CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9710060366 DOC.DATE: 97/09/26 NOTARIZED: NO DOCKET #
FACIL:50-275 Diablo Canyon Nuclear Power Plant, Unit 1, Pacific Ga 05000275
50-323 Diablo Canyon Nuclear Power Plant, Unit 2, Pacific Ga 05000323

AUTH.NAME AUTHOR AFFILIATION
HAYS,J.A. Pacific Gas & Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

Revised 8/6/98

SUBJECT: Forwards proprietary rev 11C to EPIP EP-RB-8, "Emergency Off-Site Radiological Environ Monitoring." Proprietary revised EPIP witheld.

DISTRIBUTION CODE: A045D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 3+22
TITLE: OR Submittal: Emergency Preparedness Plans, Implement'g Procedures, C

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD4-2 LA	1	1	PD4-2 PD	1	1
	BLOOM,S	1	1			
INTERNAL:	AEOD/HAGAN,D	1	1	FILE CENTER 01	2	2
	NRR/DRPM/PERB	1	1	NUDOCS-ABSTRACT	1	1
EXTERNAL:	NOAC	1	1	NRC PDR	1	1 w/out Prop

C A T E G O R Y 1 D O C U M E N T

2nd Copy Rec'd

NOTE TO ALL "RIDS" RECIPIENTS:
PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL DESK (DCD) ON EXTENSION 415-2083

TOTAL NUMBER OF COPIES REQUIRED: LTTR 10 ENCL 10

Pacific Gas and Electric Company

Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, CA 93424
805/545-3627
Fax 805/545-4234

Jeffrey A. Hays
Manager
Site Services

September 26, 1997

PG&E Letter DCL-97-165

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
Emergency Plan Implementing Procedure Update

Dear Commissioners and Staff:

In accordance with Section V, "Implementing Procedures," of 10 CFR 50, Appendix E, enclosed is an update to the emergency plan implementing procedures for Diablo Canyon Power Plant, Units 1 and 2.

As provided under 10 CFR 50.54(q), the changes in this update have been made without NRC approval since they do not decrease the effectiveness of the emergency plan. The plan, as changed, continues to meet the standards of 10 CFR 50.47(b) and 10 CFR 50, Appendix E.

This update contains privacy/proprietary information that has been bracketed in accordance with NRC Generic Letter 81-27.

If there are any questions regarding this update, please contact Martin T. Hug of my staff at (805) 545-4016.

Sincerely,

Jeffrey A. Hays

Enclosures

A045

Ltr ENCL
PDR 1 1w/ø prop

060067

cc: Donald B. Allen
Steven D. Bloom
Ellis W. Merschoff - w/a (2)
Kenneth E. Perkins

DDM/1345

LOCATION OF PRIVACY/PROPRIETARY INFORMATION IN EMERGENCY PLAN IMPLEMENTING PROCEDURES FOR DIABLO CANYON POWER PLANT UNITS 1 AND 2

Procedure Number	Privacy/ Proprietary Information	Title/Location of Privacy/Proprietary Information
RB-8 Revision 11C	Yes	Emergency Emergency Off-Site Radiological Environmental Monitoring Page 2 and page 1 of Attachment 5.4

9

PACIFIC GAS AND ELECTRIC COMPANY
NUCLEAR POWER GENERATION
DIABLO CANYON POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

NUMBER	EP RB-8
REVISION	11B
PAGE	1 OF 12
UNITS	1 AND 2

TITLE: EMERGENCY OFF-SITE RADIOLOGICAL ENVIRONMENTAL MONITORING

WC

APPROVED: AUTO INC 1-17-95 4-20-95

DATE EFFECTIVE DATE

PROCEDURE CLASSIFICATION: QUALITY RELATED

TABLE OF CONTENTS

1. SCOPE

1.1 This procedure describes the emergency off-site radiological environmental monitoring program which would be undertaken in the event of an airborne release of radioactive materials. Instructions are provided to monitoring teams for sample point location, sample collection and field analysis.

1.2 On-site monitoring is described in EP RB-7.

2. RESPONSIBILITIES

2.1 Off-site teams shall be initially dispatched to the field by the Emergency Evaluation Coordinator (EEC) in the Control Room (CR) or the TSC Radiological Advisor (RA) in the Technical Support Center (TSC).

2.2 Upon activation of the Emergency Operations Facility (EOF), teams will receive instructions from the EOF Radiological Monitoring Director.

3. <u>INSTRUCTIONS</u>

3.1 INITIATING CONDITIONS

3.1.1 The Site Emergency Coordinator (SEC) declares an Alert, Site Area or General Emergency in accordance with EP G-1, "Accident Classification and Emergency Plan Activation." Off-site environmental monitoring teams may be dispatched for an Alert classification if deemed necessary by the SEC.

3.2 IMMEDIATE ACTIONS

3.2.1 Equipment for off-site environmental monitoring is available for four teams.

a. Three emergency kits (#s 1, 2, and 3) are located at the PG&E Service Center at 4325 South Higuera Street (South of Los Osos Valley Road) in San Luis Obispo (Mobile Environmental Monitoring Laboratory, or MEML, garage).

b. Two emergency kits (#s 4 and 5) are located in the Training Building, Room 126 (behind the elevator). One kit is reserved for the on-site monitoring team.

3.2.2 Deployment Instructions for Monitoring Teams

a. Retain your TLD when exiting the Protected Area.

<u>NOTE</u>: If called in from off-site, TLDs are available at the MEML and will be issued when reporting in to the MEML Operator.

b. Use a Chemistry/Radiation Protection truck, a TSC Manager's Company car, a DCPP carpool vehicle or personal vehicle to report to the MEML. Keys for available car-pool vehicles are located at the Admin. Building receptionist desk.

c. Upon arrival at the MEML garage contact the MEML Operator who will be coordinating the teams and providing a briefing prior to being dispatched and controlled by the Control Room, TSC, or EOF.

