FEDERAL EMERGENCY MANAGEMENT AGENCY

Radiological Emergency Preparedness: Exercise Evaluation Methodology.

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: The Federal Emergency Management Agency (FEMA) is revising the Radiological Emergency Preparedness Exercise Manual (REP–14) dated September 1991 by adopting the six Exercise Evaluation Areas described in this notice in place of the 34 REP–14 Objectives that are set out in Section D of REP–14. The minimum frequency with which each of the Exercise Evaluation Areas will be evaluated is also contained in this notice. Adoption of the changes to REP–14 renders a companion manual entitled Radiological Emergency Preparedness Exercise Evaluation Methodology (REP–15) dated September 1991 obsolete. FEMA is rescinding REP–15 and will utilize a new form entitled ''Evaluation Module'' to document evaluations conducted under the new criteria.

DATES: This notice is effective on October 1, 2001. Exercises conducted pursuant to 44 CFR § 350.9 between October 1, 2001 and December 31, 2001 may be (a) evaluated under the 34 Objectives enumerated in the September 1991 version of REP–14 and utilizing the points of review set out in REP–15 or (b) evaluated under the new criteria using the Evaluation Module form. The decision on which to use will be made by the appropriate FEMA Regional Assistance Committee Chair after consulting with the affected State or States. Effective January 1, 2002, exercises conducted pursuant to 44 CFR § 350.9 shall be evaluated using the criteria described in this notice and shall be documented using the Evaluation Module form. The 34 Objectives enumerated in the September 1991 version of REP–14 and the points of review set out in REP–15 shall not be used in exercises that take place on or after January 1, 2002.

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SUPPLEMENTARY INFORMATION: The Federal Emergency Management Agency (FEMA) is revising the Radiological Emergency Preparedness Exercise Manual (REP–14) dated September 1991 by adopting the six Exercise Evaluation Areas described in this notice and deleting the thirty-four REP–14 Objectives that are set out in Section D of REP–14.[1] This is an interim measure. FEMA is currently working on a REP Handbook, a comprehensive compilation of REP guidance. The REP Handbook will incorporate the new Exercise Evaluation Areas and portions of REP–14 that pertain to the conduct of exercises. When the new reference book is issued, REP–14 will be withdrawn.

Adoption of the new Evaluation Areas renders a companion manual entitled Radiological Emergency Preparedness Exercise Evaluation Methodology (REP–15) dated September 1991 obsolete. The ''Evaluation Module'' will be used to document exercise evaluations carried out under the new evaluation areas.[2] REP–15 is rescinded effective January 1, 2002, which is the date upon which all exercises will be evaluated in accordance with the new criteria.

FEMA published the proposed evaluation areas and the Evaluation Module in the **Federal Register** on June 11, 2001 for sixty days of public comment [66 FR 31342]. The public comment period closed on August 10, 2001. Eighty-three comments were submitted by the deadline. The majority of comments were submitted by representatives of State and local public health, environmental and emergency management agencies. FEMA also received comments from licensees of nuclear power plants, the general public and a public interest group. We found the comments to be thoughtful and constructive.

Pursuant to a Memorandum of Understanding between FEMA and the Nuclear Regulation Commission (NRC), 44 CFR 353 App. A (2000 edition), FEMA provides the NRC with an opportunity to review and comment on emergency planning and preparedness guidance issued by FEMA's Radiological Emergency Preparedness (REP) program. The NRC was provided with a copy of the **Federal Register** notice and asked to provide comments. The NRC staff provided comments on August 10, 2001.

[1] Adoption of the proposed Evaluation Criteria renders much of Section C.2 of REP–14 obsolete. Pages C.2–3 and C.2–4 of REP–14 speak to the frequency with which particular REP–14 objectives will be exercised. FEMA is adopting the Federal Exercise Evaluation Matrix, which appears later in this document as Table 2, in place of the exercise objective groupings which appear on Pages C.2–3 and C–2.4 of REP–14.

[2] We are not republishing the sample ''Evaluation Module'' in this notice because no changes have been made.

Background on Exercise Evaluation

FEMA, through the REP program, evaluates exercises to assess the capability of Offsite Response Organizations (ORO) to respond to an emergency involving a commercial nuclear power plant. These exercises are conducted in accordance with FEMA regulations, which appear in 44 CFR Part 350.[3] Although section 350.9 is the portion of Part 350 that primarily speaks to exercises, it does not specifically address the standards under which exercises are to be conducted and performance is to be evaluated. These standards are addressed in 44 CFR 350.5(a) which states,

> Section 50.47 of [the NRC's] Emergency Planning Rule [10 CFR Parts 50 [Appendix E] and 70 as amended and the joint FEMA-Nuclear Regulatory Commission Criteria for Preparation and Evaluation of Radiological Response Plants and Preparedness In Support of Nuclear Power Plants (NUREG–0654/FEMA REP–1, Rev 1 November, 1980) [4] * * * are to be used 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 government to implement them. Both the planning and preparedness standards and related criteria contained in NUREG–0654 are to be used by FEMA and the NRC in reviewing and evaluating State and local government radiological emergency plans and preparedness.[5]

Planning Standard N of NUREG–0654 addresses the conduct of exercises. The Planning Standard states that ''Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities * * * and deficiencies identified as a result of exercises * * * are (will be) corrected.'' Evaluation criterion N.1.a of NUREG–0654 defines an exercise as ''an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations.'' The Planning Standard N criteria contain several requirements for exercises. All exercises must simulate an emergency that results in offsite radiological emergency releases that would require response by offsite authorities.[6] Scenarios should be

[3] The preamble to 44 CFR Part 350 is published at 46 FR 44332 [September 28,1983].

[4] This document is hereafter referred to as NUREG–0654.

[5] *See also,* 44 CFR 350.13(a) which states in relevant part ''The basis upon which [FEMA] makes the determination for withdrawal of approval [of a State or local radiological emergency plan] is the same basis used in reviewing plans and exercises, i.e., the planning standards and related criteria in NUREG 0654/FEMA REP–1, Rev. 1.''

[6] The NRC staff comment noted that an acceptable exercise scenario could involve a sufficient fission

varied from year to year and conducted under various weather conditions; some exercises or drills should be off-hours and unannounced.[7] In other respects, the Planning Standard N criteria contemplate that exercises will be conducted as set forth in NRC and FEMA rules and in exercise evaluation guidance.[8]

In September 1991, FEMA published the current exercise evaluation guidance, which is REP–14. REP–14 established a series of 34 objectives (REP–14 Objectives) that interpret and apply the guidance contained in NUREG–0654. A companion document, REP–15, contained a series of forms and checklists keyed to the 34 REP–14 Objectives for use by exercise evaluators in documenting performance. FEMA circulated both documents for public comment.[9]

REP–14 also established the frequency with which each of the objectives would be demonstrated in exercises. The REP–14 Objectives were divided into three groups. Thirteen objectives in the first group would need to be demonstrated in every exercise. Nine objectives in the second group should be demonstrated in every exercise by some but not all responding organizations as the scenario dictates, provided that all responding organizations must demonstrate the objective once every six years. Another eleven objectives must be demonstrated once every six years.[10]

Public Comment on the Proposed Evaluation Areas

The new approach to exercise evaluation discussed in this notice is the outgrowth of a multi-year strategic review of the REP program. The strategic review process that led to the formulation of this approach was explained in the June 11, 2001 **Federal Register** notice [66 FR 31343–31344]. A key recommendation of the strategic review process was that FEMA streamline the exercise evaluation process by making the criteria less prescriptive and more ''results-oriented.''

A number of commenters felt that the proposal published on June 11 substantially met this objective. A State emergency management agency, writing for itself and two counties noted, ''In general, we feel that the proposals are a substantial improvement over previous evaluation methodologies. The document is much less prescriptive and establishes the basis for an outcome-based evaluation.'' Another State observed. ''This proposal showed that FEMA not only listened to the OROs' concerns, but took our advice to heart and followed through with its commitment to make the exercise evaluation process more performance-based and less subjective.'' However, several other commenters felt that the document remained too prescriptive. We have examined their suggestions and have made adjustments to certain of the criteria where appropriate. A public interest group suggested that certain of the evaluation criteria appear to significantly lower performance standards. We considered each of their examples, but we disagree with their conclusions.

The NRC staff observed, ''As a result of a staff level review of the [**Federal Register** notice] and our participation in the strategic review process, it is our belief that exercises conducted and evaluated pursuant to the revised methodology will continue to provide FEMA with sufficient basis to support reasonable assurance recommendations to the NRC.''

Two commenters, representing State agencies, suggested that FEMA periodically review the evaluation criteria to determine whether further improvements are needed. FEMA accepts the suggestion. The initial review of the evaluation criteria will commence in January 2003 when data from the first full year of exercises conducted under the new criteria will be available.

Discussion of the New Evaluation Criteria

Evaluation Area 1—Emergency Operations Management

Evaluation Area 1 has five sub-elements: (a) Mobilization, (b) facilities, (c) direction and control, (d) communications equipment and (e) equipment and supplies to support operations.

Criterion 1.a.1 requires that the OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner. FEMA previously noted that one of the more difficult issues to arise from the strategic review is how OROs demonstrate their twenty-four hour staffing capability in an exercise. The evaluation criteria associated with Planning Standard ''A'' of NUREG–0654 require that ''each principal organization shall be capable of continuous (twenty-four-hour) operations for a protracted period.'' [11] These criteria also require that each State and local response organization be capable of twenty-four-hour emergency response, including 24 hour per day staffing of communications links.[12]

REP–14 Objective 30.1,[13] which implemented these criteria, required all agencies responsible for providing twenty-four-hour staffing to demonstrate a shift change once every six years. The shift change was demonstrated by providing a ''one-for-one replacement * * * of key staff'' responsible for communications, direction and control of operations, alert and notification of the public, accident assessment, information for the public and the media, radiological monitoring, protective response and medical and public health support.[14]

REP–14 Objective 30.2 requires outgoing staff members to demonstrate the capability to brief their replacements on the current status of the simulated emergency. The purpose of this demonstration is to assure that the transition from the outgoing to the incoming shift is accomplished without discontinuity in operations.

