

Federal Emergency Management Agency

Radiological Emergency Preparedness
Program Manual

Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009)
and the Final Publication (October 2011)

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Executive Summary

This document focuses on the substantive changes made to the guidance in the REP Program Manual between the draft document issued for public comment on May 18, 2009 and the publication of the final document in October 2011. Most changes to the REP Program Manual were in response to public comments submitted on the draft document.

In addition to the substantive changes in this analysis, the final REP Program Manual contains innumerable minor changes in wording and formatting to improve readability and ensure compliance with Federal Plain Language Guidelines. These non-substantive changes can be viewed in the published red-line version of the REP Program Manual.

This analysis presents findings by topic, roughly following the order of the information presented in the REP Program Manual. Each topic includes the respective page numbers where it is found in the two publications and contains a breakdown of all of the following that apply:

- Material that is substantially unchanged between the two publications;
- Material that was in the 2009 publication but deleted in the 2011 publications;
- Material covering guidance that was substantially changed between the two publications; and
- Material that was added in the 2011 publication.

The main areas of substantive change are as follows:

- **Should/shall:** Language clarifying the use of the terms “should” and “shall” has been added.
- **Pets:** References to planning for household pets are deleted.
- **Unlicensed daycare centers:** References to unlicensed daycare centers have been removed.
- **Requirements versus guidance:** Bullets distinguishing requirements from general guidance have been added to all of the NUREG-0654/FEMA-REP-1 Criteria.
- **HSEEP compliance:** Language requiring offsite response organizations (OROs) to adopt Homeland Security Exercise Evaluation Program (HSEEP) methodology has been deleted (see NUREG-0654/FEMA-REP-1 Criterion A.1.a).
- **No/minimal release exercises:** Requirements for offsite response organizations to participate in licensee no/minimal release exercises have been modified (see NUREG-0654/FEMA-REP-1 Criterion N.1.b).
- **Ingestion pathway planning:** A new NUREG-0654/FEMA-REP-1 Criterion (N.1.d) is established covering ingestion pathway exercise requirements, and guidance for public information covering the ingestion pathway has been added (see Criterion G.1).
- **HSEEP process:** REP Exercise guidance has been expanded to cover the HSEEP planning and documentation processes in greater depth.
- **Realignment of Demonstration Criteria:** Activities under Demonstration Criteria 3.a.1 /3.b.1 and 6.a.1/6.b.1 have been rearranged for a more logical division of activities
- **Additional program administration guidance:** Guidance on REP/HSEEP integration, REP Evaluator Credentialing, Potassium Iodide for the Public, Conducting Scenario Reviews, and a list of commercial nuclear power plants have been added to Part IV.

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Table of Contents

1	Disclaimer.....	1
2	Part I: Introduction – Purpose and Scope	1
3	Part I: Introduction – Basis of the REP Program.....	3
4	Part I: Introduction – Evaluation of Radiological Emergency Preparedness.....	5
5	Part I: Introduction – Technical Basis for the REP Program.....	6
6	Part II: REP Planning Guidance – Introduction.....	7
7	Part II: Planning Guidance – NUREG Criterion A.1.a.....	8
8	Part II: Planning Guidance – NUREG Criterion A.1.b.....	8
9	Part II: Planning Guidance – NUREG Criterion A.1.c.....	9
10	Part II: REP Planning Guidance – NUREG Criterion A.1.d	9
11	Part II: REP Planning Guidance – NUREG Criterion A.1.e.....	10
12	Part II: REP Planning Guidance – NUREG Criterion A.2.a.....	10
13	Part II: REP Planning Guidance – NUREG Criterion A.2.b	11
14	Part II: REP Planning Guidance – NUREG Criterion A.3	11
15	Part II: REP Planning Guidance – NUREG Criterion A.4	12
16	Part II: REP Planning Guidance – Planning Standard B	13
17	Part II: REP Planning Guidance – NUREG Criterion C.1.a.....	13
18	Part II: REP Planning Guidance – NUREG Criterion C.1.b.....	13
19	Part II: REP Planning Guidance – NUREG Criterion C.1.c.....	14
20	Part II: REP Planning Guidance – NUREG Criterion C.2.a.....	14
21	Part II: REP Planning Guidance – NUREG Criterion C.3.....	15
22	Part II: REP Planning Guidance – NUREG Criterion C.4.....	15
23	Part II: REP Planning Guidance – NUREG Criterion C.5.....	15
24	Part II: REP Planning Guidance – NUREG Criterion C.6.....	16
25	Part II: REP Planning Guidance – NUREG Criteria D.1 – D.2.....	17
26	Part II: REP Planning Guidance – NUREG Criterion D.3	17
27	Part II: REP Planning Guidance – NUREG Criterion D.4	17
28	Part II: REP Planning Guidance – NUREG Criterion E.1	18
29	Part II: REP Planning Guidance – NUREG Criterion E.2.....	19
30	Part II: REP Planning Guidance – NUREG Criteria E.3 – E.4.....	19
31	Part II: REP Planning Guidance – NUREG Criterion E.5.....	19
32	Part II: REP Planning Guidance – NUREG Criterion E.6.....	20
33	Part II: REP Planning Guidance – NUREG Criterion E.7	21
34	Part II: REP Planning Guidance – NUREG Criterion F.1.a	22

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

35	Part II: REP Planning Guidance – NUREG Criterion F.1.b	23
36	Part II: REP Planning Guidance – NUREG Criterion F.1.c	23
37	Part II: REP Planning Guidance – NUREG Criterion F.1.d	23
38	Part II: REP Planning Guidance – NUREG Criterion F.1.e	24
39	Part II: REP Planning Guidance – NUREG Criterion F.1.f.....	24
40	Part II: REP Planning Guidance – NUREG Criterion F.2	24
41	Part II: REP Planning Guidance – NUREG Criterion F.3	25
42	Part II: REP Planning Guidance – NUREG Criterion G.1	25
43	Part II: REP Planning Guidance – NUREG Criterion G.2	28
44	Part II: REP Planning Guidance – NUREG Criterion G.3.a.....	28
45	Part II: REP Planning Guidance – NUREG Criterion G.3.b	29
46	Part II: REP Planning Guidance – NUREG Criterion G.4.a.....	29
47	Part II: REP Planning Guidance – NUREG Criterion G.4.b	30
48	Part II: REP Planning Guidance – NUREG Criterion G.4.c.....	30
49	Part II: REP Planning Guidance – NUREG Criterion G.5	31
50	Part II: REP Planning Guidance – NUREG Criteria H.1 – H.2.....	32
51	Part II: REP Planning Guidance – NUREG Criterion H.3	32
52	Part II: REP Planning Guidance – NUREG Criterion H.4	32
53	Part II: REP Planning Guidance – NUREG Criteria H.5 – H.6.....	33
54	Part II: REP Planning Guidance – NUREG Criterion H.7	33
55	Part II: REP Planning Guidance – NUREG Criteria H.8 – H.9.....	33
56	Part II: REP Planning Guidance – NUREG Criterion H.10	33
57	Part II: REP Planning Guidance – NUREG Criterion H.11	34
58	Part II: REP Planning Guidance – NUREG Criterion H.12	35
59	Part II: REP Planning Guidance – NUREG Criteria I.1 – I.6.....	35
60	Part II: REP Planning Guidance – NUREG Criterion I.7.....	35
61	Part II: REP Planning Guidance – NUREG Criterion I.8.....	36
62	Part II: REP Planning Guidance – NUREG Criterion I.9.....	37
63	Part II: REP Planning Guidance – NUREG Criterion I.10.....	37
64	Part II: REP Planning Guidance – NUREG Criterion I.11	38
65	Part II: REP Planning Guidance – NUREG Criterion J.1.....	38
66	Part II: REP Planning Guidance – NUREG Criterion J.2.....	38
67	Part II: REP Planning Guidance – NUREG Criteria J.3 – J.8	39
68	Part II: REP Planning Guidance – NUREG Criterion J.9.....	39
69	Part II: REP Planning Guidance – NUREG Criterion J.10.a.....	40
70	Part II: REP Planning Guidance – NUREG Criterion J.10.b.....	41

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

71	Part II: REP Planning Guidance – NUREG Criterion J.10.c	41
72	Part II: REP Planning Guidance – NUREG Criterion J.10.d.....	41
73	Part II: REP Planning Guidance – NUREG Criterion J.10.e	44
74	Part II: REP Planning Guidance – NUREG Criterion J.10.f	44
75	Part II: REP Planning Guidance – NUREG Criterion J.10.g.....	45
76	Part II: REP Planning Guidance – NUREG Criterion J.10.h.....	45
77	Part II: REP Planning Guidance – NUREG Criterion J.10.i.....	46
78	Part II: REP Planning Guidance – NUREG Criterion J.10.j.....	47
79	Part II: REP Planning Guidance – NUREG Criterion J.10.k.....	48
80	Part II: REP Planning Guidance – NUREG Criterion J.10.l.....	48
81	Part II: REP Planning Guidance – NUREG Criterion J.10.m.....	49
82	Part II: REP Planning Guidance – NUREG Criterion J.11.....	50
83	Part II: REP Planning Guidance – NUREG Criterion J.12.....	51
84	Part II: REP Planning Guidance – NUREG Criteria K.1 – K.2.....	51
85	Part II: REP Planning Guidance – NUREG Criterion K.3.a.....	52
86	Part II: REP Planning Guidance – NUREG Criterion K.3.b	54
87	Part II: REP Planning Guidance – NUREG Criterion K.4	54
88	Part II: REP Planning Guidance – NUREG Criterion K.5.a.....	55
89	Part II: REP Planning Guidance – NUREG Criterion K.5.b	55
90	Part II: REP Planning Guidance – NUREG Criteria K.6 – K.7.....	56
91	Part II: REP Planning Guidance – NUREG Criterion L.1	56
92	Part II: REP Planning Guidance – NUREG Criterion L.2.....	56
93	Part II: REP Planning Guidance – NUREG Criterion L.3.....	56
94	Part II: REP Planning Guidance – NUREG Criterion L.4.....	57
95	Part II: REP Planning Guidance – NUREG Criterion M.1	57
96	Part II: REP Planning Guidance – NUREG Criterion M.2.....	58
97	Part II: REP Planning Guidance – NUREG Criterion M.3.....	58
98	Part II: REP Planning Guidance – NUREG Criterion M.4.....	59
99	Part II: REP Planning Guidance – NUREG Criterion N.1.a.....	59
100	Part II: Planning Guidance – NUREG Criterion N1.b.....	60
101	Part II: REP Planning Guidance – NUREG Criterion N.1.c.....	62
102	Part II: REP Planning Guidance – NUREG Criterion N.1.d	63
103	Part II: REP Planning Guidance – NUREG Criterion N.2.a.....	64
104	Part II: REP Planning Guidance – NUREG Criterion N.2.b	65
105	Part II: REP Planning Guidance – NUREG Criterion N.2.c.....	65
106	Part II: REP Planning Guidance – NUREG Criterion N.2.d	65

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

107	Part II: REP Planning Guidance – NUREG Criteria N.2.e(1) – N.2.e(2).....	66
108	Part II: REP Planning Guidance – NUREG Criterion N.3	66
109	Part II: REP Planning Guidance – NUREG Criterion N.4	66
110	Part II: REP Planning Guidance – NUREG Criterion N.5	67
111	Part II: REP Planning Guidance – NUREG Criterion O.1	68
112	Part II: REP Planning Guidance – NUREG Criterion O.1.a – O.1.b.....	68
113	Part II: REP Planning Guidance – NUREG Criteria O.2 – O.3.....	68
114	Part II: REP Planning Guidance – NUREG Criterion O.4	69
115	Part II: REP Planning Guidance – NUREG Criterion O.5	69
116	Part II: REP Planning Guidance – NUREG Criterion P.1	70
117	Part II: REP Planning Guidance – NUREG Criterion P.2	70
118	Part II: REP Planning Guidance – NUREG Criterion P.3	71
119	Part II: REP Planning Guidance – NUREG Criterion P.4	71
120	Part II: REP Planning Guidance – NUREG Criterion P.5	72
121	Part II: REP Planning Guidance – NUREG Criterion P.6	72
122	Part II: REP Planning Guidance – NUREG Criterion P.7	72
123	Part II: REP Planning Guidance – NUREG Criterion P.8	73
124	Part II: REP Planning Guidance – NUREG Criterion P.9	73
125	Part II: REP Planning Guidance – NUREG Criterion P.10	74
126	Part II.D: REP Planning Guidance – Plan Reviews.....	74
127	Part II.E: REP Planning Guidance – Annual Letter of Certification	74
128	Part III: REP Demonstration Guidance – Introduction.....	74
129	Part III: REP Demonstration Guidance – REP Exercise Process	76
130	Part III: REP Demonstration Guidance – Scheduling REP Exercises	79
131	Part III: REP Demonstration Guidance – Full versus Partial Participation	82
132	Part III: REP Demonstration Guidance – Ingestion Pathway Exercise Requirements	82
133	Part III: REP Demonstration Guidance – Out of Sequence Demonstrations.....	83
134	Part III: REP Demonstration Guidance – Identifying Capabilities/Criteria to Be Demonstrated.....	83
135	Part III: REP Demonstration Guidance – Identifying Responsible OROs for Demonstration Criteria	84
136	Part III: REP Demonstration Guidance – Negotiating the Extent of Play	85
137	Part III: REP Demonstration Guidance – Exhibit II, Federal Evaluation Process Matrix	85
138	Part III: REP Demonstration Guidance – Developing Exercise Scenarios.....	93
139	Part III: REP Demonstration Guidance – Developing Exercise Documents	94
140	Part III: REP Demonstration Guidance – Holding Exercise Planning Meetings.....	96
141	Part III: REP Demonstration Guidance – Assigning and Confirming Evaluators	98
142	Part III: REP Demonstration Guidance – Pre-exercise Meetings/Briefings	98

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

143	Part III: REP Demonstration Guidance – Post-exercise Meetings	99
144	Part III: REP Demonstration Guidance – Identifying Exercise Issues	99
145	Part III: REP Demonstration Guidance – Classifying Issues.....	99
146	Part III: REP Demonstration Guidance – Correcting Issues during the Exercise.....	99
147	Part III: REP Demonstration Guidance – Issue Numbering	100
148	Part III: REP Demonstration Guidance – Determining Demonstration Criterion Status.....	100
149	Part III: REP Demonstration Guidance – After Action Reporting	100
150	Part III: REP Demonstration Guidance – Notifying the State of Deficiencies.....	101
151	Part III: REP Demonstration Guidance – Correcting Issues.....	101
152	Part III: REP Demonstration Guidance – Credit for Participation in an Actual Incident	101
153	Part III: REP Demonstration Guidance – Exercise Demonstration	102
154	Part III: REP Demonstration Guidance – Demonstration Criterion 1.a.1.....	105
155	Part III: REP Demonstration Guidance – Demonstration Criterion 1.b.1	106
156	Part III: REP Demonstration Guidance – Demonstration Criterion 1.c.1.....	106
157	Part III: REP Demonstration Guidance – Demonstration Criterion 1.d.1	107
158	Part III: REP Demonstration Guidance – Demonstration Criterion 1.e.1.....	107
159	Part III: REP Demonstration Guidance – Demonstration Criterion 2.a.1.....	108
160	Part III: REP Demonstration Guidance – Demonstration Criterion 2.b.1	108
161	Part III: REP Demonstration Guidance – Demonstration Criterion 2.b.2	109
162	Part III: REP Demonstration Guidance – Demonstration Criterion 2.c.1.....	109
163	Part III: REP Demonstration Guidance – Demonstration Criterion 2.d.1	110
164	Part III: REP Demonstration Guidance – Demonstration Criterion 2.e.1.....	111
165	Part III: REP Demonstration Guidance – Demonstration Criterion 3.a.1.....	111
166	Part III: REP Demonstration Guidance – Demonstration Criterion 3.b.1	112
167	Part III: REP Demonstration Guidance – Demonstration Criterion 3.c.1.....	113
168	Part III: REP Demonstration Guidance – Demonstration Criterion 3.c.2.....	113
169	Part III: REP Demonstration Guidance – Demonstration Criterion 3.d.1	114
170	Part III: REP Demonstration Guidance – Demonstration Criterion 3.d.2	114
171	Part III: REP Demonstration Guidance – Demonstration Criterion 3.e.1.....	115
172	Part III: REP Demonstration Guidance – Demonstration Criterion 3.e.2.....	115
173	Part III: REP Demonstration Guidance – Demonstration Criterion 3.f.1	116
174	Part III: REP Demonstration Guidance – Demonstration Criterion 4.a.2.....	117
175	Part III: REP Demonstration Guidance – Demonstration Criterion 4.a.3.....	117
176	Part III: REP Demonstration Guidance – Demonstration Criterion 4.b.1	117
177	Part III: REP Demonstration Guidance – Demonstration Criterion 4.c.1.....	118
178	Part III: REP Demonstration Guidance – Demonstration Criterion 5.a.1.....	118

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

179	Part III: REP Demonstration Guidance – Demonstration Criterion 5.a.3.....	119
180	Part III: REP Demonstration Guidance – Demonstration Criterion 5.a.4.....	119
181	Part III: REP Demonstration Guidance – Demonstration Criterion 5.b.1	119
182	Part III: REP Demonstration Guidance – Demonstration Criterion 6.a.1.....	120
183	Part III: REP Demonstration Guidance – Demonstration Criterion 6.b.1	121
184	Part III: REP Demonstration Guidance – Demonstration Criterion 6.c.1.....	122
185	Part III: REP Demonstration Guidance – Demonstration Criterion 6.d.1	123
186	Part IV: Program Administration – Introduction.....	123
187	Part IV: Program Administration – Regulatory Summary.....	123
188	Part IV: Program Administration – Non-participating State, Tribal, and Local Governments (NUREG-0654/FEMA-REP-1, Supplement 1)	124
189	Part IV: Program Administration – Early Site Permit Applications (NUREG-0654/FEMA- REP-1, Supplement 2)	124
190	Part IV: Program Administration – Protective Action Strategies (NUREG-0654/FEMA-REP- 1, Supplement 3).....	124
191	Part IV: Program Administration – Exercise Methodology, More Challenging Drills and Exercises, and Backup Alert and Notification Requirements (NUREG-0654/FEMA-REP-1, Supplement 4).....	126
192	Part IV: Program Administration – Target Capabilities List.....	127
193	Part IV: Program Administration – Integration of REP Demonstration Criteria and HSEEP Capabilities	127
194	Part IV: Program Administration – Emergency Planning Zone Boundary Changes.....	130
195	Part IV: Program Administration – Credentialing Framework.....	130
196	Part IV: Program Administration – Use of State, Local, and Tribal Personnel as REP Exercise Evaluators	131
197	Part IV: Program Administration – Tribal Policies and Procedures.....	131
198	Part IV: Program Administration – Staff Assistance Visits.....	131
199	Part IV: Program Administration – Evacuation Time Estimates.....	131
200	Part IV: Program Administration – Potassium Iodide for the Public	132
201	Part IV: Program Administration – American Red Cross – Congregate Care Facility Standards....	133
202	Part IV: Program Administration – Conducting Plan Reviews	133
203	Part IV: Program Administration – Conducting Scenario Reviews	133
204	Part IV: Program Administration – Annual Letter of Certification.....	137
205	Part IV: Program Administration – Public Information Guide and Process.....	137
206	Part IV: Program Administration – Disaster Initiated Review	138
207	Part IV: Program Administration – List of Commercial Nuclear Power Plants.....	139
208	Appendix A: Acronyms and Abbreviations.....	140
209	Appendix B: Glossary of REP Terms.....	141

1 Disclaimer

2009 – page iv

2011 – page vii

1.1 Substantively Unchanged

Text: Substantial efforts have been undertaken to ensure that all Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) Radiological Emergency Preparedness (REP) Program policy and guidance have been incorporated into this manual. /1/ However, it is possible that some source(s) may have been overlooked. If any relevant policy and/or guidance were not incorporated into this manual, the REP Program will regard the subject material, in its current format, as the currently held position on the referenced matter, until the manual can be appropriately revised.

Text: /1/Exception: The current FEMA-REP series guidance documents are listed in Appendix C and cited in the applicable parts of this manual. The retired guidance documents are listed in Appendix D for historical purposes. Comments and changes to the REP Manual should be submitted to FEMA for consideration. To the greatest extent possible, FEMA will issue all future REP Program guidance as amendments to the applicable parts of this manual.

1.2 Material Added to 2011 Publication

Text on the **purpose of the REP Program Manual**, page vii: This policy represents the Federal Emergency Management Agency (FEMA) Radiological Emergency Preparedness (REP) Program's interpretations of a statutory or regulatory requirement. The policy itself does not impose legally enforceable rights and obligations, but sets forth a standard operating guideline or agency practice that FEMA employees follow to be consistent, fair, and equitable in the implementation of the Agency's authorities.

Text on **amendments to the REP Program Manual**, page vii: In addition, FEMA will review changes to other Federal Agency guidance that impacts the REP Program and issue amendments to this manual as warranted.

2 Part I: Introduction – Purpose and Scope

2009 pages I-1 to I-2

2011 pages I-1 to I-4

2.1 Substantively Unchanged Material

Text: This manual is intended to be the principal source of policy and guidance for the Department of Homeland Security (DHS)/Federal Emergency Management Agency's (FEMA's) Radiological Emergency Preparedness (REP) Program.

Text: This manual supersedes the Guidance Memoranda and some FEMA-REP series documents.

Discussion: Description of the contents of Parts I to IV and the Appendices.

Discussion: Explanation of the terms “Offsite Response Organization” and “plans and/or procedures.”

2.2 2009 Material Deleted

Text, page I-1, Footnote 2: FEMA was incorporated into DHS on March 1, 2003. The organizational name “Federal Emergency Management Agency” and the acronym “FEMA” remain intact.

2.3 Material Added to 2011 Publication

Text on **participation in the REP Program**, page I-1: State, tribal, and local government participation in offsite radiological emergency planning and preparedness is voluntary. If state, local, or tribal governments choose not to participate in REP planning, 44 CFR Part 352 outlines the licensee’s obligation to develop offsite plans/procedures to protect the public health and safety.

Text on **NUREG-0654/FEMA-REP-1 requirements**, page I-1: The elements of NUREG-0654/FEMA-REP-1 are REP Program requirements for offsite response organizations.

Text on **“shall” and “should”**, page I-1: Language in the REP Program Manual quoted directly from regulatory material uses both “shall” and “should” to denote requirements. The remaining text in the REP Program Manual uses the terms “shall,” “must,” and “require” to denote mandatory items originating in regulatory material including NUREG-0654/FEMA-REP-1 and the CFR. The terms “should,” “suggest,” and “recommend” denote guidance outlining a Federally-approved means of meeting the intent of the REP regulations. The term “may” denotes an option, neither required nor necessarily recommended.

Text on **alternative approaches**, page I-1: The Evaluation Criteria listed in NUREG-0654/FEMA-REP-1, as clarified, interpreted, and applied by the NRC, FEMA, and other Federal agencies, represent Federally-approved approaches for meeting the intent of the regulatory requirements. Offsite response organizations (OROs) may propose alternative approaches to meeting those requirements in writing to the appropriate FEMA Regional Office. Part I.D.3 provides a detailed discussion of alternative approaches.

Text on **Reasonable Assurance**, page I-2: FEMA defines reasonable assurance as a determination that state, local, tribal, and utility offsite plans and preparedness are adequate to protect public health and safety in the emergency planning areas of commercial nuclear power plants.

Text on the **Planning and Preparedness Assessment Strategy**, page I-2: The REP Program currently relies on a combination of exercises, SAVs, plan reviews, and an Annual Letter of Certification (ALC) to develop a recommendation of reasonable assurance. Over the course of the last 30 years, the reasonable assurance assessment began to rely on the biennial exercise over the other components. This edition of the REP Program Manual introduces multiple policy changes that allow an ongoing assessment approach through evaluation of a broader range of activities than those previously used. These changes are consistent with national preparedness initiatives and HSEEP, and continue the streamlining of Federal, state, and local efforts and resources and the goal of employing a common assessment strategy.

Text on the **role of the REP Program Manual**, page I-3: This manual provides guidance that interprets the regulations with respect to planning, demonstrating, and performing other REP Program functions.

3 Part I: Introduction – Basis of the REP Program

2009 pages I-3 to I-7

2011 pages I-4 to I-8

3.1 Substantively Unchanged

Discussion: Establishment of the REP Program after the accident at Three Mile Island

Discussion: Regulations governing the REP Program

Discussion: Summary of the Strategic Review

Discussion: Programmatic changes including the National Incident Management System (NIMS), National Response Framework (NRF), National Preparedness Guidelines, and Post-Katrina Emergency Management Reform Act (PKEMRA)

Discussion: Initiatives in the REP Program Manual, including NIMS, Homeland Security Exercise Evaluation Program (HSEEP), and REP exercise scenario security incident enhancements

3.2 2009 Material Substantively Changed in 2011 Publication

Replaced: Under Programmatic Changes, **discussion of the Integrated Planning System replaced with Comprehensive Preparedness Guide 101.**

Replaced: **References to Homeland Security Presidential Directive (HSPD)-8 are replaced with Presidential Policy Directive (PPD)-8.**

3.3 Material Added to 2011 Publication

Discussion: **Hurricane Katrina is added to the events of September 11, 2001 as a driver of programmatic changes** in the introductory paragraph of Part I.C.

Text on **Service Animals and Household Pets**, pages I-7 to I-8:

Plans/procedures reflect how a jurisdiction will provide care to service animals in response to new regulatory requirements in the Stafford Act and the Pets Evacuation and Transportation Standards Act, including the identification of resources it has or can readily obtain through existing mutual aid agreements.

The term “service animal,” refers to any dog that has been individually trained to do work or perform tasks for the benefit of an individual with a disability. The rule states that other animals, whether wild or domestic, do not qualify as service animals. Dogs that are not trained to perform tasks that mitigate the effects of a disability, including dogs that are used purely for emotional support, are not service animals. The final rule also clarifies that individuals with mental disabilities who use service animals that are trained to perform a specific task are protected by the ADA. The rule permits the use of trained miniature horses as alternatives to dogs, subject to certain limitations. To allow flexibility in situations where using a horse would not be appropriate, the final rule does not include miniature horses in the definition of “service animal.”* Service animals are permitted in all places that serve the

public as long as the animal is not out of control. This access includes transportation with their owners/handlers during evacuations.

OROs can find planning guidance for evacuation and sheltering of household pets in CPG 101; however no specific guidance on the radiological monitoring and decontamination of household pets currently exists.

FEMA guidance on household pets is under development. Although provisions for household pets are not currently required, FEMA encourages OROs to plan for the reality that in an emergency, many evacuees will arrive at reception centers with their pets.

*Footnote: The Department of Justice published revised final regulations implementing the Americans with Disabilities Act (ADA) for title II (State and local government services) and title III (public accommodations and commercial facilities) on September 15, 2010, in the Federal Register. These requirements, or rules, clarify and refine issues that have arisen over the past 20 years and contain new, and updated, requirements, including the 2010 Standards for Accessible Design (2010 Standards).

Text on **Functional Needs Service Support**, page I-8:

In October 2006, PKEMRA provided a mandate to integrate the needs of people with disabilities and those with access and functional needs into general emergency management planning, response, and recovery. The thorough integration of and participation by people with disabilities in local planning helps ensure that misleading stereotypes do not dilute emergency plan effectiveness. Historically, resource gaps in planning for and meeting access and functional needs in general population shelters, resulted in disparate treatment and the denial of full and equal services. FEMA developed *Guidance for Planning for Integration of Functional Needs Support Services in General Population Shelters* to support Federal, state, local, and tribal governments with the integration of children and adults with and without disabilities who have access and functional needs into every aspect of emergency shelter planning and response. Communities can use this document in conjunction with general population shelter Standard Operating Procedures (SOP) to ensure that all shelter residents benefit equally from programs, services, and activities. This document provides a context for FNSS integration in light of other existing plans and describes a process to use in any planning effort. The scalability of these guidelines enables their application to urban, suburban, and rural localities with multiple or limited resources.

Children and adults with disabilities have the same right to services in general population shelters as other residents. Emergency managers and shelter planners have the responsibility of planning to ensure that sheltering services and facilities are accessible. The decisions made in the planning process determine whether integration or segregation occurs during response. Although FEMA geared the FNSS guidance toward emergency managers and shelter planners, it is a document that local communities can utilize as a shelter planning tool.

The planning guidance ensures that general population shelters do not turn away individuals and inappropriately place them in other environments (e.g., “special needs” shelters, institutions, nursing homes, and hotels and motels disconnected from other support services). Addressing these gaps benefits the entire community and maximizes resources.

4 Part I: Introduction – Evaluation of Radiological Emergency Preparedness

2009 pages I-8 to I-12

2011 pages I-9 to I-12

4.1 Substantively Unchanged

Discussion: NRC-FEMA Memorandum of Understanding

Discussion: Specific FEMA review and approval procedures

Discussion: Alternative approaches and methods to meeting the intent of the regulatory requirements

Discussion: Responsibilities of various Federal Agencies in the REP Program, the Federal Radiological Preparedness Coordinating Committee, and the Regional Assistance Committees.

4.2 Material Added to 2011 Publication

Text on the **inclusion of licensee-only NUREG-0654/FEMA-REP-1 Criteria in the REP Program Manual**, page I-9: To facilitate participant adherence to REP Program requirements and policies, this manual provides clarifying guidance from FEMA. The planning guidance contained in Part II of this manual further explains the NUREG-0654/FEMA-REP-1 Planning Standards and associated Evaluation Criteria that apply to OROs. Certain Evaluation Criteria in NUREG-0654/FEMA-REP-1, including all of those in Planning Standard B, Onsite Emergency Organization, do not pertain to offsite planning and preparedness; however, this manual incorporates all of the Planning Standards and Evaluation Criteria to maintain consistency with NUREG-0654/FEMA-REP-1.

Text on the **Planning and Preparedness Assessment Strategy**, page I-12:

Significant plan changes: After FEMA's initial determination of reasonable assurance, it continues to monitor preparedness at each site. FEMA must receive any significant change to previously approved plans/procedures for review and approval. A significant change is one involving the evaluation and assessment of a Planning Standard or a matter which, if presented with the plan, would require consideration by the Deputy Administrator of PNPD (or designee) in order to decide that ORO plans/procedures and preparedness are 1) adequate to protect the health and safety of the public living in vicinity of the commercial NPP by providing reasonable assurance that OROs can take appropriate protective measures in the event of a radiological emergency; and 2) capable of being implemented. However, the Regional Administrator may determine that certain procedures, such as holding a public meeting or a complete exercise, are unnecessary when reviewing these changes. In this case, the existing approval remains in effect during review of the change. OROs review plans annually to ensure that all information is current, regardless of whether any changes require approval.

Periodic requirements: In addition to approving significant changes, FEMA employs an assessment strategy to ensure maintenance of reasonable assurance. This strategy includes biennial evaluation of specified exercises and drills, assistance visits, the annual plan review, and an annual letter from the state to FEMA certifying the completion of other elements required by NUREG-0654/FEMA-REP-1 such as training and the updating of public emergency information.

Ongoing assessment: FEMA supplements these “snapshot” assessments with the evaluation and observation of ongoing activities including full-scale, functional, and tabletop exercises; other types of drills; seminars; training activities; interviews; and responses to actual events. In addition, FEMA employs a dedicated Site Specialist for each NPP, whose responsibilities include maintaining an ongoing assessment record that reflects the status of offsite preparedness and training. This approach allows FEMA to maintain a more up-to-the-minute assessment of reasonable assurance throughout the year and provide increased integration with other Federal, state, and local preparedness activities.

The HSEEP methodology supports the use of a variety of activities to assess response capabilities. HSEEP also facilitates activity planning and scheduling coordination. Part III of this Manual discusses the HSEEP methodology in detail as it applies to the REP Program.

