



Federal Emergency Management Agency

Region IX
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Presidio of San Francisco
San Francisco, California 94129

DEC 13 1999

Mr. Ellis Merschoff
Regional Administrator
U.S. Nuclear Regulatory Commission Region IV
611 Ryan Plaza, Suite 400
Arlington, Texas 76011-8064

Dear Mr. Merschoff:

We are enclosing the Final Evaluation Report for the April 28, 1999, Of-site Evacuee monitoring and Decontamination Drill for the Diablo Canyon Power Plant (DCPP). The report addresses the evaluation of the plans and preparedness for the public in the Emergency Planning Zone. We identified five issues during this exercise. We will provide a copy of the report to the State of California and monitor the correction of the identified issues.

The level of preparedness and the adequacy of the off-site radiological emergency response plans for the State of California and the jurisdictions site-specific to DCPP, together with the ability to implement these plans, were demonstrated in the referenced drill. Based on the results of this drill, we have determined that there is reasonable assurance that appropriate measures can be taken off-site to protect the health and safety of the public in the event of a radiological emergency at DCPP. Therefore, the Code of Federal Regulations, Title 44, Part 350 interim approval of the off-site radiological emergency response plans and preparedness for the State of California site-specific to DCPP will remain in effect.

Please contact me directly at (415) 923-7100, or your staff may contact Mr. Tom Ridgeway, Regional Assistance Committee Chair, at (415) 923-7277, if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Vallee Beesting for".

Martha Whetstone
Regional Director

Enclosure

cc: Ms. Vanessa Quinn, FEMA HQ
Mr. Charles L. Miller, NRC HQ



**Final Report
Evacuee Monitoring and
Decontamination Drill**

DIABLO CANYON POWER PLANT

Licensee: Pacific Gas and Electric Company
Drill Date: April 28, 1999
Report Date: December 9 1999

**FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION IX
Building 105, P.O. Box 29998
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I. EXECUTIVE SUMMARY

On April 28, 1999, an evacuee monitoring and decontamination drill at Camp Roberts was evaluated for the emergency planning zone (EPZ) around the Diablo Canyon Power Plant by the Federal Emergency Management Agency (FEMA), Region IX. The purpose of the drill was to assess the level of State and local preparedness in responding to a radiological emergency. This drill 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 November 4, 1998. The most recent evacuee monitoring and decontamination drill at Camp Roberts was held on April 30, 1994. The qualifying emergency preparedness exercise was conducted on August 19, 1981.

FEMA wishes to acknowledge the efforts of the many individuals who participated in these drills.

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 these drills.

This report contains the final evaluation of this drill.

The local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were 5 Areas Requiring Corrective Action (ARCA) identified as a result of this drill. One ARCA from the 1994 drill was corrected.

REPORT CREDITS

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II. INTRODUCTION

On December 7, 1979, the President directed 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 Rule 44 CFR 350 establishes the policies and procedures for FEMA's initial and continued approval of 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 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 (Federal Register, Vol. 58, No. 176, September 14, 1993); and
- Coordinating the activities of 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 RIX Regional Assistance Committee (RAC) which is chaired by FEMA.

Formal submission of the RERPs for the Diablo Canyon Power Plant to FEMA Region RIX by the State of California and the involved local jurisdictions occurred on May 31, 1988.

State and local Radiological Emergency Preparedness plans are required, in NUREG-0654/FEMA REP 1, Rev. 1 (November 1980), to designate primary and back-up medical facilities capable of providing appropriate care to injured/contaminated individuals originating from the off-site effects of an incident at a nuclear power plant. One or more of these facilities are usually exercised as part of the biennial State/Local REP exercise. Others may be exercised during the off-year period. At least one evaluated medical drill must be held each year at each nuclear facility, according to NUREG-0654 Planning Standard N.2.c.

An evacuee monitoring and decontamination drill was evaluated on April 28, 1999 by FEMA Region RIX to assess the capabilities of local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Diablo Canyon Power Plant. The purpose of this report is to present the results and findings on the performance of the off-site response organizations (ORO) 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 RIX RAC 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-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and
- FEMA-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology," September 1991.
- FEMA Guidance Memoranda MS-1, "Medical Services," November 1986.

Section III of this report, entitled "Overview," presents basic information and data relevant to the drill. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities which were evaluated.

Section IV of this report, entitled "Evaluation and Results," presents detailed information on the demonstration of applicable objectives 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 drill, recommended corrective actions, and (2) descriptions of unresolved ARCAs assessed during previous drills and the status of the OROs' efforts to resolve them.

III. OVERVIEW

Contained in this section are data and basic information relevant to the April 28, 1999, Evacuee Monitoring and Decontamination Drill to test a portion of the off-site emergency response capabilities for the area surrounding the Diablo Canyon Power Plant. This section of the report includes a description of the plume pathway EPZ, and a listing of all participating jurisdictions and functional entities which were evaluated.

A. Plume Emergency Planning Zone Description

The State of California has designated a Basic Emergency Planning Zone (BEPZ) which extends out from a 10-mile circle around the plant to include surrounding cities. The BEPZ includes the following areas:

Towns and cities: Arroyo Grande; Grover Beach; Morro Bay; Pismo Beach; and San Luis Obispo.

Unincorporated areas of San Luis Obispo County: Avila Beach; Baywood Park; Cayucos; Cienega Valley; Clark Valley; Indian Knob; Los Osos; Los Osos Valley; northern Nipomo Mesa; Oceano; Port San Luis; Prefumo Canyon; Price Canyon; San Luis Bay Estates; See Canyon; Squire Canyon; and Sunset Palisades.

Institutions: California Men's Colony; California Polytechnic State University; Camp San Luis Obispo; and Cuesta College.

Parks and Recreational Areas: Cayucos State Beach; Los Osos Oaks State Reserve; Montaña de Oro State Park; Morro Bay State Park; Morro Strand State Beach; Oceano Dunes State Vehicle Recreational Area; Pismo State Beach; Pirate's Cove; and Whale Rock Reservoir Recreational Area.

B. Participants

The following agencies, organizations, and units of government participated in the Diablo Canyon Power Plant Evacuee Monitoring and Decontamination Drill on April 28, 1999.

RISK JURISDICTION

San Luis Obispo County
Department of Social services
Health Care Agency, Public Health Nursing Division
Office of Emergency Services

STATE OF CALIFORNIA

California Conservation Corps
California National Guard-Camp Roberts

PRIVATE/VOLUNTEER ORGANIZATIONS

Amateur Radio Emergency Services/Radio Amateur Civil Emergency Services
American Red Cross-San Luis Obispo County Chapter
Pacific Gas & Electric Company

OTHER DRILL SUPPORT

Paso Robles High School

IV. EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the April 28, 1999 evacuee monitoring and decontamination drill to test the off-site emergency response capabilities of local governments in the EPZ surrounding the Diablo Canyon Power Plant.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in exercise objectives contained in FEMA-REP-14, REP Exercise Manual, September 1991. Detailed information on the objectives and the extent-of-play agreement used in this drill are found in Appendix 3 of this report.

A. Summary Results of Evaluation - Table 1

The matrix presented in Table 1, on the following page, presents the status of all objectives from FEMA-REP-14 which were scheduled for demonstration during this drill by all participating jurisdictions and functional entities. Drill objectives are listed by number and the demonstration status of those objectives is indicated by the use of the following letters:

- M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior drills)
- D - Deficiency assessed
- A - ARCA(s) assessed or unresolved ARCA(s) from prior drill(s)
- N - Not Demonstrated (Reason explained in Subsection B)

Table 1. Summary Results of Evaluation

Date and Site: April 28, 1999-Diablo Canyon Power Plant

JURISDICTION/FUNCTIONAL ENTITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Camp Roberts Reception and Care Center					A														A	M													

LEGEND:

M = Met (No Deficiency or ARCAs assessed) A = ARCA(s) assessed and/or unresolved prior ARCAs and no unresolved prior ARCAs
 N = Not Demonstrated D = Deficiency(ies) assessed Blank = Not scheduled for demonstration

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 objective demonstration status.

- **Met** - Listing of the demonstrated objectives under which no Deficiencies or ARCAs were assessed during this drill and under which no ARCAs assessed during prior drills remain unresolved.
- **Deficiency** - Listing of the demonstrated objectives under which one or more Deficiencies was assessed during this drill. Included is a description of each Deficiency and recommended corrective actions.
- **Area Requiring Corrective Actions** - Listing of the demonstrated objectives under which one or more ARCAs were assessed during the current drill or ARCAs assessed during prior drills remain unresolved with a description of the ARCAs assessed during this drill.
- **Not Demonstrated** - Listing of the objectives which were not demonstrated as scheduled during this drill and the reason they were not demonstrated.
- **Prior ARCAs - Resolved** - Descriptions of ARCAs assessed during previous drills that were resolved in this drill and the corrective actions demonstrated.
- **Prior ARCAs - Unresolved** - Descriptions of ARCAs assessed during prior drills which were not resolved in this drill. Included is the reason the ARCA remains unresolved.

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

- A **Deficiency** is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance that could cause a finding that off-site 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 FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance that is not considered, by itself, to adversely impact public health and safety."

FEMA has developed a standardized system for numbering issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering issues among FEMA Regions and site-specific drill reports within each Region. It is also used to expedite tracking of 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.
- **Year** - The last two digits of the year the drill was conducted.
- **Objective Number** - A two-digit number corresponding to the objective numbers in FEMA-REP-14.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in drill reports.
- **Issue Identification Number** - A separate two (or three) digit indexing number assigned to each issue identified in the drill.

**TABLE 2
EXERCISE ISSUES**

LOCATION	NEW ISSUE(S)	PREVIOUS ISSUE(S) RESOLVED	PREVIOUS ISSUE(S) UNRESOLVED
Camp Roberts Reception and Care Center	19-99-5-A-1 19-99-18-A-2 19-99-18-A-3 19-99-18-A-4 19-99-18-A-5	ARCA #26 (1994)	NONE

o DETAIL

The County of San Luis Obispo in support of the Diablo Canyon Power Plant (DCPP) off-site response organization, held a drill at Camp Roberts on April 28, 1999, to demonstrate the adequacy of the radiological monitoring, decontamination and registration of evacuees, and for congregate care of evacuees. In response to a radiological event at DCPP, emergency response plans provide for a possible northerly evacuation of the residents of the Basic Emergency Planning Zone into Monterey County. In such a contingency, vehicles will be directed to the Monitoring and Decontamination Center at Camp Roberts off Highway 101. There the vehicles and their passengers will be monitored and decontaminated, if necessary.

There were three objectives established for demonstration, observation and evaluation at the Camp Roberts Monitoring and Decontamination Center (Objectives 5, 18 and 19). One objective was met, and ARCAs were identified for two objectives. One ARCA from the 1994 drill was corrected. Two periods to monitor six individuals were timed; one was done at the Registration Center and one at the Evacuee Monitoring and Decontamination Center. The average processing time was ten seconds per individual (the result of 45 seconds for one and 65 seconds for the other). Based on this average time, two portal monitors would be necessary to monitor 20% of the expected population within 12 hours.

The drill was held out-of-sequence and the original time line was adjusted to provide a drill scenario that was initiated by a County Health Officer (CHO) decision to activate the Camp Roberts Facility at 0504 during an Emergency Classification Level of Site Area Emergency. The CHO then carried out his notification responsibilities including Pacific Gas & Electric Company (PG&E), the County Health Agency (CHA) and the County Department of Social Services (DSS). As planned, this would have initiated the activation, notification and operation of the Camp Roberts Facility.

The necessary supplies for the different Camp Roberts Facilities utilized by the County Response Team are stored in the San Luis Obispo area and the drill implementation allowed for the pre-staging of the necessary supplies at Camp Roberts. Necessary personnel arrived as prearranged between 0730 and 0800 and set up commenced upon their arrival. The drill was scheduled to begin at 1000.

The Drill was started after a safety and scenario briefing was provided to all participants by the Drill controllers and the specific facility controller determined that the facilities drill personnel were ready. The Drill started with the Vehicle Monitoring function and the Reception Center registration function.

VEHICLE MONITORING

The capability to continuously monitor and control radiation exposure to emergency workers was demonstrated by seven monitors and one Amateur Radio Emergency Services/Radio Amateur Civil Emergency Services (ARES/RACES) radio operator. At the Emergency Worker Command Center each person was issued a packet containing a thermoluminescent dosimeter (TLD) with an issue date of 12-15-98, a low-range CDV-138, 0 - 200 mR direct-reading dosimeter (DRD), an exposure record

card, a bottle of potassium iodide (KI) tablets with an expiration date of September 2000, and instructions for use of the KI. The DRDs were charged at the Command Center and the initial readings recorded on the record card. A charger is not included with the equipment taken to the vehicle monitoring location, which is approximately one mile from the Command Center.

They read their DRDs on an hourly basis. The team members did not know the 50 mR incremental reporting levels or the mission dose limit of 1.25 rem. They returned the dosimetry packets to the Emergency Worker Command Center.

The adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring of vehicles was demonstrated. Communication support was provided by a San Luis Obispo ARES/RACES operator. The vehicle monitoring team immediately set up the area using sawhorses linked with highly visible ribbon to direct vehicle traffic flow and instructions were on signs attached to the sawhorses. Supplies for the set-up were pre-staged in accordance with the extent-of-play agreements. There was a high-wind condition and the sawhorses had to be weighted down using any weights available to prevent their blowing over and the signs had to be tied to the sawhorses. Empty gunnysacks and a shovel should be added to their equipment inventory to make up sandbags for weighting and bungee cords to hold the signs to the sawhorses. Upon completion of the set-up the CDV-700 survey instruments were properly checked for operability including the correct response to the built-in check source. The instruments were calibrated in January 1999 and the date of calibration was stamped on the instrument. Five instruments were accepted for use and one was taped and labeled as "broken."