   1. Access to the MEML Garage requires a key code to open the door. If the field monitoring team members require the code, it is available in the High Rad Area key locker or Access Senior's Locker at Plant Access Control (x3247 telephones available in the Service Center Building). The code is also available from the ERA (x3310) and the RMD (x3181 or 549-8070).

d. PG&E team members will be paired with SLO County Environmental Health Department employees, depending on availability. Each monitoring team should consist of a minimum of one RP Technician and one County Health employee or two RP Technicians.

   1. The County has equivalent but not identical emergency kits and instruments. The County teams are ready to go when they arrive at the garage and need no further instructions. The County half of each team may elect to use its own vehicle for transportation.

   2. The PG&E team member will be the leader in this <u>joint</u> effort. The County and PG&E will coordinate together to produce one set of samples. No redundant sampling is necessary; however, the County may choose to take additional measurements and samples for its own use.

e. The FMT Kit <u>does</u> <u>not</u> need to be inventoried if it is found sealed. Instruments need to be checked prior to departure.

   1. Each emergency kit is comprised of two cases.

      a) Case A - contains the air sampling equipment, procedures and miscellaneous supplies.

      b) Case B - contains radiation dose rate and count rate instruments and dosimeters.

   2. Check all instruments, including air sampler (see Section 3.3.2.b and c), for operability.

3. Zero pocket dosimeters for self (0-200mR and 0-5R).

4. Review this procedure.

5. If time permits, prestage equipment (load air sampler heads, label coin envelopes, complete top of Field Data Sheets).

f. Obtain a respirator from the shelf. Select the correct size (S, M, or L) with cartridges and store in vehicle.

g. Don coveralls. Place gloves, booties and hoods in vehicle ready for immediate use when contamination is encountered.

h. Obtain hand-held radio off charger rack and call into the Emergency Operations Facility (EOF), Technical Support Center (TSC), or Control Room (CR) if neither the EOF or TSC is manned. Refer to Attachment 5.4 for proper radio protocol. Set radio to HP repeater frequency.

i. There may be On-site Dosimetry and Environmental Services (ODES) station wagons available. Inquire about possible use. If not available, use the Chemistry/Radiation Protection truck, DCPP Manager's car, the car-pool vehicle or personal vehicle you came in or the SLO County vehicle.

j. Check fuel gauge in vehicle; obtain fuel if necessary (check with MEML personnel). Put kits and respirator into vehicle. Keep count and dose rate instruments out in the front seat. Put both probes on front seat and keep instruments turned on. Keep procedure ready for reference.

k. Obtain TLDs from the MEML Operator.

l. Receive a predispatch briefing from the Field Team Coordinator or MEML staff member. When the briefing has been received, or if it is unavailable, then contact the EOF (or CR, TSC) via radio for directions and any updates on emergency status, radiological conditions and meteorology, plus directions to the first sample point.

m. Report in to the EOF (or CR, TSC) upon arrival at each new monitoring location or every hour, whichever is sooner.

3.2.3 If personnel and vehicle/equipment availability permits, a Field Team Coordinator may be used to transport samples from field monitoring locations back to the MEML for analysis.

3.2.4 Identification of Emergency Monitoring Locations

a. Monitoring locations used in this procedure are identified in Attachments 5.1 and 5.2, "Emergency Off-site Monitoring Locations" and "Description of Emergency Off-site Monitoring Locations." Attachment 5.1 map is for quick reference only. Use the more detailed maps in the kits to locate specific monitoring locations.

b. Alternate sample locations may be used as directed by the CR, TSC or EOF.

3.2.5 Radiological Precautions

a. Prior to initial Plume entry, contact the TSC or EOF for authorization to take Thyroid Blocking (KI) as a precaution to potentially high iodine conditions.

b. Initial TURNBACK VALUE is 500 mrem/hr for Plume entry and air sampling. This value shall be adjusted by the TSC RA (EOF ERM) when Iodine and Particulate concentration data has been analyzed in accordance with EP EF-1 (EP EF-3B).

c. The EOF, TSC or CR should refer to Attachment 5.5 for guidance on tracking and controlling field monitoring team exposures based on source term activity assumptions. (Prior to obtaining sample analysis results.)

d. Exit plume after taking air and smear samples (plus vegetation/soil/liquid samples, if so directed) and prior to counting the samples if elevated plume background levels preclude accurate counting.

e. When traveling from one location to another, always have a survey instrument on so that if a portion of the plume is traversed it will be recognized immediately.

f. Report readings to the TSC or EOF as changes are observed.

g. Place the car ventilation system on recirculation or off and close the windows whenever airborne contamination is encountered.

3.2.6 When arriving at the monitoring location, first obtain the INITIAL GROUND COUNT RATE.

a. Stay inside vehicle and lean out to survey the ground before stepping out to determine ground deposition.

b. Deduct 60 counts per min (cpm) for nominal background from the gross reading and record the net count rate on Form 69-9259, "Emergency Off-site Radiological Environmental Monitoring Field Data Sheet," Attachment 5.5.

c. If contamination level exceeds 100 net cpm direct frisk, notify the EOF or TSC.

<u>NOTE</u>: The EOF or TSC will direct you to either leave the area immediately or proceed with rad monitoring after donning additional protective clothing and/or respirators; this may first require moving.

d. If contamination level is under 100 net cpm, or when you have complied with EOF or TSC directions for monitoring a contaminated area, proceed with instructions directly following and in Section 3.3, Subsequent Actions, as amended by the EOF or TSC.

e. If allowable, exit the vehicle and obtain a general area ground count rate reading (gross cpm - 60 cpm = net cpm).

f. Record the follow up general area ground net count rate on the Field Data Sheet and report the data (time, net cpm, instrument) to the EOF or TSC if not already done or if significantly different than the initially reported figure.