The dissatisfaction within the REP community about Objective 30 seemed to stem from time constraints associated with the exercise. OROs will bring a second shift (often composed of volunteers who must take time away from other responsibilities) in for the exercise, only to discover that there is little time left in the exercise for the second shift to actually demonstrate their capabilities.

In response to these concerns, new evaluation criterion 1.a.1 eliminates the requirement that OROs demonstrate a shift change once every six years. In order to assure that OROs have sufficient staffing to support twenty-four hour operations, we will require that

product accumulation in containment without a release, notwithstanding the language of Planning Standard N. FEMA believes that exercise scenarios that involve offsite radiological emergency releases provide a better test of an ORO's integrated response capability.

[7] *See,* Planning Standard N, evaluation criteria 1.a and 1.b.

[8] *See,* Planning Standard N, evaluation criteria 1.a (rules) and 3 (exercise evaluation guidance).

[9] On March 27, 1991, FEMA noticed the availability of REP–14 and REP–15 for public comment in the **Federal Register** [56 FR 12734. FEMA announced that REP–14 and REP–15 were final and effective in subsequent **Federal Register** notices, 57 FR 4880 (February 10, 1992) corrected by 57 FR 10956 (March 31, 1992).

[10] *See,* REP–14, pages C–2.3 to C–2.4. REP–14 Objective 34 was not included in any of the three groups because it is not demonstrated by OROs. Objective 34 addresses demonstration of emergency response capability by nuclear power plant licensees in the event that State and local government decline to participate in radiological emergency planning and preparedness.

[11] Planning Standard A, evaluation criterion A.4.

[12] Planning Standard A, evaluation criterion A.1.e.

[13] Objective 30.1 is criterion 1 under Objective 30. REP–14 evaluation criteria will be referred to in this manner throughout the document.

[14] REP–14 page D.30–1.

they certify this capability in the Annual Letter of Certification. Additionally, FEMA REP site specialists will review ORO 24-hour staffing capabilities during Staff Assistance visits. This approach is consistent with Planning Standard ''A'' of NUREG–0654 and its associated criteria, neither of which requires the demonstration of a shift change. Many comments suggested that FEMA approach verification of 24-hour capability in this manner.

However we also expressed concern in the June 11 **Federal Register** notice over whether key personnel on the off-hours shifts can perform as well as the primary responders. FEMA sought comment on whether the evaluation criteria should require OROs to demonstrate their twenty-four hour response capability by alternating the key staff that participate in the biennial exercises from among the shifts.[15]

The commenters overwhelmingly opposed FEMA's proposal to rotate exercise participation among shifts. Several of these commenters noted that they do rotate REP exercise participation among their shifts but would prefer that FEMA not prescribe that this be done. Other commenters suggested that given the frequent turnover of personnel in the emergency management community, most responders have an opportunity to participate in evaluated exercises at one time or another. Some commenters argued that they should be graded on the performance of their primary team and noted that people who occupy most key functions have adequate opportunities to train in non-graded exercises and exercises to prepare for non-radiological incidents. Commenters also argued that those who occupy key positions in their organizations would remain in place throughout the emergency response, except for relatively brief rest and sanitation breaks. Even then, they could be called back to address a critical issue. Still other commenters expressed concern that emergency management volunteers are being asked to participate in an increasing number of exercises, each directed at a specific hazard. These commenters were concerned that the cumulative exercise burden might cause volunteers to drop out. Others noted the availability of interstate mutual aid personnel to supplement local staff. FEMA generally found these arguments to be valid.

In the June 11 **Federal Register** notice, FEMA proposed that a shift change briefing occur during every exercise, regardless of whether a shift change is actually demonstrated. After considering the comments we have concluded that we will not require the demonstration of shift change briefings. Evaluation criterion 1.c.1 already requires that periodic briefings occur during the course of an exercise. To require a simulated shift change briefing would not only lengthen the exercise but also require a redundant demonstration of a briefing capability.

We sought comments about whether FEMA should commence exercises on weekends, holidays or off-hours. The comments from the emergency management community were uniformly negative. Some commenters responded that emergency management has advanced to the level that off-hours response to actual incidents is routine. Other commenters felt that the cumulative burden of actual off-hours responses and off-hours exercises on volunteers was too great.

The NRC staff, on the other hand, suggested that off-hours and unannounced exercises were helpful since actual events happen in the off-hours. Evaluation Criterion 1.b of Planning Standard ''N'', as interpreted by subsequent guidance, requires off-hours exercises. Additionally Planning Standard ''N'' suggests that some exercises should be unannounced. In light of this language, FEMA believes that the new exercise evaluation criteria should provide for off-hours and unannounced exercises, but will defer consideration of a standard until it has finalized a policy on granting exercise credit for participation in actual emergency response activities and equivalent drills and exercises. We believe that many OROs will be able to demonstrate their ability to quickly mobilize personnel at any time of the day, which is the reason that Planning Standard ''N'' suggests unannounced and off-hours exercises, through documented performance in actual emergency responses and other equivalent drills and exercises. We will publish the proposed credit policy and off-hours, unannounced exercise criteria in the **Federal Register** for comment before any are implemented.

Criterion 1.b.1 requires that the ORO demonstrate that its facilities are sufficient to support the emergency response. Under the proposed exercise methodology, facilities will only be evaluated if they are new or have substantial changes in structure or mission. It seems redundant to require the re-evaluation of a facility every two years if the facility has not changed. FEMA will require that OROs certify in the Annual Letter of Certification that their facilities are available and adequate to meet emergency response needs.[16] FEMA reserves the right to audit the representations made in the Annual Letter of Certification.

Criterion 1.d requires that communications capabilities be managed in support of emergency operations with communication links established and maintained with appropriate locations. The proper functioning of communications equipment is essential to success in any exercise, just as it is essential to success in any response to a real event. FEMA expects that both the primary and backup communications systems, which are required by Planning Standard F, Evaluation Criterion F.1 of NUREG–0654, will be fully functional at the commencement of an exercise. FEMA will continue to require that the ORO demonstrate the functionality of the primary and at least one backup system at each exercise. If one of the two communications systems fails, but there was no adverse effect on exercise performance, then there will be no exercise issue. If the primary and a backup communications system fail, the ORO can prevent an exercise issue by utilizing additional backup communications resources. However, if failure of communications systems has an adverse or potentially adverse effect on exercise performance, then FEMA will assess an exercise issue. In all cases, a failure in a communications system must be remedied no later than the next scheduled communications drill. OROs are expected to advise the REP program site specialist when a communications failure noted during an exercise has been corrected.

A commenter noted that new Evaluation Criterion 1.d.1 requires that primary and backup communications systems rely on separate power sources. This language does not appear in NUREG–0654 and has been deleted.

Criterion 1.e.1 requires that equipment, dosimetry,[17] supplies of potassium iodide (KI) and other required supplies are sufficient to support emergency operations. FEMA may or may not verify that these items are available and in good repair as a stand-alone item in every exercise. A commenter suggested that this represented a lowering of standards. We

[15] We defined key positions in this proposal in the same way that they were defined in REP–14 Objective 30.1.

[16] This notice contains several new requirements for the Annual Letter of Certification. These requirements are effective for Annual Letters of Certification due January 31, 2002.

[17] The terms permanent-record dosimeter, non-self-reading dosimeter, and non-direct-reading dosimeter, which are used in various of this document, are intended to be synonymous.

disagree. Exercise scenarios ordinarily require that equipment and supplies be put to use. If equipment and supplies are unavailable or non-functional, then the ORO may not be able to perform the emergency response activity at an acceptable level. Equipment and supplies that are not checked during an exercise will be checked during a Staff Assistance Visit. Additional assurance that equipment and supplies are available in appropriate quantities and are properly maintained will be obtained in the Annual Letter of Certification. The representations contained in the Annual Letter of Certification are subject to audit.

A number of comments addressed technical provisions of Evaluation Criterion 1.e.1. Three comments addressed the shelf life of KI supplies. KI is a non-prescription thyroid-blocking agent that is thought to provide protection to the thyroid from the uptake of radioiodines. The commenters observed that, if properly stored, KI retains its potency for a longer period than the manufacturer's expiration date would indicate. Current Food and Drug Administration (FDA) guidance authorizes the extension of the expiration date of KI supplies if a certified laboratory renders an opinion that potency remains. FEMA does not have an independent basis to determine if KI supplies remain potent past their expiration date. Accordingly, FEMA will defer to the prevailing FDA guidance when evaluating the availability of KI supplies under Criterion 1.e.1.

Several comments also addressed emergency worker protective equipment. This was an area in which some commenters thought FEMA was too prescriptive. We considered each of the comments carefully. Evaluation criterion 1.e.1 previously required that CDV–700 survey instruments be calibrated annually. This is the generally accepted standard for unmodified CDV–700 instruments. We understand that a number of CDV–700 instruments have been modified. Modified CDV–700 instruments should be calibrated in accordance with the recommendation of the manufacturer of the modification.

Evaluation criterion 1.e.1 previously provided that all instruments should be operationally checked once each calendar quarter and after each use. We have revised this criterion to provide that instruments be checked before each use in an exercise. We will observe this check during exercises. We will not verify during exercises that instruments were checked quarterly. To assure compliance with Planning Standard H of NUREG–0654, we will require that the ORO represent that instruments have been checked in accordance with the requirements of NUREG–0654 and its plans and procedures in the Annual Letter of Certification.

Evaluation Area 2—Protective Action Decisionmaking

Evaluation Area 2 assesses the ORO's ability to render decisions about what protective actions members of the public and emergency workers need to take in the wake of an incident. It has five sub-elements: Emergency worker exposure control, radiological assessment and protective action recommendations and decisions for the plume phase of the emergency,[18] protective action decision considerations for the protection of special populations, radiological assessment and decisionmaking for the ingestion pathway exposure[19] and radiological assessment and decisionmaking concerning relocation, re-entry and return.