The monitoring team members were issued anti-contamination (anti-C) clothing consisting of shoe covers, coveralls, and gloves. At the vehicle monitoring location, the monitoring team put on the anti-Cs including two pairs of gloves. They changed the outer layer of gloves on a regular basis.

Six personnel were at the vehicle monitoring location and one was at the bus transfer location in the contaminated vehicle parking lot. All seven personnel were trained in the use of the CDV-700s. At the vehicle monitoring location one member greeted the occupants of the incoming vehicle and informed them of the monitoring process and the procedure to be followed should the vehicle be determined to be clean or contaminated. The drivers of clean vehicles were given a handout containing written instructions and directed to drive the vehicle with all occupants to the Evacuee Registration Parking area where they were to park their vehicles in the clean vehicle parking area. The drivers of contaminated vehicles were given a handout containing written instructions and directed to drive the vehicle with all occupants and park the vehicle in the contaminated vehicle parking area. The occupants were taken by shuttle bus to the Evacuee Decontamination Center. The handouts were to be left on the dashboard of the clean and contaminated vehicles to indicate the vehicle had been through vehicle monitoring. The instructions, however, were not on the dashboard of all vehicles. Security for the parked vehicles was not provided in accordance with the extent-of-play agreements and traffic direction and control personnel would be provided by the Camp Roberts National Guard upon request.

Two teams of two persons per team took large area swipes on the surface of vehicles (windshield, hood, top of vehicle, trunk, and wheel areas) and the two swipes from each vehicle were surveyed by a monitor using a CDV-700 to determine if the swipes exceeded the contamination limit of greater than 200 counts per minute (cpm) above background. Fourteen vehicles were monitored for an average time of approximately 1.5 minutes per vehicle or 40 vehicles per hour per monitor per two smear teams. The monitor was not being fully utilized since he was waiting for the next set of smears.

SOP III.06 HP-7 ENVIRONMENTAL HEALTH procedure identifies a minimum of four radiation monitors per shift for vehicle monitoring. Three monitors would be performing vehicle monitoring and one would be stationed at the shuttle bus area.

Additional personnel could be used to collect the smear wipes and the trained personnel could be used to operate the CDV-700 survey instruments. With this arrangement one person qualified to operate the CDV-700 could survey swipes from several teams. The observed vehicle-monitoring throughput would increase significantly. For example, the extent-of-play estimates twenty percent of the population that could evacuate to Camp Roberts is 4954. Based on 2.4 occupants per vehicle, an estimated 2064 vehicles could arrive at Camp Roberts. Therefore, 172 vehicles would have to be monitored per hour or 57 vehicles per monitor. Based on the aforementioned measured throughput, a monitor with three smear teams could process 60 vehicles per hour. Thus, three monitors with nine smear-collecting teams should be sufficient to monitor the expected number of vehicles at Camp Roberts. Consequently, the lack of personnel resources is not with the trained monitors but the availability of personnel to collect the smear wipes. These personnel could be readily available through a request from the State Office of Emergency Services (OES).

Checklist 1 - NOTIFICATION and MOBILIZATION in SOP III.06 - HP-7 ENVIRONMENTAL HEALTH states the State OES shall request assistance from the State Department of Health Services support for monitoring and decontamination which verifies the corrective action for Planning Issue #4 from the 1994 drill. Decontamination of vehicles would be addressed during the post-emergency phase of the event at the power plant.

A person was assigned to the contaminated vehicle parking area to greet the occupants in the contaminated vehicles. He informed them in a reassuring manner of the next step in the process, i.e, they would be bussed to the Decontamination Center where they would be monitored, told them to sit in separate rows on the bus, and loaded them on the shuttle bus. Upon return to this location, the interior and seats of the shuttle bus were smeared and surveyed for contamination before loading the next group of potentially-contaminated evacuees.

Upon termination of the vehicle monitoring, the team members correctly removed the anti-Cs and were given a whole-body survey to ensure they were not contaminated. They were uncertain of what they should do in the event they were contaminated as determined by the whole body survey. The shuttle bus was also checked for contamination at the close of the drill.

EVACUEE MONITORING AND DECONTAMINATION CENTER

The capability to continuously monitor and control radiation exposure to emergency workers was demonstrated. The monitoring personnel used appropriate dosimetry for their radiation exposure control. Each of the two monitors was assigned a TLD. The TLD number was recorded on the monitor's Radiation Exposure Record Log. At the end of the shift, the TLD was turned in at the Decontamination Administration Building. In addition to the TLD, each monitor was assigned a model CDV-138 0-200 mR DRD, a vial of KI, KI Instruction, and a personal exposure record were obtained and information completed as necessary. Consistent with the standard operating procedures (SOP), the DRD number is not recorded. By interview, the inspection of the DRDs for electrical leakage is performed quarterly and a list is maintained by the San Luis Obispo County OES with a letter on file at the regional FEMA Office.

Instructions were available on the use of the DRDs. A dosimeter charger, checked for proper operation, was available and was used to zero the DRDs prior to deployment. Each monitor read his DRD at least once per hour and at the end of the shift. The DRD readings, in units of milliRoentgens (mR), were documented on the monitor's Exposure Record Card. At the end of the shift, the Radiation Exposure Record Logs were turned in to the Evacuee Decontamination Center Manager.

The evacuee monitoring personnel were aware of their requirement to reset their DRD when it approached 175 mR with the authorization of the Evacuee Decontamination Center Manager. This reset along with the DRD exposure value was to be documented on their Exposure Record Card. The evacuee monitoring personnel were not aware of the maximum authorized mission exposure limit of 1250 mR. In addition, the monitoring personnel were not aware of their requirement to notify the Evacuee Decontamination Center Manager when their DRDs read approximately 50, 100, and 150 mR. One monitor did know that the maximum dose would be 5 Rem and that this could only be obtained if special permission authorized the dose.

The bus driver transporting potentially contaminated evacuees to the Evacuee Decontamination Center was not wearing dosimetry, but the driver transporting the evacuees free of contamination from the Evacuee Decontamination Center to the Registration Facility was wearing dosimetry. Though dosimetry for the bus drivers is not covered in the SOPs, the bus driver transporting potentially-contaminated evacuees should be equipped with appropriate dosimetry.

Initial Monitoring

The adequacy of facilities, equipment, supplies, personnel, and procedures for initial monitoring of evacuees was demonstrated. The San Luis Obispo CHA was responsible for the facility. Volunteers from PG&E conducted the initial evacuee monitoring. The facility had adequate space and resources for all activities and was set up to separate contaminated and non-contaminated individuals. SOPs were in place for personnel to perform their duties and to minimize contamination. SOPs were available and they were used.

The facility was equipped with two portal monitors (SAIC PPM-100 and Eberline PPM-1) and 42

CDV-700 survey instruments. Both portal monitors were set-up. Per the Plan, one portal monitor was used to monitor the evacuees and positioned at the entrance to the Evacuee Decontamination Center. By interview, the portal monitor operator stated that they would move the portal monitor inside if inclement weather became a problem. The other portal monitor was available as a backup in the event that the first portal monitor became inoperable. Consistent with the plan, two trained radiological monitors conducted portal monitoring activities. In addition, there were two other trained radiological monitors performing monitoring duties inside the Evacuee Decontamination Center who were capable of operating the portal monitors.

Prior to use, proper operation of the portal monitor was verified with a calibrated Cs-137 radioactive source with a radioactivity of 0.984 microCuries as of June 1, 1986. The applicable checklist in the plan (III.06 HP-7, Checklist 7B, page 36) states, "Perform a functional test using a one microCurie check source." The plan does not define how to perform the functional test. This should be formalized into an appropriate procedure. The functional test is not performed on the standby portal monitor. To insure that the second portal monitor is a viable standby, the SOP should also require a functional test on the standby unit.

An operational check was performed on all CDV-700 survey instruments. This operability check included battery check and a check with a radioactive source to verify proper instrument response. Each instrument was equipped with earphones. The probes were covered in plastic. All monitoring was performed with the beta shield open.

The Drill started with the Vehicle Monitoring function and the Reception Center registration function. Individuals in contaminated vehicles and individuals that alarmed the portal monitor set up at Registration were brought by bus to the Reception Center Monitoring and Decontamination Facilities. These evacuees were then monitored with the use of the portal monitor. The demonstrated monitoring techniques were consistent with the SOPs and sufficient to detect radiological contamination. A path leading to the portal monitor was very well defined by using barricades and colored rope. Those evacuees waiting to be monitored stood behind a line at least ten feet from the portal monitor. At this distance, there was very little chance that a contaminated individual waiting in line could influence the operation of the portal monitor. Initial monitoring of the evacuees was performed with the SAIC portal monitor. If the portal monitor did not alarm, the individual was provided a "clean" hand stamp and directed to the "clean" bus to be taken to complete the Reception Center Registration process. If an evacuee was found to be contaminated; i.e., the portal monitor alarmed, the evacuee was directed inside the decontamination facility where they were monitored using a CDV-700 survey instrument. If the CDV-700 detected radiation greater than 200 cpm above background, the individual was directed to decontamination. If the CDV-700 detected radiation less than 200 cpm above background, the individual was directed to the Evacuee Registration facility. Signs were visible advising the evacuees that they should bathe and change clothes within three days.

The time required to monitor six individuals using the portal monitor was 65 seconds.

The staff showed interest and caring for the evacuees, and worked well as a team, assisted each other, and showed knowledge and understanding of their activities.

The staff employed the following contamination control measures:

- the initial evacuee monitors wore gloves and booties;
- contaminated and uncontaminated individuals were separated;
- the portal monitor's sides and detectors were wrapped in plastic;
- the base of the portal monitor was covered in multiple layers of paper;
- after an individual would alarm the portal monitor, the monitoring personnel working on the "hot" side would change the paper on the portal monitor's base and surveyed his hands for contamination; and
- survey instrument probes were covered in plastic.

At the end of the drill, monitoring personnel surveyed the area and their equipment for contamination

Inconsistent with personnel performing other radiation monitoring activities, the radiation monitors performing monitoring of evacuees at the Decontamination Center wore one pair of gloves instead of two pairs. Checklist 8 of HP-7 instructs all Evacuee Decontamination Center Staff (but not staff doing the initial monitoring at the Registration Center) to don two pairs of gloves

The bus/van routes for transporting the contaminated and uncontaminated evacuees were not proceduralized. As the van drove to the rear of the Evacuee Decontamination Center to pick up the evacuees free of contamination, it drove over the same roadway that had been used by the bus transporting potentially-contaminated evacuees from the Contaminated Parking Area to the Evacuee Decontamination Center.

Evacuee Decontamination and Radiological Monitoring of Evacuee Possessions

The adequacy of facilities, equipment, supplies, personnel, and procedures for the decontamination of evacuees was demonstrated. The actual drill activation process started about 0800 and the monitoring/decontamination administrative barracks (#6316); the evacuee monitoring (outside Bldg. # 6315) utilizing a portable, portal monitor; and the Female Decontamination Facility (inside barracks #6315) were activated. The planned SOPs call for the establishment of both a female and male decontamination facilities; however, the extent-of-play agreement for this exercise allowed for the set up of only the female facility (Bldg. #6315). The set-up was accomplished in a very professional manner. Personnel were well trained in the necessary set-up SOPs for equipment such as the portal monitor and hand-held radiation detection instruments, and reference to SOP set-up figures was used to establish various activity areas. The facility was configured as shown in HP-7, Figure 5. The necessary facilities for monitoring and decontamination functions were set up in a timely manner and operational by 0900.

The Camp Roberts facilities provided have adequate space for the administrative, monitoring and decontamination activities except that there is only one entrance into the shower facility and this entrance is a very narrow space. The facility space available would allow for various contingencies such as inclement weather.

The radiation monitoring equipment used consists of one SAIC portable, portal monitor (in use), one Eberline portable, portal monitor (standby) and 42 CDV 700s.

There were five trained radiological monitors present that demonstrated the drill activities. Gloves were worn by all operating personnel, but the monitors only used one pair.

Check sources were available and utilized for the monitoring devices. The CDV 700 instruments that were used (some were spares) were all readied for use by referring to the provided SOPs which included putting in batteries, and checking the instrument for proper operation. The instrument was placed on the "X10" scale, the probe was placed against the instrument's check source and the scale deflection was checked to determine an acceptable scale range measurement. In addition, the correct operation of the provided earphones was also determined. If the check procedure results were not acceptable, the instrument was not put into service.

Individuals in contaminated vehicles and individuals that alarmed the portal monitor set up at Registration were brought by bus to the Reception Center Monitoring and Decontamination Facilities. These evacuees were then monitored with the use of the portal monitor. If the portal monitor did not alarm, the individual was provided a "clean" hand stamp and directed to the "clean" bus to be taken to complete the Reception Center Registration process.

If the portal monitor alarmed, the evacuee was directed into the Female Decontamination Facility. Since only one decontamination facility was operational, individuals were segregated and processed by gender. The inside monitoring and decontamination process included monitoring to determine if contamination was present in excess of 200 net cpm, creating a personal record (Form A), creating a "body-map" (Form B), securing contaminated personal items and clothing, showering to remove contamination, re-monitoring to determine the results of the decontamination, dressing in provided "clean" clothes, receipt of a "clean" hand stamp, and being bused to registration.