3.3 SUBSEQUENT ACTIONS

3.3.1 DOSE RATE AT 3 FEET

a. Take dose rate readings with instrument or probe held at waist level.

b. If dose rate instrument is equipped with a beta window, take readings with window open and closed.

<u>NOTE</u>: RO-2s have normal beta windows; ASP-1s do <u>not</u> have a "normal" Beta window (will not admit "soft" betas). All readings taken with the ASP-1(HP-270 probe) should be with an open shield.

c. Record data for the dose rate measurement on the "Emergency Off-site Radiological Environmental Monitoring Field Data Sheet," Attachment 5.5.

d. Report results of this survey, including time of survey, dose rates and instrument, to the EOF or TSC.

3.3.2 AIR SAMPLE

a. Assemble the filter and AgZ cartridge in the sampling head and place the filter head on the sampler.

b. Attach the sampler to the vehicle battery by attaching the red cable to the positive battery terminal and the black cable to a chassis ground.

<u>NOTE</u>: Try to position the air-sampler away from the vehicle's cooling fan, if possible.

c. Turn the vehicle engine on. Start the sampler. Note the airflow. Do <u>not</u> attempt to adjust the airflow by turning the setscrew on the top of the flowmeter.

d. If the flow rate changes significantly during sample collection, note the value at the end of the sample period and determine the average value of the flow rate. This average value should be used to determine the size of the sample collected.

e. Allow the sampler to run until at least 10 ft^3 (but preferably 30-50 ft^3) is collected.

f. Stop the sampler and remove the filter head.

g. Enter the air sample data on the Field Data Sheet and calculate the sample volume.

3.3.3 PARTICULATE CONCENTRATION DETERMINATION

NOTE: Exit plume if necessary to count filter.

a. Label the coin envelope to be used for storage of the particulate filter using the preprinted gummed labels with the necessary information as indicated on the envelope.

b. Count the particulate filter using a constant geometry holder and then place the filter in the labeled coin envelope.

c. Record the data on the Field Data Sheet.

d. Determine the net count rate and calculate the gross particulate activity if requested and record on the Field Data Sheet:

$$\mu\text{Ci/cc} = \frac{\left(1.61 \times 10^{-10}\right)(\text{Net cpm})}{(\text{V})}$$

where:

Net cpm	=	gross cpm on filter using an HP-210 or HP-260 probe, efficiency = 0.10 for gross particulate - bkgd cpm
V	=	volume of airborne sample (ft^3)

e. Report the results to the CR, TSC or EOF.

3.3.4 IODINE CONCENTRATION DETERMINATION

NOTE: Exit plume if necessary to count cartridge.

a. Remove the AgZ cartridge from the sample head and count the cartridge using a constant geometry holder.

b. Record the data on the Field Data Sheet.

c. Place the cartridge in a 4"x6" plastic ziploc bag. Label the bag with the date, time, team number and location using the preprinted gummed labels in the kit.

d. Obtain a 13"x18" plastic bag and place both filter samples (the AgZ filter in the smaller bag and the particulate filter in the coin envelope) separately within the larger bag. Use a preprinted gummed label on the outside of the larger bag.

e. The outside of this package should be verified to be uncontaminated by direct frisk or smear survey. This package will be taken to the MEML or count room in accordance with instructions from the TSC or EOF.

f. Determine the net count rate and calculate gross iodine concentration if requested and record on the Field Data Sheet:

$$\mu Ci/cc = \frac{\left(5.64 \times 10^{-9}\right)(\text{Net cpm})}{(V)}$$

where:

Net cpm = gross cpm on cartridge using an HP-210 or HP-260 probe, efficiency = 0.003 for gross iodine - bkgd cpm

g. Report the results to the TSC or EOF.

3.3.5 SMEARABLE CONTAMINATION

a. Select a representative smooth horizontal surface to smear, e.g., tops of cars or sills, and take a 100 cm^2 smear.

<u>NOTE</u>: Exit plume if necessary to count smear.

b. Count the smear and report the type of surface smeared, net count rate and instrument used to the TSC or EOF.

c. Place the smear in a plastic ziploc bag. Label the bag with the date, time, team number, location and net count rate, and save it for later analysis in the MEML.

d. Calculate the smearable contamination and enter data on the Field Data Sheet:

$$dpm/100cm^2 = (\text{Net cpm}) \times 10$$

where:

Net cpm = gross cpm on smear pad using an HP-210 or HP-260 probe, efficiency = 0.10 for gross smearable - bkgd cpm

3.3.6 PRESSURIZED ION CHAMBER

a. There are environmental monitoring and sampling stations which are part of the continuing program conducted by the On-site Dosimetry and Environmental Services (ODES).

<u>NOTE 1</u>: Field monitoring teams will not collect data from ODES instrumentation unless directed. Further information and guidance will be provided at that time.

<u>NOTE 2</u>: The TLDs are located in a gray plastic container. Opening the container requires an 1/8-inch Allen head wrench which is in the emergency kits.

b. The Pressurized Ion Chamber may be read directly (some require pressing the "READ" pushbutton installed on the front face of the instrument).

c. Dose rate trending may be performed by reviewing the strip chart. The trace which indicates the range (usually a straight line) matches one of the markings immediately below the chart. The second trace indicates the actual dose rate and should correspond with that shown on the digital display.

d. Record data on the Field Data Sheet.

e. Report the reading to the CR, TSC or EOF as is appropriate.

f. Field Teams may be requested to obtain milk samples from the local dairies. Further information and guidance will be made available at that time.

