

ATTACHMENT 1

Updates Included In This Submittal

DIABLO CANYON EMERGENCY PLAN
IMPLEMENTING PROCEDURES

Volume 3A

Updated Table of Contents
EP OP-20, Revision 3
EP R-1, Revision 12

Volume 3B

Updated Table of Contents
EP RB-8, Revision 4
EP EF-1, Revision 3
EP EF-3, Revision 4

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ATTACHMENT 2

Location of Proprietary/Privacy Information

Procedure:

R-1 -- Pages 2, 11 and 16 of 16; Attachment - Safety, Health and Claims Personnel to be Contacted for Reporting of Injuries at Diablo Canyon, pages 1 and 2 of 2.

RB-8 -- Page 3 of 49.

EF-1 -- Attachment-TSC Activation and Operation Checklist for the Site Emergency Coordinator, page 1 of 2; Attachment - TSC Activation and Operation Checklist for the Emergency Liaison Coordinator, page 1 of 1; Attachment - TSC Activation Checklist for the Emergency Radiological Advisor, page 1 of 2.

EF-3 -- Attachment -- EOF Activation Checklist for the Advisor to the County Emergency Organization, page 1 of 2; Attachment - EOF Activation Checklist for the Interim Radiological Recovery Manager, page 1 of 2; Attachment - EOF Activation Checklist for the Interim EARS Operator - page 1 of 1; Attachment - EOF Activation Checklist for the Interim Operations and Analytical Recovery Manager, page 1 of 1; Attachment - EOF Activation Checklist for Interim Public Information Recovery Manager, page 1 of 1; Attachment - EOF Activation Checklist for the Technical Advisor to the PRIM, page 1 of 1; Attachment - Auxiliary Trailer Call Out List, page 1 of 1.

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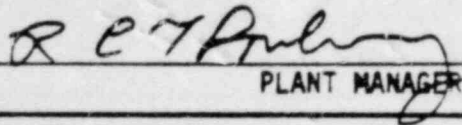


DEPARTMENT OF NUCLEAR PLANT OPERATIONS

DIABLO CANYON POWER PLANT UNIT NO(S) 1 AND 2

TITLE EMERGENCY OPERATING PROCEDURE
EXCESSIVE REACTOR COOLANT SYSTEM LEAKAGEIMPORTANT
TO
SAFETY

APPROVED


PLANT MANAGER5/4/84
DATESCOPE

This procedure outlines the steps to be taken in the event of reactor coolant system leakage in excess of the Technical Specifications limits, yet within the capacity of the charging system. If leakage is detected, the primary goal should be to identify and isolate or reduce the magnitude of the leak.

SYMPTOMS

Any one or more of the following symptoms may indicate excessive reactor coolant leakage:

1. Unexpected auto make-up to Volume Control Tank (VCT).
2. Unexpected charging pump speed or flow increase during steady-state operation.
3. Increased level, temperature and/or pressure in the Pressurizer Relief Tank (PRT).
4. Possible annunciators:
 - a. HIGH RADIATION (PK11-21)
 - 1) Containment Area Rad Monitor alarm.
 - 2) Incore seal table Area Rad Monitor alarm.
 - 3) Sampling room Area Rad Monitor alarm.
 - 4) Charging pump room Area Rad Monitor alarm.
 - 5) Auxiliary building control board Area Rad Monitor alarm.
 - 6) Process monitor Hi-Rad alarm.

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TITLE EXCESSIVE REACTOR COOLANT SYSTEM LEAKAGE

- b. CONTAINMENT ENVIRONMENT (PK01-16)
- c. PRESSURIZER SAFETY OR RELIEF LINE TEMPERATURE (PK05-23).
- d. PRESSURIZER RELIEF/SAFETY VALVES OPEN (PK05-20)
- e. BUILDING SUMPS (PK15-01)
 - 1) Containment sump high level alarm.
 - 2) Reactor cavity sump high level alarm.
- f. PRESSURIZER LEVEL HI/LO (PK05-21)
- g. PRESSURIZER LEVEL HI/LO CONTROL (PK05-22)
- h. REACTOR FLANGE LEAKOFF TEMP HI (PK11-02)
- i. RCS VALVE STEM LEAKAGE (PK05-8)

AUTOMATIC ACTIONS

- 1. Possible charging pump flow increase.
- 2. Possible process monitor isolation actions:
 - a. Component cooling water surge tank vent valve closure.
 - b. Steam generator blowdown and sample line isolation.
 - c. Containment ventilation isolation.
- 3. Possible PRT vent header isolation at 10 PSIG in PRT.
- 4. Possible pressurizer letdown isolation.

OBJECTIVE

- 1. Identify the source and rate of leakage.
- 2. Isolate the leak, if possible.
- 3. Take actions as necessary to comply with Technical Specifications requirements.

TITLE EXCESSIVE REACTOR COOLANT SYSTEM LEAKAGE

IMMEDIATE OPERATOR ACTIONS

COMMENTS

1. Monitor pressurizer level and start another charging pump as necessary.
2. If pressurizer level continues to drop, isolate letdown.
3. If pressurizer level cannot be maintained, manually initiate SI and go to EP OP-0, Reactor Trip with Safety Injection.

SUBSEQUENT OPERATOR ACTION

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Monitor the VCT level and take manual control as necessary to maintain VCT level. If charging pump suction is swapped to the RWST, commence a rapid load reduction and proceed to shut down the reactor. 2. Attempt to determine the magnitude of the leak while continuing with this procedure. 3. If S/G tube leakage is indicated, go to EP OP-3B, Minor S/G Tube Leak. 4. Check for indication of leakage from PZR Safety valves and PORV's by observing discharge temperatures and sonic flow detector. If leakage is indicated from PORV, close the associated block valve. | <ol style="list-style-type: none"> 2. Refer to STP R-10. 4. Refer to Technical Specifications 3.4.4 if block valve is closed. |
|---|---|

TITLE EXCESSIVE REACTOR COOLANT SYSTEM LEAKAGE

5. If the leak appears to be inside containment:
 - a. Check the containment temperature and dewpoint monitoring system and attempt to determine the location of the leak.
 - a. Monitoring system is located in Mech. Panel 199 next to the HSD Panel. Refer to P&ID drawing No. 102023 sheet 8 for detector location table and map.
 - b. Consider making containment entry for inspection.
6. Check other possible sources of leakage.
 - a. Primary sampling system.
 - b. Component cooling water surge tank.
 - b. If leakage is indicated in CCW system, go to EP OP-11.
 - c. If reactor vessel flange leakage is indicated:
 - 1) Close 8032 on VB2.
 - 2) Close 8069B, then open 8069A.
 3. Open 8032 and check for indications of leakage past the outer O-ring.
 4. If leakage occurs past the outer O-ring, proceed with reactor shutdown.

TITLE

EXCESSIVE REACTOR COOLANT SYSTEM LEAKAGE

- d. Check unusual inflow to liquid radwaste system.
 - e. Check for possible discharge into the PRT from relief valves or valve stem leakoff.
 - e. Refer to OP A-4B:IV, Table 1 & 2 for list of valves that discharge into the PRT.
7. If leakage is indicated in the auxiliary building, conduct a radiation survey to assist in locating the leak.
 7. If leakage is due to a letdown or charging failure, refer to EP OP-18.
 8. If leak is located, attempt to isolate it.
 9. When the leak rate is determined and classified, take actions as required by the Plant Technical Specification.
 9. Technical Specifications 3.4.6.2.
 10. Continue to monitor leakrate as necessary.

TITLE

EXCESSIVE REACTOR COOLANT SYSTEM LEAKAGE

APPENDIX Z

EMERGENCY PROCEDURE NOTIFICATION INSTRUCTIONS

1. When this emergency procedure has been activated and upon direction from the Shift Foreman, proceed as follows:
 - a. If the leakage rate appears to be less than 50 gpm (pressurizer level can be maintained with one centrifugal charging pump with normal letdown flow) then:
 - 1) Evaluate the leakage rate and identify the type of leakage within four hours.
 - 2) If within the 4 hours the leakage is determined to be within the LCO of Tech. Spec. 3.4.6.2, there is NO emergency and no reporting is required.
 - 3) If the leakage rate exceeded the LCO and the leakage rate was returned to within limits within the 4 hours, or if the leakage rate cannot be brought within limits within the 4 hours, or if there is PRESSURE BOUNDARY leakage, declare a NOTIFICATION OF UNUSUAL EVENT and continue to comply with the action statement. Notify plant staff and response organizations required for this classification by implementing Procedures G-2 "Establishment of the On-Site Emergency Organization" and G-3 "Notification of Off-Site Organizations" in accordance with Emergency Procedure G-1 "Accident Classification and Emergency Plant Activation".
 - b. If the RCS leak rate is calculated to be >50 gpm or one centrifugal charging pump is unable to maintain pressurizer level with normal letdown flow, designate this event an Alert. Notify plant staff and response organizations required by EP G-2 and EP G-3 in accordance with EP G-1.

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TITLE PERSONNEL INJURY OR ILLNESS (RADIOLOGICALLY RELATED) AND/OR OVEREXPOSURE

- b. Notify the control room (Shift Foreman) as soon as practical, and provide a phone number for the patients location.

NOTE: The Shift Foreman may be notified by dialing Ext. [REDACTED]. Dialing [REDACTED] activates the fire alarm and medical emergency code call. The caller must remain on the phone to enable the Shift Foreman to dial into a conference call.

2. Shift Foreman (Interim Site Emergency Coordinator)

- a. Evaluate plant status that may have produced the personnel injury, illness and/or overexposure. Sound the site emergency signal to clear the affected area, if the situation warrants it.
- b. Dispatch additional first aid personnel such as the project construction EMT [REDACTED] to the scene of the injury or illness if required.
- c. Notify Chemistry and Radiation Protection personnel [REDACTED]
- d. Call an ambulance if the injury warrants it. Refer to Appendix 1 "Measures to be taken if Medical Care Is Required" for instructions.

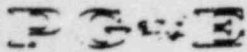
SUBSEQUENT ACTIONS

The Shift Foreman shall direct all subsequent actions until relieved by the long-term Site Emergency Coordinator if the situation warrants it.

1. Actions Common to All Occurrences

- a. Transport the patient to the first aid room, provided that this can be done without aggravating the injury.
- b. Take actions as specified in the following sections as appropriate for the particular occurrence.

Section 2: Minor injury, when contamination is present.



Pacific Gas and Electric Company

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DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT UNIT NO(S) 1 AND 2
EMERGENCY PROCEDURE
PERSONNEL INJURY OR ILLNESS (RADIOLOGICALLY
RELATED) AND/OR OVEREXPOSURE

APPROVED W. C. Thompson 5-3-84
PLANT MANAGER DATE

SCOPE

This procedure describes the actions which are to be taken in the event of:

1. Personnel injury or illness (minor or serious), where the victim is radiologically contaminated.
2. Overexposure (or suspected overexposure), from an external source.
3. Overexposure (or suspected overexposure) from an internal source.
4. A combination of the above.

Injuries or illnesses which do not involve radioactive contamination or overexposure are handled in accordance with Emergency Procedures M-1 or M-2. This procedure and changes thereto requires PSRC review.

DISCUSSION

Any radiologically related injury or illness or potential radiation overexposure is a serious matter requiring prompt attention to the care of the patient and prompt appropriate corrective action to preclude re-occurrence. In addition, followup investigation to quantify the extent of exposure to radiation requires care in the gathering and retention of samples, radiation readings and other evidence which may contribute to the understanding of the incident and assist both in care of the injured and in preventing re-occurrence.

IMMEDIATE ACTIONS

1. The employee(s) who are at the scene shall:
 - a. Render all necessary first aid.

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Section 3: Serious injury when contamination is present.

Section 4: Overexposure from external source

Section 5: Overexposure from internal source.

- c. Perform the notifications required by Appendix Z "Emergency Procedure Notification Instructions."

NOTE: Form 69-9221 "Emergency Notification Record" is provided to record notifications not documented elsewhere.

- d. Collect personnel dosimetry assigned to the individual and have it evaluated.
- e. Begin gathering information to assist the long-term Site Emergency Radiological Advisor in his evaluation. Guidance on things which should be investigated is given in Appendix 2 "Factors to Consider in Making a Preliminary Evaluation."
- f. Close out the event with the following written reports:
- 1) Report to NRC (required within 24 hours for an Unusual Event, or within 30 days for a report under 10CFR20.403).
 - 2) Form 62-4587 "Report of Industrial Injury to Employee."
 - 3) Form 62-4586 "Employers' Report of Occupational Injury or Illness."
 - 4) Nuclear Plant Problem Report. (See Nuclear Plant Administrative Procedure C-12.)

NOTE: Reports to NRC and the Nuclear Plant Problem Report are not required for minor injuries or illness for which onsite first aid and decontamination is adequate.

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2. Minor Injury or Illness When Contamination is Present

The following steps apply to injuries where prompt medical attention is not required (i.e., first aid at the plant is adequate).

- a. Make the following surveys and record the results on the "Skin and Clothing Decontamination" Form (Form 69-9392).
 - 1) The wound prior to decontamination.
 - 2) The object causing the injury (if possible) and any clothing penetrating or touching the injury. These items should be retained, if possible, until the long-term Site Emergency Radiological Advisor has completed his evaluation so that detailed radionuclide analysis can be performed, if required.
 - 3) The wound during each decontamination and after final decontamination.

NOTE: These personnel surveys are in addition to other radiological surveys (e.g., work area, equipment) which may be required by radiation protection management.

- b. Decontaminate the wound using the standard procedures discussed in Radiation Control Procedure G-4. In cases of severe contamination, where there is a realistic possibility that significant internal retention of radionuclides may have occurred, it is desirable to retain wash solutions (or samples thereof), swabs, and other such material which may be useful to the Site Emergency Radiological Advisor.

NOTE: Refer to Emergency Procedure RB-5 "Personnel Decontamination" in the event normal decontamination facilities are overloaded or unavailable.

- c. Complete any additional first aid measures.

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- d. Complete accident report Form 62-4587, "Report of Industrial Injury to Employee" and forward to plant clerk for processing.

NOTE: This documentation requirement assumes no medical attention (beyond first aid) is required and that no lost time occurs. If lost time beyond the day of injury is likely, or if medical treatment (including doctor referral) is required, complete Form 62-4586, "Employers' Report of Occupational Injury of Illness" and forward to plant clerk.

3. Serious Injury or Illness When Contamination is Present

The following steps apply to injuries or illnesses where prompt medical attention is required (i.e., the patient must be taken to a hospital) and the patient is contaminated. In this type of circumstance, the need for treatment of the injury and comfort of the patient will take precedence over the need for decontamination.

- a. Call San Luis Ambulance and French Hospital and have the patient transported to French Hospital. The detailed steps to be taken if this is required are given in Appendix 1 of this procedure. The Control Room should keep personnel attending the patient informed of the status of the ambulance.
- b. During the interval until the ambulance arrives keep the patient as comfortable as possible. Survey and decontaminate the patient to the extent that time and conditions permit. Do not decontaminate the patient if it will aggravate his injury. Record survey results on the "Skin and Clothing Decontamination" Form (Form 69-9392.)
- 1) Survey any wounds and/or the victim's skin (if possible).
 - 2) Survey the object causing the injury (if possible) and any clothing penetrating or touching the injury. These items should be retained, if possible, until the long-term Site Emergency radiological Advisor has completed his evaluation so that detailed radionuclide analyses can be performed, if required.

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- 3) Decontaminate the patient using the standard procedures discussed in Radiation Control Procedure G-4. In cases of severe contamination, where there is a realistic possibility that significant internal retention of radionuclides may have occurred, it is desirable to retain wash solutions (or samples thereof), swabs, and other such material which may be useful to the Site Emergency Radiological Advisor.

NOTE: Refer to Emergency Procedure RB-5 "Personnel Decontamination" in the event normal decontamination facilities are overloaded or unavailable.

- c. Have the hospital kit and a handheld radio available for transport to the hospital with the monitor accompanying the patient, or the team dispatched to the hospital.

4. Overexposure From External Source

The following steps apply to cases where the patient has (or is suspected to have) received a dose from an external source to the whole body, or any portion thereof, in excess of an applicable limit contained in Radiation Control Standard No. 1, and where the individual does not require prompt medical attention for any other reason. Personnel suspected of overexposure shall not re-enter radiation controlled areas unless authorized by the Site Emergency Coordinator.

- a. Provide any first aid or medical attention which the patient may require.
- b. Notify San Luis Ambulance and French Hospital and transport the patient to French Hospital in accordance with Appendix 1 for observation or treatment in any of the following circumstances: 1) The patient is known or suspected to have received at least any of the following:
 - a) 25 rem to the whole body, active blood forming organs, lens of eyes, gonads, head or trunk.

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- b) 150 rem to the skin.
- c) 375 rem to the extremities.
- 2) The patient shows signs of radiation sickness, such as nausea, vomiting, extreme sweating, weakness, diarrhea, extreme anxiety, incoherence, sensitivity of the nerves (tingling or itching sensation).
- 3) The patient shows evidence of radiation dermatitis (skin damage). Except for extremely high skin dose (greater than 5,000 rem), in which case pain occurs promptly and is intense, the symptoms at the time of exposure are a sensation of warmth and itching. Redness, blistering and other effects may not appear for several days.
- c. If the patient requires transportation to the hospital, during the interval until the ambulance arrives keep the patient comfortable. Survey the individual and perform any decontamination which circumstances require and/or permit. Do not aggravate any injury or unduly alarm the patient in performing these operations. Record survey results on the "Skin and Clothing Decontamination" Form (Form 69-9392) and/or "Radiation Dose Rate Survey Record" (Form 69-9316). In cases of severe contamination, handle as in Step 3.c to the extent practical.
- d. To the extent practical, save all vomit, urine, feces or other samples which may assist the long-term Site Emergency Radiological Advisor in evaluating the accident. This is particularly important if internal deposition of radioactive materials is suspected.
- e. Collect the patient's personnel dosimetry and any materials which may have been activated (if a neutron exposure is suspected) such as belt buckles, watches, jewelry, prior to sending him to the hospital or releasing him. This will be processed for evaluation.
- f. Subsequent actions will be based upon the results of the evaluation of the external exposure.

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5. Overexposure From Internal Sources

The following steps apply to cases where the patient has (or is suspected to have) ingested a significant quantity of radioactive material. If the ingestion was by breathing, this procedure applies any time that the concentration to which the person has been exposed is greater than or equal to $(MPC) \times PF$, where (MPC) refers to the normal (40 hr.) maximum permissible concentration, and PF refers to the protection factor the patient obtained when a quantitatively fit tested to the respirator that was worn for the job.

- a. Take any medical action which may be required as a result of injury or external dose received (Steps 3 and 4 above). The treatment of these effects should take precedence over the evaluation of internal exposure.
- b. Remove and retain for subsequent radiological analysis the patient's clothing and respirator.
- c. Survey the patient thoroughly and record the results on the "Skin and Clothing Decontamination" Form (Form 69-9392).
- d. Decontaminate individual to as low as practical without causing further injury. If practical, save samples of the decontamination solutions, swabs, and other materials which may be of use in subsequent radiological evaluations.
- e. Count the patient on the whole body counter. The results of this analysis will, in large measure, determine the necessity for further medical attention or surveillance.
- f. Collect and save any urine, feces, or vomit which is passed from the patient. The long-term Site Emergency Radiological Advisor may request that special urine samples be collected for bioassay.
- g. Subsequent actions will be based upon the results of the evaluation of the internal exposure.
- h. If the patient is sent to the hospital, make arrangements to have all urine, feces or vomit samples retained for radiological analysis.