The inside evacuee monitoring was accomplished according to the provided SOPs. A distance of about 1/2 inch was maintained between the plastic covered probe and the individual being monitored, and the clothing of the individual was constantly being touched by the probe. The probe was used with the beta shield open (window open), the earphones were used, and all monitors used very good technique to listen with the earphones and not be distracted by watching the meter dial.

The monitor reported measurements detected on the evacuees to a recorder located at the administrative table in front of the monitoring area. This table was separated by a barrier tape and a barrier rope to prevent possible contamination of this "clean" area table by a person possibly contaminated and in the "contaminated" area. The set-up provided a very good separation to minimize the possibility of cross contamination.

The level used to determine if a person was contaminated is 200 cpm above background. The level was understood by all participants; however, the meaning of net cpm was not always understood. In addition although the 200 cpm was recognized and verbalized, it was not always used. In two

instances, one at initial, inside monitoring, and one at monitoring after showering, individuals with less than 200 cpm were directed to decontamination (#1) and directed to re-shower (#2). The incidence in the shower resulted in a process delay and a back up of evacuees.

After monitoring, non-contaminated evacuees (alarmed portal monitor but contamination did not exceed 200 net cpm), could be directed to the clean side of the facility, provided a "clean" handstamp, and sent to registration. Contaminated evacuees were escorted by a Public Health Nurse (properly dressed out in anti-C's, booties, and gloves) to a clothing removal/personal item monitoring and storage area, and then to the shower. There was some confusion regarding personal items and in one case the contaminated evacuee carried a small backpack into the shower.

The barracks shower area has only one entrance and exit; thus, contaminated and "clean" evacuees must use the same area. A barrier tape divides this area, but this does not really provide an effective "hot-line." The operating personnel have been very innovative in attempting to control this area such as ensuring that only one evacuee uses the space at any one time. However, a contaminated evacuee (feet) stepped across the barrier tape, which could have contaminated the "clean" side.

Inside the shower area, evacuees were provided good instructions for bootie removal and showering and containers were provided for used towels. The evacuees were then monitored to determine the results of decontamination. In one instance, an evacuee still had detectable radiation after showering; but the reading did not exceed the 200 net cpm. An observing State Health Physicist advisor directed the evacuee to re-shower. Re-showering did not decrease the measurement because scenario data was not designed for this exercise play incident. But the same "number" being present alarmed the evacuee. There was an explanation provided to the evacuee that, "although there was radiation still present, it did not present a level of concern. It was detectable, but it was not above the decontamination required level."

If "clean," evacuees were directed from the shower (wrapped in a clean towel), to the dressing area that was located in the second available cubicle and paper clothing was provided. Uncovered windows were present in this area, but this was recognized and plastic sheets to cover the windows in a real emergency were planned. A "clean" hand stamp is then provided and the "clean" evacuee is directed to the bus to be transported to registration.

Undressed Evacuees (wrapped in a clean towel) exited the shower area and walked about one-half way back through the area to reach the dressing area. The cubicles could perhaps be rearranged to utilize the last cubicle for the dressing area. This would provide more distance between the front of the building and the shower area. Evacuees leaving the shower area are undressed and would, thus, be exposed for the least distance by using the first cubicle outside the shower. The middle cubicle would then open from the opposite side and become the personnel item and clothing cubicle.

REGISTRATION CENTER

Initial Monitoring

The capability to continuously monitor and control radiation exposure to emergency workers was successfully demonstrated by the Evacuee Monitoring Team at the Registration Center. The team consisted of four trained monitors. Each worker was issued a kit containing a TLD, a 0-200 mR DRD, KI with a precautionary leaflet, and a radiation exposure record log. Records of the assigned TLDs were made at the time of issue. The DRDs were initially zeroed and read periodically, at least once every hour. The workers were instructed how and when to read the DRDs at the time they were issued. Readings were recorded in the exposure record log. Although the workers had access to a dosimeter charger at the decontamination center, a charger was not available at the registration center. This is not inconsistent with the agency's plan, however, it may pose a problem since the registration center is not located adjacent to the decontamination center. Evidence that DRDs were inspected for electrical leakage was obtained via interview with the Decontamination Center Manager. The manager stated that testing is performed quarterly by the County. Upon interview it was ascertained that evacuee monitoring team members were not aware of their exposure reporting limits. At the end of the drill, they returned their dosimetry and completed exposure record forms to the Decontamination Center Manager.

The adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring of evacuees was demonstrated by the Evacuee Monitoring Team at the Registration Center. Activation of the reception center was demonstrated out-of-sequence. They assembled one portal monitor and arranged a flow path with the use of plastic ribbon and barricades. The portal monitor and portable survey meters (i.e., CDV-700 meters equipped with earphones) were checked for proper operational response in accordance with the SOPs. Check sources were available and were used for the portal monitor and the portable survey meters. A backup portal monitor was also available inside the registration building but was not checked to determine if it was operational. The Decontamination Center Manager was notified by radio that the facility was operational at 1046.

Adequate space was provided for flow of traffic, monitoring, and separation of contaminated and clean individuals. SOPs were in place to minimize contamination of the facility. Only those individuals with a "clean" stamp on the back of their hand were allowed to enter the registration building. All persons without a stamp were instructed to go through the portal monitor; if the monitor alarmed the person was instructed to step back and re-enter the portal. If the portal monitor alarmed a second time, the individual was surveyed with a CDV-700. A person was considered clean if contamination was less than 200 cpm above background. This procedure was successfully demonstrated when one evacuee alarmed the portal monitor. The person was monitored with the survey meter and told that they were only slightly contaminated and need not worry; the person was stamped and sent into the registration building. The individual was not instructed to bathe and change

clothes when she got home and no signs with these instructions were posted in the area.

Contamination control measures were employed at the facility, including plastic covers over the instrument probes, paper covering over the portal monitor, separation of contaminated and uncontaminated individuals, and separate waste receptacles for contaminated and uncontaminated waste. The workers wore protective boots and gloves (only one pair), consistent with the SOPs. SOP HP-14 requires the monitors performing vehicle monitoring and the public health nurses involved in the decontamination of contaminated evacuees to wear double sets of gloves, but does not refer to anti-contamination clothing required for the monitors performing the initial monitoring of evacuees. Checklist 8 of HP-7 instructs all Evacuee Decontamination Center Staff (but not staff doing the initial monitoring at the Registration Center) to don two pairs of gloves. Checklist 5 of SOP HP-7 does instruct personnel monitors to don boots and gloves, but does not specify whether they should wear one or two pairs of gloves.

Workers did not survey themselves for potential contamination at the conclusion of their function; the controller told them they were finished and they interpreted this to mean the drill was over instead of meaning that they should demobilize.

Monitoring of six consecutive evacuees was accomplished in less than 45 seconds, which is consistent with the time-frame specified in the extent-of-play agreement. Monitoring with the portable survey meters was accomplished under 4 minutes per person, which is slightly longer than what is specified in HP-7 (2 minutes). The hand monitoring was thorough, but could have been accomplished in less time. Although this was not a problem during the drill, in an actual emergency the response-time must be quicker to process the evacuees. Good monitoring technique was demonstrated, which corrects ARCA #26 from the 1994 drill that identified with monitoring technique. Consistent with the SOPs, no monitoring records are required to be kept at this location.

Registration

The adequacy of procedures, facilities, equipment, and personnel for the registration of evacuees was demonstrated. The San Luis Obispo County Chapter of the American Red Cross (ARC) managed the registration function. The registration function was located in Building 5008 on the Camp Roberts facility. There were seven registrars; six of them were County DSS employees and one was from ARC. Several of the registrars were available to assist Spanish-speaking evacuees had this been necessary. Other organizations represented at the registration facility included the following: the California Conservation Corps who provided security, message routing, and escorted clients to housing; County Mental Health, providing crisis counseling; County Child Protective Services, and ARES/RACES, providing communication services. In addition to the functions already described, the ARC also provided Family Services and First Aid. Overall direction and management of the registration function was provided by the Head Registrar (supervisor), an ARC representative.

At 1000 a briefing was held for all drill personnel to inform them of the scenario for drill play. Following this briefing, all personnel reported to their duty stations. The first evacuees arrived by bus at the registration facility at 1100. Registration continued until approximately 1215.

The concept of operations for registration of evacuees provides that only evacuees monitored and found to be free of contamination are to be admitted to the registration facility. Accordingly, a monitoring station was set up immediately outside Building 5008. Once it had been determined that an evacuee was "clean" his hand was stamped to this effect and he was admitted to the registration building. All staff in the registration building are to be commended on their diligence in ensuring that evacuees in the building carried this stamp. The ARC supervisor monitored the registration process and ensured that evacuees were only admitted to the building when one of the seven registrars was ready to accept a new client. This minimized the crowding in the building.

Registrars processed evacuees by completing the ARC Disaster Shelter Registration Form (ARC Form 5972). Evacuees were screened for medical problems and their need for Family Services was ascertained. After completing the registration form, evacuees were directed to Family Services or allowed to go directly on to housing as appropriate. One point of confusion arose when evacuees indicated they had been separated from family members. In these cases registrars would frequently refer these people to Family Services. Family Services staff would then generate a Disaster Welfare Inquiry (DWI) using ARC Form 901. This was unnecessary since one copy of the Shelter Registration form 5972 was designed to be sent to the DWI operation located in an adjacent building. The Supervisor indicated that sending these copies to DWI was one of the highest priorities. Runners were dispatched to take these forms to DWI on a frequent basis.

Registrars were careful to ascertain evacuees' needs for special medical attention or crisis counseling. All registrars were observed to deal with clients in a caring, patient and empathetic manner. The time required to complete the registration form varied with the number of family members to be registered and their special needs, with an average of about three minutes per form. As of 1230, the Supervisor indicated that 61 people had been registered on approximately 36 Disaster Shelter Registration forms.

Evacuees were directed to the Family Services area if they had special needs. There were three staff available to handle the Family Service function. A staff person would frequently have to leave her desk to find the supervisor to get clarification or to ask one of the first aid staff a question. There was no one available to direct clients to a Family Services representative. Clients completing registration were guided to the Family services area by a registrar and then told to wait. Consideration should be given to having a staff person to oversee the Family Services function. This would reduce the confusion regarding which client was next in line and minimize the time that a client had to be left alone while the Family services worker sought clarification to an issue.

The scenario provided evacuees who had a variety of needs. Some of these included: a child separated from all other family members, a mother who needed diapers for her child, another mother who needed privacy in order to breast-feed her child, vision-impaired and mobility-impaired individuals. Again, Family Service staff are to be complemented on the caring attitude they displayed in dealing with clients.

A problem was noted in the registration procedure for the mobility-impaired person. The California Conservation Corps staff located at the entrance lifted the person, in a wheel chair, up the steps to

the registration building. This presented a safety issue to both the workers and the evacuee and does not conform to the procedure for handling mobility-impaired clients. The Supervisor stated that had she been aware that a client in a wheel chair was present, she would have had a registrar and other staff as necessary go outside to serve this client. Security staff at the building entrance should be informed of this procedure and be instructed to inform the supervisor when a mobility-impaired client arrives.

Once the registration process had been completed, evacuees were queued up inside near the rear exit from the building. They were escorted in groups of five or so to the appropriate shelter barracks by California Conservation Corps staff.

CONGREGATE CARE

The adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees was demonstrated. The San Luis Obispo County Chapter of the ARC fulfilled its primary responsibility of operation and management of the Camp Roberts Congregate Care Center (CCC). By extent-of-play agreement, the timing of CCC activation and operation was out-of-sequence for this drill. The ARC and support staff arrived at 0745 and began set-up of the CCC. At 0800, the ARC County chapter disaster director, who performed the chapter role in the Simulation Cell, provided a comprehensive 20-minute briefing to 88 CCC players. The director introduced the CCC on-site worker-in-charge, the shelter manager, and assistant, block manager and assistant, as well as ARC function leads for Communications, Disaster Welfare Inquiry, Family Service, Logistics, Mass Feeding, Mental Health, Physical Health, Public Relations, Records & Reports, and Registration. The director provided job descriptions for each player, parking and schedule information and emphasized that the chain-of-command within ARC functions would be observed. The lead controller joined the briefing by providing guidance on the appropriate roles and behavior of players, controllers, and evaluators. The lead controller provided a briefing at 1000 hours to indicate the current plant conditions and ECL and advised that the County Emergency Services Director had determined the need to activate the CCC and projected that evacuees would reach the RCC registration center at 1045 (actual time was 1102). The director clarified during the pre-drill interview at 1020 that the County Emergency Services Director had notified the DSS Director of the need to activate the RCC and its CCC. The DSS director then notified the County EOC ARC liaison, who in turn notified the director at the ARC County chapter.

The director indicated by interview that CCC support agencies included the following: CHA (public and mental health support staff), Camp Roberts (use of facilities, roads, logistics and security), RACES/ARES (amateur radio/packet radio communications support), California Conservation Corps (escorts, runners and logistical support staff), and the DSS (child protective services staff for minor children evacuees).