Evaluation criterion 2.a.1 addresses radiation exposure control for emergency workers. In response to comments we have deleted language in the first two paragraphs of the extent of play that was regarded as unduly prescriptive by commenters.

Various commenters suggested that FEMA not require a demonstration of the capacity to make decisions about authorizing emergency workers to receive radiation doses above the preauthorized levels and to manage workers who have received higher-level doses. FEMA believes that this capability should continue to be demonstrated.[20]

Evaluation criterion 2.b.2 requires OROs to demonstrate a decision making process for recommending the use of KI for the general public. The NRC staff suggested that this criterion should read, ''OROs should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for the general public to supplement sheltering and evacuation if the offsite planning authorities generally have determined that KI will be used as a protective measure for the general public under offsite plans.'' We agree in principle and have revised the criterion; however, it is important to emphasize that we will only evaluate an ORO's plan to distribute and administer KI to the general public if the ORO has voluntarily decided to utilize KI as a protective measure for the general public.

Sub-element 2.d establishes procedures for ingestion pathway exercises. A number of comments suggested that FEMA not require ingestion pathway exercises unless federal agency participation is sufficient to support State and local efforts. As Chair of the Federal Radiological Preparedness Coordinating Committee, FEMA is taking the lead in encouraging increased federal participation in ingestion pathway exercises. However, the OROs are still obligated to demonstrate that they can make ingestion pathway decisions independent of federal participation under Planning Standards J and N of NUREG–0654. 44 CFR 350.9(c)(4) requires ingestion pathway exercises to be conducted whether or not the federal agencies elect to participate.[21]

Evaluation criterion 2.e.1 requires demonstration of the capability to make decisions on the relocation, re-entry and return of the general public following a severe accident at a nuclear power plant. One commenter inquired whether the criterion requires that the ORO provide dosimetry to members of the public entering a restricted zone who are escorted by personnel wearing dosimetry. FEMA believes that everyone in the restricted zone needs to be able to track his or her dose. Accordingly, we believe that this criterion, which is based in part on evaluation criterion K.3.a of Planning Standard ''K,'' requires that each individual in the restricted zone have a non-self-reading (permanent-record) dosimeter. It is sufficient for the escorts to possess direct reading dosimetry.

A commenter suggested that FEMA retain the standard and optional approaches to re-entry and relocation decisionmaking in REP–14. We understand that the optional approach is more conservative than the standard approach, which we have incorporated in the new evaluation areas. If the ORO's plan and procedures provide that the optional approach will be employed in re-entry and relocation decisionmaking, then FEMA will evaluate performance under the optional approach.

[18] The plume phase of the emergency focuses on preventing exposure of a population to radiation through direct contact with the plume.

[19] The ingestion pathway phase focuses on preventing exposure of a population to radiation through ingestion of food and water that may have been contaminated by radiation.

[20] This observation also applies to comments arguing the same point in connection with sub-elements 3.c.

[21] These observation also apply to comments submitted with respect to Evaluation Criteria 3.e.1 and 3.e.2, 4.b.1 and 4.b.2.

Evaluation Area 3—Protective Action Implementation

Evaluation Area 3 assesses the ORO's ability to implement protective actions, including evacuation. It contains six sub-elements: implementation of emergency worker exposure control, implementation of KI decisions, implementation of protective actions for special populations, implementation of traffic and access control, implementation of ingestion pathway decisions, and implementation of relocation, re-entry and return decisions.

Criterion 3.a.1 provides that OROs should demonstrate the capability to provide appropriate dosimetry, dosimeter chargers, and instructions on the use of dosimetry to emergency workers. One commenter suggested that each emergency worker in the field does not require a personal dosimeter charger. We agree; however, every emergency worker should have reasonable access to a dosimeter charger. OROs should demonstrate the ability to provide dosimetry that is appropriate in relation to the responsibilities of the emergency workers.

The new criterion makes it clear that emergency workers can refer to published procedures and confer with co-workers in responding to evaluator inquiries about dosimetry, just as they would, if necessary, in a real incident. One commenter thought that this amounted to a ''monumental lowering of standards'' and suggested that some emergency workers may be ''clueless'' about how to read dosimetry. We disagree. Emergency workers are trained in the proper use of dosimetry. It is anticipated that in a real situation they would refer to printed materials and confirm readings with other members of their team.

Criterion 3.c.1 evaluates implementation of protective actions for special populations other than schools. OROs must demonstrate a capability to alert and notify special populations, transportation providers (including special resources for people with disabilities), and establish reception facilities. The availability of resources to transport special populations out of the plume exposure pathway is key. For this reason, we proposed that OROs actually contact at least ⅓ of their transportation providers during each exercise to determine whether buses and drivers would be available if the exercise were an actual emergency. We received a significant number of comments that suggested we delete this requirement. Some commenters thought the demonstration proves only that their list of telephone numbers is correct. Other commenters felt that some actual contacts should be demonstrated but that the number of contacts should be negotiated in the extent of play agreement. We agree with these commenters and have modified Criterion 3.c.1 accordingly.

Criterion 3.c.2 evaluates the capability to implement protective action decisions for schools and day care centers. The criterion requires that OROs alert and notify every public school system or district, in every exercise, using whatever method would be used to make the notification in the event of a real incident. A number of commenters who use technology such as auto-dialers and tone alert radios to make actual notifications objected to demonstrating the technology during exercises. The concern expressed was that some would not understand that the activation was part of an exercise and would panic. Since the systems are regularly tested, the argument that an activation in connection with an exercise would cause panic seems improbable.

A number of comments addressed the extent to which private schools and day care centers must participate in REP exercises. We note that there are variations in the amount of control that OROs exercise over private schools and day care centers. A number of commenters suggested that FEMA should not require demonstration of actual or simulated contacts with day care centers. If the ORO's plan provides that private schools and/or day care providers are to be treated as special populations for the purpose of notification, then FEMA believes it is reasonable to ask that the ORO demonstrate the ability to execute this portion of the plan. However, if the plan regards some or all private schools and/or day care centers (such as those located in private homes) as part of the general population, rather than a special population, these facilities fall outside of Criterion 3.c.2. Therefore, the ability to make individual contacts need not be demonstrated. Since there are considerable differences in the way that ORO plans and procedures relate to private schools and day care centers, we believe it is more appropriate to address whether and how these facilities will participate in exercises through the Extent of Play agreement rather than the evaluation criteria.

In the June 11 **Federal Register** notice FEMA reserved the right to interview bus drivers and/or bus escorts (if a plan provides that the buses will be escorted) to determine their familiarity with evacuation routes. In response to comments, we will make every effort to interview bus drivers and/or escorts out of sequence from the exercise, during their regular duty day, in order to reduce costs to OROs.

Criterion 3.d.1 evaluates the capability to establish and maintain appropriate traffic control and access points. A commenter suggested that FEMA should not interview public safety personnel about traffic and access control plans but confine these interviews to determining whether the public safety workers can adequately utilize personal protective equipment. We believe that both topics are equally important. Interviews may include such topics as re-entry criteria, location of congregate care centers and evacuation routes.

Evaluation Area 4—Field Measurement and Analysis

Evaluation Area 4 assesses the capability of OROs to conduct and analyze field radiation measurements. It has three sub-elements: plume phase field measurements and analysis, post plume phase field measurements and sampling, and laboratory operations. A commenter asked how high range instruments referred to in Criterion 4.a.1 should be operationally tested. The criterion requires that the ORO demonstrate their established policy. FEMA will observe that the operational check is performed in accordance with the ORO's policy. The location where these operational checks will occur can be negotiated in the extent of play agreement.

Another commenter suggested that the ORO should not be required to send field teams to measure the plume centerline or peak plume measurement under Criterion 4.a.2. The commenter observed that protective action decisions could be formulated based upon plant conditions prior to release and measurements at the plume edges. Criterion 4.a.2 allows the ORO to rely on plume centerline and peak plume measurements collected by the nuclear power plant licensee. However, if this data is not available from the licensee, then the decision as to whether this data is necessary to sufficiently characterize the plume rests with the ORO. A commenter thought Criterion 4.a.2 was too prescriptive in describing how the transfer of samples to a radiological laboratory should occur. The criterion requires that standard chain of custody procedures be observed in transferring samples. We do not believe that it is unduly prescriptive.

Evaluation Area 5—Emergency Notification and Public Information

Evaluation Area 5 looks at the ORO's ability to notify the public of an incident and to effectively communicate protective action decisions. It contains two sub-elements: activation of the prompt alert and notification system and emergency information and instructions for the public and the media.

Proposed Criteria 5.a.1, 5.a.2 and 5.a.3 address activation of the prompt alert and notification system. We are publishing criteria 5.a.1 and 5.a.3 in final form, but are deferring final publication of proposed Criterion 5.a.2. Criterion 5.a.1 requires that the alert and notification system be activated in a timely manner following notification to the ORO by the nuclear power plant of an incident that requires activation of the alert and notification system but does not immediately require urgent action by the public. Whether decisionmakers initiate the alert and notification system in a ''timely manner'' will be judged in relation to the scenario. We will also evaluate the quality of the public notification. A commenter felt that the term ''timely manner'' is too subjective. We disagree. The decision on whether and when to initiate the alert and notification sequence in situations where no urgent action is required by the public is a matter of judgment. The ORO is expected to exercise this judgment in accordance with its plans and procedures.

Proposed criterion 5.a.2 required that activities associated with the alert and notification system in a ''fast breaker'' situation must be completed within fifteen minutes of the time that ORO officials have received verified notification from the nuclear power plant of a situation that immediately requires urgent public action. The proposed criterion was based on NRC regulations that appear in 10 CFR Part 50, Appendix E.IV.D. Many commenters addressed the ''fast breaker'' provision in the June 11 **Federal Register** notice. Pursuant to Section III.E of the Memorandum of Understanding between FEMA and the NRC, the NRC has requested that FEMA defer publishing Criterion 5.a.2 in final at this time. Since Criterion 5.a.2 derives from NRC regulations, it is especially appropriate that FEMA honor this request.