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REFERENCES

1. Radiation Control Standard No. 1, "Personnel Exposure."
2. Radiation Control Standard No. 2, "Internal Exposure Controls."
3. Radiation Control Standard No. 5, "Medical."
4. Radiation Control Standard No. 8, "Reporting Requirements."
5. Radiation Control Procedure No. G-3, "Personnel Internal Exposure Control."
6. Radiation Control Procedure No. G-4, "Personnel Contamination Control."
7. Radiation Control Procedure No. G-7, "Radiation Surveys."
8. Emergency Procedure G-1, "Accident Classification and Emergency Plan Activation."
9. Emergency Procedure G-2, "Establishment of the Onsite Emergency Organization."
10. Emergency Procedure G-3, "Notification of Offsite Organizations."
11. Emergency Procedure R-4, "High Radiation (In Plant)."
12. Emergency Procedure RB-5, "Personnel Decontamination."
13. Emergency Procedure OR-1, "Offsite Support and Assistance"

APPENDICES

1. Appendix 1, Measures To Be Taken If Medical Care Is Required.
2. Appendix 2, Factors To Consider In Making A Preliminary Investigation.
3. Appendix 2, Emergency Procedure Notification Instructions.

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ATTACHMENTS

1. Form 69-9221, "Emergency Notification Record."
2. Form 69-9316, "Radiation Dose Rate Survey Record."
3. Form 69-9392, "Skin and Clothing Decontamination."
4. Form 62-4587, "Report of Industrial Injury to Employee."
5. Form 62-4586, "Employers' Report of Occupational Injury or
Illness."
6. Form 62-6015, "Medical Referral."
7. Light Duty Program Letter.
8. Safety, Health and Claims Personnel to Be Contacted for Reporting
of Injuries at Diablo Canyon (3/83).

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APPENDIX 1 (Cont'd)

MEASURES TO BE TAKEN IF MEDICAL CARE IS REQUIRED

- b. Company affiliation.
- c. Phone number of caller. (Where he can be reached.)
- d. Name of injured or ill person.
- e. Age of injured or ill person (approximate if not known).
- f. Extent of injury, illness or symptoms.
- g. Medical history (if known).
- h. Radiological conditions.

Record this information on Form 69-9221, "Emergency Notification Record", or other suitable log.

4. Prior to arrival of the ambulance, the patient should be decontaminated to the extent practical without aggravation of injury.
5. If the patient cannot be completely decontaminated prior to arrival of the ambulance, wrap him in a blanket prior to placing him in the ambulance in order to minimize the spread of contamination. Alternatively, he may be placed in the plant's Nuclear Accident Emergency Carrier.
6. An individual qualified in radiation monitoring shall accompany the victim to the hospital. This individual should take a hospital kit and a handheld radio with him.

NOTE: Two hospital kits and radios are stored in Access Control. Additional equipment and radios are also available at the PG&E San Luis Obispo Service Center.

7. Two additional individuals qualified in radiation monitoring should be dispatched to French Hospital to assist hospital personnel.

NOTE: Refer to EP OR-1 "Offsite Support and Assistance" for air ambulance and medivac support.

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TITLE PERSONNEL INJURY OR ILLNESS (RADIOLOGICALLY RELATED) AND/OR OVEREXPOSURE

APPENDIX 1

MEASURES TO BE TAKEN IF MEDICAL CARE IS REQUIRED

The following are the procedural steps to be taken in the event a contaminated patient must be transported to the hospital for medical treatment:

1. Call San Luis Ambulance [Phone [REDACTED] Emergency No. [REDACTED]] and provide the following information:
 - a. Name of caller.
 - b. Company affiliation.
 - c. Phone number of caller. (Where he can be reached.)
 - d. Name of injured or ill person.
 - e. Where the patient is located.
 - f. Where the patient is to be transported (French Hospital).
 - g. Nature of injury or illness.
 - h. Patient is contaminated.
 - i. Any other medical information which might be pertinent to transporting the patient.

Record this information on Form 69-9221, "Emergency Notification Record," or other suitable log.

2. Contact the Security Shift Supervisor [REDACTED] and have him call the security force at the Port San Luis entrance [REDACTED] and alert them that the ambulance is entering. It is also advisable to have an escort accompany the ambulance from the Security Building to the first aid room to minimize the delay in reaching the destination.
3. The victim shall be transported to French Hospital. Call ahead to the hospital [REDACTED] and provide the following information:
 - a. Name of caller.

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TITLE PERSONNEL INJURY OR ILLNESS (RADIOLOGICALLY RELATED) AND/OR OVEREXPOSURE

APPENDIX 2

FACTORS TO CONSIDER IN MAKING A PRELIMINARY INVESTIGATION

It is important to conduct the preliminary investigation in a systematic manner to assure that potentially valuable evidence is not overlooked, lost or destroyed. The following is a reference listing of items which should be checked (if they are applicable). Also, two other factors are important in conducting an investigation of this type, namely: a) information which is gathered should be written down in a comprehensive, neat manner, and b) all samples, clothing, or other articles which are collected should be put in sample bottles or plastic bags, and labelled with the patient's name, date, collection time, sample identification, and other pertinent data.

1. Factors Common to All Accidents
 - a. Date, time of occurrence.
 - b. Basic reconstruction of events.
 - c. Probable source(s) of radioactivity involved.
 - d. Names and addresses of all witnesses.
2. Considerations in Evaluating External Exposure
 - a. Exactly where was the patient located at the time of exposure?
 - b. How was patient physically oriented with respect to source (will help to evaluate nonuniform exposure)?
 - c. On what part(s) of body were dosimeters being worn?
 - d. Were self-reading dosimeter readings recorded and all nonself-reading types collected?
 - e. Are there any "natural" dosimeters available? (Belt buckles, wrist watches, gold tooth fillings, and other such items are useful in determining neutron dose.)
 - f. Exactly what was the time interval over which exposure occurred?

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- g. Are there any applicable dose rate measurements, and if so, exactly where and when were they made?
 - 1) Ion chamber measurements
 - 2) Area monitors
 - 3) Other
- h. What was the status of the plant at time of exposure?
- 3. Considerations in Evaluating Internal Exposure
 - a. Where was the patient located at time of exposure?
 - b. Exactly what was the time interval over which exposure occurred?
 - c. Can sample(s) of liquids which were internally deposited be obtained?
 - d. Can samples of airborne activity which were breathed be obtained before the area is purged?
 - e. Are there any applicable monitor readings?
 - 1) Process monitors
 - 2) Continuous Air Monitors
 - 3) Area Monitors
 - 4) Other
 - f. Can samples of patient's clothing, decontamination solutions, secretions, respirator filters, be saved?
 - g. Can the region in the vicinity of the occurrence be smear-tested, or can decontamination solutions be retained?

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TITLE PERSONNEL INJURY OR ILLNESS (RADIOLOGICALLY RELATED) AND/OR OVEREXPOSURE

APPENDIX Z

EMERGENCY PROCEDURE NOTIFICATION INSTRUCTIONS

1. When this emergency procedure has been activated and upon direction from the Shift Foreman, proceed as follows:
 - a. In case of a minor injury with contamination present or an overexposure case from any source which does not meet the criteria for an Unusual Event, notify the Plant Manager, Plant Superintendent and Supervisor of Chemistry and Radiation Protection or their designated alternates.
 - b. Designate this a Notification of Unusual Event in any case of an injury or overexposure requiring transportation of the patient to an offsite hospital or if extensive onsite decontamination is required (soap and water washings do not remove contamination or offsite decontamination assistance is required). Notify plant staff and response organizations required for this classification by implementing Emergency Procedures G-2 "Establishment of the Onsite Emergency Organization" and G-3 "Notification of Offsite Organizations" in accordance with Emergency Procedure G-1 "Accident Classification and Emergency Plan Activation."
 - c. If the case involves an overexposure from an external source which exceeds:

Immediate Notification*

25 Rem Whole Body
150 Rem Skin
375 Rem Extremities

Notification Within 24 Hours

5 Rem Whole Body
30 Rem Skin
75 Rem Extremities


Notify the Director, NRC Region 5 by telephone and telegraph, mailgram and facsimile within the applicable time frame described above. Indicate the notification is pursuant to 10 CFR20.403 (Notification of Incidents).

*Designate this a Notification of Unusual Event and complete the additional notifications prescribed in section 1.b. above.

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2. In addition to notification performed above, also notify the following in any case where NRC notification is required.
- a. Supervising Nuclear Generation Engineer (Personnel and Environmental Safety) or his alternate in the Department of Nuclear Plant Operations:
- Mr. W. H. Fujimoto PGandE: 
Plant Ext.:
Home:
- b. Compensation Claims Representative in the Department of Safety, Health and Claims, per the attached list of personnel.

- NOTE: 1) The System Dispatcher will handle the notification of General Office Personnel if they cannot be promptly reached.
- 2) Nuclear Mutual Limited (NML) holds the Company liability and property damage insurance for Company personnel and property. They should be notified under the same circumstances as the NRC. Notification is made by the Company's Insurance Department. The Department of Nuclear Plant Operations should be requested to interface between the plant and the Insurance Department when required. American Nuclear Insurers/Mutual Atomic Energy Liability Underwriters (ANI/MAELU) holds third party insurance coverage and would be similarly notified in accidents involving a third party.

69-9316 7/80 (100)

DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT
RADIATION DOSE RATE SURVEY RECORD

DATE _____ TIME _____ SWP/RWP NO _____ SURVEY NO. _____

AREA OR EQUIPMENT _____

TYPE OF SURVEY _____ SHEET _____ OF _____

ITEM NO.	DESCRIPTION	BETA		GAMMA		NEUTRON	
		m rad/hr	distance	mR/hr	distance	mrem/hr	distance

SURVEYED BY _____

SURVEY TYPE	INSTRUMENT	TYPE DETECTOR	SERIAL NO.	DATE CALIB. DUE
BETA				
GAMMA				
NEUTRON				

COMMENTS _____

RECOMMENDATIONS _____

SURVEY REVIEWED _____ SUPERVISOR _____ DATE _____

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2
SKIN AND CLOTHING DECONTAMINATION REPORT

RCP G-4

NAME _____ EXPOSURE ID# _____ DATE/TIME _____

RWP/SWP NO. _____ DECONTAMINATION LOG NO. _____

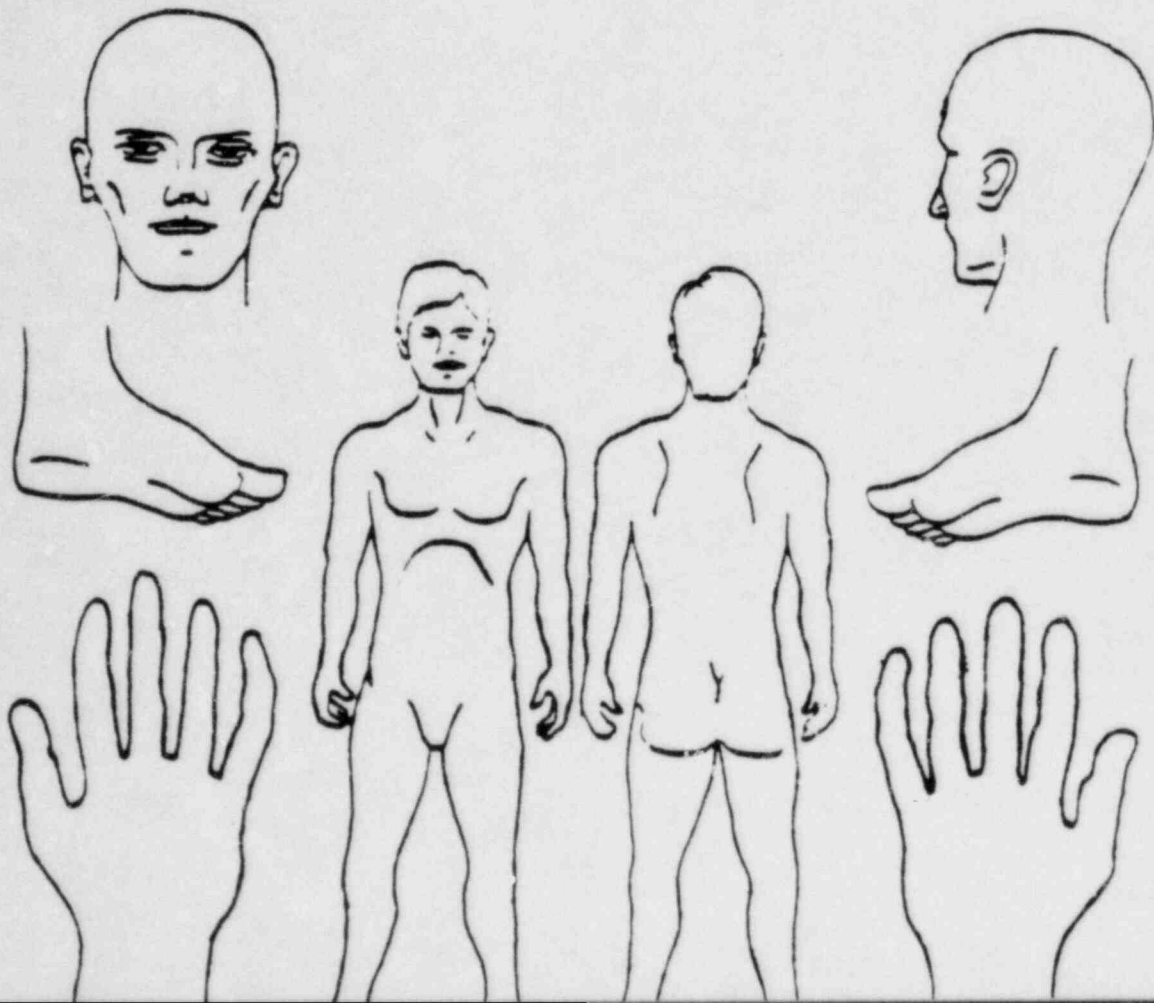
Plant location where contamination occurred _____

Cause of contamination _____

Skin condition after decontamination _____

Radiation Protection Technician _____

Use drawings below to identify where and what levels of contamination present. Show post decontamination levels.



PACIFIC GAS AND ELECTRIC COMPANY

Report of Industrial Injury to Employee

- 1. Name _____ 6. Division _____
- 2. Address _____ ZIP _____
- 3. Telephone No. _____ 7. Department _____
- 4. Social Security No. _____ 8. Date of Accident _____
- 9. Occupation _____ 9. Time of Accident _____
- 10. Location of Accident _____ 11. Nature of Injury _____
- 12. What were you doing and how did accident occur? _____

12. Describe First Aid rendered: _____

14. Witnesses to accident

- 1. _____
- 2. _____
- 3. _____

15. _____
Signature of Employee

16. Date injury reported: _____

17. Date 30 days elapsed: _____

* See Over

18. _____
Signature of Supervisor

INSTRUCTIONS: This report (Items 1 thru 15) should be written and signed by the employee personally and countersigned by the supervisor. It is for all industrial injuries and is in duplicate. The original is to be retained for Company records; the copy is to be detached after completion and given to the employee. Before signing in Item 18, the supervisor should fill in the date of the report (Item 16) and compute and note the date 30 days from the date the injury was reported (Item 17).

If the employee later requires treatment by a doctor or becomes disabled, Form 62-4586 must be prepared and forwarded to the Safety, Health and Claims Department IMMEDIATELY accompanied by the original of this report.

If the employee is unable to fill out or sign this report, it should be prepared, signed by the supervisor and the employee should be given a copy within 5 days as required by law.

If the injured employee cannot write English, the report may be made according to a verbal statement. If necessary, the employee may sign by a mark and a witness to the report should sign below the employee's mark.

If you wish to exercise your rights under item 10 of the information section, please complete this form and present it to your assigned supervisor.

§ 87(2)(b), Cause of the Employee-Supplier Physician. The physician or facility chosen by the employee who undertakes to provide treatment pursuant to Labor Code Section 4600 shall:

- (a) Within 3 working days after undertaking to provide such treatment notify the employer of the name and address of such physician or facility, and
- (b) Within 5 working days following such consultation with a public health officer report to the employer to include:
 - (1) The name and address of injured employee;
 - (2) The employer's medical history as obtained by the physician;
 - (3) Findings on examination;
 - (4) The suggestive diagnosis reported by the physician;
 - (5) The medical course, date and duration of treatment;
 - (6) A prognosis, the employee's present condition;
 - (7) An opinion as to whether further permanent disability is to be anticipated and, if so, the date, or estimate of its date;
 - (8) An opinion as to whether the employee will ultimately be able to engage in the occupation being performed at the time of injury.
- (c) As reasonable written notice of such treatment, the employee reports to the employer and, if necessary, report directly to the employer shall:
 - (1) The employer's condition before injury to work;
 - (2) The employer's condition relative to his or her to work after;
 - (3) Restrictions of activity or evidence of recommendation;
 - (4) The employer's condition (physical, emotional and economic);
 - (5) The employer's condition (physical) a previously unreported significant change; (the report shall contain a description of the proposed course of treatment proposed, if any, by the employer);
 - (6) The employee's intention to accept or refuse for compensation;
 - (7) The employee's present physical condition and proposed treatment.

Report # _____ Date _____, 19__

Dr. _____

Kindly give to bearer.

Mr./Ms. _____
medical attention, and forward a complete detailed report immediately to Manager, Safety Health and Claims Dept., 245 Market Street, San Francisco, 94106. Your bills should be itemized and all bills and reports rendered in triplicate.

PACIFIC GAS AND ELECTRIC COMPANY

By _____ RC # _____

12-6619 (REV 5/88)

Mgr. - Foreman - Supv.

PLEASE COMPLETE AND RETURN TO EMPLOYEE
(EMPLOYEE MUST HAVE COMPLETED CARD TO RETURN TO WORK)

Pacific Gas and Electric Co.: _____ Date _____, 19__

Mr./Ms. _____

Occupation _____ Report # _____

Employed By _____ RC # _____ Division _____

Injured at _____^{h.}_{a.m.} on _____, 19__

- Return to full work immediately _____
- Modified work until _____
- Unable to work until _____
- Restrictions or limitations _____
- Return Appl. Date: _____ Time: _____
- Discharged from treatment _____

Signature _____ MD.

PACIFIC GAS AND ELECTRIC COMPANY

5041

SHAW CANYON POWER PLANT
P.O. Box 11, AND EAST COUNTY ROAD, 1920 50 000

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

Dear Dr.

Thank you for being one of our panel physicians that treat our employees. Our primary goal is to provide employees who sustain industrial injuries requiring medical attention with prompt, first-class treatment. Your assistance in this endeavor is appreciated.

There is an area of concern to us. While the number of employees that require treatment by a physician has remained stable or in some cases declined, the number of disabling injuries requiring time away from work, i.e., lost time injuries, has dramatically increased.

We believe that some of this time away from work might possibly be avoided if the availability of light (modified) duty or desk-type work were more widely known. Some physicians have stated that in some cases the patient will respond more rapidly to treatment if kept busy in a light-duty capacity. Productive, light-duty assignments are almost always available for employees released for work within the medical restrictions established by the physician.

It is our policy to have an injured employee accompanied by a supervisor or other representative on the first doctor's visit. Should there be any question about the availability or type of light duty that can be provided, he or she will be able to answer for us.

Our employees' welfare is our main concern. Should you have any questions about our program, I will be glad to call on you at your convenience.

Sincerely,

R. C. THORNBERRY

RCT:kgs

3/83
RW9

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

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Safety, Health and Claims Personnel to be
Contacted for Reporting of Injuries at Diablo Canyon¹

EMPLOYEE INJURIES

In all cases of serious employee injuries (for example, injuries involving hospitalization, electric contact, hernia, amputation, fractures, or injuries expected to result in lost time from work beyond the day of injury) or death, which occur while on the job, report should be made as follows:

During Working Hours:

T. B. Honey

PGandE local

(If Mr. Honey is not available, the person answering the telephone will take the message and notify Mr. Honey or any other parties necessary in the Safety, Health and Claims Department).