The director further indicated that the CCC capacity was 8,000 persons and by extent-of-play agreement, three (3) barracks buildings (5104, 5105 and 5106) would be activated to demonstrate separate facilities for: elderly, families with children, and single adults. The three (3)-enclosed diagrams depict the overall CCC building and floor plans of barracks administration (building 5121)

and ARC Administration (Building 5007). The shelter manager and director did not know how many evacuees to expect, but the shelter manager instituted the practice of completing CCC census reports every thirty minutes (1115, 1145 and 1215) to show the actual CCC population by individual barracks building. This procedure, along with the detailed bunk assignment logs maintained by each block manager, provided assurance that the capacities of the overall CCC and each barracks would not be exceeded.

This CCC did demonstrate the successful handling of visually and physically ill, a simulated service animal and injured evacuees. The chief controller and CCC controllers indicated that the ARC logistics staff would arrange outdoor facilities (portable tables and chairs) for evacuees in wheelchairs, since the buildings did not have ramps. However, the California Conservation Corps escorts actually lifted a wheelchair-bound evacuee up and down several stairs into and out of the registration building 5008. ARC and DSS registration, physical health services and family services workers provided all necessary aid to this evacuee inside building 5008 and indicated by interview that arrangements for transfer of the evacuee to a fully-accessible alternate CCC (City of Paso Robles Centennial Park) or a local motel could be made in a timely manner.

All essential services (shelter, food, sanitation, family assistance, child care, medical care, and first aid) were readily available to evacuees. The CCC had specific workers assigned as follows: ARC provided management (shelter manager & assistant, block manager and assistant), logistics (9), communications (3), nurses (8), mental health (5), registration clerks (2), cooks, kitchen helpers and servers (10), family service (7), public relations (1), and records & reports (2), California Conservation Corps provided escort/runners (16), RACES/ARES provided amateur radio operators (9), Camp Roberts provided personnel for building maintenance, sanitation and security staff, DSS provided mental health crisis counselors (9), social workers (5) and child protective service workers (3).

The CCC had ample space to support the following: Emergency medical care (available throughout the CCC), Reception and Registration (Building 5008), storage of food, supplies and serving of meals (Building 5101), Child Care and Recreation (Building 5120), and restrooms (Buildings 5007, 5008, and shelter barracks 5104, 5105 and 5106). The director indicated by interview that the ARC would not take responsibility for evacuees' personal belongings and possessions and in accordance with the ARC informational sheet provided to all evacuees, that personal items should not be brought to the CCC. The director clarified during the post-drill briefing (1430) that the interview question was answered only in the context of concerning large (furniture) and valuable items, which the individual evacuee would have to secure outside the CCC. The Camp Roberts facility has on-site resources available to provide necessary hot meals, drinking and all-purpose water, storage, toilets and sleeping space. Each 2-story barracks could accommodate 100 evacuees on each floor, allowing each evacuee 40 square feet of living/sleeping space. 25 of the 40+ available barracks buildings would be adequate for the number (4,954) of evacuees expected in the extent-of-play agreement. The second floor of each of three barracks buildings was not used during the drill because of incomplete construction of fire escapes. ARC had the following supplies available: paper products, cleaning supplies, comfort kits, registration supplies, and food preparation and service equipment. Camp Roberts Buildings 5101 and 5120 contained military mess hall equipment. Camp Roberts facilities contained electrical,

heating/cooling and sanitation equipment.

All CCC staff, especially the escorts, demonstrated that all evacuees had clean hand-stamps.

The CCC completed registration of evacuees in a timely manner and census reports were prepared every 30 minutes (1115, 1145 and 1215). There was a slight variance in the census counts (the shelter manager's reports indicated 57 evacuees, the enclosed ARC Disaster Shelter registration Form 5972's indicated 65 evacuees, and the barracks block managers indicated 60 evacuees. The ARC family service forms and physical health services logs matched perfectly with the actual on-site count. However, the number of DWI forms varied as the shelter manager reported 60 inquiries, the Records & Reports lead reported 18 inquiries, but the actual count of Form 2079 was 35. These variances did not, in any way, adversely affect the CCC operation, as the staff fully demonstrated in every instance a caring commitment and concern for the evacuees. One evacuee (Profile #13) with simulated asthmatic and other problems was tracked throughout the 1 and ½ hour drill from 1102 to 1240) because at every juncture the evacuee expressed a need for individual care. At the end of the drill, the evacuee expressed appreciation for the constant care and concern shown by numerous CCC escorts and workers assigned to 5 different buildings.

Areas Requiring Corrective Action

19-99-5-A-1. Exposure and Dose Control Limits

NUREG-0654 Reference: K.3.b

Objective #5

Demonstration Criterion #2

1. **Description:** Neither the vehicle monitoring team members nor evacuee monitoring personnel knew the incremental exposure reporting levels of 50 mR, 100 mR, etc. or the mission dose limit of 1.25 rem
2. **Recommendation:** Ensure that all staff that are required to wear a DRD receive appropriate training and that they understand the concept of the maximum authorized mission limit and that they understand their reporting requirements. Also, emphasize these in briefings.

19-99-18-A-2. Handouts not left on the dashboard of the monitored vehicles.

NUREG-0654 Reference: J.12

Objective #18

Demonstration Criterion #5

1. **Description:** The handouts to indicate the vehicle had been through vehicle monitoring were not left on the dashboard of all vehicles.

2. **Recommendation:** Train the greeter at the vehicle monitoring station to verbally state this directive to the driver of each vehicle.

19-99-18-A-3. Confusion Regarding Personal Items

NUREG-0654 Reference: J.10.h.,12

Objective #18
Demonstration Criterion #3

1. **Description:** An evacuee was allowed to carry a backpack into the showers. The backpack was not contaminated and the individual only had contaminated feet. Thus, a shower was not necessary and only the feet needed to be washed. But the backpack would have been cumbersome and could have become contaminated in the shower area. It should have been removed, checked again for contamination and transferred to the clean side to be picked up by the evacuee after decontamination.
2. **Recommendation:** Emphasize the adherence to SOPs regarding evacuee possessions during training.

19-99-18-A-4. Contamination Control

NUREG-0654 Reference: J.10.h.,12

Objective #18
Demonstration Criterion #1

1. **Description:** There was only one portal for the shower area in the Camp Roberts barracks. The staff had been very innovative in establishing control methods for this area. Traffic was constantly controlled in the area and this opening was divided in half by a barrier tape, but this was really not an effective barrier to prevent cross-contamination. One evacuee with contaminated feet did accidentally step across the barrier. The area should have been immediately smeared and surveyed, but both inside monitors were busy.
2. **Recommendation:** Emphasize contamination control during training. Consider assigning one additional monitor in each facility to be able to immediately take care of monitoring needs resulting from possible contamination of a "clean" area. This monitor could also provide a 5 or 10 minute break for the operating monitors.

19-99-18-A-5. Anti-contamination Clothing for Initial Monitors

NUREG-0654 Reference: J.10.h.,12

Objective #18

Demonstration Criterion #1

1. **Description:** Inconsistent with personnel performing other radiation monitoring activities, the radiation monitors performing monitoring of evacuees at the Decontamination Center and Registration Center wore one pair of gloves instead of two pairs. SOP HP-14 requires the monitors performing vehicle monitoring and the public health nurses involved in the decontamination of contaminated evacuees to wear double sets of gloves, but does not refer to anti-contamination clothing required for the monitors performing the initial monitoring of evacuees. Checklist 8 of HP-7 instructs all Evacuee Decontamination Center Staff (but not staff doing the initial monitoring at the Registration Center) to don two pairs of gloves. Checklist 5 of SOP HP-7 does instruct personnel monitors to don boots and gloves, but does not specify whether they should wear one or two pairs of gloves.
2. **Recommendation:** Train all monitoring and decontamination staff to wear two sets of gloves. Revise the SOPs defining the appropriate anti contamination clothing required for the monitors performing the monitoring of evacuees at the Registration Center. This SOP should include the requirement that two sets of gloves are to be worn.

Prior Areas Requiring Corrective Action-Corrected

26. Inadequate Monitoring Technique (1994)

NUREG-0654 Reference J.12

Objective #18

Demonstration Criterion #3

1. **Description:** The staff member performing the hand-held monitoring, in the Registration Area monitoring location, demonstrated inadequate capability in several aspects: the staff member often rotated the open window away from the surface being monitored, the monitoring was performed with the instrument set on the x100 scale, the speaker side of the earphone was oriented away from the ear, and the background count rate used as a base for establishing the presence of contamination was determined in an inappropriate manner.
2. **Recommendation:** Ensure that all staff have received appropriate training and understand all necessary concepts and processes before being used in a monitoring role.

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations that were used in this report.

ANL	Argonne National Laboratory
anti-Cs	anti-contamination clothing
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARES	Amateur Radio Emergency Services
BEPZ	Basic Emergency Planning Zone
CCC	Congregate Care Center
CD-V	Civil Defense - Victoreen
CFR	Code of Federal Regulations
cpm	counts per minute
CHO	County Health Agency
CHA	County Health Officer
DCPP	Diablo Canyon Power Plant
DRD	Direct-Reading Dosimeter
DSS	Department of Social Services
DWI	Disaster Welfare Inquiry
EEM	Exercise Evaluation Methodology
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FR	Federal Register
GM	Geiger-Müller
KI	potassium iodide
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, <i>"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980</i>
OES	Office of Emergency Services
ORO	Off-site Response Organization

PG&E	Pacific Gas and Electric Company
R	Roentgen
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
rem	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RIX	Region 9
R/h	Roentgen(s) per hour
mR	milliroentgen (10^{-3} Roentgen)
mrem	millirem (10^{-3} Rem)
SOP	Standard Operating Procedure
TLD	Thermoluminescent Dosimeter

APPENDIX 2

DRILL EVALUATORS

The following is a list of the personnel who evaluated the Diablo Canyon Power Plant Off-site Evacuee Monitoring and Decontamination Drill at Camp Roberts on April 28, 1999. The letters "(TL)" indicate evaluator Team Leaders after their names. The organization that each evaluator represents is indicated by the following abbreviations:

ANL - Argonne National Engineering Laboratory
FEMA - Federal Emergency Management Agency

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Vehicle Monitoring and Decontamination	Bill Serrano	ANL
Initial Evacuee Monitoring:	Daryl Thomé	ANL
Evacuee Decontamination	Dave Duncan	ANL
Initial Evacuee Monitoring Registration Center	Deborah Blunt	ANL
Registration	Richard Converse	ANL
Congregate Care	Dave Vargo	FEMA RIX

Richard Echavarria, FEMA RIX, Evaluation Team Leader
Tom Ridgeway, FEMA RIX, RAC Chair

APPENDIX 3.

OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the objectives which were scheduled for demonstration in the Diablo Canyon Power Plant Off-site Evacuee Monitoring and Decontamination Drill on April 28, 1999, and the extent-of-play agreement approved by FEMA Region IX.

The objectives, contained in FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991, 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 objectives 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 objectives.

A. Objectives

Listed below are the specific radiological emergency preparedness objectives scheduled for demonstration during this exercise.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

OBJECTIVE 18: RECEPTION CENTER-MONITORING, DECONTAMINATION AND REGISTRATION

Demonstrate the adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring, decontamination and registration of evacuees.

OBJECTIVE 19: CONGREGATE CARE

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by San Luis obispo County, and was approved by FEMA Region IX, in preparation for the Diablo Canyon Power Plant Evacuee Monitoring and Decontamination Drill on April 28, 1999. The extent-of-play agreement includes any significant modification or change in the level of demonstration of each exercise objective listed in Subsection A of this appendix.

2.0 Objectives and Extent of Play - Camp Roberts 1999

FACILITY LOCATIONS

1 CAMP ROBERTS

(A federal facility operated by the California National Guard)

Located approximately 45 miles north of the Diablo Canyon Power Plant and outside of the States Basic Emergency Planning Zone (BEPZ).

a. VEHICLE MONITORING AREA

Located **Inside the North Gate entrance (East Garrison Exit off of Hwy 101)** on G. Street. This includes an open area with large parking area for contaminated vehicles (if needed). PG&E personnel (in support of county operations) will demonstrate this function.

b. EVACUEE MONITORING and DECONTAMINATION AREA

Barracks number 6315 and 6316 on New Mexico Avenue will be used to demonstrate evacuee monitoring and decontamination. Evacuees from contaminated vehicles and contaminated evacuees detected at Registration report to these barracks for monitoring and decontamination. PG&E personnel (in support of county operations) will demonstrate the usage of portal and hand held monitors. Public Health Nurses activated by the County Health Agency will be responsible for decontamination inside one of the above listed barracks.

c. EVACUEE MONITORING AT REGISTRATION

Prior to entering the Reception and Care Registration Building~ 5008 (located at the corner of Arizona Blvd. and Ave. 15) all evacuees from clean vehicles will be monitored by PG&E personnel (in support of county operations).

d. ADMINISTRATION BUILDING

Building 5007 (located on Ave 15). The administration for the entire Congregate Care Functions will be demonstrated from this building. Functions performed in the Administration Building will include:

- Shelter Manager
- Health Services (Nursing Supervisor)
- Personnel
- Disaster Welfare Inquiries
- Logistics
- Communications
- ARES/RACES
- Security, and Public Relations/Public Information

2.0 Objectives and Extent of Play - Camp Roberts 1999

e. REGISTRATION BUILDING

Building 5008. The registration function for evacuees will be demonstrated in this building. Functions performed in the Registration Building include:

- Registration
- Housing Assignments
- First Aid
- Family Services

f. BLOCK MANAGER HEADQUARTERS BUILDING

Building 5121. The Block Manager Headquarters Building will house the Block Manager responsible for all barracks within the Block, a Block Nurse, and a Mental Health Counselor.

g. BARRACKS

Buildings 5104, 5105 and 5106. The Barracks Manager is the only function demonstrated within the barracks.

h. DINING HALL

Building 5101. The Feeding and Canteen Service functions will be demonstrated in this facility.

i. RECREATION HALL

Building 5102- The second dining hall will be used by the Recreation Coordinator as an example of a shelter indoor recreation area.