Proposed criteria 5.a.1 and 5.a.2 indicated that the content of the initial informational message should be consistent with current FEMA guidance. FEMA is publishing a companion notice in today's edition of the **Federal Register** addressing the minimum required content for initial informational messages.

Criterion 5.a.3 addresses backup alerting and notification of the general public in the event of a failure in the primary alert and notification system. It also addresses alerting of people who are located in ''exception areas'' and are not notified by the Emergency Alert System, tone alert radios or other technology. Criterion 5.a.3 requires that the completion of the alert and notification sequence for exception areas and backup alerting and notification be completed within 45 minutes of the decision by offsite emergency officials to notify the public of an emergency situation. REP–14 required completion of the notification within ''approximately'' 45 minutes for backup alerting and within 45 minutes for exception areas. The new criterion, which sets a 45-minute standard for both, more closely conforms to the requirements set forth in Appendix 3 to NUREG–0654 and in FEMA REP–10. One commenter suggested that the REP–14 criterion be retained. Another suggested that FEMA establish a ''goal of 45 minutes'' for completion of the sequence. We will not require that this capability be demonstrated during periods in which weather or road conditions create a safety hazard for mobile teams attempting to meet the 45-minute deadline.

Criterion 5.b.1 tests whether OROs provide accurate emergency information and instructions to the public and the news media in a timely fashion. While FEMA has determined that technical information such as Emergency Classification Levels need not be included in the initial alert and notification system message, this information should be made available to the news media with a plain language explanation for use in subsequent emergency information and instructions.

The preamble to the June 11 **Federal Register** notice stated that the ORO should be prepared to explain the Emergency Classification Level and related technical information in plain language during an exercise. We agree with a commenter who observed that it is the obligation of the nuclear power plant licensee to explain the plant conditions that caused the Emergency Classification Level to be triggered. However, the ORO is required to explain the significance of the Emergency Classification Level and why protective action decisions have been made based upon the Emergency Classification Level. We also accepted comments that the so-called ''rumor control'' telephone line hereafter be referred to as the ''public inquiry hotline'' and that the term ''press release'' be replaced with ''media release.''

Evaluation Area 6: Support Operations/ Facilities

Evaluation Area 6 assesses the capability of OROs to account for, monitor and decontaminate evacuees, emergency workers, and emergency worker equipment, to provide temporary care of evacuees and to assure that capabilities exist for transporting and treating injured individuals who have been exposed to radiation. These competencies are tested in the four sub-elements associated with Evaluation Area 6. We agree with a commenter who indicated that Criterion 6.a.1 does not require that an ORO demonstrate the ability to monitor the entire population of an Emergency Planning Zone within 12 hours of the incident. The new evaluation areas do not affect longstanding guidance that requires OROs to plan for and to demonstrate the ability to monitor 20% of the Emergency Planning Zone population within the twelve-hour timeframe.

Several comments addressed the monitoring of vehicles that may need to be decontaminated. One commenter asked whether FEMA requires that vehicles used by members of the general public be monitored. NUREG–0654 does not require that vehicles operated by members of the general public be monitored or decontaminated. FEMA has nevertheless required that procedures be in place to monitor and decontaminate vehicles if an occupant is found to be contaminated. During an exercise these procedures at a minimum must be described to the evaluator.

Other commenters thought that Criterion 6.b.1, which pertains to emergency worker vehicles, is too prescriptive about how vehicles are to be monitored. The criterion offers examples of places where radiation can accumulate. It is not intended to require that all of these areas be inspected. Another commenter suggested that we not mention air filters in Criterion 6.b.1 since they are inaccessible in modern cars. We have deleted this reference.

In response to a comment concerning Criterion 6.d.1, we note that a person who has suffered a critical injury may be transported to a hospital that does not have the capability to monitor for radiation exposure. Under such circumstances, it is acceptable for the ORO to provide the monitoring capability at the hospital.

TABLE 1—COMPARISON OF PROPOSED EVALUATION AREAS WITH NUREG–0654/FEMA REP–1, REV. 1 PLANNING CRITERIA AND REP 14/15 OBJECTIVES AND CRITERIA

Evaluation area/Sub-element/Criterion	NUREG 0654 criteria	REP–14/15 objective & criterion
1—EMERGENCY OPERATIONS MANAGEMENT	.....	1, 2, 3, 4, 5, 8, 14, 30
1.a—Mobilization		
1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.	A.4; D.3, 4; E.1,2; H.4	1.1, 1.2; 30
1.b—Facilities		
1.b.1: Facilities are sufficient to support the emergency response	H3	2.1
1.c—Direction and Control		
1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.	A.1.d; A.2 a,b	3.1
1.d—Communications Equipment		
1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations.	F.1, 2	4.1
1.e—Equipment and Supplies to Support Operations		
1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations.	H. 7, 10; J.10.a,b,e, J.11; K.3.a.	2.1; 5.1; 8.2; 14.2
2—PROTECTIVE ACTION DECISION MAKING	.....	5, 7, 9, 14, 15, 16, 26, 28
2.A—Emergency Worker Exposure Control		
2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.	J.10.e,f; K.4	5.1, 5.3; 14.1
2.b—Radiological Assessment and Protective Recommendations and Decisions for the Plume Phase of the Emergency		
2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions.	I.8, 10; Supp. 3	7.1
2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy).	J.9; J.10.f,m	9.1; 14.1
2.c—Protective Action Decisions Consideration for the Protection of Special Populations		
2.c.1: Protective action decisions are made, as appropriate, for special population groups.	J.9; J.10.d,e	9.1; 15.1; 16.1
2.d—Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway		
2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria.	J.11	26.1, 26.2
2.e—Radiological Assessment and Decision-Making Concerning Relocation, Reentry, and Return		
2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessment of radiological conditions and criteria in the ORO's plan and/or procedures.	I.10; M.1	28.1, 28.2, 28.3, 28.4, 28.5
3. PROTECTIVE ACTION IMPLEMENTATION	.....	5, 11, 14, 15, 16, 17, 27, 29
3.a—Implementation of Emergency Worker Exposure Control		
3.a.1: The OROs issues appropriate dosimetry and procedures, and manages radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart.	K.3.a, 3.b	5.1, 5.2
3.b—Implementation of KI Decision		
3.b.1: KI and appropriate instructions are made available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.	J.10.e	14.1, 14.3
3.c—Implementation of Protective Actions for Special Populations		
3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.	J.10.c,d,g	15.1, 15.2
3.c.2: OROs/School officials decide upon and implement protective actions for schools.	J.10.c,d,g	16.1, 16.2, 16.3
3.d—Implementation of Traffic and Access Control		
3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.	J.10.g,j	17.1, 17.2, 17.3
3.d.2: Impediments to evacuation are identified and resolved	J.10.k	17.4
3.e—Implementation of Ingestion Pathway Decisions		
3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.	J.9, 11	27.1

TABLE 1—COMPARISON OF PROPOSED EVALUATION AREAS WITH NUREG–0654/FEMA REP–1, REV. 1 PLANNING CRITERIA AND REP 14/15 OBJECTIVES AND CRITERIA—Continued

Evaluation area/Sub-element/Criterion	NUREG 0654 criteria	REP–14/15 objective & criterion
3.e.2: Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production.	J.9, 11	11.4; 27.2; 27.3
3.f—Implementation of Relocation, Re-entry, and Return Decisions		
3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented.	M.1, 3	29.1, 29.2, 29.3, 29.4
4—FIELD MEASUREMENT AND ANALYSIS		6, 8, 24, 25
4.a—Plume Phase Field Measurement and Analyses		
4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.	H.10; I.7, 8, 9	6.1; 8.1, 8.2
4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure.	I.8,11; J.10.a; H.12	6.3, 6.4
4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.	I.9	6.4,6.5; 8.3, 8.4, 8.5, 8.6
4.b—Post Plume Phase Field Measurements and Sampling		
4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making.	I.8; J.11	24.1
4.c—Laboratory Operations		
4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.	C.3; J.11	25.1, 25.2
5—EMERGENCY NOTIFICATION AND PUBLIC INFORMATION		10, 11, 12, 13
5.a—Activation of the Prompt Alert and Notification System		
5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance.	10 CFR Part 50, Appendix E.IV.D; E.5, 6, 7.	10.1
5.a.2: [RESERVED]		
5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.	Appendix 3: B.2.c; E.6	10.2, 10.3
5.b—Emergency Information and Instructions for the Public and the Media		
5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.	E.5,7; G.3.a; G.4.c	11.1, 11.2, 11.3; 12.1, 12.2; 13.1, 13.2
6—SUPPORT OPERATIONS/FACILITIES		18, 19, 20, 21, 22
6.a—Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees		
6.a.1: The reception center/emergency workers facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers.	J.10.h; J.12; K.5.a	18.1, 18.2, 18.3, 18.4, 18.5, 22.1, 22.2
6.b—Monitoring and Decontamination of Emergency Worker Equipment		
6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment, including vehicles.	K.5b	22.1; 22.3
6.c—Temporary Care of Evacuees		
6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (Found in MASS CARE—Preparedness Operations, ARC 3031) Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.	J.10.h; J.12	19.1, 19.2
6.d—Transportation and Treatment of Contaminated Injured Individuals		
6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring decontamination, and medical services to contaminated injured individuals.	F.2; H.10l K.5,a,b; L.1; L.4	20.1, 20.2 20.3, 20.4; 20.5; 21.1, 21.2, 21.3, 21.4

Evaluation Area 1

Emergency Operations Management

Sub-Element 1.a—Mobilization

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG–0654, A.4; D.3, 4; E.1, 2; H.4)

Extent of Play

Responsible OROs should demonstrate the capability to receive notification of an emergency situation from the licensee, verify the notification, and contact, alert, and mobilize key emergency personnel in a timely manner. Responsible OROs should demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations. Activation of facilities should be completed in accordance with the plan and/or procedures. Pre-positioning of emergency personnel is appropriate, in accordance with the extent of play agreement, at those facilities located beyond a normal commuting distance from the individual's duty location or residence. Further, pre-positioning of staff for out-of-sequence demonstrations is appropriate in accordance with the extent of play agreement.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 1.b—Facilities

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have facilities to support the emergency response.