Any Other Time:

Report to one of the persons on the following list, trying each in order until one is contacted:

- | | |
|---------------------|---------------|
| 1. T. B. Honey | Pinole |
| 2. A. Thomas | San Francisco |
| 3. C. B. Powell | San Francisco |
| 4. P. S. Benitez | San Rafael |
| 5. T. G. Scott | Oakland |
| 6. L. Lasagna | Albany |
| 7. C. W. Allen | San Francisco |
| 8. B. L. Wade | Larkspur |
| 9. J. A. Glimme | Danville |
| 10. J. C. Vocke | Lafayette |
| 11. W. A. Hutchison | San Carlos |
| 12. M. C. Dolan | Oakland |
| 13. M. W. Johnson | Walnut Creek |
| 14. R. W. Hall | Richmond |
| 15. I. M. Crawford | Hercules |
| 16. R. G. Schumaker | El Granada |
| 17. R. D. Fagg | San Rafael |
| 18. P. C. Boettcher | Moraga |
| 19. H. W. Reynolds | Sunnyvale |
| 20. B. P. Sadler | Belmont |


¹This listing extracted from Safety, Health, and Claims memo regarding Personnel to be Contacted for Reporting of Accidents, dated 01/13/83.

Non-Employee Injuries


C. O. Schreil, San Luis Obispo,  (office)
(office)
(home)

If he cannot be reached, contact one of the following in order of preference:

During working hours:

1. John C. Echols
 2. Doug G. Keeler
 3. George G. Perry (collection only)
- 

After working hours on Monday through 8:00 a.m. on Friday, except holidays:

- | | |
|---|---------------|
| 1. John C. Echols | Pleasant Hill |
| 2. Doug G. Keeler | Concord |
| 3. John C. Vocke | Lafayette |
| 4. Anos L. Bechtold | Cupertino |
| 5. William H. Bingaman | Novato |
| 6. E. Anthony Giudici | San Carlos |
| 7. J. Alex McCorquodale | San Ramon |
| 8. Bruce P. Sadler | Belmont |
| 9. George G. Perry
(collection only) | Hayward |
| 10. Stanley W. Johnston | Fairfield |
- 

After 5:00 p.m. on Fridays to 8:00 a.m. on Mondays and holidays:

Contact the Investigator delegated to stay on call for all emergencies. He may be reached through the System Dispatcher. If he is not available, the Dispatcher will follow the procedures for "After Working Hours."

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06/01/84

PG&E**Pacific Gas and Electric Company**

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DEPARTMENT OF NUCLEAR PLANT OPERATIONS

DIABLO CANYON POWER PLANT UNIT NO(S)

1 AND 2

TITLE EMERGENCY PROCEDURE
EMERGENCY OFFSITE RADIOLOGICAL
ENVIRONMENTAL MONITORING**IMPORTANT
TO
SAFETY**

APPROVED

*JR E T Johnson**5/4/84*

PLANT MANAGEMENT

DATE

SCOPE

This procedure and changes thereto requires PSRC review.

This procedure describes the emergency offsite radiological environmental monitoring program which would be undertaken in the event of an airborne release of radioactive materials from the Diablo Canyon Power Plant. The procedure provides instruction for implementation of the program. Also provided are instructions to monitoring teams for locating sample points, collecting samples, and performing field analyses of samples.

INITIATING CONDITIONS

The Site Emergency Coordinator declares a Site Area or General Emergency in accordance with EP G-1, "Accident Classification and Emergency Plan Activation". Offsite environmental monitoring teams may be dispatched for an Alert classification if judged appropriate by the Site Emergency Coordinator.

DIRECTION AND CONTROL

Offsite monitoring teams and the Mobile Environmental Monitoring Laboratory (MEML) will be initially dispatched at the direction of the Emergency Evaluations and Recovery Coordinator (EERC) in the TSC or Control Room. The offsite monitoring teams and MEML may receive operating instructions from the Emergency Radiological Advisor (ERA) which may be through a liaison assistant. The ERA will keep the EERC informed of the offsite monitoring team activities.

After the EOF has been fully manned and activated, the Radiological Emergency Recovery Manager (RERM) or interim RERM, will assume control of and responsibility for offsite radiological assessment and monitoring activities. On-site and near-site monitoring activities usually continue to be coordinated from the TSC. The Radiological Monitoring Director (or monitoring team liaison coordinator) will be responsible for communication with the monitoring teams, the MEML, and provide them with operating instructions. The RERM will be kept informed of the offsite monitoring teams activities, and coordinate PGandE efforts with the Unified Dose Assessment Center (UDAC) staff.

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Transfer of control and responsibility for offsite radiological assessment activities will usually be initiated by the EOF staff. The decision to transfer control and responsibility shall be approved by the Site Emergency Coordinator and the person in charge at the EOF. This shall be done by direct communication and entered on the radiological status board.

The ERA, at the TSC, will then inform each offsite environmental monitoring team and the MEML, by radio, that communications and data will be transmitted to and from the EOF to the Radiological Monitoring Director.

COMMUNICATIONS

1. The primary communication links between the 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. The location and numbers of available radios are listed below:

<u>Location</u>	<u>Radio Type</u>	<u>Number</u>
OSC (Security Building)	H	3
PGandE Service Center (MEML Garage)	H	4
EOF	H	2
	P	1
MEML	P	1
DER Vehicle	P	1

H=Hand-held. P=Permanent.

NOTE: Field teams should obtain hand-held radios from the OSC or MEML. Other locations should be used as a back-up only.

- a. For ease of communication with the radios, the 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

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ENVIRONMENTAL MONITORING

b. Radio Technique

NOTE: The "T" switch is set on  "F" set on  for
repeater,  or local.

- 1) Hold the radio upright, directly in front of the mouth with antenna oriented 90° from direction of receiving station (e.g., EOF). This normally means the antenna is also upright.
- 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.
- 4) Begin all communications using the following example:
"EOF, this is Alpha team. Do you read me?"
- 5) Close all communications using the following example:
"This is Alpha team. Over".

2. Communications back-up would be by telephone:

EOF:
TSC or Control Room:
UDAC:



3. Each monitoring team leader and the MEML shall contact the TSC or EOF under the following conditions:

- a. Prior to beginning the monitoring program, in order to obtain initial instructions.
- b. Upon completion of monitoring at each location.

OR

- c. At least once per hour.

MONITORING TEAMS

1. Composition

- a. Equipment for a minimum of four teams plus the MEML is

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available for offsite environmental monitoring. One team is normally designated for on- and near-site monitoring (per Emergency Procedure RB-7 "Emergency On-site Radiological Environment Monitoring).

- b. Each team will have two members. One team member will be designated the team leader.
 - c. Teams will be comprised of 1 (one) PGandE C&RP Technician as the team leader and 1 (one) additional PGandE Technician and/or 1 (one) SLO County (SLOCO) Environmental Sanitarian.
2. Day Shift (Week Days)
- a. PGandE personnel will be dispatched from DCPD.
 - b. One team will be supplied with a hand-held radio and an emergency kit from the site, and initiate monitoring. The other teams will obtain equipment at the MEML Garage.
 - c. Mobilization and dispatch on the day shift will take approximately 20 minutes.
3. Back Shifts (Weekends)
- a. Teams notified on a call-out basis will be directed to assemble at the Operational Support Center (Security Building) or the San Luis Obispo Service Center MEML Garage. Teams including a SLOCO Environmental Technician will assemble at the MEML Garage.
 - b. Mobilization and dispatch on a backshift will take approximately one hour.
4. The Emergency Liaison Coordinator will transmit the assembly location to the SLOCO Emergency Organization.

GENERAL INSTRUCTIONS

1. Locations to Monitor
 - a. Affected Sectors

The 360° of the compass have been divided into sixteen 22.5° sectors which are identified by the compass point of their centerline: i.e., N, NNE, NE, ENE, E, etc. In this

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ENVIRONMENTAL MONITORING

procedure, all directions are referenced to true north, so N means true north. If the wind direction has been reasonably steady, the monitoring program should emphasize the sector immediately downwind plus one adjacent 22.5° sector on either side of the downwind sector. If the wind direction is changing considerably, the sectors monitored will have to be appropriately increased.

b. Distance Downwind

The EERC will use the EARS system or manual overlays as described in EP RB-11 to determine distance affected downwind. Generally, it is best to send at least one team as far downwind as appropriate, and then have them work their way back in toward the plant.

c. Identification of Emergency Monitoring Locations

1) Monitoring locations used in this procedure are identified in Figure 1, "Onsite Assembly and Monitoring Locations" and Figure 2, "Emergency Offsite Monitoring Locations". Table 1, "Description of Emergency Onsite Monitoring Locations", and Table 2, "Description of Emergency Offsite Monitoring Locations" are included for reference.

2) Coordinate System

Each monitoring location is identified by three coordinates: a compass point, a distance in kilometers, and a letter designation, (i.e., NNE, 8, A).

The compass point refers to the sector in which the sample was taken.

To help locate the distance from the plant at which the sample was taken, concentric circles have been drawn on the map at the following distances from the plant: 0.8 km (800 m), 2 km, 4 km, 6 km, 10 km, 15 km, 20 km, 30 km, etc. This defines segments of a circle which are 22.5° in arc, and either 0.8, 1.2, 2 or 5 km deep, depending upon the particular location of the segment. The km designation in the identification refers to the distance of the farthest segment boundary, not the actual downwind distance.

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In cases where samples are taken at locations other than those previously labeled, some other identification means must be used. Thus, the following might be typical sample location designations:

(ESE, 15, Avila Post Office)
(ENE, 20, Corner of Marsh and Broad Streets, SLO)
(NNW, 8, Campground at mouth of Islay Creek)

2. Radiological Precautions

NOTE: In NON-evacuated areas NO PROTECTIVE CLOTHING OR RESPIRATORS shall be worn.

- a. Protective clothing should be worn if loose surface contamination levels above unconditional release are expected. The amount of and the need for protective clothing must be balanced against other controls (such as leaving the area). Here are some criteria to be used in determining when and how much protective clothing is worn.
 - 1) If contamination surveys (smears, direct readings probe held out car window facing down) indicate >1000 dpm/100 cm² but $<10,000$ dpm/100 cm², the minimum protective clothing is hand and feet protection.
 - 2) If surveys indicate activity $>10,000$ dpm/100 cm², then a minimum of a full set of protective clothing is worn.
- b. Respirators should be worn if loose surface contamination levels of $>100,000$ dpm/100 cm² is found or an air particulate sample indicated an concentration of 5×10^{-8} μ Ci/ml. The following rules of thumb can be used to determine the number of counts per minute (as a function of sample volume) that would give the above concentration.
 - 1) Using an HP-210 or HP-260 probe, the ratio of cpm to sample volume to give 5×10^{-8} μ Ci/ml = 500cpm/ft³
 - 2) Using an HP-240 probe (window open), the ratio of cpm to sample volume to give 5×10^{-8} μ Ci/ml = 50cpm/ft³

For example, if a sample volume of 10 ft³ were taken, a 5000 cpm reading above background using an HP-210 probe would be equivalent to 5×10^{-8} μ Ci/ml.

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NOTE: The presence of radon products can cause erroneous readings. Be sure to count the filter with and without a sheet of paper between it and the probe. If the count rate decreases by 50% with the paper, then the rules of thumb needs to be adjusted a corresponding amount.

- c. Team members shall survey themselves, their equipment after use and the exterior package of their samples if loose surface contamination is found during their surveys. Contamination control points may be required. If possible, unconditional release of all items should be made. Otherwise, control them as radioactive materials.
- d. Environmental Sampling Stations
 - 1) There are a number of environmental monitoring and sampling stations which are part of the continuing program conducted by the Department of Engineering Research. For reference, these stations are shown in Figure 3, "Location of Departments of Engineering Research Environmental Monitoring and Sampling Stations".

NOTE 1: Field monitoring teams will not collect data from DER monitors unless expressly directed by the Radiological Monitoring Director (located at the EOF).

NOTE 2: The TLD's are located in a grey plastic container. Opening the container requires an 1/8-inch Allen wrench which is in the emergency kits.

- 2) The Nuclear Regulatory Commission also has posted TLD's in the area. Information may be obtained from the NRC Representative onsite. See Table 4, "Environmental Radiation Monitoring Network Stations - Nuclear Regulatory Commission", for locations of the TLD's.

e. Dairies

Because the milk pathway is often the limiting pathway, it may be desirable to collect milk samples. The locations of dairies in the DCPD area are described in Table 5, "Locations of Selected Dairies".

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2. Sample Identification and Data Sheets

a. Identification and Retention of Samples

Samples or filters which are collected in the field shall be placed in a sealed plastic bag, envelope, or bottle, as appropriate, and identified with a firmly attached label which states the following information:

- 1) Date and time of start and end of sample collection. The time is expressed using the military (24 hour period) standard.
- 2) Sampler flow rate (air samples only).
- 3) Location of sample.
- 4) Name of person who collected the sample. The exterior of the bag shall be surveyed. If contamination above unconditional release limits are found, decontaminate or place it in another bag. Note contamination levels on label.

All samples and filters shall be taken to the MEML for preliminary field screening.

b. Field Data Sheets

Field data shall be recorded on the Emergency Environmental Monitoring Field Data Sheets (Form 69-9259). Each monitoring team shall maintain a notebook with the data sheets and other pertinent instructions.

The data sheet contains provisions for entering the data from all of the various field monitoring techniques. At any given monitoring location, only a few of the possible types of measurements may actually be performed.

MONITORING PROGRAM

An external dose rate measurement shall be taken and an air sample shall be collected at each offsite monitoring location.

If the TASC-4 continuous environmental monitors are in an affected sector, they shall be read. The TASC-4 are located at the Avila Beach Gate (ESE, 10, B) and the Los Osos fire station (N, 15, C).

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If the Pressurized Ion Chambers (PICs) are located in an affected sector, they shall be read. PIC locations are described in Table 6.

Collection of any other types of samples (i.e., ground deposition measurements, vegetation, soil, water or milk samples) will be at the direction of the Emergency Evaluations and Recovery Coordinator or the Radiological Monitoring Director.

1. External Dose Rate and/or Count Rate Measurements

a. Equipment Required

- 1) Any of the following instruments can be used for external dose rate measurements:
 - a) Rad Owl.
 - b) Victoreen Radgun.
 - c) HPI-1010
 - d) RO-2

For measuring an external count rate, use an Eberline E-140/N survey meter equipped with either an HP-240 standard GM probe, HP-260 pancake GM probe, or an HP-210 shielded GM probe.

b. Procedure

1) Dose or Count Rate Measurements

- a) Make a dose rate and/or count rate measurement with the detector held about three feet off the ground (i.e., approximately at waist level). Scan in a 360° direction. If the detector is so equipped, take the data both window (or shield) on and off.

NOTE: When using the HP-210 probe, take both shield up (GM window down) and shield down (GM window up) readings. These readings may be required later to account for sky shine. Be sure to note the correct reading under the correct headings on the Data Sheet - cpm [shield off (up)] or cpm [shield on (down)].

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- b) Identify the type of instrument (or probe) used, time survey was started, and calibration due date of the instrument on Section 1 of the Field Data Sheet.
- c) Using the highest value obtained during the scan, calculate the net dose or count rate values by subtracting the appropriate background values given in Table 7.
- d) Report both the open window (or shield) on and off values and the type of instrument used, to the Emergency Evaluations and Recovery Coordinator (EERC), or Radiological Monitoring Director (RMD).

2) Integral Dose

The Rad Owl and the HPI-1010 have the capability for dose integration if desired. If an integrated measurement is made, the data can be entered in Section 1.c. of the Field Data Sheet. Integral measurements with the Rad Owl should be made with the window open. Report the integral dose and the time period over which it was collected to the EERC or RMD, as appropriate.

2. Collection of Air Samples

a. Equipment Required

- 1) One of the following air samplers, equipped with sample head for two-inch filters:
 - a) RADECO Model HD-28B (120V AC-powered).
 - b) RADECO Model H-809B (12V DC-powered, with battery).
 - c) RADECO Model H-809C (12V DC-powered, without battery).
- 2) Two-inch diameter absolute particulate filter paper.
- 3) Coin envelope for retention of filter.

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- 4) HI-Q 2- $\frac{1}{2}$ "-diameter charcoal cartridge or AgZ cartridge.
- 5) Plastic sandwich bag for retention of cartridge.
- 6) Gummed or other label for labeling cartridge container.
- 7) Wristwatch or stopwatch.

b. Procedure

- 1) Assemble the filter and halogen cartridge in the sampling head as shown in Figure 5. Draw an arrow on the cartridge to indicate the direction of flow.
- 2) Place the filter head on the sampler.
- 3) For an HD-28B, proceed as follows:
 - a) Plug in the sampler, turn on the power, and simultaneously start a stopwatch (or reset the timer on the sampler itself, if a sampling time of several hours is contemplated).
 - b) Quickly adjust the flow rate to the desired value (typically 2 cfm).
- 4) For an H-809C, proceed as follows:
 - a) Attach the sampler to the car battery by attaching the red cable to the positive battery terminal and the black cable to a chassis ground.

NOTE: Close the hood and place the air sampler on top of it to avoid engine fan turbulence.
 - b) Turn the vehicle engine on. Start the sampler. Note the airflow. Do not attempt to adjust the airflow by turning the setscrew on the top of the flowmeter.
- 5) For an H-809B, proceed as follows:
 - a) If an automobile is available, put the toggle switch on the black battery pack in EXT. Connect the red cable to the positive terminal of the

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battery and the black cable to a chassis ground.

NOTE: Close the hood and place the air sampler on top of it to avoid engine fan turbulence.

- b) If an automobile is not available, put the toggle switch on the black battery pack in INT.

NOTE: The unit will not run using 120V AC, so do not sample while charging.

- c) Dial in the appropriate sampling time, using the appropriate combination of toggle switches.
- d) Turn on vehicle engine. Start the sampler. Note the airflow. Do not attempt to adjust the airflow by turning the setscrew on the top of the flowmeter.

NOTE: The maximum flow rate is ~1 cfm when the unit is using its own battery.

- 6) Periodically check the flow indicators to verify that the flow rate is being maintained. 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.
- 7) Allow the sampler to run until at least 10 ft³ (but preferably 30-50 ft³) is collected. The greater the volume sampled, the better.
- 8) Stop the vehicle engine. Stop the sampler and remove the filter head.
- 9) Make the halogen and particulate measurements discussed in steps 3 and 4 below, if desired.
- 10) Label the envelope and then place the particulate filter in the coin envelope.
- 11) Place the iodine cartridge in a sandwich bag and label the bag.

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12) Enter the collection data in Section 2 of the Field Data Sheet.

3. Determination of Gross Iodine (Field Technique)

a. Equipment Required

- 1) Eberline E-140/N survey meter equipped with either an HP-240/270 standard GM probe, an HP-260 pancake GM probe, or an HP-210 shielded pancake GM probe. The HP-210 probe is preferred.
- 2) Cylinder of dry air equipped with regulator.
- 3) Plastic bag.
- 4) Forceps or tweezers

b. Procedure

- 1) Depending on the air samples used, remove the cartridge from the air sampler head (HD-28) or remove sampler head from sampler (H-809).
- 2) Insert the cartridge (or sample head) into the adapter sample head shown on Figure 6.
- 3) Open the main valve on the air cylinder and note the cylinder pressure gauge. It should normally read about 1800 psi. Replace the cylinder if it reads <300 psi. Close the main valve. Open the flow control valve and adjust the regulator so that the delivery pressure gauge reads 5 psi. Close the flow control valve.
- 4) Attach the air cylinder/regulator to the adapter and sample as shown in Figure 6. Open the main valve and flow control valve to allow air to blow through the cartridge in the reverse direction. Let the purge continue until the cylinder pressure gauge drops 200 psi. The technique removes noble gases from the halogen cartridge.
- 5) Record the standard background count rate for the GM probe used for counting the cartridge using Table 7 onto Section 4 of the Field Data Sheet.

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- 6) Remove the cartridge and place the probe within one-half inch of the upstream side of the cartridge. See Figure 7. Measure and then record the count rate. When using the HP-240/270 probe, the window must open. The detector is face down when the HP-210 or HP-260 is used.
- 7) Record the count rate in Section 4 of the Field Data Sheet. Note time sample was started and calibration due date of the instrument.
- 8) Bag and label the cartridge. Survey the exterior of the bag. Decontaminate or put it into another bag if contamination levels above uncondition release limits are found.
- 9) Calculate gross iodine concentration from the following expression:

$$\mu\text{Ci/ml} = \frac{(1.59 \times 10^{-11}) (CR_{\text{net}})}{(\epsilon_2) (E_c) (V)}$$

where:

CR_{net} = net cpm on cartridge

ϵ_2 = probe efficiency from Table 8

E_c = cartridge collection efficiency, assumed to be 0.80

V = volume of airborne sample (ft^3)

- 10) Report gross iodine concentration, probe used, and volume of sample to the Emergency Evaluations and Recovery Coordinator or the Radiological Monitoring Director.