2. SIMULATED FACILITIES

No other emergency facilities will be demonstrated outside of Camp Roberts. For purposes of message delivery and information flow the following facilities will be simulated:

County Emergency Operations Center
American Red Cross Chapter Headquarters
Phone Assistance Center

3. TRAINING ACTIVITIES OUTSIDE THE SCOPE OF THIS EXERCISE

ARES/RACES Communications between Camp Roberts and the County Emergency Operations Center.

Attachment: Detailed Extent of Play. Submitted to and approved by FEMA Region IX.

2.0 Objectives and Extent of Play - Camp Roberts 1999

EXCEPTIONS TO EXTENT OF PLAY:

The following exceptions are proposed to be incorporated into the Extent-of Play by agreement with FEMA Region IX staff.

Exception 1. SET UP

The exercise will begin with facilities pre-set up. Set up of Decontamination area facilities will be done prior to the commencement of the Monitoring and Decontamination Drill. Mock evacuees will be cued in their vehicles at the north gate (Garrison Road entrance). Upon determination by the Lead Controller, the exercise will start. The supplies for the Camp will be pre-staged. Set of the decontamination barracks will be done as part of training. FEMA may observe the set up of the facilities prior to commencement of the evaluated exercise.

Exception 2. EXERCISE TIME LINE

The exercise scenario time line from the November 4, 1998 exercise has been modified to accommodate the start time of the Camp Roberts exercise.

Exception 3. OFF SITE SIGNING.

Cal Trans will not set up signing on the Highway to identify entrance gates. Regulations restricting the use of highway signing prevent this from occurring. An example of highway signing capability has been document on video tape for this exercise.

Exception 4. VEHICLE MONITORING.

Procedures for vehicle monitors at Camp Roberts identify large area swipes for screening of contaminated vehicles. Vehicle monitors will not monitor air filters, engine compartments or other interior areas of the car. The concept of operations is that if exterior contamination is discovered, the car is parked in the "contaminated vehicle parking area and left there until sufficient resources are available to do follow-up monitoring and decontamination. The plan identifies this as a recovery issue. Procedure III.6 HP-6 identifies that security is provided for in the "contaminated vehicle area. Security for this area will not be demonstrated.

Exception 5. PERSONNEL MONITORING

Exception 5.1 Decon Area (Build. 6104 and 6105).

Procedures call for establishing separate male and female decontamination barracks. The layout calls for separate monitoring stations outside of each Decon barracks. Two portal monitors will be set up. One will be in use. The other will serve as a back-up. Male and females will be segregated by gender and enter the operable Decon barracks at separate times. Persons who are monitored in the Decon area are registered by Public Health staff. NOTE: THIS REGISTERS THE PERSON AS HAVING BEEN MONITORED AT THE DECON AREA. REGISTRATION FOR CONGREGATE CARE TAKES PLACE AT THE REGISTRATION BUILDING 5008.

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Exception 5.2 Congregate Care Area (Reception building 5008).

Two portal monitors will be set up with one in use and the other serving as a back-up. Monitors at this location do not register evacuees. Evacuees are instructed to enter the Registration Building where Social Services and ARC register people using the appropriate forms. All evacuees that are registered at this location must first be monitored

Exception 6. DECONTAMINATION CENTER

Procedures call for establishing separate male and female barracks for decontamination. One barracks will be established and in use during the exercise. For this exercise, mock evacuees will be segregated and be processed through decontamination by gender.

Evacuees that are monitored at the Decontamination Center are registered by Public Health personnel. This registration process is solely to register evacuees that have been monitored, and if necessary, decontaminated at the Decontamination Center. Registration for the Congregate Care Center takes place in Registration Building 5008.

Nasal swabs are required to be implemented only at the discretion or direction of the County Health Officer. This will not be demonstrated during this exercise. No evacuees will disrobe or shower during this exercise. No evacuees will be directed to don alternate clothing during this exercise.

Exception 7. EMERGENCY WORKER EXPOSURE CONTROL (EWEC)

Only personnel in monitoring and decon functions are required to use exposure control equipment and procedures. These workers have and will use Exposure Control Equipment in accordance with their procedures. Exposure control tracking was successfully demonstrated in the November 4, 1998 exercise and will not be demonstrated in this exercise. Knowledge of the use of dosimeters and exposure log forms will be demonstrated.

Exception 8. CAMP ROBERTS PARTICIPATION

Constraints have resulted in some limitations on the number of CANG personnel that are involved in Camp Roberts Exercise. For example, for this exercise, Camp Roberts personnel are demonstrating security on a limited basis.

Exception 9. NUMBER OF EVACUEES

The population of evacuees is drawn from the San Luis Obispo County Cities Nuclear Power Plant Emergency Response Plan. The estimated population, for the 10 mile area around the Diablo Canyon Power Plant, that could evacuate north to Camp Roberts is 24,769. Twenty percent of this number is 4,954. This number does not include school populations as they are moved early in the emergency and do not go to Camp Roberts. A rate of 413 evacuees per hour is needed to monitor twenty percent of the population in a 12 hour time frame. Portal monitors

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are used for this function. It is estimated that each evacuee would need about seven seconds to be monitored through the portal monitoring stations. Assuming operation of the monitor for 50 minutes per hour, 429 evacuees could be monitored per hour per portal monitor. This translates into 5,143 people monitors in a 12 hour time frame. The result is that one portal monitor is needed at the Camp Roberts facility to monitor twenty percent of the population in a 12 hour time frame. The 10 mile area of federal jurisdiction consists of Protective Action Zones 1, 2, 3, 4 and 5.

The State of California has requested that FEMA provide a courtesy evaluation of the monitoring and decontamination for the Diablo Canyon Emergency Planning Zone outside of 10 miles. This area consists of Protective Action Zones 1, 2, 3, 4, 5, 8 and 9. The total population, including transient population, on a normal weekday is 94,526. Twenty percent of this number is 18,905. Using the same monitoring rate above, a total of 4 portal monitors are needed to accommodate the 20% population figure. The County has nine portal monitors available for use.

Exception 10. SPECIAL NEEDS POPULATIONS

The Camp Roberts facility is not well suited for handling special needs populations, such as wheel chair bound personnel. Persons requiring special needs attentions or handicapped facilities are monitored and registered at the Camp Roberts Facilities and then assigned to another facility off of the Camp Roberts premises in accordance with standard ARC procedures. During real emergencies, supplemental resources to accommodate larger numbers of special needs populations would be requested through standard mutual aid channels. These resources could include construction personnel to add ramps to existing barracks structures to make them wheel chair accessible. This will not be demonstrated (see Exception 10).

Exception 10. Supplemental Resources

The standard emergency management protocols allow for the procurement of supplemental resources. During times of emergencies, local governments can make requests for supplemental assistance from the State and federal governments. Mutual Aid systems exist in the State of California. These systems allow for the procurement of additional resources from state, local and federal sources. If shortfalls of resources occur or are identified during the conduct of the exercise, the mutual aid systems will not be implemented during this exercise.

Exception 11. TRAINING ACTIVITIES OUTSIDE THE SCOPE TO THIS DRILL

ARES/RACES volunteers will be involved in a concurrent training exercise. While several ARES/RACES volunteers will be at Camp Roberts assisting with inter-camp communications, other ARES/Races volunteers may be in locations outside of the Camp. Only the communications within Camp Roberts are the subject of this evaluation. Communications between the outside ARES/RACES volunteers and the Camp will not be evaluated as these communications will be for training purposes only.

The County Public Health Nursing Staff will have two shifts of Decontamination Center personnel at Camp Roberts. Public Health may practice a shift change of Decon personnel as

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a training exercise. Based on input from the Governor's Office of Emergency Services, the shift change at the Decontamination Center is not a FEMA REP requirement and the shift change is not proposed for evaluation. We request that FEMA observe the shift change and provide courtesy comments under separate cover from the exercise evaluation report.

Exception 12. Set Up of Facilities

FEMA will be welcome to observe the set up of Camp Roberts facilities. Minor exceptions to setup include:

1. Positioning of Monitoring and Decon Supplies at the appropriate stations
2. Telephone lines and furniture necessary for the drill will be propositioned and activated.
3. Drill participants will not be called out but rather will be given a specific time to report to the Camp.

Exception 13. TERMINATION OF EXERCISE FOR REAL EMERGENCY EVENTS

The Drill Director may terminate the exercise should emergency conditions occurring in San Luis Obispo County or at Camp Roberts require the attention of emergency response personnel participating or controlling the Exercise.

EXTENT OF PLAY AGREEMENT

The Objectives and Extent of Play will be reviewed by FEMA Region IX staff. The Extent of Play identifies the extent of demonstration by Point of Review. This Objectives and Extent of Play package constitutes the agreed upon FEMA REP Objectives and the level of participation and demonstration for this exercise. Upon approval of this Extent of Play and Objectives, any subsequent FEMA or FEMA contractor requests to modify this Extent of Play and Objectives must be made in writing and must be received by San Luis Obispo County OES no later than thirty days prior to the date of the drill.

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This Objectives and Extent of Play document addresses the FEMA required demonstration of Radiological Emergency Preparedness Objectives 18, 19 and 5. The demonstration of these objectives will be accomplished at drill held at Camp Roberts on April 28, 1999. This drill is a continuation of the DCPD emergency response exercise held on November 4, 1998. The scenario for this drill will be sent under separate cover

Demonstrate the adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring, decontamination, and registration of evacuees.

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J.10.h.,12.

18. 1. At what time and at what emergency classification level (ECL) did the response organization determine that activation of reception centers was necessary?

This was demonstrated during the November 1998 Exercise (see EOC Messages #s 21 and 23).

Time 1017 hours ECL Site Area Emergency

Please note that for the April 28 Exercise, this time frame will be revised in the scenario to accommodate the actual start time of the drill

J.10.h.,12.

18.2. What organization(s) was responsible for demonstrating the following?

Monitoring Pacific Gas and Electric

Decontamination SLO County - Health Agency

Registration SLO Co. Chapter American Red Cross and SLO Co. Dept. of Social Services

J.10.h.,12.

18.3. Was the reception center activated prior to the arrival of evacuees?

The reception center will be activated out of sequence, on April 28, 1999, as a separate drill involving Congregate Care and Evacuee Monitoring and Decontamination. Due to the need to coordinate with other activities taking place at the Camp Roberts facilities, the drill will begin and be run with facilities activated.

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J.10.h.,12. 18.4. At what time was the reception center operational?

The Reception Center will be set up and drill participants will start in place. The estimated start time for the drill is 1000 hours. Set up of facilities will occur prior to the start time for the drill.

J.10.h.,12. 18.5. Was there adequate space for the following?

Monitoring activities will take place at three locations. Evacuee vehicles entering the Camp will be monitored using large area swipe method. People from vehicles identified as being contaminated will be taken to the monitoring and decontamination barracks. They will be monitored and if contamination is found, they will be decontaminated. Then the people will be monitored again at the exit location for the decontamination area. A third monitoring station will be set up prior to the entrance at the Registration building. This area will check all persons that do not have stamped hands indicating that they have been monitored and are clean. The procedures used will be HP-6 and HP-7.

J.10.h.,12. 18.6. Was the facility set up to separate contaminated and non-contaminated or clean individuals?

The above (POR 18.5) describes the set up to assure separation of contaminated and non-contaminated persons (Procedure HP-7)

J.101.12. 18.7. Were procedures in place to minimize contamination of the facility?

Procedures call for minimizing contamination by first screening vehicles as they enter the facility and directing contaminated vehicles to a designated parking area. Persons from contaminated vehicles are taken to a monitoring station and checked for contamination. If contamination is found on the person, decontamination procedures are initiated. The person is monitored again and if monitored at less than 200 counts per minute above background, as measured by a CDV 700, they are bused to the registration facility.

If the vehicle is found to be free from contamination, the vehicle is sent to a parking area near the registration building. There, the people will exit the vehicles and will be monitored prior to entering the Registration Building. If people are found to be contaminated, they will return to their

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vehicle and drive to the "contaminated vehicle" parking lot and then take the bus to the decontamination center. If people are clean, their hand is stamped and they are allowed to enter the registration building.

1.8.
 J.12.

18.8. What types of survey instruments or portal monitors and how many of each were available for monitoring evacuees?

TYPE OF INSTRUMENT NUMBER AVAILABLE

Pacific Gas and Electric owns and maintains a total of 8 portal monitors. Seven of these are kept in the San Luis Obispo area, usually at the Pacific Gas and Electric Co. Service Center in the City of San Luis Obispo. One portal monitor is in the City of Santa Maria. SLO County has a cache of CDV-700 instruments made available from the State

Eberline PPM-1 portal monitor 5

SAIC PPM- 100 (or equivalent) 3

CDV 700 (or equivalent) 40

For the drill, there will be two portal monitors (one of which is a back-up monitor) at the barracks used for monitoring and decontamination and four hand held monitoring staff.

