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PG&E Letter DCL-01-137

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

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

Dear Commissioners and Staff:

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

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

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

If there are any questions regarding this update, please contact Mr. Mark Lemke of my staff at (805) 545-4787.

Sincerely,

James R. Becker

Enclosures

A045

cc: Ellis W. Merschoff - w/a (2)
David L. Proulx
Girija S. Shukla

DDM/1345

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

Procedure Number	Privacy/ Proprietary Information	Title/Location of Privacy/Proprietary Information
EP G-3 Revision 36	Yes	Notification of Off-Site Agencies and Emergency Response Organization Personnel Attachment 9.1 - pages 1, 2, 3, and 4. Attachment 9.2 - pages 2 and 3.
EP R-3 Revision 8C	No	Release of Radioactive Liquids
EP RB-11 Revision 12	No	Emergency Offsite Dose Calculations
EP RB-15 Revision 10	No	Post Accident Sampling System
OTSC EP EF-2 Revision 25	No	Activation and Operation of the Operational Support Center

DIABLO CANYON POWER PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURES

Table of Contents - Emergency Plan Implementing Procedures
Volume 1A (OM10.ID3 only), Volume 1B (OM10.DC1 only), and Volume 3B

*** Procedure included in this submittal**

TITLE: **Notification of Off-Site Agencies and Emergency Response Organization Personnel**

12-20-01
EFFECTIVE DATE

PROCEDURE CLASSIFICATION: QUALITY RELATED

TABLE OF CONTENTS

1. SCOPE

1.1 This procedure provides instructions for notification of Emergency Response Organization personnel and both initial and follow up notifications of appropriate federal, state and local agencies in the event of a declared emergency condition at Diablo Canyon.

2. DISCUSSION

2.1 Off-site Agency Notification

2.1.1 Notification of off-site organizations is to be made immediately following declaration of an emergency condition per EP G-1, "Accident Classification and Emergency Plan Activation" and immediately following classification level changes.

a. Notification of the San Luis Obispo County Sheriff's Watch Commander and the State Office of Emergency Services **shall be within 15 minutes of initial declarations, classification level changes, and event terminations.**

NOTE: Notification to NRC shall be made by the Shift Manager, Shift Foreman, or a licensed operator.

b. The NRC shall be notified after state and local agencies, but not later than one hour after initial event declaration, classification level change, and event termination.

c. If NRC requests an open communication channel with the Control Room, a licensed operator or STA knowledgeable of the event should be provided for this purpose.

2.1.2 Notifications should not be delayed if some information is not immediately available. It is better to provide the required notification in a timely manner, thereby allowing other organizations to begin responding.

Not all the details may be fully understood at first and it is acceptable to simply state "Unknown" for those items until more information is available. That is the purpose of follow-up notifications.

2.1.3 During transient situations plant status and key parameters may be changing constantly. Notifications, once begun, should be completed as expeditiously as possible unless a classification change is needed.

2.2 Emergency Response Organization (ERO) Notification

2.2.1 Notification of personnel at an Alert or greater classification is made using the Voice Automated Notification System (VANS).

a. Backup to this system is to manually call personnel using the Recall Roster along with Paging Phone, which is non-selective.

2.2.2 During the normal administrative day shift, the Site Emergency Signal supplemented by the Public Address System provides notification. VANS is also activated for redundancy.

2.2.3 Use of VANS or the call sequence of the Recall Roster provides a selective call out. Preferred position holders for a particular position are listed by teams of qualified personnel, and the on-call team is called first.

2.2.4 Use of Paging Phone, or use of the Site Emergency Signal, provides a nonselective call out. Essentially, all members of the emergency organization are notified to respond.

2.2.5 Information on the success of the notification is provided by VANS reports and the Recall Roster notification methods. This feedback provides the opportunity to conduct alternate notifications, if necessary, to fill a key position. The Recall Roster includes individual phone and pager numbers for subsequent notification.

2.2.6 Fitness for Duty (FFD) Program requires that personnel reporting for duty during an emergency be fit for duty. Plant responders who have consumed alcohol within the past five hours will report to the Security Building and complete the "DCPP Fitness for Duty Call Out Form." Responders for the EOF will report to the Recovery Manager's Office and complete the form.

3. DEFINITIONS

3.1 Off-Site Notification - Verbal transmittal of an approved message from PG&E to local, state, and federal authorities that provides both a non-technical classification of the emergency status and a recommendation of protective actions for the public.

3.2 Verification - A call back from an off-site authority to confirm the validity of a notification or to obtain clarification of its contents.

4. RESPONSIBILITIES

4.1 Off-site Agency Notification - Control Room

4.1.1 The Interim Site Emergency Coordinator (ISEC) is responsible for ensuring off-site agency initial notification and follow-up notifications using Form 69-10581, "DCPP Event Notification Form," and "Protective Action Recommendation" (see EP RB-10), Form 69-13216 or functional equivalents, until relieved by the TSC.

4.1.2 The Emergency Liaison Coordinator (ELC) is responsible for initiating steps in Attachment 9.2, "Emergency Liaison Coordinator's Notification Procedure." If no ELC is available, the ISEC is responsible for ensuring Attachment 9.2 is implemented.

4.2 Off-site Agency Notification - TSC

4.2.1 Upon Technical Support Center (TSC) activation, if prior to EOF activation, the Liaison Advisor and Assistants are responsible for relieving the Control Room staff (Emergency Liaison Coordinator) of off-site organization communications responsibilities, including the NRC.

4.2.2 The Liaison Advisor and ASEC are responsible for coordinating information flow for the completion of Notification/PAR forms within required time limits, until the EOF is activated.

4.2.3 Phone/Fax notifications by PG&E personnel to the State and NRC may be discontinued when these agencies establish their own communication channels (generally by posting their own representatives at the TSC or EOF).

4.3 Off-site Agency Notification - EOF

4.3.1 Upon EOF activation, the EOF Agency Liaison and Advisor to the County (upstairs) coordinate the completion and routing of Event Notifications/PARs between the involved parties. The Agency Liaison is responsible for phone notifications to the State and the NRC.

4.3.2 Phone/Fax notifications by PG&E personnel to the State and NRC may be discontinued when these agencies establish their own communication channels (generally by posting a representative at the EOF).

4.4 Emergency Response Organization Personnel Notification

4.4.1 The CRA notifies emergency organization personnel per Attachment 9.1, "Control Room Assistant's Notification Procedure." In the absence of a CRA, the ELC or ISEC is responsible for implementing Attachment 9.1.

NOTE: If Pacific Bell service is interrupted, alternate system instructions are included in Attachment 9.1.

5. PREREQUISITES

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

6. PRECAUTIONS

6.1 The formal notifications to the County, State and NRC are made by phone or personal contact and must include the event Classification Level and PAR. Computer transfer or faxing the Event Notification and PAR information does not preclude the requirement for these notifications within the applicable time limits.

7. INSTRUCTIONS

Continuous Use of these instructions is expected during initial notifications and Periodic Use during follow-up notifications.

NOTE: Notifications to NRC shall be made by the Shift Manager (ISEC), Shift Foreman (ELC) or a licensed operator.

7.1 INITIAL NOTIFICATIONS FROM CONTROL ROOM

Upon determination of a declarable event (U.E., Alert, S.A.E. or G.E.), the Interim Site Emergency Coordinator (ISEC) shall:

7.1.1 Complete Form 69-10581, "DCPP Event Notification Form," and PAR (EP RB-10, Form 69-13216), or functional equivalents.

7.1.2 Direct the CRA to activate VANS for callout of emergency response personnel per Attachment 9.1.

7.1.3 Direct the Emergency Liaison Coordinator (ELC) to make Off-Site Agency Notifications per Attachment 9.2, utilizing Form 69-13238, "Off-Site Notifications Log Sheet."

7.1.4 IF the emergency classification escalates before the ELC has completed the required 15 minute notifications to the SLO County Sheriff's Watch Commander and California State OES, THEN perform the following:

a. Direct the ELC or assigned personnel to complete those two calls only.

b. Complete both a new Event Notification Form 69-10581 and PAR Form 69-13216, or functional equivalents, with updated information.

c. If escalating from a U.E., direct the ELC to obtain a new Form 69-13238, "Off-Site Notifications Log Sheet," and begin again from the top using the new declaration time.

d. Ensure the ELC notifies the NRC within 60 minutes of the first declaration and assist him or her as necessary to meet time limit.

NOTE: The NRC shall be notified within one hour of the time when the emergency was first declared.

7.1.5 Confirm initial notifications to SLO County and State OES have been completed within required time limits.

7.1.6 IF a Site Area or General Emergency has been declared, THEN direct the ELC or assigned personnel to also notify the US Coast Guard in accordance with the Off-Site Notifications Log Sheet.

a. The US Coast Guard (Marine Safety Office) should be informed of the emergency classification, the PAR, and that SLO County authorities will call soon to request support in the vicinity of DCPP.

7.2 CR FOLLOW-UP NOTIFICATIONS AND TURNOVER TO TSC OR EOF STAFF

The Interim Site Emergency Coordinator (ISEC) shall:

7.2.1 Complete follow-up Event Notification and updated PAR forms or functional equivalents, approximately every 30 minutes, OR IMMEDIATELY IF ANY of the following occurs:

a. Emergency classification changes.

b. Significant change in off-site dose projections or required PARs.

c. Wind direction changes sectors and significant release is occurring or possible.

7.2.2 Direct the ELC to make follow-up notifications, meeting the 15 or 30 minute criterion, as applicable (one hour for NRC).

7.2.3 Exception to 30 minute update requirement (UE ONLY)

a. For a UE classification only, the 30 minute update classifications may be waived if both of the following criteria are met:

1. Conditions are stable and not expected to degrade, AND

2. The agency (County, State, NRC) agrees that 30 minute updates are not necessary.

b. In such circumstances, give the agreeing agency an estimate of the event termination time, and then waive the 30 minute update notifications until the estimated or actual event termination time (whichever comes first).

NOTE: The event termination notice must always be given to the County and State within 15 minutes of the termination decision (1 hour NRC).

7.2.4 Direct ELC to provide a turnover of notifications responsibilities to either the TSC Liaison Advisor or EOF Agency Liaison.

NOTE: NRC may require open communications with the Control Room after turnover to the TSC.

7.3 TSC NOTIFICATIONS:

7.3.1 The TSC Liaison Advisor and the Liaison Assistants shall perform all off-site agency and personnel notifications until the EOF is activated.

7.3.2 The Asst. SEC and Liaison Advisor shall coordinate information flow for the production and transmission of Notifications/PARs as assisted by EOF RP personnel.

7.3.3 The Site Emergency Coordinator shall approve DCPP Event Notification Form 69-10581 and the PAR (EP RB-10, Form 69-13216 or 69-10412), or functional equivalents. Notification time criteria are the same as indicated in Sections 7.2.1 and 7.2.2.

7.3.4 The Liaison Assistants shall make reports from the TSC using the following EP G-3 Attachments or equivalents:

a. Forms 69-10581 and 69-13216\10412, "DCPP Event Notification Form" and "PAR."

b. Form 69-10295, "Plant Status Emergency Form," (fax to EOF) if plant status summaries are unavailable to the EOF via the computer network.

7.3.5 NRC requests for phone talkers:

a. ENS - A Liaison Assistant is normally assigned to NRC phone contact duties.

b. HPN - An NRC request for a knowledgeable full-time HPN phone talker should be accommodated if providing such a person will not detract from emergency response activities. Otherwise, the request must be denied until additional personnel can be called in or the EOF may assume this responsibility.