5 Part I: Introduction – Technical Basis for the REP Program

2009 pages I-13 to I-17

2011 pages I-13 to I-17

5.1 Substantively Unchanged

Discussion on the Nature of the Hazard, including types of radiation

Discussion on Protective Actions to Reduce Exposure to Radiation

Discussion on Protective Action Guides (PAGs)

Discussion on Emergency Planning Zones

5.2 Material Added to 2011 Publication

Text box explaining **Exposure vs. Contamination**, page I-13: It is important to distinguish between direct exposure to radiation and exposure through radiological contamination. A person exposed to a medical X-ray receives direct radiation, but the body is not radioactively contaminated. Radioactive contamination occurs when radioactive particles are deposited on a person’s skin and can be absorbed through the skin or by inhalation or ingestion.

Text box highlighting the **PAGs for the general public**, page I-15:

PAGs for the General Public

- Evacuation/sheltering: 1-5 rem
- Ingestion: 0.5 rem projected whole body or 5 rem to most exposed part
- Relocation: 2 rem whole body in first year

Text box highlighting the **PAGs for Emergency Workers**, page I-16:

PAGs for Emergency Workers

- A limit of 5 rem for any emergency activity.
- A limit of 10 rem for protecting valuable property (when a lower dose is not practicable).
- A limit of 25 rem for life-saving activities or protection of large populations (where a lower dose is not practicable).

- A dose greater than 25 rem for life-saving activities or protection of large populations when an emergency worker volunteers for the mission and is fully aware of the risks involved.

Text explaining **radiological incident phases**, page I-17:

An incident involving a radiological release contains three general phases:

The early phase (also referred to as the plume or emergency phase) is the period at the beginning of a nuclear incident requiring immediate decisions for effective use of protective actions and must therefore usually employ the status of the NPP and the prognosis for worsening conditions as their primary basis. When available, decision makers may use predictions of radiological conditions in the environment based on the condition of the source or actual environmental measurements. Precautionary actions may precede protective actions based on the PAGs. This phase lasts hours to several days and ends when the radioactive release ends.

The intermediate phase is the period beginning after the utility verifies the termination of the release. Decisions on additional protective actions may use reliable environmental measurements as a basis. This phase extends until the termination of these additional protective actions. This phase may overlap the late phase and may last from weeks to many months. The intermediate phase encompasses REP activities associated with both ingestion and relocation.

The late phase is the period beginning when recovery action designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced, and ending upon completion of all recovery actions. This period may extend from months to years. REP activities associated with return and recovery occur during the late phase.

6 Part II: REP Planning Guidance – Introduction

2009 pages II-1 to II-2

2011 page II-1

6.1 Substantively Unchanged

Discussion of Purpose and Scope

Discussion of Contents and Organization

6.2 2009 Material Deleted

Discussion of term “plans and/or procedures” (was redundant to text in Part I)

6.3 Material Added to 2011 Publication

Text box, page II-1: **The guidance in this manual applies only to offsite response organizations.**

7 Part II: Planning Guidance – NUREG Criterion A.1.a

2009 pages II-4 to II-5

2011 pages II-3 to II-4

7.1 Substantively Unchanged

Explanation of what is meant by principal OROs and support OROs

Explanation of the adoption of NIMS as a condition for Federal preparedness assistance

7.2 2009 Material Deleted

Criterion A.1.a, **NIMS compliance requirement**: The text “ORO plans shall be compliant with the National Incident Management System” is deleted from the criterion language.

7.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-3:

TO MEET THE INTENT OF CRITERION A.1.a, ORO PLANS/PROCEDURES SHALL:

- Describe all Federal, state, local, tribal, and private-sector organizations comprising the overall ORO. Tribal governments submit their own plans/procedures or may choose to be included as part of the state plans/procedures within which the tribal land falls.
- Identify the principal response organizations.

7.4 Material Added to 2011 Publication

Discussion, **adoption of NIMS**, page II-3: The 2009 language was modified to emphasize that the adoption of NIMS is not a universal requirement, but is a condition for Federal preparedness assistance. Licensees are not required to adopt NIMS but are expected to coordinate with OROs to ensure effective response and communications.

Text, **NIMS for licensees**, page II-3: NRC regulations in 10 CFR § 50.47(b)(3) & (b)(6) require licensees to ensure that their programs integrate with those of the OROs.

8 Part II: Planning Guidance – NUREG Criterion A.1.b

2009 pages II-5 to II-6

2011 page II-4

8.1 Substantively Unchanged

Explanation of how to describe organizational roles and concept of operations in REP plans

8.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-4:

TO MEET THE INTENT OF CRITERION A.1.b, ORO PLANS/PROCEDURES SHALL:

- Specify the organization's role in an emergency.
- Specify how the organization will carry out its role in an emergency.

9 Part II: Planning Guidance – NUREG Criterion A.1.c

2009 pages II-6 to II-7

2011 pages II-4 to II-5

9.1 Substantively Unchanged

Explanation of illustration of organizational relationships in a block diagram

9.2 2009 Material Deleted

Exhibit II-1: Sample Block Diagram/Organizational Chart

9.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-5:

TO MEET THE INTENT OF CRITERION A.1.c, ORO PLANS/PROCEDURES SHALL:

- Include an illustration of each organization and its relationship to the total emergency response effort.

9.4 Material Added to 2011 Publication

Footnote to above bullet: For a sample Incident Command System organization chart, see ICS Form 207, Organizational Chart.

http://training.fema.gov/EMIWeb/IS/ICSResource/ICSResCntr_Forms.htm

10 Part II: REP Planning Guidance – NUREG Criterion A.1.d

2009 page II-8

2011 page II-5

10.1 Substantively Unchanged

Explanation of individual in charge of the emergency response

10.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-5:

TO MEET THE INTENT OF CRITERION A.1.d, ORO PLANS/PROCEDURES SHALL:

- Identify a specific individual, by title/position, who is in charge of the emergency response.
- Specify who, by title/position, coordinates response activities under the authority of the person in charge.

11 Part II: REP Planning Guidance – NUREG Criterion A.1.e

2009 pages II-8 to II-9

2011 page II-6

11.1 Substantively Unchanged

Explanation of maintaining 24-hour response capability

11.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-6

TO MEET THE INTENT OF CRITERION A.1.e, ORO PLANS/PROCEDURES SHALL:

- Specify who, by title/position, is responsible for managing the communications center.
- Describe the procedures to provide for 24-hour emergency response.
- Specify where the 24-hour communications center is located.
- Refer to a personnel roster for maintaining 24-hour communication.
- Specify primary and backup means of notification.

11.3 Material Added to 2011 Publication

Text clarifying the term “**backup means of notification,**” page II-6: Backup means of notification refers to whatever secondary communication systems are in place to execute notification if the primary communication link fails. These could include, but are not limited to, commercial telephones, fax, and emergency radio frequencies.

12 Part II: REP Planning Guidance – NUREG Criterion A.2.a

2009 pages II-9 to II-11

2011 pages II-7 to II-8

12.1 Substantively Unchanged

Explanation of specifying functions and responsibilities for response

12.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-7

TO MEET THE INTENT OF CRITERION A.2.a, ORO PLANS/PROCEDURES SHALL:

- Identify key individuals, by title/position, who have emergency response roles.
- Describe the responsibilities by functional areas
- Include a matrix of these responsibilities by functional area that identifies organizations responsible for primary and support roles. A sample matrix/table is shown in Exhibit II-1.

13 Part II: REP Planning Guidance – NUREG Criterion A.2.b

2009 page II-12

2011 page II-9

13.1 Substantively Unchanged

Explanation of legal authorities for response

13.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-9:

TO MEET THE INTENT OF CRITERION A.2.b, ORO PLANS/PROCEDURES SHALL:

- Identify the legal authority to assign lead responsibility for emergency preparedness to a particular state agency.
- Indicate who (e.g., the Governor) may declare a “state of emergency” (or “state of disaster emergency”) and what special powers may ensue.
- Identify the legal authority to delegate responsibility and authority for preparedness and response at the local level.
- Identify any limitations on the authority of Letter of Agreement signatories.

14 Part II: REP Planning Guidance – NUREG Criterion A.3

2009 pages II-12 to II-13

2011 pages II-9 to II-11

14.1 Substantively Unchanged

Discussion of letters of agreement – guidance from NUREG Criteria A.3 and C.4 are combined under A.3.

14.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-9:

TO MEET THE INTENT OF CRITERION A.3, ORO PLANS/PROCEDURES SHALL:

- Identify assisting organizations and the type of assistance (capabilities and resources) they will provide.
- Specify for each organization identified whether the aid is covered under an inter-governmental mutual assistance compact or whether a Letter of Agreement (LOA) is needed.
- Include LOAs by reference or in a suitable appendix.
- Include or reference applicable LOAs between the licensee and ORO including arrangements for access to the NPP site, if appropriate.
- State that the LOAs include details on what services will be provided and how the agreements will be activated.
- State that LOAs are reviewed annually to verify their validity. (See also Criterion P.4)

14.3 Material Added to 2011 Publication

Text explaining role of **mutual assistance compacts**, page II-10: Intergovernmental support is increasingly being secured through mutual assistance compacts supported by legislation. However, for those support arrangements between jurisdictions that are not covered by mutual assistance compacts, and for support arrangements with private-sector entities, LOAs are needed.

15 Part II: REP Planning Guidance – NUREG Criterion A.4

2009 pages II-13 to II-14
2011 page II-11

15.1 Substantively Unchanged

Explanation of continuous operations capability

15.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-11:

TO MEET THE INTENT OF CRITERION A.4, ORO PLANS/PROCEDURES SHALL:

- Identify key individuals, by title/position, who are responsible for ensuring continuity of resources in support of 24 hour operations.
- Include a reference to a roster that identifies at least two shifts of key staff, as well as provisions for its maintenance.
- Identify who is responsible, by title/position, for maintaining the roster and where the roster is located.
- Indicate the shift period (e.g., 8 or 12 hours), and specify that the outgoing staff will brief the incoming staff on the status of the emergency and the response activities occurring.
- Describe the responsibilities by the functional areas listed above.

FEMA HIGHLY RECOMMENDS THAT PLANS/PROCEDURES:

- Describe responsibilities by the five Incident Command System functions.

15.3 Material Added to 2011 Publication

Text, page II-11: The plans/procedures contain the procedures that will ensure continuity of operations throughout one or more change in emergency response personnel.

16 Part II: REP Planning Guidance – Planning Standard B

2009 pages II-15 to II-17

2011 pages II-12 to II-14

16.1 Substantively Unchanged

All text (this Planning Standard applies only to licensees)

17 Part II: REP Planning Guidance – NUREG Criterion C.1.a

2009 page II-18

2011 page II-15

17.1 Substantively Unchanged

Explanation of persons authorized to request Federal assistance

17.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-15:

TO MEET THE INTENT OF CRITERION C.1.a, ORO PLANS/PROCEDURES SHALL:

- Identify, by title/position, the key officials authorized to request Federal assistance.

18 Part II: REP Planning Guidance – NUREG Criterion C.1.b

2009 page II-19

2011 page II-16

18.1 Substantively Unchanged

Explanation of Federal resources expected

18.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-16:

TO MEET THE INTENT OF CRITERION C.1.b, ORO PLANS/PROCEDURES SHALL INCLUDE:

- A process for identifying potential shortfalls in resources.

- Information on and a list of resources that an ORO can expect to receive from the Federal government.
- An estimate of how long it will take those resources to arrive at the desired location.

18.3 Material Added to 2011 Publication

Clarifying text, page 16: ...how those requirements can be met using outside resources, and “ include an estimate of the expected time of arrival of Federal resources in order to provide a general planning timeframe.”

Text, page II-16: Planning is one of the five Incident Command System functions and its role includes the process of identifying resources that can be provided by Federal agencies.

19 Part II: REP Planning Guidance – NUREG Criterion C.1.c

2009 pages II-19 to II-20

2011 pages II-16 to II-17

19.1 Substantively Unchanged

Explanation of resources to support Federal response

19.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-16:

TO MEET THE INTENT OF CRITERION C.1.c, ORO PLANS/PROCEDURES SHALL:

- Describe the facilities that may be made available to Federal response personnel.
- Identify the general geographical areas for the locations of these facilities and the unique features of the area.
- Describe the interoperable communications plans/procedures, equipment, and protocols that may be made available to Federal response personnel.

20 Part II: REP Planning Guidance – NUREG Criterion C.2.a

2009 page II-20

2011 page II-17

20.1 Substantively Unchanged

Explanation of principal offsite response organization representatives at the licensee’s emergency operations facility

20.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-17:

TO MEET THE INTENT OF CRITERION C.2.a, ORO PLANS/PROCEDURES SHALL:

- Indicate whether the ORO plans to send a representative to the licensee's emergency operations facility and if so, which person, by title/position, would be dispatched.

21 Part II: REP Planning Guidance – NUREG Criterion C.3

2009 page II-21
2011 page II-18

21.1 Substantively Unchanged

Explanation of identification of laboratories

21.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-18:

TO MEET THE INTENT OF CRITERION C.3, ORO PLANS/PROCEDURES SHALL:

- List the laboratories that are qualified to analyze samples of materials that may have been contaminated with radionuclides.
- Indicate the radiochemical and analytical capabilities of each laboratory (e.g., the ability to analyze milk and other foodstuffs, soil samples, and water samples).
- Indicate the number of samples the laboratories would be able to process in a given period.
- Include the location and potential availability of the laboratories.

22 Part II: REP Planning Guidance – NUREG Criterion C.4

2009 pages II-22 to II-23
2011 page II-18

22.1 2009 Material Deleted

Guidance in NUREG Criterion C.4 combined with Criterion A.3 to eliminate redundancy

22.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-18:

TO MEET THE INTENT OF CRITERION C.4, ORO PLANS/PROCEDURES SHALL:

- Meet the requirements specified in Criterion A.3.

23 Part II: REP Planning Guidance – NUREG Criterion C.5

2009 page II-23
2011 page II-19

23.1 2009 Material Substantively Changed in 2011 Publication

Text explaining the **special applicability of Criterion C.5**, page II-19:

2009 text:

2011 text: FEMA and the NRC developed this criterion as part of Supplement 1 to NUREG-0654/FEMA-REP-1, Rev. 1 to address emergency preparedness when state, tribal and/or local governments decline to participate in emergency planning. In this criterion only, “offsite response organization” refers to “utility offsite emergency response organization comprised of other participating voluntary and private organizations, and local, state and Federal governments engaging in the development of offsite emergency plans and preparedness for a nuclear power plant.” In such cases, these organizations develop, review, and evaluate offsite emergency plans/procedures and preparedness.

24 Part II: REP Planning Guidance – NUREG Criterion C.6

2009 pages II-23 to II-24

2011 pages II-19 to II-20

24.1 Substantively Unchanged

Explanation of enabling onsite response support in a hostile-action based incident

24.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-19:

TO MEET THE INTENT OF CRITERION C.6, ORO PLANS/PROCEDURES SHALL:

- Include provisions to allow ORO law enforcement and other initial first responders prompt access to the NPP site.
- Include provisions for coordination between in-bound response resources and evacuation efforts.
- Identify any mutual aid agreements for alternate personnel to supplement local resources (see also Criterion A.3).
- Address radiological training requirements for the primary and alternate personnel, including just-in-time training.
- Include procedures for activating qualified alternate personnel.

24.3 Material Added to 2011 Publication

Text box, **Evaluation Limited to REP Activities**, page II-20: REP exercises and drills are designed to test the capability of OROs to protect public health and safety through implementation of their radiological emergency response plans/procedures in simulated emergencies. FEMA’s REP Program does not evaluate security and law enforcement tactical response capabilities related to site security contingency plans/procedures. This ensures the confidentiality of sensitive security information.

25 Part II: REP Planning Guidance – NUREG Criteria D.1 – D.2

2009 page II-25

2011 page II-21

25.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

26 Part II: REP Planning Guidance – NUREG Criterion D.3

2009 pages II-25 to II-26

2011 pages II-21 to II-22

26.1 Substantively Unchanged

Explanation of Emergency Classification Levels

26.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-21:

TO MEET THE INTENT OF CRITERION D.3, ORO PLANS/PROCEDURES SHALL:

- Include reference to the standard Emergency Classification Levels (ECLs).¹
- Acknowledge that the ECL system will form the basis for determining the level of response to a nuclear incident that will be consistent with the licensee.

27 Part II: REP Planning Guidance – NUREG Criterion D.4

2009 pages II-26-II-27

2011 page II-22

27.1 Substantively Unchanged

Explanation of emergency actions procedures consistent with licensee recommendations

27.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-22:

¹ NUREG-0654/FEMA-REP-1, Revision 1, Appendix 1 – Emergency Action Levels Guidelines for Nuclear Power Plants, October 1980 refers to Emergency Action Levels (EALs) rather than ECLs. Since publication of NUREG-0654, EALs have come to be considered *in-plant* conditions that trigger declaration of various levels of emergencies. These levels of emergencies (NOUE, Alert, SAE, and GE) are referred to as ECLs.

TO MEET THE INTENT OF CRITERION D.4, ORO PLANS/PROCEDURES SHALL:

- Indicate the emergency actions to be taken to protect the public at each ECL, given the local conditions at the time of the emergency.

Text on **preferred protective actions in a severe incident** updated to align with concurrently published revisions to Supplement 3:

2009 page II-26: Planners should be aware that, for a GE, Appendix 1 of NUREG-0654/FEMA-REP-1 recommends sheltering within a 2-mile radius and 5 miles downwind. However, current FEMA and NRC philosophy is that the preferred protective action for severe reactor (core damage) incidents is to evacuate immediately within a 2-mile radius of the plant and 5 miles downwind, unless other conditions make evacuation dangerous.

2011 page II-22: Planners should be aware that guidance on preferred protective actions in a severe accident continues to evolve. For a General Emergency, Appendix 1 of NUREG-0654/FEMA-REP-1 recommends sheltering within a 2-mile radius and 5 miles downwind. However, updated FEMA and NRC guidance in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, Guidance for Protective Action Strategies (October 2011) provides a protective action logic development tool that should be used by licensees to develop site specific protective action recommendation procedures and is recommended for use by OROs to develop protective action strategy guidance for decision makers.

28 Part II: REP Planning Guidance – NUREG Criterion E.1

2009 pages II-28 to II-30

2011 pages II-23 to II-24

28.1 Substantively Unchanged

Explanation of response organization notification processes

28.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-23:

TO MEET THE INTENT OF CRITERION E.1, ORO PLANS/PROCEDURES SHALL DOCUMENT THE FOLLOWING NOTIFICATION PROCESSES:

- Initial notification from the licensee to a designated offsite 24-hour warning point (e.g., fire or police department dispatch, 911 emergency center). Offsite plans/procedures indicate the location of the warning point and the method of notification and backup (e.g., commercial telephone, dedicated telephone, fax machine, or pager). If the initial notification from the licensee to the warning point is over a non-secure system, the criterion requires message verification (e.g., via a return call). If the primary means of notification from the licensee to the warning point is on a dedicated system (i.e., one capable of being used only by a known, limited number of organizations), OROs may choose whether to verify receipt of notification.
- Initial notification to licensee and the ORO when a notification originates from an entity other than the licensee. The plans/procedures identify the points of contact for the licensee and ORO, method of notification and backup, and method of verifying notification.

- Subsequent notifications from the licensee and/or ORO to other offsite organizations. The plans/procedures may call for subsequent notifications to locations other than the warning point or other designated entities. For example, after the EOC is operational, the plans/procedures may state that all further notifications are made directly to the EOC rather than to the warning point.

29 Part II: REP Planning Guidance – NUREG Criterion E.2

2009 page II-30

2011 pages II-24 to II-25

29.1 Substantively Unchanged

Explanation of personnel alert, notification, and mobilization procedures

29.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-25:

TO MEET THE INTENT OF CRITERION E.2, ORO PLANS/PROCEDURES SHALL:

- Indicate who, by title/position, is responsible for notifying each staff member, either by including a notification call list or making reference to such a list.
- Describe the process used to notify all applicable OROs once the 24-hour warning point, or other designated entity, has received and verified the initial notification, if necessary.
- Describe who, by title/position, has the responsibility for notifying all appropriate organizations once the initial notification to the 24-hour warning point has been made. For example, the responsibility of the warning point for notifications may end after it places a call to the state and county emergency management agencies. A diagram that shows how the notification process works (e.g., call-down) may supplement a plan/procedure description.
- Indicate the specific notifications made at each ECL.
- Indicate the means by which notifications will be accomplished (e.g., pagers, telephones, radios, auto dialers).

30 Part II: REP Planning Guidance – NUREG Criteria E.3 – E.4

30.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

31 Part II: REP Planning Guidance – NUREG Criterion E.5

2009 page II-32 to II-33

2011 pages II-26 to II-27

31.1 Substantively Unchanged

31.2 2009 Material Deleted

Text on **rumor control** (covered under Criterion G.4.c), page II-32: Document the entity (e.g., the EOC or media center) responsible for monitoring the broadcast of official information messages (e.g., from radio and television) and correcting incomplete, inaccurate, or ambiguous information as soon as possible. The organization monitoring the information broadcasts should notify the Public Information Officers (PIOs) and public inquiry (rumor control) personnel about the corrected information.

31.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-26:

TO MEET THE INTENT OF CRITERION E.5, ORO PLANS/PROCEDURES SHALL:

- List the broadcast stations and other systems (e.g., tone alert radios, route alerting) used to provide emergency instructions to the public.
- Establish individual responsibilities for each broadcast station and system and document commitments between them and the ORO (e.g., MOUs and/or LOAs) to honor these responsibilities in a radiological emergency. (Also see Criterion A.3)
- Document or reference the broadcast stations' or systems' capability to participate in the public notification process. A statement that the station participates in a "Local Emergency Alert System Operational Area Plan" is considered satisfactory.
- Identify broadcast station and system points of contact, by title/position, who are accessible 24 hours a day, 7 days a week. (Also see Criterion A.4)
- Establish the interval for broadcasting official information statements.

Added requirement on **alternate stations** under list of requirements, page II-26: Identify an alternate station, if a selected station does not have a backup power supply.

32 Part II: REP Planning Guidance – NUREG Criterion E.6

2009 pages II-33 to II-36

2009 pages II-27 to II-31

32.1 Substantively Unchanged

Discussion on design objectives (reorganized for clarity)

Discussion on physical means of alert and notification (reorganized for clarity)

Discussion on administrative means of alert and notification (reorganized for clarity)

32.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-28:

TO MEET THE INTENT OF CRITERION E.6, ORO PLANS/PROCEDURES SHALL:

- State that the alert and notification system (ANS) is capable of meeting the 15-minute design objective.
- Describe the primary and backup physical means of alert and notification, including the system(s) used to alert and notify the general public, persons with disabilities and access/functional needs, and exception areas, and their respective point(s) of activation.
- Describe the administrative means of alert and notification, including:
 - The title of the organizations or individuals responsible for: (1) making the decision to activate the ANS and (2) activating the system.
 - The ANS activation procedures and time required to implement these procedures.
 - A discussion of how the requirements for periodic siren testing will be accomplished.

32.3 Material Added to 2011 Publication

Text clarifying terms “alert” and “notification” of the public, page II-28: “Alert” refers to the process used to get the attention of the public. “Notification” refers to the process used to supply detailed information and instructions following the alert signal.

Text box on **Design Objectives Are for Worst-Case Scenarios, page II-28:** The alert and notification system must be capable of meeting design objectives in the event of a rapidly-escalating incident. Even if the incident is not escalating rapidly, the initial notification of the affected populations within the plume exposure pathway EPZ must be completed in a manner consistent with assuring the public health and safety (i.e., in a timely manner and without undue delay).

Exhibit illustrating **Design Objectives for Alert and Notification of the Public, page II-29:** Primary alert and notification – 15 minutes; Primary alert and notification in approved exception areas – 45 minutes; Backup alert and notification – within a reasonable time

33 Part II: REP Planning Guidance – NUREG Criterion E.7

2009 pages II-36 to II-38

2011 pages II-32 to II-34

33.1 Substantively Unchanged

Discussion of initial Emergency Alert System messages (reorganized for clarity)

Discussion of follow-on news broadcasts (reorganized for clarity)

Discussion of requirements for translation of messages into non-English languages (reorganized for clarity)

33.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-32:

TO MEET THE INTENT OF CRITERION E.7, IF THE ORO COMPOSES MESSAGES FOR DISTRIBUTION TO THE PUBLIC, PLANS/PROCEDURES SHALL INCLUDE AND/OR REFERENCE:

- EAS message templates that would be modified as necessary and sent to the EAS station(s) for broadcast.
- Provisions for special news broadcasts as supplements to the EAS message.
- Provisions for foreign language translations of EAS messages and special news broadcasts, if required.
- The process for selecting, modifying, approving, and releasing messages.
- The methodology for EAS message re-broadcast, along with the frequency (how many times and at what interval, such as every 15 minutes).

33.3 Material Added to 2011 Publication

Text clarifying the requirement for **Non-English language messages**, page II-33: Section 203 of the Voting Rights Act requires that messages be pre-scripted in non-English languages that are spoken by more than 5 percent of the county population of voting age, based on current demographic studies. For counties that lie only partially in the EPZ, this applies to the population of the entire county, not just the portion in the EPZ.

34 Part II: REP Planning Guidance – NUREG Criterion F.1.a

2009 page II-39

2011 page II-35

34.1 Substantively Unchanged

Explanation of notification capabilities

34.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-35:

TO MEET THE INTENT OF CRITERION F.1a, ORO PLANS/PROCEDURES SHALL:

- Describe the equipment used (e.g., dedicated telephone line or specific radio net) for notifying and communicating with the organization's personnel and other response organizations. The equipment must include a primary link and alternate means of communication.
- Describe the system used to ensure 24-hour availability to receive and pass along notifications. The system is generally a continuously staffed warning point (e.g., a police dispatch center) or a duty officer system in which the designated duty officer carries a pager.

FEMA HIGHLY RECOMMENDS THAT PLANS/PROCEDURES:

- Include a diagram depicting communication links.

35 Part II: REP Planning Guidance – NUREG Criterion F.1.b

2009 page II-40

2011 page II-36

35.1 Substantively Unchanged

Explanation of communications between contiguous state/local governments

35.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-36:

TO MEET THE INTENT OF CRITERION F.1.b, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Primary and backup communication capability between all local governments within the plume EPZ.
- Primary and backup communication capability between each local government and any associated host/support counties located outside the plume EPZ.
- Primary and backup communication capability between each state government and all local governments within its jurisdiction and with other state governments within the plume and/or ingestion EPZ.

36 Part II: REP Planning Guidance – NUREG Criterion F.1.c

2009 pages II-40 to II-41

2011 pages II-36 to II-37

36.1 Substantively Unchanged

Discussion of communications with Federal response organizations

36.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-36:

TO MEET THE INTENT OF CRITERION F.1.c, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The system(s) available for communicating with Federal response organizations (e.g., ordinary commercial telephone, dedicated telephone lines, or radio nets).
- The primary system and at least one backup system.

37 Part II: REP Planning Guidance – NUREG Criterion F.1.d

2009 pages II-41 to II-42

2011 pages II-37 to II-38

37.1 Substantively Unchanged

Discussion of communications with the licensee's emergency operations facility

37.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-37:

TO MEET THE INTENT OF CRITERION F.1.d, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The primary and backup communication systems that provide links to the emergency operations facility.
- For jurisdictions that deploy radiological monitoring and other field teams, the primary and backup systems used to communicate with the teams.

38 Part II: REP Planning Guidance – NUREG Criterion F.1.e

2009 pages II-42 to II-43

2011 page II-38

38.1 Substantively Unchanged

Explanation of alerting personnel

38.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-38:

TO MEET THE INTENT OF CRITERION F.1.e, ORO PLANS/PROCEDURES SHALL:

- Contain a general description of how personnel are activated (i.e., notified of an incident and requested to report to their emergency duty station).
- Include or reference lists of names and phone numbers of personnel to alert or activate based on the ECL.

39 Part II: REP Planning Guidance – NUREG Criterion F.1.f

2009 page II-43

2011 page II-38

39.1 Substantively Unchanged

All text (this Criterion applies only to licensees)

40 Part II: REP Planning Guidance – NUREG Criterion F.2

2009 pages II-43 to II-44

2011 page II-39

40.1 Substantively Unchanged

Discussion of communications between fixed and mobile medical facilities

40.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-39:

TO MEET THE INTENT OF CRITERION F.2, ORO PLANS/PROCEDURES SHALL INCLUDE FOR ALL PRIMARY AND BACKUP HOSPITALS/MEDICAL FACILITIES AND AMBULANCES WITH A ROLE IN THE TRANSPORTATION AND TREATMENT OF CONTAMINATED INJURED INDIVIDUALS:

- Identification of communications links between the ambulance and the designated hospital/medical facilities.
- A description of primary and backup communications among the hospital/medical facilities, the jurisdiction's EOC, and the licensee.

41 Part II: REP Planning Guidance – NUREG Criterion F.3

2009 pages II-44 to II-45

2011 pages II-39 to II-40

41.1 Substantively Unchanged

Explanation of periodic testing of communications systems

41.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-40:

TO MEET THE INTENT OF CRITERION F.3, ORO PLANS/PROCEDURES SHALL:

- Describe the test method and period (e.g., monthly, quarterly or annually) for each communication system used for the functions identified in Criteria F.1. and F.2.

42 Part II: REP Planning Guidance – NUREG Criterion G.1

2009 pages II-46 to II-49

2011 pages II-41 to II-45

42.1 Substantively Unchanged

The overall guidance in Criteria G.1 and G.2 is not substantively changed, but has been significantly reorganized to align with the emphasis of each criterion. Guidance on content and types of public information materials is under Criterion G.1; guidance on the dissemination of public information materials is under Criterion G.2.

42.2 2009 Material Deleted

Term “shall” in reference to **providing non-English educational information in languages spoken by less than 5% of the county population** of voting age, page II-49.

42.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, pages II-41 to II-42:

TO MEET THE INTENT OF CRITERION G.1, ORO PLANS/PROCEDURES SHALL INCLUDE:

- A description of each item (e.g., brochure, calendar, utility bill insert) used to disseminate public information annually. Copies of these items must be provided to FEMA for review on an annual basis through the ALC. In addition to the ALC submission, materials may be reviewed during an SAV, exercise, separate mailing, etc.
- Provisions for identifying individuals needing assistance with evacuation and how personal information will be protected.
- A description of materials directed to transient populations.
- A description of materials addressing information for the ingestion pathway, if separate from the general public information materials.
- A description of each item translated into non-English languages that are spoken within the EPZ by more than 5% of the county population, as well as information accessible to other persons with disabilities and access/functional needs located within the EPZ.²

FEMA HIGHLY RECOMMENDS THAT PLANS/PROCEDURES:

- Include provisions to provide some form of public information for non-English speaking populations that comprise less than 5% of the county population.

Text on **Identification of Individuals Who Need Assistance during an Evacuation**, page II-43:

Plans/procedures describe a method for identifying individuals who need assistance when evacuating. Such individuals include those with physical or mental limitations and the transportation-dependent. For example, the material could include a card to be completed and returned to the appropriate agency by residents needing special assistance during an emergency. However, recent studies have shown that the response to self-registration cards is historically very low. OROs that use this method should consider supplemental venues for self-registration and identification of individuals.

FEMA has developed guidance to support Federal, state, local, and tribal, governments in the integration of children and adults with and without disabilities who have access and functional needs into every aspect of emergency shelter planning and response.

(Footnote) For additional guidance see Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters, Federal Emergency Management Agency, November 2010.

42.4 Material Added to 2011 Publication

² Refer to Executive Order 13407 (Public Alert and Warning System, June 26, 2006).