4. Determination of Gross Particulate (Field Technique)

a. Equipment Required

- 1) Eberline E-140/N survey meter equipped with either an HP-240/270 standard GM probe, an HP-260 pancake GM probe, or an HP-210 shielded pancake GM probe.

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- 2) Coin envelope.
- 3) Forceps or tweezers.

b. Procedure

- 1) Remove the filter from the air sampler head.
- 2) Record the standard background taken from Table 7 for the probe being used in the appropriate location in Section 3 of the Field Data Sheet. When using the HP-210 or HP-260 probe, the reading is taken with the detector faced down. The window must be open when using the HP-240/270 probe.
- 3) Place the probe (window open using the HP-240/270 probe, face down using HP-210 probe) within one-half inch to the upstream side of the filter in an analogous manner to the counting of halogen cartridges shown in Figure 7. Filters should be handled with forceps (or tweezers) and the probe should not touch the filter, in order to avoid contamination of the probe.
- 4) Record the count rate in Section 3 of the Field Data Sheet. Note time sample was started and calibration due date of the instrument.
- 5) Label the envelope and place the filter in the coin envelope, using the forceps (or tweezers). Place the probe within one-half inch over the envelope. If the count rate now decreases, then radon products should be suspected. Note this on the Field Data Sheet.
- 6) Determine the net count rate and calculate the gross particulate activity from the expression:

$$\mu\text{Ci/ml} = \frac{(1.59 \times 10^{-11}) (CR_{\text{net}})}{(c_3) (E_f) (V)}$$

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where:

CR_{net} = net cpm on filter

ϵ_3 = probe efficiency from Table 9

E_f = cartridge collection efficiency, assumed
to be 0.90

V = volume of airborne sample (ft^3)

- 7) Report the activity, type of probe used, and volume of sample, to the Emergency Evaluations and Recovery Coordinator or Radiological Monitoring Director.

5. Soil and Vegetation Sampling

a. Equipment Required

- 1) Trowel.
- 2) Grass cutters or knife.
- 3) 18" x 24" plastic bags.
- 4) Masking tape.
- 5) Labels.
- 6) Eberline E-140/N survey meter with HP-240/270 standard GM probe.
- 7) Protective clothing as determined by surveys.

b. Procedure

1) Vegetation Sampling and Counting

- a) Cut the vegetation from the approximately 1 m^2 of ground; the aim being to collect 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. Do not contaminate the sample with dirt.
- b) Place the vegetation in the plastic bag, top end first. Slowly compress the air out of the bag and

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seal it with tape. One pound of material will normally fill the bag about half full.

CAUTION: DO NOT PLACE BODY OVER BAG OPENING WHILE COMPRESSING IT'S CONTENTS.

- c) Label the bag with the following information
- 1) Location of sample
 - 2) Date and time of sample. The time is expressed using the military (24 hour period) standard.
 - 3) Name of person who took sample
- d) Using Table 7, pick the standard background for the HP-240/270 probe and record it on Section 7 of the Field Data Sheet.
- e) Flatten the bag and lay the probe (window open) on the center of the bag.
- f) Fold the bag over the probe and note the reading. Record the reading on the field data sheet along with time of survey and instrument calibration due data.
- g) The activity level in $\mu\text{Ci/gm}$ can be obtained from the following expression:

$$\mu\text{Ci/gm} = 2.5 \times 10^{-6} \times \text{CR}_{\text{net}}$$

where:

$$\text{CR}_{\text{net}} = \text{net cpm on a standard GM tube (HP-240/270)}$$

- h) Survey the exterior of the bag. If contamination levels above unconditional release limits are found, decontaminate or place it into another bag. Note the contamination levels on the label.
- i) Report the type of vegetation samples and the activity level to the Emergency Evaluations and

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Recovery Coordinator or the Radiological
Monitoring Director.

2) Soil Sampling

- a) Sample the soil from about a m^2 area. Remove only the top surface (to a depth of ≈ 1 " or less) using the trowel. Stay upwind and wear appropriate protective clothing when scraping. See GENERAL INSTRUCTIONS.
- b) Place the sample in a bag, seal, and label.
- c) No field counting of soil samples is required. The samples are taken for follow-up analysis only. Scan the bag to determine if there is a high count rate ($>1,000$ cpm). Survey the exterior of the bag. If contamination is found above unconditional release limits, decontaminate or place another bag over it. Record any high count rates on Section 10 of the Field Data Sheet.

6. Liquid Sampling and Counting

a. Equipment Required

- 1) Sample bottle (1 liter)
- 2) Labels.
- 3) Eberline E-140/N survey meter equipped with HP-240/270 standard GM probe.
- 4) Sheet plastic or plastic bag.
- 5) Protective clothing as determined by surveys

b. Procedure

- 1) Wrap the GM probe and cord (window open) in thin plastic to protect it against liquid damage and contamination.
- 2) Immerse the probe in as large a body of liquid as is available (reservoir, cattle trough, 10-gallon milk can, etc.) to obtain the gross open window reading.

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Enter the reading in Section 9 of the Field Data Sheet along with the time of survey and calibration due date of the instrument.

- 3) Use 60 cpm as a background count rate to determine the net count rate.
- 4) Report the type of sample, volume of sample counted, and net count rate to the Emergency Evaluations and Recovery Coordinator or Radiological Monitoring Director.
- 5) Collect and label a 1-liter sample and retain for later analysis. If readings >200 cpm were obtained during probe immersion, place the 1-liter sample in a plastic bag and then tape the opening. Survey the exterior of the bag. If contamination levels above unconditional release limits are found, decontaminate or place another bag over it.
- 6) Survey the probe after it has been removed from its plastic bag. Decontaminate if practical. Otherwise treat it as radioactive material.

7. Ground Surveys

a. Equipment Required

Eberline E-140/N survey meter equipped with either an HP-240/270 standard GM probe and HP-260 pancake GM probe, or an HP-210 shielded pancake GM probe. The HP-210 is the preferred detector because its shield reduces the influence of sky shine.

Protective clothing as required by surveys. See GENERAL INSTRUCTIONS.

b. Procedure

- 1) Hold the GM probe, window open using HP-240/270 probe (shield up when using HP-210 probe) not more than two inches above the ground, and measure the count rate. The following precautions should be taken when making this measurement.

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- a) Make the measurement over short grass on undisturbed land (common grazing, permanent pasture).
 - b) Make the measurement at least 20 yards from any building, road, railway, bridge, or heaps of material such as gravel, rubble, or road-cut. These all contain varying amounts of natural uranium and thorium.
 - c) Haystacks or silos should be avoided because they may contain in an concentrated form the total deposition on grass which originally covered a large area. Trees and hedges also act as collectors of fallout which is washed out to a variable extent by rain. In an emergency, they may trap large amounts of airborne particulate and give a falsely high reading.
 - d) Care must be taken to avoid any contamination of the instrument. If necessary, wrap the instrument (including probe) in a plastic bag prior to starting survey.
- 2) Identify the type of probe used and enter the data in Section 6 of the Field Data Sheet. Include the time the survey was started and the calibration due date of the instrument.
 - 3) Calculate the net count rate value by subtracting the background value given in Table 7.

NOTE 1: It is not possible to correct the background values for sky shine if an HP-240/270 or HP-260 is being used. Significant sky shine will invalidate ground surveys taken with these probes.

NOTE 2: If an HP-210 is being used, the effect of sky shine can be estimated. To do this, take a second measurement with the GM window facing the sky (shield down reading). Then add 1/10 of this figure to the normal background from Table 7 and use this sum as the

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corrected background. That is:

$$(Bckg)_{Corrected} = (Bckg)_{Table 7} + 0.10(CPM)_{Sky}$$

where:

$(Bckg)_{Corrected}$ = background corrected for sky shine (cpm)

$(CPM)_{sky}$ = gross cpm with detector window facing upward

- 4) Calculate the ground deposition from the following equation:

$$\text{Ground Deposition } (\mu\text{Ci}/\text{m}^2) = \epsilon_1 \times CR_{NET}$$

where:

ϵ_1 = probe efficiency factor given in Table 10

CR_{net} = net count rate (in cpm) from ground survey

- 5) Report location of measurement, ground deposition, and the type of instrument used to the Emergency Evaluations and Recovery Coordinator or Radiological Monitoring Director.

8. Determination of Smearable Contamination

a. Equipment Required

- 1) Two-inch diameter filters with holders.
- 2) Eberline E-140/N survey meter equipped with an HP-210/270 Standard Probe, an HP-260 pancake probe, or an HP-210 shielded pancake GM probe.

b. Procedure

- 1) Select a representative smooth surface to smear-test. Examples are tops of cars, store windows or sills, and walls of buildings.
- 2) Wipe the area using a uniform, moderate fingertip pressure. Estimate the total area smeared, in square feet or fraction thereof.

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- 3) Take a background count rate measurement and then a count of the filter. Enter the data in Section 8 of the Field Data Sheet along with the time of the survey and the calibration due date of the instrument.
- 4) Put the filter into a labeled holder and save it for later analysis in the counting room.
- 5) Calculate the smearable contamination as follows:

$$\text{dpm/dm}^2 = \frac{(0.11) (\text{CR}_{\text{net}})}{(\epsilon_3)A}$$

where:

CR_{net} = net cpm on filter

ϵ_3 = probe efficiency factor from Table 9

A = area smeared, in square feet

- 6) Report the type of surface smeared, instrument used, and the smearable contamination level to the Emergency Evaluations and Recovery Coordinator or Radiological Monitoring Director.

9. How to Read the TASC-4

NOTE: For purposes of emergency monitoring standardize the scaler-timer by using a ten-second count.

- a. On the NT-29 timer, set ten-seconds.
 - 1) The top thumbwheel is set at 1; the middle and lower unces are set at 0 (i.e., a reading of 1.00).
 - 2) The MIN-SEC toggle switch is set in SEC.
 - 3) The RANGE MULTIPLIER is set at X10.
- b. On the NS-12 scaler, set the TEST/SCALER toggle switch to SCALER.
- c. Press the STOP pushbutton, then press the RESET pushbutton (the RESET pushbutton should never be depressed while counts

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are being applied to the register; first stop the count by pressing the STOP pushbutton).

- d. Set the PRESET rotary switch to the OFF position.
- e. Press the START button to start a count.
- f. The scaler will begin to accumulate counts and will continue doing so until the preset time period has elapsed. At this point, counting will automatically stop.
- g. The dose rate is determined from the following expression:

$$DR (\mu R/hr) = \frac{\text{(total counts)}}{\text{(counting time in seconds)}}$$

For a ten-second count, this becomes:

$$DR (\mu R/hr) = \frac{\text{(total counts)}}{10}$$

- h. Report dose rate to the Emergency Evaluations and Recovery Coordinator or Radiological Monitoring Director.
10. "How to read the Pressurized Ion Chamber (PIC)"
- a. Equipment
 - 1) High Security Pin Tumbler key (in Emergency Kit)
 - 2) Screwdriver with 0.25-inch blade or equivalent
 - b. Using the screwdriver and key (as applicable), open the door and read the liquid crystal digital display.

NOTE: The selector switch must be in the "READ" position. Also some PIC's have a window to view the display so the unit need not be opened.

- c. Look at the strip chart. One trace on it (usually a straight line) matches one of the markings immediately below the chart. This indicates the range. The second trace will normally fluctuate. This trace indicates the actual dose rate. It should correspond with that shown on the digital display. Using a felt-tip type pen or a pencil, indicate

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and write the date, time and initials of person checking the reading on the chart. If the two readings do not agree, use the higher reading.

- d. Close the cover. Record data on Field Data Sheet. Report the reading.

11. Recordkeeping

All records generated by the utilization of this procedure for an exercise or emergency shall be forwarded the next working day to the Senior Emergency Planner for review and retention.

- a. Records generated from exercises will be categorized as non permanent and retained for a minimum of five years.
- b. Records generated from actual emergency events will be categorized as lifetime and placed into lifetime storage in accordance with procedure "Requirements for Retention and Extended Storage of Operation Phase Activity Records, (AP-E-1-S1)."

FIGURES

1. Onsite assembly and Monitoring Locations.
2. Emergency Offsite Monitoring Locations.
3. Locations of DER Onsite Environmental Sampling and Monitoring Locations.
4. Locations of DER Offsite Environmental Sampling and Monitoring Locations.
5. Exploded View of Halogen Cartridge and Particulate Filter in Sampling Head.
6. Method for Blowing Noble Gases from Halogen Cartridge.
7. Position of GM Tube and Cartridge for Gross Iodine Determination.

TABLES

1. Description of Emergency Onsite Monitoring Locations.

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2. Description of Emergency Offsite Monitoring Locations.
3. DER Environmental Sampling Locations.
4. Environmental Radiation Monitoring Network Station of the NRC.
5. Locations of Selected Dairies.
6. PIC Locations.
7. Background Data for B/ γ Dose and/or Count Rate Measurements.
8. GM Probe Efficiency Factors for Iodine Determinations.
9. GM Probe Efficiency Factors for Particulate Determinations.
10. GM Probe Efficiency Factors for Ground Surveys.

ATTACHMENTS

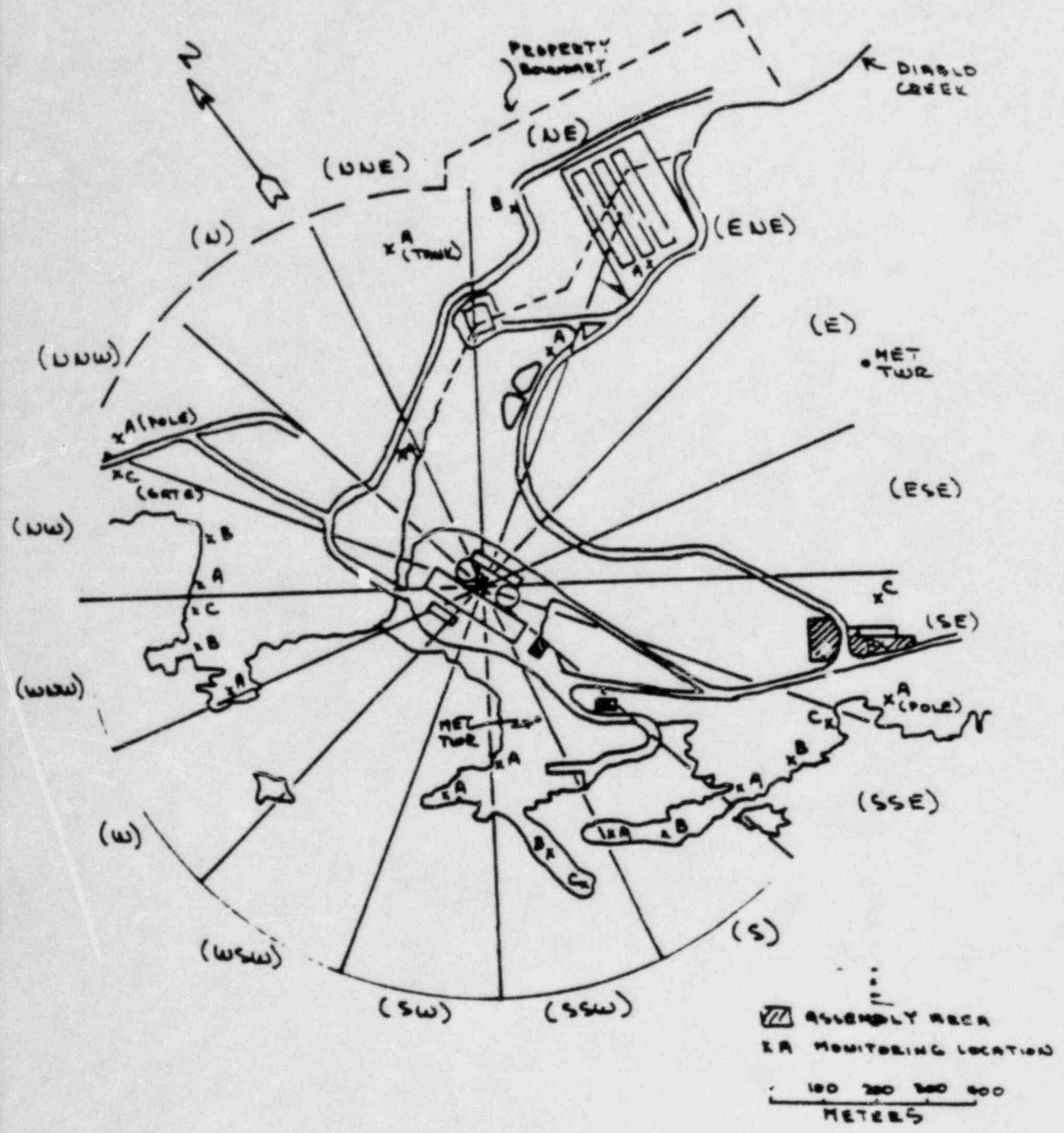
1. Form 69-9259, "Emergency Environmental Monitoring Field Data Sheet".