There will be two portal monitors (one of which is a back-up monitor) outside or near the Registration area and two hand held monitors

Additional portal monitors or hand held monitors may be provided as needed

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J.12

18.9. How many trained radiological monitors were present to operate portable survey instruments?

Procedure HP-7 identifies a total of four trained monitors per barracks. The monitoring and decontamination process is structured to be flexible with the use of either hand held monitoring or portal monitors. The basic process is that people initially walk through the portal

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monitor. If the portal monitor does not alarm then it is determined that there is no contamination, the people are "clean" and their hand is stamped. If the portal monitor detects contamination, the person is sent to a hand held monitor that will attempt to characterize the contamination in terms of its location on the person. The person is then decontaminated and a second hand held monitor will check the person to assure that the decontamination was successful

At the Registration Building, persons whose vehicles were "clean" must go through a portal monitor prior to entering the Registration Building. If the portal monitor does not alarm, the person is allowed to enter the registration building. No monitoring records are kept at this location. If the portal monitor detects contamination, the person is monitored again using a hand held monitor, and directed to drive their vehicle back to the remote vehicle parking area where they will be bussed to the decontamination barracks.

(a) Was this number consistent with the number of radiological monitors specified in the pre-exercise agreement for this center? (Secure and attach a list of trained monitors for each shift.)

A list of trained monitors will be provided by the Drill Controller

H.10.
J.12.

18-10. Were check sources available to verify proper operation of portable survey instruments?

A check source exists on the CDV-700 instrument itself. The check source verifies that the instrument is functioning. If the instrument is not functioning properly, another instrument is used. Portal monitors are serviced by the utility (PG&E). A check source to verify functioning of portal monitors is brought and used by PG&E.

(a) Was the proper reading (or range of readings), on a CDV-700, for a particular check source available for each instrument or unit?

The check source verifies that the meter is functioning. The instrument is replaced if it is not functioning.

(b) Were all survey instruments or portal monitors checked for proper operation including reading of the check source?

Hand held instruments are serviced on an annual basis. Portal Monitors are serviced by PG&E and are on a regular service and maintenance schedule that includes verification of proper operation of

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equipment. Monitoring instrumentation is checked at the Camp Roberts facility prior to it's use.

H.10
J.12

18.11. Were portable survey instruments equipped with earphones or speakers?

All hand held monitors are equipped with earphones. Portal monitors have a loud alarm sound that is easily heard.

NOTE: Answer PORs 18.12-14 only if portal monitors were used as a major method for detecting contamination.

H.10

18.12. How many personnel were present who were trained to set up and operate the portal monitors?

A minimum of one per monitor. Monitoring personnel are cross trained in the operation of both portal and hand held monitors. A list of trained monitors will be available from the Drill Controller (Same as POR 18.9).

18.13 Was a check source available to verify proper operation of the portal monitors?

See POR 18 10 (b) above.

(a) Was the proper reading (or range of readings) for a particular check source available for each unit?

This is done as part of the regular maintenance.

(b) Were all portal monitors checked for proper operation, including reading of the check source?

The basic concept is that regular service and checks of the portal monitor is one means of assuring the proper operating condition of the equipment. If equipment is found to be in a non-operating condition, it is taken out of service and replaced with either another portal monitor, or a hand held monitor. A check source is used to verify that the portal monitor is functioning prior to it's use at the monitoring location. This is done by PG&E personnel.

© Were all the portal monitors at this location operable?

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To be determined at the time of the drill.

(d) If any were not operable explain:

RADIOLOGICAL MONITORING OF EVACUEES

J.10.h.,12. 18.14. How long did it take to consecutively monitor six individuals for contamination with the portal monitors?

To be determined at the time of the drill. FEMA REP 14 establishes that 20 percent of the EPZ population allocated to the reception center should be capable of being monitored in 12 hours. The number of individuals actually monitored will be dependent upon the number of mock evacuee volunteers that agree to participate. Scenario information submitted to FEMA will provide the estimated population that accounts for 20% of the EPZ population that would be directed to go to Camp Roberts

(a) Were individuals, who were found to be contaminated, monitored again with a portable survey instrument prior to being decontaminated?

Individuals that are identified by portal monitors as being potentially contaminated should be monitored again by hand held monitor devices to attempt to locate the area of contamination

18.15. Were provisions made (e.g., signs or handouts) to advise evacuees who were monitored and found not contaminated to bathe and change clothes at their convenience within three days?

A sign advising people to bathe within three days will be posted near the reception center

J.12 18.16. How long did it take for each radiological monitor to consecutively monitor six individuals with portable survey instruments? (The specific number of portal monitors/radiological monitors needed for this demonstration should be established in the pre-exercise agreement.)

RADIOLOGICAL MONITOR	TOTAL MONITORING TIME FOR SIX INDIVIDUALS
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The time used for drill will be consistent with the FEMA REP 14 guidance to monitor 20% of the federal area of jurisdiction that includes the portion of population, in Protective Action Zones 1, 2, 3, 4, and 5, allocated to Camp Roberts. The primary method for initial monitoring will involve the use of portal monitors making this POR not applicable for hand held monitors. The total number of portal monitors needed for the demonstration to meet the FEMA requirement for monitoring is one.

H.10. 18.17. Were portable survey instruments equipped with earphones or
J.12. speakers?

Yes, see response to POR 18.11

(a) Was monitoring for contamination accomplished with the beta shield open?

Hand held monitoring devices are used with beta shields open (Procedure HP-7). This POR is N/A for portal monitor use.

H.10 J.12 18.18. Were individuals re-monitored after they were decontaminated?

Procedure HP-7 (See Decontamination Guides and Procedures Section) calls for hand held frisk monitoring of individuals to verify the effectiveness of decontamination procedures.

J.9.12. 18-19 What action level was used to decide whether or not an individual required decontamination? (Provide action level for each type of instrument.)

A reading of 200 counts per minute above background (on a CDV-700) is used as the threshold for decontamination. This is determined by the hand held monitoring device.

TYPE OF INSTRUMENT	ACTION LEVEL
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CDV 700 (or equivalent)	>200 CPM above background
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J.12 18.20. Were the demonstrated monitoring procedures sufficient to

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detect radiological contamination at the level specified in the

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organization(s) plan?

The level of 200 counts per minute above background (on a CDV-700) is the threshold level specified in Procedure HP-7

J.10.h.,12

18.21. Were contamination control measures employed at the reception center?

Contamination control procedures are identified in Procedure HP-7 (See POR 18.5).

(a) If yes, check those measures used.

- Monitors wore gloves
- Covered survey instrument probes with thin plastic
- Temporary covers on walkways
- Other (Specify)

All of the measures marked above are part of the procedures used at Camp Roberts.

DECONTAMINATION OF EVACUEES

J.10.h.,12

18.22. Check the decontamination measures that were simulated or demonstrated. (Indicate YES, NO, N/A, or N/O in the space provided for each item. Use S for simulated and D for demonstrated.)

YES NO S/D N/A N/O

- S- Removal of contaminated clothing -
Decontamination personnel will inform evacuees of the steps they would be requested to do but will not ask evacuees to disrobe
- S- Use of shower facilities -
Decontamination personnel will inform evacuees of the steps that they would be requested to perform but will not request

that shower facilities be used Evacuees will walk into the shower

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area but water will not be turned on

- S- *Use of sink or wash basin if only extremities were contaminated - Decontamination personnel will describe to evacuees the steps they would need to perform to wash hand or extremity contamination but will not request sink to be used with running water.*

- D- *Re-monitoring of decontaminated individuals - Contaminated personnel will exit shower area and be re-monitored using hand held CDV 700 instruments.*

J.10.h.,12

18.22. Check the decontamination measures that were simulated or demonstrated. (Indicate YES, NO, N/A, or N/O in the space provided for each item. Use S for simulated and D for demonstrated.)

- D- *Provisions of changes of clothing for individuals after decontamination - Provisions for changes of clothing would be provided by the utility and will be made available by decontamination center staff. However, evacuees will not disrobe and change into the clothing.*

- D- *Method for separating and containing contaminated clothing and other materials (e.g., plastic bags). - Procedure HP-7 identifies the method for separating contaminated clothing and other materials. Decontamination center personnel will describe the process for handling these articles as provided for in Procedure HP-7. No clothing or articles will taken from the mock evacuees for this demonstration.*

- ___ *Other (Specify) _____*

J 10.h.,12

18.23 Were provisions or procedures for separate male and female showers available?

Procedure HP-7 identifies the establishment of separate male and female shower facilities. Barracks and shower facilities are identical. One barracks shower facility will be set up to demonstrate decontamination procedure. For purposes of this drill, male and female evacuees will utilize the same facility.

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J.9.12

18.24. Were individuals with fixed contamination above the action level established in the plan referred to a medical facility? (This information should be obtained through an interview if not demonstrated.)

Procedure HP-7 includes referral to a medical facility for individuals with fixed contamination, greater than the threshold limit of 200 counts per minute. This will be demonstrated by interview with the Decontamination Manager.

- (a) Describe alternative procedures that were followed for those individuals not referred to a medical facility.

Procedure HP-7 identifies the method for handling fixed contamination. This procedure calls for the referral to a medical facility once it is determined that the contamination is fixed.

REGISTRATION OF EVACUEES

J.12

18.25. Was each individual registered upon completion of monitoring and/or decontamination?

All individuals that are monitored at Camp Roberts are registered. Individuals from vehicles that are found to be clean are monitored outside of the Registration building and are subsequently registered by the American Red Cross in accordance with Standard Operating Procedure # III.23 - American Red Cross. Individuals that are in vehicles that are contaminated are monitored at the decontamination center with documentation of the monitoring and decontamination activities. These individuals are subsequently transported to and registered with the American Red Cross at the Registration building.

- (a) If yes, check the registration method(s) used.

Audio tapes
 Computerized forms
 Paper forms
 Video tapes
 Other (Specify)

- (b) If yes, did the registration record include the following information? (Indicate YES, NO, N/A, or N/O in the space provided for each item)

YES Name

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YES Address

YES Telephone number

-NO Results of monitoring for contamination.

Records of monitoring results are not made at the at the Congregate Care Registration Building. Persons monitored and filling out ARC registration forms are determined as having been monitored and found clean.

-YES Time of decontamination (if any)

_____ Other (Specify) _____

The Red Cross. Registration will be done after an individual has been monitored and found to be "clean". Standard American Red Cross Forms are used for this registration. These forms are also found in Standard Operating Procedure III.07 Social Services on page 15. Records of monitoring and decontamination done at the Decontamination Center are maintained by the County Health Agency. The records for monitoring and decontamination include the name, address telephone number and other relevant information to allow follow-up information (See Procedure HP-7)

J.12

18.26. Were records established for each contaminated individual? (If available, attach sample form.)

Records of each contaminated individual are kept by the Decontamination Manager (see Procedure HP-07). Initially, the records are maintained by the Decontamination Manager and turned over to the County Health Officer. Long term follow-up is a joint responsibility of State Department of Health Services and County Health.

18.27. Were registration records used for locating and reuniting families?

The standard American Red Cross Disaster Welfare Inquiry system will be demonstrated in the registration facility.

RADIOLOGICAL MONITORING OF VEHICLES AND EVACUEE POSSESSIONS

I.8

18.28 What types of survey instruments were used to monitor

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vehicles and evacuee possessions?

The standard instrument used to monitor vehicles is a CDV-700 (or equivalent). Vehicle monitoring is done for all vehicles that arrive at the Camp Roberts facilities. Vehicles are initially monitored using surface area wipe down. The wipe is then checked for contamination. If the wipe indicates contamination, the vehicle is directed to a separate parking area. The concept of operations is to keep the vehicle secured in the parking area. Vehicle decontamination is a Recovery issue that is dealt with when sufficient outside resources (State and Federal) are available. Procedure HP-6 is the operable procedure for vehicle monitoring. HP 7 is the operable SOP for monitoring and handling possessions. Vehicle decontamination will not be demonstrated.

Evacuee personal possessions are monitored when the evacuee steps through a portal monitor. Subsequent monitoring of possessions may be necessary based on the results of the portal monitoring. Specific evacuee possessions may be monitored by hand held monitors if the portal monitor indicates the presence of radioactive materials above threshold limits. This will be demonstrated within the context of the scenario for at least one evacuee.

H.10. 18.29. Were check sources available to verify proper operation of survey instruments?

Check sources are on the CDV-700 instrument itself

- (a) Was the proper reading (or range of readings) for a particular check source available for each instrument?

Equipment is maintained in accordance with HP-7

H.10. 18.30. Were portable instruments equipped with earphones or speakers?

Instruments are equipped with earphones (see POR 18.11).

- (a) Were earphones or speakers used when monitoring for

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contamination?

Earphones are used

(b) Was monitoring accomplished with the beta shield open?

Procedure HP-6 requires monitors to use an open beta shield.

J.12

18.31 Did the vehicle monitoring procedure include monitoring the following areas? (Indicate YES, NO, N/A, or N/O in the space provided for each item.)

- Air intake filter
- Grills
- Wheel areas
- Bumpers
- Tires
- Other (Specify) _____

Procedure HP-6 (the Evacuee Vehicle Monitoring Section) specifies that the person doing the monitoring, will use a clean non-contaminated wipe over a large representative area, including the hood, roof, trunk, tires and wheel wells. The monitor will then bring the survey meter probe to within 1/2 inch of the wipe. If the instrument reads over 200 counts per minute above background, the vehicle is considered contaminated. No monitoring of the air intake filter is done at this stage. If contamination is to be found, it will be present on one of the portions of the vehicle identified above. If the vehicle is contaminated, it is directed to the contaminated vehicle parking area

J.12

18.32 Were the demonstrated monitoring procedures sufficient to detect radiological contamination at the level specified in the organization(s) plan?

