

Considerations for REP Assessments During the COVID-19 Public Health Emergency

Supplemental Guidance for the Radiological Emergency Preparedness
Program

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Background

The Federal Emergency Management Agency (FEMA) Technological Hazards Division (THD) administers the Radiological Emergency Preparedness (REP) Program by assessing offsite planning and preparedness for communities within the plume and/or ingestion exposure pathway emergency planning zones (EPZs) of commercial nuclear power plants (NPPs). Evaluations are conducted through an established set of objectives and capability targets that reflect the intent of the planning standards of [44 Code of Federal Regulations \(CFR\) Part 350](#) and the evaluation criteria of [NUREG-0654/FEMA-REP-1, Rev. 2. 44 CFR § 350.5\(a\)](#) discusses the planning standards which FEMA uses “...in reviewing, evaluating and approving State and local radiological emergency plans and preparedness and in making any findings and determinations with respect to the adequacy of the plans and the capabilities of State and local governments to implement them.”

Reasonable assurance is described in the regulations as needing to be both “adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility” and “capable of being implemented.” FEMA assesses the two halves of reasonable assurance through a variety of methods to include the annual plan review, assessments, and the Annual Letter of Certification (ALC) process.

The national [public health emergency \(PHE\)](#), declared for continued consequences from the [Coronavirus Disease 2019 \(COVID-19\)](#), impacts the traditional implementation of the REP Program and the manner in which FEMA assesses preparedness activities (e.g., planning, conducting exercises/physical demonstrations, training, etc.) in communities surrounding commercial NPPs. REP Program stakeholders, including but not limited to Federal, state, local, and Tribal partners, plan, prepare, and execute assessment activities in accordance with appropriate national, state, Tribal, and local public health guidance.

Purpose

This document provides planning considerations to FEMA Regional staff when working with state, Tribal, and local partners in planning evaluated activities to assess reasonable assurance. The document identifies multiple methods, from flexibilities in existing program guidance, that can be used to evaluate activities in the assessment and validation of reasonable assurance.

The intent is to provide guidance to the FEMA Regions on conducting exercises and other assessments while protecting the safety of the exercise participants. Assessments, exercises or other activities, are used to determine the ability of OROs to protect public health and safety. Maintaining the health and safety of state, Tribal, and local partners remains the same.

Providing relief from the frequency of exercises is addressed within the FEMA regulations ([44 CFR § 350.9\(c\)](#)) and clarified in the “Update to the Relief from the Frequency Requirements for Radiological Emergency Preparedness Program (REPP) Exercises” memorandum, dated February 18, 2021, but that does not alter FEMA’s responsibility to assess the OROs ability to demonstrate reasonable assurance that public health and safety is maintained. Under 44 CFR Part 350, exercises are required to be conducted and are an important tool used by the REP Program to validate the OROs capabilities in the determination of reasonable assurance, but an exercise does not make up the entirety of reasonable assurance.



Because there is no one-size-fits-all solution to validating reasonable assurance, FEMA is committed to working with the OROs to find viable solutions that meet the needs of each REP community based on their specific circumstances, and as coordinated, agreed upon, and approved by the applicable [FEMA Regional Office](#). FEMA provides this guidance to outline flexibilities in which the REP Program can assess and validate reasonable assurance.

Principles

The following principles will guide implementation of this document.

- A. This guidance document provides planning considerations to ensure the regulatory requirements of the REP Program are still met, namely the assessment and validation of reasonable assurance, while acknowledging the need for maximum flexibility in its execution.
- B. FEMA utilizes a range of methods and tools to assess and validate reasonable assurance.
- C. An exercise does not make up the entirety of reasonable assurance.

The *Considerations for REP Assessments During the COVID-19 Public Health Emergency* is not a new requirement. Given the current PHE, this is an outline of the evaluation planning process using existing options not commonly employed for evaluation but necessitated by the COVID-19 PHE.