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TITLE: EMERGENCY OFFSITE RADIOLOGICAL ENVIRONMENTAL MONITORING

FIGURE 1
ON-SITE ASSEMBLY AND MONITORING LOCATIONS



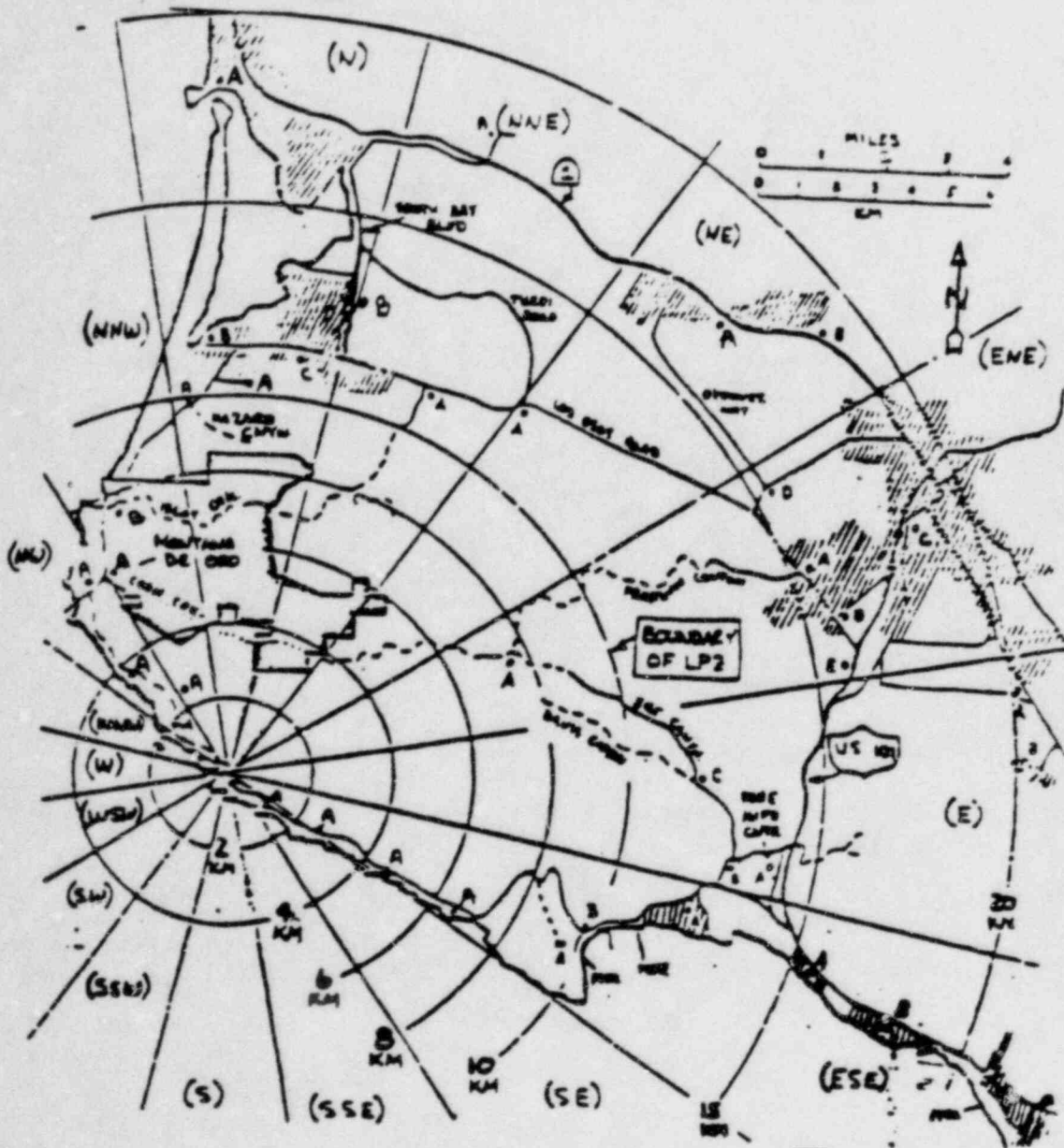
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FIGURE 2
EMERGENCY OFFSITE MONITORING LOCATIONS



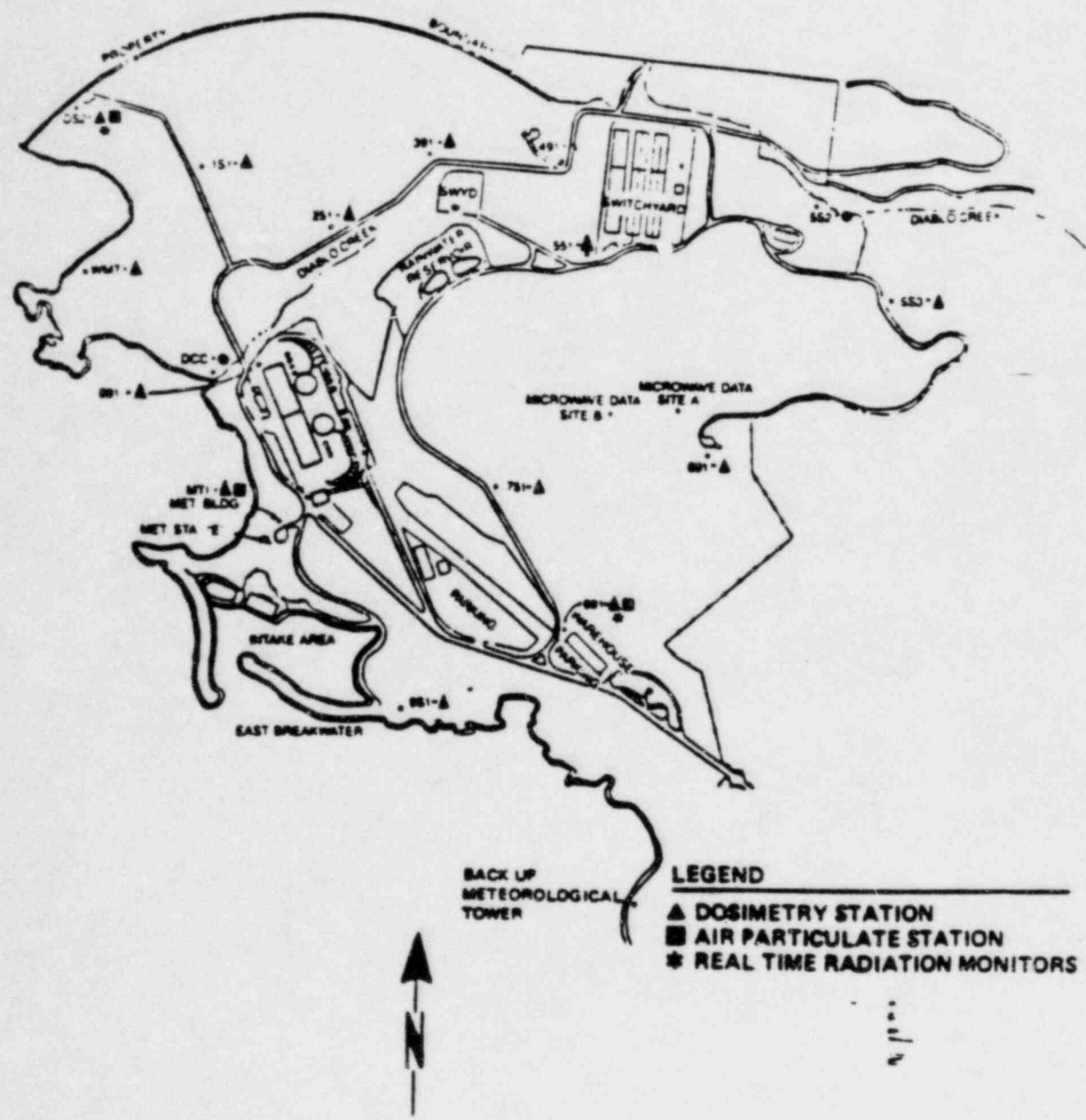
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FIGURE 3
LOCATIONS OF DEPARTMENT OF ENGINEERING RESEARCH'S
ONSITE ENVIRONMENTAL SAMPLING AND MONITORING STATIONS



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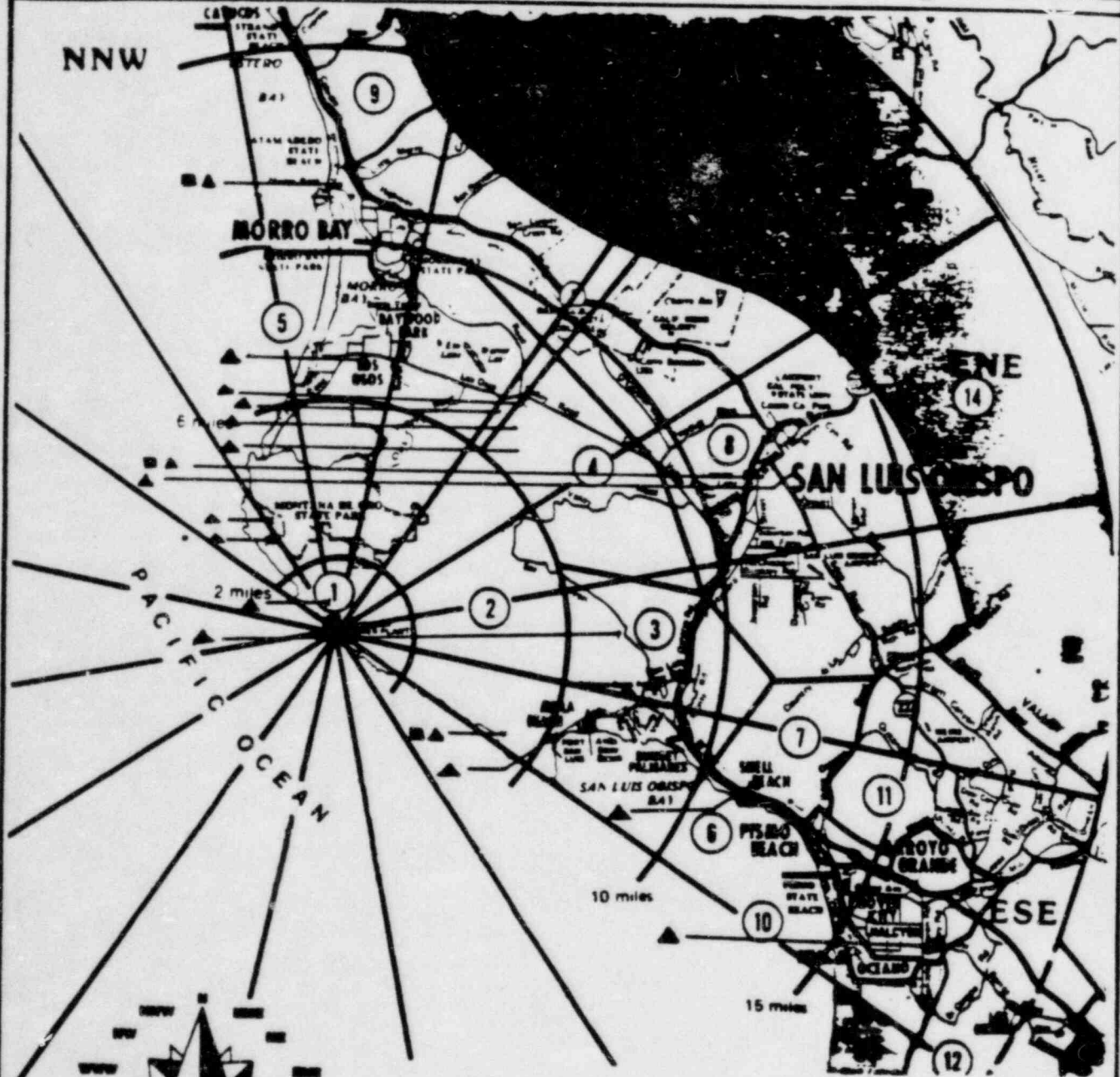


FIGURE 4

Locations of Department of Engineering
Research's Offsite Environmental
Sampling and Monitoring Locations

Legend

- ⊔ Air Particulate Station
- △ Dosimetry Station

SSW

S

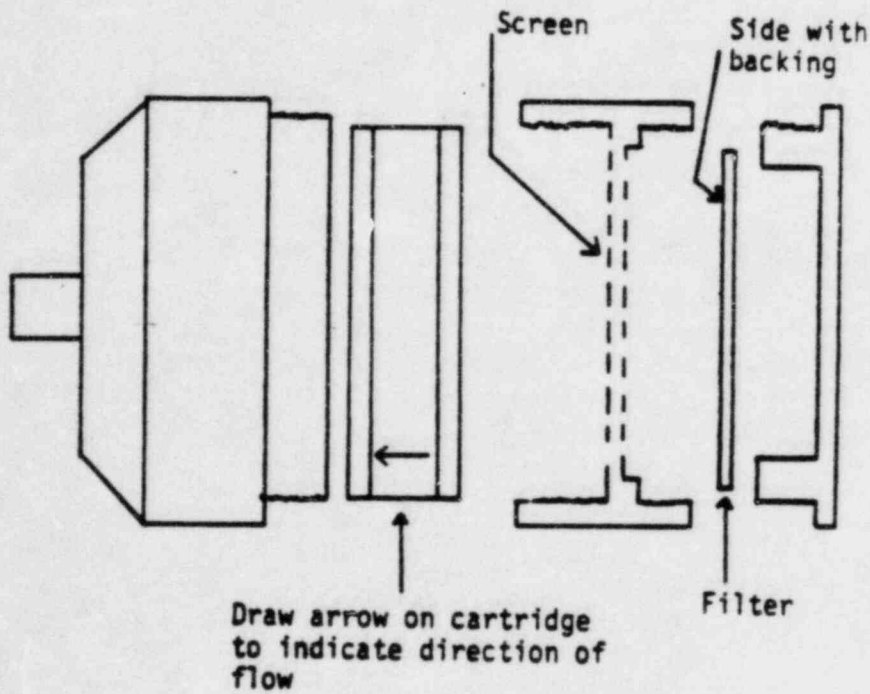
Scale in Miles

0 1 2 3 4

DC0182 29VI

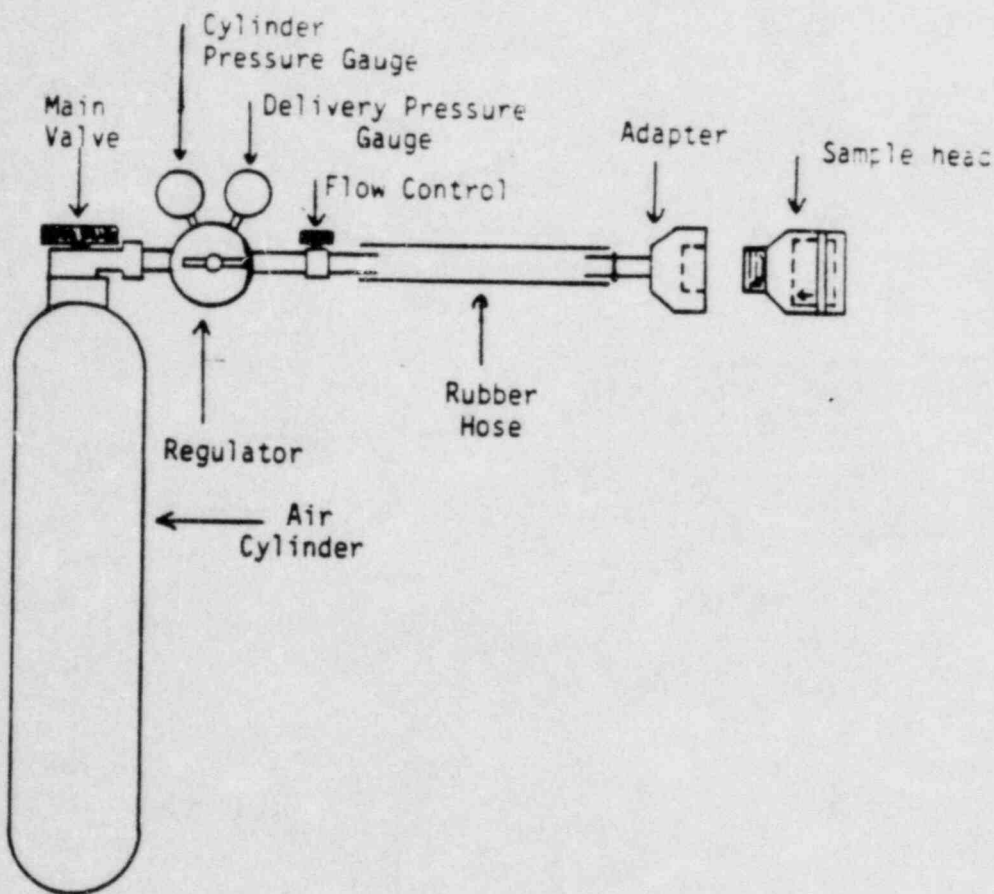
TITLE: EMERGENCY OFFSITE RADIOLOGICAL ENVIRONMENTAL MONITORING

FIGURE 5
EXPLODED VIEW OF HALOGEN CARTRIDGE AND PARTICULATE FILTER IN SAMPLING HEAD



TITLE EMERGENCY OFFSITE RADIOLOGICAL ENVIRONMENTAL MONITORING

FIGURE 6
METHOD FOR BLOWING NOBLE GASES FROM HALOGEN CARTRIDGE



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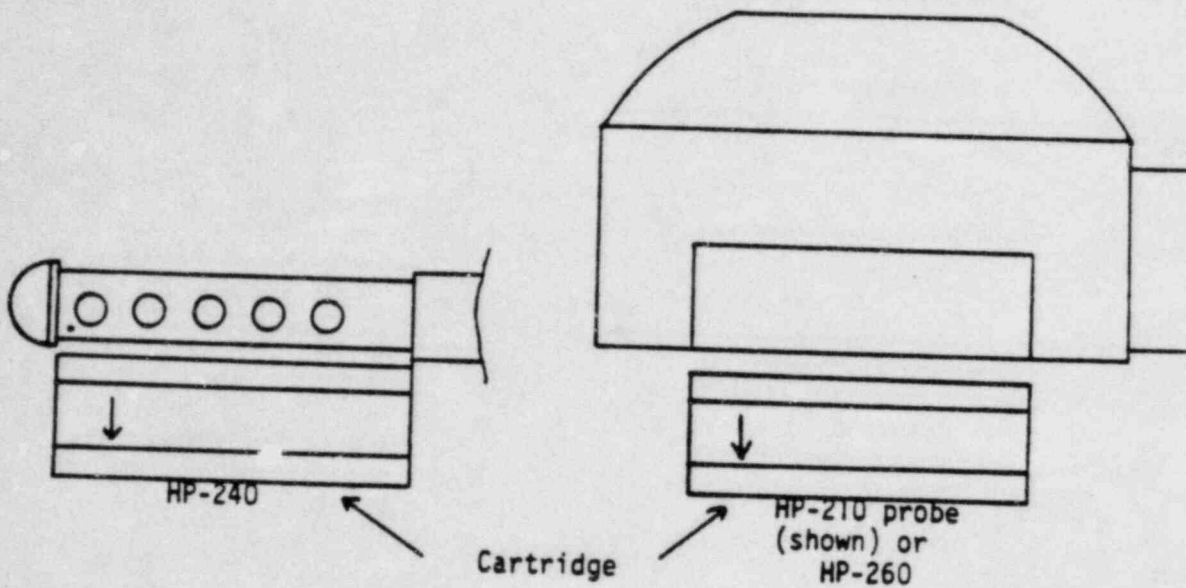
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TITLE
EMERGENCY OFFSITE RADIOLOGICAL
ENVIRONMENTAL MONITORING

FIGURE 7
POSITION OF GM TUBE AND CARTRIDGE FOR
GROSS IODINE DETERMINATION



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 TITLE EMERGENCY OFFSITE RADIOLOGICAL
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TABLE 1

DESCRIPTION OF EMERGENCY ONSITE MONITORING LOCATIONS

<u>Coordinate</u>	<u>Straight Line Distance From Plant (Meters)</u>	<u>Description</u>	<u>AC Power Available</u>
N,A	300	South side of road	No
N,NE,A	700	In front of wooden water tank	No
NE,A	420	Adjacent to east reservoir	Yes
NE,B	800	North side next to road, adjacent to gulley	No
ENE,A	700	South side of switch- yard at fence	No
SE,C	700	Air sampler-behind north side of GC warehouse	Yes
SE,B	800	Front of GC warehouse	Yes
SE,A	800	40 feet off the main road on the west side of road	No
SSE, A	700	Adjacent to guard shack on bluff	Yes
SSE,B	700	Adjacent to culvert on west side of dirt road	No
SSE,C	700	West of sandblasting area	No
S,A	---	On breakwater	No

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TITLE EMERGENCY OFFSITE RADIOLOGICAL ENVIRONMENTAL MONITORING

TABLE 1 (Continued)

<u>Coordinate</u>	<u>Straight Line Distance From Plant (Meters)</u>	<u>Description</u>	<u>AC Power Available</u>
S,B	---	On breakwater	No
SSW,A	400	West of met tower - requires - 53 - key for gate - not accessible by vehicle	No
SSW,B	---	On breakwater	No
SSW,C	---	On breakwater	No
SW,A	500	West of met tower - requires - 53 - key for gate - not accessible by vehicle	Yes
WNW,A	500	Near gully on south side - requires - 53 - key for gate	No
WNW,B	600	40 feet in front gate - requires - 53 - key	No
WNW,C	600	North side of road in clearing-may have plant growth	No
NW,A	600	North side of road in clearing-may have plant growth	No
NW,B	600	Northwest side of dirt road	No
NW,C	800	At gate on road leading to north road	No
NNW,A	800	30 feet north of steps leading to pond	No

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EMERGENCY OFFSITE RADIOLOGICAL
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TABLE 2

DESCRIPTION OF EMERGENCY OFF-SITE MONITORING LOCATIONS

<u>Coordinate</u>	<u>Straight Line Distance From Plant (KM)</u>	<u>Description^B</u>	<u>AC Power Available</u>
N,10,A	9.8	West of Montana de Oro State Park sign (0.6 miles SW of Rodman Drive on Pecho Road. Good radio at path off road south of State Park sign. Sign on path reads "No Vehicles".	No
N,15,A	10.0	End of Alamo Drive in Cabrillo Estates. (Turn off Pecho Road at Rodman and go to the top of the hill. Turn right onto Alamo and follow it to the end). Good radio. Phone available.	Yes ¹
N,15,B	11.6	Sunset Terrace Golf Course at Clubhouse. Good radio at west end of Howard Drive or on road running north of the golf course.	Yes ²
N,15,C	11.3	Baywood Park Fire Station (Turn south off of Los Osos Road onto Bayview Heights Drive. Has a TASC-4. DER's monitoring Station 10 is located at Sunnyside School next door). Good radio. Phone available.	Yes
N,20,A	18.0	Morro Bay Power Plant. DER's monitoring Station 9 is located here. Good radio. Phone available.	Yes