The level of 200 counts per minute above background is the threshold level specified in Procedure HP-6.

J.12

18.33. What action level(s) was used to initiate decontamination of vehicles and evacuee possessions?

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The threshold limit for decontamination is 200 counts per minute above background.

J.12

18-34. Were contaminated vehicles and evacuee possessions separated from uncontaminated vehicles and evacuee possessions and moved to an isolated area?

Contaminated vehicles are parked in a separate parking area, located well away from the reception and congregate care area. These vehicles are impounded until sufficient resources are available to initiate decontamination procedures. The decontamination of evacuee vehicles is a Recovery Phase issue and will not be demonstrated during the drill. If required by FEMA evacuee possessions that are identified as contaminated will be bagged and labeled as necessary. If not required, this issue will be handled by interview during the drill.

J.12

18.35. Were uncontaminated individuals kept away from vehicles and possessions that required decontamination?

Yes, per Camp Roberts layout and Procedures HP-6 and HP-7.

18.36 What action level was used to release vehicles and evacuee possessions with fixed contamination?

Vehicles are not decontaminated during this phase of the emergency. Important possessions, such as wallets and purses, are checked for contamination. The contents are also checked and if less than 200 cpm above background, they are returned to the individual. If the contents are greater than 200 cpm above background, the procedure requires that decontamination be attempted. Decontamination of evacuee possessions will not be demonstrated (Refer to HP-6 for vehicles and HP-7 for evacuee possessions).

(a) If fixed contamination levels exceeded action level, what procedures were followed?

If contamination cannot be removed, the possessions are labeled and the person is informed that his possessions will be secured, and decontaminated and returned to the person at a later time. Decontamination of possessions will not be

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OBJECTIVE 18 March, 1999

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demonstrated (See POR 18.36).

J.12.

18.37. Was adequate equipment available to decontaminate vehicles and possessions found to be contaminated? (This information may be obtained through an interview, if equipment not available or not demonstrated.)

The concept of operations establishes decontamination of vehicles as a Recovery issue. Vehicles found to be contaminated are placed in a separate parking area. No vehicle decontamination takes place in the emergency phase at Camp Roberts. State and federal resources are called in to assist with vehicle decontamination during the Recovery Phase. Proper vehicle decontamination technique is demonstrated as part of the emergency worker monitoring and decontamination. This was demonstrated in 1997 by the City of Santa Maria/Santa Barbara County. A separate decontamination drill will be held at El Chorro Regional Park and Campground in San Luis Obispo County in 1999. The separate drill will specifically address vehicle monitoring and decontamination as part of FEMA REP Objective 22: Emergency Workers, Equipment and Vehicle Monitoring and Decontamination.

N.1.a

18.38. In the implementation of the activities associated with this objective, did the organization follow its plans and procedures?

To be determined during the drill.

18.39. Specify whether or not the following demonstration criteria were successfully demonstrated during this exercise using YES, N/O NO, or N/A.

1. The reception center(s) had adequate space available for the monitoring, decontamination and registration of evacuees and was activated and operational in a timely manner. (J.10.h., 12: PORs 18.1.-18.5.)

The Camp Roberts facility has adequate space available for the functions identified above. Approximately 8000 evacuees can be sheltered in the facility. An additional

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10,000 people can be sheltered with additional preparation time.

2. The reception center(s) had adequate and appropriate resources, was set up on logical order for its operation and control of contamination, and had trained staff and procedures sufficient to accomplish monitoring of evacuees within the time frames established in the organizations plan.

The layout of Camp Roberts and the implementation of Procedures HP-6, HP-7 and SOP III.07 Social Services and SOP III.23 American Red Cross provide the above.

3. Procedures and equipment for monitoring and decontamination of evacuees were adequate. (J.9., 10.h., 12; PORs 18:14.-18.24)
Standard Operating Procedure HP-7 will be demonstrated in accordance with the provisions listed above.
4. Evacuees were properly registered. (I.12; PORs 18.25, 18.27).
Standard Operating Procedures III.07 Social Services, III.23 American Red Cross and HP-7 provide for the proper registration of evacuees.
5. Vehicles and evacuees possessions arriving at reception center(s) were monitored for contamination and decontaminated, if necessary.
(H.10., I.8., J.9., 12j; PORs 18.28.-18.37)
Standard Operating Procedures HP-7 and HP-6 provided for monitoring of vehicles and possessions.

6. All activities described in the demonstration criteria for this objective were carried out in accordance with the plan, unless deviations were provided for in the extent-of-play agreement. (N.I.a; POR 18.38.)

To be determined during the conduct and evaluation of the drill

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 OBJECTIVE 19: CONGREGATE CARE February, 1999

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

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J.10.h.,12

19.1 What agency was responsible for managing the congregate care center or shelter?

The County of San Luis Obispo Nuclear Power Plant Emergency Response Plan defines the County Department of Social Services as the primary entity responsible for establishment and oversight of the Reception and Congregate Care Center (see SOP III.07). County Social Services works in conjunction with the American Red Cross. The American Red Cross has the primary responsibility for the operation of congregate care and disaster welfare inquiries (see SOP III.23)

County Social Services (see SOP III.07) is the agency that receives the notification to open Camp Roberts from the Command Group at the County EOC. County Social Services Coordinates with the American Red Cross in providing staff for registration, Disaster Welfare Inquiries and family services. Social Services communicates with the County EOC and other agencies involved in congregate care activities. Social Services coordinates with the County Engineer for transportation of evacuees at the congregate care center during Recovery

J.10 h. 12

19.2 What other agencies were represented at the center and what were their roles?

AGENCY	ROLE
--------	------

The following agencies will participate in the Congregate Care portion of the drill with their functions pre-identified as follows.

<i>Health Agency Public Health</i>	<i>Congregate Care Nursing Support</i>
--	--

<i>Mental Health</i>	<i>Counseling services at congregate care DEMONSTRATED TWO MENTAL HEALTH COUNSELORS</i>
----------------------	---

<i>Animal Services</i>	<i>Animal Control for congregate care - Not demonstrated</i>
------------------------	--

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AGENCY

ROLE

State Dept. of Health Services	<i>Health Physics Support for Monitoring and Decontamination.</i>
PG&E	<i>The utility provides portal monitors and trained monitoring personnel. All radiological monitoring of evacuees is done by PG&E personnel.</i>
Camp Roberts Personnel	<i>Provide use of facilities, facility security, on base traffic control and support for logistics - demonstrated and simulated - Camp Roberts will provide liaison support and will provide four to seven base personnel for traffic control and security.</i>
State OES	<i>Assists with logistical support for Recovery issues as requested by County EOC.</i>
RACES/ARES	<i>Provide back-up communications from Camp Roberts to the County EOC - DEMONSTRATED.</i>
Cal. Conservation Corp	<i>May be asked to assist American Red Cross with set up of congregate care and registration facilities - CCC assists with duties as runners, checks evacuees for hand stamps to assure they have been monitored and other support duties as needed</i>

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OBJECTIVE 19: CONGREGATE CARE February, 1999

OBJECTIVE 19: CONGREGATE CARE
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J.10.h. 19.3. Who made the decision to activate the congregate care center, at what time, and what emergency classification level (ECL)?

DECISION MAKER	TIME	ECL
----------------	------	-----

<i>Emergency Services Director</i>	<i>1017</i>	<i>Site Area Emergency</i>
------------------------------------	-------------	--------------------------------

The above action was taken by the County Emergency Services Director at the Command Table via written message to the Director of the County Department of Social Services at the County EOC on November 4, 1998 - the date of the FEMA evaluated exercise (EOC Message # 21).

For purposes of this drill activation times will be modified to accommodate the time and date of the drill.

(A) Who advised the congregate care center manager of the need to activate the center?

The Emergency Services Director (see above POR 19 3)

J.10.h. 19.4. At what time and ECL was the congregate care center activated?

TIME *1017 Decision to activate ECL Site Area Emergency
1140 Camp Roberts ready to receive evacuees*

J.10.H 19.5. According to the center manager, what was the capacity of the center?

By interview, the Center Manager will demonstrate familiarity with the facilities at Camp Roberts

19.6 Was the center manager told how many evacuees to expect?

This was demonstrated during the November 4, 1998 exercise Please see exercise documentation by Social Services and American Red Cross

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J.10.d.h

19.7. Was the center capable of handling disabled evacuees, such as those in wheelchairs?

Camp Roberts is not a facility that is suitable for disabled persons. Demonstration will include disabled persons registering at Camp Roberts and then, using standard American Red Cross Procedures, suitable accommodations in motels and hotels with handicap access are arranged by the ARC.

J.10.h

19.8. Were procedures available to make sure that center capacity was not exceeded?

This is a function that is accomplished as part of the administration of the congregate care function (SOP III.23). Camp Roberts personnel and the ARC work together to assure that sufficient space is available. Based upon the availability of barracks space, when it is determined that capacity of the facility may be exceeded, other arrangements may be made. This includes the possible use of military tents, and the opening of other ad hoc congregate care centers.

J.10.h

19.9. Were the following essential services available for evacuees? (Indicate YES, NO, N/A, or N/O in the space provided for each item.)

During the drill, the following essential services will be demonstrated as identified below

- | | | |
|-----------|---------------------|--|
| <u>XX</u> | Shelter | <i>Demonstrated by use of example barracks</i> |
| <u>XX</u> | Food | <i>Demonstrated by arrangement with outside food vendor (Note. According to Camp Roberts personnel, the facility has a 30 day supply of food on the base sufficient to accommodate 20,000 people).</i> |
| D | Sanitation services | <i>On base sewer system with bathrooms in every barracks, are used.</i> |
| D | Family Serv | <i>Demonstrated by ARC and Social Services</i> |
| | Child care | <i>ARC would request Social Services Child Protective Custody personnel to assist with</i> |

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	<i>unescorted children.</i>
D	First aid <i>ARC and Public Health nursing staff will be present. The base has a medical facility that will be available for this drill.</i>
	-D/S- Medical care <i>ARC nursing staff will be present during the drill. Serious medical problems would be referred to outside physicians or the Twin Cities Hospital in Templeton or other medical facility as determined appropriate.</i>

J.10.h

19.10. Did the center have the following staff available? (Indicate YES, NO, N/A, or N/O in the space provided for each item.)

To provide the essential services identified in 19.9, the following agencies will staff the facilities as follows:

	-YES	Managerial personnel	<i>ARC, Social Services and Camp Roberts management personnel will participate in the drill</i>
	YES	Nurses	<i>An ARC nurse will participate</i>
	YES	Registration clerks	<i>ARC and Co. Social Services staff</i>
<i>Not Demonstrated</i>	XX	Cooks	<i>Not Demonstrated - Kitchen Facilities are available but will not be used</i>
<i>Not Demonstrated</i>	XX	Kitchen help	<i>Not Demonstrated -see above</i>
	YES	Servers	<i>ARC staff will provide distribution of lunches and snacks</i>
<i>Not Demonstrated</i>	XX	Building maintenance pers	<i>Not demonstrated - Building maintenance is the function of Camp Roberts personnel</i>
<i>Partially Demonstrated</i>	XX	Security personnel	<i>Camp Roberts personnel are responsible for on base security - four to seven Camp Roberts</i>

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personnel will participate in the drill for security purposes if they are available. Camp Roberts is a military base and can rapidly increase the number of personnel needed for security purposes.

Not Demonstrated XX Sanitation personnel *Camp Roberts has a sanitation plant that is run by on base personnel. Specific individuals will not be assigned to sanitation for the exercise.*

YES Crisis counselors *One or more Mental Health Counselors will be assigned to the congregate care function.*

YES Social workers *County Department of Social Services is present at Reception Center. Social Service Personnel will be participate in the Drill*

XX Child care personnel *Social Services Child Welfare organization would be contacted by ARC if unattended children arrive at the Congregate Care Center. Child care will not be demonstrated during the drill.*

YES *Interviews to assess needs of evacuees and make assistance referrals ARC and Social Services accomplish this function. It will be demonstrated during the drill.*

J 10.H. 12

19.11 Did the center have space allocated to support the following?
 (Indicate YES, NO, N/A, or N/O in the space provided for each item.)

The following identifies the facilities and functions that are available at Camp Roberts

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- YES Emergency medical care *The base has a medical clinic. Major medical problems are referred to hospitals.*
- YES Reception *Camp Roberts will be set up to accomplish the functions necessary for a reception center*
- YES Registration *Registration Center will be established. From there people can either go to congregate care at the base or leave the base.*
- YES Serving of meals *ARC will provide coffee and snacks. Lunch will be provided at the end of the drill. Camp Roberts has multiple kitchens and mess halls throughout the base.*
- YES Storage of food *On base supplies of food at Camp Roberts are substantial. An estimate provided by the base was food supplies were sufficient to serve 20,000 people three meals a day for thirty days.*
- YES Storage of supplies *On base supplies include supply storage (bedding, blankets, pillows and other necessary supplies for congregate care*
- YES Storage of evacuee belongings *Ample room exists on the base to store evacuee belongings.*
- XX Child care *On base facilities (unused barracks or mess halls can be established as child care recreation areas.*
- YES Restrooms *Each barracks has restroom facilities with showers. These would be designated by gender. One barracks would have women's restrooms, the adjacent barracks*

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would have mens restrooms. Signs will designate restroom locations

J.10.h.

19.12. Were the following services and resources [contained in the American Red Cross (ARC) planning guidelines] available for the center? (Indicate YES, NO, N/A, or N/O in the space provided for each item.)