Text on **Information for the Ingestion Pathway**, pages II-44 to II-45:

Materials include information on the ingestion pathway. This information is either included as a section in the annual public information materials published and distributed by the state and/or licensee or presented as fact sheets summarizing recommended protective actions for applicable agricultural industries including milk, livestock, and crops produced for human consumption. The information covers the following subjects:

- Effects of radiation and radioactive material deposits on the human food supply;
- Explanation of ORO ingestion PAGs;
- How farmers, food processors and distributors will be notified of when and which protective actions are taken in an emergency;
- Identification of sources where further information may be obtained during an emergency, such as NOAA Weather Radio and the EAS; and
- Identification of possible preventive protective actions taken for food and water, including livestock, poultry, fruits, vegetables, and other crops. Examples of preventive protective actions are:
 - Milk – Removing all lactating dairy animals from pasture and placing them on uncontaminated feed and water;
 - Vegetables and Fruits – Washing, brushing, scrubbing or peeling fruits and vegetables to remove surface contamination;
 - Meat and Meat Products – If levels of radioactive cesium in milk approach the preventive PAG “response level,” surveillance and protective actions for meat are recommended (e.g., placing meat animals on uncontaminated feed and water);
 - Poultry and Poultry Products – Monitoring poultry if they are raised outdoors and especially if they are used for egg production. If poultry live indoors and are fed stored rations, contamination is unlikely;
 - Soils – If soil problems occur, proper soil management procedures could be implemented to reduce contamination: (1) Idling (i.e., non-use of the land) may be necessary in some cases; however, in a worst case situation, removal and proper disposal of soil would be more appropriate; (2) Alternating types of crops may be beneficial in some situations. Planting crops that would contribute little or no radioactive material to the human diet could be substituted for other food crops. For example, fiber crops such as cotton and flax might be substituted for fruit and vegetable crops; (3) Deep plowing may keep radioactive substances below the plant root zone where these substances can decay and (4) Liming to limit absorption of specific radioactive substances by the crops.
 - Grains – Permitting grain to grow to maturity, with subsequent milling and polishing to remove most of the radioactive contamination; and
 - Water – Covering open wells, rain barrels, and tanks to prevent contamination of water supplies. For storage containers which are supplied by runoff from roofs or other surface drain fields, the filler pipe is disconnected to prevent contaminants from being washed into the storage container. Unless soils are highly permeable, contaminants deposited on the ground will normally travel very slowly into the aquifer. In addition, radionuclides may be released directly into surface water bodies and into groundwater. Streams and lake currents can transport these radionuclides many miles in a few hours.
- Other emergency protective actions which may involve the interdiction or condemnation of foods, feeds or other contaminated products.

Text **clarifying the non-English translation requirement**, page II-46: At a minimum, public information materials shall be translated into any non-English language spoken by more than 10,000

individuals or more than 5% of the county population of voting age (based on current demographic studies). For counties that lie only partially in the EPZ, this applies to the population of the entire county, not just the portion in the EPZ.

43 Part II: REP Planning Guidance – NUREG Criterion G.2

2009 pages II-49 to II-50

2011 pages II-46 to II-47

43.1 Substantively Unchanged

The overall guidance in Criteria G.1 and G.2 is not substantively changed, but has been significantly reorganized to align with the emphasis of each criterion. Guidance on content and types of public information materials is under Criterion G.1; guidance on the dissemination of public information materials is under Criterion G.2.

43.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-46:

TO MEET THE INTENT OF CRITERION G.2, ORO PLANS/PROCEDURES SHALL INCLUDE:

- Methods used to disseminate public information, assuring that all residences in the plume EPZ will be covered, and that written material will likely be available in a residence during an emergency.
- Methods for distributing ingestion exposure pathway information annually within the 10-mile EPZ, and provisions for distribution within the 50-mile EPZ if needed.
- Methods used to disseminate and maintain public information for transient populations.

43.3 Material Added to 2011 Publication

Text on the **distribution of educational materials in the ingestion pathway**, page II-46:
Information on the ingestion exposure pathway is disseminated at least annually to farmers, processors and distributors in the food production process located within the 10-mile EPZ. The licensee and/or OROs are prepared to disseminate information for implementing protective actions within the entire 50-mile ingestion pathway in the event of a Site Area Emergency or General Emergency.

44 Part II: REP Planning Guidance – NUREG Criterion G.3.a

2009 pages II-51 to II-52

2011 pages II-47 to II-48

44.1 Substantively Unchanged

Discussion on JIC facilities and operations

44.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-47:

TO MEET THE INTENT OF CRITERION G.3.a, ORO PLANS/PROCEDURES SHALL:

- Identify the location where the jurisdiction will brief the media, whether at a Joint Information Center (JIC), separate facility, or both.
- Include a physical description of the facility, including its location and size, and any steps necessary to activate it for use (e.g., coordination with other organizations consistent with Incident Command System, installation of equipment, and rearranging of furnishings), for jurisdictions that operate a media facility.
- If the primary facility is located within the EPZ, identify an alternate facility located outside the EPZ available to provide the same capabilities, and describe the facility with the same level of detail specified for the primary facility.
- Describe the organization's capability to answer media telephone inquiries.
- Describe the mechanism for coordination between the team of personnel designated to answer media calls and the organization's public information officer (PIO), as well as with points of contact located at other facilities supporting the JIC.

45 Part II: REP Planning Guidance – NUREG Criterion G.3.b

2009 pages II-52 to II-53

2011 page II-48

45.1 Substantively Unchanged

Criterion text (this criterion applies only to the licensee)

45.2 2009 Material Deleted

Explanatory note on **locating the JIC at the EOF**, page II-53:

This criterion addresses the need to grant some members of the media access to the EOF for the purposes of transparency of the response efforts.

Note: This criterion does not establish that the JIC shall be co-located with the EOF. In general, it is preferable to locate the main JIC outside the plume EPZ, although co-location of the JIC and the EOF may be acceptable if the preferred alternative is not feasible.

46 Part II: REP Planning Guidance – NUREG Criterion G.4.a

2009 pages II-53 to II-55

2011 pages II-49 to II-50

46.1 Substantively Unchanged

Discussion on PIO roles and responsibilities

46.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-49:

TO MEET THE INTENT OF CRITERION G.4.a, ORO PLANS/PROCEDURES SHALL:

- Identify who, by title/position, will serve as the main PIO for the organization and where the PIO will be located. If media interaction is planned for more than one location, a main PIO is designated for each location.
- Describe how the PIO will obtain access to information about the emergency and the organizations' response efforts, gather and verify such information, and coordinate/communicate with the appropriate personnel for approval in advance of disseminating any information to the public and/or the media.
- If the PIO will be operating at a location remote from the EOC, describe:
 - Who, by title/position, will be the main point of contact in the EOC for exchanging information with the PIO.
 - What physical means (e.g., telephone, fax, or computer network) will be used for communicating information between the EOC and the PIO.
- Include procedures for authorizing release of information and, in particular, for control and release of sensitive information.

47 Part II: REP Planning Guidance – NUREG Criterion G.4.b

2009 pages II-55 to II-56

2011 pages II-50 to II-51

47.1 Substantively Unchanged

Discussion on exchange of information between PIOs

47.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-50:

TO MEET THE INTENT OF CRITERION G.4.b, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The exchange, discussion, and coordination of information among PIOs, if information is provided to the media primarily through a JIC (e.g., meetings to coordinate and share information prior to press briefings/conferences, circulation of press releases among the PIOs and their staffs).
- If the jurisdiction has a PIO at a separate facility (in addition to or instead of the JIC), equipment and procedures for timely exchange of information with other PIOs, including:
 - Who, by title/position, is responsible for ensuring that the exchange takes place.
 - What physical communication means (e.g., telephone, fax, computer network, electronic mail, video, or Internet-based teleconference system) will be used.

48 Part II: REP Planning Guidance – NUREG Criterion G.4.c

2009 pages II-56 to II-57

2011 pages II-51 to II-52

48.1 Substantively Unchanged

Discussion on handling public inquiries and rumors

48.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-51:

TO MEET THE INTENT OF CRITERION G.4.c, ORO PLANS/PROCEDURES SHALL:

- Describe the capability to receive and effectively respond to numerous simultaneous telephone calls from the general public and respond to questions, requests, or comments posed by the public.
- Identify the method for publicizing the dedicated telephone number(s) and other contact information (e.g., website address) for public inquiries and/or media information.
- Include or describe procedures to effectively monitor media information messages to identify incomplete, inaccurate, or ambiguous information related to the emergency in the public domain.
- If a jurisdiction sends a delegate to a joint public inquiry program or relies on another organization to answer public inquiries, identify which organization provides or coordinates the public inquiries program and the method for contacting that organization.

49 Part II: REP Planning Guidance – NUREG Criterion G.5

2009 pages II-57 to II-58

2011 pages II-52 to II-53

49.1 Substantively Unchanged

Discussion on annual media briefings

49.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-53:

TO MEET THE INTENT OF CRITERION G.5, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Provisions for an annual media briefing.
- Distribution of written materials (media kits) covering topics described below.
- Each item provided as baseline information about REP to the local media.

49.3 Material Added to 2011 Publication

Text on **FEMA review of media briefing materials**, page II-53: OROs provide copies of materials used for media briefing to FEMA for review on an annual basis through the ALC. In addition to the ALC submission, materials may be reviewed during an SAV, exercise, separate mailing, etc.

50 Part II: REP Planning Guidance – NUREG Criteria H.1 – H.2

2009 page II-59
2011 page II-54

50.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

51 Part II: REP Planning Guidance – NUREG Criterion H.3

2009 pages II-59 to II-60
2011 pages II-54 to II-55

51.1 Substantively Unchanged

Discussion on emergency operations center (EOC) facilities

51.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-54:

TO MEET THE INTENT OF CRITERION H.3, ORO PLANS/PROCEDURES SHALL INCLUDE:

- A description of or reference to the location and layout of the EOC.
- A listing of facility equipment necessary to support operations.
- The EOC's backup power capability, if available.
- Details and methods for access control to the facility.
- Reference to the location of the alternate EOC, if applicable.
- The organization and official, by title/position, responsible for maintaining the operational readiness of the EOC.

52 Part II: REP Planning Guidance – NUREG Criterion H.4

2009 pages II-61 to II-61
2011 page II-55

52.1 Substantively Unchanged

Discussion on activation and staffing of EOCs

52.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-55:

TO MEET THE INTENT OF CRITERION H.4, ORO PLANS/PROCEDURES SHALL INCLUDE:

- Detailed procedures for activation and staffing of all emergency facilities.
- Criteria used for declaring facilities operational.
- A list of staff, by title/position, assigned to each facility and rosters of key positions.

53 Part II: REP Planning Guidance – NUREG Criteria H.5 – H.6

2009 pages II-61 to II-62
2011 page II-56

53.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

54 Part II: REP Planning Guidance – NUREG Criterion H.7

2009 page II-62
2011 pages II-56 to II-57

54.1 Substantively Unchanged

Discussion on provision of offsite radiological monitoring equipment

54.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-56:

TO MEET THE INTENT OF CRITERION H.7, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Radiological monitoring equipment, by type and number, that is located or stored near the NPP or that will be brought in by the ORO.
- Fixed radiological monitoring stations near the NPP.

55 Part II: REP Planning Guidance – NUREG Criteria H.8 – H.9

2009 page II-63
2011 page II-57

55.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

56 Part II: REP Planning Guidance – NUREG Criterion H.10

2009 pages II-63 to II-65

2011 pages II-57 to II-59

56.1 Substantively Unchanged

Discussion on types and maintenance of radiological equipment

56.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-57:

TO MEET THE INTENT OF CRITERION H.10, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The organization(s) responsible for maintenance of all radiological equipment.
- Specifics regarding the inventory, operational checks, and calibration for dosimetry, portal monitors, radiological survey equipment, air sampling equipment, and laboratory equipment.

56.3 Material Added to 2011 Publication

Text for additional clarification on **types of dosimetry**, page II-58: Dosimeters are available in two basic types: permanent record dosimeters (PRDs) (e.g., film badges and thermoluminescent dosimeters [TLDs], which have to be read by a laboratory) and direct-reading dosimeters (DRDs) (e.g., ion chamber electroscope and electronic dosimeters, which can be read by the user) (see Evaluation Criterion K.3.a for more detail).

Text on **calibration frequency for portal monitors**, page II-58: Calibration is at intervals recommended by the manufacturer of the equipment.

Text on **range of readings documentation**, page II-58: Instruments being used to measure activity have accompanying documentation and/or a sticker affixed to the instrument indicating the effective range of readings. The range of readings documentation indicates the acceptable range of readings that the meter should indicate when it is response-checked using a standard test source.

57 Part II: REP Planning Guidance – NUREG Criterion H.11

2009 pages II-65 to II-66

2011 pages II-59 to II-60

57.1 Substantively Unchanged

Discussion on inventory of emergency equipment

57.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-59:

TO MEET THE INTENT OF CRITERION H.11, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The number and contents of emergency kits by location and general category.
- The quantity of each item per kit.

58 Part II: REP Planning Guidance – NUREG Criterion H.12

2009 pages II-66 to II-67
2011 page II-60

58.1 Substantively Unchanged

Discussion on central collection point for field monitoring data and samples

58.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-60:

TO MEET THE INTENT OF CRITERION H.12, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The organization(s) responsible for assessing radiological data.
- The location of the central point for compiling and analyzing all field monitoring data, including the means used by FMTs to relay information to the central point.
- The coordination and analysis of sample media, including procedures for transporting samples and transferring the data from the laboratory to the central point.

59 Part II: REP Planning Guidance – NUREG Criteria I.1 – I.6

2009 pages II-68 to II-69
2011 pages II-61 to II-62

59.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

60 Part II: REP Planning Guidance – NUREG Criterion I.7

2009 pages II-69 to II-70
2011 pages II-62 to II-63

60.1 Substantively Unchanged

Discussion of field monitoring resources

60.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-62:

TO MEET THE INTENT OF CRITERION I.7, THE ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Which organizations have primary responsibility for field monitoring activities.

- The capabilities and resources state, local, tribal, and non-governmental organizations will contribute.

61 Part II: REP Planning Guidance – NUREG Criterion I.8

2009 pages II-70 to II-75

2011 pages II-63 to II-67

61.1 Substantively Unchanged

Discussion of field monitoring procedures

61.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-63:

TO MEET THE INTENT OF CRITERION I.8, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The process for activating and notifying field teams.
- The composition of the FMTs (e.g., organizations involved, number of teams [two or more], number of members on each team).
- The types and sources of transportation resource(s) for FMTs and estimated deployment times to reach a site from various locations, if applicable.
- The location of any staging areas.
- The title/position of the person responsible for directing FMTs to proper locations for monitoring and air sampling.
- The monitoring, sampling, and communications equipment that will be used by FMTs.
- The procedures that will be followed for field monitoring, sample collection, and field sample analysis.
- The laboratories to which specific samples will be sent for analysis, including estimated delivery and analysis times, transportation and temporary storage arrangements, and procedures for chain-of-custody records.
- How the ORO will obtain centerline measurements.

Text on **obtaining peak plume measurements:**

2009 page II-71: Preferably, State or local teams will traverse the plume to obtain peak and plume-edge measurements, but only at locations where they will not exceed turn-back exposure values. In addition, the plans/procedures should address whether FMTs will coordinate with other FMTs in the field (e.g., local or licensee) and how they will share measurement data.

2011 page II-64: ORO teams obtain peak plume measurements (centerline measurements) according to their plans/procedures. FMTs may accomplish this by traversing the plume to obtain peak plume measurements (centerline measurements), or by making mathematical calculations from measurements taken off centerline, as agreed in plans/procedures or LOAs. FMTs will obtain plume-edge measurements. In addition, the plans/procedures address whether FMTs coordinate/ communicate with other FMTs in the field (e.g., Federal, ORO, or licensee) and how they share duties, resources, and measurement data.

Text on **taking ambient radiation measurements**:

2009 page II-72: The procedures should state that open- and closed-window readings should be taken at waist level (approximately 1 meter) or higher and at near-ground levels (e.g., 5–7 centimeters), and that the beta window on the instrument’s probe, when conducting open-window readings, should point up for waist level or higher readings and down for near-ground readings.

2011 page II-65: The procedures state that open- and closed-window readings are taken at waist level (approximately 1 meter) or higher and at near-ground levels (e.g., 5-7 centimeters). When conducting open-window readings, it is recommended that that the beta window on the instrument’s probe point up for waist level or higher readings and down for near-ground readings. Taking multiple readings helps identify changes in the plume.

62 Part II: REP Planning Guidance – NUREG Criterion I.9

2009 pages II-75 to II-76

2011 pages II-67 to II-68

62.1 Substantively Unchanged

Discussion on measurements of radioiodine concentrations in the plume

62.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-68:

TO MEET THE INTENT OF CRITERION I.9, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The capability to collect air samples within the plume and perform analysis that will detect radioiodine concentrations as low as 10^{-7} $\mu\text{Ci/cc}$ under field conditions.
- The process used for collecting air samples, including location of sampling points, timing of sample collection, and techniques used to collect and count (see Criterion I.8).

63 Part II: REP Planning Guidance – NUREG Criterion I.10

2009 pages II-76 to II-77

2011 pages II-68 to II-69

63.1 Substantively Unchanged

Discussion on dose calculation

63.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-68:

TO MEET THE INTENT OF CRITERION I.10, ORO PLANS/PROCEDURES SHALL ADDRESS THE FOLLOWING POINTS FOR THE EARLY, INTERMEDIATE, AND LATE PHASES:

- Personnel and equipment that will be involved in dose assessment.
- Computer software and documentation, including data input procedures, that will be used.
- Alternate methods that may be used (e.g., hand calculations).
- Information/variables to run the model, including proper units of measure.
- Means for obtaining initial information (e.g., from licensee monitors or inventory estimates).
- Use of field data to verify and modify model results.
- Procedures for comparing dose results with those of other organizations that perform dose assessments.

64 Part II: REP Planning Guidance – NUREG Criterion I.11

2009 page II-77

2011 page II-69

64.1 Substantively Unchanged

Discussion on tracking the plume

64.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-69:

TO MEET THE INTENT OF CRITERION I.11, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The planned use of any outside resources to locate and track the plume, including taking measurements and collecting air samples from or near the plume's peak concentration, if applicable.

65 Part II: REP Planning Guidance – NUREG Criterion J.1

2009 page II-78

2011 page II-70

65.1 Substantively Unchanged

All text (this Criterion applies only to licensees)

66 Part II: REP Planning Guidance – NUREG Criterion J.2

2009 pages II-78 to II-79

2011 pages II-70 to II-71

66.1 Substantively Unchanged

Discussion on ORO support of onsite evacuation

66.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-70:

TO MEET THE INTENT OF CRITERION J.2, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Assistance that will be provided to licensees during an evacuation of the site or a statement that no assistance is required.
- The alternatives that will be implemented during inclement weather and/or high traffic densities.
- Provisions for coordinating arrangements with other offsite organizations to expedite evacuation of onsite personnel.

66.3 Material Added to 2011 Publication

Text on addressing ORO role in onsite evacuation, page II-70: ... PLANS/PROCEDURES SHALL DESCRIBE Assistance that will be provided to licensees during an evacuation of the site [following text added] or a statement that no assistance is required.

67 Part II: REP Planning Guidance – NUREG Criteria J.3 – J.8

2009 pages II-79 to II-81

2011 pages II-71 to II-72

67.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

67.2 2009 Material Substantively Changed in 2011 Publication

Text clarifying Criterion J.6:

2009 page II-80: Explanation: If individuals arriving onsite are ORO EWs, then respective plans should reflect agreements between the licensee and the OROs regarding provision of additional protective equipment and radioprotective drugs. Should logistical circumstances inhibit provisions from being onsite at the time of the emergency, plans/procedures should include processes for timely procurement or redistribution of necessary assets to provide to EWs responding onsite.

2011page II-71: NOTE: Although this criterion is the responsibility of the licensee, OROs that expect to provide onsite support in an emergency should be aware of the licensee's arrangements regarding provision of additional protective equipment and radioprotective drugs.

68 Part II: REP Planning Guidance – NUREG Criterion J.9

2009 pages II-81 to II-83

2011 pages II-72 to II-74

68.1 Substantively Unchanged

Discussion of protective actions

68.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-72:

TO MEET THE INTENT OF CRITERION J.9, ORO PLANS/PROCEDURES SHALL INCLUDE:

- The organization's procedures for making PADs and implementing protective actions based upon PAGs that are consistent with EPA recommendations.
- The process followed to ensure coordination of PADs with all appropriate jurisdictions.

68.3 Material Added to 2011 Publication

Text referring to **revised Supplement 3** in the Protective Action Guides discussion, page II-73: For further guidance, see NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, Guidance for Protective Action Strategies, October 2011.

Text referring to **revised Supplement 3** in the Protective Action Decision Making discussion, page II-73: For supplementary guidance on the development of predetermined PADs that take into account multiple variables, see NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, Guidance for Protective Action Strategies, October 2011.

69 Part II: REP Planning Guidance – NUREG Criterion J.10.a

2009 pages II-83 to II-84

2011 page II-75

69.1 Substantively Unchanged

Discussion of maps to support response activities

69.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-75:

TO MEET THE INTENT OF CRITERION J.10.a, ORO PLANS/PROCEDURES SHALL:

- Include clearly legible maps of all evacuation routes, evacuation areas, pre-selected radiological sampling and monitoring points (including water supplies), reception and congregate care centers in host/support jurisdictions, decontamination facilities, and shelter areas.
- Describe the procedures and organization(s) responsible for updating and maintaining maps, as necessary, using the most current and accurate data (e.g., census data, state and county records, etc).

69.3 Material Added to 2011 Publication

Text on **geographic information systems (GIS) data**, page II-75: Approved geographic information systems data and products, as outlined by plans/procedures, may be used.

70 Part II: REP Planning Guidance – NUREG Criterion J.10.b

2009 page II-84

2011 pages II-75 to II-76

70.1 Substantively Unchanged

Discussion of maps showing population distribution in the EPZ

70.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-75:

TO MEET THE INTENT OF CRITERION J.10.b, ORO PLANS/PROCEDURES SHALL INCLUDE:

- Clear, legible maps showing population distribution around the NPP, possibly in a separate appendix.

70.3 Material Added to 2011 Publication

Text on **GIS data**, page II-76: Approved geographic information system data and products, as outlined by plans/procedures, may be used.

71 Part II: REP Planning Guidance – NUREG Criterion J.10.c

2009 page II-85

2011 page II-76

71.1 Substantively Unchanged

Discussion on notifying the population

71.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-76:

TO MEET THE INTENT OF CRITERION J.10.c, ORO PLANS/PROCEDURES SHALL:

- Meet the requirements listed under Criteria E.5, E.6, and E.7

72 Part II: REP Planning Guidance – NUREG Criterion J.10.d

2009 pages II-85 to II-87
2011 pages II-76 to II-78

72.1 Substantively Unchanged

Discussion on protective actions for the mobility-impaired

72.2 2009 Material Deleted

72.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-76:

TO MEET THE INTENT OF CRITERION J.10.d, ORO PLANS/PROCEDURES SHALL:

- Describe the means to protect those persons whose mobility may be impaired because of institutional or other confinement (e.g., children in schools and licensed daycare centers and persons in nursing homes, hospitals, and correctional facilities).
- Describe the methods for determining the number of persons who may need assistance and the type of assistance, per planning area.
- Reference lists of documented individuals who need assistance in an evacuation of the EPZ and processes for keeping the lists up to date.
- Describe processes for evacuating persons with disabilities and access/functional needs and for sheltering in place those who cannot be moved.
- Describe any special transportation needs for these groups and the transportation resources, including types and quantities of vehicles, used to move them.

Text on **unlicensed daycare centers,**

2009 page II-86: FEMA recommends that planning be provided for any unlicensed or “exempt” day care providers. The licensing of daycare centers by governmental organizations places them under government regulation and standards. The licensing standards establish the legal responsibilities of the managers of the centers for the care, health, and safety of persons under their care, both for routine and emergency situations. Some States do not require licensing if the day care center is located within the physical structure of a religious building; therefore, these day care facilities are exempt from licensing.

2011 page II-77: In some states, certain types of daycare facilities are exempt from licensing requirements (e.g., if the daycare center is located within the physical structure of a religious building or under a certain size). Exempt facilities are considered part of the general population for planning purposes. When possible, FEMA encourages OROs to work with known unlicensed and exempt daycare providers.

Addition of qualifier “licensed” to all references to daycare centers

Text on **disabled persons:**

2009 page II-86: Disabled Persons. The plans/procedures should provide for a means of protecting all categories of disabled individuals present in the EPZ. For each disabled person, there should be contacts to provide communication and physical assistance and agreements made

with transportation providers. For those disabled persons requiring the assistance of service animals, the plans/procedures also should include provisions for the animals' protection and accommodation. Agreements should be made with hospitals/medical facilities, mental hospitals, adult care facilities, and community mental health centers outside the EPZ to receive the severely mobility-impaired and emotionally disabled.

For disabled persons, the plans/procedures should include:

- A list of all disabled individuals within the EPZ who need assistance and the process for keeping the list current. This list should be maintained at the local risk government EOC and may be included by reference.
- Means to protect those persons whose mobility may be impaired because of institutional or other confinement, including those who cannot be evacuated and must be sheltered. A means of informing these individuals of planned emergency procedures should also be addressed.
- An up-to-date list of transportation resources, including types and quantities, to move the mobility impaired.

2011 page II-78: Documented individuals who need assistance in an evacuation. The plans/procedures provide for a means of protecting all categories of individuals needing assistance during an evacuation present in the EPZ. These persons may include, but are not limited to, residents with disabilities, access or functional needs, or those who may live in a facility such as an assisted living community or skilled nursing home, children and adults whose mobility is impaired due to institutional or other confinement, and the transportation-dependent. For each resident needing assistance during an evacuation, plans/procedures include or reference contacts to provide communication and physical assistance, as well as agreements with transportation providers. For those individuals requiring the assistance of service animals, the plans/procedures also include provisions for the animals' protection and accommodation. Agreements are made with hospitals/medical facilities, mental hospitals, adult care facilities, and community mental health centers outside the EPZ to receive the severely mobility-impaired and emotionally disabled.

For documented individuals who need assistance in an evacuation, ORO plans/procedures include:

- Reference to a list of all individuals within the EPZ needing assistance during an evacuation and the process for keeping the list current (e.g., working with those organizations that provide assistance to individuals who may need special assistance in an evacuation). This list is maintained at the local risk government EOC and may be included by reference.
- Means to protect those persons whose mobility may be impaired because of institutional or other confinement, including those who cannot be evacuated and must be sheltered. A means of informing these individuals of planned emergency procedures is addressed.
- An up-to-date estimate of transportation needs and list of potential resources, including types and quantities, to move the mobility impaired.

References to “disabled persons” replaced with “documented individuals who need assistance in an evacuation”

References to “special populations” replaced with “persons with disabilities and access/functional needs”

References to “prisons” replaced with “correctional facilities”

72.4 Material Added to 2011 Publication

73 Part II: REP Planning Guidance – NUREG Criterion J.10.e

2009 pages II-87 to II-89

2011 pages II-79 to II-80

73.1 Substantively Unchanged

Discussion of the use of radioprotective drugs

73.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-79:

TO MEET THE INTENT OF J.10.e, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- What groups might be advised to take KI.
- Adequate supply of radioprotective drugs for each individual, including quantities, storage locations, and means of distribution.
- Adequate maintenance, shelf life extensions, and timely replacement of radioprotective drugs.
- Means for communicating a recommendation to take radioprotective drugs to emergency workers, institutionalized persons, and (if included as an option in the plans/procedures) the general public.

Text on instructions to be supplied with radioprotective drugs:

2009 page II-88: The plans/procedures should include the instructions that will be issued with KI. These instructions should indicate that there is a relatively small risk of adverse health effects from taking KI, but that these risks are outweighed by the risk of potential health effects from radiation dose to the thyroid gland. Persons who are known to be allergic to iodine should not take KI. Information on correct dosage, which is dependent on the age of the individual being exposed, should be included in the instructions.

2011 page II-79: The plans/procedures include a statement that the manufacturer's instructions will be provided with KI. Those organizations that have chosen to acquire KI for use by the general public must incorporate distribution procedures into the plans/procedures within one year of receiving the KI.

74 Part II: REP Planning Guidance – NUREG Criterion J.10.f

2009 pages II-89 to II-90

2011 pages II-80 to II-81

74.1 Substantively Unchanged

Discussion on the decision making process for recommending the use of radioprotective drugs

74.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-80:

TO MEET THE INTENT OF CRITERION J.10.f, ORO PLANS/PROCEDURES SHALL:

- Identify, by title/position, those who will make decisions regarding the use of KI during an emergency.
- Describe the criteria and decision-making processes for recommending the use of KI.

75 Part II: REP Planning Guidance – NUREG Criterion J.10.g

2009 pages II-90 to II-91

2011 pages II-81 to II-81

75.1 Substantively Unchanged

Discussion on evacuation of the public

75.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-81:

TO MEET THE INTENT OF CRITERION J.10.g, ORO PLANS/PROCEDURES SHALL DESCRIBE HOW THE PUBLIC WITHIN THE PLUME EXPOSURE PATHWAY EPZ WILL BE EVACUATED, INCLUDING:

- Means for controlling traffic to assure a safe and efficient evacuation.
- Procedures for implementing alternate evacuation routes, if warranted.
- Transportation resources, including drivers.
- The methods for determining the number of persons without private transportation, per planning area.
- Designated pickup points for persons without private transportation.

75.3 Material Added to 2011 Publication

Text on **evacuation of individuals needing assistance during an evacuation**, page, II-81: This includes individuals who are capable of using public transportation; the evacuation of individuals who need special assistance in an evacuation due to physical or mental disability or institutional or other confinement is addressed in Criterion J.10.d.

76 Part II: REP Planning Guidance – NUREG Criterion J.10.h

2009 pages II-91 to II-92

2011 pages II-82 to II-83

76.1 Substantively Unchanged

Discussion on relocation centers

76.2 2009 Material Deleted

References to planning for household pets

76.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-82:

TO MEET THE INTENT OF CRITERION J.10.h, ORO PLANS/PROCEDURES SHALL IDENTIFY:

- All relocation centers and host schools for evacuees and students by name and address.
- Organizations responsible for managing the centers and staffing requirements for each center.
- Arrangements for handling students at relocation centers and/or host schools.
- Arrangements for handling service animals.
- Hospitals, correctional facilities, and nursing homes that will receive evacuees.
- Provisions for the radiological monitoring of evacuees, service animals, and evacuee vehicles, according to the plans/procedures. If students are taken to host schools where monitoring capabilities are not present, the plans/procedures address any special considerations for radiological monitoring of student evacuees following a release.
- Provisions for students at schools outside the EPZ who reside within the EPZ.

76.4 Material Added to 2011 Publication

Text on **congregate care** (previously located in Criterion J.12), page II-82: Some evacuees may need congregate care after arriving at a relocation center. Current FEMA policy requires that the planning basis for monitoring personnel and equipment needs be 20 percent of the EPZ population (See Criterion J.12). OROs also use this 20 percent of the EPZ population as a planning basis for determining the number of congregate care centers needed to accommodate evacuees from the EPZ. While the actual proportion of individuals seeking congregate care could be more or less than 20 percent, it is prudent to incorporate a planning basis that can be modified as the incident warrants.

77 Part II: REP Planning Guidance – NUREG Criterion J.10.i

2009 pages II-92 to II-93

2011 page II-83

77.1 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-83:

TO MEET THE INTENT OF CRITERION J.10.i, ORO PLANS/PROCEDURES SHALL:

- Reference the evacuation time estimate (ETE) studies and include the results of the ETES.
- Reference the traffic capacities of the evacuation routes.

- Discuss the potential need to use alternate routes because of traffic impediments, adverse weather conditions, an airborne radioactive plume, areas affected by hostile actions, or other factors that might hinder a timely, safe evacuation.
- Provide maps as described in Criterion J.10.a.

Text in Explanation:

2009 page II-92: The plans/procedures should reference the evacuation time estimate (ETE) studies and include the results of the ETEs, as well as traffic capacities of the evacuation routes and the potential need to use alternate routes because of traffic impediments, adverse weather conditions, an airborne radioactive plume, areas affected by hostile actions, or other factors that might hinder a timely, safe evacuation. Maps should be provided as recommended in Criterion J.10.a.

Generally, the ETE should be reviewed if the population within the EPZ increases by 10 percent or if there is a significant change to the evacuation route network. The ETE should be reviewed in accordance with NUREG-0654/FEMA-REP-1, Revision 1, Appendix 4 Evacuation Time Estimates within the Plume Exposure Pathway Emergency Planning Zone, October 1980.