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG–0654, H.3)

Extent of Play

Facilities will only be specifically evaluated for this criterion if they are new or have substantial changes in structure or mission. Responsible OROs should demonstrate the availability of facilities that support the accomplishment of emergency operations. Some of the areas to be considered are: adequate space, furnishings, lighting, restrooms, ventilation, backup power and/or alternate facility (if required to support operations).

Facilities must be set up based on the ORO's plans and procedures and demonstrated as they would be used in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 1.c—Direction and Control

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to control their overall response to an emergency.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG–0654, A.1.d; A.2.a, b)

Extent of Play

Leadership personnel should demonstrate the ability to carry out essential functions of the response effort, for example: keeping the staff informed through periodic briefings and/or other means, coordinating with other appropriate OROs, and ensuring completion of requirements and requests.

All activities associated with direction and control must be performed based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise noted above or indicated in the extent of play agreement.

Sub-Element 1.d—Communications Equipment

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should establish reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as the following: appropriate contiguous governments within the emergency planning zone (EPZ), Federal emergency response organizations, the licensee and its facilities, emergency operations centers (EOC), and field teams.

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG–0654, F.1, 2)

Extent of Play

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed. Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exists. The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system, as negotiated in the extent of play agreement.

All activities associated with the management of communications capabilities must be demonstrated based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise noted above or in the extent of play agreement.

Sub-Element 1.e—Equipment and Supplies To Support Operations

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have emergency equipment and supplies adequate to support the emergency response.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG–0654, H.7,10; J.10.a, b, e, J.11; K.3.a)

Extent of Play

Equipment within the facility (facilities) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency

operations. Use of maps and displays is encouraged.

All instruments, including air sampling flow meters (field teams only), should be inspected, inventoried, and operationally checked before each use. They should be calibrated in accordance with the manufacturer's recommendations (or at least annually for the unmodified CDV–700 series or if there are no manufacturer's recommendations for a specific instrument; modified CDV–700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer.). A label indicating such calibration should be on each instrument or verifiable by other means. Note: Field team equipment is evaluated under 4.a.1; radiological laboratory equipment under 4.c.1; reception center and emergency worker facilities' equipment is evaluated under 6.a.1; and ambulance and medical facilities' equipment is evaluated under 6.d.1.

Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers should be available for issuance to all categories of emergency workers that could be deployed from that facility. Appropriate direct-reading dosimetry should allow individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans and procedures.

Dosimetry should be inspected for electrical leakage at least annually and replaced, if necessary. CDV–138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced if necessary. This leakage testing will be verified during the exercise, through documentation submitted in the Annual Letter of Certification, and/or through a staff assistance visit.

Responsible OROs should demonstrate the capability to maintain inventories of KI sufficient for use by emergency workers, as indicated on rosters; institutionalized individuals, as indicated in capacity lists for facilities; and, where stipulated by the plan and/or procedures, members of the general public (including transients) within the plume pathway EPZ.

Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from FEMA indicating that the KI supply remains potent, in accordance with Food and Drug Administration (FDA) guidance. FEMA issues these letters based upon the findings of the certified laboratory that performed the analysis at the ORO's request and expense.

At locations where traffic and access control personnel are deployed, appropriate equipment (e.g., vehicles, barriers, traffic cones and signs, etc.) should be available or their availability described.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Evaluation Area 2

Protective Action Decision-Making

Sub-Element 2.a—Emergency Worker Exposure Control

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans and procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration Total Effective Dose Equivalent or organ-specific limits) identified in the ORO's plans and procedures.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG–0654, K.4, J.10. e, f)

Extent of Play

OROs authorized to send emergency workers into the plume exposure pathway EPZ should demonstrate a capability to meet the criterion based on their emergency plans and procedures.

Responsible OROs should demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.

As appropriate, OROs should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure, based on the ORO's plan and/or procedures or projected thyroid dose compared with the established Protective Action Guides (PAGs) for KI administration.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 2.b.—Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to independently project integrated dose from exposure rates or other information and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation. OROs base these choices on PAGs from the ORO's plans and procedures or EPA 400–R–92–001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (e.g., other affected OROs), availability of appropriate in-place shelter, weather conditions, evacuation time estimates, and situations that create higher than normal risk from evacuation.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG–0654, I.8, 10 and Supplement 3)

Extent of Play

During the initial stage of the emergency response, following notification of plant conditions that may

warrant offsite protective actions, the ORO should demonstrate the capability to use appropriate means, described in the plan and/or procedures, to develop protective action recommendations (PAR) for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available.

When release and meteorological data are provided by the licensee, the ORO also considers these data. The ORO should demonstrate a reliable capability to independently validate dose projections. The types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs appropriate to the scenario. In all cases, calculation of projected dose should be demonstrated. Projected doses should be related to quantities and units of the PAG to which they will be compared. PARs should be promptly transmitted to decision-makers in a prearranged format.

Differences greater than a factor of 10 between projected doses by the licensee and the ORO should be discussed with the licensee with respect to the input data and assumptions used, the use of different models, or other possible reasons. Resolution of these differences should be incorporated into the PAR if timely and appropriate. The ORO should demonstrate the capability to use any additional data to refine projected doses and exposure rates and revise the associated PARs.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PAD) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG–0654, J.9, 10.f,m)

Extent of Play

Offsite Response Organizations (ORO) should have the capability to make both initial and subsequent PADs. They should demonstrate the capability to make initial PADs in a timely manner appropriate to the situation, based on notification from the licensee, assessment of plant status and releases, and PARs from the utility and ORO staff.

The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field monitoring data, or information on plant conditions. The decision-makers should demonstrate the capability to change protective actions as appropriate based on these projections.

If the ORO has determined that KI will be used as a protective measure for the general public under offsite plans, then the ORO should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for the general public to supplement sheltering and evacuation. This decision should be based on the ORO's plan and/or procedures or projected thyroid dose compared with the established PAG for KI administration. The KI decision-making process should involve close coordination with appropriate assessment and decision-making staff.

If more than one ORO is involved in decision-making, OROs should communicate and coordinate PADs with affected OROs. OROs should demonstrate the capability to communicate the contents of decisions to the affected jurisdictions.

All decision-making activities by ORO personnel must be performed based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 2.c—Protective Action Decisions Consideration for the Protection of Special Populations

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to determine protective action recommendations, including evacuation, sheltering and use of potassium iodide (KI), if applicable, for special population groups (e.g., hospitals, nursing homes, correctional facilities, schools, licensed day care centers, mobility impaired individuals, and transportation dependent individuals). Focus is on those special population groups that are (or potentially will be) affected by a radiological release from a nuclear power plant.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG–0654, J.9, J.10.d,e)

Extent of Play

Usually, it is appropriate to implement evacuation in areas where doses are projected to exceed the lower end of the range of PAGs, except for situations where there is a high-risk environment or where high-risk groups (e.g., the immobile or infirm) are involved. In these cases, examples of factors that should be considered are: weather conditions, shelter availability, Evacuation Time Estimates, availability of transportation assets, risk of evacuation vs. risk from the avoided dose, and precautionary school evacuations. In situations where an institutionalized population cannot be evacuated, the administration of KI should be considered by the OROs.

All decision-making activities associated with protective actions, including consideration of available resources, for special population groups must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 2.d.—Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate PAGs, and make timely, appropriate protective action decisions to mitigate exposure from the ingestion pathway.

During an accident at a nuclear power plant, a release of radioactive material may contaminate water supplies and agricultural products in the surrounding areas. Any such contamination would likely occur during the plume phase of the accident and, depending on the nature of the release, could impact the ingestion pathway for weeks or years.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria. (NUREG–0654, J.11)

Extent of Play

It is expected that the Offsite Response Organizations (ORO) will take precautionary actions to protect food and water supplies, or to minimize exposure to potentially contaminated water and food, in accordance with their respective plans and procedures. Often such precautionary actions are initiated by the OROs based on criteria related to the facility's Emergency Classification Levels (ECL). Such actions may include recommendations to place milk animals on stored feed and to use protected water supplies.

The ORO should use its procedures (for example, development of a sampling plan) to assess the radiological consequences of a release on the food and water supplies. The ORO's assessment should include the evaluation of the radiological analyses of representative samples of water, food, and other ingestible substances of local interest from potentially impacted areas, the characterization of the releases from the facility, and the extent of areas potentially impacted by the release. During this assessment, OROs should consider the use of agricultural and watershed data within the 50-mile EPZ. The radiological impacts on the food and water should then be compared to the appropriate ingestion PAGs contained in the ORO's plan and/or procedures. (The plan and/or procedures may contain PAGs based on specific dose commitment criteria or based on criteria as recommended by current Food and Drug Administration guidance.) Timely and appropriate recommendations should be provided to the ORO decision-makers group for implementation decisions. As time permits, the ORO may also include a comparison of taking or not taking a given action on the resultant ingestion pathway dose commitments.

The ORO should demonstrate timely decisions to minimize radiological impacts from the ingestion pathway, based on the given assessments and other information available. Any such decisions should be communicated and, to the extent practical, coordinated with neighboring and local OROs.

OROs should use Federal resources, as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (e.g., compacts, nuclear insurers, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 2.e.—Radiological Assessment and Decision-Making Concerning Relocation, Re-Entry, and Return

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to make decisions on relocation, re-entry, and return of the general public. These decisions are essential for the protection of the public from the direct long-term exposure to deposited radioactive materials from a severe accident at a nuclear power plant.

