FEMA

2004
Post-Plume Phase
Final Exercise and Drill Reports
Columbia Generating Station
Richland, Washington

Licensee:	**Energy Northwest**
Exercise Date:	**June 16-19, 2004** **August 31, 2004**
Report Date:	**November 23, 2004**

U. S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION 10
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I. EXECUTIVE SUMMARY

On August 31, 2004, the Federal Emergency Management Agency (FEMA), Region X conducted a plume-phase exercise in the plume exposure pathway emergency planning zones (EPZs) around the Columbia Generating Station. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. The exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local Radiological Emergency Response Plans (RERP) and Procedures.

The most recent exercise at this site was conducted on September 17 and 18, 2002. The qualifying emergency preparedness exercise was conducted on June 1, 1983. FEMA wishes to acknowledge the efforts of the many individuals in the State of Washington (WA); Emergency Operations Center (EOC) and WA State Media/Public Inquiry at Camp Murray; Joint Information Center (JIC) at Richland; WA Radiological Monitoring Teams, WA Department of Health (Radiological Protection); and the WA Department of Agriculture. The risk Counties of Benton and Franklin also participated. Various agencies of the State of Oregon (OR) also participated in this exercise, including the OR Department of Health and OR Department of Energy Emergency Coordination Center.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this exercise.

This report contains the final evaluation of Energy Northwest's Columbia Generating Station (CGS) post-plume exercise and the evaluation of the following out-of-sequence activities: Oregon Lab Drill; Washington Lab Drill; Medical Services Drill at Lourdes Medical Center; and Emergency Worker and Assistance Center Drill, Benton County.

The States and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies identified as a result of the exercise or out-of-sequence drills. Three new ARCAs and seven new Planning Issues were identified as a result of this exercise. The Planning issues are provided in Appendix 6. Four prior ARCAs were also cleared in this exercise or in out-of-sequence drills which have taken place since the CGS 2002 REP Exercise. The prior ARCAs cleared are as follows:

- 69-00-21-A-02
- 69-00-21-A-03
- 69-02-1.c.1-A-01
- 69-02-2.b.1-A-04

II. INTRODUCTION

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume the lead responsibility for all off-site nuclear planning and response. FEMA's activities are conducted pursuant to 44 *Code of Federal Regulations* (CFR) Parts 350, 351, and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

FEMA's rule contained in 44 CFR Part 350 establishes the policies and procedures for FEMA's initial and continued approval of Tribal, State, and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local government participation in joint exercises with licensees. FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in off-site emergency planning and in the review and evaluation of Radiological Emergency Response Plans (RERPs) and procedures developed by State and local governments;

- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;

- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (44 CFR Part 354, Appendix A, September 14, 1993); and

- Coordinating the activities of the following Federal agencies with responsibilities in the radiological emergency planning process:

    - U.S. Department of Commerce;
    - U.S. Nuclear Regulatory Commission;
    - U.S. Environmental Protection Agency;
    - U.S. Department of Energy;
    - U.S. Department of Health and Human Services;
    - U.S. Department of Transportation;
    - U.S. Department of Agriculture;
    - U.S. Department of the Interior; and
    - U.S. Food and Drug Administration.

Representatives of these agencies serve on the FEMA Region X Regional Radiological Assistance Committee (RRAC), which is chaired by FEMA. The Alert and Notification system for the Columbia Generating Station was approved by FEMA on June 17, 1994.

Initial submission of the RERPS for the Columbia Generating Station to FEMA Region X by the State of Washington and involved local jurisdictions occurred in June 1981. Oregon and involved jurisdictions submitted their initial RERPs for Columbia Generating Station to FEMA Region X in

December 1993. All of the organizations in Washington and Oregon have been responsive to suggestions for plan improvements and have continued to improve and update their RERPs following the guidance in 44 CFR 350. The State of Washington submitted their initial letter requesting formal review and approval of their RERPs under 44 CFR 350 on May 6, 1999. A REP exercise was conducted on September 17 and 18, 2002, by FEMA Region X to assess the capabilities of the States and local emergency preparedness organization in implementing their RERPs and procedures. The State of Washington finalized and submitted their RERPs in June/July 2002. The 350-Review of State and County Plans and Procedures for the State of Washington was approved by Michael Brown, Undersecretary of Emergency Preparedness and Response (FEMA), on April 28, 2004.

The REP Plume Exercise was conducted on August 31, 2004, by FEMA Region X to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological incident involving the Columbia Generating Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (OROs) during a simulated radiological emergency. The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA Region X RRAC Chairperson, and approved by the Regional Director.

The criteria utilized in the FEMA evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;

- FEMA's "Interim Radiological Emergency Preparedness Program Manual," dated August 2002; and

- FEMA Medical Services Guidance, Page 237 of the "Interim Radiological Emergency Preparedness Program Manual," date August 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway emergency planning zone (EPZ), a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents detailed information on the demonstration of applicable exercise evaluation areas at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' schedule of corrective actions for each identified exercise issue, and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the ORO's efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the August 31, 2004, exercise to test the offsite emergency response capabilities in the area surrounding the Columbia Generating Station. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participant jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

A. PLUME EMERGENCY PLANNING ZONE DESCRIPTION

The Columbia Generating Station (CGS) is located at the Northeast corner of the U.S. Department of Energy's (US DOE) Hanford Reservation and is operated by Energy Northwest. It is about ten miles north of the city of Richland and three miles west of the Columbia River. The Columbia Generating Station is a boiling water reactor with a turbine generator rated at 1,250 megawatts (peak gross).

The topography of the ten-mile EPZ is relatively flat except for a range of hills southwest of the site and bluffs and rolling hills to the north and to the east of the site along the Columbia River. The land is arid and desert-like except where it is irrigated.

The total resident population of the ten-mile EPZ is estimated at 3,674. Approximately 1150 of these residents live in Benton County where the CGS is located. The other 2,524 residents live across the Columbia River to the east in Franklin County. There are no residents within three miles of the site.

The transient population of the ten-mile EPZ could total 15,836 depending on the time of the year. This estimate is comprised of: 7,926 industrial employees, mostly in Benton County, 5,135 migrant farm workers, mostly in Franklin County, and 2,775 recreationists, mostly along the east bank of the Columbia River and at the Off-Road Vehicle Park on the southwest edge of the EPZ.

The land use within the Benton County portion of the 10-mile EPZ is predominantly vacant except for scattered industrial sites, recreational sites, and some residents on the southern edge of the EPZ. The land use within the Franklin County portion of the EPZ is predominantly diversified agricultural production facilitated by irrigation. There are six recreation areas within the EPZ: Horn Rapids Park, Horn Rapids Off-Road Vehicle Park and Rattlesnake Mountain Shooting Facility in Benton County; the Wahluke Hunting areas and Ringold Fishing Area in Franklin County; and the Columbia River.

B. EXERCISE PARTICIPANTS

The following agencies, organizations, and units of government participated in the Columbia Generating Station exercise on August 31, 2004, and/or the out-of-sequence drills conducted June 16-19, 2004.

STATE OF WASHINGTON

Washington State Department of Agriculture
Washington State Department of Health, Division of Radiation Protection
Washington State Public Health Laboratory
Washington State Department of Transportation
Washington State National Guard
Washington State Patrol
Military Department, Emergency Management Division
American Red Cross
Radio Amateur Civil Emergency Services
Energy Northwest - Columbia Generating Station

RISK JURISDICTIONS (WASHINGTON STATE)

BENTON COUNTY

Benton County Board of Commissioners
Benton County Emergency Services (SECOMM and Benton County Emergency Management)
Benton County Fire Protection District #4
Benton County Public Works
Benton County Prosecuting Attorney's Office
Benton County Sheriff's Office
Benton/Franklin District Health Department
American Red Cross, Benton Franklin District
Ben Franklin Transit
Benton County CERT Volunteers
Benton/Franklin Amateur Radio Association
Washington State Patrol
Washington State Department of Agriculture
Washington State Military Department
City of Richland
Energy Northwest

FRANKLIN COUNTY

Franklin County Assessor's Office
Franklin County Commissioner's Office
Franklin County Coroner's Office
Franklin County Fire Protection District #3
Franklin County Geographic Information Systems Department
Franklin County Public Works
Franklin County Prosecutor's Office
Franklin County Sheriff's Department
Benton/Franklin District Health Department

Franklin County Volunteer Emergency Workers
Big River School
Country Christian Center
American Red Cross, Benton-Franklin Chapter
ARES Radio Operators
Washington State Department of Agriculture

STATE OF OREGON

Oregon Department of Agriculture
Oregon State Emergency Management
Oregon State Health Division
Oregon State Office of Energy

RISK JURISDICTIONS (OREGON STATE)

Umatilla County Emergency Management
Morrow County Emergency Management

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross
ARES/RACES
Benton/Franklin Amateur Radio Association
Big River Country School (Franklin County)
Country Christian School (Franklin County)
Lourdes Medical Center
Pasco Fire Department
Organization of Radiation Protection Technicians
Richland Police Explorer Post

FEDERAL AGENCIES

Federal Emergency Management Agency
Nuclear Regulatory Commission
U.S. Department of Agriculture
U.S. Department of Transportation
U.S. Environmental Protection Agency
U.S. Food and Drug Administration

C. EXERCISE TIMELINE

Table 1, on the following page, presents the time at which key events and activities occurred during the Columbia Generating Station exercise on August 31, 2004. Times at which notifications were made to the participating jurisdictions/functional entities are also noted.

Table 1: Columbia Generating Station Plume Exercise Timeline – August 31, 2004

Emergency Classification Level	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		WA State EOC	Benton County EOC	Franklin County EOC	OR State EOC	JIC	EOF
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0751	0805	0804	0806	0826	0806	N/A
Site Area Emergency	0918	0927	0932	0932	0925	0920	0919
General Emergency	0936	0948	0951	0949	0940	0950	0937
Simulated Radiation Release Started	0940	0948	0951	0949		0950	0941
Simulated Radiation Release Terminated:	1310		1330	1330			1313
Facility Declared Operational (Ops Full Func)		0825 (0920)	0930	0850	0900	0840	0905
Declaration of State of Emergency		1120	0945	0940		1145	
Exercise Terminated		1325	1323	1323		1332	1324
Early Precautionary Actions: Evacuate Hunting, Fishing, and Recreation Evacuate School at SAE			1020 0932	N/A		0940	
1st Early Protective Action Decision Shelter: Sectors 1, 4 Evacuate: Sectors 2, 3B, 3C		0948	0934	0934		1040 1005	
1st Siren Activation			0940	0940		N/A	0940
1st EAS or EBS Message			0944	0944		N/A	0944
2nd Protective Action Decision Shelter: Sectors 1 and 4 Evacuate: Sectors 3B and 3C			0951	0951			
2nd Siren Activation			1001	1001		N/A	
2nd EAS or EBS Message			1005	1005		N/A	
KI Administration Decision: EW* in Sectors 2 and 3		1035	1045	1035		1111	EW* 1033 FMT* 1020
3rd Protective Action Decision Franklin County Ag Advisory				1023			
3rd AR Press Release to JIC				1058			
4th Revised Ag Advisory to JIC				1158			

* Legend: EW - Emergency Worker FMT - Field Monitoring Team

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the August 31, 2004, exercise, as well as out-of-sequence drills that were conducted on June 16-19, 2004. The exercise was held to test the offsite emergency response capabilities of State and local governments in the 10- and 50-mile emergency planning zones (EPZs) surrounding the Columbia Generating Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the exercise evaluation area criteria contained in the Federal Emergency Management Agency's (FEMA) Radiological Emergency Preparedness (REP) Program Manual. Detailed information on the exercise evaluation area criteria and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation

The matrix presented in Table 2, on the following pages, presents the status of the exercise evaluation area criteria from the FEMA REP Program Manual that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. The exercise evaluation area criteria are listed by number, and the demonstration status of the criteria is indicated by the use of the following letters:

M – Met (No Deficiency or Area(s) Requiring Corrective Action [ARCA(s)] assessed and no unresolved ARCA(s) from prior exercises).
See Appendix 5 for complete listing of unresolved ARCAs, including those from prior exercises/drills.

D – Deficiency assessed

A – ARCA(s) assessed. See Appendix 5 for complete listing of or unresolved ARCA(s) including those from prior exercise(s)/drills.

A^1 – ARCA assessed but Re-demonstrated Successfully

N – Not demonstrated (reason explained in Subsection B)

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity, in a jurisdiction-based, issues-only format. Presented below is a definition of the terms used in this subsection relative to criteria demonstration status.

- **Met** – Listing of the demonstrated exercise evaluation area criteria under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.

- **Deficiency** – Listing of the demonstrated exercise evaluation area criteria under which one or more Deficiencies were assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

- **Area Requiring Corrective Actions** – Listing of the demonstrated exercise evaluation area criteria under which one or more ARCAs were assessed during the current exercise. Included is a description of the ARCAs assessed during this exercise and the recommended corrective actions to be demonstrated before or during the next biennial exercise.

- **Not Demonstrated** – Listing of the exercise evaluation area criteria which were scheduled to be demonstrated during this exercise and the reason they were not demonstrated.