Guidance

This guidance document captures the existing flexibility in the REP Program, as envisioned in the [2019 REP Program Manual \(RPM\)](#) and [NUREG-0654/FEMA REP-1, Rev.2](#), and focuses on areas of adjustment intended to reduce the risk for those participants who must work in close proximity to other participants at each site and for each ORO.¹

There are many factors that will affect or impact the ability to reduce the footprint of physical demonstrations. For example:

- State and local protective measures in response to the COVID-19 PHE (i.e., quarantines, stay-at-home advisories, travel restrictions, etc.);
- Impact of the COVID-19 PHE within a community (i.e., staffing, resources, closed/inaccessible facilities, etc.);
- REP Program activities that have already occurred within this two-year cycle (i.e., some requirements may have already been accomplished);
- Flexibility of the licensee to participate in alternate demonstrations (i.e., licensee participation may be critical to the participation of others);
- Timing of previously conducted exercise and
- Ability and desire to utilize other means to demonstrate exercise objectives and validate capabilities (i.e., not all methods will be able to be deployed for all sites or for all OROs).

Reducing the footprint of demonstrations that require participants to work in close proximity with one another is achieved through the development of a specific mitigation or exposure-reduction risk strategy for each site and/or OROs as needed. FEMA has several established approaches that can be used individually or combined to minimize the risk to participants.

Methods of Assessment

Demonstration Credit

Provide OROs appropriate credit for participation in activities that demonstrate capabilities necessary for reasonable assurance outside REP-specific events and/or response to a real-world incident. Focus should be on the outcomes of the OROs' performance and a demonstrated ability to meet corresponding capability targets (or demonstration criteria for those that have not yet transitioned to the 2019 RPM guidance). Focus should be less on the specific paths used to ultimately achieve the outcome. Documentation provided by OROs should fully support the credit request. Specific documentation required is identified in the 2019 RPM. Approval of credit toward demonstration of capability targets (or demonstration criteria if using the 2016 RPM) is ultimately at the discretion of the Regional Assistance Committee (RAC) Chair. Coordination at all levels (state, local, licensee, FEMA Regions,

¹ Federal guidance and recommended measures, such as those from the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS), Food and Drug Administration (FDA), etc., should be used as a minimum standard. State and local guidance, when more restrictive than the Federal guidance, should be utilized.

Regulatory Commission [NRC] Regions) is necessary prior to granting credit to OROs to ensure appropriate participation from the OROs when licensees do not have an exemption from their biennial exercise.

Tools provided: Credit Worksheets (one based on capability targets, one based on demonstration criteria) and 2019 RPM guidance (pages 181-182)

Additional considerations: There is a significant level of effort required by both the OROs and FEMA for granting credit. Some OROs have successfully achieved this and a community of best practices is under development and located on the [PrepToolkit](#). Opportunities for credit for participation in other exercises should not be ignored. Partial credit can and should be given whenever possible.

Staff Assistance Visits

Staff assistance visits (SAVs) are another method to reduce the footprint of physical demonstrations² thereby reducing the need for individuals to be in close proximity to one another or to gather in large groups. A SAV is a broad-ranging activity focused on assisting OROs and includes a wide variety of activities:

- Providing technical assistance regarding development of plans/procedures or their implementation;
- Attending meetings with OROs and the licensee;
- Participating in ORO REP training;
- Participating in or observing non-evaluated exercises and drills;
- Evaluating exercises and drills to fulfill biennial requirements;
- Developing and submitting applications to receive credit for responses to real-world incidents;
- Verifying supply and operability of equipment and supplies;
- Ensuring potassium iodide (KI) supply is current; and
- Verifying ALC and plan information (e.g., radioprotective drug inventories, equipment maintenance, verification of training courses delivered).

Under the current PHE circumstances, the flexibility that SAVs offer should be leveraged. Activities assessed through a SAV should be captured in an Evaluation Report with appropriate supporting documentation. As with other assessments, narratives should address points of review found in Part III of the 2019 RPM (or the points of review found in the 2013 REP Exercise Preparation Guide, if still using the 2016 RPM) under the assessment portion of each applicable capability target.