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG–0654, I.10; M.1)

Extent of Play

Relocation: OROs should demonstrate the capability to estimate integrated dose in contaminated areas and to compare these estimates with PAGs, apply decision criteria for relocation of those individuals in the general public who have not been evacuated but where projected doses are in excess of relocation PAGs, and control access to evacuated and restricted areas. Decisions are made for relocating members of the evacuated public who lived in areas that now have residual radiation levels in excess of the PAGs. Determination of areas to be restricted should be based on factors such as the mix of radionuclides in deposited materials, calculated exposure rates vs. the PAGs, and field samples of vegetation and soil analyses.

Re-entry: Decisions should be made regarding the location of control points and policies regarding access and exposure control for emergency workers and members of the general public who need to temporarily enter the evacuated area to perform specific tasks or missions.

Examples of control procedures are: the assignment of, or checking for, direct-reading and non-direct-reading dosimetry for emergency workers; questions regarding the individual's objectives and locations expected to be visited and associated time frames; availability of maps and plots of radiation exposure rates; advice on areas to avoid; and procedures for exit including: monitoring of individuals, vehicles, and equipment; decision criteria regarding decontamination; and proper disposition of emergency worker dosimetry and maintenance of emergency worker radiation exposure records.

Responsible OROs should demonstrate the capability to develop a strategy for authorized re-entry of individuals into the restricted zone, based on established decision criteria. OROs should demonstrate the capability to modify those policies for security purposes (e.g., police patrols), for maintenance of essential services (e.g., fire protection and utilities), and for other critical functions. They should demonstrate the capability to use decision making criteria in allowing access to the restricted zone by the public for various reasons, such as to maintain property (e.g., to care for farm animals or secure machinery for storage), or to retrieve important possessions. Coordinated policies for access and exposure control should be developed among all agencies with roles to perform in the restricted zone. OROs should demonstrate the capability to establish policies for provision of dosimetry to all individuals allowed to re-enter the restricted zone. The extent that OROs need to develop policies on re-entry will be determined by scenario events.

Return: Decisions are to be based on environmental data and political boundaries or physical/geological features, which allow identification of the boundaries of areas to which members of the general public may return. Return is permitted to the boundary of the restricted area that is based on the relocation PAG.

Other factors that the ORO should consider are, for example: conditions that permit the cancellation of the Emergency Classification Level and the relaxation of associated restrictive measures; basing return recommendations (i.e., permitting populations that were previously evacuated to reoccupy their homes and businesses on an unrestricted basis) on measurements of radiation from ground deposition; and the capability to identify services and facilities that require restoration within a few days and to identify the procedures and resources for their restoration. Examples of these services and facilities are: medical and social services, utilities, roads, schools, and intermediate term housing for relocated persons.

Evaluation Area 3

Protective Action Implementation

Sub-Element 3.a—Implementation of Emergency Worker Exposure Control

Intent

This sub-element is derived from NUREG–0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimetry and permanent record dosimetry; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in

excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG–0654, K.3.a,b)

Extent of Play

OROs should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimeter chargers, and instructions on the use of dosimetry to emergency workers. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the ORO's plans and procedures.

Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures. OROs should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g., written procedures and/or co-workers) in providing responses.

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimetry. Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 3.b—Implementation of KI Decision

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to provide radioprotective drugs for emergency workers, institutionalized individuals, and, if in the plan and/or procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to emergency workers and institutionalized individuals, the provision of KI to the general public is an ORO option and is reflected in ORO's plans and procedures. Provisions should include the availability of adequate quantities, storage, and means of the distribution of radioprotective drugs.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate recordkeeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG–0654, J.10.e)

Extent of Play

Offsite Response Organizations (ORO) should demonstrate the capability to make KI available to emergency workers, institutionalized individuals, and, where provided for in the ORO plan and/or procedures, to members of the general public. OROs should demonstrate the capability to accomplish distribution of KI consistent with decisions made. Organizations should have the capability to develop and maintain lists of emergency workers and institutionalized individuals who have ingested KI, including documentation of the date(s) and time(s) they were instructed to ingest KI. The ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI is not necessary. OROs should demonstrate the capability to formulate and disseminate appropriate instructions on the use of KI for those advised to take it. If a recommendation is made for the general public to take KI, appropriate information should be provided to the public by the means of notification specified in the ORO's plan and/or procedures.

Emergency workers should demonstrate the basic knowledge of procedures for the use of KI whether or not the scenario drives the use of KI. This can be accomplished by an interview with the evaluator.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-element 3.c—Implementation of Protective Actions for Special Populations

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to implement protective action decisions, including evacuation and/or sheltering, for all special populations. Focus is on those special populations that are (or potentially will be) affected by a radiological release from a nuclear power plant.

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG–0654, J.10.c,d,g)

Extent of Play

Applicable OROs should demonstrate the capability to alert and notify (e.g.,

provide protective action recommendations and emergency information and instructions) special populations (hospitals, nursing homes, correctional facilities, mobility impaired individuals, transportation dependent, etc.). OROs should demonstrate the capability to provide for the needs of special populations in accordance with the ORO's plans and procedures.

Contact with special populations and reception facilities may be actual or simulated, as agreed to in the Extent of Play. Some contacts with transportation providers should be actual, as negotiated in the extent of play. All actual and simulated contacts should be logged.

All implementing activities associated with protective actions for special populations must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG–0654, J.10.c,d,g)

Extent of Play

Applicable OROs should demonstrate the capability to alert and notify all public school systems/districts of emergency conditions that are expected to or may necessitate protective actions for students. Contacts with public school systems/districts must be actual.

In accordance with plans and/or procedures, OROs and/or officials of public school systems/districts should demonstrate the capability to make prompt decisions on protective actions for students. Officials should demonstrate that the decision making process for protective actions considers (i.e., either accepts automatically or gives heavy weight to) protective action recommendations made by ORO personnel, the ECL at which these recommendations are received, preplanned strategies for protective actions for that ECL, and the location of students at the time (e.g., whether the students are still at home, en route to the school, or at the school).

Public school systems/districts shall demonstrate the ability to implement protective action decisions for students. The demonstration shall be made as follows: At least one school in each affected school system or district, as appropriate, needs to demonstrate the implementation of protective actions. The implementation of canceling the school day, dismissing early, or sheltering should be simulated by describing to evaluators the procedures that would be followed. If evacuation is the implemented protective action, all activities to coordinate and complete the evacuation of students to reception centers, congregate care centers, or host schools may actually be demonstrated or accomplished through an interview process. If accomplished through an interview process, appropriate school personnel including decision making officials (e.g., superintendent/principal, transportation director/bus dispatcher), and at least one bus driver (and the bus driver's escort, if applicable) should be available to demonstrate knowledge of their role(s) in the evacuation of school children. Communications capabilities between school officials and the buses, if required by the plan and/or procedures, should be verified.

Officials of the school system(s) should demonstrate the capability to develop and provide timely information to OROs for use in messages to parents, the general public, and the media on the status of protective actions for schools.

The provisions of this criterion also apply to any private schools, private kindergartens and day care centers that participate in REP exercises pursuant to the ORO's plans and procedures as negotiated in the Extent of Play Agreement.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 3.d.—Implementation of Traffic and Access Control

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to implement protective action plans, including relocation and restriction of access to evacuated/sheltered areas. This sub-element focuses on selecting, establishing, and staffing of traffic and access control points and removal of impediments to the flow of evacuation traffic.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG–0654, J.10.g,j)

Extent of Play

OROs should demonstrate the capability to select, establish, and staff appropriate traffic and access control points, consistent with protective action decisions (for example, evacuating, sheltering, and relocation), in a timely manner. OROs should demonstrate the capability to provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.

Traffic and access control staff should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview, in accordance with the extent of play agreement.

In instances where OROs lack authority necessary to control access by certain types of traffic (rail, water, and air traffic), they should demonstrate the capability to contact the State or Federal agencies with authority to control access.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG–0654, J.10.k)

Extent of Play

OROs should demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments, such as wreckers, need not be demonstrated; however, all contacts, actual or simulated, should be logged.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 3.e—Implementation of Ingestion Pathway Decisions

Intent

This sub-element is derived from NUREG–0654, which provides that OROs should have the capability to implement protective actions, based on criteria recommended by current Food and Drug Administration guidance, for the ingestion pathway zone (IPZ), the area within an approximate 50-mile radius of the nuclear power plant. This sub-element focuses on those actions required for implementation of protective actions.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion

exposure pathway emergency planning zone for implementation of protective actions. NUREG–0654, J.9, 11)

Extent of Play

Applicable OROs should demonstrate the capability to secure and utilize current information on the locations of dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points to implement protective actions within the ingestion pathway EPZ. OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, nuclear insurers, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG–0654, J.9, 11)

Extent of Play

Development of measures and strategies for implementation of IPZ protective actions should be demonstrated by formulation of protective action information for the general public and food producers and processors. This includes the capability for the rapid reproduction and distribution of appropriate reproduction-ready information and instructions to pre-determined individuals and businesses. OROs should demonstrate the capability to control, restrict or prevent distribution of contaminated food by commercial sectors. Exercise play should include demonstration of communications and coordination between organizations to implement protective actions. However, actual field play of implementation activities may be simulated. For example, communications and coordination with agencies responsible for enforcing food controls within the IPZ should be demonstrated, but actual communications with food producers and processors may be simulated.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 3.f—Implementation of Relocation, Re-Entry, and Return Decisions

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should demonstrate the capability to implement plans, procedures, and decisions for relocation, re-entry, and return. Implementation of these decisions is essential for the protection of the public from the direct long-term exposure to deposited radioactive materials from a severe accident at a commercial nuclear power plant.

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented. (NUREG–0654, M.1, 3)

Extent of Play

Relocation: OROs should demonstrate the capability to coordinate and implement decisions concerning relocation of individuals, not previously evacuated, to an area where radiological contamination will not expose the general public to doses that exceed the relocation PAGs. OROs should also demonstrate the capability to provide for short-term or long-term relocation of evacuees who lived in areas that have residual radiation levels above the PAGs.