- **Prior ARCAs – Resolved** – Descriptions of ARCAs assessed during previous exercises that were resolved during this exercise and the corrective actions demonstrated.

- **Prior ARCAs – Unresolved** – Descriptions of ARCAs assessed during prior exercises that were not resolved during this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues that are discussed in this report.

- A **Deficiency** is defined in the FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

- An **ARCA** is defined in the FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety ..."

TABLE 2
COLUMBIA GENERATING STATION 2004 EXERCISE EVALUATION
DATE: June 16-19 and August 31, 2004

JURISDICTION/LOCATION	1.a.1	1.b.1	1.c.1	1.d.1	1.e.1	2.a.1	2.b.1	2.b.2	2.c.1	2.d.1	2.e.1	3.a.1	3.b.1	3.c.1	3.c.2	3.d.1	3.d.2	3.e.1	3.e.2	3.f.1	4.a.1	4.a.2	4.a.3	4.b.1	4.c.1	5.a.1	5.a.2	5.a.3	5.b.1	6.a.1	6.b.1	6.c.1	6.d.1
1. STATE OF WASHINGTON																																
1.1 Emergency Operations Center	M		M	M	M	M																						M				
1.2 Joint Information Center	M		M	M	M																							A				
1.3 Emergency Operation Facility	M		M	M	M	M	M					M	M									M										
1.4 Radiological Field Monitoring Team 1				M	M							M	M								M		M									
1.5 Radiological Field Monitoring Team 2				M	M							M	M										M									
1.6 Lab Drill												M												M								
2. RISK JURISDICTIONS (Washington State)																																
2.1 Benton County																																
2.1.1 Emergency Operations Center	M		M	M	M	M	M	M	M			M	M	M	M	M	M	N	N						M							
2.1.2 Kiona-Benton EWAC Drill	M			M								M																	M	M	M	
2.2 Franklin County																																
2.2.1 Emergency Operations Center	M		M	M	M	M		M	M			M	M	M	M	M	M	M	N						M			A				
2.2.2 Big River Country School															M																	
2.2.3 Country Christian School															M																	
2.2.4 MS-1 Drill – Patient Transport																																A
3. OREGON STATE																																
3.1 Emergency Operations Center	M	M	M	M	M		N												N									M				
3.2 Radiological Field Monitoring Team	M	M	M	M	M							M									M	N	M					M				
3.3 Lab Drill												M												M								

FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. It is also used to expedite tracking of exercise issues on a nationwide basis.

The identifying number for Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- **Plant Site Identifier** – A two-digit number corresponding to the Utility Billable Plant Site Codes.
- **Exercise Year** – The last two digits of the year the exercise was conducted.
- **Evaluation Area Criterion** – A letter and number corresponding to the criteria in the FEMA REP Program Manual.
- **Issue Classification Identifier** – (D = Deficiency; A = ARCA) Only Deficiencies and ARCAs are included in exercise reports.
- **Exercise Issue Identification Number** – A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

1. WASHINGTON STATE

1.1 EMERGENCY OPERATIONS CENTER (EOC) – This facility is located in Building 20 at the National Guard Headquarters, Camp Murray, Washington.

a. MET: 1.a.1 2.a.1 5.b.1
1.c.1
1.d.1
1.e.1

b. DEFICIENCY: None.

c. AREAS REQUIRING CORRECTIVE ACTION: None.

d. NOT DEMONSTRATED: None.

e. PRIOR ARCAs – RESOLVED: One.

ISSUE NO.: 69-02-1.c.1-A-01

DESCRIPTION: State of Oregon, Walla Walla and Yakima Counties did not receive notifications or they were not timely. (NUREG 0654, A.1.d; A.2.a, b)

CORRECTIVE ACTION DEMONSTRATED: Communication between the WA EMD and the counties, CGS, Oregon, and other Washington agencies worked well. Communications were sent out in a timely manner and verified by an alternate source. This cleared the previous ARCA #69-02-1.c.1-A-01 from the 2002 CGS exercise relating to failure to communicate in a "timely" manner. WA EOC, EPZ Counties, and the appropriate agencies are included in the Crash call network. Although Yakima and Walla Walla Counties did not play in the exercise, they did receive messages, log them, and verify with the WA EMD the time the messages were received.

f. PRIOR ARCAS – UNRESOLVED: None.

1.2 JOINT INFORMATION CENTER (JIC) – This facility is located at 3000 George Washington Way, Richland, Washington.

a. MET: 1.a.1
1.c.1
1.d.1
1.e.1

b. DEFICIENCY: None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** One.

ISSUE NO.: 69-04-5.b.1-A-01

CONDITION: Press release number #4 from Franklin County was not distributed to the Joint Information Center (JIC) or media in a timely manner. This press release contained the protective action decision to evacuate sub area #2 and was to be released at 1005. It is noted that the Emergency Alert System (EAS) message with the evacuation recommendation was issued in a timely manner, and the media had been briefed. However, message number #3 from Benton County and message number #6a from Franklin County were also delayed in distribution to the JIC and the media.

POSSIBLE CAUSE: Once received in the JIC, media releases are taken to the Admin area where they are duplicated and distributed. It was at this point that the Franklin message #4 was lost or misplaced. Benton County message number #3 and Franklin County message number #6a were also delayed at Admin area.

REFERENCE: NUREG-0654, E.5, 7; G.3.a; G.4.c

EFFECTS: Although the media had been informed verbally, the written information would not have been provided to them in a timely manner. News Release Numbers 3, 4, and 6a were delayed 1 hour 17 minutes, 1 hour 47 minutes, and 1 hour 30 minutes, respectively.

RECOMMENDATION: Provide additional training to County and State PIOs and other JIC personnel on tracking their information. Develop a tracking system to ensure all releases are distributed in a timely manner.

SCHEDULE FOR CORRECTIVE ACTION: JIC staff trained during annual team drills on distribution of news releases. Redemonstrate September 2006.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None

1.3 **EMERGENCY OPERATIONS FACILITY (EOF) –** The EOF is located onsite, near the Columbia Generating Station in the Kootenai Building.

a. **MET:**

1.a.1	2.a.1	3.a.1	4.a.2
1.c.1	2.b.1	3.b.1	
1.d.1			
1.e.1			

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

1.4 RADIOLOGICAL FIELD MONITORING TEAM NO. 1

a. **MET:** 1.d.1 3.a.1 4.a.1
1.e.1 3.b.1 4.a.3

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

1.5 RADIOLOGICAL FIELD MONITORING TEAM NO. 2

a. **MET:** 1.d.1 3.a.1 4.a.3
1.e.1 3.b.1

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs - RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

1.6 WASHINGTON STATE LAB DRILL

a. **MET:** 3.a.1 4.c.1

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

2. RISK JURISDICTIONS (WASHINGTON STATE)

2.1 BENTON COUNTY

2.1.1 Emergency Operations Center – This facility is located at 651 Truman Avenue, Richland, Washington.

a. **MET:**

1.a1	2.a.1	3.a.1	5.a.1
1c.1	2.b.1	3.b.1	
1d.1	2.b.2	3.c.1	
1e.1	2.c.1	3.c.2	
		3.d.1	
		3.d.2	

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** 3.e.1, 3.e.2. These criteria will be evaluated during the next FEMA-graded REP exercise in 2006.

e. **PRIOR ARCAs – RESOLVED:** One.

ISSUE NO.: 69-02-2.b.1-A-04

DESCRIPTION: The BC EOC was notified of a Site Area Emergency (SAE) at 1017. The Agricultural Advisory was not issued until 1430, 4 hours and 13 minutes later. In the Benton County Fixed Nuclear Facility Emergency Response Plan, dated May 10, 2002, Section 4.3 "Site Area Emergency" (Page 2 within Section 4) it says "Monitoring, ingestion pathway control, and possible evacuation or sheltering of some of the public may be required." This implies that preparation of the Agricultural Advisory begins at SAE, utilizing the wind vector existing at that time. (NUREG-0654, I.8, 10, 11 and Supplement 3)

CORRECTIVE ACTION DEMONSTRATED: The Washington Agriculture support function was staffed at 0840. Although there was no indication of a release, Washington Agriculture took the initiative to evaluate potential impacts and options based on potential consequences and available meteorological data.

At 0917, the Public Information Officer (PIO) (former Benton County EOC Operations Officer) assisted with development of the Agriculture Advisory and assembled the Emergency Chairman, Emergency Manager, and County Sheriff at the Washington Agriculture work station. The PIO briefed them on his recommendations for Agriculture Advisories that included the City of Richland, part of Franklin County, and Benton County south of the Yakima River. The assembled team agreed with the recommendations and then proceeded to draft the agriculture advisories for Benton and Franklin Counties.

At 1001, Washington Agriculture and the Support Coordinator delivered the draft Agriculture Advisories to the Emergency Manager. The Emergency Manager received agreement on the advisories from the Decision Table (Chairman, Legal, and Sheriff) at 1004. At 1005, the Emergency Manager then directed the Public Information Officer (PIO) to issue the Agriculture Advisories. The issuance of these advisories was noted by the Emergency Manager on a "Crash" call at approximately 1015. At 1020, the Agriculture Advisories were faxed to the Joint Information Center.

The Agriculture Advisory action addresses previous ARCA 69-02-2.b.1-A-04. The primary issue identified in the ARCA was a delay of more than 4 hours from SAE declaration to issuance of an Agricultural Advisory. The issuance of the Agricultural Advisories in this exercise was completed within 30 minutes of the General Emergency Protective Action Decisions and represents timely completion of this task.

This demonstration corrects ARCA 69-02-2.b.1-A-04.

f. PRIOR ARCAs – UNRESOLVED: None.

2.1.2 Kiona-Benton EWAC Drill -- The Emergency Worker Assistance Center (EWAC) was established at Kiona-Benton High School in Benton City, Washington.

a. MET: 1.a.1 1.d.1 3.a.1 6.a.1 6.b1 6.c.1

b. DEFICIENCY: None.

c. AREAS REQUIRING CORRECTIVE ACTION: None.

d. NOT DEMONSTRATED: None.

e. PRIOR ARCAs – RESOLVED: None.

f. PRIOR ARCAs – UNRESOLVED: None.

2.2 FRANKLIN COUNTY

2.2.1 Emergency Operations Center – This facility is located at 502 Boeing Street, Pasco, Washington.

a. MET:

1.a.1	2.a.1	3.a.1	5.a.1
1.c.1	2.b.2	3.b.1	
1.d.1	2.c.1	3.c.1	
1.e.1		3.c.2	
		3.d.1	
		3.d.2	
		3.e.1	

b. DEFICIENCY: None.

c. AREAS REQUIRING CORRECTIVE ACTION: One.

ISSUE NO.: 69-04-5.b.1-A-02

CONDITION: As a whole, news releases were not complete, or consistent with the current information on the emergency, and specific language was inconsistent with language used in other news releases. Several news releases refer to KONA 105.3 FM (but not 610 AM) for further emergency information. News release #1 and #2 refer to KONA for further emergency information, but there were no Emergency Alert System (EAS) messages being broadcast at the time. Several news releases do not list the Public Concern hotline telephone number or the Energy Northwest Joint Information Center for emergency information.

News Release #4 (1005) provided information on the General Emergency and the evacuation of residents of Section 2 to the Columbia Basin College Emergency Worker/Assistance Center, but it did not mention the recommendation for residents of Section 1 to shelter-in-place.

POSSIBLE CAUSE: The pre-scripted news releases used were not consistent. Review of draft news releases was not thorough.

REFERENCE: NUREG-0654, E.5, 7; G.3.a; G.4.c

EFFECT: Although the information about sheltering-in-place was disseminated both in the EAS message and in briefings at the Joint Information Center (JIC), there is a potential that those media that rely solely on the news release would disseminate incomplete information. The effect could vary from a decrease in the credibility of the County to an increase in calls to the EOC, JIC or hotline, to an increase in risk to the public who do not know the action they need to take. Also, this shows that there is the potential for release of incomplete and inaccurate information even though there is a review process in place for both the EOC and the JIC.

RECOMMENDATION: Review and revise the pre-scripted releases to ensure the boilerplate language and information is consistent. Emphasize in training the need to thoroughly review public information prior to its dissemination to the public and the media.

SCHEDULE FOR CORRECTIVE ACTION: Modify pre-scripted news releases to include both KONA FM and 610 AM, as well as the boilerplate for evacuating section 2 and sheltering in section 1. Redemonstrate during next CGS biennial exercise.

2.2.2 Big River Country School

a. **MET:** 3.c.2

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

2.2.3 Country Christian School

a. **MET:** 3.c.2

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

2.2.4 MS-1 Drill – Patient Transport

a. **MET:** None.

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** One.

ISSUE NO.: 69-04-6.d.1-A-03

CONDITION: (1) The patient was not decontaminated in accordance with the procedures in the "Lourdes Medical Center Emergency Decontamination Plan"; (2) Instrument probes were not covered with suitable material and monitoring of the patient was not accomplished at approximately one half inch above surface.

POSSIBLE CAUSE: Radiation Emergency Area (REA) staff did not use the checklist available in the "Lourdes Medical Center Emergency Decontamination Plan". In addition, the Controller told the REA monitor that the patient was no longer contaminated before decontamination was demonstrated. In the case of instrument probes, failure to follow plan, poor monitoring technique.