3.4 INGESTION PATHWAY/FOLLOW-UP

If directed by the EOF, TSC, MEML or Field Team Coordinator, also perform the following actions. Ensure instructions are obtained for sample delivery to the MEML.

3.4.1 VEGETATION SAMPLES

a. Cut the vegetation cover from at least a 1 m^2 area of ground (approximately one pound). Cut the vegetation at a height of 1-2 cm from base of vegetation to approximate what a grazing animal would consume. Avoid contaminating the sample with dirt.

NOTE: Equipment for taking environmental samples (trowel, grass shears, bottles, 18"x24" plastic bags) is not carried in the emergency kits proper. It is located on the kit shelves at the MEML garage.

b. Place the vegetation in a plastic bag. Seal the bag and take an external contact count rate.

c. Label the bag (date, location, net contact count rate) and hold it for transfer to the MEML.

3.4.2 LIQUID SAMPLES

a. Collect and label a 1-liter sample and retain for later analysis. If readings ≥200 net cpm are obtained near contact or if general area contamination was noted, place the 1-liter sample in a sealed plastic bag.

3.4.3 SOIL SAMPLE

a. Sample the soil from a $1m^2$ area. Remove only the top surface (to a depth of ≈ 1/4" or less) using the trowel.

b. Place the sample in a bag, seal, count and label.

4. RECORDS

4.1 For actual emergency events, the team leader shall deliver the Field Data Sheets to the EOF Radiological Manager at the EOF immediately upon completing his or her field monitoring activities or as requested by the Radiological Manager. MEML personnel may be used to transmit the sheets if available.

4.2 All records generated by the utilization of this procedure for an emergency or exercise shall be forwarded the next working day to the Director, Safety, Health and Emergency Service for review and retention.

5. ATTACHMENTS

5.1 "Emergency Off-Site Monitoring Locations," 05/22/92

5.2 "Descriptions of Emergency Off-Site Monitoring Locations," 05/22/92

5.3 "Pressurized Ion Chamber Locations," 01/17/95

5.4 "Off-Site Communications," 10/20/94

5.5 "Field Monitoring Team Exposure Tracking Guidance," 12/06/93

5.6 Form 69-9259, "Emergency Off-Site Radiological Environmental Monitoring Field Data Sheet," 11/22/93

6. REFERENCES

6.1 EP G-2, "Activation and Operation of the Interim Site Emergency Organization (Control Room)."

6.2 EP RB-7, "Emergency On-Site Environmental Monitoring."

6.3 EP EF-1, "Activation and Operation of the Technical Support Center."

6.4 EP EF-3B, "Long Term Activation and Operation of the EOF."

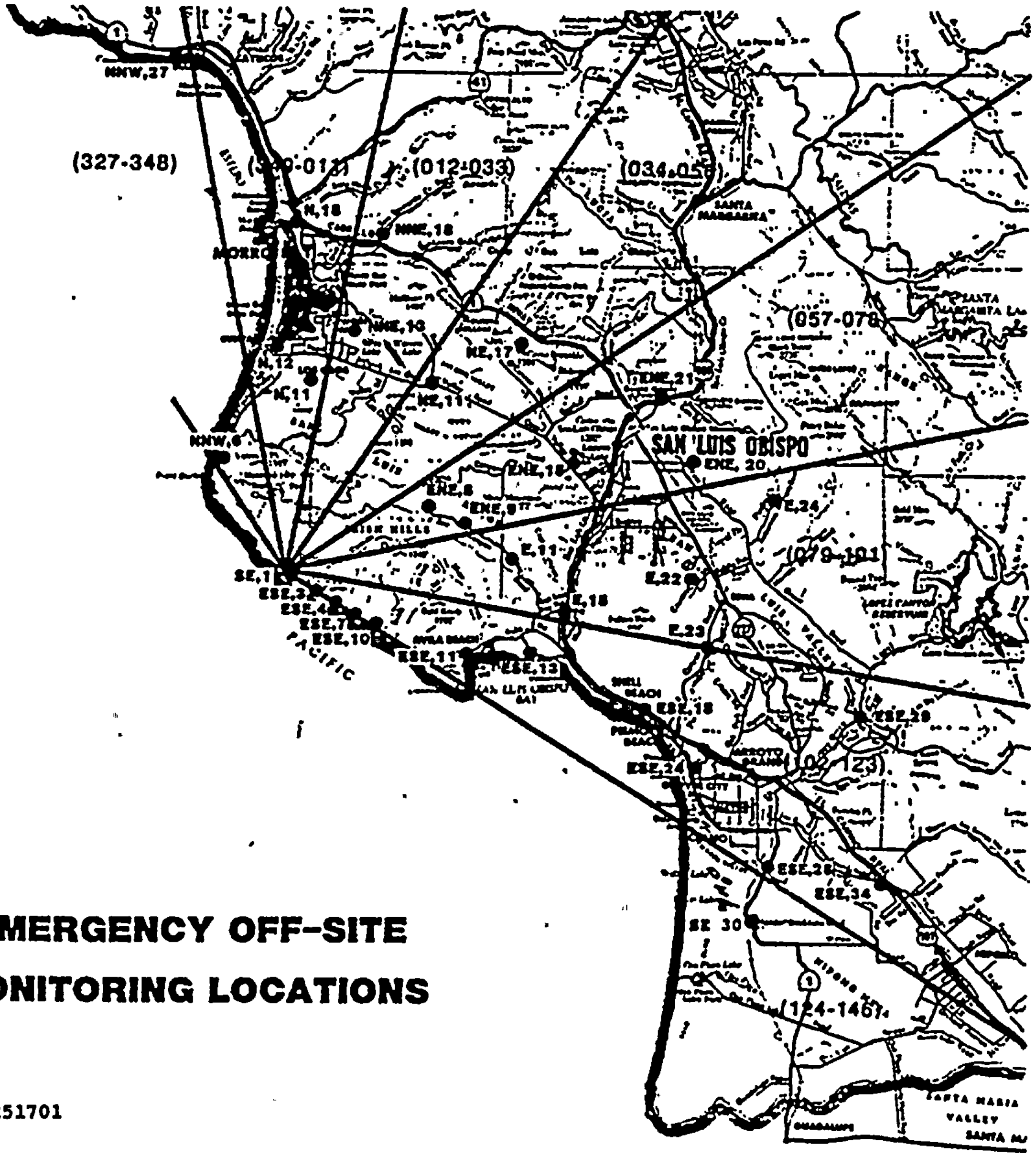
6.5 EP EF-4, "Activation of the Mobile Environmental Monitoring Laboratory."