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TITLE	EMERGENCY OFFSITE RADIOLOGICAL ENVIRONMENTAL MONITORING	PAGE	36 OF 49

TABLE 2 (Continued)

<u>Coordinate</u>	<u>Straight Line Distance From Plant (KM)</u>	<u>Description</u>	<u>AC Power Available</u>
NNE,15,A	11.3	Intersection of Los Osos Valley Road and Clark Valley Road (under PG&E transmission lines). Good radio.	No
NNE,15,B	12.9	Los Osos Jr. High School on South Bay Boulevard in the playing field. Good radio.	No
NNE,20,A	17.6	0.2 miles north along San Bernardo Creek Road is on the northeast side of Highway 1. Good radio.	No
NE,15,A	10.6	Intersection of Los Osos Valley Road and Turri Road. DER's monitoring Station 11 is located nearby. Good radio at intersection.	No
NE,20,A	17.4	Sheriff's headquarters. (EOF) Turn south on Highway 1 at sign indicating Sheriff's Operational Center. Good Radio. Phone available.	Yes
NE,20,B	19.2	PG&E substation near Men's Colony, adjacent to northeast side of Highway 1. Good Radio. Phone available.	Yes

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		REVISION	4
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TITLE	EMERGENCY OFFSITE RADIOLOGICAL ENVIRONMENTAL MONITORING	PAGE	37 OF 49

TABLE 2 (Continued)

<u>Coordinate</u>	<u>Straight Line Distance From Plant (KM)</u>	<u>Description</u>	<u>AC Power Available</u>
ENE,8,A	9.0	See Canyon Road, 4.2 miles up from Sar Luis Bay Drive intersection. Good radio. Telephone available. Rattlesnake hazard.	Yes ¹
ENE,20,A	14.8	Laguna Jr. High School at intersection of Los Osos Road and Perfumo Canyon Road. Good radio.	Yes ³
ENE,20,B	16.0	Fire station at inter- of Los Osos Valley and Madonna Roads. Good radio.	Yes
ENE,20,C	18.6	PG&E Information Zone 1 substation at corner of Walker and Pacific Streets. DER's Station 12 is also located here. Good radio.	Yes
ENE,20,D	15.6	Corner of Foothill Boulevard and O'Conner Way. Good radio.	Yes ¹
ENE,20,E	15.8	Yancy's Restaurant (formerly Hob Nob) parking lot. Good radio.	Yes ²
E,15,A	14.5	PG&E Information Center. Good radio.	Yes
E,15,B	13.4	Bellevue-Sante Fe School. Fair Radio.	Yes ⁴

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 TITLE EMERGENCY OFFSITE RADIOLOGICAL
 ENVIRONMENTAL MONITORING

TABLE 2 (Continued)

<u>Coordinate</u>	<u>Straight Line Distance From Plant (KM)</u>	<u>Description</u>	<u>AC Power Available</u>
E,15,C	11.3	See Canyon Road, 1.7 miles up from San Luis Bay Drive intersection. Survey at intersection of See Canyon Road and Davis Canyon Road. Good radio.	Yes ¹
E,25,A	20.2	SLO County Airport. The field on the right of the road to the parking lot. Good radio.	Yes
E,25,B	21.5	SLO Country Club. East side of parking lot in the fairway. Good radio.	Yes ²
ESE,4,A	2.6	Turnout on access road, 1.6 miles from Security Building. Marked with red/white fence post. Radio near plant or near location ESE,10,A	No
ESE,6,A	4.5	Turnout on access road 2.8 miles from Security Building. Marked with red/white fence post. Radio near plant or near location ESE,10,A.	No

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 ENVIRONMENTAL MONITORING

TABLE 2 (Continued)

<u>Coordinate</u>	<u>Straight Line Distance From Plant (KM)</u>	<u>Description</u>	<u>AC Power Available</u>
ESE,8,A	6.9	Gate next to shack at road to ruins, 4.3 miles from Security Building along access road. Marked with red/white fence post. DER station 16 is near here. Radio near plant or near location ESE,10,A	No
ESE,10,A	9.6	Top of San Luis Hill ⁵ . Gate at 6.2 miles from the Security Building. Fair radio.	No
ESE,10,B	10.0	Port San Luis Gate. TASC-4 and DER's Station 27 are located here. Radio on road to Pirates Cove.	Yes
ESE,15,A	11.6	Parking lot behind Avila Beach Post Office. Radio on road to Pirates Cove.	Yes
ESE,20,A	15.3	Pismo Beach Fire Dept. on Shell Beach Road. Good radio.	Yes
ESE,20,B	19.2	0.5 miles northwest of the Shorecliff Inn on Shell Beach Road. Good radio.	Yes ¹
SE,2,A	1.3	Turnout on access road, 0.8 miles from Security Building near meteorological Tower A. Marked with red/white fence post. DER Station 7 is near here. Good radio.	No

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TABLE 2 (Continued)

<u>Coordinate</u>	<u>Straight Line Distance From Plant (KM)</u>	<u>Description</u>	<u>AC Power Available</u>
NW,2,A	1.6	0.6 miles north from Field's property gate (1 mile north from plant, just ENE of Lion Rock).	No
NW,4,A	3.5	Fields' road near large watering pond.	No
NW,8,A	6.1	Near residence by park gate.	Yes ¹
NNW,4,A	2.7	Near wood paneled house.	Yes ¹
NNW,8,A	5.8	Parking lot near end of road at southern park boundary (near gate to Fields' property). Good radio.	No ⁶
NNW,8,B	7.6	Ranger station over- looking Spooner's Cove. Good radio on road south of Ranger Station at "Locked Gate Ahead" sign (near parking overlook of Spooner's Cove).	Yes ⁷

NOTES:

¹Power is available at nearby residences.

²During working hours. Also power is available at nearby residences.

³During school hours. Also at nearby residences.

⁴During school hours.

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TABLE 2 (Notes Continued)

⁵A dirt road leads to the top of the hill. The intersection of this road with access road is marked with a red/white fence post. A 90909 key is required on the gate. A four-wheel drive vehicle is preferred. Alternatively; take readings on the access road at the marked fence post.

⁶Power is available at nearby residence on Fields' property (NW,8,A) and monitoring can be performed at this latter location.

⁷During daylight hours.

⁸Radio comments refer to the best result using unaided handi-talkies using repeaters (H.P. Frequency).

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TABLE 3

DER ENVIRONMENTAL SAMPLING LOCATIONS

Code	Description	Radial Direction 0°	Radial Distance (Miles)
0B1	Point Buchon (Station 18).....	325	3.6
0S1	Exclusion Fence-Northwest Corner (Station 3).....	320	0.1
0S2	North Gate (Station 31).....	320	0.5
1A1	Crowbar Canyon (Station 13).....	327	1.6
1C1	Montana de Oro Campground (Station 38).....	336	4.7
1S1	Wastewater Pond (Station 32).....	330	0.4
2D1	Sunnyside School (Station 10).....	10	6.9
2F1	Morro Bay (Station 26).....	0	10.9
2F2	Morro Bay Power Plant (Station 9).....	358	11.2
2S1	Back Road-300 m North of Plant (Station 33).....	0	0.2
3D1	Clark Valley (Station 40).....	24	6.2
3S1	Road NW of 230 kv Switchyard (Station 34).....	23	0.4
4C1	Clark Valley - Gravel Pit.....	45	5.8
4D1	Los Osos School (Station 11).....	36	7.6
4S1	Back Road Between Switchyards (Station 35).....	43	0.5
5C1	Junction Perfumo/See Canyon Roads (Station 39)...	64	4.7
5F1	SLO Zone 1 Substation (Station 12).....	68	11.2
5F2	Cal Poly Farm (Station 25).....	60	12.6
5F3	SLO County Health Department (Station 29).....	70	12.7
5S1	400 kv Switchyard (Station 4).....	58	0.4
5S2	Diablo Creek Weir (Station 20).....	65	0.6
5S3	Microwave Tower Road (Station 8).....	70	0.7
6D1	Junction See/Davis Canyon Roads (Station 41).....	89	7.5
6S1	Microwave Tower (Station 5).....	94	0.5
7C1	Pecho Creek Ruins (Station 16).....	118	4.1
7D1	Avila Gate (Station 27).....	120	6.6
7D2	Avila Beach (Station 14).....	110	7.6
7F1	Shell Beach (Station 17).....	110	10.8
7F2	Pismo Beach (Station 22).....	115	12.6
7G1	Arroyo Grande (Station 23).....	115	16.8
7G2	Oceano Substation (Station 15).....	118	17.3
7G3	Woodland Dairy (Station 30).....	122	17.9
7S1	Overlook Road (Station 36).....	112	0.3
7S2	Diablo Peak (Station 28).....	103	1.1
8S1	Target Range (Station 6).....	125	0.5

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TABLE 3 (Continued)

<u>Code</u>	<u>Description</u>	<u>Radial Direction 0°</u>	<u>Radial Distance (Miles)</u>
BS2	Southwest Site Boundary (Station 7).....	128	1.1
9S1	South Cove (Station 37).....	167	0.4
DCC	Diablo Creek at Diablo Cove (Station 21).....	270	0.1
DCM	Diablo Cove (Station 19).....	270	0.2
ICO	Iodine Cartridge Composite.....	0	0.0
LO	Lompoc (at City Hall).....	154	44.6
MT1	Meteorological Tower (Station 1).....	185	0.2
SM	Santa Maria (at Health Dept.).....	127	29.7
SV	Solvang (at Sheriff's Substation).....	144	56.7
WH1	Northwest Guard Shack (Station 2).....	290	0.2

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EMERGENCY OFFSITE RADIOLOGICAL
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TABLE 4

ENVIRONMENTAL RADIATION MONITORING NETWORK STATION
OF THE NUCLEAR REGULATORY COMMISSION

<u>NRC STATION NO.</u>	<u>SECTOR</u>	<u>AZIMUTH</u>	<u>ZENTH</u>	<u>DESCRIPTION</u>
1	SE	125°	1.0 mi.	Site entrance road
2	ESE	119°	4.2 mi.	Site entrance road
3	ESE	107°	6.9 mi.	San Miguel Street, Avila Beach
4	ESE	109°	10.6 mi.	Corner of Naomi Avenue and Seacliff Drive, Sunset Palisades area
5	ESE	113°	14.1 mi.	Corner of Atlantic City Avenue and Front Street, Grover City
6	ENE	68°	9.6 mi.	Perfumo Canyon Road, Laguna Lake Park Area
7	N	359°	11.1 mi.	PG&E Morro Bay Power Plant
8	N	359°	6.6 mi.	Pecho Valley Road, Cuesta by the Sea Area
9	NNW	339°	4.7 mi.	Montana De Oro State Park
10	NNW	328°	3.5 mi.	Private Property Road at end of Pecho Valley Road
11	NNW	332°	1.3 mi.	Private Property Road North of Diablo Canyon Plant
12	NE	37°	21.4 mi.	San Diego Road, Atascadero
13	NE	37°	21.4 mi.	San Diego Road, Atascadero
14	NE	37°	21.4 mi.	San Diego Road, Atascadero

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TABLE 5

LOCATIONS OF SELECTED DAIRIES

<u>DAIRY HERD</u>	<u>LOCATION RELATIVE TO DCCP</u>
L.F. Domenghini (500 cows)	NNE, 12.5 miles
Roemer and Jones (200 cows)	NNE, 11 miles
Dutch Maid Farm (100 cows)	NE, 8 miles
Don Warden (200 cows)	NE, 8 miles
Jim Spreafico (150 cows)	E, 9.5 miles
SLO Cal Poly Farm	ENE, 10 miles
Albertoni Farm	SE, 23.5 miles (Guadalupe)

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TABLE 6

PIC LOCATIONS

<u>LOCATION</u>	<u>DESCRIPTION</u>
Site 1	DCPP North Gate Guard Post
Site 2	SSW Corner of Target Range
Site 3	715 Harbor Street, Morro Bay. Small fenced yard on NE corner of Harbor Street and Piney Street intersection.
Site 4	Montano de Oro State Park. At the Park Ranger's residence, adjacent to the emergency siren.
Site 5	Los Osos Fire Department
Site 6	SLO County Sheriff's Office. South of EOF trailer behind retaining wall
Site 7	SLO Police Department. Intersection of Santa Rosa Street and Walnut Street. Behind fence SW of Walnut Street driveway.
Site 8	SLO Service Center
Site 9	PGandE Energy Information Center
Site 10	DCPP Front Gate
Site 11	Pismo Beach. From Bellow Street go N.E., turn between Veterans's Memorial and St. Paul's Church and proceed up dirt road. PIC is on top of hill north of pump house and west of water storage tank.

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ENVIRONMENTAL MONITORING

TABLE 6 (Continued)

LOCATION

DESCRIPTION

Site 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.

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TABLE 7

BACKGROUND DATA FOR β/γ DOSE AND/OR COUNT RATE MEASUREMENTS
(3' ABOVE GROUND)

<u>INSTRUMENT</u>	<u>BACKGROUND DOSE RATE (mR/hr)</u>	
	<u>WINDOW CLOSED</u>	<u>WINDOW OPEN</u>
Rad Owl	0	0
Victoreen radgun	0.02	0.02
HPI-1010	0.015	NA
RO-2	0	0

<u>GM PROBE</u>	<u>BACKGROUND COUNT RATE (cpm)</u>	
	<u>SHIELD ON</u>	<u>SHIELD OFF</u>
HP-240/270	60	60
HP-260	NA	50
HP-210	NA	50

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TABLE 8

GM PROBE EFFICIENCY FACTORS, ϵ_2 FOR IODINE DETERMINATIONS

<u>GM PROBE</u>	<u>ϵ_2 (counts/dis)</u>
HP-240/270	0.013
HP-260	0.09
HP-210	0.09

TABLE 9

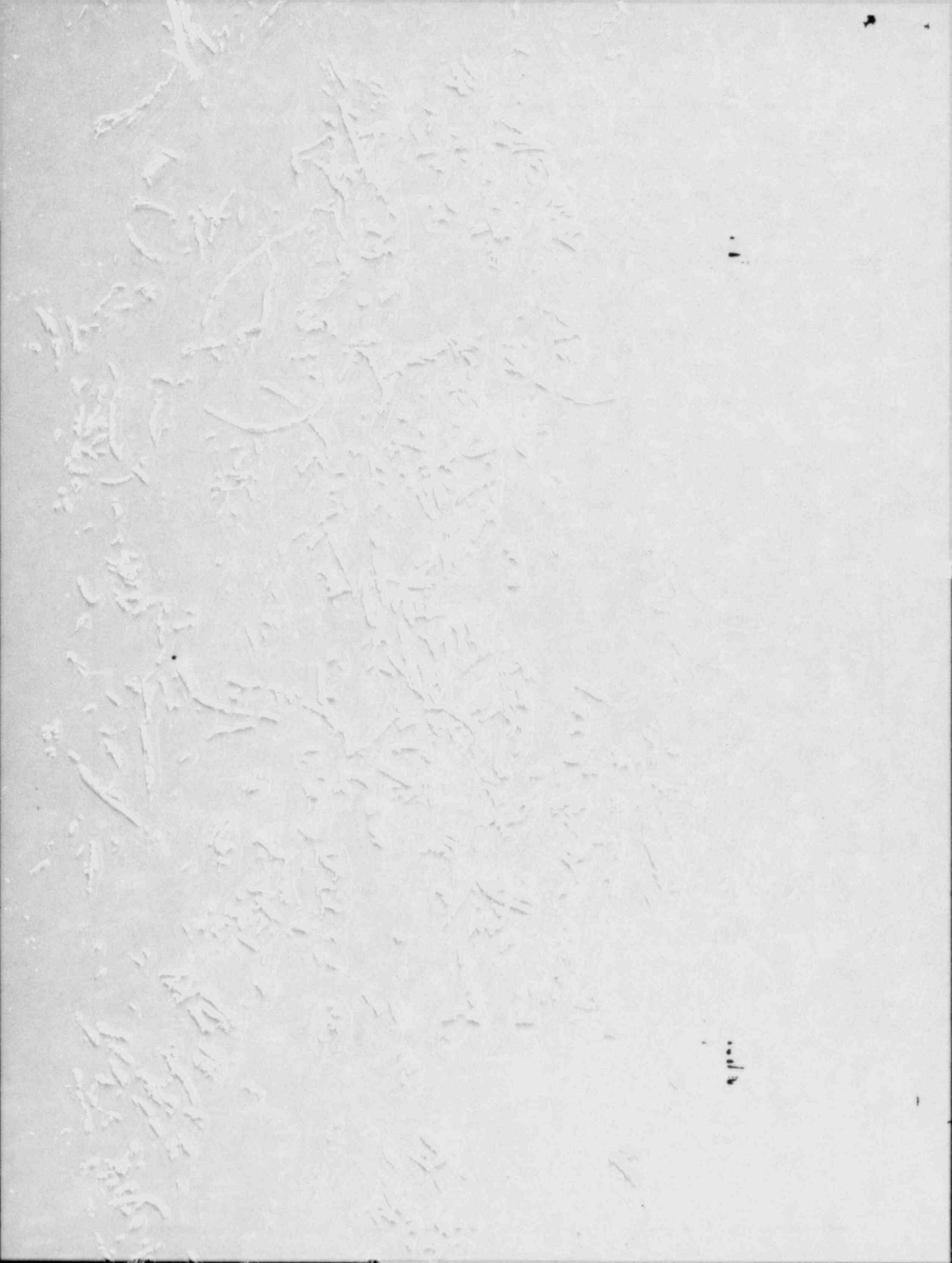
GM PROBE EFFICIENCY FACTORS, ϵ_3 , FOR PARTICULATE DETERMINATIONS

<u>GM PROBE</u>	<u>ϵ_3 (counts/dis)</u>
HP-240/270	0.018
HP-260	0.20
HP-210	0.18

TABLE 10

GM PROBE EFFICIENCY FACTORS, ϵ_1 , FOR GROUND SURVEYS

<u>GM PROBE</u>	<u>ϵ_1 ($\mu\text{Ci}/\text{m}^2/\text{cpm}$)</u>
HP-240/270	0.0042
HP-260	0.0012
HP-210	0.0011



PACIFIC GAS AND ELECTRIC COMPANY
 NUCLEAR PLANT OPERATIONS
 DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2
 EMERGENCY ENVIRONMENTAL MONITORING FIELD DATA SHEET

Team _____ Leader _____ Member _____
 Monitoring Location _____

1. THREE FOOT BETA-GAMMA RADIATION FIELD READINGS

a. Count Rate Calibration Due Date _____

Time	Type of Probe	CPM[Shield off(UP)]			CPM[Shield on(down)]		
		Gross	BKG*	Net	Gross	BKG*	Net
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

b. Dose Rate Calibration Due Date _____

Time	Instrument	mR/hr(Window Open)			mR/hr(Window Closed)		
		Gross	BKG*	Net	Gross	BKG*	Net
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

c. Integral Dose

Instrument	① Time Started	② Time Complete	③ Duration(HR) ② - ①	④ Total Dose(mR)	⑤ Dose Rate(mR/hr) ④ - ③
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

2. AIR SAMPLE DATA

Calibration Due _____

Sampler	Time Started	Time Completed	Duration (Minutes)	Flow Rate (CFM)	Sample Volume (FT ³)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

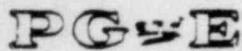
3. PARTICULATE DETERMINATION

Type of Probe	Gross	CPM(Shield off) BKG*	① Net	② ϵ_s	③ E_f	④ Volume(FT ³)	① $\times 1.59 \times 10^{-11}$ ② \times ③ \times ④ (μ Ci/ml)
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

4. IODINE DETERMINATION

Type of Probe	Gross	CPM(Shield Off) BKG*	① Net	② ϵ_s	③ E_c	④ Volume(FT ³)	① $\times 1.59 \times 10^{-11}$ ② \times ③ \times ④ (μ Ci/ml)
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

*NUMERICAL VALUE FOUND IN EMERGENCY PROCEDURE RB-7 OR RB-8



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DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT UNIT NO(S) 1 AND 2
EMERGENCY PROCEDURE
ACTIVATION AND OPERATION OF THE TECHNICAL
TITLE SUPPORT CENTER

IMPORTANT
TO
SAFETY

APPROVED R. L. Thibault 5-3-84
PLANT MANAGER DATE

SCOPE

This procedure describes the actions that are to be taken in the event it becomes necessary to activate and operate the Technical Support Center (TSC). Also described are instructions for turning over selected emergency functions from the Control Room to the TSC.