REFERENCE: NUREG-0654, F.2; H.10; K.5.a, b; L.1, 4

EFFECT: In regards to decon procedures, the patient could have still been contaminated and as such could have contaminated the Center when admitted. Probes could have become contaminated, and the patient was not adequately monitored and could have entered the Medical Center contaminated.

RECOMMENDATION: Follow the decontamination procedure in the "Lourdes Medical Center Emergency Decontamination Plan", and follow plan and cover probes with suitable material, such as thin plastic, and pay closer attention to monitoring technique.

SCHEDULE OF CORRECTIVE ACTION: June 2008.

d. NOT DEMONSTRATED: None.

e. PRIOR ARCAs – RESOLVED: Two.

ISSUE NO.: 69-00-21-A-02

DESCRIPTION: The set-up and conduct of operations in the REA were not supervised as described in the "Procedure for the Care of Radiation Accident Patients at Our Lady of Lourdes Health Center, Pasco, Washington," Revision 9, updated 99/08/16. Page 4 of the procedure states, "the Emergency Room Supervisor or designee shall direct activities and shall ensure all actions are taken by using this procedure and checking-off the task when completed." It was evident, based on steps being missed or taken at an inappropriate time, that a trained Supervisor or designee was not available during most of the drill. During the call-outs and set-up of the REA, two or three staff members were giving instructions, some of which were contradictory. Instructions were given to set-up the ER prior to notification from the ambulance crew that an "injured and contaminated patient" would be brought to the Health Center. The extent-of-play agreement did not allow pre-drill set-up of the REA. Notification call-outs were also premature. In addition, failure to ensure that "Actions Cards" were followed resulted in the REA set-up being incomplete. (NUREG-0654, L.1, 3; N.1.a)

CORRECTIVE ACTION DEMONSTRATED: The medical center staff began preparations at 0837 for receiving a patient possibly contaminated with radioactive material. The ED staff began the notification process and the set-up of the Radiation Emergency Area (REA). The staff retrieved the "Lourdes Medical Center Emergency Decontamination Plan" and began the assignment of duties as required by the plan. Staff members received a "Radiation Action Card", enclosed in a plastic bag, with instructions regarding their specific assignments to prepare for receiving a patient contaminated with radioactive material. *This action will close out ARCA No: 69-00-21-A-02.*

ISSUE NO.: 69-00-21-A-03

DESCRIPTION: REA set-up was incomplete. The "Procedure for the Care of Radiation Accident Patients at Our Lady of Lourdes Health Center, Pasco, Washington," Revision 9, updated 99/08/16, page 6, Action Card #7, states that four containers (two marked "disposable waste" and two marked "non-disposable waste") are to be placed in REA. The containers were not placed in the REA during the drill. (NUREG-0654, L.1, 3)

CORRECTIVE ACTION DEMONSTRATED: Containers marked for protective clothing (1), and disposable and non-disposable waste (2) were setup in the shelter, along with medical supplies. One end of the shelter was designated as "dirty" and the other end as "clean." The entire REA was designated, with cones and tape, as a controlled area. The set-up of the REA was completed at 0904 in accordance with the plan. *This action will close out ARCA No.69-00-21-A-03.*

f. **PRIOR ARCAs – UNRESOLVED:** None.

3. OREGON STATE

3.1 EMERGENCY COORDINATION CENTER – This facility is located at 595 Cottage Street N.E., Salem, Oregon.

a. **MET:** 1.a.1 5.b.1
1.b.1
1.c.1
1.d.1
1.e.1

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** 2.b.1, 3.e.2. This criterion will be evaluated during the next FEMA-graded REP exercise in 2006.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

3.2 RADIOLOGICAL FIELD MONITORING TEAM – OREGON

a. **MET:** 1.a.1 3.a.1 4.a.1 5.b.1
1.b.1 4.a.3
1.c.1
1.d.1
1.e.1

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** 4.a.2. This criterion will be evaluated during the next FEMA-graded REP exercise in 2006.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

3.3 OREGON LAB DRILL

a. **MET:** 3.a.1 4.c.1

b. **DEFICIENCY:** None.

c. **AREAS REQUIRING CORRECTIVE ACTION:** None.

d. **NOT DEMONSTRATED:** None.

e. **PRIOR ARCAs – RESOLVED:** None.

f. **PRIOR ARCAs – UNRESOLVED:** None.

APPENDIX I
ACRONYMS AND ABBREVIATIONS

ACP	Access Control Point
AMA	American Medical Association
ARCA	Area Requiring Corrective Action
CDE	Committed Dose Equivalent
CFR	Code of Federal Regulations
CGS	Columbia Generating Station
CNF	Classification Notification Form
CPM	Counts per Minute
CRASH	dedicated emergency telephone line
DHHS	U.S. Department of Health and Human Services
DIL	Derived Intervention Level
DOE-RL	U.S. Department of Energy – Richland Office
DOH-DRP	Department of Health/Division of Radiation Protection
DOT	U.S. Department of Transportation
DRD	Direct Reading Dosimeter
DTL	Deputy Team Leader
EAL	Emergency Action Level
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECC	Emergency Coordinating Center
ECL	Emergency Classification Level
EDPS	Emergency Dose Projection System
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EPZ	Emergency Planning Zone
ETA	Estimated Time of Arrival
ETE	Evacuation Time Estimate
EW	Emergency Worker
EWAC	Emergency Worker Assistance Center
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FR	Federal Register
FRMAC	Federal Radiological Monitoring and Assessment Center
FTC	Field Team Coordinator
ft/min	feet per minute
ft^3/min	cubic feet per minute

GE	General Emergency
GM	Guidance Memorandum
HEAR	Hospital Emergency Ambulance Radio
HP	Health Physicist
HPT	Health Physics Technician
ICF	ICF Consulting (FEMA Evaluator Contractor source)
IP	Implementing Procedure
JIC	Joint Information Center
JPIC	Joint Public Information Center
JR ROTC	Junior Reserve Officer Training Center
KI	Potassium Iodide
MDL	Minimum Detection Level
mR	milliroentgen
mR/h	milliroentgen per hour
MUDAC	Meteorological and Unified Dose Assessment Center
NOAA	National Oceanic and Atmospheric Administration
NOUE	Notification of Unusual Event
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"* November 1980
NWS	National Weather Service
OEM	Office of Emergency Management
OHD	Oregon Health Division
OOE	Oregon Office of Energy
OR	State of Oregon
ORO	Off-site Response Organization
PA	Protective Action
PAD	Protective Action Decision
PAG	Protective Action Guide
PAO	Public Affairs Official
PAR	Protective Action Recommendation
PIO	Public Information Officer
QEDPS	Quick Emergency Dose Projection System

R	Roentgen
RACES	Radio Amateur Civil Emergency Service
RC	Reception Center
REA	Radioactive Emergency Area
REM	Roentgen Equivalent man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
R/h	Roentgen(s) per Hour
RO	Radiological Officer
RRAC	Regional Radiological Assistance Committee
RRAC AC	Regional Radiological Assistance Committee – Advisory Council
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SITREP	Situation Report
TCP	Traffic Control Point
TDD	Telecommunication Device for the Deaf
TL	Team Leader
TLD	Thermoluminescent Dosimeter
TSC	Technical Support Center
UHF	Ultra High Frequency
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
VHF	Very High Frequency
WA	State of Washington
WA EOC	Washington State Emergency Operations Center
WAEMD	Washington State Emergency Management Division
WSDA	Washington State Department of Agriculture
WP	Warning Point

APPENDIX 2
EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the *Columbia Generating Station* exercise and out-of-sequence drill on June 16-19 and August 31, 2004. The Team Leaders have the letters "TL" after their names. Deputy Team Leaders are indicated by "DTL." Controllers have the letter "C" after their names. The organization that each evaluator represents is indicated by the following abbreviations:

DOT	Department of Transportation
FEMA	Federal Emergency Management Agency
ICF	ICF Consulting
NRC	U.S. Nuclear Regulatory Commission
PSNS	Puget Sound Naval Shipyard
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
WA Health	Washington Department of Health

FEMA:

Patrick Massey – RRAC Chair
Mike Hammond – Site Specialist

EVALUATION SITE	EVALUATOR	ORGANIZATION
WASHINGTON STATE		
Emergency Operations Center	Paul Neid (TL)	ICF
	Jan Hlavaty-LaPosa	FEMA Region X
	Kathy Burke	FEMA Region X
	Ryan Ike	FEMA Region X
	Dick Cowley (C)	WA Health
Joint Information Center	Jane Young (TL)	FEMA Region VII
	Henry Christianson	ICF
	Pat Tenorio	FEMA HQ
Emergency Operations Facility	Daryl Thome (TL)	ICF
	Johnna Berkey (C)	WA Health
	Dick Cowley (C)	WA Health
	Frank Bold	ICF
	Hollis Berry	ICF
	Joe Keller	ICF
Field Monitoring Team #1	Lyle Slagle	ICF
	Al Danielson (C)	WA Health

EVALUATION SITE	EVALUATOR	ORGANIZATION
Field Monitoring Team #2	Scott Hamilton Bob Clark (C)	FEMA Region X WA Health
BENTON COUNTY		
Emergency Operations Center	Lynn Mariano (TL) Bill Maier Rick Poeton James Purvis	ICF NRC EPA Region 10 FEMA HQ
FRANKLIN COUNTY		
Emergency Operations Center	Richard Echavarria (TL) Dolph Diemont Bryant Harrison James McClanahan	FEMA Region IX USCG-DOT FEMA Region X ICF
Big Country Day School	Dennis Wilford	PSNS
Country Christian School	Dennis Wilford	PSNS
STATE OF OREGON		
Emergency Operations Center	Andy Hendrickson Kathleen Cox	FEMA Region X FEMA Region X
Field Monitoring Team	Rodney Boast	FEMA Region X

MISCELLANEOUS 2004 DRILLS (Out of Sequence, etc.)

EVALUATION SITE	EVALUATOR	ORGANIZATION
WASHINGTON Lab Drill	Hollis Berry Frank Bold	ICF ICF
FRANKLIN COUNTY **MS-1 Drill (Lourdes Medical Center)**	Art Ball Janet Hlavaty-LaPosa Mike Hammond Johanna Berkey (C)	ICF FEMA Region X FEMA Region X WA Health

EVALUATION SITE	EVALUATOR	ORGANIZATION
BENTON COUNTY Emergency Worker Assistance Center (EWAC) Drill	Lynn Mariano	ICF
	Frank Bold	ICF
	Hollis Berry	ICF
	Art Ball	ICF
	Tony Schiebe	American Red Cross
	Lyle Slagle	ICF
	Mike Hammond	FEMA Region X
	Janet Hlavaty-LaPosa	FEMA Region X
	Johnna Bereky (C)	WA Health
	Bob Clark (C)	WA Health
	Alisa Johnson (C)	Benton County
	Patrick Massey (RRAC Chair)	FEMA Region X
OREGON Lab Drill	Frank Bold (TL)	ICF
	Hollis Berry	ICF
	Doug Huston (C)	OR Energy
	Danny Loomis(C)	OR Energy

APPENDIX 3
EXERCISE EVALUATION AREA CRITERIA AND EXTENT-OF-PLAY AGREEMENTS

This appendix lists the extent-of-play agreements (EOPs) approved by FEMA Region X for the out-of-sequence demonstrations on June 16-19, 2004, and for the plume exercise on August 31, 2004. The EOPs are arranged by State, according to the exercise evaluation area criteria.

The exercise evaluation area criteria, contained in the "FEMA Radiological Emergency Preparedness Exercise Evaluation Methodology," 67 FR 20580, April 25, 2002, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Because the exercise evaluation area criteria are intended for use at all nuclear power plant sites, and because of variations among off-site plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the evaluation area criteria.

A. Exercise Evaluation Area Criteria

Listed below are the specific radiological emergency preparedness evaluation area criteria scheduled for demonstration during this exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

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

Sub-element 1.b – Facilities

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

Sub-element 1.c – Direction and Control

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

Sub-element 1.d – Communications Equipment

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

Sub-element 1.e – Equipment and Supplies to Support Operations

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

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a – Emergency Worker Exposure Control

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

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

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

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

Sub-element 2.c – Protective Action Decisions Consideration for the Protection of Special Populations

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

Sub-element 2.e – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, I.10; J.9; M.1)

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

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

Sub-element 3.b – Implementation of KI Decision

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

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

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

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

Sub-element 3.d – Implementation of Traffic and Access Control

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

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

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

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

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an

appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.9)

Sub-element 4.b – Post Plume Phase Field Measurements and Sampling

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

Sub-element 4.c – Laboratory Operations

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

EVALUATION AREA 5: EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

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

Sub-element 5.b – Emergency Information and Instructions for the Public and the Media

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

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d – Transportation and Treatment of Contaminated Injured Individuals

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

B. Extent-of-Play Agreements

The extent-of-play agreements on the following pages were developed by the States of Washington and Oregon and submitted to FEMA Region X for approval. The agreements include any significant modification or change in the level of demonstration of each exercise evaluation area criterion listed in Subsection A of this appendix. Below are the dates on which the extent-of-play agreements were approved by FEMA Region X:

- State of Washington—April 21, 2004
- State of Washington Mobile Laboratory Drill—April 26, 2004
- State of Oregon—February 17, 2004
- State of Oregon Mobile Laboratory Drill—March 13, 2004

COLUMBIA GENERATING STATION PLUME EXERCISE

WASHINTON STATE JURISDICTIONS

EXTENT OF PLAY AGREEMENT

April 21, 2004

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

EXTENT OF PLAY

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: WSDA personnel will respond to the State EOC to fill the EM Liaison position upon notification of Alert Level emergency classification and will respond to fill the Executive and Operations Liaison positions upon notification of Site Area or General Emergency classification.