2011 page II-83: The licensee is responsible for conducting and updating the ETE; review of ETE studies is generally performed by transportation experts contracted by the NRC. OROs use ETE information to plan for evacuation. Population and roadway capacity, the primary elements in the ETE, are periodically evaluated and updated to determine if there is an impact on the ETE. The population review not only addresses increases in population, but also assesses the age demographics and persons with disabilities and access/functional needs as well. The roadway capacity assessment includes review of transportation improvements, constraints, traffic flow, and changes in transient traffic flow through the EPZ.

Licensees update the ETE in accordance with current NRC guidance. As a general rule, the ETE is revised every 10 years following the U.S. census. In addition, an ETE update must be performed at any time during the decennial period if the EPZ permanent resident population estimate increases such that it causes the longest ETE value for the 2-mile or 5-mile zone, including affected emergency response planning areas, or for the entire 10-mile EPZ to change by 25 percent or 30 minutes, whichever is less, from the licensee's currently approved ETE.

78 Part II: REP Planning Guidance – NUREG Criterion J.10.j

2009 pages II-93 to II-94
2011 page II-84

78.1 Substantively Unchanged

Discussion on controlling access to evacuated areas

78.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-84:

TO MEET THE INTENT OF CRITERION J.10.j, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Procedures for controlling road access to sheltered and/or evacuated areas, including organization(s) responsible for staffing TCPs and Access Control Points (ACPs).
- Maps identifying TCPs/ACPs (may be incorporated by reference).
- Equipment and resources needed (e.g., cones or barricades).
- Procedures and responsibilities for controlling access via other transportation modes.
- Procedures and responsibilities for controlling ingress and egress to other areas affected by an incident.
- Procedures for providing TCP/ACP staff with the status of emergency response activities.

79 Part II: REP Planning Guidance – NUREG Criterion J.10.k

2009 page II-94

2011 pages II-84 to II-85

79.1 Substantively Unchanged

Discussion on impediments to evacuation

79.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-84:

TO MEET THE INTENT OF CRITERION J.10.k, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Resources available (e.g., personnel and equipment) to clear impediments to evacuation and emergency response in areas affected by incidents.
- Responsibility for directing resources and rerouting traffic, as needed.

80 Part II: REP Planning Guidance – NUREG Criterion J.10.l

2009 pages II-94 to II-95

2011 page II-85

80.1 Substantively Unchanged

Discussion of evacuation time estimates

80.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-85:

TO MEET INTENT CRITERION J.10.l, ORO PLANS/PROCEDURES SHALL DESCRIBE OR REFERENCE:

- Time estimates for evacuation of various sectors or evacuation areas.

- The times required for the movement of school children and other persons with disabilities and access/functional needs.

81 Part II: REP Planning Guidance – NUREG Criterion J.10.m

2009 pages II-95 to II-97

2011 pages II-85 to II-87

81.1 Substantively Unchanged

Discussion on bases for the choice of recommended protective actions

81.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-86:

TO MEET THE INTENT OF CRITERION J.10.m, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The rationales for any pre-planned precautionary actions, including the triggering events that would lead to the decision to implement these actions.
- The rationales used to make initial PADs.
- The rationales used for subsequent PADs, including the consideration of various possible options.

Text on recommended protective actions in a severe incident:

2009 page II-95: PADs are measures taken in anticipation of, or in response to, a release of radioactive material to the environment. Sheltering and evacuation are the two PADs that are relied upon for limiting the direct exposure of the general public within the plume exposure EPZ. The plans/procedures should describe the methods for determining which PAD, evacuation or sheltering (or some combination thereof), will provide the overall greater protection. Initial PADs for the general public may be based on plant status information; it is not necessary to wait for calculations of projected dose. When plant status information indicates potential or actual severe core damage, or other significant threat to plant vital structures, the preferred protective action is to evacuate immediately to 2 miles in all directions from the plant and about 5 miles downwind; these numbers can change based upon geography or other circumstances. Evacuation should be the selected protective action unless site-specific conditions, threats, or involvement of a high-risk group (e.g., mobility-impaired) make an evacuation unusually hazardous or impossible. Under these conditions, sheltering may be substituted for evacuation.

2011 page II-86: PADs are measures taken in anticipation of, or in response to, a release of radioactive material to the environment. Sheltering and evacuation are the two PADs that are relied upon for limiting the direct exposure of the general public within the plume exposure EPZ. The plans/procedures describe the methods for determining which PAD, evacuation or sheltering (or some combination thereof, including evacuation in stages), will provide the overall greater protection. Initial PADs for the general public may be based on plant status information; it is not necessary to wait for calculations of projected dose.

Footnote: Updated FEMA and NRC guidance in NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, Guidance for Protective Action Strategies, October 2011, provides a protective

action logic development tool that should be used by licensees to develop site specific protective action recommendation procedures and is recommended for use by OROs to develop protective action strategy guidance for decision makers.

82 Part II: REP Planning Guidance – NUREG Criterion J.11

2009 pages II-98 to II-101

2011 pages II-87 to II-91

82.1 Substantively Unchanged

Discussion on protective actions for the ingestion pathway

82.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-88:

TO MEET THE INTENT OF CRITERION J.11, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The individual(s), by title/position, and organization with the authority to make decisions in the ingestion pathway planning zone.
- The ingestion protective actions planned and the rationale for the selection of actions, also see Criteria J.9. and J.10.m.
- The methodology used to designate the areas of concern where monitoring and sampling will be implemented.
- The methodology for collecting agricultural samples, including identifying field team members, providing necessary supplies, names and addresses of contact points to obtain permission to collect samples, and chain of custody procedures.
- The analytical laboratory capability to analyze various samples and the procedure for reporting analytical results to the appropriate organization.
- The location and means of obtaining up-to-date information on permanent agribusiness facilities within the EPZ. This information includes dairies, food processing plants, surface water supplies, water intakes, and other permanent facilities. Information also includes facilities outside the EPZ that could receive potentially contaminated products from within the EPZ, including names and telephone numbers for points of contact.
- The location and means of obtaining up-to-date information on land use (i.e., which crops are being grown in which areas). This information includes the status of harvesting.
- The DILs that would warrant implementation of protective actions and the rationale and assumptions used to develop the DILs.
- The availability of suitable maps for recording various data. The use of electronic means to capture and map survey and dose data (e.g., geographic information systems) are acceptable.
- The means by which the agribusiness person will be notified of a PAD that would affect his/her ability to sell or move food or agricultural products.

82.3 Material Added to 2011 Publication

Text on **GIS data**, page II-90: The use of electronic means to capture and map survey and dose data (e.g., geographic information systems) is acceptable.

83 Part II: REP Planning Guidance – NUREG Criterion J.12

2009 pages II-101 to II-104
2011 pages II-91 to II-93

83.1 Substantively Unchanged

Discussion of registering and monitoring evacuees

83.2 2009 Material Deleted

All references to **planning for household pets**

Text on **including household pets in the population estimate**, page II-102: Where applicable, service animals and household pets are also included in the “Total EPZ population.”

Text on **monitoring household pets**, page II-102: If the plans/procedures describe that evacuees’ household pets are included in the “Total EPZ Population” (i.e., are brought by evacuees to reception centers or other facilities in which they have contact with humans), they should also be monitored in accordance with the same standards and trigger/action levels for decontamination as humans.

83.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-91:

TO MEET THE INTENT OF CRITERION J.12, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Radiological monitoring of evacuees, service animals, vehicles, and possessions. OROs need to be capable of monitoring 20 percent of the EPZ population (including transients) assigned to each facility within a 12-hour period.
- Decontamination procedures, including the trigger/action levels that indicate the need for decontamination activities and procedures for medical attention referral.
- Contamination control measures, such as safety requirements, decontamination site layout, and decontamination protocol.
- The physical layout of the area, with diagrams that show the flow and layout of operations, including a description of the means for separating contaminated, uncontaminated, and unscreened individuals, vehicles, and service animals.
- The processes for registering evacuees and service animals in host/support jurisdictions, including documentation of monitoring for referral to temporary care facilities.

84 Part II: REP Planning Guidance – NUREG Criteria K.1 – K.2

2009 pages II-105 to II-106
2011 page II-94

84.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

85 Part II: REP Planning Guidance – NUREG Criterion K.3.a

2009 pages II-106 to II-111

2011 pages II-95 to II-100

85.1 Substantively Unchanged

Discussion on dose monitoring and control

85.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-95:

TO MEET THE INTENT OF CRITERION K.3.a, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Methods or options for emergency worker exposure control, to include exposure from inhalation.
- Dose limits for emergency workers.
- Types and quantities of dosimeters and dosimeter chargers available per location and the number of emergency workers needing dosimetry devices.
- Process for reading PRDs and any early reading of PRDs (e.g., when an emergency worker's task assignment is completed or as otherwise specified).
- Specific dosimetry instructions, including when, where, and to whom individuals return their dosimetry devices.
- Dosimetry storage locations.
- Distribution of dosimetry to all emergency workers and, when permitted, members of the public needing access to the restricted area.
- Proper documentation of authorization to exceed administrative dose limits.

Text on the **three EPA-recommended methods for dose control** amended to match the exact wording from EPA guidance, page II-97:

- Option 1. Until evacuation of the general public is complete, monitoring and control of emergency worker dose is based only on gamma radiation exposure as measured by a DRD without regard to additional dose received from inhalation. Emergency workers entering the plume after evacuation of the general public has been completed will be assigned a predetermined administrative dose limit, stated in terms of external radiation dose only, that is lower than the maximum TEDE dose recommended by the EPA for the class of emergency response activity to be performed. The TEDE calculation for emergency workers who have ingested KI does not include the contribution from thyroid dose due to inhalation of radioiodine, as that contribution will be minimal if KI is administered prior to exposure. The lower administrative dose limit may account for: (1) the radiation dose already received by the emergency workers and (2) the calculated ratio of external dose to the TEDE. The basis of this calculated ratio will be dose projections provided by the licensee or measurements of the radionuclide mix in the plume. This calculated ratio is based on dose projections using utility-provided source terms or measurements of the radionuclide mix in the plume.
- Option 2. An administrative limit on the dose to emergency workers entering the plume is determined in advance and documented in emergency plans/procedures. The administrative limit is stated in terms of the external dose measured by a DRD. To account for the inhalation dose,

which cannot be measured prior to or during a mission, the administrative limit is set lower than the limit for each class of activity recommended by EPA. By selecting an appropriate value for the administrative limit on measured external dose and restricting emergency workers to that limit, there can be reasonable assurance that after including the dose from inhalation, the TEDE to an emergency worker is unlikely to exceed the applicable limit. The TEDE calculation for emergency workers who have ingested KI does not include the contribution from thyroid dose due to inhalation of radioiodine, because that contribution will be minimal if KI is administered prior to exposure. For the less severe but more probable reactor incident sequences, the TEDE to emergency workers who have taken KI is unlikely to exceed 5 times their measured external dose as shown on DRDs. Therefore, if the external dose measured by a DRD is limited to 1/5 of the applicable limit, the TEDE is unlikely to exceed the limit. For example, if the external dose measured by a DRD is limited to 5 R, the TEDE is unlikely to exceed 25 rem.

- Option 3. Administrative dose limits for emergency workers are not predetermined, but are calculated for the specific incidental release anticipated or in progress. The limits are based on dose calculations similar to those used to determine the need for public protective actions. The limits, stated in terms of external dose measured by a DRD, would be set low enough to keep the TEDE to emergency workers below the maximum dose recommended for the various classes of activity.

The TEDE calculation for emergency workers who have taken KI does not include the contribution from thyroid dose due to inhalation of radioiodine, because that contribution will be minimal if KI is administered prior to exposure. The dose limits could remain the same throughout an emergency, or they could be revised periodically on the basis of knowledge of the radionuclide constituents of the plume.

85.3 Material Added to 2011 Publication

Text under **definition of emergency worker**, page II-95: Note that evacuation vehicle drivers who will be transporting individuals or groups out of the EPZ and who are not expected to return to the EPZ are not considered “emergency workers.”

Text under **PRDs**, page II-96: The thermoluminescent dosimeter or film badge is read by a processor accredited by the National Voluntary Laboratory Accreditation Program or other accreditation program in accordance with American National Standards Institute, Standard N13.11-1983, Personal Dosimetry Performance Criteria for Testing. Accreditation is for the specific type of dosimetry in use and is for the type of radiation(s) for which the individual wearing the dosimeter is monitored.

Text box on **Issuing the Right Dosimetry**, page II-96: A mathematical conversion factor is used to translate DRD readings in units of R into applicable dose limits in units of rem.

For example, if the state uses a conversion factor of 5, emergency workers multiply the reading on their DRD by 5 and compare the result to the administrative limits in the plans/procedures. Therefore, if the applicable dose limit is 5 rem, the minimum acceptable dosimetry issued to emergency workers must be capable of reading 1 R to provide the information needed to accurately monitor their exposure.

Text on the use of **group dosimetry**, page II-97: Group dosimetry for these emergency workers [outside the 10-mile EPZ] is permitted. Group dosimetry is accomplished by issuing a PRD to each individual, then using one or more area DRDs to monitor exposure of the entire group. Group dosimetry is also permitted for emergency workers assigned to a fixed facility inside the 10-mile

EPZ; however, if emergency workers are deployed outside the building, including moving to an alternate facility, they must be issued a DRD.

86 Part II: REP Planning Guidance – NUREG Criterion K.3.b

2009 pages II-111 to II-112

2011 pages II-100 to II-101

86.1 Substantively Unchanged

Discussion of monitoring and recording dosimeter readings

86.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-100:

TO MEET THE INTENT OF CRITERION K.3.b, ORO PLANS/PROCEDURES SHALL INDICATE:

- The method for obtaining dose information from emergency workers.
- The timeframes for reading dosimeters (e.g., every 15 or 30 minutes).
- The methods for recording doses (e.g., the form used).
- Appropriate reporting if administrative limits have been reached or exceeded (refer to Criterion K.4.).

87 Part II: REP Planning Guidance – NUREG Criterion K.4

2009 pages II-113 to II-114

2011 pages II-101 to II-102

87.1 Substantively Unchanged

Discussion on authorization to exceed PAGs

87.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-101:

TO MEET THE INTENT OF CRITERION K.4, ORO PLANS/PROCEDURES SHALL SPECIFY:

- Dose limits (TEDE) for missions, accounting for dose from inhalation.
- Actions taken when exposure limits have been reached.
- Any special conditions requiring additional limitations (e.g., pregnant emergency workers).
- Authorization to exceed pre-authorized exposure limits and management of emergency workers' exposure above the limits.
- Points of contact for authorization to remain in the hazard area and receive additional exposure (e.g., for special lifesaving missions) if the allowable upper limit has been reached.
- Information on risk and threshold doses for health effects to be provided to emergency workers volunteering for higher dose exposure.

- Administrative limits.

88 Part II: REP Planning Guidance – NUREG Criterion K.5.a

2009 pages II-114 to II-116

2011 pages II-102 to II-104

88.1 Substantively Unchanged

Discussion of monitoring and decontamination action levels

88.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-102:

TO MEET THE INTENT OF CRITERION K.5.a, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Facilities for monitoring and decontaminating emergency workers, equipment, and vehicles, along with operating and implementing procedures.
- Locations of monitoring and decontamination facilities (preferably located outside the plume EPZ).
- Methods for controlling the spread of contamination at the emergency worker monitoring facilities.
- Radioactive contamination levels that will trigger decontamination of emergency workers, equipment, and vehicles, expressed in applicable units (e.g., cpm, mR/hr).
- Survey instruments (i.e., specific appropriate equipment and sensitivity, including radiation type) used to monitor emergency workers, equipment, and vehicles.
- Procedures for monitoring individuals and equipment.

89 Part II: REP Planning Guidance – NUREG Criterion K.5.b

2009 pages II-116 to II-118

2011 pages II-104 to II-106

89.1 Substantively Unchanged

Discussion on decontamination procedures

89.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-104:

TO MEET THE INTENT OF CRITERION K.5.b, ORO PLANS/PROCEDURES SHALL ADDRESS:

- Supplies and equipment for decontamination.
- Decontaminating people, equipment, and vehicles.
- Re-monitoring people, equipment, and vehicles and recording the results.
- Criteria for sending individuals with fixed contamination for medical attention.

- Controlling the spread of contamination.
- Number of people needed to perform decontamination in the event of an emergency.
- Contaminated waste collection, handling, and storage.

90 Part II: REP Planning Guidance – NUREG Criteria K.6 – K.7

90.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

91 Part II: REP Planning Guidance – NUREG Criterion L.1

2009 pages II-120 to II-122

2011 pages II-107 to II-109

91.1 Substantively Unchanged

Discussion on primary and secondary medical service providers

91.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-107:

TO MEET THE INTENT OF CRITERION L.1, ORO PLANS/PROCEDURES SHALL:

- Reference written agreements or LOAs with hospitals/medical facilities.
- Reference written agreements or LOAs for technical staff that are not employed by the hospital/medical facility.
- Include individual facility capabilities, including the number of radiologically trained medical personnel and support staff.
- Describe hospital/medical facility and support service operations for treating contaminated, injured, or exposed individuals.
- Describe dosimetry procedures, including record keeping and final receipt for processing.

92 Part II: REP Planning Guidance – NUREG Criterion L.2

2009 page II-122

2011 page II-109

92.1 Substantively Unchanged

All text (this Criterion applies only to licensees)

93 Part II: REP Planning Guidance – NUREG Criterion L.3

2009 pages II-123 to II-124
2011 pages II-109 to II-110

93.1 Substantively Unchanged

Discussion on identification of additional medical services resources

93.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-109:

TO MEET THE INTENT OF CRITERION L.3, ORO PLANS/PROCEDURES SHALL INCLUDE:

- Lists of additional hospitals/medical facilities capable of providing medical support for contaminated, injured, or exposed individuals.

94 Part II: REP Planning Guidance – NUREG Criterion L.4

2009 pages II-124 to II-126
2011 pages II-110 to II-112

94.1 Substantively Unchanged

Discussion on transportation of victims of radiological incidents

94.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-110:

TO MEET THE INTENT OF CRITERION L.4, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- The method for determining an appropriate hospital/medical facility and the person, by title/position, responsible for the determination.
- Means of transporting individuals, including how to request additional emergency medical services.
- Communications between the transport crew and hospital/medical facility staff.
- Specifics of radiological monitoring.
- Contamination control measures during transport.
- Decontamination techniques, including trigger/action levels.
- Dosimetry for the transport crew.
- LOAs with transportation providers (see Criterion A.3).

95 Part II: REP Planning Guidance – NUREG Criterion M.1

2009 pages II-127 to II-128
2011 pages II-113 to II-114

95.1 Substantively Unchanged

Discussion of planning for the post-plume phase

95.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-113:

TO MEET THE INTENT OF CRITERION M.1, ORO PLANS/PROCEDURES SHALL DESCRIBE ACTIONS DURING INTERMEDIATE AND LATE PHASES OF AN INCIDENT, INCLUDING:

- Continuing environmental radiation measurements and dose assessments.
- Establishing restricted and buffer zones.
- Relocation.
- Controlled reentry into restricted areas.
- Return of the public to previously evacuated areas.
- Recovery, including a list of actions that may be needed and organizations responsible for carrying them out.

96 Part II: REP Planning Guidance – NUREG Criterion M.2

2009 pages II-128 to II-129

2011 page II-115

96.1 Substantively Unchanged

All text (this Criterion applies only to licensees)

97 Part II: REP Planning Guidance – NUREG Criterion M.3

2009 page II-129

2011 page II-115

97.1 Substantively Unchanged

Discussion on communicating recovery operations activities

97.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-115:

TO MEET THE INTENT OF CRITERION M.3, ORO PLANS/PROCEDURES SHALL INDICATE:

- Means used to keep all involved response organizations (e.g., OROs with affected populations and/or areas) informed of recovery phase plans/procedures being developed, such as remedial measures, how long they will take, and what final outcome is expected.
- Changes that might take place in the organizational structure (e.g., the Governor being in charge under a “state of emergency” that may then revert to a new or other authority).

98 Part II: REP Planning Guidance – NUREG Criterion M.4

2009 page II-130

2011 page II-116

98.1 Substantively Unchanged

Discussion on estimating total population exposure

98.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-116:

TO MEET THE INTENT OF CRITERION M.4, ORO PLANS/PROCEDURES SHALL:

- Identify agencies responsible for and involved in long-term dose assessment activities after an incident.

99 Part II: REP Planning Guidance – NUREG Criterion N.1.a

2009 pages II-132 to II-133

2011 page II-117

99.1 Substantively Unchanged

Discussion on using HSEEP methodology for REP exercises

99.2 2009 Material Deleted

Text on **HSEEP** (redundant to text in Part III), page II-131: Integrating HSEEP and REP will achieve program efficiencies by:

- Ensuring REP compliance with elements of HSPD-5, HSPD-8, and PKEMRA;
- Standardizing exercise design, conduct, evaluation, and improvement planning requirements among all FEMA Regions and evaluation team members;
- Reducing scheduling conflicts by bringing the REP Program into the National Exercise Schedule;
- Reducing exercise fatigue by combining multiple requirements into fewer total exercises; and
- Providing a suite of standardized tools for scheduling, planning, information sharing, and evaluation/corrective action. Such integration will not, however, establish any additional exercise requirements for the REP Program or replace existing REP evaluation criteria with new capabilities.

99.3 2009 Material Substantively Changed in 2011 Publication

Text in Criterion N.1.a **requiring the use of HSEEP methodology**, page II-131:

2009 page II-131: Exercises shall be conducted as set forth in NRC and FEMA rules and in accordance with the standardized methodology of the Homeland Security Exercise Evaluation Program (HSEEP).

2011 page II-117: Exercises shall be conducted as set forth in NRC and FEMA rules and policy.

Text moved from Explanation to list of requirements, page II-117

TO MEET THE INTENT OF CRITERION N.1.a, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- REP exercises will be conducted in accordance with NRC and FEMA rules and policy.

100 Part II: Planning Guidance – NUREG Criterion N1.b

2009 pages II-132 to II-137

2011 pages II-118 to II-122

100.1 Substantively Unchanged

Discussion: general explanation of exercise frequency requirements, other than the exercise cycle length (see below)

Discussion: additional scenario variations to create more challenging exercises and drills

Discussion: scenario variable of hostile action directed at the plant site

Discussion: scenario variable of an initial classification of or rapid escalation to a Site Area Emergency or General Emergency

Discussion: varying radiological release effects and meteorological conditions

Discussion: a broader spectrum of initiating/concurrent events

100.2 2009 Material Deleted

Criterion N.1.b language on **critiquing exercises**, page II-132: Federal, State, and local personnel shall critique offsite emergency response organization performance in the biennial exercise in accordance with HSEEP guidance. Licensee personnel shall critique onsite emergency response organization performance in the biennial exercise. The critique should be conducted in a manner that allows observation by FEMA personnel and NRC inspectors.

Criterion N.1.b language requiring scenario variations to include **implementation of strategies, procedures, and guidance developed under 10 CFR 50.54(hh)**, page II-132.

Discussion of **ingestion pathway exercise requirements**, page II-133. (This information is now found in Criterion N.1.d.)

100.3 2009 Material Substantively Changed in 2011 Publication

Criterion N.1.b language:

2009 page II-132: An exercise shall include mobilization of State and local personnel and resources adequate to verify the capability to respond to an incident scenario requiring response. Federal, State, and local personnel shall critique offsite emergency response organization performance in the biennial exercise in accordance with HSEEP guidance. Licensee personnel shall critique onsite emergency response organization performance in the biennial exercise. The critique should be conducted in a manner that allows observation by FEMA personnel and NRC inspectors. The scenario shall be varied such that the major elements of the plans and preparedness organizations are tested within a six-year exercise planning cycle. The scenario variations shall include, but not be limited to, the following:

- Hostile action directed at the plant site;
- No radiological release or an unplanned minimal radiological release that does not require offsite public protective actions;
- An initial classification of or rapid escalation to a Site Area Emergency or General Emergency;
- Implementation of strategies, procedures, and guidance developed under 10 CFR 50.54(hh); and
- Integration of offsite resources with onsite response.

The following scenarios shall occur at least once every eight years:

- Hostile action directed at the plant site;
- An initial classification of or rapid escalation to a Site Area Emergency or General Emergency.

2011 page II-118: An exercise shall demonstrate the key skills of response organizations to adequately respond to an incident scenario. The scenarios shall vary such that the major elements of emergency plans are exercised within an eight-year exercise cycle. Each scenario variation shall be demonstrated at least once during the eight-year exercise cycle and shall include, but not be limited to, the following:

- a. Hostile action directed at the plant site involving the integration of offsite resources with onsite response;
- b. An initial classification of or rapid escalation to a Site Area Emergency or General Emergency;
- c. No radiological release or an unplanned minimal radiological release that requires the site to declare a Site Area Emergency, but does not require declaration of a General Emergency. For this scenario variation the following conditions shall apply:
 - i. The licensee is required to demonstrate the ability to respond to a no/minimal radiological release scenario at least once within the eight-year exercise cycle. State, Tribal and local response organizations have the option, and are encouraged, to participate jointly in this demonstration.
 - ii. When planning for a joint no/minimal radiological release exercise, affected State, Tribal and local jurisdictions, the licensee, and FEMA will identify offsite capabilities that may still need to be evaluated and agree upon appropriate alternative evaluation methods to satisfy FEMA's biennial criteria requirements. Alternative evaluation methods that could be considered during the extent of play negotiations include expansion of the exercise

scenario, out of sequence activities, plan reviews, staff assistance visits or other means as described in FEMA guidance.

- iii. If the offsite organizations elect not to participate in the licensee's required minimal or no-release exercise, they will still be obligated to meet the exercise requirements as specified in 44 CFR § 350.9.

Requirement, **exercise cycle length**: the revised language in Criterion N.1.b changes the length of the exercise cycle from six years to eight years.

Text moved from Explanation to list of requirements, page II-118:

TO MEET THE INTENT OF CRITERION N.1.b, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- All major elements of the plans/procedures will be tested at minimum at the frequency specified by the REP Program Manual, Exhibit III-2.
- Scenarios for exercises will be varied from exercise to exercise and include all required scenario variations during the exercise cycle.

100.4 Material Added to 2011 Publication

Criterion N.1.b **language qualifying the requirements for the no/minimal release scenario variation** (see 2011 N.1.b items c.i-iii above), page II-118

Text specifying that **Criterion N.1.b applies to plume exercises**, page II-119: Criterion N.1.b addresses frequency and scenario requirements for plume-phase exercises. Criterion N.1.d describes exercise requirements specific to ingestion-phase activities.

Text explaining **full-participation versus full-scale exercises**, page II-119:

Full participation is a REP-specific term found in 44 CFR § 350.2(j) that refers to an exercise in which: (1) state and local government emergency personnel are engaged in sufficient numbers to verify the capability to respond to the actions required by the accident scenario; (2) the integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant is tested; and (3) the implementation of the observable portions of state and/or local plans is tested.

A true full-scale exercise involves all organizations participating in real-time hands-on engagement that covers the full range of response activities and, for REP exercises, evaluation of all Demonstration Criteria.

Most REP biennial full-participation joint exercises are functional exercises – they meet the criteria for full participation, but some response capabilities are simulated or demonstrated out of sequence from the scenario. In addition, not every ORO is required to participate in every full-participation exercise.

101 Part II: REP Planning Guidance – NUREG Criterion N.1.c

2011 page II-122

101.1 Material Added to 2011 Publication

New NUREG Criterion N.1.c, off-hours exercises (licensees only):

Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every eight-year exercise cycle. Some drills or exercises should be unannounced.

Applicability and Cross Reference to Plans: Licensee X State Local

102 Part II: REP Planning Guidance – NUREG Criterion N.1.d

2011 pages II-122 to II-123

102.1 Material Added to 2011 Publication

New NUREG Criterion N.1.d, ingestion pathway exercises:

An exercise shall include mobilization and implementation of State and local (as appropriate) personnel and resources adequate to verify the capability and response to a large radiological release requiring ingestion pathway protective actions beyond the 10 mile EPZ at least once every 8 years. Organizations shall specify who is responsible for the decision-making process. OROs shall reference or include the organization's procedures for making PADs and implementing protective actions based upon PAGs that are consistent with EPA recommendations, and the process for ensuring coordination of PADs with all applicable jurisdictions.

Applicability and Cross Reference to Plans: Licensee State X Local X

TO MEET THE INTENT OF CRITERION N.1.d, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- The state and other OROs (as appropriate) will participate in an ingestion pathway exercise at least once every 8 years.
- States that do not have an NPP located within their borders, but are located within the 50-mile EPZ of a bordering state's NPP, must fully participate in at least one exercise at least once every 8 years at the bordering state's site(s).
- OROs within the 50-mile EPZ that are not part of the full-participation ingestion exercise with the state participate in an ingestion tabletop exercise or other ingestion pathway training activity at least once during the exercise cycle.
- The number and types of personnel participating in ingestion aspects of an exercise will be sufficient for carrying out those ingestion measures required by the incident scenario.

EXPLANATION:

States within the 50-mile ingestion exposure pathway EPZ of an NPP must participate in the ingestion pathway portion of exercises at least once every 8 years at that site. The level of participation may vary as follows:

States that have multiple sites rotate this participation from site to site; no partial participation is required. During the year in which the full-participation ingestion pathway exercise is held at one of the sites, the responsible OROs review their ingestion pathway plans/procedures for the other sites

within the state to verify their accuracy and completeness. This review validates the identification of farms, food processors, and distributors. OROs report this review and any resultant plan revisions in the ALC as part of the annual review and plans/procedures update.

If a state is within the 50-mile ingestion exposure pathway zone of a site located in a bordering state, and also has a site located within its own borders, the state partially participates in all ingestion pathway-related exercises for those bordering state sites. States that do not have an NPP located within their borders, but are located within the 50-mile EPZ of a bordering state's NPP, must fully participate in at least one exercise at least once every 8 years at the bordering state's site(s).

Since local governments are not usually required to develop and test ingestion pathway plans/procedures and preparedness, state officials would be the emergency personnel primarily involved in the ingestion pathway portion of exercises. However, in some states, local governments have responsibilities that require their participation in such exercises. The number and function of personnel needed is sufficient for carrying out those protective action measures that are necessitated by a particular accident scenario. Also, organizations with field sampling responsibilities that are fully participating in the ingestion pathway portion of an exercise deploy field monitoring teams to secure and analyze media samples as required by the accident scenario.

OROs within the 50-mile EPZ that are not part of the full-participation ingestion exercise with the state participate in an ingestion tabletop exercise or other ingestion pathway training activity at least once during the exercise cycle. OROs report this ingestion pathway training in the ALC.

These ingestion exposure pathway phase activities may be performed either in connection with or separate from a plume exercise. Separating ingestion from plume activities would provide OROs with additional time for performing these activities more comprehensively. If separated, the plume phase technical data may be extended into ingestion exposure pathway activities. However, the bases for performing the ingestion exposure pathway phase activities may be derived from technical data other than that which was used in the previous plume exercise.

References

- 44 CFR § 350.9.c

103 Part II: REP Planning Guidance – NUREG Criterion N.2.a

2009 pages II-137 to II-138

2011 page II-124

103.1 Substantively Unchanged

Discussion of communications drills

103.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-124:

TO MEET THE INTENT OF CRITERION N.2.a, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- ORO communications systems are tested monthly.

- Communications with the Federal response organizations and states within the ingestion pathway are tested quarterly.
- Communications with the NPP, ORO EOCs, and field assessment teams are tested annually.
- All communications drills include a message content check.

104 Part II: REP Planning Guidance – NUREG Criterion N.2.b

2009 pages II-138

2011 pages II-125

104.1 Substantively Unchanged

All text (this Criterion applies only to licensees)

105 Part II: REP Planning Guidance – NUREG Criterion N.2.c

2009 pages II-138 to II-140

2011 pages II-126 to II-127

105.1 Substantively Unchanged

Discussion of medical emergency drills

105.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-125:

TO MEET THE INTENT OF CRITERION N.2.c, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- Medical emergency drills are conducted annually.