6.6 RCP D-420, "Sampling and Measurement of Airborne Radioactivity."

7. SPONSOR

D.I. Fawcett
R.M. Bliss

TITLE: EMERGENCY OFF-SITE MONITORING LOCATIONS



EMERGENCY OFF-SITE MONITORING LOCATIONS

00251701

NOTE: Refer to detail maps in kits for precise locations

TITLE: DESCRIPTIONS OF EMERGENCY OFF-SITE MONITORING LOCATIONS

Coordinate	Near	Description
NNW,6	Los Osos	Montana de Oro State Park. Take Los Osos Valley Road west, go south on Pecho Road through the park to the parking lot near end of road at southern park boundary. Phone available at Ranger Station at Spooner Cove.
NNW,27	Cayucos	Cayucos Pier. Going north on Highway 1, take second Cayucos exit marked Cayucos Drive. Phone available.
N,11	Los Osos	Baywood Park Fire Station. Take Los Osos Valley Road west, turn south off LOVR onto Bayview Heights Drive (up one block). Phone available.
N,12	Los Osos	Sea Pines Golf Course Clubhouse. Take Los Osos Valley Road to Pecho Valley Road. Turn west off Pecho Valley Road onto Monarch Lane. Right on Del Norte. Right on Howard. Phone available at clubhouse.
N,18	Morro Bay	Morro Bay Power Plant. Phone available.
NNE,13	Baywood Park	Los Osos Jr High School. Take Los Osos Valley Road west, turn north on South Bay Boulevard to El Morro Ave. Phone available during school hours.
NNE,18	Morro Bay	Take Hwy 1 north past Cuesta College, turn north on San Bernardo Creek Rd 0.3 miles north along San Bernardo Creek Road. Phone available at nearby residences.
NE,11	SLO	Intersection of Los Osos Valley Road and Turri Road. Phone available at nearby residences.
NE,17	SLO	EOF. Turn south off Highway 1 just north of SLO at sign indicating Sheriff's Operational Center. Phone available.
ENE,8	Avila Beach	See Canyon Road at intersection with Coon Creek Road (6.0 miles from San Luis Bay Drive on See Canyon Road).
ENE,9	Avila Beach	See Canyon Road, 4.2 miles up from San Luis Bay Drive intersection (intersection of See Canyon Road and Black Walnut Road). Phone available at residences. Rattlesnake hazard.

TITLE: DESCRIPTIONS OF EMERGENCY OFF-SITE MONITORING LOCATIONS

Coordinate	Near	Description
ENE,15	SLO	Laguna Jr High School at intersection of Los Osos Road and Prefumo Canyon Road, north side of LOVR. Phone available during school hours, otherwise at nearby residences.
ENE,20	SLO	PG&E Substation at corner of Orcutt and Johnson Streets. North on Higuera St, turn east on Tank Farm Rd, then north on 227 (Broad St), then east on Orcutt Rd to intersection with Johnson Ave.
ENE,21	SLO	Cuesta County Park. 101 N, left on Grand, right on Loomis to Park. Phone in parking lot.
E,11	Avila Beach	See Canyon Road, 1.7 miles up from San Luis Bay Drive intersection. Survey at intersection of See Canyon Road and Davis Canyon Road. Phone available at nearby residences.
E,15	Avila Beach	PG&E Community Center, Ontario Rd (west Hwy 101 frontage) just south of the San Luis Bay Drive turnoff.
E,22	SLO	SLO Country Club. Take Broad St (227) to Edna Rd, go west on Edna, turn right onto Los Ranchos Rd, then right on Country Club Dr. East side of club parking lot. Phone available at club during working hours, otherwise at nearby residences.
E,23	Pismo Beach	Intersection of Price Canyon Road and Oromonde. Hwy 101 south to Price Canyon Rd (Hinds Ave turnoff, turn left), then north to Oromonde.
E,24	SLO	Righetti Road at intersection of Coyote Canyon Road at metal gate. See directions to ENE,20. Then go south on Orcutt Rd to Righetti, turn left on Righetti. No phone, but a few scattered residences in the area.
ESE,3	DCPP	Turnout on DCPP access road, 1.6 miles from Security Building. Marked with red/white fence post. (At mile marker 5.8.)
ESE,4	DCPP	Turnout on DCPP access road 2.8 miles from Security Building. Marked with red/white fence post. (Between mile markers 4.5 - 4.6.)
ESE,7	DCPP	By Ranch Road, 4.3 miles from Security Building along DCPP access road. Marked with red/white fence post. (Between mile markers 3.0 - 3.1.)