The following resources are available at Camp Roberts. The extent of utilization of resources is described below

-YES- Two hot meals a day

Due to the limited duration of the drill, hot meals will not be served. Kitchen facilities and on base food supplies are clearly capable of meeting this requirement.

-XX- Midday lunch for children, the elderly, expectant and nursing mother, and individuals doing heavy work.

Lunch will be served by ARC during the drill See previous discussion.

-YES- At least one quart of drinking water per individual per day

An on-base water supply is more than adequate to meet this requirement. Potable water exists in barracks facilities.

-YES- Five gallons of all-purpose water per individual per day

On base water supply is adequate to meet this requirement

-YES- 2,500 calories or approximately 3 1/2 pounds of unprepared food per individual per day

On base food supply meets this requirement.

-YES- One toilet per 40 individuals

On base restroom facilities meet this requirement.

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YES Food preparation equipment *On base mess halls and supply caches contain sufficient food preparation equipment for up to 20,000 individuals.*

YES Heaters or fans *Barracks facilities have heat. Fans can be obtained through outside vendors as appropriate.*

J.12.

19.14. Did the center screen evacuees entering the facility to make sure that they had been monitored for contamination and were uncontaminated?

Arriving evacuees go through a series of checks to assure that contaminated persons are identified. Arriving vehicles are monitored using large area swipes. Contaminated vehicles are segregated and occupants monitored and if necessary, decontaminated. Occupants of non-contaminated vehicles are monitored prior to registration. A hand stamp is used to assure that the person has been monitored and is uncontaminated

J.10.h.,12.

19.15. Was the center capable of registering and tracking the evacuees entering the facility?

Evacuees are registered and assigned to a specified living areas. ARC Block captains assure that people are in their assigned living area. A block captain is assigned for a group of barracks. Persons that are registered and leave the Camp are not tracked once they leave the premises.

N.1.a

19.16. In the implementation of the activities associated with this objective, did the organization follow its plans and procedures?

The following procedures will be utilized for this drill. SOP III -07. SOP III.23. SOP 06 HP-6. SOP 06 HP-7. SOP 06 HP-1 1

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J.10.d.h.,12. 19.17. Specify whether or not the following demonstration criteria were successfully demonstrated during the exercise using YES, NO, NIA, or NIO.

N/A 1. Emergency operations center personnel determined the need to activate congregate care centers on the basis of scenario events and exercise play requirements. Providers of congregate care capable of meeting those needs were identified and contacted. (G.10.d.h.,12.; PORs 19.1-19.8)

This was accomplished during the November 4, 1998 exercise

XX 2. Managers of congregate care facilities demonstrated that the centers had resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrated the procedures to assure that evacuees had been monitored for contamination and were uncontaminated prior to entering congregate care facilities. (G.10.d.h.,12.; PORs 19.9-19.15)

Resources and personnel will be operating in accordance with plans and procedures. Previously identified procedures provide guidance for operation of reception, congregate care, monitoring and decontamination and all other functions to successfully operate a reception and congregate care center.

XX 3. All activities described in the demonstration criteria for this objective were carried out in accordance with the plan, unless deviations were provided for in the extent-of-play agreement. (N.I.a; POR 19.16)

The plan and procedures guide the activities necessary to accomplish the previously identified functions. The extent of demonstration is identified in the sections above.

A map showing the approximate use locations for the Camp Roberts facility as demonstrated in this draft Objectives and Extent of Play is attached

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers

NUREG REF

POINTS OF REVIEW

H.10., K.3.a.,b

- 5.1. Identify which group(s) of emergency workers (e.g., radiation monitoring teams and traffic control personnel) demonstrated this objective at this location.

Dosimetry must be worn by the following persons:

All persons performing monitoring or decontamination of persons or property.

All persons handling or guarding contaminated property or waste

- 5.2. Was a non-self-reading dosimeter assigned to each emergency worker?

(a) If yes, specify the type.

TLD *Used in Drill*

- (b) Was a record made of the non-self-reading dosimeter number assigned to each emergency worker?

Records of dosimetry are kept in accordance with SOPs HP-7, Guide # 2 and HP-11 EWEC

- © Where and when would the non-self-reading dosimeter be turned in for processing?

Where? _____ When?

At the end of the shift to "Command Center"

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

NUREG REF POINTS OF REVIEW

- 5.3. Did each emergency worker or team have a direct-reading dosimeter(s)?
- (a) If yes, identify the number and the full-scale range(s) of the direct-reading dosimeter(s).
Demonstrated during the drill. DRDs are 0-200 mR.
- (b) Was a record made of the dosimeter number(s) assigned to each emergency worker or team for each mission?
Not done per SOP
- 5.4. Is there evidence that the direct-reading dosimeter(s) was inspected for electrical leakage?
- (a) If yes, what is the most recent inspection date indicated?
This information has been provided to FEMA Region IX under separate cover.
- (b) Were all inspection dates within the time frames as stated in the plan?
Demonstrated during the drill.
- J.10.e., K.3.a.,b.,4 5.5. Were instructions available on how to use the dosimeter(s) and perform periodic readings on the direct-reading dosimeter(s)?
Demonstrated during the drill
- 5.6. Did each emergency response team have access to a dosimeter charger?
Demonstrated during the drill.
- (a) Was the charger checked for proper operation?
Demonstrated during the drill.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

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- 5.7. Were the direct-reading dosimeters zeroed and/or the initial readings recorded prior to deployment?
Demonstrated during the drill
- 5.8. Were emergency workers aware of their maximum authorized mission exposure limit?
Demonstrated during the drill.
- (a) If yes, what exposure limit did they indicate?
Demonstrated during the drill
- (b) Were emergency workers authorized to terminate their mission by their own decisions if a turn-back value was reached?
The Decontamination Center Manager oversees the exposure logs for Decontamination Center Staff and provides reassignment when Decon Center Staff approach Mission Limits.
- © What turn-back value(s) did they use?
1250 mR
- (d) Whom would they contact? Specify individual by title and organization.
Decontamination Center Manager, SLO County Public Health
- 5.9. Were the direct-reading dosimeters periodically read?
- (a) If yes, at what time intervals?
At least once per hour
- 5.10 Did each emergency worker have an exposure record or chart?
A radiation exposure record log (3X6" card) (see SOP HP-7: Guide 2, Form 1) is used.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

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- (a) Were individual exposures in Roentgens recorded at the end of each mission?
Exposure is recorded in mR.
- (b) Were emergency worker exposure records given to a designated individual?
Exposure records are given to the Command Center and then to the EWEC Desk at the end of the individual's mission.
- © If yes, identify this individual by title and organization.
Command Center and EWEC desk, and County Health Officer per HP-11.

5.11. Were emergency workers made aware of the potential need to take potassium iodide (KI) for thyroid blocking?
KI is not likely to be issued due to the location of the decontamination and congregate care facilities in relation to the plant. The Decontamination Center Manager addresses the issue of Emergency Worker Exposure Control as part of the operational briefing for activation of the Decontamination Center. Included in the briefing is the use of Form 1.

K.3.4

5.12. Were emergency workers, who were assigned special missions, briefed regarding higher dose limits authorized for these assignments?

- (a) If so, what limit was authorized for what type of assignment?
ASSIGNMENT _____ LIMIT _____

Due to the extremely low probability that the mission limits would be exceeded by staff at Camp Roberts, this will not be demonstrated.

- (b) Was any special administrative approval required for these higher dose limits?

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OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL

Not demonstrated. Approvals for exceeding exposure are clearly defined in HP-11. This was demonstrated during the November 4, 1998 exercise.

N.I.a

5.13. In the implementation of the activities associated with this objective, did the organization follow its plans and procedures?

To be determined as part of the exercise evaluation.

5.14. Specify whether or not the following demonstration criteria were successfully demonstrated during this exercise using YES, NO, N/A, or N/O.

H.10., K.3.a., b

_____ 1. The response organization utilized appropriate dosimetry for emergency worker radiation exposure control. (PORs 5.1-5.4)

To be determined as part of the exercise evaluation only for the monitoring and decontamination Center Staff that are identified in POR 5.1.

J.10.e., K.3.a., b., 4

_____ 2. Emergency workers periodically read, and at the end of each mission, recorded their dosimeter readings on the appropriate exposure record or chart. Procedures were followed to manage radiological exposure so that emergency workers did not incur excess dose. (PORs 5.5-5.11)

To be determined as part of the exercise evaluation only for the monitoring and decontamination Center Staff that are identified in POR 5.1.

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K.3.4 _____ 3. Appropriate decisions were made to send emergency workers into areas within the plume exposure pathway emergency planning zone where special missions required higher dose limits. (POR 5.12)

This POR is not applicable to this drill. This POR was demonstrated as part of the November 4, 1998 exercise.

N.I.a _____ 4. All activities described in the demonstration criteria for this objective were carried out in accordance with the plan, unless deviations were provided for in the extent-of-play agreement. (POR 5.13)

To be determined as part of the exercise evaluation only for the monitoring and decontamination Center Staff that are identified in POR 5.1 :

APPENDIX 4.

DRILL SCENARIO

This appendix contains a summary of the simulated sequence of events -- Scenario -- which was used as the basis for invoking emergency response actions by OROs in the Diablo Canyon Power Plant Off-site Evacuee Monitoring and Decontamination Drill on April 28, 1999.

This scenario, on the following page, was submitted by San Luis Obispo County, and approved by FEMA Region IX.

5.0 SCENARIO

5.1 NARRATIVE SUMMARY

The 1999 Camp Roberts Congregate Care Exercise is a continuation of the 1998 Annual Exercise.

Due to the severity of this accident, a General Emergency has been declared. San Luis Obispo County Direction and Control has mandated the evacuation of the following Protective Action Zones (PAZs):

PAZ #1 - 0-2 mile radius from the Diablo Canyon Power Plant.

PAZ #2 - 2-6 mile radius from the Diablo Canyon Power Plant.

PAZ #5 - Baywood Park, Los Osos, Turri Road, Los Osos Valley Road west of Turri Road, Clark Valley.

PAZ #9 - Route 1 west of Cuesta College, Morro Bay, Cayucos, Whale Rock Reservoir.

Camp Roberts has been activated, and the support personnel from the County and American Red Cross are ready to receive evacuees.

The timeline of the 1998 Annual Exercise has been modified to accommodate the performance of this exercise (See Section 5.2 Action Summary).

5.0 SCENARIO

5.2 INITIAL CONDITIONS

A loss of coolant accident (LOCA), complicated by a loss of all vital power, has resulted in significant core damage in the Unit-1 reactor. A pressure increase inside containment following the LOCA has resulted in a breach of containment integrity, and radioactive gases and fission products are being released to the environment via the Unit-1 plant vent. At this point San Luis Obispo County Reception & Care Centers are activated, and Department of Social Services (DSS) advises that Camp Roberts will be opened to receive evacuees.

5.3 TIMELINE

An overview of the events leading up to the evacuation of the public has been described in section 5.1. The following timeline is provided to detail the actions taken by San Luis Obispo County, the American Red Cross-San Luis Obispo Chapter, and the California National Guard at Camp Roberts. The underlined times listed below follow the timeline of the 1998 Exercise, developed from scenario events along with actual player response times. The modified times for purposes of this Congregate Care Exercise are bolded in the right column.

Annual Exercise Times 1998	Cong. Care Exercise Times 1999	
<u>0806</u> -	2:53	Alert #28 declared due to a bomb being found in the Residual Heat Removal (RHR) 1-1 pump room.
<u>0825</u> -	3:12	A second device detonates, causing a small radioactive release from a Gas Decay Tank.
<u>0923</u> -	4:10	Site Area Emergency (SAE) #17 is declared based on SEC judgement.
<u>0950</u> -	4:37	System disturbance cause loss of 500kV system and Unit-1 reactor trip.
<u>1000</u> -	4:47	230 kV startup breaker trips open, resulting in loss of all offsite AC power.
<u>1008</u> -	4:55	Diesel generators trip, resulting in loss of all onsite and offsite AC power.
<u>1017</u> -	5:04	EOC decision for activation of Congregate Care Center.
<u>1122</u> -	6:09	Offsite power is restored.
<u>1125</u> -	6:12	Camp Roberts is open for ARC and DSS to set up for evacuees.
<u>1207</u> -	6:54	Design Basis Loss of Coolant Accident (LOCA) occurs, and containment purge valves fail due to high containment pressure, resulting in release path to plant vent.

5.0 SCENARIO

5.3 TIMELINE (CONTINUED)

- 1210 - 6:57 Fuel damage is occurring and a high level radioactive release is now in progress.
- 1214 - 7:01 A **General Emergency** is declared due to LOCA with high containment radiation levels.
- 1215 - 7:02 Recommendation for evacuation of PAZs 1 & 2 submitted to Emergency Services Director located in County Direction & Control.
- 1220 - 7:07 Direction & Control issues a PAD to evacuate PAZ 1 & 2.
- 1304 - 7:51 Recommendation for evacuation of PAZs 1, 2, 5 & 9 submitted to Emergency Services Director located in County Direction & Control.
- 1310 - 7:57 Direction & Control issues a PAD to evacuate PAZs 5 & 9.
- 1405 - 8:52 San Luis Obispo Department of Social Services (DSS) advises that Camp Roberts will be opened to receive evacuees.
- 1435 - 9:22 California Highway Patrol closes off north and southbound traffic on highway 101 (north of Camp Roberts and south of Five cities area).
- 1513 - 10:00 Camp Roberts is ready to receive evacuees.