WSDA personnel will respond to the Benton County EOC to fill the WSDA County Liaison position.

WA DOH: Personnel will respond to locations within one hour after notifications.

Field Teams, EOF, and JIC will be pre-positioned at the Department of Health Offices in Richland.

EOC staff will be departing from the offices in Olympia.

MS-1 and EW/AC participants will be pre-positioned at a central location in Richland.

A roster listing qualified staff will be made available upon request.

Two field teams will participate in field operations.

The State Health officer will be available via phone only.

No shift changes will be demonstrated.

BENTON COUNTY: Benton County exercise play limited to the Benton County EOC and the ENW JIC.

FRANKLIN COUNTY: The following emergency response activities will be simulated:

ALL evacuations

Activation of the Columbia Basin College Emergency Worker/Assistance Center (CBC EWAC)
Deployment of Access/Food Control Points (ACP/FCP)

Notification of the Special Needs population being simulated. (Except as noted at 2.c.1 and 3.c.2.)

Demonstration of EOC Security and Access Control will terminate upon the EOC being declared operational.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b – Facilities

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have facilities to support the emergency response.

EXTENT OF PLAY

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: WSDA will use provided equipment and facilities at the State EOC, EOF, Benton County EOC and at the Franklin County EOC.

WA DOH: The earthquake involved within the scenario will not impact field team activities.

Field Team kits are now located in the Richland offices.

BENTON COUNTY:

FRANKLIN COUNTY: Back-up power will not be demonstrated as part of this exercise. Back-up power generator logs will be available for review.

No intentional computer systems failures are included in this exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c – Direction and Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to control their overall response to an emergency.

EXTENT OF PLAY

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: WSDA will demonstrate direction and control over WSDA response staff.

WA DOH: Limitations: None

BENTON COUNTY:

FRANKLIN COUNTY: Key personnel will demonstrate their ability to function in their assigned EOC duty position. The following emergency response activities will be simulated:

ALL evacuations

Activation of the Columbia Basin College Emergency Worker/Assistance Center (CBC EWAC)

Deployment of Access/Food Control Points (ACP/FCP)

Notification of the Special Needs population being simulated. (Except as noted at 2.c.1 and 3.c.2.)

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d – Communications Equipment

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed. Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exists.

The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system.

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: WSDA staff will use agency, State EOC, EOF and Benton County communications systems.

WA DOH: Limitations: No communication or phone system failures are planned.

Radios are considered the primary and cell phone/two way radios are the secondary mode of communications.

BENTON COUNTY: Benton County backup communications will be limited to CEMNET and/or Amateur Radio to communicate with the Washington State and Franklin County EOC's.

FRANKLIN COUNTY: The following communications systems are available in the Franklin County EOC:

Commercial Telephone and Fax Lines
Energy Northwest CRASH Line
Energy Northwest Dedicated "Dial-Up" Line
Energy Northwest Dedicated Fax Line
Amateur Radios
Franklin County/Pasco Dispatch Station (LERN, HARM, etc)
Comprehensive Emergency Management Network (CEMNET)

No communications or phone systems failures are included in this exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.e – Equipment and Supplies to Support Operations

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have emergency equipment and supplies adequate to support the emergency response.

EXTENT OF PLAY

Equipment within the facility(ies) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

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

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

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

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency play.

WA EMD:

WSDA: Dosimetry and specialized field equipment and supplies for WSDA response staff are maintained at the Pasco Field Office.

WA DOH: Limitations: None

BENTON COUNTY: Dosimetry and KI is evaluated by site inspections separate from the exercise. This sub-element is limited to the EOC and EOF.

FRANKLIN COUNTY: No limitations with the exception of Potassium-Iodide (KI). Supplies of KI are subject to annual FEMA review and inventory.

No KI will be consumed during this exercise.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a – Emergency Worker Exposure Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

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

EXTENT OF PLAY

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: N/A for WSDA. WSDA field staff (Food Control Point Workers and Milk Samplers) do not mobilize until the plume has settled and a Food control Area has been defined, and they are prohibited by agency policy from exceeding the administrative (pre-authorized) turn back value for any mission.

WA DOH: Limitations: Scenario will not warrant emergency workers need to seek authorization for additional exposures.

Demonstrate the ability to calculate and notify emergency workers of one revised turn around value.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

During the initial stage of the emergency response, following notification of plant conditions that may warrant offsite protective actions, the ORO should demonstrate the capability to use appropriate means, described in the plan and/or procedures, to develop protective action recommendations (PARs) for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available.

When release and meteorological data are provided by the licensee, the ORO also considers these data. The ORO should demonstrate a reliable capability to independently validate dose projections.

The types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs appropriate to the scenario. In all cases, calculation of projected dose should be demonstrated. Projected doses should be related to quantities and units of the PAGs to which they will be compared. PARs should be promptly transmitted to decision-makers in a prearranged format.

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Limitations: None

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which indicates that OROs have the capability to use all available data to independently project integrated dose from exposure rates or other information and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation and base these choices on protective action guides (PAGs) from the ORO's plans and procedures, FRC Reports Numbers 5 and 7 or EPA 400-R-92-001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (e.g. other affected OROs), availability of appropriate in-place shelter, weather conditions, and situations that create higher than normal risk from evacuation.

EXTENT OF PLAY

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

The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field monitoring data, or information on plant conditions. The decision-makers

should demonstrate the capability to change protective actions as appropriate based on these projections.

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Limitations: None

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.c – Protective Action Decisions Consideration for the Protection of Special Populations

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Not applicable.

BENTON COUNTY: Play will be limited to calling people during the exercise to update information and determine how many would have needed assistance if it had been a real emergency.

FRANKLIN COUNTY: Play will be limited to calling a sample of three (3) transportation dependant Franklin County residents of the Emergency Planning Zone (EPZ). These persons will be called to verify the continued need for special assistance and that the phone number is correct.

Play will be limited to simulating all transportation missions.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.d – Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria. (NUREG-0654, J.9, 11)

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

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

EXTENT OF PLAY

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

The ORO should use its procedures (for example, development of a sampling plan) to assess the radiological consequences of a release on the food and water supplies. The ORO assessment should include the evaluation of the radiological analyses of representative samples of water, food, and

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: The WSDA County Liaison at Benton County will make an Agricultural Advisory Area recommendation to the affected counties.

WA DOH: This criterion will not be demonstrated.

BENTON COUNTY: Benton County participation limited to acting in a control cell capacity if other ingestion counties choose to conduct ingestion exposure pathway activities.

FRANKLIN COUNTY:

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.e – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, I.10; J.9; M.1)

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

EXTENT OF PLAY

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

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

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

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: This criterion will not be demonstrated.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimeters and permanent record dosimeters; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

EXTENT OF PLAY

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

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

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

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimeter.

Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: NA for WSDA. WSDA field responders do not activate until the plume has settled and a food control area has been defined.

WA DOH: No limitations.

BENTON COUNTY: The demonstration of this sub-element is limited to the EOF.

FRANKLIN COUNTY: Play will be limited to simulating Emergency Worker Exposure Control Measures.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.b – Implementation of KI Decision

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

information should be provided to the public by the means of notification specified in the ORO's plan and/or procedures.

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Limitations: The consumption of KI will be simulated.

BENTON COUNTY: The demonstration of this sub-element is limited to the EOC and EOF.

FRANKLIN COUNTY: Play will be limited to simulating consumption of KI.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

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

EXTENT OF PLAY

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Not applicable.

BENTON COUNTY: Play limited to calling people during the exercise to update information and determine how many would have needed assistance if it had been a real emergency.

FRANKLIN COUNTY: Play will be limited to simulating Special Population notification except as noted in Criterion 2.c.1.

Play will be limited to simulating transportation missions.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

Criterion 3.c.2 OROs/School officials implement protective actions for schools. (NUREG-0654, J.10.c, d, g)

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

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

EXTENT OF PLAY

Applicable OROs should demonstrate the capability to alert and notify all public school systems/districts, licensed day care centers, and participating private schools within the emergency planning zone of emergency conditions that are expected to or may necessitate protective actions for students.

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

Implementation of protective actions should be completed subject to the following provisions: At least one school in a school system or district within the EPZ, as appropriate, needs to

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Not applicable.

BENTON COUNTY:

FRANKLIN COUNTY:

Country Christian Center school official will demonstrate familiarity with REP Emergency procedure and will by interview describe to the FEMA Evaluator those actions to be taken upon being notified of an emergency at the Columbia Generating Station. This school official will call the Franklin County EOC in order to communicate the decision to evacuate and to provide a status report to the EOC based on student, faculty and staff numbers present at the facility on the day of the exercise. The school official will notify the EOC of any transportation needs.

Big River Country School school official will demonstrate familiarity with REP Emergency procedure and will by interview describe to the FEMA Evaluator those actions to be taken upon

being notified of an emergency at the Columbia Generating Station. This school official will call the Franklin County EOC in order to communicate the decision to evacuate and provide a status report to the EOC based on student, faculty and staff numbers present at the facility on the day of the exercise. The school official will notify the EOC of any transportation needs.

Play will be limited to simulating the evacuation of all Franklin County EPZ schools.

Play will be limited to simulating all transportation missions.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d – Implementation of Traffic and Access Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WDA:

WA DOH: Not applicable.

BENTON COUNTY: There will be no Benton County field demonstration of this criterion. Law enforcement representatives at the Benton County EOC may be interviewed concerning this criterion.

FRANKLIN COUNTY: Franklin County Public Works will demonstrate those actions needed to establish an Access/Food Control point (ACP/FCP). This demonstration will take place in the Franklin County Public Works Motor Pool/County Yard. This will include the drawing of Emergency Worker Kits by participating staff, location of ACP's, the difference between an ACP and a Food Control Point (FCP), and demonstrate the ability to communicate their status to the Public Works Coordinator in the Franklin County EOC.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d – Implementation of Traffic and Access Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Not applicable.

BENTON COUNTY:

FRANKLIN COUNTY: Play will be limited to the simulation of an impediment to traffic flow by the EOC Staff.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e – Implementation of Ingestion Pathway Decisions

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. NUREG-0654, J.9, 11)

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

Applicable OROs should demonstrate the capability to secure and utilize current information on the locations of dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points to implement protective actions within the ingestion pathway EPZ.

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: The WSDA County Liaison will provide general information about crops being harvested and processors & dairies within the recommended agricultural advisory area.

WA DOH: This criterion will not be demonstrated.

BENTON COUNTY: Benton County's involvement is limited to simulation of the Agriculture Advisory process.

FRANKLIN COUNTY:

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e – Implementation of Ingestion Pathway Decisions

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

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

EXTENT OF PLAY

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: The WSDA County Liaison will make an Agricultural Advisory recommendation to the affected counties after plume release.

WSDA will participate with Franklin County staff in a Food Control Point demonstration on August 31 only.

WA DOH: This criterion will not be demonstrated.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.f – Implementation of Relocation, Re-entry, and Return Decisions

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

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

Re-entry: OROs should demonstrate the capability to control re-entry and exit of individuals who need to temporarily re-enter the restricted area, to protect them from unnecessary radiation exposure

and for exit of vehicles and other equipment to control the spread of contamination outside the restricted area. Monitoring and decontamination facilities will be established as appropriate.

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

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: This criterion will not be demonstrated.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to detect radioactive particulate material in the airborne plume.

In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

EXTENT OF PLAY

Field teams should be equipped with all instruments and supplies necessary to accomplish their mission. This should include instruments capable of measuring gamma exposure rates and detecting the presence of beta radiation. These instruments should be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on the air sample collection media, consistent with the

intended use of the instrument and the ORO's plans and procedures. An appropriate radioactive check source should be used to verify proper operational response for each low range radiation measurement instrument (less than 1 R/hr) and for high range instruments when available. If a source is not available for a high range instrument, a procedure should exist to operationally test the instrument before entering an area where only a high range instrument can make useful readings.

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Limitations: Field Teams will be able to re-demonstrate any potential issues that do not affect the scenario or participation of other centers.

All field team equipment will be checked prior to deployment.

Only plume phase equipment will be utilized during this exercise.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

Responsible OROs should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.

Field measurements are needed to help characterize the release and to support the adequacy of implemented protective actions or to be a factor in modifying protective actions. Teams should be

directed to take measurements in such locations, at such times to provide information sufficient to characterize the plume and impacts.