7.4 EOF NOTIFICATIONS:

7.4.1 The EOF relieves either the CR or the TSC of responsibility for generating off-site agency notifications.

7.4.2 The Recovery Manager (RM) shall determine emergency classification levels per EP G-1 and PARs per EP RB-10.

7.4.3 The EOF Agency Liaison and Advisor to the County (upstairs) shall coordinate the completion and routing of Event Notification/PAR forms, or functional equivalents, between the involved parties.

7.4.4 Updates to California OES and NRC shall be the responsibility of the Agency Liaison until these organizations establish their own communication channels and no longer need status reports (generally by posting representatives at the EOF). The Agency Liaison will generally utilize the Liaison Assistant to make notification phone calls to these agencies.

8. RECORDS

8.1 All attachments, logs, checklists and records, whether fully or partially completed, will be collected in each facility and turned over to the Shift Manager (UE only) or to the Nuclear Regulatory Services Representative (Alert and above) for compilation and retention and for filing the appropriate reports indicated below:

8.1.1 Notification of Unusual Event (NUE): Written summary required within 24 hours of close out to local and State agencies, with copies to the NRC.

8.1.2 Alert, Site Area and General Emergency: Written summary required within 8 hours of close out or class reduction to local and State agencies, with copies to the NRC.

9. ATTACHMENTS

9.1 "Control Room Assistant's Notification Procedure," 11/07/01

9.2 "Emergency Liaison Coordinator's Notification Procedure," 12/12/00

9.3 Form 69-10581, "DCPP Event Notification Form," 01/14/97

9.4 Form 69-13238, "Off-Site Notifications Log Sheet," 12/12/00

9.5 Form 69-10295, "Plant Status Emergency Form," 12/12/00

10. REFERENCES

10.1 EP G-1, "Accident Classification and Emergency Plan Activation."

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

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

10.4 EP EF-3, "EOF Activation and Operation."

10.5 EP R-2, "Release of Airborne Radioactive Materials Initial Assessment."

10.6 EP RB-10, "Protective Action Recommendations."

10.7 XI1.ID2, "Regulatory Reporting Requirements and Reporting Process."

10.8 OM14.ID3, "Fitness For Duty Program."

10.9 OP1.DC23, "Control of Posted Plant Signs and Information."

DIABLO CANYON POWER PLANT
EP G-3
ATTACHMENT 9.1

1 AND 2

TITLE: Control Room Assistant's Notification Procedure

Activation of VANS for:

NOTIFICATION OF UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY OR GENERAL EMERGENCY. (VANS MAY ALSO BE USED FOR 1 HR/4 HR/8 HR NOTIFICATIONS.)

NOTE: If the emergency event is upgraded from a Notification of Unusual Event to an Alert or greater, activate VANS for the upgraded classification.

If VANS is initially activated at an Alert classification, do not repeat activation for upgrading to SAE or GE

1. Initial Actions
2. Activate VANS for Notification of Unusual Event, Alert, Site Area Emergency or General Emergency as requested by the Shift Manager or designee. (Follow steps 8.1-through-8.7)
3. IF VANS was intended to be used and is unavailable or failed during execution, activate the Paging Phone. (Follow step 11)
4. Inform the ISEC when VANS activation is complete and verify his pager was activated. If the CRA and Shift Manager pagers have not been activated after 10 minutes, then activate Paging Phone. (Follow step 11) and initiate a manual call out using the Master Recall Roster (available in the CRA Position Binder).
   - 4.1 Begin with calling the positions of the team that is on call.
   - 4.2 If an on call position holder cannot be confirmed, contact alternate team members until the position is filled.
5. Inform the on-duty RP Foreman [x3247 or X3668] that VANS has been activated to call out technicians.
6. Inform the ISEC when the VANS report comes over the FAX at the end of 40 minutes for an NUE or 70 minutes for Alert or greater.
7. Activation of VANS CALLOUT SYSTEM
8. Primary VANS phone. (Italicized words in parentheses are VANS prompts)
   - 8.1 **Press the CALL VANS button**

     (You will hear "This is the Diablo Canyon Power Plant Voice Automated Notification System")

     ("Please enter your scenario activation password, followed by the pound sign")
   - 8.2 **Press the ENTER PASSWORD button then #.**

     ("To start a scenario, enter the scenario ID followed by the pound sign or press pound alone for more options")
   - 8.3 **Press the EVENT CLASSIFICATION then #,** as instructed by the ISEC or as listed on form 69-10581.

     ("You may change On the Fly Message number one. Press 1 to listen to the message. Press 2 to record a new message. Press pound to continue")

8.4 **Press # to continue (go to step 8.5)** unless you want to record an on the fly message.

If recording a message, continue here.

("After the tone, speak the new message. When you are finished recording, press the pound sign")

Speak the message then press the pound sign. The message will be played back to you.

("Press one to listen to the message. Press two to record a new message. Press pound to continue")

Press pound to continue unless you want to record over your message.

("The event pager code [is xxxx.] Press 1 to change the event code, Press 2 to continue")

8.5 **Press 2 to continue.**

("To start the scenario press 3, to return to the main menu, press the pound sign")

8.6 **Press 3 to start the scenario.**

("The scenario is building")

(To start a scenario press 1. To stop a scenario press 2. To check scenario information press 3. To enter a different scenario activation password press 4. To end this call press pound")

8.7 **Press the POUND SIGN to end the call.** This can be done at any time after this message begins.

9. STOPPING THE CALL-OUT

9.1 To stop the system call-out, **enter the scenario in the same manner as steps 8.1 through 8.3.**

("The scenario is currently active. Would you like to stop the scenario, press nine for yes or six for no")

9.2 **Press 9**

("The scenario will be stopped. To start a scenario press 1. To stop a scenario press 2. To check scenario information press 3. To enter a different scenario activation password press 4. To end this call press pound")

9.3 **Press pound to end the call.**

10. REMOTE PHONE ACTIVATION

10.1 If the VANS telephone is damaged or you are forced to abandon the Control Room, VANS can be activated from an alternate phone. Directions are found in the CRA position book utilizing the "Voice Automated Notification System, Manual Operation" Step 13.

11. PAGING PHONE ACTIVATION The procedure is posted as a sign next to the Paging Phone in the Control Room in accordance with OP1.DC23. (This is the brown phone next to the VANS phone in the Control Room which uses the plant pager system and sends a code to preprogrammed pager groups.)

NOTIFICATION OF UNUSUAL EVENT (NUE) (also use for 1 hr/4 hr/8 hr notifications)

1. Pick up the receiver and listen.
2. At the beep, enter **0400** for Management Pager Group.
3. After 3 tones, enter the password, _____.(See Step 13)
4. After 3 tones, enter **111** for NUE (also for 1 hr/4 hr/8 hr notification).
5. Press the pound sign (#) and hang up.

ALERT / SITE AREA EMERGENCY / GENERAL EMERGENCY

1. Pick up the receiver and listen.
2. At the beep, enter 0411 for ALL Pager Groups
3. After 3 tones, enter the password, _____. (See Step 13)
4. After 3 tones, enter 666 for ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY.
5. Press the pound sign (#) and hang up.
6. Verify the Shift Manager and CRA pager activates

Repeat steps 1 - 5 every 2 to 3 minutes for 3 times if the Shift Manager and CRA pagers do not activate

12. OFF-NORMAL COMMUNICATIONS

12.1 If Pacific Bell service has been lost or interrupted, VANS primary will still function, however, alternate means of off-site communications include:

- OPS radio to the Sheriff's Dispatch
- OPS radio to San Luis Obispo Distribution Operations (SLODO)

San Francisco (public dial tone): Dial 51-9 from the Control Room, and company phones will connect you with San Francisco Pacific Bell lines. You will receive a dial tone and continue to dial as from a normal outside Pacific Bell line.

REMEMBER: You are connected through San Francisco and therefore their telephone area code. All phone calls to SLO will need to be preceded by one and then our area code: 1-805-number.

Phones from which you can dial 51-9 to access San Francisco telephone lines include those located on Units 1 and 2 on the Senior Control Operator consoles, Shift Foreman phones and the Shift Manager phones. TSC and EOF some company phones (standard ROLM phones) also have this capability.

13. VANS MANUAL OPERATION

13.1 From any plant telephone, dial____.

13.2 When prompted, enter the scenario activation password (VANS Primary _____ or VANS BACKUP _____), followed by the "#" sign.

13.3 When prompted, enter the scenario ID number from the listing below, followed by the "#" sign.

13.4 Follow the prompts to complete the call-out.

SCENARIO TITLE	SCENARIO ID NUMBERS	EVENT CODE NUMBERS
OCC Call-Out	**777**	**333**
Industrial Fire Officer	**999**	**8911**
Operation Diablo Shield NUE	**1010**	**111**
DCPP Dual Unit 1 Hr/4 Hr/8 Hr Notification	**101**	**111**
DCPP Dual Unit Notification of Unusual Event	**102**	**111**
DCPP Dual Unit Alert	**103**	**666**
DCPP Dual Unit Site Area Emergency	**104**	**666**
DCPP Dual Unit General Emergency	**105**	**666**
DCPP Unit 1 1 Hr/4 Hr/8 Hr Notification	**111**	**111**
DCPP Unit 1 Notification of Unusual Event	**112**	**111**
DCPP Unit 1 Alert	**113**	**666**
DCPP Unit 1 Site Area Emergency	**114**	**666**
DCPP Unit 1 General Emergency	**115**	**666**
DCPP Unit 2 1 Hr/4 Hr/8 Hr Notification	**121**	**111**
DCPP Unit 2 Notification of Unusual Event	**122**	**111**
DCPP Unit 2 Alert	**123**	**666**
DCPP Unit 2 Site Area Emergency	**124**	**666**
DCPP Unit 2 General Emergency	**125**	**666**

Scenario ID Numbering Index

The first number (1) in the sequence signifies an Emergency

The second number in the sequence signifies the Unit Designation

The third number in the sequence signifies the Event Level

Unit Designation	Event Level
0 = Dual Unit	1 = 1 / 4 / 8 Hour Event
1 = Unit 1	2 = Notification of Unusual Event
2 = Unit 2	3 = Alert
	4 = Site Area Emergency
	5 = General Emergency

DIABLO CANYON POWER PLANT
EP G-3
ATTACHMENT 9.2

1 AND 2

TITLE: Emergency Liaison Coordinator's Notification Procedure

NOTE 1: If an ELC is unavailable, the ISEC shall ensure notifications are performed.

NOTE 2: Notify SLO County and California OES within 15 minutes and NRC within one hour of the declaration of any Emergency Classification or subsequent change in classification.

TAB 1

UNUSUAL EVENT, ALERT, SITE EMERGENCY OR GENERAL EMERGENCY

AT ALL TIMES

B. INITIAL ACTIONS

NOTE 1: Notification has priority over all other assignments. It is to be performed immediately and as quickly as possible. Do not answer incoming phone calls until the initial notification is complete.

NOTE 2: If further information is requested during initial notification, inform requester that follow-up notifications will be made shortly.

1. If directed by the ISEC, fill out the DCPP Event Notification Form 69-10581 completely and obtain ISEC approval of the message content for follow-up notification.
2. Obtain a completed Form 69-13216 (EP RB-10), PARs information, from the Emergency Evaluation Coordinator or ISEC.
3. Obtain ISEC approval signatures on both of the above forms when completed.
4. Complete initial Off-Site Notifications, using the Off-Site Notifications Log Sheet, Form 69-13238.
5. Verify the 15 minute time limit on Initial Notification to SLO County Sheriff's Watch Commander and California OES has been met, and one hour for the NRC.
6. Complete NRC Event Notification Worksheet, NRC Form 361 (XI1.ID2) if directed by the ISEC.
7. Be alert to incoming calls from off-site organizations, in particular:
   a. Verification calls from the SLO County Sheriff via telephone or Operations radio.
   b. Calls from the NRC [on the ETS-2000 line.]