This procedure also describes the TSC's ventilation system and its operation. This procedure and changes thereto requires PSRC review.

GENERAL

The objective of the TSC is to provide personnel and equipment to relieve the control room staff from emergency activities unrelated to maintaining the plant in a safe condition. These functions are: 1) Site emergency response management, 2) communications with offsite emergency response organizations, 3) offsite emergency response coordination, including radiological monitoring and recommendations for offsite protective actions, 4) accident assessment of plant conditions.

The TSC serves as the headquarters for the Site Emergency Coordinator, the Emergency Liaison Coordinator, the Emergency Evacuations and Recovery Coordinator, the Emergency Maintenance Coordinator, the Emergency Operations Advisor, the Emergency Radiological Advisor, and their staffs.

INITIATING CONDITIONS

The criteria for activating the TSC will be, but is not limited to the declaration of an Alert, Site Area Emergency or General Emergency as defined in EP G-1, "Accident Classification and Emergency Plan Activation." The emergency signal is sounded or a call out of personnel is initiated to activate and fully staff the TSC in accordance with EP G-2 "Establishment of the Onsite Emergency Organization."

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TITLE ACTIVATION AND OPERATION OF THE TECHNICAL
SUPPORT CENTER

IMMEDIATE ACTIONS

1. All onsite personnel, upon hearing the emergency signal or being notified of its activation, shall report to their assigned assembly areas in accordance with EP G-4, "Personnel Accountability and Assembly."
2. The Shift Foreman may assign a Liaison Assistant to activate the TSC switchboard to receive incoming phone calls and complete notification of plant staff from this location.

NOTE: Figure 1 provides a floor plan of the TSC.

SUBSEQUENT ACTIONS

1. The Site Emergency Coordinator shall activate the TSC by establishing the emergency response organization in the TSC and relieving the interim Site Emergency Coordinator (normally the Shift Foreman) of his duties.
2. When the TSC has been activated and staffed to acceptable minimum levels, the Site Emergency Coordinator shall formally announce that the TSC has been activated and he (the SEC) is assuming overall management of PGandE emergency response efforts from the interim Site Emergency Coordinator (normally the Shift Foreman in the Control Room).
3. Interim emergency response personnel will continue their assigned duties until relieved by someone in the long-term emergency organization, or dismissed by the Site Emergency Coordinator. Personnel relieved may be re-assigned to other emergency response functions.
4. Plant personnel assigned to the TSC shall activate the TSC by first notifying the Site Emergency Coordinator (or Liaison Coordinator) of their arrival, and then proceed with their activation checklist.

NOTE: If the emergency involves control room inaccessibility personnel should establish communications with the Hot Shutdown panel [(X1431 Unit 1, X2432 Unit 2)] and/or dedicated shutdown panel [(X1355 Unit1, X2246 Unit 2)] in lieu of the control room.

DIABLO CANYON POWER PLANT UNIT NO(S) 1 AND 2

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TITLE ACTIVATION AND OPERATION OF THE TECHNICAL
SUPPORT CENTER

SUPPORTING PROCEDURES

- G-1 "Accident Classification and Emergency Plan Activation"
- G-2 "Establishment of the Onsite Emergency Organization"
- G-3 "Notification of Offsite Organizations"
- G-4 "Personnel Accountability and Assembly"
- EF-6 "Activation of the Emergency Assessment and Response System"
- EF-7 "Activation of the Nuclear Data Communications"
- OP-4 "Operating Order "1 hour Reporting Requirements to the NRC"

FIGURES

- 1. TSC Floor Plan

ATTACHMENTS

- 1. 69-11112-1 TSC Activation and Operation Checklist for the Site Emergency Coordinator.
- 2. 69-11112-2 TSC Activation and Operation Checklist for the Emergency Liaison Coordinator.
- 3. 69-11112-3 TSC Activation and Operation Checklist for the Emergency Evaluations and Recovery Coordinator.
- 4. 69-11112-4 TSC Activation and Operation Checklist for the Emergency Radiological Advisor.
- 5. 69-11112-5 TSC Activation and Operation Checklist for the Emergency Maintenance Coordinator.
- 6. 69-11112-6 TSC Activation and Operation Checklist for the Emergency Operations Advisor.
- 7. 69-11112-7 Activation of the TSC Ventilation System for Abnormal Operation.

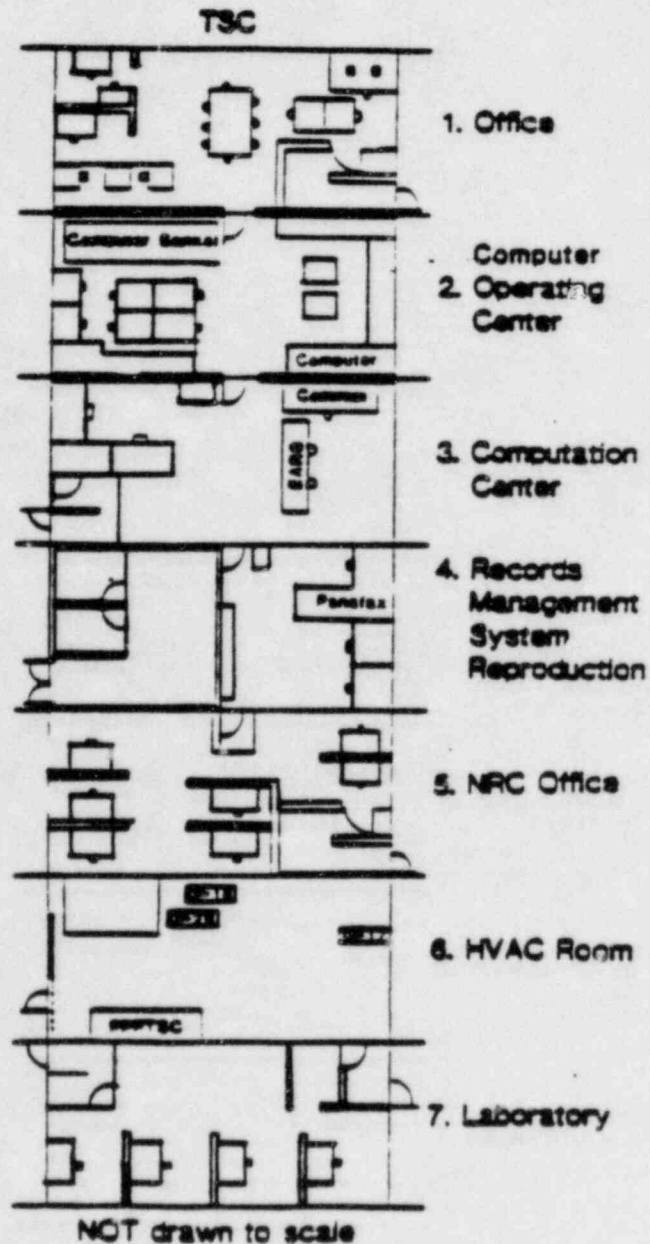
DIAGLO CANYON POWER PLANT UNIT NO(S) 1 AND 2

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TITLE: ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER


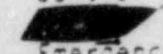
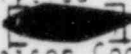

FIGURE 1

Floor Plan of the Technical Support Center



PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE SITE EMERGENCY COORDINATOR
(SEC)

1. Have the Emergency Liaison Coordinator (ELC) establish manning status of TSC (Use Form 69-9370 "Site Emergency Organization Assignments"). Notify the Security Shift Supervisor of personnel accounted for in the TSC per EP G-4 if the site emergency signal is sounded.
2. Notify the Control Room, TSC staff and interim EOF staff that you (the SEC) are assuming overall management of PG&E emergency response efforts from the interim SEC (normally the Shift Foreman).
3. Have the ELC establish and maintain communications with:
 - a. Control Room, Senior Control Operator's Desk 
 - b. Emergency Operations Facility, Operating and Analytical Recovery Manager 
 - c. Radiological Emergency Recovery Manager 
 - d. Corporate Incident Response Center, Corporate Liaison Coordinator 
4. Verify that the equipment in the TSC is operational:

Emergency Evaluations and Recovery Manager

 - a) Ventilation System
 - b) NDCS (Harris) computer systems
 - c) Emergency Response Facility Data System (ERFDS)

Emergency Radiological Advisor

 - a) Radiation monitoring equipment in the TSC
 - b) Emergency Assessment and Response System (EARS)

Emergency Operations Advisor

 - a) Television monitoring equipment
5. If necessary, provide instructions to personnel at assembly areas (See EP G-4), authorize the evacuation of non-essential personnel, and specify the evacuation route (see EP G-5).
6. Prior to the arrival of the corporate Recovery Manager at the EOF:
 - a. Maintain communication with the ACEO and direct all emergency response operations performed by PG&E in the San Luis Obispo area.
 - b. Authorize company protective action recommendations to the County.

TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE SITE EMERGENCY COORDINATOR
(SEC)

- c. Change the Emergency Action Level Classification as necessary and have the ELC notify required offsite organizations (see EP G-3) and all emergency response groups onsite.
 - d. Authorize release of information about the emergency to the news media.
 - e. Other responsibilities as given in Table 1 of Procedure EP G-2.
7. Communicate significant events and decisions to the EOF and Control Room.
8. Maintain a log of significant communications and decisions.

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TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE EMERGENCY LIAISON COORDINATOR
(ELC)

1. Establish notification status of offsite organizations and plant personnel from the interim Liaison Coordinator [REDACTED] and assign the Liaison Assistants to relieve the control room of that responsibility.
2. Activate the communication links by performing a functional check on the UHF/VHF radio and telephone communications equipment required. Assign a clerk or liaison assistant to activate the TSC switchboard and relieve the control room of the responsibility of answering incoming calls.
3. Direct liaison assistants notifications and status updates to offsite organization and communications for TSC personnel. Maintain communications with:
 - a. Control Room, Senior Control Operator's Desk, [REDACTED]
 - b. Emergency Operations Facility, Operations and Analytical Recovery Mgr., [REDACTED]
 - c. Corporate Incident Response Center, Corporate Liaison Coordinator, [REDACTED]

PACIFIC GAS AND ELECTRIC COMPANY
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DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE EMERGENCY EVALUATIONS
AND RECOVERY COORDINATOR (EERC)

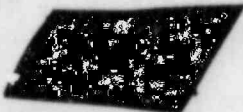
1. Determine the nature of emergency from the interim Emergency Evaluations and Recovery Coordinator (STA).
2. If necessary, request the Control Room to switch the TSC from non-vital to vital power (specify Unit 1 or Unit 2). The switches are located in the Unit 2 480V switch gear room (Panels EPTSN and EPTSC).
3. Assign data processors to activate the NDCS (harris) computer system according to Procedure EP EF-7, to monitor the ERFDS and to develop and interpret plant data for Transmission offsite.
4. Provide the SEC, in consultation with the ERA any recommendations for appropriate response actions; and on-site and offsite recommendations for protective actions.
5. Keep the SEC and the ERA informed of plant equipment and monitoring personnel status and the evaluations and recommendations regarding plant operations.
6. Assign personnel to monitor the ventilation system and perform any manual actions needed. See Appendix DC69-11112-7.
7. Maintain a log of significant communications and decisions.

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE EMER. RADIOLOGICAL ADVISOR
(ERA)

1. Verify that radiation monitoring equipment in the TSC is operational.
2. Assign personnel to operate the Emergency Assessment and Response System (EARS). Have radiological status forms prepared providing appropriate release rate, meteorological and other radiological information for offsite organizations. Forward these to the ELC.
3. Determine the extent of radiological monitoring and health physics support required in-plant, on-site and off-site (in consultation with EOF personnel) and make personnel assignments for these monitoring activities.
4. Maintain communications with the Radiological Emergency Recovery Manager (RERM) at the EOF:
 - a. Consult on the potential or real release rates for radioactive material.
 - b. Consult on the off-site monitoring and assessment activities with the RERM.
5. Maintain communications with the site chemistry and Radiation Protection Coordinator at access control. Approve all entries to the controlled area and keep informed of the location of response personnel.
6. Maintain communications with the Emergency Evaluations and Recovery Coordinator (EERC).
 - a. Advise the EERC of offsite protective actions appropriate to the situation.
 - b. Inform the EERC of the radiological exposure status of personnel and equipment involved in emergency response.
 - c. Determine if plant status changes will adversely affect personnel exposure.
7. Direct and Control the onsite monitoring team(s).
8. Have the Emergency Liaison Coordinator call out dosimetry manpower as required to prepare for determining radiation exposure of emergency response personnel.

Don Jones
John Warrick



TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE EMER. RADIOLOGICAL ADVISOR
(ERA)

9. Maintain a log of significant communications and decisions.
10. If the event possibly involves a release, assure that contamination control equipment (meter, shoe covers, etc.) is available and operable to avoid contamination of the TSC.

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE EMERGENCY
MAINTENANCE COORDINATOR (EMC)

1. Determine repair/damage control and corrective actions for plant mechanical, electrical, and instrumentation and control systems, and coordinate all such activities from the TSC through the appropriate maintenance coordinator.
2. Keep the Site Emergency Coordinator and the Emergency Evaluations and Recovery Coordinator informed of the status of equipment and personnel involved in the repair/damage control effort and the status of personnel availability for in-plant support by coordinating personnel accountability with the Operational Support Center (Security Building Lunchroom) Supervisor.
3. Keep the Shift Foreman informed of the status of equipment and personnel involved in the repair/damage control effort.

NOTE: ALL ENTRIES INTO A RADIOLOGICALLY CONTROLLED AREA WILL REQUIRE A SWP AND THE APPROVAL OF THE EMERGENCY RADIOLOGICAL ADVISOR. (See Procedure EP RB-4).

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

TITLE: TSC ACTIVATION AND OPERATION CHECKLIST FOR THE EMERGENCY
OPERATIONS ADVISOR (EOA)

1. Verify that the control room television monitoring equipment is operational by obtaining a clear picture of the control room indicators appropriate the situation.
2. Establish communication with the Emergency Operations Coordinator in the control room.
3. Keep the Site Emergency Coordinator advised as to plant operational activities and any requests for assistance.
4. Assist the Emergency Evaluation and Recovery Coordinator (EERC) in monitoring SPDS information and obtaining plant data as required.
5. Determine the need for assistance in handling radioactive waste and advise the Emergency Evaluation and Recovery Coordinator (EERC).

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR OPERATIONS
DIABLO CANYON POWER PLANT UNIT NOS. 1 AND 2

TITLE: ACTIVATION OF TSC VENTILATION SYSTEM FOR ABNORMAL OPERATIION

PROCEDURE

Operation of the ventilation system in any mode other than mode 1 is considered an abnormal condition.

A. Mode 2 - Fire

This mode only concerns the control room in the event of a fire.

B. Mode 3 - Chlorine

In this mode the Control room and TSC are isolated from all outside air. 100% of the air is recirculated with 9% of the flow passing through HEPA and charcoal filters. This mode can be initiated automatically, as described in the general operating procedures OP H-5:IV, or manually from the control room. When an alarm is activated or the control room wishes to manually activate Mode 3, the TSC will be notified and asked to perform the following functions for Mode 3 operation.

1. Check the TSC outside (make up) air fan OS-93 has stopped.
2. Check the TSC lead filter supply fan OS-94 has started.
3. Close vent damper O-18 manually.
4. Verify that vent damper O-17 is closed.
5. Open vent damper O-26 manually.
6. Verify the following at the annunciator panel PK-75, located in the TSC computation center:
 - a. AD "TSC MODE 3 ISOLATION" illuminated.
 - b. AE "TSC MODE 1 NORMAL VENT" not illuminated.
 - c. BB-1 "NORMAL VENT DAMPER OPEN ON MODE 3 OR 4" O-18 not illuminated.
 - d. BB-2 "CARBON FILTER DAMPER CLOSED IN MODE 3 OR 4" O-26 not illuminated.
 - e. BC "NORMAL VENT ON" OS-93 not illuminated.
 - f. BD "CARBON FILTER LOW AIR FLOW" not illuminated.
 - g. BE "TSC AREA AIR COND. ON" OS-92 illuminated.
 - h. BE "LAB AREA AIR COND. ON" OS-90 illuminated.
 - i. BF "TSC AREA AIR COND. OFF MODE 3 OR 4" not illuminated.
 - j. BF "LAB AREA AIR COND. OFF MODE 3 OR 4" not illuminated.
 - k. CE "LEAD SUPPLY FAN ON MODE 3 OR 4" OS-94 illuminated.
 - l. CF "REDUN. SUPPLY FAN ON MODE 3 OR 4" OS-95 illuminated.

If any of these annunciator lights cannot be verified, consult the section on annunciator lights for further instructions.

TITLE: ACTIVATION OF TSC VENTILATION SYSTEM FOR ABNORMAL OPERATION

C. Mode 4 - High Radiation or Dilution

Mode 4 is automatically activated by high radiation levels at the control room intakes or by a Phase A isolation signal. Mode 4 can also be activated manually. This is used after prolonged periods of Mode 3 to dilute the CO₂ which has accumulated in the TSC. When the ventilation system is in Mode 4 the TSC will be notified and asked to perform the following functions.

1. Check the TSC outside (make up) air fan OS-93 has stopped.
2. Check the TSC lead filtered supply fan OS-94 has started.
3. Close vent damper O-18 manually.
4. Open vent damper O-17 manually.
5. Open damper O-26 manually.
6. Verify the following at the annunciator panel PK-75, located in the TSC computation center:
 - a. AC "TSC MODE 4 PRESSURIZATION" illuminated.
 - b. BB-1 "NORMAL VENT DAMPER OPEN MODE 3 OR 4" not illuminated.
 - c. BB-2 "CARBON FILTER DAMPER CLOSED IN MODE 3 OR 4" O-26 not illuminated.
 - d. BD "CARBON FILTER LOW FLOW" FB-94 not illuminated.
 - e. BE-1 "TSC AIR COND. ON" OS-92 illuminated.
 - f. BE-2 "LAB AREA AIR COND. ON" OS-90 illuminated.
 - g. CA "LEAD DUCT HEATER ON MODE 4" OEH-28A illuminated.
 - h. CE "LEAD SUPPLY FAN ON MODE 3 OR 4" OS-94 illuminated.

If any of these annunciator lights cannot be verified, consult the section on annunciator lights for further instructions.

7. For Mode 4 operation to be completely functional the following doors must be closed.
 - a. Office space outside water tight door.
 - b. Office space inside door.
 - c. Computation center outside water tight door.
 - d. Computation center inside door.
 - e. NRC Office outside water tight door.
 - f. NRC Office inside door.
 - g. Mechanical room outside water tight door.
 - h. Mechanical room air control plate (slide gate)
 - i. Laboratory outside water tight door (West).
 - j. Laboratory inside door (West).
 - k. Laboratory outside water tight door (East).
 - l. Laboratory inside door (East).

TITLE: ACTIVATION OF TSC VENTILATION SYSTEM FOR ABNORMAL OPERATIION

D. Returning to Mode 1 Operation

The control room will place the ventilation mode selector switch located at vertical board IVB4(2VB4) in the Mode 1 position to return the system to normal operation. The TSC sha^{ll} confirm that the ventilation system has returned to normal by verifying the following.

1. Lead Supply Fan OS-94 is off.
2. Outside (make up) Air Fan OS-93 is on.
3. Damper O-18 opened manually.
4. Damper O-17 closed manually.
5. Damper O-26 closed manually.