TITLE: DESCRIPTIONS OF EMERGENCY OFF-SITE MONITORING LOCATIONS

ESE,10	DCPP	DCPP access road at Gate, 6.2 miles from the Security Building. (Between mile markers 1.4 - 1.5.) Marked with red/white fence post. Phone available.
ESE,11	DCPP	South of and above DCPP front gate in boat storage lot. Phone at front gate guard shack.
ESE,13	Avila Beach	Pirate's Cove parking lot. West on Avila Beach Rd exit off Hwy 101, turn east on Cave Landing Rd. No phone available.
ESE,18	Shell Beach	Shell Beach, Margo Dodd Park, Seaview and Ocean Blvd. Hwy 101 south to Spyglass exit, south on Shell Beach (frontage) Rd to Seaview, turn right. Phone at nearby residences.
ESE,24	Grover City	Pismo State Beach. Grand Ave at Highway 1. Hwy 101 south to 4th St exit, south to Grand Ave, west to Hwy 1. Phones at nearby commercial enterprises.
ESE,28	Oceano	Market on the corner of Halcyon and Highway 1 (Mesa View Drive intersection at top of hill). See directions to ESE,24, then south on Hwy 1 to Halcyon.
ESE,29	Arroyo Grande	Market parking lot at corner Cecchetti and Lopez Lake Drive. Hwy 101 south to Grand Ave exit, east through old Arroyo Grande (Branch St), continue east (Lopez Lake Dr) to Cecchetti. No phone.
ESE,34	Arroyo Grande	Intersection of Highway 101 S and Los Berros Road. No phone available.
SE,1	DCPP	Turnout on DCPP access road, 0.8 miles from Security Building near meteorological Tower A. Marked with red/white fence post. Between mile markers 6.5 - 6.6. Phone in tower building.
SE,30	Oceano	Intersection at Highway 1 and Callender. See directions to ESE,28. Continue south on Hwy 1 past Halcyon towards Guadalupe to Callender Rd. No phone available

DIABLO CANYON POWER PLANT
EP RB-8
ATTACHMENT 5.3

1 AND 2

TITLE: PRESSURIZED ION CHAMBER LOCATIONS

NUMBER	DESCRIPTION
1	DCPP North Gate Guard Post.
2	SSW Corner of Target Range (on-site location, SE,B).
3	Morro Bay Power Plant front gate.
4	Montana de Oro State Park. At the Park Ranger's residence, adjacent to the emergency siren.
5	Los Osos (South Bay) Fire Department.
6	Outside rear entrance to EOF (south side of building) (NE,17).
7	SLO Police Department. Intersection of Santa Rosa Street and Walnut Street. Behind fence SW of Walnut Street driveway.
8	SLO Service Center, 4325 So. Higuera St., SLO (MEML Garage).
9	PG&E Community Center (E,15).
10	DCPP Front Gate.
11	Pismo Beach at the PG&E Pismo Warehouse on Price Canyon Road, about one-half mile NE of the Price Street intersection. The ion chamber is located in the upper parking lot.
12	SLO County Building, Grover City. Exit Hwy 101 at 4th street. Take 4th to Longbranch and proceed NE on Longbranch. County Social Services Building is on corner of 16th and Longbranch.

TITLE: OFF-SITE COMMUNICATIONS

a. The primary communication links between the CR, TSC, EOF, MEML, and field monitoring teams will be by radio communications on the Health Physics frequency. The field monitoring teams will use hand-held radios or if available, ODES vehicles with permanent radios.

b. For ease of communication with the radios, the off-site field monitoring teams will be given call names using the International (ICAO) Phonetic Alphabet:

A - Alpha	E - Echo	I - India
B - Bravo	F - Foxtrot	J - Juliett
C - Charlie	G - Golf	K - Kilo
D - Delta	H - Hotel	L - Lima

Note that the on-site teams will be using numerical call names, e.g., On-site Team Number 1, Team Number 2, etc.

c. Radio Technique

NOTE: The "T" switch (is so equipped) is set on "1," "F" set for "8" (HP repeater). Speaker/no speaker switch set on "no speaker" icon will enable the private line and automatic squelch features.

1. Hold the radio upright, directly in front of the mouth.

2. Before transmitting, make certain that someone else is not already transmitting on the frequency.

3. After pushing transmit button, wait two seconds to allow automatic radio encoding to occur.

d. Communications back-up would be by telephone:

Control Room:		
	Shift Supervisor	(805) 545-3377
	Shift Foreman	(805) 545-1234
	Senior Control Operator	(805) 545-1224, -2324
TSC:	RA	(805) 545-3310
	Rad Data Processors	(805) 545-3301
EOF:	RMD	(805) 549-8070, 545-3181
	EOF Radiological Manager	(805) 549-9373, 545-3284
MEML:		(805) 546-3833

e. Each monitoring team shall contact the CR, TSC or EOF under the following conditions:

1. After obtaining hand held radios to verify radio operability and obtain initial instructions from the CR, TSC or EOF.

2. Upon arriving at a monitoring location, to report initial radiological conditions (dose rate, count rate).

TITLE: OFF-SITE COMMUNICATIONS

3. After completion of sampling at a monitoring location to report results or obtain additional instructions.

4. Upon any significant change in radiological conditions.

5. At least once an hour to maintain communications.

f. Avoid use of acronyms that may be misunderstood, e.g., cpm v. dpm, PIC v. dosimeter. To insure your information is comprehended, use the complete word or phrase instead of an abbreviation.

g. Use courtesy as this HP frequency is used by the on-site teams to communicate with the CR or TSC. Don't "walk over" other teams' transmissions

1 AND 2

TITLE: FIELD MONITORING TEAM EXPOSURE TRACKING GUIDANCE

1. SCOPE AND DISCUSSION - This attachment provides guidance on conservatively estimating TEDE and Thyroid CDE to emergency workers based on SRD reading or other dosimetry indications and the application of a multiplier (or table lookup) for dose conversion.