   NOTE: Immediate follow-up notification is given (within 15 min. State and County, one hour NRC):

   - If Emergency Classification is increased or a significant increase occurs in Dose Projections.
   - If the emergency is terminated.

TAB 1

UNUSUAL EVENT, ALERT, SITE EMERGENCY OR GENERAL EMERGENCY

AT ALL TIMES

C. SUBSEQUENT ACTIONS

1. Provide updates to the State and County at least every thirty minutes as long as updates are required.

NOTE: If an Unusual Event is anticipated to remain in effect greater than about 2 hours, give the off-site organizations an anticipated time of termination. If agreed to by the off-site agencies, updates are not necessary unless the anticipated termination time changes. The final termination notice must be given at the time of the actual event termination.

2. Assist in answering incoming calls as time permits.

3. Fax Initial and Follow-up Event Notification Forms to the SLO County Sheriff's Watch Commander, California OES and NRC Operations Center (optional), as soon as practicable after each verbal notification.

NOTE: Both the NRC Event Notification Worksheet, NRC Form 361, and the DCPP Event Notification Form 69-10581 may be sent by FAX to the NRC Operations Center, after verbal (official) notification is completed.

4. Inform the ISEC when notifications are completed.

5. Log all incoming calls from off-site organizations, in particular, verification calls from SLO County Sheriff [usually on x3223, Unit 1, or x3324, Unit 2 or Operations Radio].

6. If requested by the NRC to maintain an open communications channel and there are available personnel:

   a. Request the Interim SEC assign in this preference:

      1) Senior Licensed Operator

      2) STA or knowledgeable Licensed Operator

   b. Inform NRC of the status of staffing [on the FTS-2000 line.]

7. As time permits, attempt to contact the Liaison Advisor in the TSC or Agency Liaison in the EOF to turn over notifications responsibilities. Upon TSC or EOF activation, relinquish notifications responsibilities to the Liaison Advisor or Agency Liaison.

DIABLO CANYON POWER PLANT
EP G-3
ATTACHMENT 9.3

1 AND 2

TITLE: DCPP Event Notification Form

DCPP EVENT NOTIFICATION FORM

Facility or Organization	Unit#	Date:	Time:	Notification # (initial is #1)
Diablo Canyon		/ /	(Declared/Reclassified/Terminated)	

Notification Type (check applicable item)

☐ **Initial** ☐ **Follow up** ☐ **Termination**

1. **Classification:** (check applicable item)

☐ **Unusual Event** ☐ **Alert** ☐ **Site Area Emergency** ☐ **General Emergency**

2. **Assistance to be Requested** (check applicable items)

County Fire/CDF ☐ **YES** ☐ **NO**	**Medical** ☐ **YES** ☐ **NO**	**Law Enforcement (SLO Sheriff)** ☐ **YES** ☐ **NO**

3. **What Happened?** (check or fill in applicable items)

Safety Injection - Emergency Core Cooling Systems On

Plant Equipment Failure (Specify Component):

Loss of Electrical Power to the Plant

Fire (Specify Location):

Earthquake - Classification is by motion measured at the Plant

Other (Specify):

4. **Written Summary:** (This section can be left blank for initial emergency notifications.)
Fill in this section for emergency notifications. Avoid the use of jargon and acronyms when possible

APPROVED BY ISEC/SEC/RM: _____ **TIME:** _____

DIABLO CANYON POWER PLANT
EP G-3
ATTACHMENT 9.4

1 AND 2

TITLE: Off-Site Notifications Log Sheet

DATE:_____ **OFF-SITE NOTIFICATIONS #** _____

CONTACT	PRIMARY #	ALTERNATE #	TIME / INITIAL
NOTIFY WITHIN 15 MINUTES			
NOTE: FAX notification sheets following completion of both 15 minute notifications. **THIS IS A REQUIREMENT.**			
1. San Luis Obispo County (Sheriff's Watch Commander) OR call Adv. to Co. when staffed (# in FTL and NERC)	TIE LINE Fax **(Fax Required)** _____ Fax Time	911 OPS Radio (ENCODE 11)	/ (Person Contacted)
2. California Office of Emergency Services (OES) (Emergency Response Center) (Communications with OES lost, call CHP backup)	TIE LINE Fax **(Fax Required)** _____ Fax Time		/ (Person Contacted)
NOTE: Provide 30 minute updates and an estimated closeout time to the San Luis Obispo County (Sheriff's Watch Commander) and California Office of Emergency Services (Emergency Response Center).			
NOTIFY WITHIN 60 MINUTES			
3. NRC Operations Center	FTS 2000 LINES Fax **(Fax Optional)**	_____ Fax Time	/ (Person Contacted)
NOTIFY AT ALERT OR GREATER WHEN TSC IS ACTIVATED			
4. INPO Emergency Response Center			/ (Person Contacted)
INITIAL NOTIFICATION OF SITE AREA OR GENERAL EMERGENCY			
NOTE: This notification is only required if the San Luis Obispo County Emergency Operations Center is NOT activated.			
5. US Coast Guard (Marine Safety Office Long Beach, CA)			/ (Person Contacted)
RADIOLOGICAL RELEASE TO OCEAN			
6. California Regional Water Quality Control Board	**(Normal Hours)**	STATE OES TIE LINE **(Off-Hours)**	/ (Person Contacted)

DIABLO CANYON POWER PLANT
EP G-3
ATTACHMENT 9.5

1 AND 2

TITLE: Plant Status Emergency Form

Provide as much information as is available and appropriate at the time of the status report.

Date: ____/____/____ Status Report # 1 2 3 4 5 6 7 8 9 or _____

Liaison Advisor: _____ (Reviewed By) Liaison Assistant: _____ (Transmitted By)

1. Time Data Collection Begin: _____ (24 hr clock) Complete: _____

2. Reactor Status: [ ] Unit 1 [ ] Unit 2 (Provide a separate form for the other unit)

		BEFORE		CURRENT	
a. Power Level:	Power Range	_____	(%)	_____	(%)
	Int Range	_____	(µa)	_____	(µa)
	Source Range	_____	(cps)	_____	(cps)

b. Fuel Damage: [ ] None [ ] Minor [ ] Major

3. Reactor Coolant System:
   a. Pressure: _____ psig Estimated RCS Leakage _____ gpm
   b. RCP Running: [ ] 1 [ ] 2 [ ] 3 [ ] 4
   c. Incore Thermocouple(s): Hottest _____ F Average _____ F
   d. Reactor Vessel Level: _____ % [ ] Dynamic [ ] Full

4. Pressurizer:
   a. Level: _____ %
   b. PORV: [ ] Open [ ] Closed
   c. Safety Valves: [ ] Open [ ] Closed

5. ECCS:
   a. Cent. Chg. Pumps On: [ ] 1 [ ] 2 Total gpm: _____
   b. SI Pumps On: [ ] 1 [ ] 2 Total gpm: _____
   c. RHR Pumps On: [ ] 1 [ ] 2 Total gpm: _____
   d. Accumulators Discharged: [ ] YES [ ] NO
   e. Mode: [ ] Inject, RWST _____ % [ ] Recirculation, Contmt Level _____ ft.

6. Containment:
   a. Pressure: _____ psig
   b. Cont Isolation: [ ] Phase A [ ] Reset [ ] Phase B [ ] Reset
   c. Cont Spray Pumps On: [ ] 1 [ ] 2 Spray from RHR [ ]
   d. Fan Coolers Status: (Key: H - High L - Low N - Off C - Cleared)

   1 _____ 2 _____ 3 _____ 4 _____ 5 _____

EP G-3 (UNITS 1 AND 2)
ATTACHMENT 9.5

TITLE: Plant Status Emergency Form

7. Steam Generators:

		1	2	3	4
a.	WR Level:	_____ %	_____ %	_____ %	_____ %
b.	Pressure:	_____ psig	_____ psig	_____ psig	_____ psig

c. Auxiliary Feedwater Pumps On: [ ] Turbine [ ] 2 [ ] 3

Total gpm: _____

d. Feedwater Source: [ ] Cond Tk _____ % [ ] Raw Water _____ %

[ ] Fire Water _____ %

e. MSIVs Closed: [ ] 1 [ ] 2 [ ] 3 [ ] 4

8. Cooling:

a. CCW Pumps On: [ ] 1 [ ] 2 [ ] 3

b. ASW Pumps On: [ ] 1 [ ] 2

9. Other Information: _____

_____

_____

_____

_____

RETAIN THIS FORM FOR EVENT EVALUATION

TITLE: Release of Radioactive Liquids

11-28-01
EFFECTIVE DATE

PROCEDURE CLASSIFICATION: QUALITY RELATED

1. SCOPE

1.1 This procedure discusses the actions to be taken in the event that a radioactive liquid is released to the ocean under any of the following circumstances:

1.1.1 The release is accidental.

1.1.2 The magnitude of the release is unknown.

1.1.3 The release exceeds normal limits.

1.2 This procedure and changes thereto require PSRC review and Plant Manager approval.

2. DISCUSSION

2.1 A liquid release to the ocean does not pose an immediate threat to the health and safety of the general population and would not require immediate protective actions.

2.2 Mixed-waste (radiologically contaminated hazardous material) is not addressed in this procedure. This procedure assumes the only concern to health and safety is radioactivity.

3. RESPONSIBILITIES

3.1 The immediate actions (Section 6.1) are the responsibility of any person recognizing any of the symptoms of an uncontrolled release listed in Section 5.0.

3.2 The subsequent actions (Section 6.2) are the responsibility of the Shift Supervisor (Interim Site Emergency Coordinator).

4. PRECAUTIONS

4.1 This procedure is for non-hazardous material releases of radioactive liquids only.

4.2 For hazardous or potentially hazardous material releases refer to EP M-9A, "Hazardous Materials Incident - Initial Emergency Response/Mitigation," procedure.

5. SYMPTOMS

5.1 Any of the following alarms or indications may be associated with an uncontrolled release of radioactive liquids.

- Liquid Radwaste Discharge Line Effluent Monitor (RE-18) alarm followed by failure of RCV-18 to close.
- Discovery of improper liquid waste system valve lineup which has resulted in overboard discharge.
- Witnessing spill of radioactive materials in an area which does not drain to liquid radwaste.
- Unaccounted for loss of volume in liquid radwaste tank.
- Steam Generator Blowdown Tank Effluent Monitor (RE-23) alarm followed by failure of FCV-498 (blowdown effluent valve) to close.
- Oily Water Separator Liquid Effluent Monitor (RE-3) alarm.

6. INSTRUCTIONS

****

CAUTION: This procedure does not apply to release of hazardous or potentially hazardous materials.

****

6.1 Immediate Actions - Upon recognizing any of the above listed symptoms, the person discovering a potentially uncontrolled release of non-hazardous radioactive liquid shall:

6.1.1 Notify the Shift Supervisor.

6.1.2 Take appropriate action as directed by the Shift Supervisor to terminate or minimize the release.

6.2 Subsequent Actions - The Shift Supervisor shall then:

6.2.1 Notify the Chemistry Department of the event (Chemistry Foreman or Shift Chemistry Technician).

6.2.2 Classify the emergency event per EP G-1 and perform the notifications.

6.2.3 Begin investigation to determine the location and magnitude of the release. Following are the types of information which should be gathered:

a. Check the effluent monitor on the suspected release path. An alarm on an effluent monitor does not necessarily mean that any release limit was exceeded, since the alarms are deliberately set in a very conservative manner.

b. Sample the liquid which was discharged, if possible.

c. Retain any squeegees, rags, mops or other implements used to assist in cleaning up a spill.

d. Obtain before and after tank levels.

e. Obtain discharge flowrate and duration.