Tools provided: Evaluation Report template for recording results and 2019 RPM guidance (pages 166, 237)

Additional considerations: May have an in-person component and could be time-intensive. Also presents great opportunity for virtual engagement.

² Federal guidance and recommended measures, such as those from the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS), Food and Drug Administration (FDA), etc., should be used as a minimum standard. State and local guidance, when more restrictive than the Federal guidance, should be utilized.

Virtual Demonstrations

Much like a traditional REP exercise or drill, virtual exercises and drills provide an excellent opportunity to assess the implementation of OROs' plans and preparedness while limiting exposure from in-person contact. This method may be more challenging logistically but addresses many of the issues that would make a traditional exercise or drill difficult under the COVID-19 PHE. Virtual exercises and drills may address the inherently radiological aspects of the REP Program along with those that are less conducive to address through other means, and therefore require some level of physical demonstration. A detailed extent-of-play agreement, including unique aspects of the virtual demonstration methodology, should be developed. Assessment through virtual means requires the development of an after-action report (AAR); the narratives should address the applicable points of review for the capability target being assessed.

Tools provided: AAR template for recording results and most exercise and drill guidance from 2019 RPM (pages 165-166, 172-174)

Additional considerations: There is a significant amount of planning and logistics to address. A communications plan will be important to ensure evaluators, controllers, and players can communicate in real-time.

Physical Demonstrations

Physical demonstrations, such as exercises, are an instrument used to validate capabilities, train, assess, practice, and improve performance. They are the most effective tool for validating the capability for plans/procedures to be implemented as written. However, the value of conducting full-scale "traditional" REP exercises, within the COVID-19 PHE environment, must be weighed against the potential health risks, desired outcomes, operational environment, and safety measures put in place by OROs. As an example, every effort must be made to ensure a safe and secure environment for all participants, to include reducing the number of individuals that must gather in one place by allowing remote participation when practical. Those who must participate in areas where they may come in close contact with others should follow [public health guidelines](#) for minimizing risk.

Drills and out-of-sequence demonstrations represent a part of the overall exercise and provide an opportunity for a coordinated, supervised activity usually employed to validate a specific operation or function in a single agency or organization. Pulling out functional activities provides an opportunity to reduce the risk to all participants in an exercise by creating opportunities for drills which typically have a smaller footprint and reduce the number of individuals that may be in close proximity to one another while allowing for more opportunity for participants to socially distance themselves from other participants.

All activities assessed at any physical demonstration are captured in an AAR. All narratives address points of review found in Part III of the 2019 REP Program Manual (or the points of review found in the 2013 REP Exercise Preparation Guide, if still using the 2016 RPM) under the assessment portion of each applicable capability target. Coordination at all levels (state, local, Tribal, licensee, FEMA Regions, and NRC Regions) is necessary to ensure appropriate participation from the OROs when licensees do not have an NRC exemption from their biennial exercise. Regions encourage OROs to coordinate development of their extent-of-play agreements with the licensees.

Tools provided: AAR template for recording results and 2019 RPM guidance (pages 165-166, 172-174)

Additional considerations: An exercise may require participants to work in close proximity to one another and therefore carries many logistical challenges with respect to ensuring safety of the participant is the primary consideration. Drills are physical demonstrations and therefore carry the same logistical challenges as exercises. Considerations include, at a minimum, the number of evaluators needed; travel logistics and quarantine concerns; personal protective equipment (PPE) requirements and provision; and the ability to maintain and accommodate social distancing standards, as needed (e.g., when planning physical demonstrations to fulfill exercise objectives, considerations should be taken into account that travel, distancing, and access requirements may change without notice). A back-up plan to conduct virtual demonstrations should be considered in the planning process as a fall back to physical demonstrations in order to meet as many objectives as possible.

Plan Review

FEMA Regional staff and OROs review offsite plans/procedures annually for compliance and consistency, and the OROs make revisions when necessary. Unlike the other methods, plan reviews do not offer many opportunities to assess objectives typically addressed through exercises. When plan reviews are conducted, results are captured in the Plan Review Checklist.