E. TSC Annunciator Panel

The following is a list of each TSC annunciator panel light with information included on what to do in the event a light does not function properly.

- AA-1 (RED) High radiation in TSC area. If illuminated notify the Control Room and Radiation Protection and follow radiation control procedures.
- AA-2 (RED) High radiation in TSC airflow. If illuminated follow radiation control procedures.
- AB-1 (RED) High radiation in lab area of TSC. If illuminated follow radiation control procedures.
- AB-2 (RED) High radiation in lab area airflow. If illuminated follow radiation control procedures.
- AC (WHITE) TSC Mode 4 pressurization. If not illuminated during Mode 4 pressurization check the procedure for Mode 4 operation.
- AD (WHITE) TSC Mode 3 isolation. If not illuminated during Mode 3 isolation, check the procedure for Mode 3 operation.
- AE TSC Mode 1 normal ventilation. Illuminated in normal operation Mode 1.
- AF SPARE. Not illuminated.
- BA-1 Normal vent damper open Mode 1. Illuminated in normal operation Mode 1. If not illuminated in Mode 1 verify manual operated damper O-18 is open.

TITLE: ACTIVATION OF TSC VENTILATION SYSTEM FOR ABNORMAL OPERATIION

- BA-2 Carbon filter damper closed in Mode 1. Illuminated in normal operation Mode 1. If not illuminated in Mode 1 verify manual operated damper 0-26 is closed.
- BB-1 Normal vent damper open in Mode 3 or 4. Illuminate when damper 0-18 is open in Mode 3 or 4 operation. Damper 0-18 must be closed manually.
- BB-2 Carbon filter damper closed in Mode 3 or 4. Illuminated when damper 0-26 is closed in Mode 3 or 4 operation. Damper 0-26 must be opened manually.
- BC Normal vent fan on OS-93. Illuminated in normal operation Mode 1. Should be off in Mode 3 or 4 operation.
- BD Carbon filter low air flow FB-94. Illuminated when there is not enough airflow through carbon filters in Mode 3 or 4 operation. Check lead and redun. Supply fans OS-94 and OS-95 for one of them to be running with corresponding damper open, 0-24 or 0-25.
- BE-1 TSC Area Air Condition on, OS-92, illuminated in all operations.
- BE-2 Lab area air condition on, OS-90. Illuminated in all operations.
- BF-1 TSC area air condition off in Mode 3 or 4 OS-92. Illuminated when air conditioner for TSC is not in operation during Mode 3 or 4. Investigate circuit breakers (PPTSC) to put back into operation.
- BF-2 Lab area air conditioner off in Mode 3 or 4, OS-90. Illuminated when air conditioner for lab area is not in operation during Modes 3 or 4. Investigate circuit breakers (PPTSC) to put back into operation.
- CA Lead duct heater on Mode 4 operation, OEH28A. Illuminated in proper Mode 4 operation.
- CB Lead duct heater malfunction, OEH28A. Illuminated when a malfunction is triggered in Mode 4 operation. To troubleshoot check the following:
- a. Check circuit breaker panel PPTSC3 to be on.
 - b. Check motor starter switch LPTSC3 to be on with green light illuminated.
 - c. Check damper 0-17 to be open.
- If the lead duct heater still will not function turn the starter switch LPTSC3 off and energize LPTSC4 for rudun. supply heater OEH28B.

TITLE: ACTIVATION OF TSC VENTILATION SYSTEM FOR ABNORMAL OPERATION

- CC No duct heater on Mode 4 operation, OEH28B illuminated in proper Mode 4 operation.
- CD Redun. duct heater malfunction, OEH28B. Illuminated when a malfunction has tripped a sensor. To trouble shoot check the following:
- Check circuit breaker panel PPTSC4 to be on.
 - Check motor starter switch LPTSC4 to be on with green light illuminated.
 - Check damper O-17 to be open.
- If both OEH-28A and OEH-28B both cannot be energized, notify Control Room that Mode 4 Operation of ventilation system is not functioning.
- CE Lead supply fan on Mode 3 or 4, OS-94. Illuminated in normal Mode 3 or 4 operation. If inoperable in Mode 3 or 4 check the following.
- Check circuit breaker panel PPTSC-6 to be on.
 - Check at local disconnect switch LPTSC-5, place in on position and verify green light is illuminated.
 - Press start button and verify green light is out and red light is illuminated with fan running.
 - Verify corresponding damper is open O-24 or O-25.
- If the fan will not operate properly turn local disconnect switch LPTSC-5 off and LPTSC-6 on for fan OS-95.
- CF Redun. supply fan on Mode 3 or 4, OS-95. Illuminated in Mode 3 or 4 when OS-94 is not functioning. If OS-95 is also inoperable refer to checklist on panel CE. If neither fan will operate notify the control room of malfunction.
- DA TSC radiation monitor failure or loss of AC power. Illuminated when the TSC radiation monitor fail or lose AC power. Switch the TSC to vital AC power. If still illuminated, notify the shift foreman.
- DB Fire Detector. Illuminated when fire is detected in HVAC Room.
- DC SPARE. Not illuminated.
- DD-1 Pressurization damper closed in Mode 4, O-17. Illuminated when damper O-17 is closed in Mode 4. Damper O-17 must be opened manually.
- DD-2 Pressurization damper open in Mode 1, 2 or 3, O-17. Illuminated when damper O-17 is open in Mode 1, 2, or 3. Damper O-17 must be closed.
- DE SPARE. Not illuminated.

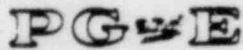
TITLE: ACTIVATION OF TSC VENTILATION SYSTEM FOR ABNORMAL OPERATION

FIGURE 1

Annunciator Panel

	A	B	C	D	E	F
A	TSC AREA HIGH RAD	TSC LAB AREA HIGH RAD	TSC MODE 4 PRESSURIZATION	TSC MODE 3 ISOLATION	TSC MODE 1 NORMAL VENT	SPARE
B	TSC AIRBORN HIGH RAD	TSC AIRBORN HIGH RAD				
B	NORMAL VENT DAMPER OPEN MODE 1 0-18	NORMAL VENT DAMPER OPEN MODE 3 OR 4 0-18	NORMAL VENT FAN ON 05-93	CARBON FILTER LOW AIR FLOW FB-94	TSC AREA AIR COND. ON 05-92	TSC AREA AIR COND. OFF MODE 3 OR 4 05-92
	CARBON FILTER DAMPER CLOSED MODE 1 0-26	CARBON FILTER DAMPER CLOSED IN MODE 3 OR 4 0-26			LAB AREA AIR COND. ON 05-90	LAB AREA AIR COND. OFF MODE 3 OR 4 05-90
C	LEAD DUCT HEATER ON MODE 4 OEH 28A	LEAD DUCT HEATER MALFUNCTION OEH 28A	NO DUCT HEATER ON MODE 4 OEH 28B	REDUN. DUCT HEATER MALFUNCTION OEH 28B	LEAD SUPPLY FAN ON MODE 3 OR 4 05-94	REDUN. SUPPLY FAN ON MODE 3 OR 4 05-95
D	TSC RAD MON FAILURE OR LOSS OF AC POWER	FIRE DETECTOR	SPARE	PRESS DAMPER CLOSED IN MODE 4 0-17	SPARE	SILENCE <input type="checkbox"/>
				PRESS DAMPER OPEN IN MODE 1 2 OR 3 0-17		ACK <input type="checkbox"/>
						TEST <input type="checkbox"/>
						RESET <input type="checkbox"/>

■ LIGHTS IN RED



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DIABLO CANYON POWER PLANT UNIT NO(S) 1 AND 2
EMERGENCY PROCEDURE
ACTIVATION AND OPERATION OF THE EMERGENCY
TITLE OPERATIONS FACILITY

**IMPORTANT
TO
SAFETY**

APPROVED R. L. Thibault 5-3-84
PLANT MANAGER DATE

SCOPE

This procedure describes the actions to be taken in the event it becomes necessary to activate and operate the Emergency Operations Facility (EOF). The EOF is considered to include all facilities provided by PGandE at the San Luis Obispo County Sheriff's Complex, including the EOF/EOC building and the Media Center. This procedure and changes thereto requires PSRC review.

GENERAL

The principal purpose of the EOF is to provide a location for management of overall emergency response and facilitate the coordination of emergency response activities between PGandE, county, state and federal agencies. The EOF is co-located with the San Luis Obispo County Emergency Operations Center (EOC). The EOF serves as the headquarters for the Recovery Manager in directing emergency response and recovery efforts. The EOF/EOC provides a central point of data assessment for PGandE, federal, state and local agencies. It also serves as a centralized location for dissemination of information to the public.

INITIATING CONDITIONS

The criteria for activating the EOF will be, but is not limited to the declaration of an Alert, Site Area, or General Emergency as defined in EP G-1, "Accident Classification and Emergency Plan Activation".

IMMEDIATE ACTIONS

1. Upon declaration of an Alert, Site Area, or General Emergency at the Diablo Canyon Power Plant, the Shift Foreman shall assume the duties of the Site Emergency Coordinator and shall notify

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personnel to staff the EOF in accordance with EP 6-3, "Notification of Offsite Emergency Organizations" and EP 6-2, "Establishment of the Onsite Emergency Organization".

NOTE: The Recovery Manager shall notify the corporate emergency organization in accordance with Procedure 1.1 of the Corporate Emergency Response Plan following his notification.

SUBSEQUENT ACTIONS

1. Plant personnel assigned to the EOF shall notify the Watch Commander on duty at the San Luis Obispo Sheriff's Dispatch Center, that they are at the EOF to man it and then proceed with their activation checklist.
2. Plant personnel assigned to the EOF will continue to their assigned duties until relieved by corporate EOF Personnel, or dismissed by the Site Emergency Coordinator. Personnel relieved may be re-assigned to other emergency response functions, or may provide backshift coverage of corporate EOF functions, as needed.
3. If an event is classified as an Alert, the Advisor to the County Emergency Organization should determine if corporate EOF personnel are proceeding to the EOF, and if not, arrangements to provide relief plant personnel at the EOF may be needed.
4. When the EOF has been activated and staffed by the long-term EOF organization to acceptable minimum levels, the Recovery Manager shall formally announce that the EOF has been activated by the PG&E Corporate Organization and he (the Recovery Manager) is assuming overall management of PG&E emergency response efforts from the Site Emergency Coordinator in the TSC.
5. When manned, status updates to San Luis Obispo County will be provided by the E.O.F. Changes in emergency classification or information on the estimated potential for time of or extent of a release will be immediately provided to offsite organizations as authorized.

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SUPPORTING PROCEDURES

G-1, "Accident Classification and Emergency Plan Activation"
G-2, "Establishment of the Onsite Emergency Organization"
G-3, "Notification of Offsite Organizations"
EP EF-6 "Activation of the Emergency Assessment and Response System"
EP EF-7 "Activation of the Nuclear Data Communications System"

ATTACHMENTS

1. 69-10781-1 EOF Activation Checklist for the Advisor to the County
Emergency Organization.
2. 69-10781-2 EOF Activation Checklist for the Interim Radiological
Recovery Manager.
3. 69-10781-3 EOF Activation Checklist for the Interim EARS
Operator.
4. 69-10781-4 EOF Activation Checklist for the Interim Operations
and Analytical Recovery Manager.
5. 69-10781-5 EOF Activation Checklist for the Interim Public
Information Recovery Manager.
6. 69-10781-6 EOF Activation Checklist for the Technical Assistant
to the Public Information Recovery Manager.

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DEPARTMENT OF NUCLEAR PLANT OPERATIONS
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TITLE: EOF ACTIVATION CHECKLIST FOR THE ADVISOR TO THE COUNTY
EMERGENCY ORGANIZATION (ACEO)

1. Use the recovery manager's office.
2. Establish manning status of EOF.
3. Contact shift clerk [REDACTED] for callout status of positions not yet filled.
4. Call out any additional EOF personnel required, the County Liaison and the Monitoring Team Liaison Coordinator will require callout if not already done.
5. Contact the Liaison Coordinator at the TSC [REDACTED]
 - a. Provide status of EOF activation and provide names and positions of personnel at the EOF.
 - b. Determine nature of emergency.
 - c. Determine general plant status.
 - d. Request copies of notification and data forms via Panafax (EOF Panafax PT&T [REDACTED])If the TSC is not yet functional - call the control room liaison coordinator [REDACTED]
6. Contact the corporate Liaison coordinator at CIRC [REDACTED]
 - a. Provide status of EOF activation and provide names and positions of personnel at the EOF.
7. Get emergency information updates from the interim RERM and OARM.
8. Contact the Site Emergency Coordinator at the TSC [REDACTED] and obtain permission to brief the county emergency organization and assume responsibility for updating the county EOC.

TITLE: EOF ACTIVATION CHECKLIST FOR THE ADVISOR TO THE COUNTY
EMERGENCY ORGANIZATION (ACEO)

9. Contact county personnel at the EOC and UDAC (use county liaison as needed).
 - a. Provide status of EOF activation.
 - b. Provide briefing on plant status.
 - c. Inform them that updates are to be provided through the EOF, and information to the sheriff's dispatch office will cease.
 - d. Provide normal status updates approximately every 15 minutes.

NOTE: Immediate notification of a change of classification or change in, the potential for a release will be made to the county.

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TITLE: EOF ACTIVATION CHECKLIST FOR THE INTERIM RADIOLOGICAL RECOVERY
MANAGER (RERM)

1. If you are the initial person at the EOF assume the duties of the ACEO, and complete Form 69-10781-2, "EOF Activation Checklist for the Advisor to the County Emergency Organization (AECO)," first.
2. Use the RERM's office.
3. Check manning status for EARS operator and field team liaison coordinator, and assist in filling positions as needed.
4. Establish contact with emergency radiological advisory (ERA), [redacted] in the TSC.
 - a. Provide status of EOF activation and provide names and positions of personnel at the EOF.
 - b. Determine nature of emergency.
 - c. Determine general plant status.
 - d. Obtain the available information on radiological conditions.If the TSC is not yet functional, call the interim emergency evaluations and recovery coordinator (STA) [redacted]
5. Report status to the Advisor to the County Emergency Organization (ACEO) in the Recovery Manager's Office [redacted]
6. Advise County UDAC personnel of radiological conditions and Plant status under direction from the AECO.
7. Establish contact with the field teams at the MEML garage [redacted] or through the service center [redacted]
8. Direct field teams as required. Transmit EOC decisions on protective actions (i.e. one way traffic due to evacuations etc.) to the field team. Coordinate these activities with the ERA.

TITLE: EOF ACTIVATION CHECKLIST FOR THE INTERIM RADIOLOGICAL RECOVERY
MANAGER (RERM)

9. Provide radiological data to the clerk for distribution as required, using forms found in Emergency Procedure G-3. Brief the AECO and UDAC as needed.
10. Evaluate plant radiological conditions and provide status and recommendations to the ACEO as required.
11. Assign a clerk to maintain the UDAC radiological status board as status updates are obtained.

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TITLE: EOF ACTIVATION CHECKLIST FOR THE INTERIM EARS OPERATOR

1. Contact EARS operator in TSC [REDACTED] If the TSC is not yet functional, call the interim emergency evaluations and recovery coordinator (STA) [REDACTED]
2. Activate EARS equipment as per Emergency Procedure EF-6, "Activation of the Emergency Assessment and Response System."
3. Provide assistance to RERM as required in obtaining additional personnel, radiological calculations, contacting field teams, etc.



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TITLE: EOF ACTIVATION CHECKLIST FOR THE INTERIM OPERATIONS AND
ANALYTICAL RECOVERY MANAGER (OARM)

1. If you are the initial person at the EOF assume the duties of the AECO, see Form 69-10781-2 "EOF Activation Checklist for the Advisor to the County Emergency Organization (AECO)," first.
2. Contact Shift Clerk [REDACTED] to determine clerk call out status, if clerks are not yet available.
3. Check Emergency Response Facility Data System (ERFDS) functioning.
4. Activate Nuclear Data Communications System (NDCS) terminal as per Emergency Procedure EF-7, "Activation of the Nuclear Data Communications System."
5. Contact data processor in the TSC [REDACTED] and provide status of the SPDS system and NDCS terminal.
6. Call the liaison coordinator in the TSC [REDACTED] and inform that you are ready to receive plant data. Arrange for a telecopier check.
7. Report status to the ACEO.
8. Have a clerk distribute radiological and plant data sheets as they become available, using forms found in Emergency Procedure G-3. Provide briefings to the AECO as needed.
9. Have a clerk maintain plant, radiological and chronological status on status boards on West wall of operations office.


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TITLE: EOF ACTIVATION CHECKLIST FOR THE INTERIM PUBLIC INFORMATION
RECOVERY MANAGER (PIRM)

1. Contact the Technical Advisor to the PIRM and have him brief you on emergency status. Begin preparation of a news bulletin as soon as sufficient information is available. (Refer to Emergency Procedure OR-2, "Release of Information to the Public).
2. Contact additional PGandE local public information personnel to assist if not already done.
3. Establish communications with the county public information organization.
4. Determine plans for contacting the news media.
5. Contact the corporate public information coordinator  and provide status and media contact plans. 
6. Participate in media briefings as per Emergency Procedure OR-2.

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TITLE: EOF ACTIVATION CHECKLIST FOR THE TECHNICAL ADVISOR TO THE PIRM

1. Contact and be briefed by the RERM and the OARM.
2. Determine plant status.
3. Contact the liaison coordinator in the TSC  to clarify details if necessary.
4. Assist PIRM in preparing news releases, contacting personnel, and supporting the county news organization in news releases as per Emergency Procedure OR-2, "Release of Information to the Public."

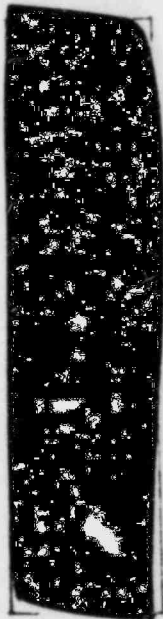
PACIFIC GAS AND ELECTRIC COMPANY
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TITLE: AUXILIARY TRAILER CALL OUT LIST

Call Out Instructions:

1. Contact only one person.
2. Contact first listed available person (preferred position holder); if unavailable, contact next available person.

- | | | | |
|-------|---------------------------|----------------|--|
| a. | A. G. CALLAHAN..... | COMPANY PHONE: | |
| | | HOME PHONE : | |
| ** b. | RON LARGE..... | COMPANY PHONE: | |
| | | HOME PHONE : | |
| * c. | DON BURNER..... | COMPANY PHONE: | |
| | | HOME PHONE : | |
| ** d. | JIM (J.D.) LIEFER..... | COMPANY PHONE: | |
| | | HOME PHONE : | |
| ** e. | RHONDA HART-NORELIUS..... | COMPANY PHONE: | |
| | | HOME PHONE : | |
| ** f. | STEVE STAAT..... | COMPANY PHONE: | |
| | | HOME PHONE : | |



* ALTERNATE ON-CALL SUPERVISOR

** CLASS ONE LICENSE HOLDER



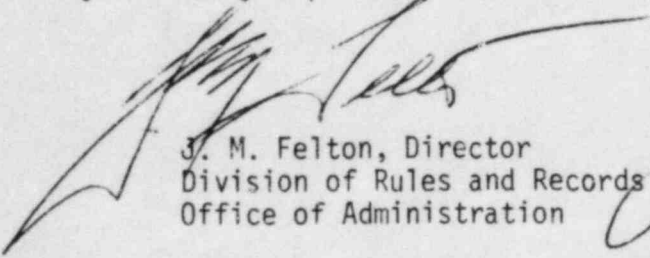
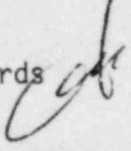
UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 25, 1984

50-275/323 Diablo Canyon

MEMORANDUM FOR: Chief, Document Management Branch, TIDC
FROM: Director, Division of Rules and Records, ADM
SUBJECT: REVIEW OF UTILITY EMERGENCY PLAN DOCUMENTATION

The Division of Rules and Records has reviewed the attached document and has determined that it may now be made publicly available.


J. M. Felton, Director
Division of Rules and Records
Office of Administration 

Attachment: As stated