6.2.4 Assess the incident for potential contamination spread and radiation exposure. Consult other EP procedures below as applicable:

a. EP R-2, "Release of Airborne Radioactive Materials"

b. EP RB-4, "Access to and Establishment of Controlled Areas Under Emergency Conditions"

7. RECORDS

None

8. REFERENCES

8.1 EP G-1, "Accident Classification and Emergency Plan Activation."

8.2 EP G-2, "Establishment of the On-site Emergency Organization."

8.3 EP R-2, "Release of Airborne Radioactive Materials."

8.4 EP RB-4, "Access to and Establishment of Controlled Areas Under Emergency Conditions."

8.5 EP M-9A, "Hazardous Materials Incident - Initial Emergency Response/Mitigation."

9. SPONSOR

D.I. Fawcett/ M.T. Hug

TITLE: Emergency Offsite Dose Calculations

12-20-01
EFFECTIVE DATE

PROCEDURE CLASSIFICATION: QUALITY RELATED

1. SCOPE

1.1 This procedure provides the methodology for performing manual offsite dose calculations under emergency conditions as a manual backup to the Emergency Assessment Response System (EARS) or QUICKDOSE dose projection programs by Emergency Operation Facility (EOF) staff, if both computer programs are unavailable

2. DISCUSSION

2.1 This procedure provides the necessary guidance to determine projected offsite dose rates and integrated doses under accident conditions. It is used as a manual backup in the case where both Emergency Assessment Response System (EARS) and QUICKDOSE dose projection computer programs are unavailable

2.2 The projected offsite dose rates and integrated doses calculated in this procedure shall be used to recommend protective actions for the general public in accordance with procedure EP RB-10, "Protective Action Guidelines."

3. RESPONSIBILITIES

3.1 EOF Dose Assessment Staff shall use this procedure to perform manual dose calculations if both EARS and QUICKDOSE are unavailable.

4. OFFSITE DOSE CALCULATIONS - ATTACHMENT 7.1

4.1 GENERAL INFORMATION

4.1.1 Record the Information Requested.

4.1.2 Obtain the TIME AFTER REACTOR SHUTDOWN (hours) and the POSTULATED ACCIDENT SOURCE TERM from EP RB-9. Record these in the spaces provided.

4.1.3 Check the Radiological Release Source from EP RB-9 and Steam Generator Water Level, if applicable.

4.2 AVERAGE STABILITY CLASS

When meteorological conditions for the specified distances have not changed from those in the previous RB-11 calculation or EARS update, proceed to Steps 4.4.3 and 4.4.4.

4.2.1 Automated System Operable

Current meteorological data is available from the Plant Process Computer (PPC), and UDAC PCs. Proceed to Step 4.2.2 if these systems are inoperable.

NOTE: Plant process computer meteorological data turn on codes are "METP" (Primary Data) and "METB" (Back-up Data).

a. Record the WIND SPEED (m/sec), WIND DIRECTION (deg) and the HORIZONTAL AND VERTICAL STABILITY CLASSES in the spaces provided. If the horizontal and vertical stability classes are the same, record the stability class in the space labeled AVERAGE STABILITY CLASS and proceed to Step 4.3. Otherwise, proceed to Step 4.2.1b.

b. Use Table 1, Appendix 6.1 to select the VERTICAL AND HORIZONTAL STABILITY CLASS #s that match Step 4.2.1a vertical and horizontal stability classes. Record the # in the spaces provided. Take the vertical and horizontal stability class average, round up to the nearest whole number. Use Table 1 to select the stability class that matches the result and stability class #. Record this in the space labeled AVERAGE STABILITY CLASS.

4.2.2 Automated System Inoperable

Current meteorological data is available from the strip charts in the meteorological tower instrumentation buildings or the portable meteorological station.

a. Record the WIND SPEED (mph) and WIND DIRECTION (deg) in the spaces provided. To convert the WIND SPEED to m/sec multiply by 0.447. Record the result (m/sec) in the space provided.

b. Use Table 2, Appendix 6.2 to select the stability class that matches Step 4.2.2a wind speed. Record the selected stability class in the space labeled AVERAGE STABILITY CLASS.

4.3 ATMOSPHERIC DISPERSION FACTOR

When meteorological conditions for the specified distances have not changed from those in the previous RB-11 calculation or EARS update, proceed to Steps 4.4.3 and 4.4.4.

4.3.1 Atmospheric Dispersion Factor Determination

a. Use Appendix 6.3 to obtain the XU/Qs that match Step 4.2.1 or 4.2.2 AVERAGE STABILITY CLASS for the specified centerline distances. Record the XU/Qs (m^{-2}) into the spaces provided.

b. Record the WIND SPEED (Step 4.2.1 or 4.2.2) into the space provided.

c. To determine the dispersion factors divide the XU/Qs by the WIND SPEED. Record the results (sec/m^3) in the spaces labeled X/Q.

4.3.2 Atmospheric Dispersion Factor Determination - Alternate Method

X/Q values may be determined by using the PASQUILL curves shown in Figures 1 and 2 and the following equation:

$$X/Q = \frac{1}{\pi\,(\sigma_y)(\sigma_z)\bar{u}} \quad (1)$$

where

X/Q = Atmospheric Dispersion Factor in sec/m^3,

π = 3.14

σ_y = Horizontal Dispersion Coefficient (Figure 1) in m,

σ_z = Vertical Dispersion Coefficient (Figure 2) in m, and

$\bar{u}$ = 10 meter level wind speed in m/s.

a. Use Appendix 6.5 to determine the horizontal dispersion coefficient for the specified centerline distances. Record these values (meters) in the spaces labeled SIGMA Y. Use Step 4.2.1 or 4.2.2 AVERAGE STABILITY CLASS.

b. Use Appendix 6.6 to determine the vertical dispersion coefficient for the specified centerline distances. Record these values (meters) in the spaces labeled SIGMA Z. Use Step 4.2.1 or 4.2.2 AVERAGE STABILITY CLASS.

c. Record the WIND SPEED (Step 4.2.1 or 4.2.2) into the space provided.

d. To determine the dispersion factors multiply SIGMA Y, SIGMA Z, PI, and the WIND SPEED for the specified distances. Take the reciprocal of this product and record the results (sec/m^3) in the spaces labeled X/Q.

4.3.3 OFF-CENTERLINE CORRECTION - For points not located on the centerline, the following equation can be used to calculate off-centerline dispersion factors:

$$CF = e^{-\frac{1}{2}\frac{y^2}{\sigma_{y^2}}}$$

where

CF = Off centerline correction factor,

e = Natural exponent,

y = Perpendicular distance from centerline (m), and

σ_y = Centerline horizontal dispersion coefficient in (m)

a. Determine the perpendicular distance (meters) from the centerline to the selected off-centerline points. Record these into the spaces labeled OFF-CENTERLINE DISTANCES. (J)

b. Determine the centerline distance (meters) corresponding to the selected off-centerline points. Record these into the spaces labeled CENTERLINE DISTANCES. (I), other.

c. Use Appendix 6.5 to determine the centerline horizontal dispersion coefficients. Record these (meters) into the spaces labeled CENTERLINE SIGMA Y. Use Step 4.2.1 or 4.2.2 AVERAGE STABILITY CLASS.

d. Follow Step 4.3.1 or 4.3.2 to determine the centerline atmospheric dispersion factor (sec/m^3). Record the results in the spaces labeled CENTERLINE X/Q. (L)

e. Divide the OFF-CENTERLINE DISTANCE by the CENTERLINE SIGMA Y. Square the result and record into the spaces labeled CORRECTION RATIO. (M)

f. Multiply the CORRECTION RATIO (Step 4.3.3e) by -0.5. Raise the result to the NATURAL EXPONENT. Record these in the spaces labeled CORRECTION FACTOR. (N)

g. To determine the off-centerline dispersion factors multiply the CORRECTION FACTOR (N) by the CENTERLINE X/Q. (L) Record the results (sec/m^3) in the spaces labeled OFF CENTERLINE X/Q. (O)

4.4 DOSE RATE AND DOSE CALCULATIONS

4.4.1 Total Effective Dose Equivalent (TEDE) Rate and TEDE - Variable Meteorological Conditions

a. Obtain the Noble Gas release rate, the I-131 TEDE EQUIVALENT RELEASE RATE, Ci/sec from EP RB-9. Record the values into the spaces labeled NOBLE GAS RELEASE RATE, and I-131 TEDE EQUIVALENT RELEASE RATE.

b. For a Plant Vent Release obtain a source term assessment from the TSC RA based on EP RB-14, "Core Damage Assessment." Choose the most appropriate TEDE DOSE CONVERSION FACTOR from Appendix 6.7 and record this value.

c. Determine the total conversion constant ΣC by summing the Noble Gas and Iodine contributions.

d. Copy the X/Qs (sec/m^3) from Step 4.3 for the specified distances into the spaces provided.

e. To determine the TEDE rates multiply the TOTAL CONVERSION CONSTANT and the X/Q. Record the result (rem/hr) in the space labeled TEDE RATES.

f. Copy the RELEASE DURATION, hours, from Step 4.3.1 into the space provided.

g. To determine the TEDE multiply the TEDE RATE by the RELEASE DURATION. Record the results (rem) in the spaces labeled TEDE.

4.4.2 Thyroid Committed Dose Equivalent (CDE) Rate and Thyroid CDE - Variable Meteorological Conditions

a. Obtain the I-131 Thyroid CDE Equivalent Release Rate, Ci/sec from EP RB-9, or the I-131 Equivalent Release Rate from EARS. Record the obtained value into the space labeled I-131 THYROID CDE EQUIVALENT RELEASE RATE.

b. Multiply the I-131 THYROID CDE EQUIVALENT RELEASE RATE by the CONVERSION FACTOR. Record the result [(Rem)(m^3)/(sec)(hr)] in the space labeled CONVERSION CONSTANT.

c. Copy the X/Q and the RELEASE DURATION from Step 4.4.1 into the spaces provided.

d. To determine the thyroid CDE rate multiply the CONVERSION CONSTANT by the X/Q. Record the results (Rem/hr) in the space labeled THYROID CDE RATES.

e. To determine the thyroid CDE multiply the THYROID CDE RATES by the RELEASE DURATION. Record the results (Rem) in the spaces labeled THYROID CDE.

4.4.3 TEDE Rate and TEDE - Constant Meteorological Conditions

When the meteorological conditions remain constant the ratio of previous and current total conversion constants are used to arrive at current dose rates and doses as follows:

a. Calculate the TOTAL CONVERSION CONSTANT using 4.4.1 of Attachment 7.1. Record the obtained value in the space labeled TOTAL CONVERSION CONSTANT.

b. Obtain the previous TOTAL CONVERSION CONSTANT from previous dose calculations. Record obtained value into the space labeled PREVIOUS TOTAL CONVERSION CONSTANT.

c. Divide the TOTAL CONVERSION CONSTANT by the PREVIOUS TOTAL CONVERSION CONSTANT. Record the result in the space labeled TEDE RATE RATIO.

d. Obtain the previous TEDE rates (Rem/hr) from Step 4.4.1 or 4.4.3. Record obtained values into the spaces labeled PREVIOUS TEDE RATES.

e. Record the RELEASE DURATION, hours, (Step 4.1.1) into the space provided.

f. To determine the TEDE rate multiply the TEDE RATE RATIO and the PREVIOUS TEDE RATES. Record the results (Rem/hr) in the spaces labeled TEDE RATES.

g. To determine the TEDE multiply the TEDE RATES by the RELEASE DURATION. Record the results (Rem) in the space labeled TEDE.