   Initially a Turnback Value of 500 mrem/hr (instrument reading) is used with NO multiplier until plant conditions or radiological release data provide a basis for determining a different value or multiplier.

   TEDE multipliers are the ratios of Combined DCF to External Immersion DCF for each of six (6) possible source terms;

   - Plant Vent Release - Coolant, Gap, or Core Activity dispersed throughout the Containment prior to an unfiltered release or,
   - Steam Generator Tube Rupture - S/G Water Level Empty, Normal or Flooded and 10% Steam Dump Open to atmosphere.

   Thyroid CDE multipliers are the ratios of Inhalation Thyroid DCF to External Immersion DCF for each of the above conditions.

2. PRECAUTIONS - The tabulated SRD reading thresholds are for the purpose of anticipating required authorizations or other protective actions in keeping with ALARA.

3. INSTRUCTIONS

   3.1 Determine the release pathway and refer to Page 2 for Plant Vent Release or Page 3 for Atmospheric Steam Release.

   3.2 Select the Table that matches the source term conditions.

   3.3 Select the THYROID CDE column that applies. (i.e., if KI has been administered to all FMT members, the right hand column may be disregarded)

   NOTE: If KI is administered, TEDE is the more limiting dose consideration in all cases. If KI is not administered, Thyroid CDE is more limiting and may even be prohibitive to effective field monitoring.

   3.4 From reported SRD readings, use the multiplier at the bottom of the column heading to determine the TEDE and Thyroid CDE.

   NOTE: The tables provide examples of the correlation for selected threshold values (exposure limits and KI PAGs) for anticipating the need to initiate the authorization process prior to curtailing field team activities.

   3.5 Use the tabulated 10 CFR 20 annual exposure limits for TEDE and Thyroid CDE to determine appropriate SRD reading "mission limits" or adjusted "Turnback Values" from Portable Instrument readings to avoid inadvertent overexposures.

PLANT VENT RELEASE

NOTE: The tabulated data below give the SRD readings (or projected DDE based on dose rate instrumentation) that correspond to either the need to obtain authorization for KI or an emergency exposure authorization based on current assumptions about the source term activity.

COOLANT ACTIVITY RELEASE

SRD (mR)	TEDE (rem)	THYROID CDE WITH KI (rem)	THYROID CDE NO KI (rem)
580	1.8	2.5	25 (KI needed)
*1,160	3.5	5	50 rem (limit)
1,650	5 rem (limit)	7.1	71
Dose Readings	(times 3)	(times 4.3)	(times 43)

GAP ACTIVITY RELEASE

SRD (mR)	TEDE (rem)	THYROID CDE WITH KI (rem)	THYROID CDE NO KI (rem)
45	1.13	2.4	25 (KI needed)
* 90	2.25	4.8	50 rem (limit)
200	5 rem (limit)	10.6	106
Dose Readings	(times 25)	(times 53)	(times 530)

CORE ACTIVITY RELEASE

SRD (mR)	TEDE (rem)	THYROID CDE WITH KI (rem)	THYROID CDE NO KI (rem)
155	3.4	2.5	25 (KI needed)
**225	5 rem (limit)	3.6	36
310	6.8	5	50 rem (limit)
Dose Readings	(times 22)	(times 16)	(times 160)

* Thyroid CDE Annual Limit (potentially exceeded, IF NO KI Administered)

** Total Effective Dose Equivalent Annual Limit (potentially exceeded)

NOTE 1: Tables above based on DCF multipliers that are appropriately rounded off for purpose of controlling Field Team Exposures below allowable limits under highly variable conditions.

NOTE 2: Disregard right hand column if KI has been administered. Third column assumes a 90% protection factor for KI taken before exposure.

ASSUMPTIONS: (Basis for the above multipliers)

1. Decay of one (1) hour since time of trip.
2. Release duration one (1) hour.
3. Plant Vent Release, unfiltered, at 3.24 E+05 SCFM.
4. Default X/Q used, 5.0 E-05 sec/m^3.

TITLE: FIELD MONITORING TEAM EXPOSURE TRACKING GUIDANCE

ATMOSPHERIC STEAM RELEASE

NOTE: The tabulated data below give the SRD readings (or projected DDE based on dose rate instrumentation) that correspond to either the need to obtain authorization for KI or an emergency exposure authorization based on current assumptions about the source term activity.

SGTR - SG WATER LEVEL EMPTY ACTIVITY RELEASE

SRD (mR)	TEDE (rem)	THYROID CDE WITH KI (rem)	THYROID CDE NO KI (rem)
15	0.9	2.1	25 (KI needed)
*35	2.1	4.9	50 rem (limit)
80	5 rem (limit)	11.2	112
Dose Readings	(times 60)	(times 140)	(times 1400)

SGTR - SG WATER LEVEL NORMAL ACTIVITY RELEASE

SRD (mR)	TEDE (rem)	THYROID CDE WITH KI (rem)	THYROID CDE NO KI (rem)
95	1.2	2.5	25 (KI needed)
*190	2.3	5	50 rem (limit)
415	5 rem (limit)	10.8	108
Dose Readings	(times 12)	(times 26)	(times 260)

SGTR - SG WATER LEVEL FLOODED ACTIVITY RELEASE

SRD (mR)	TEDE (rem)	THYROID CDE WITH KI (rem)	THYROID CDE NO KI (rem)
10	1.1	2.5	25 (KI needed)
*20	2.2	5	50 rem (limit)
45	5 rem (limit)	11.25	112.5
Dose Readings	(times 110)	(times 250)	(times 2500)

* Thyroid CDE Annual Limit (potentially exceeded, IF NO KI Administered)

NOTE 1: Tables above based on DCF multipliers that are appropriately rounded off for purpose of controlling Field Team Exposures below allowable limits under highly variable conditions.