Tools provided: Plan Review Checklist for recording review/results and 2019 RPM guidance (pages 165, 184, 240-241)

Additional considerations: In early 2020, Regions and OROs were poised to begin the update process for plans/procedures for the 2019 RPM; the COVID-19 PHE will likely extend that timeframe. It is unclear how delays in 2019 RPM guidance implementation may affect future activities.

Annual Letter of Certification

Several periodic reporting requirements for the REP Program are addressed by submitting the ALC, such as the 24-hour staffing requirement under planning standard A, accomplishing drills required by planning standard N and not evaluated by FEMA, and the training requirements under planning standard O. Many of these requirements are not easily demonstrated, and therefore are assessed through the ALC process. The ALC process may be leveraged to address objectives typically covered by the exercise, particularly by those OROs that have moved to the 2019 RPM guidance and capability targets.

Tools provided: ALC Checklist for recording review/results and 2019 RPM guidance (pages 165, 184, 246)

Additional considerations: Information captured for the current ALC should be utilized and leveraged to whatever degree possible. Additional guidance called the ALC Supplemental Guidance is available on the [THD SharePoint](#) for addressing the effect of the PHE on the current ALC.

Training

Training conducted during the current assessment period may also be considered for demonstration of capabilities. OROs may request credit for training conducted since the submittal of the ALC is a means to address objectives and

capability targets. When an opportunity allows for FEMA regional staff to observe training (including virtual observation), there may also be an opportunity to apply demonstration credit. To apply credit for training, participants must demonstrate a proficiency in subject matter by the conclusion of the training period (for example, hospital staff participate in training on instrumentation and survey technique in which they demonstrate hands-on use of the survey instrument from operational testing through the survey procedure; this could be used to provide partial credit for the medical drill). If regional staff is not able to observe training, credit may still be granted in negotiation with the RAC Chair. Regional staff should validate training not observed by collecting appropriate documentation. Documentation provided by the ORO includes a detailed description of the training, a summary of which capability targets were addressed through the training, participating organizations, and documentation of participants.

Tools provided: ALC Checklist for recording trainings; 2019 RPM guidance (pages 165, 166, 171)

Additional considerations: Information captured for the current ALC should be utilized and leveraged to whatever degree possible. Additional guidance is available on the [PrepToolkit](#) and the [THD SharePoint](#) for addressing the effect of the PHE on the current ALC.

Creating a Strategy

The creation of each strategy to accomplish annual and biennial requirements will be site-specific and require collaboration and coordination between FEMA THD HQ, FEMA Regional staff, licensees, the NRC, and OROs. The principles for creating a strategy are discussed in the 2019 REP Program Manual Part III and have been framed in this guidance for use in a public health emergency.

- When devising site-specific strategies, begin by identifying the organizations that must participate.
 - Consider full and partial state participation;³
 - Consider activities that are rotated amongst participants; and
 - Identify the type of required demonstration(s) that must be assessed (e.g. exercise, medical services drill, reception center drill, emergency worker monitoring and decontamination, etc.).
- For each demonstration identified, determine which objectives and capability targets (evaluation area and demonstration criteria if using 2016 guidance) are due for demonstration.
- Once the required objectives and capability targets are identified, consider what credit might be applied.
 - Credit can be granted based on response to actual incidents/emergencies or through alternative demonstrations. In situations where credit cannot be granted using the activities identified in the tables below, the RAC Chair may consider other opportunities to grant credit.
 - These opportunities could include training recently accomplished after the ALC was submitted.

³ 44 CFR § 350.2(j) defines Full Participation as an exercise in which: (1) State and local government emergency personnel are engaged in sufficient numbers to verify the capability to respond to the actions required by the accident scenario; (2) the integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant is tested; and (3) the implementation of the observable portions of State and/or local plans is tested. 44 CFR 350.2(k) defines Partial Participation as the engagement of State and local government emergency personnel in an exercise sufficient to adequately test direction and control functions for protective action decision-making related to emergency action levels and communication capabilities among affected State and local governments and the licensee.