4.4.4 Thyroid CDE Rate and Thyroid CDE - Constant Meteorological Conditions

When the meteorological conditions remain constant the ratios of previous and current release rates are used to arrive at current dose rates and doses as follows:

a. Obtain and record the I-131 Thyroid CDE Equivalent Release Rate from RB-9, or the I-131 Equivalent Release Rate from EARS.

b. Obtain and record the previous I-131 Thyroid CDE Equivalent Release Rate.

c. Calculate and record the THYROID CDE RATE RATIO.

d. Obtain the previous THYROID CDE RATES (Rem/hr) from Step 4.4.2 or 4.4.4. Record obtained values into the spaces labeled PREVIOUS THYROID CDE RATES.

e. Record the RELEASE DURATION, hours, (Step 4.1.1) into the space provided.

f. To determine the thyroid CDE rate multiply the THYROID CDE RATIO and the PREVIOUS THYROID CDE RATES. Record the results (Rem/hr) in the spaces labeled THYROID CDE RATES.

g. To determine the thyroid CDE multiply the THYROID CDE RATES by the RELEASE DURATION. Record the result (Rem) in the space labeled THYROID CDE.

5. RECORDS

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

6. APPENDICES

6.1 Table 1, Identification of Stability Class

6.2 Table 2, Stability Class Estimation

6.3 Table 3, XU/Q Values for Various Stability Classes

6.4 Table 4, Designation for Affected Sectors

6.5 Figure 1, Horizontal Dispersion Coefficient, σ_y

6.6 Figure 2, Vertical Dispersion Coefficient, σ_z

6.7 Figure 3.1, TEDE Dose Conversion Factors For Plant Vent Releases
Figure 3.2, TEDE Dose Conversion Factors For Steam Releases

7. ATTACHMENTS

7.1 "Offsite Dose Calculations," 10/15/01

8. REFERENCES

8.1 SH&ES Calculation No. EP-94-02, Rev 0, Validation and Verification of EP RB-9, "Calculation of Release Rate," Rev 10, and EP RB-11, "Emergency Offsite Dose Calculations," Rev 11.

8.2 EP G-1, "Accident Classification and Emergency Plan Activation."

8.3 EP EF-1, "Activation and Operations of the Technical Support Center."

8.4 EP EF-3, " Activation and Operations of the Emergency Operations Facility."

8.5 CAP A-8, "Off-Site Dose Calculation."

8.6 EP RB-9, "Calculation of Release Rate."

8.7 EP RB-10, "Protective Action Recommendation."

8.8 EP RB-14, "Core Damage Assessment."

APPENDIX 6.1

TABLE 1

IDENTIFICATION OF STABILITY CLASS

Stability Class #	Stability Class	Designation	$\Delta T/\Delta Z$ (°C/100m)	Sigma A (DEG)
1	A	Extremely Unstable	$\Delta T/\Delta Z \leq -1.9$	SigA≥22.5
2	B	Moderately Unstable	$-1.9 < \Delta T/\Delta Z \leq -1.7$	22.5>SigA≥17.5
3	C	Slightly Unstable	$-1.7 < \Delta T/\Delta Z \leq -1.5$	17.5>SigA≥12.5
4	D	Neutral	$-1.5 < \Delta T/\Delta Z \leq -0.5$	12.5>SigA≥7.5
5	E	Slightly Stable	$-0.5 < \Delta T/\Delta Z \leq 1.5$	7.5>SigA≥3.8
6	F	Moderately Stable	$1.5 < \Delta T/\Delta Z \leq 4.0$	3.8>SigA≥2.1
7	G	Extremely Stable	$4.0 < \Delta T/\Delta Z$	2.1>SigA

APPENDIX 6.2

TABLE 2

STABILITY CLASS ESTIMATION

Wind Speed (m/s)	Stability Class	
	Daytime (Sunrise to Sunset)	Nighttime (Sunset to Sunrise)
<2	B	F
2-5	C	E
>5	D	D

Based on Turner, D. B., 1969: "Workbook of Atmospheric Dispersion Estimates," Environmental Protection Agency, Research Triangle Park, NC.

APPENDIX 6.3

TABLE 3

XU/Q VALUES FOR VARIOUS STABILITY CLASSES

(m^{-2})

STABILITY CLASS	SITE BOUNDARY	2 Mi	5 Mi	10 Mi	15 Mi	20 Mi
A	7.0E-06	7.4E-07	3.2E-07	1.7E-07	1.2E-07	9.2E-08
B	3.1E-05	9.8E-07	4.3E-07	2.3E-07	1.6E-07	1.2E-07
C	6.7E-05	5.8E-06	1.3E-06	4.1E-07	2.2E-07	1.6E-07
D	1.7E-04	2.2E-05	5.4E-06	2.0E-06	1.1E-06	7.2E-07
E	3.0E-04	4.4E-05	1.4E-05	5.0E-06	3.0E-06	2.0E-06
F	5.2E-04	9.6E-05	3.0E-05	1.3E-05	7.8E-06	5.4E-06
G	8.0E-04	2.2E-04	7.2E-05	3.2E-05	1.9E-05	1.4E-05

Values involve building wake correction and a 1000 meter default mixing height.

APPENDIX 6.4

TABLE 4

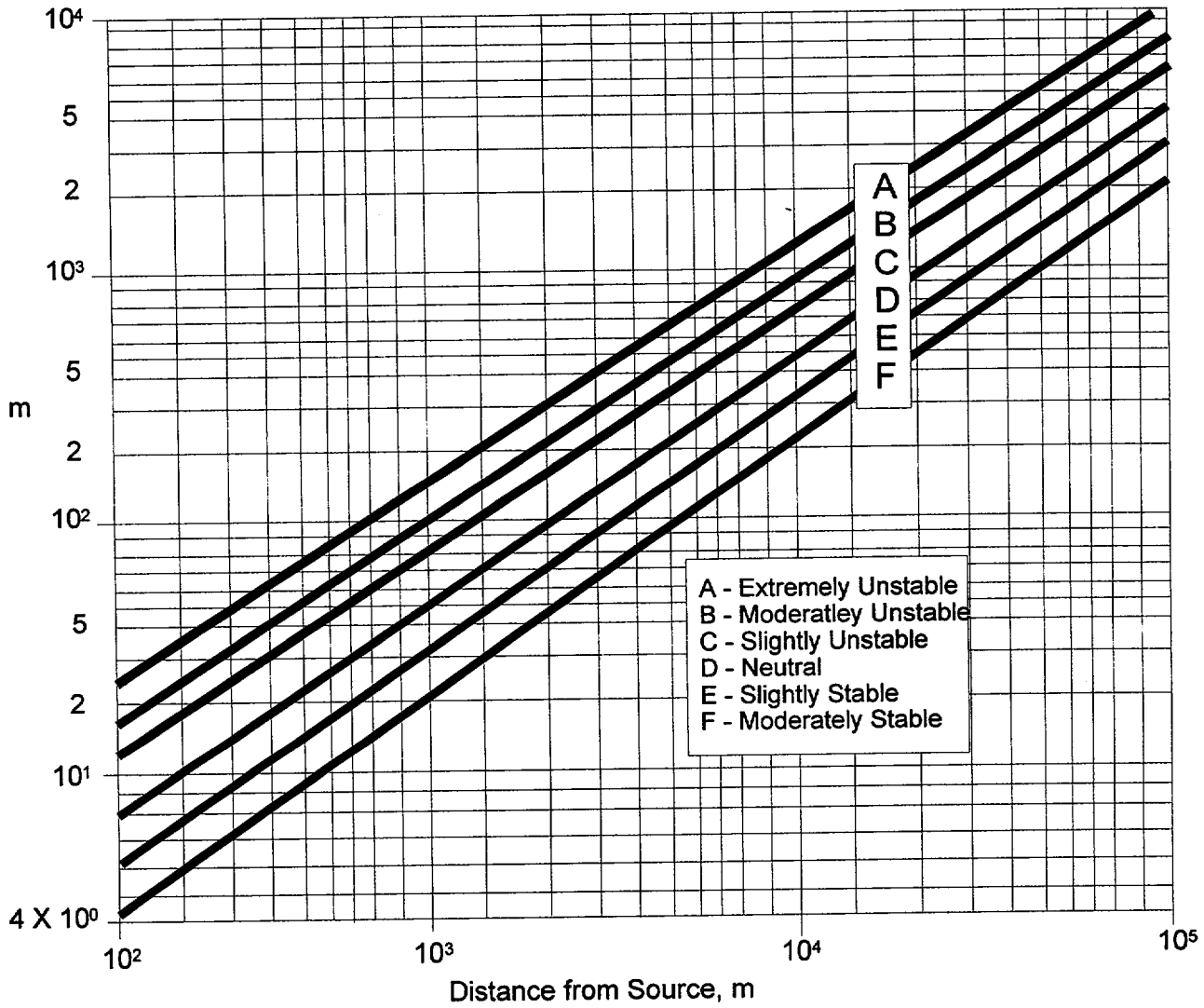
DESIGNATION FOR AFFECTED SECTORS

WIND DIRECTIONS (FROM)	SECTORS AFFECTED
169 - 191	N
192 - 213	NNE
214 - 236	NE
237 - 258	ENE
259 - 281	E
282 - 303	ESE
304 - 326	SE
327 - 348	SSE
349 - 011	S
012 - 033	SSW
034 - 056	SW
057 - 078	WSW
079 - 101	W
102 - 123	WNW
124 - 146	NW
147 - 168	NNW