106 Part II: REP Planning Guidance – NUREG Criterion N.2.d

2009 page II-140

2011 pages II-126 to II-127

106.1 Substantively Unchanged

Discussion of radiological monitoring drills

106.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-126:

TO MEET THE INTENT OF CRITERION N.2.d, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- Radiological monitoring drills are conducted annually.

107 Part II: REP Planning Guidance – NUREG Criteria N.2.e(1) – N.2.e(2)

2009 page II-141

2011 page II-127

107.1 Substantively Unchanged

Discussion of health physics drills

107.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-127:

TO MEET THE INTENT OF CRITERION N.2.e, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- Health physics drills are conducted semi-annually.

108 Part II: REP Planning Guidance – NUREG Criterion N.3

2009 page II-142

2011 pages II-127 to II-128

108.1 Substantively Unchanged

Discussion of exercise scenario development

108.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-128:

TO MEET THE INTENT OF CRITERION N.3, ORO PLANS/PROCEDURES SHALL INDICATE THAT:

- Each of the items a through f above will be addressed in the scenario developed for the exercise.

109 Part II: REP Planning Guidance – NUREG Criterion N.4

2009 pages II-142 to II-143

2011 pages II-128 to II-129

109.1 2009 Material Substantively Changed in 2011 Publication

Text of Criterion N.4

2009 page II-142: Official observers from Federal, State or local governments will observe, evaluate, and critique the required exercises. A critique shall be scheduled at the conclusion of the exercise to evaluate the ability of organizations to respond as called for in the plan. The critique shall be conducted as soon as practicable after the exercise, and a formal evaluation should result from the critique.

2011 page II-128: Biennial exercises shall be evaluated and critiqued as required. FEMA evaluators shall evaluate offsite emergency response organization performance in the biennial exercise in accordance with FEMA REP exercise methodology.

Text moved from Explanation to list of requirements, page II-128:

TO MEET THE INTENT OF CRITERION N.4., ORO PLANS/PROCEDURES SHALL STATE THAT:

- ORO exercise performance is evaluated according to FEMA REP exercise methodology.

Text of Explanation:

2009 page II-143: The organization's plans/procedures should state that the exercises will be observed by official evaluators who will critique the exercises.

2011 page II-128: Part III of the REP Program Manual includes six Assessment Areas that are derived from the 16 Planning Standards of 44 CFR Part 350 and NUREG-0654/FEMA-REP-1 and their associated Evaluation Criteria. Each Assessment Area contains Sub-elements and Demonstration Criteria designed to exercise the implementation of ORO plans/procedures. Part III also contains detailed guidance on the development, conduct, evaluation, and documentation of REP exercises.

Part III.B, REP Program Exercise Guidance: REP Exercise Process, provides guidance on conducting exercise evaluation and post-exercise critiques.

110 Part II: REP Planning Guidance – NUREG Criterion N.5

2009 page II-143

2011 page II-129

110.1 Substantively Unchanged

Discussion of improvement planning

110.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-129:

TO MEET THE INTENT OF CRITERION N.5, ORO PLANS/PROCEDURES SHALL DESCRIBE:

- Processes for correcting issues identified during exercises.

111 Part II: REP Planning Guidance – NUREG Criterion O.1

2009 page II-144

2011 page II-130

111.1 Substantively Unchanged

Discussion of overall training program

111.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-130

TO MEET THE INTENT OF CRITERION O.1, ORO PLANS/PROCEDURES SHALL:

- Identify organizations responsible for coordinating radiological training.
- Identify organizations that will ensure radiological emergency response training will be included as part of fire, police, and ambulance/rescue training, if appropriate.
- Describe provisions to ensure availability of just-in-time training on basic radiation protection for all emergency workers, as needed.
- Describe provisions to ensure appropriate personnel participate in training courses designed for individuals who will assist in radiological emergency response (e.g., transportation providers).

112 Part II: REP Planning Guidance – NUREG Criterion O.1.a – O.1.b

2009 page II-145

2011 pages II-130 to II-131

112.1 Substantively Unchanged

Discussion of training requirements

112.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-131:

TO MEET THE INTENT OF O.1.b, THE ORO PLANS/PROCEDURES SHALL STATE THAT:

- Training is offered to the mutual aid district, if mutual aid plans/procedures have been established between local agencies,

113 Part II: REP Planning Guidance – NUREG Criteria O.2 – O.3

113.1 Substantively Unchanged

All text (these Criteria apply only to licensees)

114 Part II: REP Planning Guidance – NUREG Criterion O.4

2009 pages II-146 to II-150

2011 pages II-131 to II-136

114.1 Substantively Unchanged

All text in sub-criteria O.4.e and O.4.i (these Criteria apply only to licensees)

114.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements – sub-criteria O.4.a, b, c, d, f, g, h, and j:

TO MEET THE INTENT OF CRITERION O.4.[sub-criterion letter], ORO PLANS/PROCEDURES SHALL DISCUSS:

- Training programs specific to [response personnel addressed in the sub-criterion]
- Scope of the training programs.
- Time intervals at which these training programs will be offered.
- Organizations (e.g., licensee, FEMA) that will provide training assistance, if applicable.

115 Part II: REP Planning Guidance – NUREG Criterion O.5

2009 pages II-150 to II-151

2011 page II-136

115.1 Substantively Unchanged

Discussion of initial and annual retraining

115.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-136:

TO MEET THE INTENT OF CRITERION O.5, THE PLANS/PROCEDURES SHALL:

- State which organizations will provide initial training as well as retraining.

FEMA HIGHLY RECOMMENDS THAT PLANS/PROCEDURES INCLUDE:

- A training matrix that lists all available courses and provides general descriptions of those courses.
- Names of the organizations requiring training and the type of training they require.

116 Part II: REP Planning Guidance – NUREG Criterion P.1

2009 page II-152
2011 page II-137

116.1 Substantively Unchanged

Discussion on training for individuals responsible for planning

116.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-137:

TO MEET THE INTENT OF CRITERION P.1, ORO PLANS/PROCEDURES SHALL:

- Identify, by title/position, individuals responsible for oversight of plan/procedure development and maintenance, including the positions referred to in Criteria P.2 and P.3, and any other positions with planning responsibilities.
- Specify the training regimen for the identified individuals.

117 Part II: REP Planning Guidance – NUREG Criterion P.2

2009 pages II-152 to II-153
2011 pages II-137 to II-138

117.1 Substantively Unchanged

Discussion on identification of individual with overall authority for planning

117.2 2009 Material Deleted

117.3 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-137:

TO MEET THE INTENT OF CRITERION P.2, ORO PLANS/PROCEDURES SHALL:

- Identify, by title/position, the individual responsible for radiological emergency response planning.

117.4 Material Added to 2011 Publication

Text for **additional clarification** (previously located in Criterion P.3), page II-137: This position is the legally designated authority responsible for radiological emergency preparedness and response (e.g., the senior elected official), but may or may not be the same position with operational responsibility.

118 Part II: REP Planning Guidance – NUREG Criterion P.3

2009 page II-153

2011 page II-138

118.1 Substantively Unchanged

Discussion on identification of individual with operational responsibility for planning and coordination

118.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-138

TO MEET THE INTENT OF CRITERION P.3, ORO PLANS/PROCEDURES SHALL:

- Identify, by title/position, the individual responsible for developing and updating emergency plans/procedures as well as coordinating plans/procedures with other response organizations.

119 Part II: REP Planning Guidance – NUREG Criterion P.4

2009 pages II-153 to II-154

2011 pages II-138 to II-139

119.1 Substantively Unchanged

Discussion on updating plans and certifying them annually

119.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-138:

TO MEET THE INTENT OF CRITERION P.4, ORO PLANS/PROCEDURES SHALL INCLUDE:

- Evidence that plans/procedures and agreements have been reviewed for accuracy and completeness of information and appropriate changes made within the last year (e.g., a signature page, etc.).
- A process for correcting plan issues identified in drills and exercises.

119.3 Material Added to 2011 Publication

Text giving **additional requirements for plan updates, page II-138:**

- A process for periodic update of maps.
- A process for periodic updating of ingestion pathway information (e.g., a list of food processing facilities, etc.)(See also Criterion J.11)

120 Part II: REP Planning Guidance – NUREG Criterion P.5

2009 pages II-154 to II-155

2011 pages II-139 to II-140

120.1 Substantively Unchanged

Discussion on documenting plan revisions

120.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-139

TO MEET THE INTENT OF CRITERION P.5, ORO PLANS/PROCEDURES SHALL:

- List the organizations and individuals who are given the updated plans/procedures.
- Identify individual(s), by title/position, responsible for distributing plan/procedure updates and what the update cycle is.
- Include revision bar markings or equivalent visual indications on revised pages to reflect where changes were made and on what date, or a summary list of changes in cases where changes are so numerous or extensive that revision bars are impractical.

121 Part II: REP Planning Guidance – NUREG Criterion P.6

2009 page II-140

2011 page II-155

121.1 Substantively Unchanged

Discussion on list of supporting plans

121.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-155:

TO MEET THE INTENT OF CRITERION P.6, ORO PLANS/PROCEDURES SHALL CONTAIN:

- A list of supporting radiological emergency plans/procedures.

122 Part II: REP Planning Guidance – NUREG Criterion P.7

2009 pages II-155 to II-156

2011 page II-140

122.1 Substantively Unchanged

Discussion on list of implementing procedures

122.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-140:

TO MEET THE INTENT OF CRITERION P.7, ORO PLANS/PROCEDURES SHALL:

- Include a list of all implementing procedures associated with the body of the plan. The list indicates which section(s) of the plan are implemented by each procedure.

123 Part II: REP Planning Guidance – NUREG Criterion P.8

2009 page II-156

2011 page II-141

123.1 Substantively Unchanged

Discussion of cross reference between plans and NUREG-0654 requirements

123.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-141:

TO MEET THE INTENT OF CRITERION P.8., ORO PLANS/PROCEDURES SHALL CONTAIN:

- A specific table of contents.
- A cross-reference between the plans/procedures and the NUREG-0654/FEMA-REP-1 Evaluation Criteria.

123.3 Material Added to 2011 Publication

Text for **additional clarification**, page II-141: A detailed cross-reference ensures all NUREG-0654/FEMA-REP-1 criteria are addressed, facilitates review and updating of the plans/procedures, and helps avoid the common situation of a piece of information being updated in one section of the plans/procedures, but not in another.

124 Part II: REP Planning Guidance – NUREG Criterion P.9

2009 page II-157

2011 page II-141

124.1 Substantively Unchanged

All text (this criterion applies only to licensees)

125 Part II: REP Planning Guidance – NUREG Criterion P.10

2009 page II-157

2011 page II-142

125.1 Substantively Unchanged

Discussion of updating telephone numbers in plans/procedures

125.2 2009 Material Substantively Changed in 2011 Publication

Text moved from Explanation to list of requirements, page II-142:

TO MEET THE INTENT OF CRITERION P.10, ORO PLANS/PROCEDURES SHALL INDICATE:

- Who, by title/position, is responsible for quarterly updates of each procedure that contains telephone numbers.

126 Part II.D: REP Planning Guidance – Plan Reviews

126.1 2009 Material Deleted

Discussion on plan reviews, page II-158 (combined with more detailed Plan Review section in Part IV)

127 Part II.E: REP Planning Guidance – Annual Letter of Certification

127.1 2009 Material Deleted

Discussion on the Annual Letter of Certification, page II-159 (combined with more detailed Annual Letter of Certification section in Part IV)

128 Part III: REP Demonstration Guidance – Introduction

128.1 Substantively Unchanged

Discussion on Contents and Organization of this part

128.2 2009 Material Deleted

Text under **Purpose and Scope**, page III-1:

The Radiological Emergency Preparedness (REP) Exercise Program conforms to the methodologies established by the Department of Homeland Security (DHS) National Exercise Program (NEP), established per Homeland Security Presidential Directive (HSPD) 8, the National Strategy for Homeland Security, and the Post-Katrina Emergency Management Reform Act (PKEMRA). The

Homeland Security Exercise and Evaluation Program (HSEEP) is the national standard for exercise design, development, conduct, evaluation, and improvement planning. The HSEEP volumes provide consistent terminology, common exercise policy, and general program guidance that should be used by REP exercise planners, regardless of the nature and composition of their sponsoring agency or organization.

Radiological emergency response plans, procedures, and preparedness capabilities are reviewed in accordance with 44 CFR Part (§) 350, which establishes the applicable planning standards and evaluation criteria outlined in NUREG-0654/FEMA-REP-1. FEMA has provided guidance to interpret, clarify, and apply the planning standards and evaluation criteria through FEMA policy and Guidance Memoranda (GMs), the FEMA-REP series documents, and this Manual.

128.3 2009 Material Substantively Changed in 2011 Publication

The term “Evaluation Criteria” has been replaced with the term “Demonstration Criteria.”

128.4 Material Added to 2011 Publication

Text under **Background**, page III-1:

FEMA bases its reasonable assurance determination that OROs can protect the health and safety of the public in the event of an incident at an NPP on both adequate plans/procedures and the demonstrated ability to implement them. OROs use exercises, drills, seminars, training, SAVs, and actual events to practice and fine-tune plan implementation. FEMA observes or uses records of ORO activities, as well as plan reviews, SAVs, and the ALC, to fulfill its responsibility to assess the adequacy of offsite response. Part III focuses primarily on exercises, but touches on the other venues as well. More detailed guidance on plan reviews, the ALC, and SAVs is located in Part IV.

HSEEP: Using HSEEP methodology for exercises facilitates program efficiency. Such integration does not establish additional exercise requirements for the REP Program or replace existing REP Demonstration Criteria with new capabilities.

Target capabilities: The DHS TCL identifies 37 specific capabilities for preventing, protecting from, responding to, and recovering from a wide range of incidents. The DHS National Exercise Program uses HSEEP exercises to practice and test the capabilities developed through planning, training, and equipment acquisition. Like National Exercise Program exercises, REP exercises verify the ability of OROs to implement various aspects of their response plans. However, in the REP Program, the regulations in 44 CFR Part 350 dictate certain capabilities the ORO must demonstrate. Under these regulations, REP exercises must demonstrate reasonable assurance that OROs can meet the Planning Standards of NUREG-0654/FEMA-REP-1.

Demonstration Criteria: REP exercises use the REP Assessment Areas, Sub-elements, and Demonstration Criteria to observe and evaluate the ability to meet the appropriate Planning Standards. Each Sub-element identifies a major facet of its Assessment Area. Each Demonstration Criterion sets the standard for an ORO’s ability to perform a specific emergency function under the Sub-element (e.g., communicating among response organizations; making dose assessments; alerting and notifying the public). Thus, The REP Assessment Areas, Sub-elements, and Demonstration Criteria work like HSEEP capabilities, activities, and tasks. FEMA identified the set of Target Capabilities correlating to the REP Demonstration Criteria so that REP exercise evaluations using HSEEP exercise documents may occur (see Appendix G for additional information).

129 Part III: REP Demonstration Guidance – REP Exercise Process

129.1 Substantively Unchanged

Discussion: general introduction

129.2 2009 Material Substantively Changed in 2011 Publication

Exhibit III-1, Milestones for the REP Exercise Process, and introductory text:

2009 page III-3: Exhibit III-1: “Milestones for REP Exercise Process” provides typical milestones for the REP exercise process.

Time

(no later than X days

before / after exercise) Milestone

365	Establish exercise date
210	Identify exercise planning team members
180	Conduct Initial Planning Conference (IPC)
175	Submit exercise objectives and Evaluation Areas. Complete review of exercise Evaluation Area tracking from previous exercise
170	Final State and local plans submitted to Region
145	FEMA and the Nuclear Regulatory Commission (NRC) complete review of Evaluation Areas and extent-of-play agreements
120	Develop Exercise Plan (EXPLAN)
120	Prepare work order for contract support
120	Arrange logistics
100	Develop Master Scenario Events List (MSEL)
90	Conduct Mid-term Planning Conference
90	Assign and confirm controllers and evaluators
60	Finalize EXPLAN
60	Submit draft exercise scenario for FEMA review
60	Develop Controller/Evaluator (C/E) Handbook
50	FEMA and NRC complete review of exercise scenario
45	Conduct Final Planning Conference
30	Distribute EXPLAN and C/E Handbook
30	Prepare and distribute C/E packets
1	Conduct C/E training
1	Conduct C/E briefing
Exercise day (ED)	Conduct exercise
ED	Document organizational exercise performance
ED	Conduct player hot wash
ED	Conduct post-exercise evaluator/participant interviews
ED + 1	Conduct C/E debrief and initiate consultation process
ED + 2	Consultation process for Deficiencies initiated by RAC Chair
ED + 2	Complete evaluation modules and narratives
ED + 2	Conduct post-exercise participants briefing
ED + 2	Conduct participants meeting that is open to the public

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

ED + 2	Hold 44 CFR part 350 approval process meeting
ED + 10	Notification of Deficiencies to State
ED + 20	State acknowledges receipt of Deficiency letter and proposes schedule for remedial actions
ED + 30	Draft AAR/Improvement Plan (IP) provided by FEMA Region to ORO for review
ED + 60	Draft AAR/IP comments sent from ORO to Region
ED + 75	Conduct After Action Conference
ED + 90	Final AAR/IP issued by Region
ED + 90	Share lessons learned, areas for improvement, best practices, and successes identified in final AAR/IP
ED + 120	Evaluate and report on remedial exercises
ED + 120	Corrective actions demonstrated
Ongoing	Track demonstration of exercise Evaluation Area criteria

2011 page III-2: Exhibit III-1, Milestones for REP Exercise Process, provides a time frame for completing exercise development, conduct, evaluation, and reporting activities. FEMA highly recommends many of these milestones that fall short of being a requirement. However, the milestones surrounded by asterisks are relatively inflexible, representing deadlines imposed by regulations or that could significantly impact the exercise if missed.

Calendar Days

Before/After

Exercise	Milestone	Lead/ Responsible Organization
730	Request additional Federal support (e.g., Federal Radiological Monitoring and Assessment Center (FRMAC), Advisory Team for Environment, Food, and Health, etc.), if desired for the exercise	State, FEMA
365	Establish or confirm exercise date/1/	State, FEMA
200	Identify Exercise Planning Team (EPT) members FEMA	State, Utility,
180	Conduct Initial Planning Conference (IPC) to include Concepts and Objectives (C&O) Meeting as necessary	State, FEMA
120	FEMA prepares work order for contract support	FEMA
120	If exercise includes FRMAC participation, submit required scenario and source information (for ingestion phase activities only) to FRMAC/2/	State, Utility
90	Conduct Mid-term Planning Conference (MPC). MPC members review the following draft documents: Master Scenario Events List (MSEL), Exercise Plan (ExPlan), Controller/Evaluator (C/E) Handbook, Exercise Evaluation Guides (EEGs), and the Extent-of-Play Agreement.	State, FEMA

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

90	Submit approved ORO plans/procedures to FEMA Region	OROs
75	FEMA completes a review of draft ExPlan and EEGs and approves	FEMA
60	Submit draft exercise scenario for FEMA technical review	State, Utility
60	Confirm and assign controllers and evaluators	State, FEMA
45	Complete draft ExPlan	State, FEMA
45	Complete draft C/E Handbook	State, Utility, FEMA
30	FEMA completes Scenario Review and approves	FEMA
30	Finalize MSEL	State
30	Conduct Final Planning Conference (FPC)	State, FEMA
30	Prepare and distribute C/E packets	State, FEMA
1	Conduct C/E briefing	State, FEMA
Exercise Day (ED)		
	Conduct Exercise	OROs
ED	Begin documenting organizational exercise performance	FEMA
ED	Conduct player hot wash	OROs
ED +1	RAC Chair initiates consultation process for Deficiencies	FEMA
ED +2	Notification of potential Deficiencies to FEMA Headquarters	FEMA
ED +2	Complete exercise evaluation documentation	FEMA
ED +2	Conduct evaluator debrief	FEMA
ED +3	Evaluators conduct post-exercise participant interviews	FEMA
ED +3	Conduct participants meeting	FEMA
ED +3	Conduct post-exercise meeting that includes the public	FEMA, NRC
ED +7	Conduct controller debrief and initiate consultation process	State
ED +10	Notification of Deficiencies to state	FEMA
ED +20	State acknowledges receipt of Deficiency letter and proposes schedule for remedial actions	State

ED +30	Draft AAR/IP sent to states for review	FEMA
ED +60	Draft AAR/IP comments sent from state(s) to FEMA Region	State
ED +75	Conduct After Action Conference (AAC)	State, FEMA
ED +90	Final AAR/IP issued by FEMA Region	FEMA
ED +90	Share lessons learned, areas for improvement, best practices, and strengths identified in final AAR/IP	State, FEMA
ED +120	Deficiencies corrected; evaluate and report on remedial exercises	FEMA
Ongoing	Track evaluation of Demonstration Criteria	State, FEMA

Footnotes

/1/ For changes to an exercise date due to extenuating circumstances, notice is given to the FEMA Region as soon as possible.

/2/ 120 days is FEMA's guidance. FRMAC's requirement is at least 90 days for submittal of the scenario and source information. FRMAC will not participate in the exercise if the scenario and source information are received later than 90 days before the exercise.

129.3 Material Added to 2011 Publication

130 Part III: REP Demonstration Guidance – Scheduling REP Exercises

2009 pages III-4 to III-5

2011 pages III-4 to III-6 and III-12

130.1 Substantively Unchanged

Discussion on the Training and Exercise Planning Workshop

130.2 2009 Material Substantively Changed in 2011 Publication

The exercise cycle length is changed from 6 years to 8 years

130.3 Material Added to 2011 Publication

Text on **Activity Types**, pages III-4 to III-6

FEMA's planning and preparedness assessment strategy uses a combination of exercises, drills, training, SAVs, and reporting to ensure that offsite planning and preparedness remain adequate to protect the health and safety of the public. The HSEEP scheduling process permits coordination of many of these activities. The activity types described here include the variety of venues available for demonstration and evaluation of REP planning and preparedness.

(1) Exercises

Exercises conducted jointly with the licensee offer an excellent opportunity to exercise Direction and Control and Protective Action Decision-making when considering plant conditions. With the exception of the site's qualifying exercise and subsequent full-scale exercises, these Demonstration Criteria can also be adequately assessed during functional and tabletop exercises. Always use outcome-based exercise evaluation to allow for greater efficiency in the process.

The minimum capabilities assessed in a joint exercise are Sub-Element c of Assessment Area 1 and Assessment Area 2. These represent the critical decision-making capabilities requiring at least biennial demonstration in a coordinated manner in one of the following types of exercises:

- Full-Scale Exercises engage all ORO entities in real-time hands-on response activities including all of those specified in the Demonstration Criteria extent-of-play sections. The site uses a full-scale exercise for its qualifying exercise, which validates the adequacy of the offsite plans and procedures for formal FEMA plan approval. Subsequently, FEMA/NRC requires a full-scale exercise at least once every eight years and includes demonstration of ingestion pathway procedures by the appropriate state and local OROs.
- Functional Exercises sufficiently engage organizations to test their abilities to respond to the scenario, but participation is less than full-scale. Most REP biennial joint exercises are functional exercises because they simulate some response capabilities or demonstrate them out of sequence from the scenario, and the exercise may not require participation of all offsite entities that would respond in a real radiological emergency. Processes that require multiple elements in play for protective action decision making and implementation may be demonstrated in a functional exercise that includes full participation to the extent necessary to achieve the exercise goals. OROs may use functional exercises concurrently with a licensee's annual exercise to test utility/offsite interaction and communications.
- Tabletop Exercises are discussion-based and may test single or multiple scenarios and outcomes. OROs may use tabletop exercises to assess key elements in decision-making and implementation. Offsite planners may opt to use a tabletop exercise in conjunction with a licensee's annual exercise, or as a separate training or planning event. The suitability of a tabletop exercise might vary depending on the number of jurisdictions that need to participate to meet exercise objectives.

Note: Full participation is a REP-specific term found in 44 CFR § 350.2(j) that refers to the level of participation required to meet regulatory requirements. A full-participation exercise is one in which: (1) state and local government emergency personnel are engaged in sufficient numbers to verify the capability to respond to the actions required by the accident scenario; (2) the integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant is tested; and (3) the implementation of the observable portions of state and/or local plans is tested.

(2) Drills

Under NUREG-0654/FEMA-REP-1 Evaluation Criterion N.2, OROs conduct drills to test, develop, and maintain skills in a particular operation. Evaluation Criteria N.2.a through N.2.e establish the specific types of evaluated drills required and their frequency.

ORO may conduct other types of drills to evaluate certain Demonstration Criteria. Wherever practicable, drills provide a superior means of assessing technical proficiency, particularly in critical areas such as Emergency Worker Exposure Control and Field Monitoring. Similarly, activation drills may serve as an assessment tool for infrequently activated facilities.

(3) Seminars and Training

A major element of the ORO's annual activities includes review of training objectives, ongoing maintenance of personnel proficiency, and skill development. FEMA should observe training and seminars wherever possible and practical demonstrations used to assess proficiency. Occasionally, it may be appropriate for an organization to request feedback or technical advice during its training. FEMA can furnish appropriate resources in those instances and be part of the assessment.

(4) Plan Reviews

OROs and FEMA Regions review offsite plans annually for consistency and revise them where necessary. OROs and the Region jointly decide on the need to test new procedures before adoption, which they then incorporate in the annual training and exercise plan.

(5) Staff Assistance Visits

FEMA Headquarters and Regional staff provide support to OROs through SAVs. Such assistance can include: technical assistance with plan development, review, or implementation; attending meetings with OROs and the licensee; participating in or observing non-evaluated exercises and drills; evaluating exercises and drills to fulfill biennial requirements; and verifying ALC and plan information (e.g., KI inventories, equipment maintenance, training courses offered).

(6) Actual Events

Where a significant commonality in plans and personnel exists, an actual event could serve to validate elements for a facility's annual assessment. If time permits, the Site Specialist may deploy to the location during the event. Otherwise, the ORO can submit a request for REP exercise credit to the FEMA Region according to the process described in Section 7 of Part III.B.

Text on **Exercise Cycle Requirements**, pages III-8

NUREG Criteria N.1.b and N.1.d establish considerations for both the Demonstration Criteria and the scenario variables selected for REP exercises. Exercise planners need to consider the following when scheduling REP activities:

- FEMA evaluates all elements of the NUREG-0654/FEMA-REP-1 Planning Standards, as expressed functionally through the Evaluation Areas, Sub-elements, and Demonstration Criteria, in a full-scale integrated exercise at least once in an 8-year exercise cycle. FEMA must evaluate certain core elements of the Assessment Areas at least biennially. FEMA may evaluate elements involving activities that are not central to the decision-making process less frequently as indicated in Exhibit III-2, Federal Evaluation Process Matrix.
- States and applicable local jurisdictions must fully participate in an ingestion pathway exercise at least once every 8 years.
- Scenario Variations: NUREG Criterion N.1.b also establishes requirements for certain scenario variations within the 8-year cycle. An exercise may combine required variations.
 - At least one exercise every 8-year cycle must involve an HAB scenario.
 - At least one exercise scenario every 8-year exercise cycle must involve an initial classification of or rapid escalation to a Site Area Emergency or General Emergency.
 - At least one exercise every 8-year cycle must include a scenario involving no radiological release or an unplanned minimal radiological release that requires the site to declare a Site Area Emergency, but does not require declaration of a General Emergency.

131 Part III: REP Demonstration Guidance – Full versus Partial Participation

2009 page III-5

2011 page III-5

131.1 Substantively Unchanged

Discussion of regulatory requirements for exercise participation

132 Part III: REP Demonstration Guidance – Ingestion Pathway Exercise Requirements

2009 page III-5

132.1 2009 Material Deleted

Discussion on **requirements for ingestion pathway exercises** (moved to new NUREG Criterion N.1.d), page III-5:

The regulations also require that States within the 50-mile ingestion exposure pathway EPZ of an NPP must fully participate in the ingestion pathway portion of exercises at least once every 6 years at that site. In States with multiple sites, the State should rotate this participation from site to site. Partial participation by a State in ingestion pathway activities at sites within that State is not required. During the year in which the full-participation ingestion pathway exercises is held at one of the sites, the responsible State and local governments should review their plans and procedures for the other sites within the State to verify their accuracy and completeness. This review should validate the identification of farms, food processors, and distributors. This review and any resultant revisions should be made and reported in the Annual Letter of Certification (ALC), as part of their annual review and plan update.

A State that has ingestion pathway related responsibilities for a site located within its borders and that is also within the 50-mile ingestion exposure pathway zone (EPZ) of a site located in a bordering State should at least partially participate in all of the ingestion pathway-related exercises for those bordering State sites. States that do not have a nuclear power plant (NPP) located within their borders, but are located within the 50-mile EPZ of a bordering State's NPP, should fully participate in at least one exercise every 6 years.

Since local governments are not usually required to develop and test ingestion pathway plans and preparedness, State officials would be the emergency personnel primarily involved in the ingestion pathway portion of exercises. However, in some States, local governments have responsibilities that require their participation in such exercises. The number and function of personnel needed should be sufficient for carrying out those protective action measures that are necessitated by a particular accident scenario. Also, organizations fully participating in the ingestion pathway portion of an exercise should deploy field monitoring teams to secure and analyze media samples as required by the accident scenario.

133 Part III: REP Demonstration Guidance – Out of Sequence Demonstrations

2009 page III-6

133.1 2009 Material Deleted

Text on Out of Sequence Demonstrations (moved to Appendix B – Glossary)

REP exercise scheduling may also include out-of-sequence demonstrations, which are those activities and resources derived from the offsite response plan that can be separated from the exercise. Out-of-sequence activities and resources can be treated as independent elements of the emergency response. An example of an out-of-sequence demonstration would be the evaluation of a reception center activated for the purpose of radiological monitoring and decontaminating evacuees. Possible emergency response elements that may be demonstrated out of sequence are provided in Exhibit III-2: Federal Evaluation Process Matrix. Negotiations during development of the extent-of-play agreement should be used to determine those activities that will be demonstrated out of sequence with the plume pathway exercise. The RAC Chair will make the final decision on what is acceptable for out-of-sequence demonstrations. Out-of-sequence demonstrations scheduled no more than 60 days prior to or 30 days after the biennial exercise should be included in the biennial after-action report. Out-of-sequence demonstrations scheduled outside the specified timeframe require a separate report.

134 Part III: REP Demonstration Guidance – Identifying Capabilities/Criteria to Be Demonstrated

2009 page III-14

2009 pages III-15 to III-16

134.1 2009 Material Substantively Changed in 2011 Publication

2009 page III-14: Determine Evaluation Area Criteria to be Evaluated

Each Evaluation Area criterion refers to an ORO capability to perform a specific emergency function, such as communicating among response organizations, making dose assessments, and alerting and notifying the public. Some Evaluation Area criteria are core functions and activities that should be demonstrated by each participating organization during each exercise. Other criteria focus on specific fundamental radiological emergency response capabilities that only certain organizations should demonstrate in every exercise. The particular participating organizations are determined by scenario events and exercise play.

Determining what Evaluation Area criteria are to be demonstrated will depend on the type of exercise. For example, all Evaluation Area criteria must be demonstrated for the initial qualifying REP exercise when a licensee is seeking an operating license from NRC. For a biennial exercise (conducted for continued 44 CFR part 350 approval), planners should review what Evaluation Areas were demonstrated during the previous two exercises to determine those that still need to be demonstrated. This would also include a review of the plans to ensure that all OROs that need to demonstrate an Evaluation Area at least once every 6 years have done so.

For the qualifying exercise (when a licensee is seeking an operating license from NRC), all Evaluation Area criteria must be demonstrated by the appropriate ORO in accordance with their plans and procedures. If one or more State or local governments within the EPZ for the site have refused to participate in the planning or preparedness for the site, the licensee offsite plans developed in accordance with Supplement 1, NUREG-0654/FEMA-REP-1 would demonstrate the licensee's capability to implement its plans to protect public health and safety absent participation by State and/or local governments.