- Dress rehearsals, or other non-evaluated exercises and drills that are either documented to acceptable levels or were observed by FEMA Regional staff.
- Virtual hybrid drills that combine virtual and physical demonstrations or partial demonstration and training may be used to accomplish activities that were not able to be conducted safely by strictly physical demonstration. For objective and capability targets to which credit cannot be granted, the RAC Chair determines what level of demonstration is necessary to adequately assess implementation of plans and procedures.

Assessments can be conducted using a combination of the methods identified in the section of this document entitled *Methods of Assessment*. Coordination at all levels (state, local, licensee, FEMA Regions, and NRC Regions) is necessary to ensure appropriate participation from the OROs when licensees do not have an exemption from their biennial exercise. Regions encourage OROs to coordinate development of their extent-of-play agreements with the licensees.

Creating a strategy may be less complicated when it focuses on required objectives and capability targets needed for individual locations. Some situations lend themselves easily to assessment through an interview, such as traffic and access control, protective actions taken by schools, and other emergency management processes and procedures. Interviews can be conducted virtually using a variety of platforms. Back-up route alerting may be accomplished through use of [RadResponder](#) to confirm the time taken to complete the route followed by an interview with the driver. Location of demonstrations is also a factor that needs to be considered as the strategy is being developed.

Supplemental Guidance on Relief Requests

Guidance on relief from a scheduled event can be found in the “Relief from the Frequency Requirements for Radiological Emergency Preparedness Program (REPP) Exercises” memo discussed in the Purpose section of this document. For the current PHE, supplemental relief guidance can be found on the [FEMA THD SharePoint site](#) and the PrepToolkit in the [THD-REP COVID-19 Community](#). This guidance is intended for internal use by FEMA Regional staff.

FEMA will consider granting REP Program assessment activity credit to OROs for their participation in a response to real-world incidents and/or alternative REP demonstrations.

The following tables are intended to provide examples of how the capability targets or demonstration criteria could be accomplished and are therefore illustrative guidance and should not be considered the only means of accomplishment.

Table 1: Biennial Assessment Approach – Capability Targets (2019 RPM)

Capability Targets	Plume Exercise	Ingestion/RRR Exercise	Drills	SAV ⁴	ALC ⁵	Credit ⁶
1.1	X		X		X	X
1.2	X				X	X
1.3	X					
1.4	X					X
1.5	X			X	X	X
1.6		X	X		X	
1.7		X	X		X	
2.1	X					
2.2	X			X	X	
3.1	X		X		X	
3.2	X				X	
3.3	X				X	X
4.1	X					
4.2	X		X	X	X	
4.3		X	X	X	X	
4.4			X		X	X
4.5	X		X		X	
4.6		X	X		X	
5.1	X		X	X	X	X
5.2	X		X	X	X	X
5.3	X		X	X	X	X
5.4	X		X	X		X

⁴ Addresses the capability targets at least in part.

⁵ Addresses the capability targets at least in part. For the capability targets associated with drills that are recorded in the ALC (e.g., Environmental Monitoring drills), this table assumes those drills are still able to occur.

⁶ Could be full or partial credit.

Table 2: Biennial Assessment Approach – Demonstration Criteria (2016 RPM)

Demonstration Criteria	Plume Exercise	Ingestion/RRR Exercise	Drills	SAV	Credit
1.a.1	X		X		X
1.b.1	X		X	X	X
1.c.1	X		X ⁷		X
1.d.1	X		X		
1.e.1	X		X	X	X ⁸
2.a.1	X				
2.b.1	X				
2.b.2	X				
2.c.1	X				X ⁹
2.d.1		X			
2.e.1		X			
3.a.1	X		X		
3.b.1	X		X		
3.c.1	X		X	X	X
3.c.2	X		X	X	X
3.d.1	X		X	X	X
3.d.2	X		X	X	X
3.e.1		X	X		
3.e.2		X	X		
3.f.1		X	X		
4.a.2 ¹⁰	X				
4.a.3 ¹¹	X				

⁷ Partial credit may be given.