APPENDIX 6.5

FIGURE 1

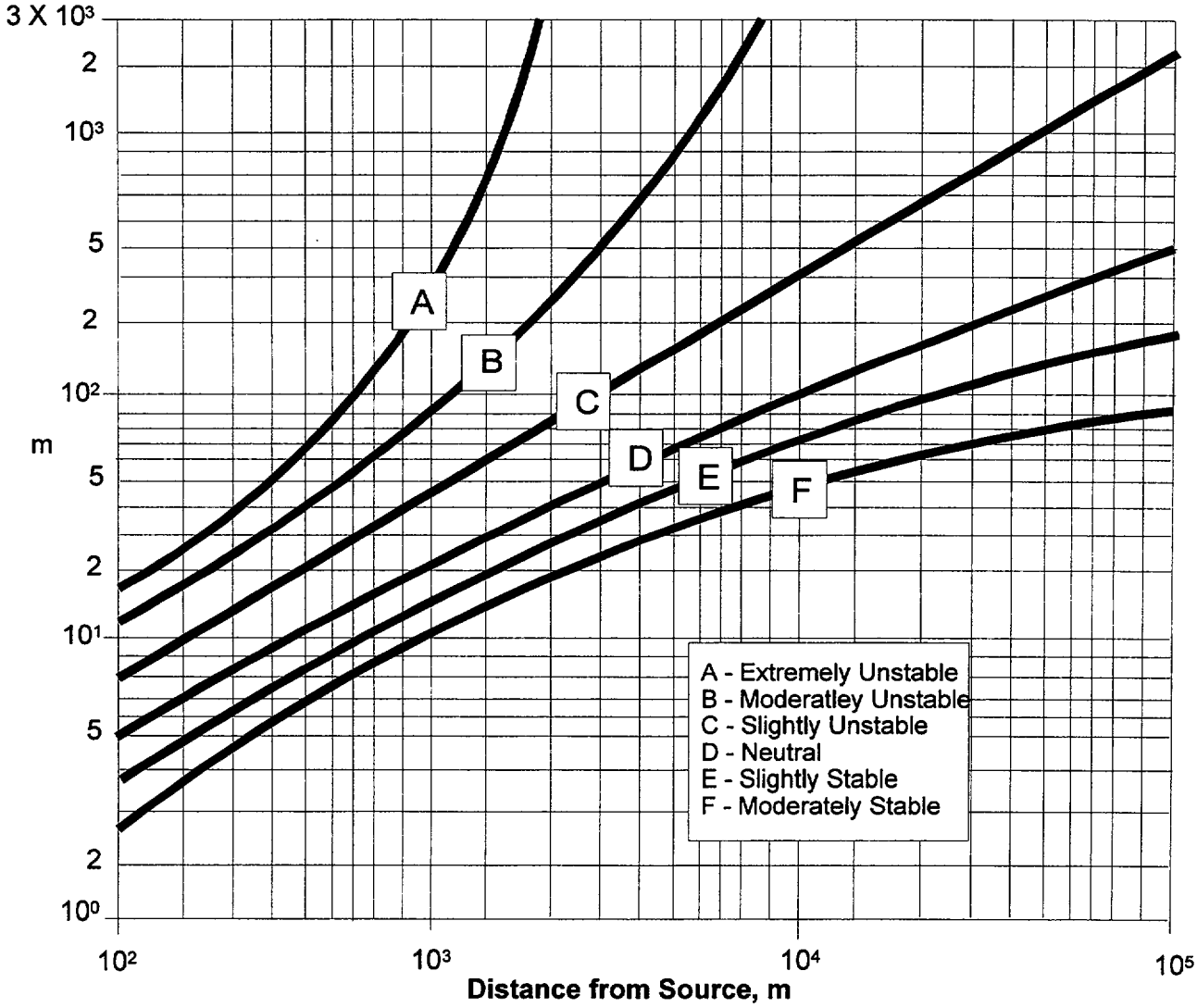
HORIZONTAL DISPERSION COEFFICIENT, σ_y



APPENDIX 6.6

FIGURE 2

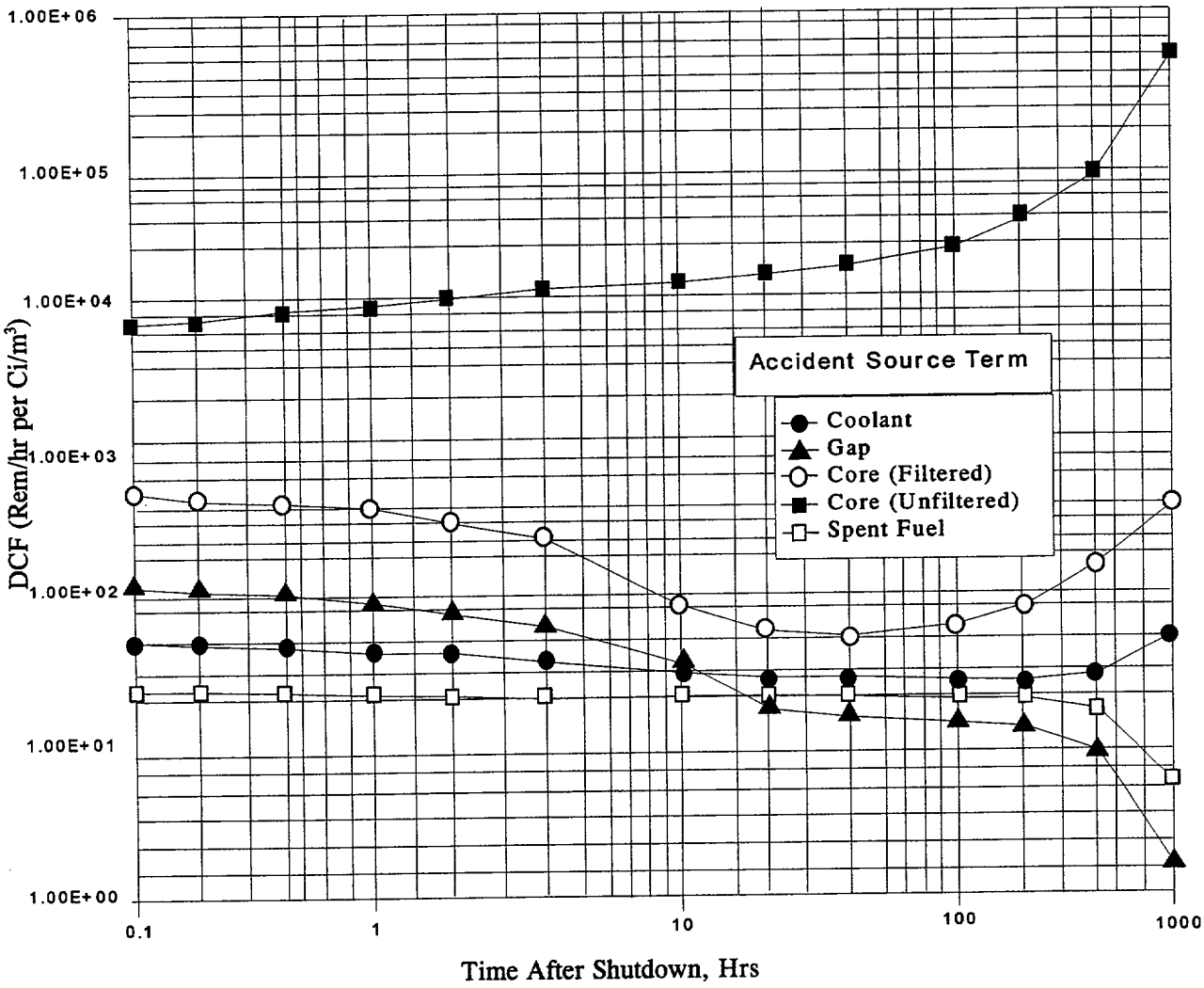
VERTICAL DISPERSION COEFFICIENT, σ_z



APPENDIX 6.7

FIGURE 3.1

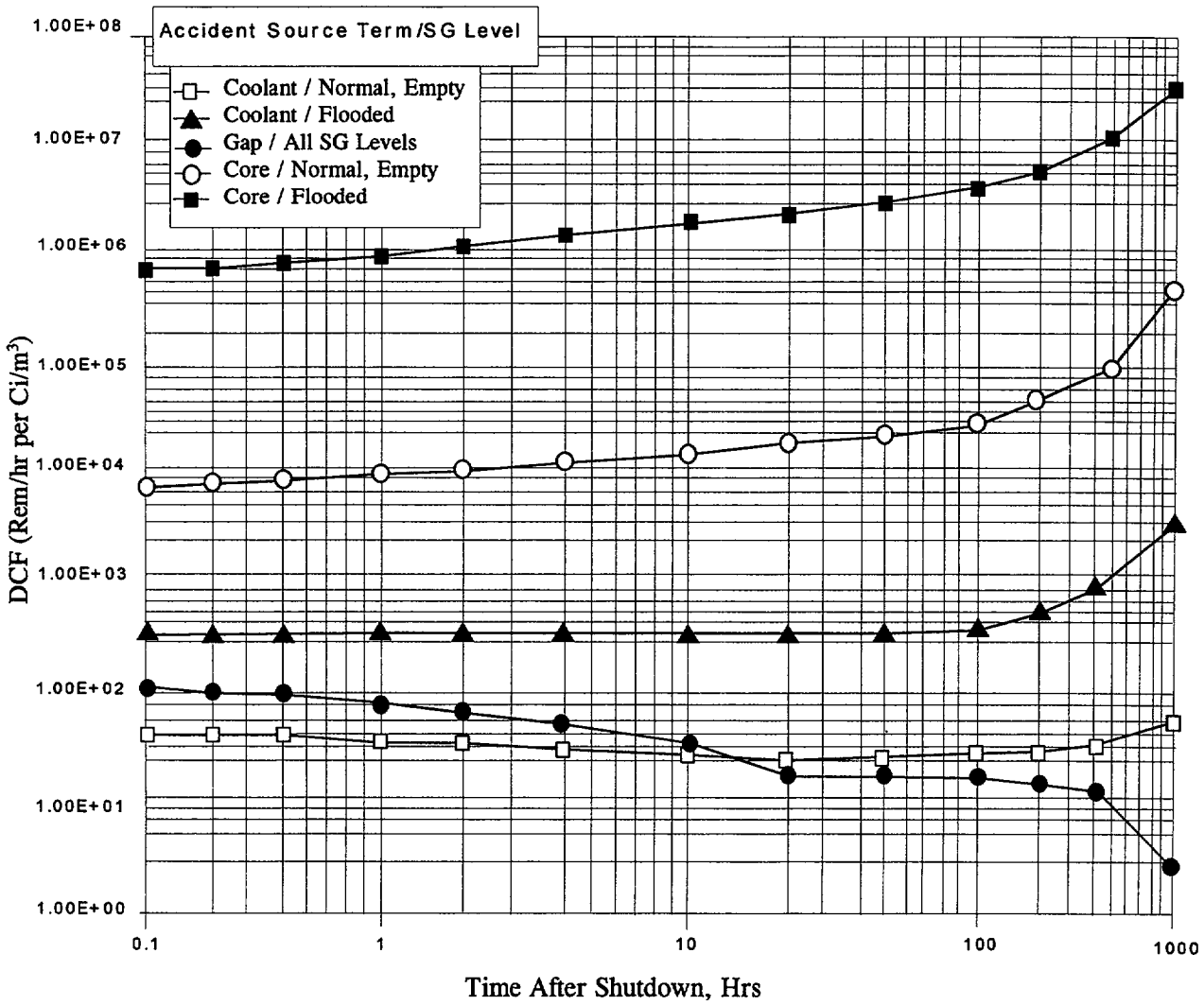
TEDE DOSE CONVERSION FACTORS FOR PLANT VENT RELEASES



APPENDIX 6.7 (Continued)

FIGURE 3.2

TEDE DOSE CONVERSION FACTORS FOR STEAM RELEASES



DIABLO CANYON POWER PLANT
EP RB-11
ATTACHMENT 7.1

1 AND 2

TITLE: Offsite Dose Calculations

PART 3.1 GENERAL INFORMATION

NOTE: Refer to the latest RB-9 Attachment for release rate data and general information.

3.1.1 Date ___/___/___ Time _____ Unit_____ Calculation #_____
RB-9 Attachment

Completed By _____ Release Duration _____ Hr

3.1.2 Time After Reactor Shutdown _____ Hr Postulated Accident Source Term _____
RB-9 (1.2) RB-9 (1.2)

3.1.3 Source of Radiological Release: (Check One)

Plant Vent (RB-9, Attachment 7.1) _____

Steam Release (RB-9, Attachment 7.2) _____

Containment Leakage (RB-9, Attachment 7.3) _____

Steam Generator Water Level

[ ] Empty [ ] Normal [ ] Flooded

PART 3.2 AVERAGE STABILITY CLASS

Proceed to Steps 3.4.3 and 3.4.4 of the meteorological conditions for the specified distances have not changed from those in the previous RB-11 calculation or EARS update.