2011 pages III-15 to III-16: Select Demonstration Criteria for Evaluation

Before the planning process begins, the FEMA Region compiles a list of Demonstration Criteria that must be evaluated at the OROs to provide reasonable assurance. Some Demonstration Criteria are core functions and activities that FEMA must evaluate for each participating ORO at least biennially, as identified in Exhibit III-2, Federal Evaluation Process Matrix. Other Demonstration Criteria focus on specific radiological emergency response capabilities for which only certain organizations are responsible. Scenario events, exercise play, and the criterion demonstration schedule determine the particular organizations that will participate.

The type of exercise will determine which Demonstration Criteria FEMA will evaluate. For the qualifying exercise, FEMA must evaluate all Demonstration Criteria at the appropriate ORO in accordance with the plans/procedures. For biennial exercises, planners review the Demonstration Criteria evaluated during the previous three exercises to determine those that need to be evaluated for the current exercise cycle. The FEMA Region will come to the IPC with the recommended list of Demonstration Criteria for evaluation. This list provides a starting point for discussions to define the extent of play and scope of the exercise during the subsequent planning meetings.

The FEMA Region also considers Demonstration Criteria that may be performed out of sequence. The RAC Chair will make the final decision on all aspects of acceptable out-of-sequence evaluations. The biennial after-action report (AAR) includes out-of-sequence evaluations that are scheduled no more than 60 days prior to or 30 days after the biennial exercise. A separate AAR documents out-of-sequence evaluations scheduled outside the specified timeframe.

In addition, the FEMA Region considers any credit given to OROs for activities performed during real-world incidents. The process for requesting and documenting REP exercise credit is provided in subsection 7 of Part III.B.

135 Part III: REP Demonstration Guidance – Identifying Responsible OROs for Demonstration Criteria

2009 pages III-6

2011 page III-13

135.1 Substantively Unchanged

Discussion on identifying responsible OROs

136 Part III: REP Demonstration Guidance – Negotiating the Extent of Play

2009 page III-15

2011 page III-16

136.1 2009 Material Substantively Changed in 2011 Publication

2009 page III-15: For purposes of this manual, “extent of play” refers to the degree that actions taken by responsible OROs in response to exercise events conform to those actions that would be taken, under the plan, in an actual emergency.

All OROs seeking to simulate demonstration of specific Evaluation Area criteria should document extent-of-play agreements. These agreements should specify the simulation approved for each criterion for all participating organizations. Extent-of-play agreements should take into account the provisions regarding field activities in partial-participation exercises, as previously described. In addition, extent-of-play agreements should document which Evaluation Area criteria are appropriate for re-demonstration or immediate correction (see section III.B.3.b below).

2011 page III-16: The FEMA Region will come to the IPC with the recommended list of Demonstration Criteria for evaluation. This list provides a starting point for discussions to define the extent of play and scope of the exercise during the subsequent planning meetings.

137 Part III: REP Demonstration Guidance – Exhibit II, Federal Evaluation Process Matrix

137.1 Substantively Unchanged

137.2 2009 Material Deleted

137.3 2009 Material Substantively Changed in 2011 Publication

Demonstration Criterion 1.a.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria	A.1.a, e; A.3, 4; C.1, 4, 6; D.4;	A.4; C.1, D.3, 4; E.1, 2; H.4
Minimum Frequency	Every exercise	E.1, 2; H.3, 4
Out of Sequence of Evaluation	NO	At least biennially
Actual Incident Credit	Radiological - YES	YES
	Non-radiological - YES	YES
Staff Assistance Visit	NO	NO

Demonstration Criterion 1.b.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria K.5.b		H.3 H.3; G.3.a; J.10.h, J.12;
Minimum Frequency	Once/2/	No less than once every 8 years/2/
Out of Sequence of Evaluation	NO	YES
Actual Incident Credit	Radiological - YES Non-radiological - YES	YES
Staff Assistance Visit	YES	YES
Demonstration Criterion 1.c.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		A.1.d;A.2.a,b
	A.1.d;A.2.a,b;	A.3;C.4, 6
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	NO	NO
Actual Incident Credit	Radiological - NO Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 1.d.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		F.1,2 F.1,2
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	NO	YES/3/
Actual Incident Credit	Radiological - NO Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 1.e.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		H.7, 10; I.7, 8, 9; J.10.a, b, e;
	H.7, 10;I.7, 8, 9; J.10.a, b, e; J.11; K.3.a	J.11, 12; K.3.a; K.5.b
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - NO	NO
Staff Assistance Visit	YES	YES
Demonstration Criterion 2.a.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.10.e, f; K.4 C.6;J.10.e, f;K.4
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	YES	NO
Actual Incident Credit	Radiological - YES Non-radiological - NO	NO
Staff Assistance Visit	NO	NO

Demonstration Criterion 2.b.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria	I.10;Supp. 3	I.8,10; Supp. 3
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	NO	NO
Actual Incident Credit	Radiological - YES	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 2.b.2	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.9; J.10.f,m A.3; C.4, 6;
D.4;		J.9;J.10.f, m
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	NO	NO
Actual Incident Credit	Radiological - YES	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 2.c.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.9; J.10.d,e D.4; J.9;J.10.d,e
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	NO	NO
Actual Incident Credit	Radiological - YES	
	Non-radiological - YES	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 2.d.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.9, 11 A.3; C.1, 4;D.4;
		J.9, 11
Minimum Frequency	Every ingestion exercise	Every ingestion exercise
Out of Sequence of Evaluation	NO	NO
Actual Incident Credit	Radiological - YES	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 2.e.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		I.10; J.9; M.1 I.10;
J.9; K.3.a; M.1		
Minimum Frequency	Once in 6 years	No less than once every 8 years
Out of Sequence of Evaluation	NO	NO
Actual Incident Credit	Radiological - YES	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO

Demonstration Criterion 3.a.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria b,K.4		K.3.a, 3.b J.10.e,K.3.a,
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 3.b.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.10.e J.10.e, f
Minimum Frequency	Once in 6 years/4/	At least biennially/5/
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 3.c.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.10.c, d, g J.10.c, d, e, g
Minimum Frequency	Once in 6 years	No less than once every 8 years
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - YES	YES
Staff Assistance Visit	YES	YES
Demonstration Criterion 3.c.2	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.10.c, d, g J.10.c, d, e, g
Minimum Frequency	Once in 6 years/5/	No less than once every 8 years /6/
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - YES	YES
Staff Assistance Visit	YES	YES
Demonstration Criterion 3.d.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria 4;J.10.g, j		J.10.g, j A.3;C.1,
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - YES	YES
Staff Assistance Visit	YES	YES
Demonstration Criterion 3.d.2	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		J.10.k J.10.k
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES Non-radiological - YES	YES
Staff Assistance Visit	YES	YES

Demonstration Criterion 3.e.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			J.9, 11 A.3; C.1, 4;
J.11			
Minimum Frequency	Every ingestion exercise		Every ingestion exercise
Out of Sequence of Evaluation	NO		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - NO		NO
Staff Assistance Visit	NO		NO
Demonstration Criterion 3.e.2		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			J.9, 11 G.1, J.9, 11
Minimum Frequency	Every ingestion exercise		Every ingestion exercise
Out of Sequence of Evaluation	NO		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - NO		NO
Staff Assistance Visit	NO		NO
Demonstration Criterion 3.f.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			M.1,3 E.7;J.10.j; J.12;
Minimum Frequency	Once in 6 years		K.5.b;M.1,3
Out of Sequence of Evaluation	NO		No less than once every
Actual Incident Credit	Radiological - YES		8 years
	Non-radiological - NO		YES
Staff Assistance Visit	NO		NO
			NO
Demonstration Criterion 4.a.2		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			I.7, 8, 11;J.10.a; H.12
	C.1;H.12;		
Minimum Frequency	Every full participation exercise/7/		I.7, 8, 11;J.10.a
Out of Sequence of Evaluation	YES		Every full participation exercise/8/
Actual Incident Credit	Radiological - YES		YES
	Non-radiological - NO		NO
Staff Assistance Visit	NO		NO
			NO
Demonstration Criterion 4.a.3		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			I.8, 9 C.1;I.8,
	9;H.12;J.10.a		
Minimum Frequency	Every full participation Exercise/8/		Every full participation exercise
Out of Sequence of Evaluation	YES		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - NO		NO
Staff Assistance Visit	NO		NO

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

Demonstration Criterion 4.b.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		I.8; J.11 C.1;I.8;J.11
Minimum Frequency	Every ingestion exercise	Every ingestion exercise
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 4.c.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		C.3; J.11 C.1; 3;J.11
Minimum Frequency	Once in 6 years	No less than once every 8 years
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - YES	
	Non-radiological - NO	YES
Staff Assistance Visit	NO	NO
Demonstration Criterion 5.a.1	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		E.5, 6, 7; IV.D E.5, 6,
7		
Minimum Frequency	Every exercise	At least biennially
Out of Sequence of Evaluation	NO	YES
Actual Incident Credit	Radiological - NO	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 5.a.3	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		E.6; Appendix 3 E.6;
		Appendix 3.B.2.c
Minimum Frequency	Once in 6 years	No less than once every 8 years
Out of Sequence of Evaluation	NO	YES
Actual Incident Credit	Radiological - NO	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO
Demonstration Criterion 5.a.4	2009	2011
NUREG-0654/FEMA-REP-1 Criteria		E.6; Appendix 3 E.6;
		Appendix 3.B.2.c
Minimum Frequency	Every exercise, as needed	At least biennially
Out of Sequence of Evaluation	YES	YES
Actual Incident Credit	Radiological - NO	
	Non-radiological - NO	NO
Staff Assistance Visit	NO	NO

Demonstration Criterion 5.b.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			E.5, 7; G.3.a; G.4.c E.5, 7;
G.3.a;G.4.a, c			
Minimum Frequency	Every exercise		At least biennially
Out of Sequence of Evaluation	NO		YES
Actual Incident Credit	Radiological - NO		
	Non-radiological - NO		NO
Staff Assistance Visit	NO		NO
Demonstration Criterion 6.a.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			J.10.h; J.12; K.5.a A.3;
C.4;J.10.h; J.12			
Minimum Frequency	Once in 6 years/8/		No less than once every 8 years/9/
Out of Sequence of Evaluation	YES		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - NO		YES
Staff Assistance Visit	NO		NO
Demonstration Criterion 6.b.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			K.5.b K.5.a, b
Minimum Frequency	Once in 6 years ⁹		No less than once every 8 years
Out of Sequence of Evaluation	YES		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - NO		YES
Staff Assistance Visit	NO		NO
Demonstration Criterion 6.c.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			J.10.h; J.12 J.10.h;J.12
Minimum Frequency	Once in 6 years/9/		No less than once every 8 years/10/
Out of Sequence of Evaluation	YES		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - YES		YES
Staff Assistance Visit	YES		YES
Demonstration Criterion 6.d.1		2009	2011
NUREG-0654/FEMA-REP-1 Criteria			F.2; H.10;K.5.a,b;L.1; L.4
	F.2; H.10;K.5.a,b;		L.1, 4
Minimum Frequency	Every exercise		At least biennially/11/
Out of Sequence of Evaluation	YES		YES
Actual Incident Credit	Radiological - YES		
	Non-radiological - NO		YES
Staff Assistance Visit	NO		NO

2009 Footnotes

/1/ 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 2 years (44 CFR §

350.9(c)(1)). 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 2 years (44 CFR § 350.9(c)(2)). When not fully participating in an exercise at a site, the State shall partially participate at that site to support full participation of the local governments.

/2/ Facilities should only be evaluated for this criterion if they are new or have substantial changes in structure, equipment, or mission that affect key capabilities, as outlined in emergency plans (EPs) and procedures.

/3/ The plume phase and ingestion pathway phase (ingestion, relocation, reentry, and return) can be demonstrated separately.

/4/ Should be demonstrated in every biennial exercise by some organizations and at least once every 6 years by every ORO with responsibility for implementation of KI decisions.

/5/ This applies to school systems/districts and not individual schools within the district.

/6/ Physical deployment of resources is not necessary

/7/ 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 2 years (44 CFR § 350.9(c)(1)). 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 2 years (44 CFR § 350.9(c)(2)). When not fully participating in an exercise at a site, the State shall partially participate at that site to support full participation of the local governments.

/8/ All facilities must be evaluated once during the 6-year exercise cycle.

/9/ Facilities managed by ARC, under the ARC/FEMA MOU, will be evaluated once when designated or when substantial changes occur; all other facilities not managed by ARC must be evaluated once in the 6-year exercise cycle.

2011 Footnotes

/1/ See NUREG-0654/FEMA-REP-1 Criteria N.1.b and N.1.d for additional details.

/2/ Facilities evaluated once when they are new and once every 8 years thereafter. Facilities are re-evaluated for this criterion if, in the interim since the last evaluation, they have substantial changes in structure, equipment, or mission that affect key capabilities, as outlined in emergency plans/procedures.

/3/ Communications equipment can be demonstrated in an out-of-sequence scenario during medical services and reception/relocation center drills as negotiated in the extent of play.

/4/ The post-plume phase (ingestion, relocation, reentry, and return) may be demonstrated separately from the plume phase.

/5/ Demonstrated in every biennial exercise. Participation may be rotated among facilities, but each individual distribution facility must be evaluated no less than once every 8 years.

/6/ Participation may be rotated among school districts, but each school system/district in the EPZ and at least one of its schools must be evaluated no less than once every 8 years. It is not required that every school within the school system/district be evaluated.

/7/ Physical deployment of resources is not necessary except in a full-scale exercise.

/8/ 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 OROs at least every 2 years (44 CFR Part 350.9(c)(1)). 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 2 years (44 CFR Part 350.9(c)(2)). When not fully participating in an exercise at a site, the state shall partially participate at that site to support full participation of the OROs. See NUREG-0654/FEMA-REP-1 Criterion N.1.b for clarification of full participation.

/9/ Participation may be rotated among facilities, but each facility must be evaluated no less than once every 8 years.

/10/ Facilities managed by the American Red Cross under the American Red Cross/FEMA MOU will be evaluated once when designated or when substantial changes occur; all other facilities not managed by the American Red Cross must be evaluated no less than once every 8 years.

/11/ At least one facility must be evaluated biennially. All designated primary and backup facilities and transportation providers must be evaluated no less than once every 8 years.

138 Part III: REP Demonstration Guidance – Developing Exercise Scenarios

2009 pages III-15 to III-20

138.1 Substantively Unchanged

Discussion on scenario development process and milestones

Discussion on ingestion exposure pathway and relocation/reentry/return play

Discussion on scenario variables (condensed to reduce information redundant to the guidance in NUREG Criterion N.1.b)

138.2 2009 Material Substantively Changed in 2011 Publication

Text on **plume exposure pathway play**.

2009, page III-16: Plume Exposure Pathway Exercise Play

There are two basic approaches to satisfying the Evaluation Area criteria and extent-of-play agreements for plume exposure pathway exercises. The preferred approach utilizes plant conditions and a simulated or potential for release of radiological materials to drive the exercise play. The alternative approach is based on plant conditions and the potential for release of radiological materials, but with no simulated release.

Preferred Plume Exposure Pathway Approach. In the preferred approach, the incident scenario includes a combination of plant conditions and a potential or simulated release of radioactive materials into the environment. In this integrated approach, the source term corresponding to the simulated release and resultant dose projections should be of sufficient magnitude and distance from the plant to drive the demonstration of exercise Evaluation Area criteria and extent of play for the participating jurisdictions.

Alternate Plume Exposure Pathway Approach. In the alternative approach, plant conditions alone may be used to drive exercise play for all initial protective action decision-making and implementation. Subsequent protective action decision-making and implementation would be based on a combination of plant conditions and controller injects. Controller injects would be used to drive components of field exercise play requiring contamination or exposure rates. Examples of such components include:

- Dose projection;
- Decisions to decontaminate people and equipment;
- Emergency worker use and understanding of established turn back values; and

- Field monitoring.

Under this alternative approach, OROs affected by the plume (as determined by the exercise scenario and in accordance with extent-of-play agreements) should implement appropriate and timely protective actions in accordance with the plans.

Certain conditions should be met for FEMA to approve such an approach:

- The involved OROs cannot have a Deficiency related to protective action decision-making in the last exercise.
- Scenarios should be designed to sustain potential projected doses for a sufficient period of time to drive OROs to implement protective actions, as applicable. Such scenarios would preclude OROs from waiting out the scenario to avoid making decisions on implementing protective actions. Failure of responsible OROs to take appropriate and timely protective actions may result in FEMA citing a Deficiency, even in the absence of a simulated release during the exercise.
- The scenario should contain simulated contamination or exposure rates, in the form of controller injects, to drive field exercise play. Out of sequence drills may also be used.

2011 page III-13: Plume Exposure Pathway exercise play.

Plume exposure pathway exercise play requires developing a scenario that will drive the demonstration of capabilities to protect public health and safety within the 10-mile EPZ. In general, the source term and resultant dose projections reach a sufficient magnitude and distance from the plant to drive the performance of the agreed-upon Demonstration Criteria and extent of play.

139 Part III: REP Demonstration Guidance – Developing Exercise Documents

2011 pages III-16 to III-17

139.1 Material Added to 2011 Publication

3. DEVELOPING REP EXERCISE DOCUMENTS

This section describes the following REP exercise documents:

- ExPlan
- C/E Handbook
- EEGs
- MSEL

Although document development occurs as part of the Planning Meetings described in the next section, they are explained first here for clarity.

a. Exercise Plan

The ExPlan includes general exercise information, but does not contain scenario details. It is the “game plan” for the exercise. The EPT typically distributes the ExPlan to Players and Observers, but

should also give it to Controllers and Evaluators. The EPT brings all information needed to complete the ExPlan to the IPC. The EPT develops the draft ExPlan prior to the MPC, and creates the Final ExPlan prior to or at the FPC.

b. Controller/Evaluator Handbook

The C/E Handbook is largely considered to be a supplement to the ExPlan. The C/E Handbook contains most of the same information but provides more detail about exercise administration and the scenario. The EPT only distributes the C/E Handbook to the Controllers and Evaluators. Other exercise participants must not receive the C/E Handbook.

For REP Program exercises, the EPT only creates C/E Handbooks when it determines a need for them. The EPT should consider creating a C/E Handbook in the following situations:

- Large number of Controllers and/or Evaluators: the C/E Handbook will help provide more specific information and targeted instruction to the larger groups.
- Complex scenario and/or MSEL: The C/E Handbook can include the scenario details, injects, and/or MSEL itself to ensure that Controllers and Evaluators have all pertinent information.

For exercises without a C/E Handbook, the EPT can easily include additional information within the ExPlan itself (e.g., Controller and Evaluator roles and responsibilities) or its appendices for information with limited distribution (e.g., scenario information).

c. Exercise Evaluation Guides

FEMA recommends that REP exercise planners develop tailored capability-based EEGs. The capability-based Master EEGs maintain the integrity of the REP exercise criteria while providing useful input to the jurisdictions that helps them test and build their capabilities.

FEMA Region decides the degree of EPT and ORO involvement in tailoring the Master EEGs into exercise-specific EEGs. A successful evaluation does not require direct ORO involvement in the EEG development process. However, the benefits of involving the OROs in the process include:

- Clarifying how the REP exercise and OROs Target Capabilities fit together.
- Creating site-specific EEGs that lead to a more detailed evaluation.
- Improved ORO understanding and acceptance of the REP/HSEEP approach.

FEMA recommends providing all information needed to complete the EEGs at the IPC. The EPT develops the Draft EEGs prior to the MPC, with the Final EEGs being created prior to or at the FPC.

d. Master Scenario Events List

Exercise planners may use scenario injects to increase participation by OROs during lulls in the primary radiological response activities. For example, a scenario inject for a simulated HAZMAT incident could require an immediate response by OROs. While scenario injects may enhance exercise play for OROs, they should not detract from the primary goals, technical analysis, and timeline of the primary scenario.

Most REP/HSEEP exercises may not need an MSEL Conference because player reactions to a limited number of scenario events (i.e., ECL changes and PADs) primarily control exercise play. However,

exercises with HAB or non-REP scenario elements (e.g., a joint REP and all-hazards exercise) may warrant an MSEL Conference.

MSEL conferences, when used, should include a representative from the licensee to ensure that changes in off-site event timing do not conflict with the on-site scenario that drives licensee actions. Exercise planners must ensure that MSEL injects are either timed to be consistent with the on-site scenario events or the EPT must conduct a MSEL Conference as early as possible to give the licensee time to modify the scenario and reactor simulator model.

140 Part III: REP Demonstration Guidance – Holding Exercise Planning Meetings

2011 pages III-17 to III-18

140.1 Material Added to 2011 Publication

4. HOLDING EXERCISE PLANNING MEETINGS

Following meetings occur after the pre-planning activities.

a. Concepts & Objectives Meeting

Under HSEEP, a C&O Meeting is held to identify the type, scope, and purpose of the exercise, as well as the specific Demonstration Criteria that will be evaluated. The EPT can combine the C&O Meeting with the IPC for REP exercises. However, the initial REP exercise held using the HSEEP methodology in a FEMA Region, state, or at a particular site may warrant a separate meeting to orient the planners.

b. Initial Planning Conference

The IPC lays the foundation for exercise development, and occurs at least six months before the exercise to address:

- REP Demonstration Criteria to be evaluated, including location and by whom
- Target capabilities
- Scenario type and variables
- Out-of-sequence demonstrations and potential schedule
- Roles and responsibilities for exercise document preparation
- Schedule for upcoming planning meetings
- Responsibility for exercise document development

During the IPC, the FEMA Region, state, and OROs review and finalize the appropriate Demonstration Criteria. The FEMA Region identifies any criteria that need to be evaluated based on Exhibit III-2 and any outstanding uncorrected ARCAs and comes to the IPC with a criteria list. The FEMA Region orders these criteria according to location (e.g., County EOC) and/or function (e.g., field monitoring team).

Following the IPC, and leading up to the MPC, the EPT develops the following:

- Final list of Demonstration Criteria/Target Capabilities to be evaluated

- Initial draft Extent-of-Play Agreement
- Draft ExPlan
- Draft EEGs
- Initial draft of off-site scenario and MSEL

c. Mid-term Planning Conference

REP/HSEEP MPCs generally occur three months before the exercise. Items to address and accomplish include:

- Negotiate and finalize the ORO Extent-of-Play Agreement
- Review the Draft ExPlan and incorporate the finalized extent of play
- Review general scenario concepts (FEMA reviews the scenario before the exercise and does not wait for the FPC)
- Review draft MSEL, if needed
- Review draft EEGs
- Prepare the out-of-sequence events schedule
- Prepare the exercise events schedule
- Determine the need for a C/E Handbook
- Discuss and resolve planning and logistical issues

Some EPTs may decide to hold more than one meeting to prepare all the items typically covered in the MPC, especially if there is a large volume of information to review. In any event, the EPT completes the actions below before the FPC:

- C/E Handbook, if needed
- ExPlan
- EEGs
- Scenario (limited to Trusted Agents only)
- MSEL, if needed (limited to Trusted Agents only)

d. Final Planning Conference

The purpose of an FPC is to undertake a comprehensive review of all exercise documents and identify and resolve any outstanding items. The EPT finalizes the exercise documents after the FPC. The EPT should schedule the FPC early enough that any outstanding items can be resolved prior to the exercise. While current HSEEP guidance recommends holding the FPC 30 days before an exercise, the FPC for a REP/HSEEP Integrated Exercise should occur no later than 45 days before the exercise. This timeframe provides the FEMA Region with adequate time to assemble Evaluator Packets and distribute them 30 days before the exercise.

During the FPC, the EPT:

- Reviews all exercise processes and procedures
- Approves and finalizes all exercise documents
- Finalizes exercise logistics
- Finalizes controller and evaluator assignments
- Resolves outstanding items or schedules their resolution
- Determines information to present at the exercise briefings

Following the FPC, the EPT:

- Prepares final versions of the ExPlan, C/E Handbook, EEGs, Scenario, and MSEL
- Compiles Controller Packets (state/OROs)
- Compiles Evaluator Packets (FEMA)
- Finalizes exercise briefings

141 Part III: REP Demonstration Guidance – Assigning and Confirming Evaluators

2009 page III-21

2011 page III-19

141.1 Substantively Unchanged

Discussion on assigning and confirming evaluators

141.2 2009 Material Substantively Changed in 2011 Publication

2009 page III-21: The RAC Chair or designee should ensure that all evaluators have completed the IS-331: Introduction to Radiological Emergency Preparedness Exercise Evaluation, L304: Radiological Emergency Preparedness Exercise Evaluation, and E/L340: Radiological Emergency Preparedness Planning courses, offered by FEMA's Emergency Management Institute and have observed at least one REP exercise with a trained evaluator.

2011 page III-19: The RAC Chair (or designee) ensures that all evaluators have completed the required REP-approved training courses offered by FEMA's Emergency Management Institute as well as on-the-job training with a FEMA-accepted evaluator.

142 Part III: REP Demonstration Guidance – Pre-exercise Meetings/Briefings

2011 page III-19

142.1 Material Added to 2011 Publication

Prior to the exercise, the EPT provides the exercise participants with a briefing to educate them on their roles and responsibilities during the exercise. The briefings provide a schedule of meetings and exercise events, logistical information, and instructions and procedures for conducting the exercise and evaluation activities.

Evaluator briefings include information and instructions regarding the REP/HSEEP evaluation approach used by the Region. The briefings address the applicable Demonstration Criteria/Target Capabilities to be evaluated, the exercise scenario overview, the timeline of significant events, and how evaluators will document the results.

143 Part III: REP Demonstration Guidance – Post-exercise Meetings

2009 pages III-27 to III-28

2011 pages III-19 to III-20

143.1 Substantively Unchanged

Discussion on the participant briefing

Discussion on the public meeting

143.2 Material Added to 2011 Publication

Text on the term “**hot wash**,” page III-19: Unlike HSEEP, which is designed for “no-fault” exercises, exercise evaluation under the REP program is driven by regulation and the results are graded. Therefore, the HSEEP concept of a Hot Wash, with Evaluators and Players sharing observations and identifying exercise issues together, may not be practical for an evaluated REP/HSEEP exercise. State and OROs can incorporate their separate controller/player hot wash results into the Draft AAR/Improvement Plan (IP) after the FEMA regulatory findings are completed. FEMA highly encourages HSEEP hot washes at non-evaluated REP activities.

144 Part III: REP Demonstration Guidance – Identifying Exercise Issues

2009 page III-21

2011 pages III-20 to III-21

144.1 Substantively Unchanged

Discussion on the definition and types of issues

145 Part III: REP Demonstration Guidance – Classifying Issues

2009 page III-22

2011 pages III-21 to III-22

145.1 Substantively Unchanged

Discussion on classifying issues

146 Part III: REP Demonstration Guidance – Correcting Issues during the Exercise

2009 page III-22

2011 page III-21

146.1 Substantively Unchanged

Discussion on correcting issues during the exercise

147 Part III: REP Demonstration Guidance – Issue Numbering

2009 pages III-24 to III-25

2011 pages III-22 to III-23

147.1 Substantively Unchanged

Discussion on issue numbering

147.2 2009 Material Deleted

Text and graphic on **Method of Issue Number Assignment and Tracking**, pages III-25 to III-26: One example of numbering and tracking exercise issues is the use of the form illustrated in Exhibit III-5 below. This form contains all elements of the standardized exercise issue number, except for the REP Evaluation Area Criterion and issue classification numbers, along with spaces for the jurisdiction/functional entity and a brief issue title. As issues are identified, the pertinent information can be filled in by hand or electronically, to create a “master list” of all exercise issues identified during the exercise.

148 Part III: REP Demonstration Guidance – Determining Demonstration Criterion Status

2009 pages III-26 to III-27

2011 pages III-23 to III-24

148.1 Substantively Unchanged

Discussion on determining the status of Demonstration Criteria for the exercise report

148.2 2009 Material Substantively Changed in 2011 Publication

Text on applying for **exemption from demonstration**:

2009 page III-26: An exemption must be applied for by the State and approved by FEMA’s Regional Office and headquarters prior to the exercise.

2011 page III-23: If this situation is known in advance of the exercise, the state must request an exemption, which FEMA’s Regional Office and Headquarters must approve.

149 Part III: REP Demonstration Guidance – After Action Reporting

2009 pages III-29 to III-30

2011 pages III-24 to III-25

149.1 Substantively Unchanged

Discussion of contents and timelines for the After Action Report

149.2 Material Added to 2011 Publication

Text clarifying the **purpose of the After Action Report**, page III-24:

The AAR/IP captures observations from the exercise and includes recommendations for post-exercise improvements. AARs are designed to meet varying levels of sensitivity – portions not intended for public disclosure can be separated and protected.

Consistent with the capability-based EEGs, the AAR/IP is capability-based (i.e., includes an analysis of capabilities exercised and activities performed as well as recommendations for addressing identified areas of improvement). Because regulations require successful demonstration of the Planning Standards, the AAR also includes discussions of ARCAs, Deficiencies, and Plan Issues. FEMA retains exercise documentation in the Regional files as a permanent record of exercise play.

150 Part III: REP Demonstration Guidance – Notifying the State of Deficiencies

2009 pages III-28 to III-29

2011 page III-24

150.1 Substantively Unchanged

Discussion of regulatory process for notifying the State when a Deficiency occurs at an exercise

151 Part III: REP Demonstration Guidance – Correcting Issues

2009 pages III-23 to III-24 and III-30 to III-31

2011 pages III-26 to III-27

151.1 Substantively Unchanged

Discussion of process for correcting Deficiencies, Areas Requiring Corrective Action (ARCAs), and Planning Issues

152 Part III: REP Demonstration Guidance – Credit for Participation in an Actual Incident

2009 pages III-31 to III-33

2011 pages III-27 to III-28

152.1 Substantively Unchanged

Discussion on responses that might qualify for exercise credit and the process for applying for credit.

152.2 2009 Material Deleted

Text on **examples of potentially qualifying response activities**, page III-31:

Examples include real-world demonstration of the Citizen Evacuation and Shelter-In-Place capability; the Emergency Operations Center Management capability, and radiological environmental monitoring, monitoring for radiological contamination of persons and equipment, and/or other activities successfully performed according to applicable ORO plans and procedures when the triggering event included the potential for radiation exposure.

Text on **credit for participating in non-REP exercises**, page III-32:

FEMA also will consider granting exercise credit to OROs for demonstration of REP-specific capabilities in any NEP exercise or other radiologically-based exercise or drill mandated and/or sponsored by a State or other Federal agency. Examples of non-NEP exercises open to consideration are those mandated and/or sponsored by other Federal agencies.

ORO credit requests for participation in non-REP exercises must specify the exercise and document the ORO's participation, including the REP-specific criteria and/or capabilities performed, and a list of corrective actions or improvement items identified in the exercise AAR. Furthermore, the REP-specific criteria and/or capabilities must be demonstrated to a REP credentialed evaluator in order to be considered for credit within the REP program. The evaluation results and documentation of any identified corrective action must be submitted as part of the ORO's credit request.

The ORO should submit the request for credit 90 days in advance of the non-REP exercise. FEMA headquarters will render a decision on applications for credit within 30 days of receipt. The REP-credentialed evaluator(s) should submit written documentation of evaluated criterion using the same process as for an out-of-sequence (OOS) demonstration following the non-REP exercise. Any credit that is granted must be completed in time to allow it to be included in the extent-of-play discussions prior to the REP exercise for which credit is granted.

153 Part III: REP Demonstration Guidance – Exercise Demonstration

2009 pages III-34 to III-35

2011 pages III-29 to III-30

153.1 2009 Material Substantively Changed in 2011 Publication

2009 text introducing Evaluation Areas and associated sub-elements:

This part of the Manual contains the methodology used to evaluate all drills and exercises of offsite emergency response plans in support of a NPP. This methodology is used by FEMA evaluators, other Federal agencies, FEMA contractors, and any State, local, or tribal evaluators.