⁸ Partial credit may be given.

⁹ Partial credit may be given.

¹⁰ These may be conducted out of sequence.

¹¹ These may be conducted out of sequence.

Demonstration Criteria	Plume Exercise	Ingestion/RRR Exercise	Drills	SAV	Credit
4.b.1 ¹²		X			
4.c.1			X		X
5.a.1	X		X		
5.a.3	X		X		
5.a.4	X		X		
5.b.1	X		X		X ¹³
6.a.1	X		X		X
6.b.1	X		X		X
6.c.1	X		X	X	X
6.d.1			X		X

Final Considerations

In some cases, incorporating physical demonstration may ultimately be necessary with appropriate protective measures in place.¹⁴ This appears to be true for the inherently radiological hazard-specific activities such as field monitoring team activities and dose assessment.

The FEMA THD Policy and Doctrine Branch will continuously monitor and evaluate the efficacy of this guidance as the COVID-19 PHE progresses. FEMA THD hosted a webinar in January 2021 to provide a forum for agency- and program-level guidance to safely conduct REP exercises during a PHE, including but not limited to, full-scale exercises (FSEs), drills, demonstrations, etc., and included a discussion on risk assessment and mitigation measures; best practices from REPP, Chemical Stockpile Emergency Preparedness Program (CSEPP), and other exercises; and currently available products from both FEMA and other agencies (Centers for Disease Control and Prevention [CDC], the National Integration Center [NIC], External Affairs [EA], National Exercise Division [NED], and the National Training and Education Division [NTED]). Because much of this guidance is retrieved and reframed from the 2019 RPM, the updated guidance will be included in the next iteration of the RPM.

FEMA is collecting best practices and lessons learned and posting them for review and use on the [PrepToolkit](#), within the [REP Policy and Doctrine Community](#). Please submit your best practices and/or lessons learned to FEMATHDPolicy@fema.dhs.gov.

¹² These may be conducted out of sequence.

¹³ Partial credit may be given.

¹⁴ Federal guidance and recommended measures, such as those from the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS), Food and Drug Administration (FDA), etc., should be used as a minimum standard. State and local guidance, when more restrictive than the Federal guidance, should be utilized.

Acronyms

AAR	After-action report
ALC	Annual Letter of Certification
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
HHS	Department of Health and Human Services
KI	Potassium iodide
NRC	Nuclear Regulatory Commission
ORO	Offsite response organization
PHE	Public health emergency
PPE	Personal protective equipment
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness
REPP	Radiological Emergency Preparedness Program
RIS	Regulatory Issue Summary
RPM	REP Program Manual
RRR	Relocation, Reentry, and Return (exercise)
SAV	Staff assistance visit
THD	Technological Hazards Division



Authorities

[44 Code of Federal Regulations \(CFR\) Part 350](#)

[44 CFR § 350.5\(a\)](#)

[44 CFR § 350.9\(c\)](#)

[NRC Regulatory Issue Summary \(RIS\) 2006-03, Guidance on Requesting an Exemption from Biennial Emergency Preparedness Exercise Requirements, February 24, 2006](#)



FEMA

References

Federal Emergency Management Agency (FEMA) Radiological Emergency Preparedness (REP) Program Manual (RPM), January 2016.

Federal Emergency management Agency (FEMA) Radiological Emergency Preparedness (REP) Program Manual (RPM), December 2019.

Memorandum from David Gudinas to Federal Preparedness Coordinators and Regional Assistance Chairpersons, "Update to the Relief from the Frequency Requirements for Radiological Emergency Preparedness Program (REPP) Exercises," February 18, 2021.

Nuclear Regulatory Commission Regulatory Issue Summary (RIS) 2006-03, Guidance on Requesting an Exemption from Biennial Emergency Preparedness Exercise Requirements, February 24, 2006.