3.2.1 **AUTOMATED SYSTEM OPERABLE**

HORIZONTAL STABILITY CLASS	VERTICAL STABILITY CLASS	WIND SPEED (10M LEVEL)	WIND DIRECTION (10M LEVEL)
_____	_____	_____ m/Sec	_____ deg
EARS TABLE 1	EARS TABLE 1	EARS TABLE 1	EARS TABLE 1

HORIZONTAL STABILITY CLASS #		VERTICAL STABILITY CLASS #		AVERAGE STABILITY CLASS # *	AVERAGE STABILITY CLASS
(_____	+	_____)	÷ 2 =	_____	_____
TABLE 1		TABLE 1			TABLE 1

* Round up to the nearest whole number.

OR

3.2.2 **AUTOMATED SYSTEM INOPERABLE**

Wind Speed		Wind Speed	Wind Direction	Average Stability Class
_____ mph x 0.447 =		_____ m/Sec	_____ deg	_____
				TABLE 2

PART 3.3 ATMOSPHERIC DISPERSION FACTOR

Proceed to Steps 3.4.3 and 3.4.4 if the meteorological conditions for the specified distances have not changed from those in the previous RB-11 calculation or EARS update.

3.3.1 **ATMOSPHERIC DISPERSION FACTOR DETERMINATION**

Centerline Distances	A XU/Q	B Wind Speed	C X/Q
S.B.	_____ m^{-2} TABLE 3		_____ Sec/m^3 A/B
2 Mi	_____ m^{-2} TABLE 3		_____ Sec/m^3 A/B
5 Mi	_____ m^{-2} TABLE 3	_____ m/Sec 3.2.1 or 3.2.2	_____ Sec/m^3 A/B
10 Mi	_____ m^{-2} TABLE 3		_____ Sec/m^3 A/B
15 Mi	_____ m^{-2} TABLE 3		_____ Sec/m^3 A/B
20 Mi	_____ m^{-2} TABLE 3		_____ Sec/m^3 A/B

OR

3.3.2 **ATMOSPHERIC DISPERSION FACTOR DETERMINATION - Alternate Method**

Centerline Distances	D Sigma Y*	E Sigma Z*	F Pi	G Wind Speed	H X/Q
S.B. (0.8 Km)	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)
2 Mi (3.2 Km)	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)
5 Mi (8.0 Km)	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)
10 Mi (16.1 Km)	_____ m Figure 1	_____ m Figure 2	π	_____ m/Sec 3.2.1 or 3.2.2	_____ Sec/m^3 1/(D x E x F x G)
15 Mi (24.1 Km)	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)
20 Mi (32.2 Km)	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)
_____ Other	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)
_____ Other	_____ m Figure 1	_____ m Figure 2			_____ Sec/m^3 1/(D x E x F x G)

* Step 3.2 Average Stability Class.

PART 3.3 ATMOSPHERIC DISPERSION FACTOR

3.3.3 **OFF-CENTERLINE CORRECTION**

I Centerline Distances	J Off-Centerline Distances	K Centerline Sigma Y	L Centerline X/Q	M Correction Ratio	N Correction Factor	O Off-Centerline X/Q
S.B. (0.8 Km)	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
2 Mi (3.2 Km)	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
5 Mi (8.0 Km)	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
10 Mi (16.1 Km)	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
15 Mi (24.1 Km)	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
20 Mi (32.2 Km)	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
_____ Other	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N
_____ Other	_____m	_____m Figure 1	____Sec/m^3	_____ (J/K)^2	_____ EXP (-0.5 x M)	_____Sec/m^3 L x N

* Perpendicular distance to the centerline.

1 mile = 1.6 Km

TITLE: Offsite Dose Calculations

PART 3.4 DOSE RATE AND DOSE CALCULATIONS

3.4.1 **TEDE RATE AND TEDE - VARIABLE METEOROLOGICAL CONDITIONS**

A Noble Gas Release Rate	B Dose Conversion Factors		C Conversion Constant		
_____ Ci/Sec RB-9 or EARS Table 2	_____ App 7.7	Rem • m³ / Ci • hr	_____ A x B	Rem • m³ / Sec • Hr	NG/Part.
I-131 TEDE Equivalent Release Rate					
_____ Ci/Sec RB-9	5.3E4	Rem • m³ / Ci • hr	_____ A x B	Rem • m³ / Sec • Hr	Iodine
			_____ ΣC	Rem • m³ / Sec • Hr	Total Conversion Constant

Centerline Distances	Off-Centerline Distances	D X/Q*	E TEDE Rates	F Release Duration	G TEDE
S.B.	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F
2 Mi	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F
5 Mi	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F
10 Mi	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D	_____ Hours 3.1.1	_____ Rem E x F
15 Mi	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F
20 Mi	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F
_____ Other	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F
_____ Other	_____ m	_____ Sec/m³ 3.3	_____ Rem/Hr ΣC x D		_____ Rem E x F

* Use the off-centerline X/Q if the off-centerline distance is indicated.

TITLE: Offsite Dose Calculations

PART 3.4 DOSE RATE AND DOSE CALCULATIONS (Continued)

3.4.2 **THYROID CDE RATE AND THYROID CDE - VARIABLE METEOROLOGICAL CONDITIONS**

I I-131 Thyroid CDE Equivalent Release Rate		J Dose Conversion Factor		K Conversion Constant	
_____ Ci/Sec RB-9		1.3E6	Rem • m³ / Ci • Hr	_____ I x J	Rem • m³ / Sec • Hr

Centerline Distances	Off-Centerline Distances	L X/Q	M THYROID CDE RATES	N Release Duration	O THYROID CDE
S.B.	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N
2 Mi	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N
5 Mi	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N
10 Mi	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L	_____ Hours 3.1.1	_____ Rem M x N
15 Mi	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N
20 Mi	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N
_____ Other	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N
_____ Other	_____ m	_____ Sec/m³ 3.4.1.D	_____ Rem/Hr K x L		_____ Rem M x N

PART 3.4 DOSE RATE AND DOSE CALCULATIONS (Continued)

3.4.3 **TEDE RATE AND TEDE - CONSTANT METEOROLOGICAL CONDITIONS**

A Total Conversion Constant		B Previous Total Conversion Constant		C TEDE Rate Ratio
_____ 3.4.1	Rem • m³ / Sec • Hr	_____	Rem • m³ / Sec • Hr	_____ A/B

Centerline Distances	Off-Centerline Distances	D Previous TEDE Rates*	E TEDE Rates	F Release Duration	G TEDE
S.B.	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
2 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
5 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
10 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D	_____Hours 3.1.1	_____Rem E x F
15 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
20 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
_____ Other	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
_____ Other	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F

* Use the previous off-centerline TEDE rate if the off-centerline distance is indicated.

PART 3.4 DOSE RATE AND DOSE CALCULATIONS (Continued)

3.4.4 **THYROID CDE RATE AND THYROID CDE - CONSTANT METEOROLOGICAL CONDITIONS**

A I-131 Thyroid CDE Equivalent Release Rate	B Previous I-131 Thyroid CDE Equivalent Release Rate	C Thyroid CDE Rate Ratio
_____ RB-9 or EARS	_____	_____ A/B

Centerline Distances	Off-Centerline Distances	D Previous Thyroid CDE Rates*	E Thyroid CDE Rates	F Release Duration	G Thyroid CDE
S.B.	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
2 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
5 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
10 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D	_____Hours 3.4.3 F	_____Rem E x F
15 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
20 Mi	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
_____ Other	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F
_____ Other	_____m	_____Rem/Hr	_____Rem/Hr C x D		_____Rem E x F

* Use the previous off-centerline thyroid CDE rate if the off-centerline distance is indicated.

On-The-Spot Change

SPONSOR

1. PROCEDURE NO: EP RB-15 | 2. CURRENT REV: 10 | 3. UNIT: ☐ 1 ☐ 2 ☒ 1&2

4. ☒Permanent ☐Temporary - Expiration Date/Event/Task:

5. REASON FOR/DESCRIPTION OF CHANGE: (Reference AR, QE, etc. Attach additional pages if necessary; e.g., page 1A)
Deleted reference to CAP P-9 and CAP P-10. CAP P-9 and CAP P-10 are being rescinded due to the regulatory relief requested and approved by the NRC (See LAs 149/149). See AR# A0523097.

6. PROCEDURE PAGES AFFECTED:
1, 11, and 12

7. ATTACHMENTS AND PAGES OF ATTACHMENTS AFFECTED:
N/A

8. Mark-up a clean copy of affected pages in a manner that ensures users can read and understand the changes.
- Include previous OTSCs on affected pages. Leave previous OTSCs (including dates) as is unless the content is being changed by new OTSC. Highlighting techniques (e.g., hand drawn "balloon") should be used to clearly identify change.
- Include revision bars, the notation "OTSC," and today's date in the right margin next to the change.
- If additional pages are inserted, use the page# from the procedure followed by an alpha suffix (e.g., page 3A).

9. Complete the LBIE screen on page 2.

10. ☐Y ☒N - Does OTSC significantly impact other organizations? If "Y," complete/attach Cross Discipline Review Form.
☐Y ☒N - Does OTSC impact Surveillance Program; e.g., changes to test frequency/scope, Tech Specs/ECGs, and surveillance responsibilities. If "Y," obtain review/signature of Surveillance Coordinator: _____
☐Y ☒N - Administrative Procedure OTSC? If "Y," obtain Procedure Services review/signature: _____
☐Y ☒N - Change Notice Attached? (Required if admin procedure change and specific training is not performed.)

11. ☐Y ☒N - Does OTSC conflict with DCM section 4 (Design Basis) or 5 (Surv/Maint Requirements)? If "Y," contact responsible engineer for resolution. OTSC cannot be made until the conflict is resolved.

12. This OTSC is a "change of intent" if either of the following questions is answered "YES:"
☐Y ☒N - Does OTSC change the essential purpose, major activities, equipment, Operating Mode(s), performance frequency, or range of operation, which define the limits of the procedure's intended use?
☐Y ☒N - Does OTSC reduce quality verification requirements; e.g., hold points, independent verifications?

13a. ☐ NONCHANGE-OF-INTENT ONLY:
- Obtain an Independent Technical Review.
- Obtain SRO review if required by block 17 criteria – otherwise check SRO block 20 N/A.
- O TSC may now be implemented – immediately hand carry to drop box outside Control Rm or Procedure Svcs.

13b. ☒ CHANGE-OF-INTENT OR NONCHANGE-OF-INTENT:
- Obtain an Independent Technical Review.
- Check SRO block 20 N/A.
- Obtain block 21 final management reviews/approval(s).
- O TSC may now be implemented – immediately hand carry to drop box outside Control Rm or Procedure Svcs.

14. SIGNATURE – SPONSOR (Quals: TLBIE & TPROC) Patrick W. Baxter | DATE: 12/11/01 | PRINT LAST NAME: Baxter | PHONE: 4131

ITR

15. Review this change and the results of the LBIE screen on page 2 for technical accuracy.

16. SIGNATURE – ITR (Quals: TLBIE, & PRITR or ends w/"PR") | DATE: 12/11/01 | PRINT LAST NAME: Bieze | PHONE: 3452

SRO

17. SRO review required if procedure is (a) an Operations section working level procedure, (b) a Surveillance Test, (c) an E-Plan Implementing procedure, or (d) a change that affects equipment/system OPERABILITY/availability.
18. Ensure change does not adversely impact the operating license nor the operating status of plant equipment.
19. If the approving SRO is not the affected unit SFM, then SRO notify the affected unit SFM if appropriate.