If the responsibility to obtain peak measurements in the plume has been accepted by license field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by State and local monitoring teams. If the license teams do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all field teams (licensee, federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated.

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Limitations: An interview will be conducted with the field team captains to discuss how samples are transported to the laboratory.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

Field teams should demonstrate the capability to report measurements and field data pertaining to the measurement of airborne radioiodine and particulates to the field team coordinator, dose assessment, or other appropriate authority. If samples have radioactivity significantly above

background, the appropriate authority should consider the need for expedited laboratory analyses of these samples. OROs should share data in a timely manner with all appropriate OROs. The methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO plan and/or procedures.

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Limitations: Silver Zeolite cartridges will be simulated and charcoal cartridges will be used.

Two air samples will be taken by each field team.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.b – Post Plume Phase Field Measurements and Sampling

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the ingestion emergency planning zone (IPZ) and for relocation, re-entry and return measures.

This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.

EXTENT OF PLAY

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: N/A for WSDA. WSDA field staff would not deploy until a Food Control Area was established.

WA DOH: This criterion will not be demonstrated.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.c – Laboratory Operations

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

EXTENT OF PLAY

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

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH: Extent of play for the Lab has been sent separately. Exercise scheduled for June 17, 2004.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

For exercise purposes, timely is defined as "the responsible ORO personnel/ representatives demonstrate actions to disseminate the appropriate information/ instructions with a sense of

urgency and without undue delay." If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

Procedures to broadcast the message should be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test messages **is not required**. The alert signal activation may be simulated. However, the procedures should be demonstrated up to the point of actual activation.

The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with appropriate personnel from the primary notification system.

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH:

BENTON COUNTY: No sirens will be activated. No EAS message will be sent.

FRANKLIN COUNTY: Play will be limited to the simulation of the sending of Emergency Alert System Messages and Siren Activation. Franklin County EOC Public Information Officer will upon request demonstrate the process used to activate the EAS system from the Franklin County EOC.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.2: RESERVED

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH:

BENTON COUNTY: No sirens will be activated. No EAS message will be sent.

FRANKLIN COUNTY:

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA:

WA DOH:

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.b – Emergency Information and Instructions for the Public and the Media

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

The OROs should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, information concerning pets, shelter-

in-place instructions, information concerning protective actions for schools and special populations, public inquiry telephone number, etc.) to assist the public in carrying out protective action decisions provided to them. OROs should demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion pathway EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

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

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

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

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

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

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

Region Extent of Play: Earthquake effects will not be sufficient to adversely impact local jurisdictional/state agency exercise play.

WA EMD:

WSDA: WSDA will provide a PIO to act as an agricultural spokesperson and to coordinate agricultural information at the JIC.

WA DOH:

BENTON COUNTY:

FRANKLIN COUNTY: Play will be limited to Approved Franklin County Press Releases and other requests for information will be faxed to the Columbia Generating Station JIC, EOF, Benton County EOC, Ingestion County EOC's and the Washington State EOC as applicable to the exercise scenario and exercise play as it develops.

Sending of the Additional Information Message will be coordinated with KONA, 105.3 FM.

Copies of EAS Messages, Additional Emergency Information Message, Press Releases, Agricultural Advisory and other pre printed REP specific emergency information will be available at the Franklin County EOC for FEMA Evaluator review.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.a – Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

EXTENT OF PLAY

Radiological monitoring, decontamination, and registration facilities for evacuees/ emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent of play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include 1/3 of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within 12 hours. Prior to using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.

Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This monitoring productivity rate per hour is the number of evacuees that can be monitored per hour by the total complement of monitors using an appropriate monitoring procedure. A minimum of six individuals

per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be meet. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate monitoring procedures should be demonstrated for a minimum of two emergency workers.

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

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

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

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

Region Extent of Play: Out of Sequence exercise for the Emergency Worker/Assisted Center (EW/AC) for Benton County on June 19, 2004

WA EMD:

WSDA:

WA DOH: Limitations:

Limitations will be in conjunction with Benton County.

WA DOH will send one Health Physicist and one person to track doses received by emergency workers.

The person tracking the monitoring and doses will demonstrate the ability to track two emergency workers.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.b – Monitoring and Decontamination of Emergency Worker Equipment

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

WA EMD:

WSDA:

WA DOH: Limitation: No specific health physicist will be assigned to the vehicle monitoring station.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.c - Temporary Care of Evacuees

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

WA EMD:

WSDA:

WA DOH: Not applicable.

BENTON COUNTY:

FRANKLIN COUNTY:

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d – Transportation and Treatment of Contaminated Injured Individuals

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

EXTENT OF PLAY

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

OROs should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service, any vehicle (e.g., car, truck, or ambulance) may be utilized to transport a simulated victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur prior to

releasing the ambulance from the drill. This would include reporting radiation monitoring results, if available. Additionally, the ambulance crew should demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

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

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

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

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

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

Region Extent of Play

WA EMD:

WSDA:

WA DOH: Limitations: Health Physicists responding to hospital may drink water while in radiation areas due to a medical condition requiring access to water.

BENTON COUNTY:

FRANKLIN COUNTY:

COLUMBIA GENERATING STATION PLUME EXERCISE

WASHINGTON STATE MOBILE LABORATORY DEMONSTRATION

EXTENT OF PLAY AGREEMENT

April 26, 2004

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

EXTENT OF PLAY

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

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

Region Extent of Play

Out of Sequence Laboratory Exercise June 17, 2004

Washington State Department of Health (WA DOH) Extent of Play

WA DOH: Limitations

No shift change of staff will be demonstrated.

All staff responding to this exercise will be pre positioned at the laboratory prior to the commencement of the exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b – Facilities

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have facilities to support the emergency response.

EXTENT OF PLAY

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

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

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

Region Extent of Play

WA DOH: No Limitations

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c – Direction and Control

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to control their overall response to an emergency.

EXTENT OF PLAY

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

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

Region Extent of Play

WA DOH: No Limitations

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d – Communications Equipment

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed. Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exist.

The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system, as negotiated in the extent of play agreement.

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

Region Extent of Play

WA DOH: Limitations

No communications or phone system failures are planned.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.e – Equipment and Supplies to Support Operations

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have emergency equipment and supplies adequate to support the emergency response.

EXTENT OF PLAY

Equipment within the facility(ies) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

All instruments should be inspected, inventoried, and operationally checked before each use. Instruments should be calibrated in accordance with the manufacturer's recommendations. Unmodified CDV-700 series instruments and other instruments without a manufacturer's recommendation should be calibrated annually. Modified CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer. A label indicating such calibration should be on each instrument or calibrated frequency can be verified by other means. Additionally, instruments being used to measure activity should have a range of readings sticker affixed to the side of the instrument. The above considerations should be included in 4.a.1 for field team equipment; 4.c.1 for radiological laboratory equipment (does not apply to analytical equipment; under 4.c.1; reception center and emergency worker facilities' equipment under 6.a.1; and ambulance and medical facilities' equipment under 6.d.1.

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

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

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

Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from a certified private or State laboratory indicating that the KI supply remains potent, in accordance with U.S. Pharmacopoeia standards.

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

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

Region Extent of Play

WA DOH: No Limitations

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimeters and permanent record dosimeters; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

EXTENT OF PLAY

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

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

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

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimeter.

Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

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

Region Extent of Play

Out of Sequence Laboratory Exercise June 17, 2004

WA DOH: Limitations

TLD locations will be limited to the following locations:
1 in room E-45, Gamma Count Room
2 in room E-20, Sample Prep Room
1 @ Secretary's desk opposite of room E-20
1 outside of the window of room E-69, Hot Storage Room

Scenario will not warrant emergency workers to seek authorization for additional exposures.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.c – Laboratory Operations

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

EXTENT OF PLAY

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

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

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

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

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

Region Extent of Play

Out of Sequence Laboratory Exercise June 17, 2004

WA DOH: The exercise will commence with a call from the control cell to the Director of the PHL Office of Environmental Laboratory Sciences, giving notification that play is to commence. Play will begin at the start of the second day of the emergency response, with samples from the previous evening already at various stages of processing in the laboratory. Play will continue until the evaluators have observed enough activities at each station to adequately evaluate the laboratory's capabilities.

DOH will demonstrate receiving and or processing up to 25 samples. 5 samples will be completely demonstrated through the entire process.

The samples will include:

Particulate filter air samples
Iodine cartridges (charcoal only)
Milk
Water *(water samples take 24 hours, this will be demonstrated via interview and discussion only, no actual water sample will be processed)*
Soil
Food Crops
Pasture Grass/ Hay forage

Limitations:

Laboratory staff will set up the lab (contamination control, access control and communications) prior to the start of the exercise.

A Department of Health employee will deliver samples to the Public Health Lab, not the Washington State Patrol.

Charcoal filters will be used instead of Silver Zeolite, to simulate the collection of routine environmental monitoring materials in the early stages of the event.

No "spiked" samples will be analyzed.

The set up of the "Hot Sample Storage" room will not be done as per procedures; the room will not be emptied of its present contents and shelving will not be erected. The staff will not cover the floor as per procedures. This room is presently being used as an office.

Pre-operational area spot surveys on restricted access areas will not be demonstrated.

A control cell will perform the functions of the State EOC and the facility's EOF.

In the event of an actual emergency, all play will cease until the actual emergency has been taken care of. Play may then recommence or be terminated at the discretion of the lead evaluator.

A developmental copy of the agency's environmental radiation monitoring database will be used to record sample collection data and analytical results. **No data will be entered into the agency's operational database!**

Collection information for all samples, and analytical results for those that have already been processed, will have been entered into the developmental database prior to the start of play. This is necessary to allow matching of database identification numbers to simulated laboratory results.

All simulated positive laboratory results will be stored in a computer data file that will be loaded into laboratory instrument control simulators at the start of play.

Phone and fax numbers for the control cell will be determined prior to the date of the exercise.

COLUMBIA GENERATING STATION PLUME EXERCISE

OREGON STATE JURISDICTIONS

EXTENT OF PLAY AGREEMENT

February 17, 2004

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

EXTENT OF PLAY

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

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

Region Extent of Play

1. Effective May 11, 2004, Oregon responders to CGS emergencies will report to the Oregon Department of Energy Emergency Operations Center (ODOE EOC) located at 625 Marion Street NE in Salem, Oregon. This is consistent with procedures in the May 2004 revision of the Oregon CGS/Hanford Emergency Response Plan.

2. The following agencies will be represented at the ODOE EOC.

a) Oregon Department of Energy
b) Oregon Health Services
c) Oregon Department of Agriculture

3. Oregon responders to the Energy Northwest EOF and JIC will be pre-positioned in Richland. Personnel will respond to locations no sooner than one hour after receiving initial emergency notifications.

4. Oregon will not be sending a responder to the Washington EOC. Exercise response coordination between the ODOE EOC and the Washington State EOC will be made by phone.

5. One Oregon Health Services Field Team will be pre-positioned at the Hermiston Safety Center at 8 a.m. All radiation surveys and the taking of two air samples will be demonstrated in sequence with exercise activities.

6. Morrow and Umatilla counties will provide communications support only to the ODOE EOC. The Morrow County EOC in Heppner and the Umatilla County EOC in Pendleton will not be activated for this exercise. The next evaluation of Morrow and Umatilla counties is the CGS Ingestion Exercise in 2008.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b – Facilities

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have facilities to support the emergency response.

EXTENT OF PLAY

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

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

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

Region Extent of Play

1. Because the ODOE EOC is newly established and has not been evaluated by FEMA, the ODOE EOC will demonstrate this criterion for evaluation under the new criterion during this exercise.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c – Direction and Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to control their overall response to an emergency.

EXTENT OF PLAY

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

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

Region Extent of Play

1. There are no limitations for this criterion at the ODOE EOC.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d – Communications Equipment

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed. Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exist.

The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a

communications system and the use of an alternate system, as negotiated in the extent of play agreement.

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

Region Extent of Play

1. Responders to the ODOE EOC will use commercial phone lines to demonstrate one primary communication system. Responders at the ODOE EOC will demonstrate one of a number of backup communication systems available at the ODOE EOC. This includes, but is not limited to e-mail, satellite phone, Nextel cell phone/radio, or Cobra radio.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.e – Equipment and Supplies to Support Operations

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have emergency equipment and supplies adequate to support the emergency response.

EXTENT OF PLAY

Equipment within the facility(ies) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

All instruments should be inspected, inventoried, and operationally checked before each use. Instruments should be calibrated in accordance with the manufacturer's recommendations. Unmodified CDV-700 series instruments and other instruments without a manufacturer's recommendation should be calibrated annually. Modified CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer. A label indicating such calibration should be on each instrument or calibrated frequency can be verified by other means. Additionally, instruments being used to measure activity should have a range of readings sticker affixed to the side of the instrument. The above considerations should be included in 4.a.1 for field team equipment; 4.c.1 for radiological laboratory equipment (does not apply to analytical equipment; under 4.c.1; reception center and emergency worker facilities' equipment under 6.a.1; and ambulance and medical facilities' equipment under 6.d.1.

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

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

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

Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from a certified private or State laboratory indicating that the KI supply remains potent, in accordance with U.S. Pharmacopoeia standards.