Areas of consideration should include the capability to communicate with OROs regarding timing of actions, notification of the population of the procedures for relocation, and the notification of, and advice for, evacuated individuals who will be converted to relocation status in situations where they will not be able to return to their homes due to high levels of contamination. OROs should also demonstrate the capability to communicate instructions to the public regarding relocation decisions.

Re-entry: OROs should demonstrate the capability to control re-entry and exit of individuals who need to temporarily re-enter the restricted area, to protect them from unnecessary radiation exposure and for exit of vehicles and other equipment to control the spread of contamination outside the restricted area. Monitoring and decontamination facilities will be established as appropriate.

Examples of control procedure subjects are: (1) The assignment of, or checking for, direct-reading and non-direct-reading dosimetry for emergency workers; (2) questions regarding the individuals' objectives and locations expected to be visited and associated timeframes; (3) maps and plots of radiation exposure rates; (4) advice on areas to avoid; and procedures for exit, including monitoring of individuals, vehicles, and equipment, decision criteria regarding contamination, proper disposition of emergency worker dosimetry, and maintenance of emergency worker radiation exposure records.

Return: OROs should demonstrate the capability to implement policies concerning return of members of the public to areas that were evacuated during the plume phase. OROs should demonstrate the capability to identify and prioritize services and facilities that require restoration within a few days, and to identify the procedures and resources for their restoration. Examples of these services and facilities are medical and social services, utilities, roads, schools, and intermediate term housing for relocated persons.

Communications among OROs for relocation, re-entry, and return may be simulated; however all simulated or actual contacts should be documented. These discussions may be accomplished in a group setting.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, nuclear insurers, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Evaluation Area 4

Field Measurement And Analysis

Sub-Element 4.a—Plume Phase Field Measurements and Analyses

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG–0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne

radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume. In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. This does not imply that plume exposure projections should be made from the field data. Adequate equipment and procedures are essential to such field measurement efforts.

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates. (NUREG–0654, H.10; I.7, 8, 9)

Extent of Play

Field teams should be equipped with all instrumentation and supplies necessary to accomplish their mission. This should include instruments capable of measuring gamma exposure rates and detecting the presence of beta radiation. These instruments should be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on the air sample collection media, consistent with the intended use of the instrument and the ORO's plans and procedures. An appropriate radioactive check source should be used to verify proper operational response for each low range radiation measurement instrument (less than 1 R/hr) and for high range instruments when available. If a source is not available for a high range instrument, a procedure should exist to operationally test the instrument before entering an area where only a high range instrument can make useful readings.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG–0654, H.12; I.8, 11; J.10.a)

Extent of Play

Responsible Offsite Response Organizations (ORO) should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.

Field measurements are needed to help characterize the release and to support the adequacy of implemented protective actions or to be a factor in modifying protective actions. Teams should be directed to take measurements in such locations, at such times to provide information sufficient to characterize the plume and impacts.

If the responsibility to obtain peak measurements in the plume has been accepted by licensee field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by State and local monitoring teams. If the licensee teams do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all field teams (licensee, Federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated. OROs should use Federal resources as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (e.g., compacts, utility, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG–0654, I. 9)

Extent of Play

Field teams should demonstrate the capability to report measurements and field data pertaining to the measurement of airborne radioiodine and particulates and ambient radiation to the field team coordinator, dose assessment, or other appropriate authority. If samples have radioactivity significantly above background, the appropriate authority should consider the need for expedited laboratory analyses of these samples. OROs should share data in a timely manner with all appropriate OROs. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, utility, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 4.b—Post Plume Phase Field Measurements and Sampling

Intent

This sub-element is derived from NUREG–0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the IPZ and for relocation, re-entry and return measures. This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making. (NUREG–0654, I.8; J.11)

Extent of Play

The ORO's field team should demonstrate the capability to take measurements and samples, at such times and locations as directed, to enable an adequate assessment of the ingestion pathway and to support re-entry, relocation, and return decisions. When resources are available, the use of aerial surveys and in-situ gamma measurement is appropriate. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in

accordance with the ORO's plan and/or procedures.

Ingestion pathway samples should be secured from agricultural products and water. Samples in support of relocation and return should be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, utility, nuclear insurers, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 4.c—Laboratory Operations

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to perform laboratory analyses of radioactivity in air, liquid, and environmental samples to support protective action decision-making.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG–0654, C.3; J.11)

Extent of Play

The laboratory staff should demonstrate the capability to follow appropriate procedures for receiving samples, including logging of information, preventing contamination of the laboratory, preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (e.g., milk), and keeping track of sample identity. In addition, the laboratory staff should demonstrate the capability to prepare samples for conducting measurements.

The laboratory should be appropriately equipped to provide analyses of media, as requested, on a timely basis, of sufficient quality and sensitivity to support assessments and decisions as anticipated by the ORO's plans and procedures. The laboratory (laboratories) instrument calibrations should be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident should be as described in the plans and procedures. New or revised methods may be used to analyze atypical radionuclide releases (e.g., transuranics or as a result of a terrorist event) or if warranted by circumstances of the event. Analysis may require resources beyond those of the ORO.

The laboratory staff should be qualified in radioanalytical techniques and contamination control procedures.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, utility, nuclear insurers, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Evaluation Area 5

Emergency Notification and Public Information

Sub-Element 5.a—Activation of the Prompt Alert and Notification System

Intent

This sub-element is derived from NUREG–0654, which provides that OROs should have the capability to provide prompt instructions to the public within the plume pathway EPZ. Specific provisions addressed in this sub-element are derived from the Nuclear Regulatory Commission (NRC) regulations (10 CFR Part 50, Appendix E.IV.D.), and FEMA–REP–10, ''Guide for the Evaluation of Alert and Notification systems for Nuclear Power Plants.''

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D and NUREG–0654, E.5, 6,7)

Extent of Play

Responsible Offsite Response Organizations (ORO) should demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas (permanent resident and transient) throughout the 10-mile plume pathway EPZ. Following the decision to activate the alert and notification system, in accordance with the ORO's plan and/or procedures, completion of system activation should be accomplished in a timely manner (will not be subject to specific time requirements) for primary alerting/notification. The initial message should include the elements required by current FEMA REP guidance.

For exercise purposes, timely is defined as ''the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay.'' If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

Procedures to broadcast the message should be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test messages is not required. The alert signal activation may be simulated. However, the procedures should be demonstrated up to the point of actual activation. The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with appropriate personnel from the primary notification system.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated in the extent of play agreement.

Criterion 5.a.2: [Reserved]

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG–0654, E. 6, Appendix 3.B.2.c)

Extent of Play

Offsite Response Organizations (ORO) with FEMA-approved exception areas (identified in the approved Alert and Notification System Design Report) 5–10 miles from the nuclear power plant should demonstrate the capability to accomplish primary alerting and notification of the exception area(s) within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The 45-

minute clock will begin when the OROs make the decision to activate the alert and notification system for the first time for a specific emergency situation. The initial message should, at a minimum, include: a statement that an emergency exists at the plant and where to obtain additional information.

For exception area alerting, at least one route needs to be demonstrated and evaluated. The selected route(s) should vary from exercise to exercise. However, the most difficult route should be demonstrated at least once every six years. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent of play. Actual testing of the mobile public address system will be conducted at some agreed-upon location.

Backup alert and notification of the public should be completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. Backup route alerting only needs to be demonstrated and evaluated, in accordance with the ORO's plan and/or procedures and the extent of play agreement, if the exercise scenario calls for failure of any portion of the primary system(s), or if any portion of the primary system(s) actually fails to function. If demonstrated, only one route needs to be selected and demonstrated. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent of play. Actual testing of the mobile public address system will be conducted at some agreed-upon location.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated in the extent of play agreement.

Sub-Element 5.b—Emergency Information and Instructions for the Public and the Media

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to disseminate to the public appropriate emergency information and instructions, including any recommended protective actions. In addition, NUREG–0654 provides that OROs should ensure that the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG–0654 also provides that a system should be available for dealing with rumors. This system will hereafter be known as the public inquiry hotline.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG–0654, E. 5, 7; G.3.a, G.4.c)

Extent of Play

Subsequent emergency information and instructions should be provided to the public and the media in a timely manner (will not be subject to specific time requirements). For exercise purposes, timely is defined as ''the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay.'' If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

The ORO should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, information concerning pets, shelter-in-place instructions, information concerning protective actions for schools and special populations, public inquiry telephone number, etc.) to assist the public in carrying out protective action decisions provided to them. The ORO should also be prepared to disclose and explain the Emergency Classification Level (ECL) of the incident. At a minimum, this information must be included in media briefings and/or media releases. OROs should demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion pathway EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

The emergency information should be all-inclusive by including previously identified protective action areas that are still valid, as well as new areas. The OROs should demonstrate the capability to ensure that emergency information that is no longer valid is rescinded and not repeated by broadcast media. In addition, the OROs should demonstrate the capability to ensure that current emergency information is repeated at pre-established intervals in accordance with the plan and/or procedures.

OROs should demonstrate the capability to develop emergency information in a non-English language when required by the plan and/or procedures.

If ingestion pathway measures are exercised, OROs should demonstrate that a system exists for rapid dissemination of ingestion pathway information to pre-determined individuals and businesses in accordance with the ORO's plan and/or procedures.

OROs should demonstrate the capability to provide timely, accurate, concise, and coordinated information to the news media for subsequent dissemination to the public. This would include demonstration of the capability to conduct timely and pertinent media briefings and distribute media releases as the situation warrants. The OROs should demonstrate the capability to respond appropriately to inquiries from the news media. All information presented in media briefings and media releases should be consistent with protective action decisions and other emergency information provided to the public. Copies of pertinent emergency information (e.g., EAS messages and media releases) and media information kits should be available for dissemination to the media.