NOTE 2: Disregard right hand column if KI has been administered. Third column assumes a 90% protection factor for KI before exposure.

ASSUMPTIONS: (Basis for the above multipliers)

1. Decay of ten (10) hour since time of trip.
2. Release duration one (1) hour.
3. 10% Steam Dump Lifted Release, at 4.00 E+05 LBM/HR.
4. Default X/Q used, 5.0 E-05 sec/m^3.
5. Source term - FSAR Gap Curie quantities dispersed in Primary Coolant. RCS Volume - 12,560 ft^3 with Secondary Coolant in equilibrium

DIABLO CANYON POWER PLANT
EP RB-8

1 AND 2

TITLE: EMERGENCY OFF-SITE RADIOLOGICAL ENVIRONMENTAL MONITORING FIELD DATA SHEET

*** TURNBACK VALUE: ______ mr/hr (500 mr/hr initially) ***

Date: ____________ Field Team: [ ] A [ ] B [ ] C or ____________ Leader: ____________

CR Instrument RP #: ____________ DR Instrument RP #: ____________ Air Sampler RP #: ____________

OFF-SITE EMERGENCY MONITORING LOCATION

NNW,6	N,18	NE,17	ENE,20	E,22	ESE,4	ESE,13	ESE,29
NNW,27	NNE,13	ENE,8	ENE,21	E,23	ESE,7	ESE,18	ESE,34
N,11	NNE,18	ENE,9	E,11	E,24	ESE,10	ESE,24	SE,1
N,12	NE,11	ENE,15	E,15	ESE,3	ESE,11	ESE,28	SE,30

or (describe): ____________

COUNT RATE: (GROUND)

(NOTE: Stay in vehicle and lean out to survey. Report in immediately if over 100 NET CPM. Exit vehicle to obtain General Area follow-up readings, if allowable.)

NO.	TIME	GROSS CPM		BKGD CPM		NET CPM
Initial	______	______	-	60	=	______
Follow-up	______	______	-	60	=	______
Follow-up	______	______	-	60	=	______

DOSE RATE: (AT 3 FEET) (NOTE: ASP-1 (HP-270) readings shall be with an Open Shield only, recorded as Window Open. RO-2 shall be used for both W.O. and W.C. to determine when Beta is detectable; Plume entered.)

TIME	WINDOW OPEN (mr/hr)		WINDOW CLOSED (mr/hr)	
______	______	W.O.	______	W.C.
______	______	W.O.	______	W.C.
______	______	W.O.	______	W.C.

AIR SAMPLE VOLUME: (NOTE: Required if Dose Rate measured above is 3 mr/hr or greater, but less than Turnback Value. Record Air Sample Volume on Page 2 where indicated.)

NO.	STOP TIME		START TIME		DRAW TIME (MIN.)		AVG. FLOW (FT3/MIN.)		VOLUME FT3
1.	______	-	______	=	______	x	______	=	______
2.	______	-	______	=	______	x	______	=	______
3.	______	-	______	=	______	x	______	=	______

NOTE: Avg. Flow = [(Initial Flow Rate + Final Flow Rate) / 2]

TITLE: EMERGENCY OFF-SITE RADIOLOGICAL ENVIRONMENTAL MONITORING FIELD DATA SHEET

PARTICULATE CONCENTRATION: (Record Air Sample Volume (FT3) from Pg. 1)

NO.	TIME	GROSS CPM		BKGD CPM*		NET CPM		CONV FACTOR		VOLUME FT3	=	PARTICULATE CONC uCi/cc
1.	____	____	-	____	=	(____	×	1.6E-10)	/	____	=	____
2.	____	____	-	____	=	(____	×	1.6E-10)	/	____	=	____
3.	____	____	-	____	=	(____	×	1.6E-10)	/	____	=	____

* Use 60 CPM for BKGD outside the plume contaminated area with E-140/HP-210 or 260. Obtain authorization to count in the plume.

IODINE CONCENTRATION: (Record Air Sample Volume (FT3) from Pg. 1)

NO.	TIME	GROSS CPM		BKGD CPM*		NET CPM		CONV. FACTOR		VOLUME FT3	=	IODINE CONC. uCi/cc
1.	____	____	-	____	=	(____	×	5.64E-9)	/	____	=	____
2.	____	____	-	____	=	(____	×	5.64E-9)	/	____	=	____
3.	____	____	-	____	=	(____	×	5.64E-9)	/	____	=	____

* Use 60 CPM for BKGD outside the plume contaminated area with E-140/HP-210 or 260. Obtain authorization to count in the plume.

SMEARABLE CONTAMINATION:

NO.	TIME	GROSS CPM		BKGD CPM*		NET CPM		CONV. FACTOR		CONTAMINATION	
1.	____	____	-	____	=	(____	×	10)	=	____	$dpm/100cm^2$
2.	____	____	-	____	=	(____	×	10)	=	____	$dpm/100cm^2$
3.	____	____	-	____	=	(____	×	10)	=	____	$dpm/100cm^2$

* Use 60 CPM for BKGD outside the plume contaminated area with E-140/HP-210 or 260.

PRESSURIZED ION CHAMBER:

Time: ____________ Dose Rate: ____________ mr/hr

ID # ____________________

Time: ____________ Dose Rate: ____________ mr/hr

COMMENTS: ______________________________

NOTE: Forward this completed form to EOF Radiological Manager (via the MEML Operator) upon completion of your monitoring shift.

COMPLETED BY: ____________________