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

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

Region Extent of Play

1. FEMA evaluation of this criterion will be conducted at the ODOE EOC and the Hermiston Safety Center only.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a – Emergency Worker Exposure Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

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

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

1. FEMA evaluation of this criterion is limited to Oregon responders to the Energy Northwest Emergency Operations Facility and one Oregon Health Services Field Team pre-staged at the Hermiston Safety Center to confirm that there is no plume impact in Oregon.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

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

EXTENT OF PLAY

During the initial stage of the emergency response, following notification of plant conditions that may warrant offsite protective actions, the ORO should demonstrate the capability to use appropriate means, described in the plan and/or procedures, to develop protective action recommendations (PARs) for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available..

When the licensee provides release and meteorological data, the ORO also considers these data. The ORO should demonstrate a reliable capability to independently validate dose projections. The

types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs appropriate to the scenario. In all cases, calculation of projected dose should be demonstrated. Projected doses should be related to quantities and units of the PAGs to which they will be compared. PARs should be promptly transmitted to decision-makers in a prearranged format.

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

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

Region Extent of Play

1. FEMA evaluation of this criterion is limited to Oregon responders to the Energy Northwest Emergency Operations Facility.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which indicates that OROs have the capability to use all available data to independently project integrated dose from exposure rates or other information and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation and base these choices on protective action guides (PAGs) from the ORO's plans and procedures, FRC Reports Numbers 5 and 7 or EPA 400-R-92-001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (e.g. other affected OROs), availability of appropriate in-place shelter, weather conditions, and situations that create higher than normal risk from evacuation.

EXTENT OF PLAY

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

The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field monitoring data, or information on plant conditions. The decision-makers

should demonstrate the capability to change protective actions as appropriate based on these projections.

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.c – Protective Action Decisions Consideration for the Protection of Special Populations

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.d – Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria. (NUREG-0654, J.9, 11)

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

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

EXTENT OF PLAY

We expect that the ORO will take precautionary actions to protect food and water supplies, or to minimize exposure to potentially contaminated water and food, in accordance with their respective plans and procedures. Often such precautionary actions are initiated by the OROs based on criteria related to the facility's emergency classification levels (ECL). Such action may include recommendations to place milk animals on stored feed and to use protected water supplies.

The ORO should use its procedures (for example, development of a sampling plan) to assess the radiological consequences of a release on the food and water supplies. The ORO assessment should include the evaluation of the radiological analyses of representative samples of water, food, and

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

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

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

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

Region Extent of Play

1. There are no limitations for this criterion at the ODOE EOC.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.e – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, I.10; J.9; M.1)

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

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INTENT

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

EXTENT OF PLAY

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

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

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

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

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimeters and permanent record dosimeters; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

EXTENT OF PLAY

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

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

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

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimeter.

Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

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

Region Extent of Play

1. FEMA evaluation of this criterion is limited to Oregon responders to the Energy Northwest Emergency Operations Facility and one Oregon Health Services Field Team pre-staged at the Hermiston Safety Center to confirm that there is no plume impact in Oregon.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.b – Implementation of KI Decision

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

information should be provided to the public by the means of notification specified in the ORO's plan and/or procedures.

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

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

Region Extent of Play

1. FEMA evaluation of this criterion is limited to Oregon responders to the Energy Northwest Emergency Operations Facility.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

Criterion 3.c.2 OROs/School officials implement protective actions for schools. (NUREG-0654, J.10.c, d, g)

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d – Implementation of Traffic and Access Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

Traffic and access control staff should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview in accordance with the extent of play agreement. In instances where OROs lack authority necessary to control access by certain types of traffic (rail, water, and air traffic), they should demonstrate the capability to contact the State or Federal agencies with authority to control access.

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d – Implementation of Traffic and Access Control

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e – Implementation of Ingestion Pathway Decisions

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. NUREG-0654, J.9, 11)

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

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

EXTENT OF PLAY

Applicable OROs should demonstrate the capability to secure and utilize current information on the locations of dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points to implement protective actions within the ingestion pathway EPZ.

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

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

Region Extent of Play

N/A for Oregon in the August 31, 2004, CGS Exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e – Implementation of Ingestion Pathway Decisions

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

Region Extent of Play

1. The actual dissemination of pre-printed materials will be simulated. Instead, the Public Information Officer will explain to FEMA evaluators Oregon's procedures for the dissemination of pre-printed instructional materials to satisfy this portion of the criterion.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.f – Implementation of Relocation, Re-entry, and Return Decisions

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

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

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

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

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to detect radioactive particulate material in the airborne plume.

In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

EXTENT OF PLAY

Field teams should be equipped with all instruments and supplies necessary to accomplish their mission. This should include instruments capable of measuring gamma exposure rates and detecting the presence of beta radiation. These instruments should be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on the air sample collection media, consistent with the intended use of the instrument and the ORO's plans and procedures. An appropriate radioactive check

source should be used to verify proper operational response for each low range radiation measurement instrument (less than 1 R/hr) and for high range instruments when available. If a source is not available for a high range instrument, a procedure should exist to operationally test the instrument before entering an area where only a high range instrument can make useful readings.

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

Region Extent of Play

1. There are no limitations for this criterion.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume.

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

EXTENT OF PLAY

Responsible OROs should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.

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

If the responsibility to obtain peak measurements in the plume has been accepted by license field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by State and local monitoring teams. If the license teams do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all field teams (licensee, federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated.

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

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

Region Extent of Play

1. The Oregon Field Team will demonstrate radiation surveys and the collection of two air samples.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a – Plume Phase Field Measurements and Analyses

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume.

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

EXTENT OF PLAY

Field teams should demonstrate the capability to report measurements and field data pertaining to the measurement of airborne radioiodine and particulates to the field team coordinator, dose assessment, or other appropriate authority. If samples have radioactivity significantly above

background, the appropriate authority should consider the need for expedited laboratory analyses of these samples. OROs should share data in a timely manner with all appropriate OROs. The methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO plan and/or procedures.

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

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

Region Extent of Play

1. The Oregon Field Team will demonstrate the collection of two air samples.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.b – Post Plume Phase Field Measurements and Sampling

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the ingestion emergency planning zone (IPZ) and for relocation, re-entry and return measures.

This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

1. N/A for Oregon in the August 31, 2004, CGS Exercise.

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.c – Laboratory Operations

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

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

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

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

Region Extent of Play

1. The Oregon Station University Radiation Center Laboratory will demonstrate this criterion for evaluation in an out-of-sequence exercise on June 16, 2004. The exercise objectives and extent-of-play package for the Oregon Laboratory Exercise will be submitted to FEMA separately.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

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

EXTENT OF PLAY

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

OROs with route alerting as the primary method of alerting and notifying the public should demonstrate the capability to accomplish the primary route alerting, following the decision to activate the alert and notification system, in a timely manner (will not be subject to specific time

requirements) in accordance with the ORO's plan and/or procedures. At least one route needs to be demonstrated and evaluated. The selected route(s) should vary from exercise to exercise. However, the most difficult route should be demonstrated at least once every six years. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent of play. Actual testing of the mobile public address system will be conducted at some agreed upon location. The initial message should include the elements required by current FEMA REP guidance.

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

Procedures to broadcast the message should be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test messages **is not required**. The alert signal activation may be simulated. However, the procedures should be demonstrated up to the point of actual activation.

The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with appropriate personnel from the primary notification system.

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.2: RESERVED

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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Region Extent of Play

N/A in Oregon.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

- The following **INTENT, EXTENT OF PLAY**, and **Region Extent of Play** information is provided for general reference only. Consult the extent of play agreement and your Team Leader for how it applies to your assigned location.

INTENT

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

EXTENT OF PLAY

OROs with FEMA-approved exception areas (identified in the approved Alert and Notification System Design Report) 5-10 miles from the nuclear power plant should demonstrate the capability to accomplish primary alerting and notification of the exception area(s) within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The 45-minute clock will begin when the OROs make the decision to activate the alert and notification system for the first time for a specific emergency situation. The initial message should, at a minimum, include: a statement that an emergency exists at the plant and where to obtain additional information.

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.b – Emergency Information and Instructions for the Public and the Media

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

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

EXTENT OF PLAY

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

The OROs should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should

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

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

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

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

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

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

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

Region Extent of Play

1. While multiple news releases will be developed to demonstrate this criterion, only one news conference will be conducted.

2. The news conference will be demonstrated at the News Center located at the Employment Division Auditorium, 875 Union Street NE in Salem.

3. The Public Information Officer at the Oregon ECC will determine when to activate and staff the Telephone Information Center (Rumor Control).

4. Once the PIO activates the Telephone Information Center, the Telephone Information Center will be staffed and operational for two hours.

5. Morrow and Umatilla county EOCs will demonstrate this criterion for evaluation in the next scheduled CGS Ingestion Exercise in 2008.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.a – Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

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

- Was this Criterion adequately demonstrated? **YES**____ **NO**____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

Radiological monitoring, decontamination, and registration facilities for evacuees/ emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent of play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include 1/3 of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within 12 hours. Before using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.

Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This monitoring productivity rate per hour is the number of evacuees that can be monitored per hour by the total complement of monitors using an appropriate monitoring procedure. A minimum of

six individuals per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be meet. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate monitoring procedures should be demonstrated for a minimum of two emergency workers.

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

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.b – Monitoring and Decontamination of Emergency Worker Equipment

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.c – Temporary Care of Evacuees

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

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INTENT

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

EXTENT OF PLAY

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

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

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

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

Region Extent of Play

N/A in Oregon.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d – Transportation and Treatment of Contaminated Injured Individuals

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

- Was this Criterion adequately demonstrated? **YES**_____ **NO**_____ **N/A**_____

  If **NO**, identify all exercise issues on the following page by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a detailed written narrative, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

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INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

EXTENT OF PLAY

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

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

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

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

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

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

Region Extent of Play

N/A in Oregon.

COLUMBIA GENERATING STATION PLUME EXERCISE

OREGON STATE MOBILE LABORATORY DEMONSTRATION

EXTENT OF PLAY AGREEMENT

March 13, 2004

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

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

Region Extent of Play

1. Oregon State University (OSU) Radiation Center personnel will be monitored for radiation exposure in accordance with Radiation Center Health Physics Procedures (RCHPP) 1 and 34.

2. Controllers and evaluators will be monitored for radiation exposure in accordance with RCHPPs 1 and 34.

EVALUATION AREA 4: FILED MEASUREMENT AND ANALYSIS

Sub-element 4.c – Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

Region Extent of Play

1. No "spiked" samples will be analyzed.

2. Controllers will provide simulated sample results for recording and reporting purposes after the samples have been counted.

The laboratory staff will have set up the lab (contamination control, access control, and communications) prior to the start of the exercise. The Oregon Department of Health will provide simulated field team samples.

The Oregon Department of Energy will run a Control Cell to perform the functions of the State EOC, and the EOF. The ODOE EOC Control Cell will pass on sample analysis priorities to the OSU lab when contacted by the lab. The ODOE EOC Control Cell will inform the OSU lab that these priorities have been set by the Energy Northwest EOF in accordance with Section 6 of the Oregon CGS/Hanford Emergency Response Plan.

There will be 3 controllers at the OSU Laboratory. They include:

- Lead Controller – The Lead Controller will float between the various locations in OSU as the sample is received and prepared. The Lead Controller will also be responsible for ensuring that play is smoothly coordinated and progresses in accordance with the exercise timeline.
- Sample Prep Station Controller
- Counting Station Controller

Start of play will be announced by the Lead Controller and will continue until the evaluators have determined that the evaluation team has observed enough activities at each station to adequately evaluate the laboratory's capabilities. The Lead Controller will terminate play at that time.

The Lead Controller will terminate exercise play in the event of an actual emergency.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events used as the basis for invoking emergency response actions by OROs during the Columbia Power Station exercises on June 16-19, and August 31, 2004.

These exercise scenarios were submitted by the State of Washington and State of Oregon. The scenario was approved by FEMA Region X on the following dates:

- Plume-Phase Columbia REP Exercise – August 20, 2004
- Washington Medical Services Drill – May 12, 2004
- Kiona-Benton Emergency Worker/Assistance Center (EWAC) Drill – April 19, 2004
- Washington State Lab Drill – April 26, 2004
- Oregon State Lab Drill – March 2, 2004

During the exercise, controllers from the State of Washington and State of Oregon gave "inject messages," containing scenario events or simulated data, to persons who would normally receive notification of such events, to invoke response actions by the OROs.

The summaries presented in this appendix are a compilation of exercise scenario materials submitted by the State of Washington, State of Oregon, and Energy Northwest Company. Events at the plant site that are not pertinent to the ORO response have been omitted.

Narrative Summary

Initial Conditions: For the past 657 days, Columbia Generating Station has been operating at or near 100% power.

A small steam leak has existed from a Turbine Throttle valve for the last week. The plan is to repair the leak during the refuel outage, which starts next month.

The outside air temperature is 70°F with winds from the north at 8 mph. It is a clear morning with a stable high-pressure front over the area.

Standby Gas Treatment B system outage is in progress. SGT-SYS-A, E-DG-1, and SW-P-1A are protected due to maintenance outage on SGT-SYS-B started at 0600 yesterday. ITS 3.6.4.3 Condition A has been entered.