OROs should demonstrate that an effective system is in place for dealing with calls to the public inquiry hotline. Hotline staff should demonstrate the capability to provide or obtain accurate information for callers or refer them to an appropriate information source. Information from the hotline staff, including information that corrects false or inaccurate information when trends are noted, should be included, as appropriate, in emergency information provided to the public, media briefings, and/or media releases.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Evaluation Area 6

Support Operation/Facilities

Sub-Element 6.a—Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to implement radiological monitoring and decontamination of evacuees and emergency workers, while minimizing contamination of the facility, and registration of evacuees at reception centers.

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG–0654, J.10.h; J.12; K.5.a)

Extent of Play

Radiological monitoring, decontamination, and registration facilities for evacuees/emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent of play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include ⅓ of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within 12 hours. Prior to using monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.

Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This monitoring productivity rate per hour is the number of evacuees that can be monitored per hour by the total complement of monitors using an appropriate monitoring procedure. A minimum of six individuals per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be meet. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate monitoring procedures should be demonstrated for a minimum of two emergency workers.

Decontamination of evacuees/emergency workers may be simulated and conducted by interview. The availability of provisions for separately showering should be demonstrated or explained. The staff should demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs and appropriate means (e.g., partitions, roped-off areas) to separate clean from potentially contaminated areas. Provisions should also exist to separate contaminated and uncontaminated individuals, provide changes of clothing for individuals whose clothing is contaminated, and store contaminated clothing and personal belongings to prevent further contamination of evacuees or facilities. In addition, for any individual found to be contaminated, procedures should be discussed concerning the handling of potential contamination of vehicles and personal belongings.

Monitoring personnel should explain the use of action levels for determining the need for decontamination. They should also explain the procedures for referring evacuees who cannot be adequately decontaminated for assessment and follow up in accordance with the ORO's plans and procedures. Contamination of the individual will be determined by controller inject and not simulated with any low-level radiation source.

The capability to register individuals upon completion of the monitoring and decontamination activities should be demonstrated. The registration activities demonstrated should include the establishment of a registration record for each individual, consisting of the individual's name, address, results of monitoring, and time of decontamination, if any, or as otherwise designated in the plan. Audio recorders, camcorders, or written records are all acceptable means for registration.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise indicated in the extent of play agreement.

Sub-Element 6.b—Monitoring and Decontamination of Emergency Worker Equipment

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment, including vehicles. (NUREG–0654, K.5.b)

Extent of Play

The monitoring staff should demonstrate the capability to monitor equipment, including vehicles, for contamination in accordance with the Offsite Response Organizations (ORO) plans and procedures. Specific attention should be given to equipment, including vehicles, that was in contact with individuals found to be contaminated. The monitoring staff should demonstrate the capability to make decisions on the need for decontamination of equipment, including vehicles, based on guidance levels and procedures stated in the plan and/or procedures.

The area to be used for monitoring and decontamination should be set up as it would be in an actual emergency, with all route markings, instrumentation, record keeping and contamination control measures in place. Monitoring procedures should be demonstrated for a minimum of one vehicle. It is generally not necessary to monitor the entire surface of vehicles. However, the capability to monitor areas such as air intake systems, radiator grills, bumpers, wheel wells, tires, and door handles should be demonstrated. Interior surfaces of vehicles that were in contact with individuals found to be contaminated should also be checked.

Decontamination capabilities, and provisions for vehicles and equipment that cannot be decontaminated, may be simulated and conducted by interview.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 6.c—Temporary Care of Evacuees

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) demonstrate the capability to establish relocation centers in host areas. Congregate care is normally provided in support of OROs by the American Red Cross (ARC) under existing letters of agreement.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (Found in MASS CARE—Preparedness Operations, ARC 3031) Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG–0654, J.10.h, J.12)

Extent of Play

Under this criterion, demonstration of congregate care centers may be conducted out of sequence with the exercise scenario. The evaluator should conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031. In this simulation, it is not necessary to set up operations as they would be in an actual emergency. Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this objective, exercise demonstration expectations should be clearly specified in extent-of-play agreements.

Congregate care staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate, and have been registered before entering the facility. This capability may be determined through an interview process.

If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities). However, availability of such items should be verified by providing the evaluator a list of sources with locations and estimates of quantities.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-Element 6.d—Transportation and Treatment of Contaminated Injured Individuals

Intent

This sub-element is derived from NUREG–0654, which provides that Offsite Response Organizations (ORO) should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG–0654, F.2; H.10; K.5.a, b; L.1, 4)

Extent of Play

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the victim.

Offsite Response Organizations (ORO) should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service for an extended time, any vehicle (e.g., car, truck, or van) may be utilized to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur prior to releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. Additionally, the ambulance crew should demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the victim may be performed prior to transport, done enroute, or deferred to the medical facility. Prior to using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated prior to and during transport and at the receiving medical facility.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.

The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Frequency for Evaluation of New Criteria

The REP–14 objectives are currently evaluated at the frequency described on Pages C–2.3 and C–2.4 of REP–14. Adoption of the new Exercise Evaluation Areas renders these pages obsolete. Table 2 establishes the minimum frequency with each of the Exercise Evaluation Areas would be exercised. FEMA is open to ORO proposals to voluntarily exercise certain criteria more frequently than the minimums listed below.

TABLE 2.—FEDERAL EVALUATION PROCESS MATRIX

Evaluation Area and Sub-Elements	Consolidates REP–14 objective	Minimum frequency [6]
1. Emergency Operations Management	1, 2, 3, 4, 5, 8, 14, 17, 30.	
a. Mobilization		Every Exercise
b. Facilities		Every Exercise [1]

TABLE 2.—FEDERAL EVALUATION PROCESS MATRIX—Continued

Evaluation Area and Sub-Elements	Consolidates REP–14 objective	Minimum frequency [6]
c. Direction and Control		Every Exercise [1]
d. Communications Equipment		Every Exercise [1]
e. Equipment and Supplies to Support Operations		Every Exercise [1]
2. Protective Action Decisionmaking	5, 7, 9, 14, 15, 16, 26, 28.	
a. Emergency Worker Exposure Control		Every Exercise
b. Radiological Assessment & Protective Action Recommendations & Decisions for the Plume Phase of the Emergency.		Every Exercise
c. Protective Action Decisions for the Protection of Special Populations.		Every Exercise
d. Radiological Assessment & Decisionmaking for the Ingestion Exposure Pathway [2].		Once in 6 yrs.
e. Radiological Assessment & Decisionmaking Concerning Relocation, Re-entry, and Return [2].		Once in 6 yrs.
3. Protective Action Implementation	5, 11, 14, 15, 16, 17, 27, 29.	
a. Implementation of Emergency Worker Exposure Control		Every Exercise
b. Implementation of KI Decision		Once in 6 yrs.
c. Implementation of Protective Actions for Special Populations.		Once in 6 yrs.[3]
d. Implementation of Traffic and Access Control [4]		Every Exercise
e. Implementation of Ingestion Pathway Decisions		Once in 6 yrs.
f. Implementation of Relocation, Re-entry, and Return Decisions.		Once in 6 yrs.
4. Field Measurement and Analysis	6, 8, 24, 25.	
a. Plume Phase Field Measurements & Analysis		Every Full Participation Exercise [6]
b. Post Plume Phase Field Measurements and Sampling		Once in 6 yrs.
c. Laboratory Operations		Once in 6 yrs.
5. Emergency Notification and Public Information	10, 11, 12, 13.	
a.1 Activation of the Prompt Alert and Notification System		Every Exercise
a.3 Notification of exception areas and/or Back-up Alert and Notification System within 45 minutes.		Every Exercise-as needed
b. Emergency Information & Instructions for the Public and the Media.		Every Exercise
6. Support Operations/Facilities	18, 19, 20, 21, 22.	
a. Monitoring & Decontamination of Evacuees and Emergency Workers & Registration of Evacuees.		Once in 6 yrs.[3]
b. Monitoring & Decontamination of Emergency Worker Equipment [3].		Once in 6 yrs.[3]
c. Temporary Care of Evacuees [5]		Once in 6 yrs.[5]
d. Transportation and Treatment of Contaminated Individuals.		Every Exercise

[1] See evaluation criteria for specific requirements.
[2] The plume phase and the post-plume phase (ingestion, relocation, re-entry and return) can be demonstrated separately.
[3] All facilities must be evaluated once during the six-year exercise cycle.
[4] Physical deployment of resources is not necessary.
[5] Facilities managed by the American Red Cross (ARC), under the ARC/FEMA Memorandum of Understanding, will be evaluated once when designated or when substantial changes occur; all other facilities not managed by the ARC must be evaluated once in the six-year exercise cycle.
[6] Each State within the 10-mile EPZ of a commercial nuclear power site shall fully participate in an exercise jointly with the licensee and appropriate local governments at least every two years. Each State with multiple sites within its boundaries shall fully participate in a joint exercise at some site on a rotational basis at least every two years. When not fully participating in an exercise at a site, the State shall partially participate at that site to support the full participation of the local governments.

Dated: September 6, 2001.

Lacy E. Suiter,

Assistant Director, Readiness, Response and Recovery Directorate.

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FEDERAL EMERGENCY MANAGEMENT AGENCY

Radiological Emergency Preparedness: Alert and Notification

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: FEMA is issuing revised guidance concerning the required content of an initial notification to the public in a plume Emergency Planning Zone (EPZ) following an incident at a nuclear power plant.

DATES: This guidance is effective October 1, 2001.

FOR FURTHER INFORMATION CONTACT: Vanessa E. Quinn, Chief, Radiological Emergency Preparedness Branch, Technological Hazards Division, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472; (202) 646–3664, or (e-mail) *vanessa.quinn@fema.gov.*

SUPPLEMENTARY INFORMATION: The Federal Emergency Management Agency (FEMA), through its Radiological Emergency Preparedness (REP) program, reviews the emergency response plans of Offsite Response Organizations (OROs), which are the State and local emergency management agencies responsible for responding to incidents involving nuclear power plants. FEMA also evaluates exercises that test the capability of OROs to perform in accordance with the provisions of their plans. These activities are undertaken