FEMA uses exercises and drills to determine the adequacy of offsite radiological emergency preparedness for NPP incidents.

Although the evaluation process has evolved in format and function over the years, the regulatory basis remains unchanged. The regulatory basis and standards for the REP Program exercises and drills are addressed in 44 CFR part 350, 351, and 352; and the FEMA/NRC MOU dated June 19, 1993 contained in 44 CFR § 353, Appendix A. These documents establish FEMA's responsibility to review, evaluate, and approve State, local, and tribal radiological emergency plans and preparedness and to evaluate exercises. FEMA and the NRC use both the Planning Standards and related Evaluation Criteria contained in NUREG-0654/FEMA-REP-1 in reviewing and evaluating ORO's radiological emergency plans and preparedness.

Planning Standard N of NUREG-0654/FEMA-REP-1 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.a.1 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." Planning Standard N Evaluation Criteria presume that exercises will be conducted as set forth in NRC and FEMA rules and in exercise evaluation guidance.

A Federal Register notice was issued in 1996 requesting comments on the REP Program. Based on the comments, several recommendations were made to FEMA headquarters. The first recommendation was to streamline the program and eliminate the current exercise checklists and inconsistencies among Regions. As a result of that recommendation, the exercise Evaluation Area methodology was developed to minimize exercise issue inconsistencies among Regions, and to make the evaluation less dependent upon prescriptive criteria and more "results-oriented." The exercise Evaluation Area methodology contains six Evaluation Areas:

1. Emergency Operations Management
2. Protective Action Decision-making
3. Protective Action Implementation
4. Plume Phase Field Measurements and Analyses
5. Emergency Notifications and Public Information
6. Support Operations/Facilities

REP exercises and drills are designed to test the capability of OROs to protect public health and safety through implementation of their emergency response plans and procedures in simulated emergencies. Security and law enforcement response capabilities related to site security contingency plans will not be evaluated in this program. This ensures the confidentiality of sensitive security information.

The Evaluation Areas reflect current policy and guidance on what should be required for successful demonstration during an exercise. They reflect FEMA's shift toward a results-oriented approach to the evaluation process. In other words, accomplishing the mission is more important than the steps taken to achieve the result. REP exercises and drills are designed to test the capability of OROs to protect public health and safety. The Evaluation Areas were designed to assist the evaluator in focusing on observing and recording exercise and drill events as they occur. The Evaluation Areas will periodically be reviewed to allow for changes to the methodology dictated by changing times, methods, and environments.

Contained within each of these Evaluation Areas are specific sub-elements and criteria. The 6 Evaluation Areas with their associated criteria are based on the 16 Planning Standards of 44 CFR part 350 that are further defined in NUREG-0654/FEMA-REP-1.

It is the responsibility of the Regional Office to assign the various criteria to each facility and/or function that is to be evaluated. Each FEMA Region is also responsible for tracking when these facilities and/or functions have been evaluated, which Evaluation Area criteria were evaluated, and the status of that demonstration. Exhibit 3: The Federal Evaluation Process Matrix establishes the minimum frequency with which each of the exercise Evaluation Area criteria should be exercised. FEMA is open to ORO proposals to voluntarily exercise certain criteria more frequently than the minimums shown in the matrix.

2011 text introducing Assessment Areas and Demonstration Criteria:

C. EXERCISE DEMONSTRATION

Planning Standard N of NUREG-0654/FEMA-REP-1 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 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 Evaluation Criteria presume that exercises will be conducted as set forth in NRC and FEMA rules and exercise evaluation guidance.

FEMA’s preparedness assessment philosophy focuses more on accomplishing the mission than on the steps taken to achieve a result. FEMA’s Assessment Area methodology, along with the incorporation of HSEEP methodology, minimizes exercise issue inconsistencies among its Regions and makes the evaluations less dependent upon prescriptive criteria. FEMA’s focus during REP exercises and drills is to test the capability of OROs to protect public health and safety.

Each of the Assessment Areas contains specific Sub-elements and Demonstration Criteria. Together, the FEMA Regions use these to develop Exercise Evaluation Guides that assist the evaluator in focusing on observing and recording exercise and drill events as they occur. FEMA will continue to review the Assessment Areas to allow for changes to the methodology dictated by changing times, methods, and environments.

[Text Box] REP/HSEEP Evaluation: The Assessment Areas, Sub-elements, and Demonstration Criteria can be aligned to HSEEP Target Capabilities, Activities, and Critical Tasks.

The FEMA Regional Office is responsible for assigning the various Demonstration Criteria to each facility and/or functional entity that it will evaluate. Each FEMA Region must also track when evaluations of these facilities and/or functions occur, which Demonstration Criteria FEMA evaluated, and the status of that demonstration. Exhibit III-2 establishes the minimum frequency with which FEMA must evaluate each of the Demonstration Criteria. FEMA encourages OROs to voluntarily exercise certain criteria more frequently than the minimum frequencies for evaluation shown in the matrix.

[Text box] Demonstrating Reasonable Assurance: The Assessment Areas, derived from the NUREG-0654/FEMA-REP-1 Planning Standards and Evaluation Criteria, reflect current FEMA policy and guidance on the activities that OROs are expected to be able to perform to maintain

reasonable assurance that the health and safety of the public can be protected in the event of an incident at an NPP

The term “Evaluation Area” is replaced with the term “Assessment Area”

The terms “Evaluation Area Criterion” and “Evaluation Area sub-element” are replaced with the term “Demonstration Criteria”

154 Part III: REP Demonstration Guidance – Demonstration Criterion 1.a.1

2009 pages III-38 to III-39

2011 pages III-31 to III-32

154.1 Substantively Unchanged

Guidance on demonstration and assessment of alert, notification, and activation of personnel and facilities

154.2 2009 Material Deleted

154.3 2009 Material Substantively Changed in 2011 Publication

Text on evaluation of non-REP activities:

2009 page III-38: The focus of ICS evaluation is on coordination among the incident command, the utility, and all appropriate OROs, pursuant to plans and procedures. Evaluation of ICS implementation or other independent program requirements by non-FEMA evaluators can be negotiated through the extent-of-play agreement.

2011 page III-31: The REP program does not evaluate Incident Command System tactical operations, only coordination among the incident command, the utility, and all appropriate OROs, pursuant to plans/procedures.

154.4 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.1.a; C4, 6; H.3

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

Text on **demonstrating 24-hour operations capability**: [Responsible OROs must demonstrate the capability to receive notification of an incident from the licensee; verify the notification; and contact, alert, and mobilize key emergency personnel in a timely manner] and demonstrate the ability to maintain and staff 24-hour operations. Twenty-four-hour operations can be demonstrated during the exercise via rosters or shift changes or otherwise in an actual activation.

Text on **identification of supplemental resources**: Any resources identified through LOA/MOUs must be on the ORO's mobilization list so they can be contacted during an incident, if needed.

155 Part III: REP Demonstration Guidance – Demonstration Criterion 1.b.1

2009 page III-39

2011 page III-32

155.1 Substantively Unchanged

Guidance on demonstration and assessment of facilities

155.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: K.5.b

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by out-of-sequence evaluations.

Text clarifying **facilities to be assessed**: [Baseline evaluations are performed for EOCs and JICs], as well as other fixed facilities such as reception/relocation centers.

Text clarifying the term “**substantial change**”: A substantial change is one that has a direct effect or impact on emergency response operations performed in those facilities. Examples of substantial changes include: modifying the size or configuration of an emergency operations center, adding more function to a center, or changing the equipment available for use in a center.

156 Part III: REP Demonstration Guidance – Demonstration Criterion 1.c.1

2009 pages III-39 to III-40

2011 pages III-32 to III-33

156.1 Substantively Unchanged

Guidance on demonstration and assessment of direction and control

156.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.3; C.4, 6

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished in a full scale, functional, or tabletop exercise.

Text on **supplemental resources**: Any resources identified through LOA/MOUs must be on the ORO's mobilization list so they may be contacted during an incident, if needed.

157 Part III: REP Demonstration Guidance – Demonstration Criterion 1.d.1

2009 page III-40

2011 page III-33

157.1 Substantively Unchanged

Guidance on demonstration and assessment of communications equipment

157.2 Material Added to 2011 Publication

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion is accomplished initially in a baseline evaluation and subsequently in periodic testing and drills. System familiarity and use must be demonstrated as applicable in full scale, functional and tabletop exercises, or if their use would be required, during an actual event.

Text on **demonstration of equipment operability**: [OROs must demonstrate that a primary system, and at least one backup system for fixed facilities, is fully functional] at all times. Communications systems are maintained and tested on a recurring basis throughout the assessment period and system status is available to all operators. Periodic test results and corrective actions are maintained on a real time basis.

158 Part III: REP Demonstration Guidance – Demonstration Criterion 1.e.1

2009 pages III-41 to III-42

2011 pages III-33 to III-34

158.1 Substantively Unchanged

Guidance on demonstration and assessment of adequate equipment and supplies

158.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: I.7, 8, 9; J.12; K.5.b

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion is accomplished primarily through a baseline evaluation and subsequent periodic inspections.

Text on **record-keeping for KI**: The plans/procedures must include the forms to be used for documenting emergency worker ingestion of KI, as well as a mechanism for identifying emergency workers that have declined KI in advance. Consider carefully the placement of emergency workers that have declined KI in advance.

Text on **available quantities of dosimetry**: [Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers must be available for issuance to all emergency workers] who will be dispatched to perform an ORO mission. In addition, OROs must demonstrate provisions to make dosimetry available to specialized response teams (e.g., civil support team,

Special Weapons and Tactics Teams, urban search and rescue, bomb squads, HAZMAT, or other ancillary groups) as identified in plans/procedures).

Text on operational checks of portal monitors: [The monitor(s) must conform to the standards set forth in the Contamination Monitoring Standard for a Portal Monitor Used for Emergency Response, FEMA-REP-21 (March 1995)] or in accordance with the manufacturer's recommendations.

159 Part III: REP Demonstration Guidance – Demonstration Criterion 2.a.1

2009 page III-42

2011 page III-36

159.1 Substantively Unchanged

Guidance on demonstration and assessment of emergency worker exposure control

159.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: C.6; K.4

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion must be assessed concurrently with a licensee exercise and may be demonstrated in a full scale, functional or tabletop exercise.

160 Part III: REP Demonstration Guidance – Demonstration Criterion 2.b.1

2009 pages III-43 to III-44

2011 pages III-36 to III-37

160.1 Substantively Unchanged

Guidance on demonstration and assessment of plume-phase risk assessment

160.2 2009 Material Deleted

NUREG-0654/FEMA-REP-1 cross-references: I.8

160.3 2009 Material Substantively Changed in 2011 Publication

Title of sub-element 2.b:

2009 page III-43: Dose Assessment and PARs and PADs for the Emergency Event

2011 page III-36: Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

160.4 Material Added to 2011 Publication

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise.

161 Part III: REP Demonstration Guidance – Demonstration Criterion 2.b.2

2009 pages III-44 to III-45
2011 pages III-37 to III-38

161.1 Substantively Unchanged

Guidance on demonstration and assessment of protective action decision making

161.2 2009 Material Substantively Changed in 2011 Publication

Text on **alternate protective actions**:

2009 page III-45: In addition, an HAB event or other incident may pose an undue risk to an evacuation in the potential zone of violent criminal activity or an evacuation may disrupt the efforts to respond to a hostile action and an alternate PAD may be required.

2011 page III-38: In addition, a subsequent or alternate PAD may be appropriate if various conditions (e.g., an HAB incident, weather, release timing and magnitude) pose undue risk to an evacuation, or if evacuation may disrupt the efforts to respond to a hostile action.

161.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.3; C.4, 6; D.4

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise.

162 Part III: REP Demonstration Guidance – Demonstration Criterion 2.c.1

2009 pages III-45 to III-46
2011 pages III-38 to III-39

162.1 Substantively Unchanged

Guidance on demonstration and assessment of protective action decision making for groups of persons with disabilities and access/functional needs

162.2 2009 Material Substantively Changed in 2011 Publication

Title of sub-element 2.c:

2009 page III-45: PAD Consideration for the Protection of Special Populations

2011 page III-38: PAD Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

Term “Special Populations replaced with “Persons with Disabilities and Access/Functional Needs”

Text on school district decision making:

2009 page III-46: Officials should demonstrate that the decision-making process considers (that is, either accepts automatically or gives heavy weight to) PARs 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., for example, whether the students are still at home, en route to school, or at school).

2011 page III-39: The decision-making process, including any preplanned strategies for protective actions for that ECL, must consider the location of students at the time (e.g., whether the students are still at home, en route to school, or at school).

162.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: D.4

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise that would include the use of plant conditions transmitted from the licensee.

163 Part III: REP Demonstration Guidance – Demonstration Criterion 2.d.1

2009 pages III-46 to III-47

2011 pages III-39 to III-40

163.1 Substantively Unchanged

Guidance on demonstration and assessment of ingestion pathway decision making

163.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.3; C.1, 4; D.4

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise that would include the use of plant conditions transmitted from the licensee.

164 Part III: REP Demonstration Guidance – Demonstration Criterion 2.e.1

2009 pages III-47 to III-49
2011 pages III-40 to III-41

164.1 Substantively Unchanged

Guidance on demonstration and assessment of post-plume assessment and decision making

164.2 2009 Material Substantively Changed in 2011 Publication

Title of sub-element 2.e:

2009 page III-47: Radiological Assessment and Decision Making Concerning Post-Plume Phase Relocation, Reentry, and Return

2011 page III-40: Radiological Assessment and Decision Making Concerning Relocation, Reentry, and Return

164.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: K.3.a

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise that would include the use of plant conditions transmitted from the licensee.

165 Part III: REP Demonstration Guidance – Demonstration Criterion 3.a.1

2009 pages III-50 to III-51
2011 pages III-42 to III-43

165.1 Substantively Unchanged

Guidance on demonstration and assessment of emergency worker dosimetry

165.2 2009 Material Substantively Changed in 2011 Publication

Scope of this demonstration criterion changed to include all exposure control measures for emergency workers, including KI

Added to 2011 Intent section: [...establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of the PAGs,] and the capability to provide KI for emergency workers...

Added to 2011 Criterion 3.a.1 language: [The OROs issue appropriate dosimetry,] KI... OROs maintain appropriate record-keeping of the administration of KI to emergency workers.

Added to 2011 Assessment/Extent of Play: OROs must demonstrate the capability to accomplish distribution of KI to emergency workers consistent with decisions made. OROs must have the capability to develop and maintain lists of emergency workers who have ingested KI, including documentation of the date(s) and time(s) they did so. Ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI shall not be performed. OROs must demonstrate the capability to formulate and disseminate instructions on using KI for those advised to take it. Emergency workers must demonstrate basic knowledge of procedures for using KI whether or not the scenario drives the implementation of KI use. This can be accomplished by an interview with the evaluator.

165.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: J.10.e; K.4

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

166 Part III: REP Demonstration Guidance – Demonstration Criterion 3.b.1

2009 pages III-51 to III-52
2011 pages III-43 to III-44

166.1 Substantively Unchanged

Guidance on demonstration and assessment of implementation of the KI decision for institutionalized individuals and the general public

166.2 2009 Material Substantively Changed in 2011 Publication

Scope of this Demonstration Criterion changed to cover the KI decision for institutionalized individuals and the general public only

Title of sub-element 3.b:

2009 page III-51: Implementation of KI Decision

2011 page III-43: Implementation of KI Decision for Institutionalized Individuals and the General Public

Text on KI for emergency workers moved to Demonstration Criterion 3.a.1

166.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: J.10.f

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

167 Part III: REP Demonstration Guidance – Demonstration Criterion 3.c.1

2009 page III-52

2011 page III-44

167.1 Substantively Unchanged

Guidance on demonstration and assessment of implementation of protective actions for persons with disabilities and access/functional needs

167.2 2009 Material Substantively Changed in 2011 Publication

Term “Special Populations replaced with “Persons with Disabilities and Access/Functional Needs”

Title of sub-element 3.c:

2009 page III-52: Implementation of Protective Actions for Special Populations

2011 page III-44: Implementation of Protective Actions for Persons with Disabilities and Access/Functional Needs

Demonstration Criterion 3.c.1 language: [Protective action decisions are implemented for] persons with disabilities and access/functional needs...

167.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: J.10.e

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

168 Part III: REP Demonstration Guidance – Demonstration Criterion 3.c.2

2009 pages III-52 to III-53

2011 pages III-44 to III-45

168.1 Substantively Unchanged

Guidance on demonstration and assessment of protective actions for schools

168.2 2009 Material Substantively Changed in 2011 Publication

Text clarifying participation requirements:

2009 page III-52: At least one school in each affected school system/district should demonstrate implementation of protective actions.

2011 page II-45: Each school system/district within the 10 mile EPZ must demonstrate implementation of protective actions. At least one school per affected system/district must participate in the demonstration.

168.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: J.10.e

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise, an actual event, or by means of drills conducted at any time.

169 Part III: REP Demonstration Guidance – Demonstration Criterion 3.d.1

2009 pages III-53 to III-54
2011 pages III-45 to III-46

169.1 Substantively Unchanged

Guidance on demonstration and assessment of traffic and access control

169.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.3; C.1, 4

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

170 Part III: REP Demonstration Guidance – Demonstration Criterion 3.d.2

2009 page III-54
2011 page III-46

170.1 Substantively Unchanged

Guidance on demonstration and assessment of resolving impediments to evacuation

170.2 2009 Material Substantively Changed in 2011 Publication

Text clarifying **scope of demonstration**: The impediment must occur during the evacuation and be on an evacuation route such that re-routing of traffic is required, triggering decision-making and coordination with the JIC to communicate the alternate route to evacuees leaving the area.

170.3 Material Added to 2011 Publication

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

171 Part III: REP Demonstration Guidance – Demonstration Criterion 3.e.1

2009 III-54
2011 pages III-46 to III-47

171.1 Substantively Unchanged

Guidance on demonstration and assessment of ingestion pathway decision implementation

171.2 2009 Material Deleted

NUREG-0654/FEMA-REP-1 cross-references: J.9

171.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.3; C.1, 4

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

172 Part III: REP Demonstration Guidance – Demonstration Criterion 3.e.2

2009 page III-55
2011 page III-47

172.1 Substantively Unchanged

Guidance on demonstration and assessment of measures, strategies, and pre-printed instructional materials for implementing protective action decisions for contaminated water, food products, milk, and agricultural production

172.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: G.1

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

173 Part III: REP Demonstration Guidance – Demonstration Criterion 3.f.1

2009 pages III-55 to III-56

2011 pages III-47 to III-48

173.1 Substantively Unchanged

Guidance on demonstration and assessment of implementing post-plume phase relocation, reentry, and return decisions

173.2 2009 Material Substantively Changed in 2011 Publication

Title of sub element:

2009 page III-55: Implementation of Relocation, Reentry, and Return Decisions

2011 page III-47: Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions

Demonstration Criterion 3.f.1 language clarifying the intended time frame of actions: [Decisions regarding controlled reentry of emergency workers and relocation and return of the public] during the post-plume phase...

Text clarifying **reentry during the post-plume phase**:

2009 page III-56: OROs should demonstrate the capability to control reentry and exit of individuals who need to temporarily reenter the restricted area to protect them from unnecessary radiation exposure. OROs should also demonstrate the capability to control exit of vehicles and other equipment to control the spread of contamination outside the restricted area(s).

2011 page III-48: OROs must demonstrate the capability to control reentry and exit of individuals who are authorized by the ORO to temporarily reenter the restricted area during the post-plume (i.e., intermediate or late) phase to protect them from unnecessary radiation exposure. OROs must also demonstrate the capability to control exit of vehicles and other equipment to control the spread of contamination outside the restricted area(s). Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must reenter an evacuated area during the post-emergency phase must be limited to the lowest radiological exposure commensurate with completing their missions.

173.3 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: E.7, J.10.j; J.12; K.5.b

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise, an actual event, or by means of drills conducted at any time.

Text clarifying **populations affected by relocation**: [OROs must demonstrate the capability to coordinate and implement decisions concerning relocation of individuals located] in radiologically contaminated areas who were not previously evacuated.

174 Part III: REP Demonstration Guidance – Demonstration Criterion 4.a.2

2009 pages III-57 to III-58

2011 pages III-49 to III-50

174.1 Substantively Unchanged

Guidance on demonstration and assessment of plume-phase field team management

174.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: C.1; I.7

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

175 Part III: REP Demonstration Guidance – Demonstration Criterion 4.a.3

2009 page III-58

2011 page III-50

175.1 Substantively Unchanged

Guidance on demonstration and assessment of plume-phase field team operations

175.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: C.1; H.12; I.8

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

176 Part III: REP Demonstration Guidance – Demonstration Criterion 4.b.1

2009 pages III-58 to III-59

2011 pages III-50 to III-51

176.1 Substantively Unchanged

Guidance on demonstration and assessment of post-plume field team operations

176.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: C.1

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

177 Part III: REP Demonstration Guidance – Demonstration Criterion 4.c.1

2009 pages III-59 to III-60

2011 pages III-51 to III-52

177.1 Substantively Unchanged

Guidance on demonstration and assessment of laboratory operations

177.2 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: C.1

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

178 Part III: REP Demonstration Guidance – Demonstration Criterion 5.a.1

2009 pages III-61 to III-62

2011 pages III-53 to III-54

178.1 Substantively Unchanged

Guidance on demonstration and assessment of primary alert and notification of the public

178.2 Material Added to 2011 Publication

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or operational testing of equipment that would fully demonstrate capability.

Text on methods demonstrated: OROs may demonstrate any means of primary alert and notification included in their plans/procedures as negotiated in the Extent-of-Play Agreement.

179 Part III: REP Demonstration Guidance – Demonstration Criterion 5.a.3

2009 pages III-62 to III-63
2011 pages III-54 to III-55

179.1 Substantively Unchanged

Guidance on demonstration and assessment of backup alert and notification of the public

179.2 Material Added to 2011 Publication

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or operational testing of equipment that would fully demonstrate capability.

180 Part III: REP Demonstration Guidance – Demonstration Criterion 5.a.4

2009 page III-63
2011 page III-55

180.1 Substantively Unchanged

Guidance on demonstration and assessment of exception area alert and notification

180.2 2009 Material Deleted

Text in Assessment/Extent of Play on **45-minute time limit**, page III-63: The “45-minute clock” will begin when the OROs decide to activate the alert and notification system for the first time for a specific emergency situation.

180.3 2009 Material Substantively Changed in 2011 Publication

Criterion 5.a.4 **language on time limits amended**: [Activities associated with FEMA-approved exception areas (where applicable) are completed] in a timely manner...

180.4 Material Added to 2011 Publication

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or operational testing of equipment that would fully demonstrate capability.

181 Part III: REP Demonstration Guidance – Demonstration Criterion 5.b.1

2009 pages III-63 to III-65
2011 pages III-56 to III-57

181.1 Substantively Unchanged

Guidance on demonstration and assessment of subsequent emergency information and instructions for the public and the media

181.2 2009 Material Deleted

Text on emergency information regarding pets, page III-64

181.3 2009 Material Substantively Changed in 2011 Publication

Title of sub-element 5.b:

2009 page III-64: Emergency Information and Instructions for the Public and the Media

2011 page III-56: Subsequent Emergency Information and Instructions for the Public and the Media

181.4 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: G.4.a

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, or drills.

182 Part III: REP Demonstration Guidance – Demonstration Criterion 6.a.1

2009 pages III-66 to III-67

2011 pages III-58 to III-59

182.1 Substantively Unchanged

Guidance on demonstration and assessment of monitoring and decontamination of evacuees

182.2 2009 Material Deleted

NUREG-0654/FEMA-REP-1 cross-references: K.5.a

References to monitoring and decontamination of emergency workers moved to Demonstration Criterion 6.b.1

References to monitoring and decontamination of household pets

182.3 2009 Material Substantively Changed in 2011 Publication

Scope of this Demonstration Criterion changed to apply only to evacuees; previous content on emergency workers moved to Demonstration Criterion 6.b.1

Title of sub-element 6.a:

2009 page III-66: Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees

2011 page III-58: Monitoring, Decontamination, and Registration of Evacuees

Text on **monitoring demonstration**, page III-58: Monitoring activities shall not be simulated.

182.4 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: A.3; C.4

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or SAV.

Text on demonstrating **availability of resources**, page III-58: Availability of resources can be demonstrated with valid documentation (e.g., MOU/LOA, etc.) reflecting how necessary equipment would be procured for the location. Plans/procedures must indicate provisions for service animals.

Text on **documentation of contamination status for entry into congregate care facilities**, page III-59:

Individuals who have completed monitoring (and decontamination, if needed) must have means (e.g., hand stamp, sticker, bracelet, form, etc.) indicating that they, and their service animals and vehicles, where applicable, have been monitored, cleared, and found to have no contamination or contamination below the trigger/action level.

In accordance with plans/procedures, individuals found to be clean after monitoring do not need to have their vehicle monitored. These individuals do not require confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

However, those individuals who are found to be contaminated and are then decontaminated will have their vehicles monitored and decontaminated (if applicable) and do require confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

183 Part III: REP Demonstration Guidance – Demonstration Criterion 6.b.1

2009 pages III-67 to III-68

2011 pages III-59 to III-60

183.1 Substantively Unchanged

Guidance on demonstration and assessment of monitoring and decontamination of emergency worker vehicles and equipment

183.2 2009 Material Deleted

References to **monitoring and decontamination of evacuee vehicles**

183.3 2009 Material Substantively Changed in 2011 Publication

Scope of this Demonstration Criterion changed to apply to emergency workers; previous content on evacuees moved to Demonstration Criterion 6.a.1

Title of sub-element 6.b:

2009 page III-67: Monitoring and Decontamination of Evacuee and Emergency Worker Vehicles and Equipment

2011 page III-59: Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles

Text of Criterion 6.b.1:

2009 page III-67: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of evacuee and emergency worker vehicles and equipment.

2011 page III-59: The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles.

Text on **monitoring demonstration**, page III-60: Monitoring activities shall not be simulated.

183.4 Material Added to 2011 Publication

NUREG-0654/FEMA-REP-1 cross-references: K.5.a

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or SAV.

Text on **monitoring and decontamination of emergency** workers previously located in Demonstration Criterion 6.a.1

184 Part III: REP Demonstration Guidance – Demonstration Criterion 6.c.1

2009 pages III-68 to III-69

2011 pages III-60 to III-61

184.1 Substantively Unchanged

Guidance on demonstration and assessment of congregate care services

184.2 Material Added to 2011 Publication

Text on **acceptable assessment venues:** Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or SAV.

Text on **documentation of contamination status for entry into congregate care facilities**, page III-61:

Individuals who have completed monitoring (and decontamination, if needed) must have means (e.g., hand stamp, sticker, bracelet, form, etc.) indicating that they, and their service animals and vehicles, where applicable, have been monitored, cleared, and found to have no contamination or contamination below the trigger/action level.

In accordance with plans/procedures, individuals found to be clean after monitoring do not need to have their vehicle monitored. These individuals do not require confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

However, those individuals who are found to be contaminated and are then decontaminated will have their vehicles monitored and decontaminated (if applicable) and do require confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

185 Part III: REP Demonstration Guidance – Demonstration Criterion 6.d.1

2009 pages III-69 to III-70

2011 pages III-61 to III-62

185.1 Substantively Unchanged

Guidance on demonstration and assessment of medical services for contaminated injured individuals

185.2 Material Added to 2011 Publication

Text on **acceptable assessment venues**: Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, or drills.

186 Part IV: Program Administration – Introduction

2009 page IV-1

2011 page IV-1

186.1 Substantively Unchanged

Introductory discussion

186.2 2009 Material Deleted

Section reserved for Decommissioning, page IV-62

187 Part IV: Program Administration – Regulatory Summary

2009 pages IV-2 to IV-11

2011 pages IV-2 to IV-10

187.1 Substantively Unchanged

Summary of regulations in 44 CFR Parts 350-354

187.2 Material Added to 2011 Publication

Text box on “**deficiencies**” and “**Deficiencies,**” page IV-6: The term “deficiencies” as used in 44 CFR Part 350 (with a lower-case “d”) refers collectively to all planning and preparedness issues. The definition of “Deficiency” (as the term is used now with a capital “D”) was not established until 1993 in the NRC/FEMA Memorandum of Understanding (44 CFR Part 350, Appendix A).

188 Part IV: Program Administration – Non-participating State, Tribal, and Local Governments (NUREG-0654/FEMA-REP-1, Supplement 1)

2009 page IV-12

2011 page IV-11

188.1 Substantively Unchanged

Summary of NUREG-0654/FEMA-REP-1, Supplement 1

189 Part IV: Program Administration – Early Site Permit Applications (NUREG-0654/FEMA-REP-1, Supplement 2)

2009 page IV-13

2011 page IV-11

189.1 Substantively Unchanged

Summary of NUREG-0654/FEMA-REP-1, Supplement 2

189.2 Material Added to 2011 Publication

Text on **combined licensing procedure**, page IV-11: NOTE: Although there is no NUREG-0654/FEMA-REP-1 supplement addressing combined licensing, the process has been fully outlined in the New Reactor Licensing Standard Operating Procedure. This document is available at www.fema.gov/about/divisions/thd_repp.shtm.

190 Part IV: Program Administration – Protective Action Strategies (NUREG-0654/FEMA-REP-1, Supplement 3)

2009 page IV-14

2011 page IV-12

190.1 2009 Material Substantively Changed in 2011 Publication

The text of this section is **updated to reflect the publication of revised guidance**:

2009 page IV-12:

Criteria for Protective Action Recommendations for Severe Accidents, Draft Report for Interim Use and Comment, July 1996 (NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3)

Supplement 3 to NUREG-0654/FEMA-REP-1, Revision 1, provides guidance for development of Protective Action Recommendations (PARs) for the public for severe reactor accidents involving actual or projected core damage with potential for loss of containment. The guidance updated and simplified the decision-making process for protective actions for severe reactor accidents given in Appendix 1 to NUREG-0654/FEMA-REP-1, Revision 1. In the event of a severe (core damage) accident, the preferred initial protective action is to evacuate the population promptly rather than shelter the population near the plant, barring any constraints to evacuation. Sheltering may be recommended for controlled releases of radioactive material if there is assurance that it will be a short-term release. Further guidance on the range of protective actions is provided in the NRC's Regulatory Issue Summary (RIS) 2005-08, Endorsement of Nuclear Energy Institute (NEI) Guidance "Range of Protective Actions for Nuclear Power Plant Incidents."

2011 page IV-12:

Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants – Guidance for Protective Action Strategies, October 2011 (NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3)

The 2011 publication of Supplement 3 supersedes the previous version of Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents" published in 1996 as a draft report for interim use and comment.

Supplement 3 provides guidance for use in developing site specific protective action strategies for implementation during a General Emergency at an NPP. The revised supplement provides background information and a protective action logic development tool that should be used by licensees to develop site specific protective action recommendation procedures and is recommended for use by OROs to develop protective action strategy guidance for decision makers. In addition, Supplement 3, Revision 1, contains guidance for enhancing public information materials and emergency messaging, including further considerations for individuals and populations with disabilities and access/functional needs.

In late 2004, the NRC initiated a project to analyze the relative efficacy of alternative protective action strategies in reducing consequences to the public from a spectrum of NPP core melt accidents. The study is documented in NUREG/CR-6953, "Review of NUREG-0654, Supplement 3, 'Criteria for Protective Action Recommendations for Severe Accidents,'" Volumes 1 (2007), 2 (2008) and 3 (2010). The study provides a technical basis for enhancing protective action guidance and contributed to the revision of Supplement 3. Input from State and local government emergency response professionals, stakeholders, and industry was also incorporated.

The guidance of Supplement 3, Rev. 1, provides an acceptable method to comply with 10 CFR § 50.47(b)(10) in development of a range of protective actions for the plume EPZ. However, alternative methods may also be acceptable and may be submitted for consideration.