Transformer TR-B was taken out of service at 0400 due to damage to the windings. TR-S is protected. Evaluation and subsequent repair plans are being initiated by BPA. Estimated return to service time is unknown. Technical Specification 3.8.1 condition A had been entered. Surveillance 3.8.1.1 (breaker alignment and offsite power availability) was completed at 0445 this morning.

Inoperable Equipment:

- Transformer TR-B
- SGT-SYS-B

Narrative: The scenario starts with the plant in a 72-hour shutdown LCO due a Technical Specification LCO 3.8.1 entered at 0400.

The first event is an **Operating Basis Earthquake** alarm and reports from plant personnel that an earthquake was felt. The Crew will declare an **ALERT** per **EAL 9.4.A.1.**

Crew will initiate a controlled Reactor Shutdown per ARP 4.85.S1 "window 5.1" (OBE) via PPM 3.2.1.

Emergency notifications are made and the ERO is activated.

TEA-RIS-13/13A effluent monitor fails due to a broken fan motor belt.

During the post seismic event walk-down a leak will be discovered near RCIC-V-8.

Operations will respond to the steam leak in the TIP Mezzanine (RCIC-V-8 line) by attempting to isolate the line by closing the RCIC containment isolation valves. Indication on RCIC-V-63 will be lost during closure. The valve will have lost control power and will be failed as is (open).

A catastrophic jet pump failure will occur which results in some debris in the core but not fuel failure at this time.

The Crew will initiate a Reactor SCRAM to reduce the leak in the reactor building. The MSIVs will auto close due to a loss of RPS after the failure of SM-1 and SM-3 to transfer to TRS. One MSIV (MS-V-28B) will not isolate but the MS line will be isolated with the MS-V-22B. The Turbine Building leak source will be stopped.

The release continues from the Reactor Building via the RCIC line steam leak.

During the SCRAM TRS will fail to tie to SM-1, SM-2, SM-3, SH-5 and SH-6 when the turbine tips. Due to this the feed and condensate system is not available. The crew will manually close SM-1 and SM-3, SH-5 and SH-6 onto TRS. They will not be able to close SM-2 onto TRS from the Control Room panel switch. Manual closure of the break from the local switchgear will be successful. The crew may attempt to restore feed and condensate.

Crew should attempt to restart RCIC and CRD for level control.

When HPCS-P-1 is started to recover and maintain RPV level the pump motor breaker control power closing fuse will fail.

When SGT auto initiates on low RPV level 2 SGT-FN-1A1 does not start and SGT-EHC-1A2 does not energize. SGT-FN-1A2 will operate with the heaters off. Moisture will increase in the SGT filter and reduce its efficiency.

The only electrical power initially will be from DG-1, DG-2 and DG-3, which will start on the loss of power to SM-7 and SM-8 and SM-4.

The continuing steam leak in the RCIC-V-8 valve room will exceed the Maximum Safe Operating Values (Temperature) for the area per the EOP tables. The Emergency Director will declare A **SAE** per **EAL 4.1.S.1**.

Next a second seismic event will occur which increases the size of the RCIC line break, initiates fuel pin failure, and causes a loss of the 230 KV line to the Startup Transformer. SM-1, SM-2, SM-3, SH-5 and SH-6 will become deenergized due to TR-S not being available. OSC power is also lost. The loss of the 230 KV line is due to some of the 230 KV line supporting poles being broken by the earthquake shock. BPA will be contacted to prioritize repair of the line.

The seismic event will contribute to failure of fuel pins, which will result in an off-site radioactive release from the Reactor Building (due to the steam leak on the RCIC line inboard of RCIC-V-8).

Radiation levels will increase to above MAX SAFE level in tow areas (ARM-RIS-32 and ARM-RIS-33) defined per EOP 5.3.1 and require the Crew to Emergency Depressurize the RPV. RPV levels will go below TAF. RPV level will be restored to normal level with Low Pressure ECCS systems.

The Emergency Director will declare a **GE** per **EAL 4.1.G.1**. Unisolable primary system discharging outside PC resulting in any area temperature or radiation level above Maximum Safe Operating Values (as defined in the Emergency Operating Procedures) AND ANY of the following:

- Containment Radiation Monitor CMS-RIS-27E and CMS-RIS-27F reading GT 3,600 R/hr
- RPV level LT-161 inches (for ATWS conditions, RPV level LT-183 inches) or cannot be determined
- Coolant activity GT 300 μC/gm dose equivalent iodine **or** EAL 2.1.G.2 (RPV level LT-161 inches
- Failure of containment isolation valves (LCS Table 1.6.1.3-1) in any one line to close following auto or manual initiation AND downstream pathway outside primary containment exists.

Automatic **PAR**s will be initiated to **evacuate all sections 0-2 miles, section 2 and 3 to 10 miles, and sheltering of the remaining sections 1 and 4.**

The RPV will be depressurized and the motive force for the leak will be stopped. Remaining airborne activity will be purged from the Reactor Building and the release will be no longer detectable by the field teams. Repair teams will isolate the leak by repairing the breaker for RCIC-MO-63 and closing RCIC-V-63.

Washington Medical Services-1 Drill
Exercise Scenario

June 18, 2004

Situation: Tom Rogers, a courier employed by RapidRad Medical Services was transporting a medical isotope to Lourdes Medical Center when he fell asleep and ran into a telephone pole at 502 Boeing Street in Pasco, Washington.

Employees of Franklin County Emergency Management called 9-1-1 to inform them of the accident in front of their office.

Medical Situation:

The courier has a cut approximately 3 inches long on his forehead.

His right arm is broken.

There is a deep cut on his right forearm approximately 4 inches long.

Victim is conscious. Vital signs are slightly elevated.

Radiological Situation:

The following readings are indicated using a Ludlum Model 12 Radiation Detector equipped with a Ludlum Model 44-9 Beta/Gamma (Pancake) Probe.

RIGHT THIGH: 200 Counts per Minute (CPM)
RIGHT SIDE OF TORSO: 250 CPM
RIGHT FOREARM: 300 CPM
RIGHT BICEP and SHOULDER: 250 CPM
RIGHT SIDE OF FACE: 200 CPM
HAIR and HEAD: 175-200 CPM

NOTE: Refer to attached "Body Outline" for location of injuries and radiological contamination.

INJURIES ARE SIMULATED

RADIOLOGICAL CONTAMINATION IS SIMULATED

Kiona-Benton City Highschool
Evaluated EWAC Drill
Scenario Overview

June 19, 2004

Beginning Conditions

Columbia Generating Station declared an Alert Emergency at approximately 0820 this morning.

Prior to declaring the emergency the following conditions existed.

For the past 230 days Columbia Generating Station has been operating at or near 100% power.

The temperature is 68°F with winds from the northeast at 3 mph. It is an overcast morning with a high pressure system centered over northern Idaho. A low pressure system will move onshore later today. Winds are expected to remain about the same through 1200 today and then increase as the low pressure system approaches. The wind should not switch to being from the southwest until about midnight tonight. Clearing is not expected for the next 24 hours.

Energy Northwest declared the Alert based upon EAL #2.1.A.1 - water leaking from the Reactor Coolant System in excess of 30 gallons per minute. At 0930, Energy Northwest declared a General Emergency based upon EAL #2.1.G.2 - loss of the ability to maintain reactor water level above the fuel and there are indications that the containment barrier may be damaged. The General Emergency declaration included a Protective Action Recommendation to Evacuate Section 3A, 3B and 3C and Shelter Sections 1, 2 and 4.

Energy Northwest field teams are reporting elevated radiation levels to the southwest of the Columbia Generating Station.

Washington State Laboratory
Scenario Overview

June 17, 2004

The exercise will commence with a call from the control cell to the Director of the PHL Office of Environmental Laboratory Sciences, giving notification that play is to commence. Play will begin at the start of the second day of the emergency response, with samples from the previous evening already at various stages of processing in the laboratory. Play will continue until the evaluators have observed enough activities at each station to adequately evaluate the laboratory's capabilities.

(DOH) will demonstrate receiving and or processing up to 25 samples. 5 samples will be completely demonstrated through the entire process.

The samples will include:
Particulate filter air samples
Iodine cartridges (charcoal only)
Milk
Water (water samples take 24 hours, this will be demonstrated via interview and discussion only, no actual water sample will be processed)
Soil
Food Crops
Pasture Grass/ Hay forage

Scenario

Today is June 17, 2004.

In the evening of June15, Energy Northwest's Columbia Generating Station (Columbia) experienced an emergency situation. The plant declared a General Emergency when protection systems failed to operate properly. The reactor core suffered some minor damage and radioactive material was released to the environment from the plant's damaged safety systems. The plant released radioactive material for about 1 hour before the release was terminated and the plant was returned to a safe shutdown condition.

An evacuation of the 10-mile EPZ in Franklin County was initiated prior to the onset of the release. The plume deposition was not significant enough to warrant the establishment of a Relocation Area however; a Food Control Area out to approximately 20 miles ESE of Columbia was developed.

Meteorological data at the time of the release:
- Temperature - 80°
- Wind Speed - 4 mph
- Wind Direction - WNW - ESE (282° - 102°)

Stability Class - E
Precipitation - none

Meteorological data at present time:
Temperature - 90°
Wind Speed - 2 mph
Wind Direction - W - E (265° - 85°)
Stability Class - C
Precipitation - none

All evacuated persons have been permitted to return to their homes. All transportation corridors, including the Columbia River have been reopened.

Food Control

A Food Control Area has been established to prevent the movement of contaminated food crops out of the area.

The West Boundary is described as: The Columbia River from Rankin Canyon on the South to the Ringold Wasteway on the North.

The North Boundary is described as: From the Columbia River northeastward along the Ringold Wasteway to Ringold Road. Southeast then east on Ringold Road to Glade North Road. Southeast on Glade North Road to Eltopia Road. East then southeast on Eltopia Road to US 395. Across US 395 northeast on Blanton Road to Blackman Ridge Road. East on Blackman Ridge Road to the power lines.

The East Boundary is described as: Southeast along the powerlines from Blackman Ridge Road to E. Elm Road. West on E. Elm Road to Frontier Road. South along Frontier Road to East Sagemoor Road.

The South Boundary is described as: West on East Sagemoor Road from Frontier Rd. to Sagemoor Lane. Southwest on Sagemoor Lane to East Sagemoor Road. Northwest on East Sagemoor Road across US 395 to Ione Road. North on Ione Road to Cedar Road. West on Cedar Road to North Dayton Road. North on North Dayton Road to West Dogwood Road. West on West Dogwood Road to Cottonwood Drive. Southwest on Cottonwood Drive to Rankin Canyon. Northwest along Rankin Canyon to the Columbia River.

Exercise Timeline

Real Time	Exercise Time	Event
08:00	-0:30	Players Briefing
08:30	00:00	**Play begins.** Batch 1 – All samples have been received and counted. Sample results have been approved and QA'd. Chain of Custody form and results are available to Lab Liaison. Batch 2 – All samples have been received. Five samples have been counted, two others are in correct geometry and ready for counting; two still need to be prepared for counting. All of the counted samples need to be approved and QA'd. Chain of Custody form available to Lab Liaison. Batch 3 – Faxed copy of Chain of Custody form with Lab Liaison. WSP calls Lab Liaison to notify of arrival in about 20 minutes
08:50	00:20	WSP arrives with Batch 3 samples
09:30	01:00	Batch 4 "Chain of Custody" sheet faxed to Lab Liaison for processing.
??	??	Termination of play. Critique / Hotwash.

Oregon State Laboratory
Scenario Overview

June 16, 2004

This scenario simulates multiple failures at the Columbia Generating Station in Richland, Washington. These failures result in a loss of core cooling, which causes a significant amount of fuel damage. The failures also involve a loss of containment integrity and a resulting release of fission products into the atmosphere. As a result of this accident, a plume of radioactive contamination is blown into Oregon and deposition occurs in portions of Umatilla County.

The sample counting function of the Oregon State University (OSU) Radiation Center Lab will be activated to respond to this emergency. A total of five samples: potatoes, soil, milk, water and vegetation will be counted. The vegetation sample will be simulated to exceed the Derived Intervention Level for Cesium. The soil sample will be simulated to have an external radiation level approaching the 1 mRem/h counting limit. A simulated state police vehicle will deliver the samples.

The Oregon Department of Energy (ODOE) will establish and operate a Control Cell to support OSU Laboratory operations. The ODOE EOC Control Cell will pass on to the OSU Radiation Center Laboratory sample analysis priorities in accordance with the current Oregon Plan.

Scenario

Today is June 16, 2004.

In the evening of June 14, 2004, a beyond design basis earthquake caused a major loss of coolant accident at Columbia Generating Station in Richland, WA. The earthquake also damaged the plant's emergency core cooling systems to the extent that operators were unable to keep the core adequately covered and cooled for several hours. Containment integrity was also compromised. This combination of events caused a significant amount of fuel damage and a release of fission products to the environment. The release was in progress for a little over 8 hours before the containment breach was sealed. Currently, full capability of the emergency core cooling systems has been restored, and the core is recovered. The situation is stable.

The prevailing winds carried the plume of radioactive material into Oregon and significant deposition is suspected in parts of Umatilla County. Field teams are in this area now, taking samples to confirm these suspicions.

The Oregon State University Radiation Laboratory was notified to set up to count environmental samples the morning of June 15, 2004.

Meteorological Data at the time of the release:

Temperature – 80^0
Wind speed – 20 mph
Wind direction - NNW to SSE ($350^0 – 165^0$)
Stability Class – E
Precipitation – none

Meteorological Data currently:

Temperature – 84^0
Wind speed – 4 mph
Wind direction – W to E ($265^0 – 85^0$)
Stability Class – C
Precipitation – None

A food control area has been established to prevent the movement of contaminated food crops out of the area.

Its boundaries are:

Northern Boundary – The Columbia River from the Interstate 82 bridge to the intersection of the River and a line directly north out of Echo, Oregon.

Exercise Timeline

Real Time	Exercise Time	Event
08:15	-0:45	Controller Briefing
08:30	-0:30	Player Briefing
09:00	0:00	Commence Play
		Batch 1 Samples Arrive
		Batch 2 Samples Arrive
		Batch 3 Samples Arrive
10:00	1:00	Batch 4 Samples Arrive
To be determined by Coordinating Controller		Termination of Play
		Exercise De-Brief

APPENDIX 5

SUMMARY OF ALL OUTSTANDING EXERCISE ISSUES
COLUMBIA GENERATING STATION, RICHLAND, WASHINGTON
As of November 23, 2004

Location	Issue No.	Brief Description	Schedule of Corrective Action
OR	69-03-3.e.2-A-01	Umatilla County did not have a supply of Oregon's Hanford Emergency Preparedness Brochure that was to be distributed to the public and the ag community during the early phase of the incident. No supply of pre-printed copies available at distribution points. OR Energy web-site showed brochure available only during drills and actual events. No letters of Agreement available with designated public distribution points.	ODOE will draft procedures for a web page operator. ODOE will also post the brochure permanently on the web site. ODOE will work with Umatilla County to revise the ODOEs procedures to clarify that the State is responsible for updating and providing the brochure and other materials to the County EOC. The county EOC is responsible for copying and providing the brochure to distribution points. Plan changes will be made during the 2004 revision. Umatilla county and ODOE will strive to close during next CGS Ingestion Exercise.
MUDAC	69-02-2.e.1-A-03	Relocation Area Boundary	Modify current spreadsheet to consider doses for spreadsheet projection the second year and for 50 years. DOH Office of Rad Protection officials dispute this issue and provided no schedule of corrective actions. Since it has been determined that this issue has been properly identified as an ARCA, the resolution is as recommended by FEMA and should be redemonstrated at the next CGS biennial exercise.

Location	Issue No.	Brief Description	Schedule of Corrective Actions
JIC	69-04-5.b.1-A-01	News releases were not issued in a timely manner.	JIC staff to be trained during annual team drills on distribution of news releases. To be redemonstrated during next CGS biennial exercise.
FCEOC	69-04-5.b.1-A-02	News release #4 did not accurately reflect GE Protective Action Decision.	Modify pre-scripted and boilerplate news releases. To be redemonstrated during next CGS biennial exercise.
MS-1	69-04-6.d.1-A-03	Decon procedures not followed according to Plans and Procedures; Instrument probe and monitoring procedures not correctly followed.	To be redemonstrated by June 2008.

APPENDIX 6

PLANNING ISSUES

2004 Plume Exercise and Drills

This appendix contains the Planning Issues assessed during the June 16-19 and August 31, 2004, exercise at Columbia Generating Station (CGS). Planning Issues are issues identified in an exercise or drill that do not involve participant performance, but rather involve inadequacies in the plan or procedures. Planning Issues (designated "P") are required to be corrected through the revision and update of the appropriate State and local Radiological Emergency Response Plans (RERPs) and/or procedures in accordance with the following schedule:

- Within 120 days of the date of the exercise/drill, when the Planning Issue is directly related to protection of the public health and safety.

- During the annual plan review and update (reported in the Annual Letter of Certification), when the Planning Issue does not directly affect the public health and safety. However, when the date for the annual plan review and update is imminent, and the responsible organization does not have sufficient time to make the necessary revisions in the plans and/or procedures, the revised portion of the plans and/or procedures should be submitted in the subsequent annual plan review and updated and reported in the Annual Letter of Certification.

Any requirement for additional training of responders to radiological emergencies necessitated by the revision and update of the plans and/or procedures must be completed within the timeframes described above in order for the Planning Issue to be considered resolved.

JOINT INFORMATION CENTER

Plan Issue Number: 69-04-5.b.1-P-01

CONDITION: Incomplete information was provided to the media regarding evacuation and sheltering. The Joint Information Center Public Information Officers (JIC PIOs) did not brief any information on actions to be taken by the public for evacuation, sheltering, pets care or on evacuation routes. The media releases from both counties did identify the areas to be evacuated but did not explain any of the aforementioned information. Media release number #4 from Franklin County was incomplete and was provided to the media. The JIC PIOs did brief correctly that sub area #1 was sheltered and sub area #2 was evacuated. It is noted that the follow-on Emergency Alert System (EAS) message did contain the information; however, media in the JIC did not receive hardcopy of this information.

POSSIBLE CAUSE: Information was not prepared for media release and information from the EAS messages and follow-on messages was not sent to the JIC for the PIOs information and use. In addition, all messages were sent throughout the JIC for review. The PIOs did not thoroughly review the message to ensure completeness.

REFERENCE: NUREG-0654, E.5, 7; G.3.a; G.4.c

EFFECTS: The lack of information inhibited the use of the media to provide information to the general public. The public would only have the follow-on message which may provided only a portion of the needed information. Media broadcasts of information would reduce confusion and concern and would reduce the number of 911 or Public Inquiry calls.

RECOMMENDATION: Revise plans and procedures to ensure that the PIOs and JIC receive all pertinent information to facilitate the dissemination of information to the public. Provide sheltering and evacuation information to the PIOs in the JIC.

CGS EMERGENCY OPERATIONS FACILITY

Plan Issue Number: 69-04-2.b.1-P-02

CONDITION: After the designated State Health official made the decision to authorize the ingestion of KI by State and local emergency workers, there was no recalculation of a new Emergency Worker Exposure Correction Factors (EWECF). There is no procedural requirement to produce a new correction factor; however, since the correction factor contains the contribution from the internal dose from the ingestion of radioiodine, a factor that does not account for the use of KI is overly conservative.

POSSIBLE CAUSE: Lack of consideration of the assumptions inherent in the calculational methodology used to calculate EWECF and Emergency Worker Turn Back values.

REFERENCE:

- Draft Section 10, Attachment B of the Washington State DOH procedures
- NUREG-0654, I.8, 10; Supplement 3

EFFECT: While the conservative correction factor assures that workers will not exceed the State dose limits, it may result in early withdrawal of workers from critical tasks. In an extended response, this may limit the use of needed workers.

RECOMMENDATION: Revise plan to require the calculation of a revised Emergency Worker Exposure Correction Factor and a revised Emergency Worker Turn Back Form after a decision is made to authorize the ingestion of KI by emergency workers. The plan revision should include a procedure to perform this revised calculation in addition to the discussion currently RASCAL code included in draft Section 10, Attachment B of the Washington State DOH procedures.

Plan Issue Number: 69-04-1.a.1-P-03

CONDITION: At 0810, the Department of Health Emergency Operations Facility (DOH EOF) team departed for the Richland Fire Station # 71, 1000 George Washington Way in Richland, to

obtain their dosimetry kits prior to deploying to the EOF. At 0814, while en route to the fire station and in accordance with the DOH Radiological Emergency Response Procedures (Draft, Rev 4, July 2004), Procedure 2.2.2, page 2-17, the State Health Liaison telephoned the EOF for an incident and plant status update. The recipient of the call was aware that the Emergency Classification Level (ECL) was an Alert, but had no further information. The DOH EOF team was told that the EOF was not activated and that the State would have to call back when the EOF was operational. The team called again at 0840 while traveling to the EOF. The team was told that the Assistant EOF Manager was on the phone and was not available. At 0846, another call was placed to Columbia Generating Station (CGS). The team was told that the EOF staff was preparing a notification and "CRASH" call.

POSSIBLE CAUSE: Failure of CGS to recognize the importance of having incident and/or emergency information available to the State of Washington in a timely fashion.

REFERENCE:

- NUREG 0654, E.1
- DOH Radiological Emergency Response Procedures (Draft, Rev 4, July 2004), Procedure 2.2.2, page 2-17

EFFECT: The failure of CGS to provide critical information for over 48 minutes could significantly impact the State's response.

RECOMMENDATION: The CGS should provide the ability for the State of Washington to obtain timely incident and/or emergency information.

WASHINGTON STATE RADIOLOGICAL FIELD MONITORING TEAM NO. 1

Plan Issue Number: 69-04-3.a.1-P-04

CONDITION: With the DRDs (one of range 0 – 200 mR and the other of 0 – 20 R) supplied to the field monitoring team(s), it would be practically impossible to read the MUDAC-assigned turn-around value of 400 mR. The 200 mR DRD would be off-scale high and a reading approaching 400 mR on the 20R DRD would occupy less than half of one division on the 20R scale (probably not reliably distinguishable).

POSSIBLE CAUSE: Inherent capabilities of the issued analog dosimeters are such that the low-range DRD would be far off-scale and the high-range DRD would not be sufficiently sensitive to record a readable response.

REFERENCE: NUREG 0654, K.3.a

EFFECT: Team members are not equipped with the field capability to determine when they are approaching a MUDAC-assigned turn-around value beyond the range of the low-range (0-200mR) dosimeter and below the sensitivity (and readability) of the high-range (0-20R)

dosimeter; therefore, the potential exists for them to unknowingly exceed the dose limit for emergency workers (5 rem Total Effective Dose Equivalent - TEDE).

RECOMMENDATION: Equip the field monitoring teams with a direct-reading dosimeter capable of registering, on the scale of the dosimeter, anticipated conservative turn-around values.

BENTON COUNTY EOC

Plan Issue Number: 69-04-5.a.1-P-05

CONDITION: No Public Inquiry telephone number(s) were included in the County News releases.

POSSIBLE CAUSE: All Press releases are pre-scripted without the public inquiry telephone number(s).

REFERENCE:

- 10 CFR Part 50, Appendix E
- NUREG-0654, E.5, 6, 7

EFFECT: Without publishing the public inquiry telephone(s) on the County news releases, the public inquiry calls will not be diverted to the Energy Northwest Joint Information Center (JIC) thereby overwhelming the Benton County Public Information Officer (PIO) with public inquiry calls.

RECOMMENDATION: Benton County PIO should review all pre-scripted news releases to include the public inquiry telephone numbers.

FRANKLIN COUNTY EOC

Plan Issue Number: 69-04-5.b.1-P-06

CONDITION: Production of News Release #6 on the Agriculture Advisory for Franklin County was slow. The draft was received at 1006 from Benton County. The recommendations included not drinking fresh milk produced since 0936, or eating vegetables or produce picked or harvested since 0936. It was edited to include the correct roads that served as boundaries, and finally sent to the Joint Information Center (JIC) around 1058. (It was distributed at the JIC by 1130.) It also asked them to listen to KONA 610 AM and 105.3 FM for the latest information, but none of the Emergency Alert System (EAS) messages broadcast contained information on the Agriculture Advisory, and this advisory was for an area outside the Emergency Planning Zone (EPZ). There was also no thought or discussion about translating and disseminating this advisory in Spanish. This news release did not mention the statement "Do not transport any agricultural products from the above area." A revised news release with this statement was produced and sent to the JIC at

1158. It was distributed at the JIC by 1209, but the news release number and time were not changed, and there was no indication that there was new or additional information in the news release.

POSSIBLE CAUSE: Review of draft news releases was not thorough.

REFERENCE: NUREG-0654, E.5, 7; G.3.a, G.4.c

EFFECT: The public in the advisory area would not have received the information about not drinking fresh milk produced after 0936 or eating produce picked after 0936 until 1130, and therefore could have consumed some contaminated products. Also, they could have transported contaminated products outside the area before receiving the information at 1209.

RECOMMENDATION: Emphasis in training the need to thoroughly review public information prior to its dissemination to the public and the media.

NOT DEMONSTRATED: 3.e.2. This criterion will be evaluated during the next FEMA-graded REP exercise in 2006.

Plan Issue Number: 69-04-6.d.1-P-07

CONDITION: (MS-1 Drill – Lourdes Medical Center). The incident was not confirmed by calling the 911 Dispatch or Franklin County as required on the "Notice of Incident" form.

POSSIBLE CAUSE: The team utilized an outdated form.

REFERENCE:

- NUREG-0654, F.2; H.10; K.5.a, b; L.1, 4
- "Notice of Incident" form, Appendix A, page 3 in the "Lourdes Medical Center Emergency Decontamination Plan"

EFFECT: The dispatch message could have been a hoax.

RECOMMENDATION: It is recommended that the correct "Notice of Incident" form be used, completely filled out, and notification instructions followed.