191 Part IV: Program Administration – Exercise Methodology, More Challenging Drills and Exercises, and Backup Alert and Notification Requirements (NUREG-0654/FEMA-REP-1, Supplement 4)

2011 pages IV-12 to IV-33

191.1 Material Added to 2011 Publication

Text summarizing Supplement 4:

Supplement 4 provides additional guidance for the development, review, and evaluation of offsite radiological emergency response planning and preparedness surrounding the Nation's commercial NPPs on four emerging issues:

1. Integration of National Preparedness Initiatives into ORO Plans and Activities: integration of NIMS/ Incident Command System and National Exercise Program/HSEEP concepts into offsite emergency response plans and activities.

2. Coordination between OROs and Licensees during a Hostile Action-Based Incident: unique challenges posed during HAB incidents regarding the capability of OROs to respond to the NPP site while maintaining offsite response capabilities.

3. Challenging Drills and Exercises: developing exercise scenarios that incorporate a broader spectrum of options regarding releases and initiating events to increase realism and to minimize participant preconditioning.

- Predictability of Emergency Classification Levels (ECLs)
- Varying Radiological Release Options
- Varying Radiological Release Conditions
- Broader Spectrum of Initiating Events

4. Backup Means for Alert and Notification Systems: requirements for backup capabilities for both alert and notification functions.

New requirements set forth in this Supplement include:

- Three new Evaluation Criteria
 - C.6 – addresses coordination of onsite and offsite response in an HAB incident
 - N.1.c – requires off-hours and unannounced exercises for the licensee only
 - N.1.d – identifies specific ORO requirements for demonstration of ingestion pathway response.
- Exercise scenario variations, including no/minimal release, HAB incidents, and rapidly escalating incidents.
- Change in the exercise cycle length from 6 years to 8 years.

- A full backup to the Alert and Notification System.

192 Part IV: Program Administration – Target Capabilities List

2009 Appendix F
2011 page IV-14

192.1 Substantively Unchanged

List of Target Capabilities

193 Part IV: Program Administration – Integration of REP Demonstration Criteria and HSEEP Capabilities

2011 pages IV-15 to IV-17

193.1 Material Added to 2011 Publication

Discussion of REP-HSEEP integration

The REP program is adopting the HSEEP exercise documentation format to be consistent with national preparedness and exercise initiatives. Although the goals of the REP and HSEEP exercise evaluation methodologies are the same – the assessment of response and recovery capabilities and identification of items that need to be improved – the REP program has traditionally expressed exercise outcomes in terms of Demonstration Criteria and reasonable assurance, whereas HSEEP uses Target Capabilities. Integrating the two exercise methodologies so that they are “speaking the same language” has several major benefits for response organizations:

- OROs that have already adopted the HSEEP methodology will now be able to use the same processes and report formats for their REP and HSEEP exercise activities.
- OROs can use REP After Action Reports (AARs) to document progress toward their overall preparedness and Target Capability goals; and
- OROs that are required to use the HSEEP methodology because they receive Federal preparedness grant funds can use REP AARs to satisfy grant spending documentation requirements.

To facilitate the integration process, FEMA has developed two tools: the criterion-capability crosswalk and REP-specific Exercise Evaluation Guides (EEGs).

The information in this subpart includes the following three sections:

- Criteria-Capability Crosswalk
- Exercise Evaluation Guides
- Customizing EEGs for an Exercise

1. CRITERIA-CAPABILITY CROSSWALK

The crosswalk was developed as a starting point for translating the REP Demonstration Criteria into applicable HSEEP Target Capabilities from the Target Capabilities List (TCL). FEMA reviewed the extent of play associated with each REP Demonstration Criterion and compared it with the Target Capabilities and associated activities to identify any similarities. The analysis considered the diverse range of government systems and ORO radiological emergency response frameworks that may be encountered and evaluated by a FEMA Region. The resulting crosswalk provides a “menu” of potential correlations between each REP Demonstration Criterion and the Target Capabilities, rather than a “one-size-fits-all” prescriptive list. The crosswalk is found in Exhibit IV-2.

[Exhibit IV-2: Criteria-Capability Crosswalk contains a chart with REP Demonstration Criteria on the horizontal axis and Target Capabilities on the vertical axis, with marks indicating each place where the activities included in demonstration of a REP Criterion align with activities under a Target Capability.]

2. EXERCISE EVALUATION GUIDES

FEMA used the crosswalk and the REP Exercise Preparation Guide to develop a master set of REP-specific capability-based EEGs for the potential locations and functional entities (i.e., EOC, field monitoring team, etc.) that may be evaluated during REP exercises. Each REP capability-based EEG is pre-populated with the following:

- **TCL Capability** – This field denotes which Target Capability is being evaluated, and subsequently, described in the AAR. The Target Capabilities represented in the EEGs come from the TCL and should be associated with one of the objectives set for the exercise.
- **Activity** – This field denotes which activities are being evaluated. The activities represent a functional process that can be observed, much like the observable functional processes of the REP Demonstration Criteria, making the Demonstration Criteria roughly equivalent to the level of an “activity” under HSEEP.
- **Task** – Under each Activity, tasks drawn from the TCL and Extent-of-Play Agreement provide links between the REP functions being carried out and specific Target Capabilities. The tasks originating in the TCL/Universal Task List (UTL), have corresponding TCL task numbers (i.e., Res.B1c 5.2.4). The tasks without TCL task numbers are REP-specific items that do not have an equivalent task within the TCL/UTL.
- **Observation Keys** – This field provides additional observation detail for the Evaluator. These Keys identify specific things evaluators should look for or provide additional detail on what they might observe. This field should only be used to provide further information for the Evaluators. The Observation Keys included in the EEGs were taken from the REP Exercise Preparation Guide.

This EEG structure enables users to meet the traditional reasonable assurance standards of the REP Program as well as address and document the selected Target Capabilities.

The REP EEGs were created, tested, and validated during a series of REP/HSEEP Integration Exercises held in 2009 and 2010. A sample Master Capability-based REP EEG is found in Exhibit IV-3 on the following pages. Note that the Master Capability-based EEGs continue to evolve as they are used in different exercises and new lessons learned are discovered. The most current versions of the master REP EEGs are available on the REP/HSEEP Pilot EEGs channel on LLIS.gov. Access to this channel can be requested through FEMA Headquarters.

[Exhibit IV-3 is a graphic of a sample Exercise Evaluation Guide]

3. CUSTOMIZING EEGS FOR AN EXERCISE

During the exercise planning process, the FEMA Region customizes the master Capability-based EEGs for each location or functional entity to reflect the actual Demonstration Criteria scheduled for evaluation. The regions may involve the exercise planning team (EPT) in the customization process. In addition, the Capability-based EEGs are customized to reflect the response framework established in the applicable OROs' plans and procedures. This tailoring process results in a set of EEGs that have been modified to reflect each ORO's specific plans and procedures and the applicable REP Demonstration points of review found in the Exercise Preparation Guide. Thus, for example, the Master Emergency Operations Center EEG in the previous exhibit may look entirely different when prepared for a county EOC versus a sub-county jurisdiction (e.g., township, borough) EOC.

The Master Emergency Operations Center EEG contains activities and tasks related to Demonstration Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, and 5.b.1. However, all of these Demonstration Criteria might not be scheduled for evaluation during a particular exercise, or at the applicable EOC. For example, a facility inspection (1.b.1) is not required unless the facility is new or substantially changed since the baseline inspection. In this case, items associated with the activity "Provide Sufficient Facilities (1.b.1)" would be deleted from the EEG template.

The EEG template can be further tailored to reflect responsibilities applicable to each jurisdiction/functional entity. A sub-county jurisdiction might receive instructions from the county and have no direct responsibility for activities such as activating the prompt alert and notification system (5.a.1), providing emergency information and instructions for the public and media (5.a.3), or protective action decision making (2.b.2). Depending on the local authority structure, responsibility for activities such as implementation of protective actions for schools (3.c.2) could belong to any combination of the county, sub-county governmental jurisdiction, and the school district.

The tasks listed under each activity are then customized to reflect actual tasks expected to be performed at each location or by each functional entity according to their associated plans and procedures. For example, some OROs assign different entities with the tasks needed to implement the protective action decisions for schools (Activity "Implement Protective Actions for Schools (3.c.2)"). The County EOC may be responsible for notifying the schools and the public of the decision to relocate students, but the schools are responsible for arranging transportation and medical assistance. In this case, the EEG would be tailored for the County EOC by keeping the appropriate tasks and removing the others.

Finally, the ORO Plan Reference column provides a plan/procedure reference showing the specific location of the material that addresses each task. As with the EEG customization, this information will be entered in at the discretion of the Region. Plan/procedure references can be inserted by the EPT, exercise support staff, or the evaluators as part of their pre-exercise preparation.

194 Part IV: Program Administration – Emergency Planning Zone Boundary Changes

2009 page IV-35

2011 pages IV-33 to IV-34

194.1 Substantively Unchanged

Discussion of process for applying to change an EPZ boundary

195 Part IV: Program Administration – Credentialing Framework

2011 page IV-34

195.1 Material Added to 2011 Publication

Text on the **REP Program Credentialing Framework**, December 2010

Credentialing is the administrative process for validating personnel qualifications and providing authorization to perform specific functions³. For purposes of the REP Program Credentialing Framework, it is a system that defines levels of proficiency for individuals participating in REP Program exercise evaluations and plan reviews. Credentialing ensures that individuals are qualified and experienced in performing their roles and responsibilities. It assesses whether an individual meets the training and experience required to perform tasks within a proficiency level.

The Credentialing Framework enables the REP Program to consistently manage current and prospective REP Program evaluators and plan reviewers. The Framework ensures they meet specific requirements and possess the knowledge, skills, and abilities needed to successfully evaluate an exercise or review a plan. Credentialing does not provide a certification, license, or badge. However, it will provide:

- A framework for individuals to become qualified in serving at various proficiency levels for evaluating exercises and reviewing plans.
- A reference to accurately identify training gaps and needs of REP evaluators and plan reviewers.
- A uniform system of processes and tools to assess the evaluator/plan reviewer's development.

The three major components of the Credentialing Framework are training, practicum, which is a practical application of skills involving evaluator on-the-job training (OJT) and plan reviewer mentorship, and experience. The proficiency levels link these three components together.

An individual will be designated one of four possible levels depending upon the qualifications met and the proficiency demonstrated: Trainee, Type III, Type II, and Type I (increasing, respectively, in proficiency). An individual will initially enter as a Trainee pursuing one or both of the functional areas, Emergency Operations and Technical Operations. Contingent upon successful completion of training, an individual will be assigned a higher proficiency level commensurate with experience and qualifications. In order to advance to a subsequent level, individuals must meet all requirements of their current proficiency level for evaluator or plan reviewer track.

196 Part IV: Program Administration – Use of State, Local, and Tribal Personnel as REP Exercise Evaluators

2009 pages IV-36 to IV-37
2011 page IV-35

196.1 Substantively Unchanged

Discussion of process for applying to become a REP evaluator

196.2 2009 Material Substantively Changed in 2011 Publication

References to specific training courses replaced with general reference to the REP Credentialing Framework

197 Part IV: Program Administration – Tribal Policies and Procedures

2009 page IV-38
2011 page IV-36

197.1 Substantively Unchanged

Discussion of U.S. governmental policies and procedures that are relevant to participation in the REP Program

198 Part IV: Program Administration – Staff Assistance Visits

2009 page IV-39
2011 pages IV-36 to IV-37

198.1 Substantively Unchanged

Discussion of purpose of staff assistance visits

199 Part IV: Program Administration – Evacuation Time Estimates

2009 page IV-46
2011 page IV-37

199.1 Substantively Unchanged

Discussion of evacuation time estimates

199.2 Material Added to 2011 Publication

Text on **NRC requirements for licensees**, page IV-37: NRC provides guidance to licensees in the document NUREG/CR7002, Criteria for Development of Evacuation Time Estimate Studies. This guidance requires that ETEs be updated following each decennial census. In addition, an ETE update must be performed if at any time during the 10-year period the EPZ permanent resident population estimate increases such that it causes the longest ETE value for the 2-mile zone or 5-mile zone, including affected emergency response planning areas, or for the entire 10-mile EPZ to change by 25 percent or 30 minutes, whichever is less, from the licensee's currently approved ETE.

200 Part IV: Program Administration – Potassium Iodide for the Public

2009 page VI-47
2011 page IV-38

200.1 Substantively Unchanged

Discussion of the provisions of FEMA's REP Program Guidance to State and Local Governments for Shelf-Life Extension of Potassium Iodide (KI), April 12, 2007

200.2 Material Added to 2011 Publication

Additional relevant guidance, page IV-38:

Federal Register, Volume 66, No. 13, pp. 5427-5440, Consideration of Potassium Iodide in Emergency Plans, Final Rule, Nuclear Regulatory Commission, January 19, 2001

Federal Register, Volume 67, No. 7, pp. 1335-1357, Federal Policy on Use of Potassium Iodide (KI), Federal Emergency Management Agency, January 10, 2002

Guidance for Federal Agencies and State and Local Governments Potassium Iodide Tablets Shelf Life Extension, Food and Drug Administration, March 2004

Planning Requirements: In 2001, the NRC revised emergency planning regulations in 10 CFR § 50.47 to require that planners consider including KI as a protective measure for the general public to supplement sheltering and evacuation. The NRC also agreed to fund state, and, in some cases, local KI stockpiles. State and governments are responsible for all other funding connected with the incorporation of KI, such as preparing guidelines for its stockpiling, maintenance, distribution and use, and any other ancillary costs.

Federal Policy on the Use of KI: The FRPCC revised Federal policy regarding the use of KI as a thyroidal blocking agent by emergency workers, institutionalized persons and the general public in the vicinity of nuclear power plants. The Federal position is that KI should be stockpiled and distributed to emergency workers and institutionalized persons for radiological emergencies at a nuclear power plant and its use should be considered for the general public within the 10-mile EPZ of a nuclear power plant. However, the decision on whether to use KI for the general public is left to the discretion of States and, in some cases, local governments.

How to Obtain KI: States interested in obtaining a supply of KI for distribution to the public should send a request letter to Director, Division of Preparedness and Response, Office of Nuclear Security and Incident Response, US NRC, Washington, DC 20555.

201 Part IV: Program Administration – American Red Cross – Congregate Care Facility Standards

2009 page IV-48

201.1 2009 Material Deleted

Entire section

202 Part IV: Program Administration – Conducting Plan Reviews

2009 pages IV-15 to IV-20

2011 pages IV-39 to IV-44

202.1 Substantively Unchanged

Discussion on REP plans/procedures

Discussion on division of plan review functions and applicability of NUREG-0654/FEMA-REP-1 Criteria

Sample plan review format

Sample ratings summary

203 Part IV: Program Administration – Conducting Scenario Reviews

2011 pages IV-45 to IV-48

203.1 Material Added to 2011 Publication

1. SCENARIO REVIEW PREPARATION

Outlined below is the sequential process to be used in evaluating the technical efficacy of proposed scenarios for FEMA REP biennial exercises. The times listed below are the estimated number of hours to complete the requirements of each step.

Exhibit IV-6: Scenario Review Process

STEP ONE: Conduct an inventory and very rudimentary review of the REP Exercise Scenario package provided. Use the REP Exercise Scenario Review Checklist to ensure that all documentation necessary to perform the scenario review is present.

(2 Hours)

STEP TWO: Conduct comprehensive technical review of REP exercise scenario package to determine whether or not the scope, characteristics, and content of the scenario are adequate to drive the necessary demonstration of the selected Demonstration Criteria by the offsite jurisdictions for a plume and/or ingestion exposure pathway exercise. This step will include:

- Review of the scope of the scenario to ensure that:
 - All impacted jurisdictions are included;
 - Map(s) of the plume and/or ingestion EPZ is included;
 - Expected offsite actions are consistent with the Extent-of-Play Agreements.
- Review of the proposed accident scenario to determine:
 - Type of threat (potential plant conditions-versus-simulated radiological release;
 - Radiological release characteristics (radionuclide mixture), if appropriate;
 - Degree of risk to the public (U.S. Environmental Protection Agency (EPA) Protective Action Guides (PAG) or state equivalent to be exceeded and to what degree);
 - Meteorological conditions (including wind and weather);
 - Technical adequacy of the scenario's offsite data to support technical controller injects.
- Review of the controller injects' content (technical) to determine:
 - Technical adequacy to drive the various components of offsite plume and ingestion exposure pathway exercise play (exposure rates, air concentrations, dosimeter readings, surface contamination levels, food and water contamination levels, data gradients, etc.).

(10 Hours Plume)

(16 Hours Ingestion)

STEP THREE: Perform the necessary calculations, modeling, or other evaluations to determine whether the potential plant conditions, simulated radiological release, or controller injects will result in a sufficient dose, exposure rate, or concentrations to drive the appropriate decisions and actions by offsite officials necessary to demonstrate the agreed upon Demonstration Criteria in the jurisdictions to be exercised. Verify the area affected by the plume or deposition footprint.

(2 Hours – Plume)

(2 Hours – Ingestion)

STEP FOUR: Analyze the time sequences and intervals between planned exercise events. Ensure that adequate time has been allowed for the appropriate offsite response organizations to demonstrate the selected Demonstration Criteria (technically) sufficiently.

(2 Hours)

STEP FIVE: Discuss the preliminary results of the scenario review with the RAC Chair or designee in the FEMA Region(s). Identify and offer recommendations for resolving any recognized or potential scenario problems. If no problem areas are identified, proceed to Step Seven. Otherwise, prepare a brief summary of the results of the recognized scenario problems in writing to the FEMA Region(s) RAC Chair.

(4 Hours – more may be needed if more than one FEMA Region is involved)

STEP SIX: Assist and support the FEMA Region(s) RAC Chair in negotiating scenario changes with the state(s) and/or licensee, as requested.

(4 Hours)

STEP SEVEN: Review all exercise scenario revisions received. Document the results of the scenario review and related findings in writing to the FEMA Region(s) RAC Chair and provide a copy to the

Radiological Emergency Preparedness Section, FEMA Headquarters. Retain a detailed record of the scenario review with the contractor's files.

(6 Hours)

2. RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE SCENARIO REVIEW CHECKLIST

The following information is provided to the scenario review contractor to facilitate the conduct of a comprehensive technical review of the submitted REP exercise scenario. The data listed below are not intended to include all of the data that are needed for the scenario. The FEMA Region(s) RAC Chair makes appropriate arrangements assuring that the information listed is provided to the contractor.

FACILITY: _____

CHECK IF INCLUDED

I. PRE-EXERCISE AGREEMENTS AND EXERCISE BACKGROUND MATERIALS

- ___ 1.* Assessment Areas to be demonstrated by designated state and local jurisdictions
- ___ 2.* Pre-exercise agreements, including extent of play by Assessment Area
- ___ 3.* Previous exercise evaluation report and related information on any technical issues
- ___ 4.* Radiological portions (e.g., emergency worker exposure limits, PAGs, air sampling procedures, dose calculation procedures, etc.) of the most recent version of the state, local, and appropriate agency plans/procedures, including detailed and readable maps showing pre-selected reference points.
- ___ 5.* NUREG-0654/FEMA-REP-1 cross-reference index to the state, local, and appropriate agency plans/procedures

* Indicates those items that FEMA Region(s) are responsible for providing to the scenario review contractor.

II. SCENARIO INFORMATION – GENERAL

- ___ 1. Utility/state/local scenario timelines
- ___ 2. All controller injects and messages with data in appropriate units, including those triggering the demonstration of specific technical objectives (any additional data or information needs will be identified during the detailed technical review)

III. SCENARIO INFORMATION – RELEASE PARAMETERS

- ___ 1. Potential-Only or Simulated Release

- ___ 2. Either gross noble gas, gross radioiodine, and gross particulate release rate, or isotopic release rates. If gross release rates are given, the accident type must be stated. Isotopic release rates are required for post-plume phase activities.
- ___ 3. Site characteristics and topography assumed to affect the dispersion
- ___ 4. Release point information (height – elevation ground, or mixed; etc.)
- ___ 5. Time of reactor shutdown
- ___ 6. Start time and duration of release
- ___ 7. Meteorological data used
- ___ 8. Atmospheric mixing depth (if not provided, 1250 meters will be used)
- ___ 9. Whether decay is, or is not, included in the calculations

IV. SCENARIO INFORMATION – PLUME PHASE DATA

- ___ 1. Centerline and isopleths of atmospheric dilution factors (X/Q) plotted on a map, including date and times of data values
- ___ 2. Direct radiation readings and locations
- ___ 3. Environmental samples – descriptions, locations, date, times, and results in appropriate units related to offsite instruments and procedures
- ___ 4. Radioiodine and particulate calculation results in appropriate units related to offsite instruments and procedures
- ___ 5. Map(s) that are readable and detailed for the plume phase data with plume location plotted at selected time periods
- ___ 6. Estimated doses and exposure rates calculated along the plume centerline. If different models are used by the state and Utility, included data for both

V. SCENARIO INFORMATION – INGESTION/RELOCATION PHASE DATA (See Section I., Item Number 1.)

- ___ 1. Centerline and isopleths of dilution factions X/Q plotted on a map, including date and times of data values
- ___ 2. Direct radiation readings and locations
- ___ 3. Environmental samples – descriptions, locations, date, times, and results in appropriate units related to offsite instrument and procedures
- ___ 4. Map(s) that are readable and detailed for the ingestion/relocation phase data with the deposition footprint locations indicated at selected time periods and results in appropriate units related to offsite instruments and procedures

- ___ 5. Estimated doses calculated along the plume centerline for the ingestion/relocation Phase
- ___ 6. Any planned inconsistencies between plume and ingestion/relocation data

204 Part IV: Program Administration – Annual Letter of Certification

2009 pages IV-20 to IV-34
2011 pages IV-49 to IV-57

204.1 Substantively Unchanged

Guidance and checklists for preparing the Annual Letter of Certification

204.2 2009 Material Deleted

The 2009 document contained two similar checklists, one for states and one for FEMA. The two checklists were combined to eliminate redundant information.

204.3 Material Added to 2011 Publication

Text on **reporting drills and exercises**, page IV-49: FEMA-evaluated exercises/drills are accounted for in AARs; only non-evaluated exercises/drills need to be reported in the ALC.)

Text specifying that **updates of procedures and ingestion pathway information** should be reported in the ALC, page IV-49

205 Part IV: Program Administration – Public Information Guide and Process

2009 pages IV-40 to IV-45
2011 pages IV-58 to IV-63

205.1 Substantively Unchanged

Guidance on preparing public information materials

Public Information Review Checklist

Guidance on requirements to translate materials into non-English languages

205.2 Material Added to 2011 Publication

Review checklist for Ingestion Pathway Information, pages IV-80 to IV-81

Text clarifying 5% of the county population, page IV-62: For REP Program purposes, the county will be the lowest jurisdictional subdivision to which the language minority requirements will apply,

i.e., the requirement applies to the entire population of any county wholly or partially in the EPZ. In cases where a county lies only partially in the EPZ, it would be very difficult to divide out the EPZ. People in parts of the county outside of the EPZ will hear the EAS messages and need to understand them.

206 Part IV: Program Administration – Disaster Initiated Review

2009 pages IV-49 to IV-51
2011 page IV-63

206.1 Substantively Unchanged

206.2 2009 Material Deleted

All 2009 text, including the full Standard Operating Procedure document

206.3 2009 Material Substantively Changed in 2011 Publication

Summary of the purpose and procedure for disaster initiated reviews, page IV-63:

The purpose of a Disaster Initiated Review (DIR) is to determine the capability of offsite emergency response infrastructure following an extended plant shutdown, or shutdown caused by electric grid blackouts, malevolent act, pandemic or natural disaster (e.g., hurricane, tornado, flood, and earthquake) in the vicinity of commercial nuclear power reactors.

The SOG should be implemented consistent with the agreements of the Memorandum of Understanding (MOU) between the FEMA REP Program and the NRC contained in Section I, “Recovery from Disasters Affecting Offsite Emergency Preparedness,” of 44 CFR Part 353, Appendix A. In this regard, if a disaster causes damage or changes to the emergency response infrastructure around a licensed operating nuclear power plant to the extent that the damage raises serious questions about the continued adequacy of offsite emergency preparedness, the identifying agency (FEMA REP Program/NRC) will inform the other promptly. These procedures are consistent with those of the NRC Inspection Manual Chapter 1601.

These guidelines apply when a power reactor is shutdown and an offsite review of emergency preparedness infrastructure is required. If the power reactor is operating and there is a compromise of “reasonable assurance”, damage to the offsite emergency preparedness infrastructure or any portion of offsite emergency preparedness is degraded, the FEMA REP Program Regional and HQ management, in consultation with the OROs, and the NRC, will decide on the necessary actions to ensure adequate protection of public health and safety. These guidelines have been developed and are provided to support decision making regarding offsite preparedness under these shutdown conditions. This SOG can be tailored and modified by the FEMA Regional Assistance Committee Chairperson (RAC Chair) and the DIR Team based on the extent of damage and the urgency for plant startup.

207 Part IV: Program Administration – List of Commercial Nuclear Power Plants

2011 pages IV-64 to IV-65

207.1 Material Added to 2011 Publication

The following list of commercial nuclear power plant (NPP) sites includes all operating sites as well as proposed sites engaged in the licensing process as of the date of publication of this document. The last two digits of each Utility Billable Plant Site Code are used as the initial part of the standardized exercise issue numbering system. For more information on individual NPP sites, see the NRC web site at www.nrc.gov.

Site Code	Site Name	Number of Units	Location
24 001	Arkansas Nuclear One	Operating: 2	London, AR
24 002	Salem Nuclear Generating Station/Hope Creek Generating Station(formerly Artificial Island)	Operating: 3	Hancocks Bridge, NJ
24 003	Beaver Valley Power Station	Operating: 2	Shippingsport, PA
24 004	Bellefonte Nuclear Station	Proposed: 2	Jackson County, AL
24 006	Braidwood Station	Operating: 2	Braceville, IL
24 007	Browns Ferry Nuclear Plant	Operating: 3	Athens, AL
24 008	Brunswick Steam Electric Plant	Operating: 2	Southport, NC
24 009	Byron Station	Operating: 2	Byron, IL
24 010	Callaway Plant	Operating: 1 Proposed: 1	Fulton, MO
24 011	Calvert Cliffs Nuclear Power Plant	Operating: 2 Proposed: 1	Lusby, MD
24 012	Catawba Nuclear Station	Operating: 2	York, SC
24 013	Clinton Power Station	Operating: 1	Clinton, IL
24 014	Comanche Peak Nuclear Power Plant	Operating: 2 Proposed: 2	Glen Rose, TX
24 015	Donald C. Cook Nuclear Plant	Operating: 2	Bridgman, MI
24 016	Cooper Station Nuclear Station	Operating: 1	Brownville, NE
24 017	Crystal River Nuclear Generating Plant	Operating: 1	Crystal River, FL
24 018	Davis-Besse Nuclear Power Station	Operating: 1	Oak Harbor, OH
24 019	Diablo Canyon Power Plant	Operating: 2	Avila Beach, CA
24 020	Dresden Nuclear Power Station	Operating: 2	Morris, IL
24 021	Duane Arnold Energy Center	Operating: 1	Palo, IA
24 022	Joseph M. Farley Nuclear Plant	Operating: 2	Columbia, AL
24 023	Fermi	Operating: 1 Proposed: 1	Newport, MI
24 024	James A. FitzPatrick Nuclear Power Plant	Operating: 1	Scriba, NY
24 025	Fort Calhoun Station	Operating: 1	Ft. Calhoun, NE
24 027	R. E. Ginna Nuclear Power Plant	Operating: 1	Ontario, NY
24 028	Grand Gulf Nuclear Station	Operating: 1 Proposed: 1	Port Gibson, MS
24 030	Shearon Harris Nuclear Power Plant	Operating: 1 Proposed: 2	New Hill, NC
24 031	Edwin I. Hatch Nuclear Plant	Operating: 2	Baxley, GA
24 032	Indian Point Nuclear Generating Station	Operating: 2	Buchanan, NY
24 033	Kewaunee Power Station	Operating: 1	Kewaunee, WI
24 034	LaSalle County Station	Operating: 2	Marseilles, IL
24 035	Limerick Generating Station	Operating: 2	Limerick, PA
24 036	William States Lee III Nuclear Station	Proposed: 2	Cherokee County, SC
24 037	McGuire Nuclear Station	Operating: 2	Huntersville, NC
24 038	Millstone Power Station	Operating: 2	Waterford, CT
24 039	Monticello Nuclear Generating Plant	Operating: 1	Monticello, MN

REP Program Manual: Analysis of Substantive Changes between the
Draft Issued for Comment (May 18, 2009) and the Final Publication (October 2011)

24 040	Nine Mile Point Nuclear Station	Operating: 2	
		Proposed: 1	Scriba, NY
24 041	North Anna Power Station	Operating: 2	
		Proposed: 1	Louisa, VA
24 042	Oconee Nuclear Station	Operating: 3	Seneca, SC
24 043	Oyster Creek Generating Station	Operating: 1	Forked River, NJ
24 044	Palisades Nuclear Plant	Operating: 1	Covert, MI
24 045	Palo Verde Nuclear Generating Station	Operating: 3	Wintersburg, AZ
24 046	Peach Bottom Atomic Power Station	Operating: 2	Delta, PA
24 047	Perry Nuclear Power Plant	Operating: 1	Perry, OH
24 048	Pilgrim Nuclear Power Station	Operating: 1	Plymouth, MA
24 049	Point Beach Nuclear Plant	Operating: 2	Two Rivers, WI
24 050	Prairie Island Nuclear Generating Plant	Operating: 2	Welch, MN
24 051	Quad Cities Nuclear Power Station	Operating: 2	Cordova, IL
24 053	River Bend Station	Operating: 1	
		Proposed: 1	St. Francisville, LA
24 054	H. B. Robinson Steam Electric Plant	Operating: 1	Hartsville, SC
24 055	St. Lucie Plant	Operating: 2	Jensen Beach, FL
24 056	San Onofre Nuclear Generating Station	Operating: 2	San Clemente, CA
24 057	Seabrook Station	Operating: 1	Seabrook, NH
24 058	Sequoyah Nuclear Plant	Operating: 2	Soddy-Daisy, TN
24 060	South Texas Project	Operating: 2	
		Proposed: 2	Bay City, TX
24 061	Virgil C. Summer Nuclear Station	Operating: 1	
		Proposed: 2	Jenkensville, SC
24 062	Surry Power Station	Operating: 2	Surry, VA
24 063	Susquehanna Steam Electric Station	Operating: 2	Luzerne County, PA
24 064	Three Mile Island Nuclear Station	Operating: 1	Middletown, PA
24 066	Turkey Point Nuclear Generating	Operating: 2	
		Proposed: 2	Homestead, FL
24 067	Vermont Yankee Nuclear Power Station	Operating: 1	Vernon, VT
24 068	Vogtle Electric Generating Plant	Operating: 2	
		Proposed: 2	Waynesboro, GA
24 069	Columbia Generating Station (Formerly WPSS2)	Operating: 1	Richland, WA
24 070	Waterford Steam Electric Station	Operating: 1	Killona, LA
24 071	Watts Bar Nuclear Plant	Operating: 1	Spring City, TN
24 072	Wolf Creek Generating Station	Operating: 1	Burlington, KS
	Bell Bend Nuclear Power Plant	Proposed: 1	Luzerne County, PA
	Levy County	Proposed: 2	Levy County, FL

208 Appendix A: Acronyms and Abbreviations

2009 pages A-1 to A-10

2011 pages A-1 to A-6

208.1 2009 Material Deleted

Obsolete acronyms and abbreviations

208.2 Material Added to 2011 Publication

HSEEP acronyms and abbreviations

209 Appendix B: Glossary of REP Terms

2009 pages B-1 to B-26

2011 pages B-1 to B-32

209.1 Material Added to 2011 Publication

Entries for the following:

Access and functional needs

Daycare center

Derived Intervention levels

Early, intermediate, and late incident phases

Emergency Classification Levels

Functional Needs Support Services

Various HSEEP terminology

Institutionalized individuals

Medical services hospital

Out of sequence demonstration

Persons with disabilities and access/functional needs

Reasonable Assurance

Service animal

Should, shall, and may

Substantial change