20. SIGNATURE – SENIOR REACTOR OPERATOR ☒ N/A | DATE: | PRINT LAST NAME:

21. FINAL MANAGEMENT REVIEW/APPROVAL(S) - Refer to EDMS properties to determine final reviews and approvals.
☐Y ☐N – PSRC review required (see note 1)? PSRC MTG#: _____
☒APPROVED ☐REJECTED BY: RJ Rodd DATE: 12-11-01 REMARKS: _____
VP, DCO: _____ ☐N/A VP, NUCLEAR SVCS: _____ ☐ N/A

Note 1: PSRC also reviews changes to AD7.DC8 Tool Pouch List and heavy load handling methods/routes in exclusion areas.

Procedure Control Use Only	Received: 12-11-01	OTSC Flag Set:	Immediate Dist:	Secondary Dist:	CN Sent: N/A

LICENSING BASIS IMPACT EVALUATION SCREEN

Perform the following LBIE screen IAW TS3.ID2. Unless it is clearly obvious, document in the remarks below the basis for your responses. As appropriate, document any references used to support your conclusion.

Does the proposed activity/CTE:

9A1: Involve a change to the Facility **Operating License** (OL), including Tech Specs, Environmental Protection Plan, and Antitrust Conditions? If "Y," contact the regulatory organization as NRC approval is required.	☐Y ☒N
9A2: Impact a **commitment** contained in the Procedure Commitment Database? If "YES," process the commitment change in accordance with XI4.ID2 before implementing this change.	☐Y ☒N
9A3: Involve a change to the **Fire Protection Program** as described in UFSAR Section 9.5? If "Y," perform/attach applicable LBIE.	☐Y ☒N
9A4: Involve a change to the **Quality Assurance Program** (QAP) as described in UFSAR Chapter 17? If "Y," process QAP change IAW XI3.ID2, and submit procedure change to NQAL for review. If the change to the QAP reduces program commitments, contact the regulatory organization as NRC approval is required.	☐Y ☒N
9A5: Impact other plant specific programs (e.g., the ODCM) which are controlled by regulations, the Operating License, or Tech Specs? If "Y," process in accordance with the procedure(s) for the appropriate activity.	☐Y ☒N

Answer questions 9B1-3 based on the appropriate TS3.ID2 pre-screen. If a pre-screen requires an in-depth plan review, then obtain a review by the organization that sponsors the plan, and obtain their signature on a Cross Discipline Review form. For any questions answered "Y," perform and attach the applicable LBIE.

Does the proposed activity/CTE:

9B1: Result in noncompliance with the **Environmental Protection Plan** or create a situation that may be adverse to the **environment**?	☐Y ☒N
9B2: Result in a change to the **Emergency Plan**?	☐Y ☒N
9B3: Result in a change to a **security plan** (PSP, SCP, STQP)?	☐Y ☒N

9C: Are LBIE screen **credited actions** or **compensatory measures** implemented in documents such as approved procedures, ARs, work documents (e.g., work order, jumper), or drawings?	☐Y ☒N/A

Does the proposed activity/CTE:

9D1: Require a **safety assessment**? If "Y," perform/attach TS3.ID2 safety assessment.	☐Y ☒N
9D2: Involve **maintenance** on equipment that is appropriately isolated from the facility and which restores the equipment to its approved design condition? If "Y," check the following 10 CFR 50.59 screen N/A.	☐Y ☒N

If any of the following 10 CFR 50.59 questions are answered "Y," perform/attach a TS3.ID2 10 CFR 50.59 Evaluation.

Does the proposed activity/CTE: ☐50.59 Screen N/A

9E1: Involve a change to an **SSC** that adversely affects an UFSAR described design function?	☐Y ☒N
9E2: Involve a change to a **procedure** that adversely affects how UFSAR described SSC design functions are performed or controlled?	☐Y ☒N
9E3: Involve revising or replacing an UFSAR described **evaluation methodology** that is used in establishing the design bases or used in the safety analysis?	☐Y ☒N
9E4: Involve a **test or experiment not described in the UFSAR**, where an SSC is utilized or controlled in a manner that is outside the reference bounds of the design for that SSC or is inconsistent with analyses or description in the UFSAR?	☐Y ☒N
9E5: Rely on a **vendor 10 CFR 50.59 evaluation** which has not been PSRC reviewed?	☐Y ☒N

Remarks:
This revision supports changes to ECG 11.1. See LBIE No. 2001-037, "ECG 11.1 Revision to Eliminate PASS"

TITLE: Post Accident Sampling System

10/11/01
EFFECTIVE DATE

PROCEDURE CLASSIFICATION: QUALITY RELATED

1. SCOPE

1.1 This procedure describes the emergency actions and analysis procedures, CAP P-1, CAP P-2, CAP P-3, CAP P-5, and CAP P-6, ~~CAP P-9, and CAP P-10,~~ used to ensure the safe and reliable sampling and analysis of reactor coolant, containment sump (RHR pumps discharge), and containment atmosphere during accident conditions.

1.2 The purpose of this procedure is to define the initial actions taken when a decision is made by the Site Emergency Coordinator to obtain a post-accident sample using the Post-Accident Sample System (PASS). PASS samples are not required for immediate response. PASS samples are now intended for accident recovery.

1.3 This procedure guides, with consideration of plant emergency radiation hazards, the PASS team to access and obtain samples from the PASS room. It also guides the team to withdraw from the PASS room upon sample acquisition.

1.4 This is a "PERIODIC USE" procedure.

2. DISCUSSION

2.1 This procedure contains the implementing steps to prepare for PASS sampling during recovery from emergency conditions. This procedure is to be used in conjunction with the CAP-P series procedures which contain the technical instructions to be followed for obtaining and analyzing a sample.

2.2 Throughout the EP RB-15 and CAP-P sampling procedures, check-off boxes are provided to assist in keeping track of steps completed. The use of this aid is not required but is recommended.

3. RESPONSIBILITIES

3.1 It is the responsibility of the Site Chemistry Coordinator to supervise the utilization of the PASS laboratory for post-accident sampling and analysis.

4. PREREQUISITES

4.1 The Site Emergency Coordinator should pre-plan post-accident sampling with the Radiological Advisor and the Site Chemistry Coordinator prior to ordering a plant entry (i.e., prior to deciding to collect a post-accident sample) when unusually hazardous radiation or contamination levels are known or suspected to exist.

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e. If the SPING is not alarming, the respirator if worn, may be removed at this time. [ ]

NOTE: The respirator should be donned anytime there is a potential for airborne contamination to be introduced into the room.

6.3 Sampling

6.3.1 Specific Procedures

The detailed instructions for performing the sampling and analysis are covered in the following procedures:

a. CAP P-1 -- Initial Actions

This procedure details necessary steps for initial system lineup.

b. CAP P-2 -- Reactor Coolant Sampling

This procedure describes the steps for sampling diluted liquid for gamma spec, boron, and pH analysis.

c. CAP P-3 -- Containment Air Sampling and Analysis

This procedure describes the steps for sampling containment air for percent hydrogen, radioiodines, particulates and noble gases.

d. CAP P-5 -- Sample Handling and Boron Analysis

This procedure describes the steps for PASS sample handling and boron analysis by carminic acid.

e. CAP P-6 -- Data Analysis

This procedure provides a standard format to record data and calculate dilution factors.

~~f. CAP P-9 -- Sample Storage and Disposal~~

~~This procedure provides instructions for disposal of stripped gas samples and storage of liquid samples.~~

~~g. CAP P-10 -- Undiluted Liquid Sampling~~

~~This procedure details the steps required to obtain an undiluted liquid sample.~~

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7. ACCEPTANCE CRITERIA

None

8. REFERENCES

8.1 "High Radiation Sampling System Operations and Maintenance Manual", SENTRY EQUIPMENT CORP., Prepared by NUS Corp., PG&E Record No. 696213-84-3.

8.2 NUREG 0737, 10/80.

8.3 Regulatory Guide 1.97, Rev. 3, 5/83.

8.4 License Amendment 149 (Unit 1) and 149 (Unit 2) dated July 13, 2001.

8.5 WOG Core Damage Assessment Guidance, Nov. 1999 (WCAP-14696-A, Rev. 1)

8.6 WOG Post Accident Sampling System Requirements: A Technical Basis, July 2000 (WCAP-14986-A, Rev. 2)

8.7 CAP P-1, "Initial Actions."

8.8 CAP P-2, "Reactor Coolant Sampling."

8.9 CAP P-3, "Containment Air Sampling and Analysis."

8.10 CAP P-5, "Sample Handling and Boron Analysis."

8.11 CAP P-6, "Data Analysis."

~~8.12 CAP P-9, "Sample Storage and Disposal."~~

~~8.13 CAP P-10, "Undiluted Liquid Sampling."~~

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9. RECORDS

Data Sheets and records will be maintained in the Record Management System (RMS) in accordance with CY1.DC1.

10. APPENDICES

None

11. ATTACHMENTS

11.1 "Post-Loca Brief Checklist," 10/09/01

12. SPONSOR

Patrick Baxter

TITLE: **Activation and Operation of the Operational Support Center**

12-20-01
EFFECTIVE DATE

PROCEDURE CLASSIFICATION: QUALITY RELATED

1. SCOPE

This procedure describes the activation and operation of the Operational Support Center (OSC).

2. DISCUSSION

2.1 Location and Description

The OSC provides a place separate from the Control Room and Technical Support Center where designated support personnel assemble and receive specific assignments. The OSC is located primarily on the 119' elevation in the Turbine Building, Medical Facility, and 85' Access Control. These areas contain a variety of immediately available emergency support equipment.

2.2 OSC Functions

2.2.1 A staging area for personnel assigned to one of the following tasks:

a. Emergency maintenance, assessment, repair and damage control

b. Fire fighting, search and rescue and medical assistance

c. Post-accident sampling and radiological assessment

2.2.2 Emergency response equipment storage

2.2.3 Personnel decontamination facility

2.3 Minimum Staff Required for OSC Facility Activation

- Emergency Maintenance Coordinator
- Site Radiation Protection Coordinator
- Technical Maintenance Coordinator
- Mechanical Coordinator
- Electrical Coordinator
- 6 - C&RP Technicians

NOTE: Vacancies may be filled by other qualified individuals not already filling a minimum staff position.

2.4 Activation of OSC

The OSC is considered activated when all processes required for the OSC are fully operational. Fully operational means that the person assigned to a position has taken over the responsibility for those duties.

3. RESPONSIBILITIES

3.1 Senior Control Operator

3.1.1 Ensures dispatched Operations teams are tracked until relieved by the OSC Access Supervisor.

3.2 Emergency Maintenance Coordinator

3.2.1 Directs activities of OSC personnel.

3.2.2 Develops, in cooperation with the SEC/Maintenance Logistics Advisor, a repair plan to recover from the emergency.

3.2.3 Fabricates and sets up any special equipment necessary at the direction of the SEC/Maintenance Logistics Advisor.

3.2.4 Coordinates the movement and accountability of maintenance teams.

3.2.5 Provides OSC status updates to the TSC.

3.3 Maintenance Coordinators (Mechanical, Technical, and Electrical Maintenance)

3.3.1 Plan and coordinate resources to conduct assessment, maintenance, repair or installation of special equipment.

3.3.2 Provide team status updates to the OSC Access Supervisor.

3.4 OSC Access Supervisor

3.4.1 Controls plant access and ensures personnel entering a potentially hazardous plant area are informed of:

a. plant status.

b. potential hazards.

c. safety and radiation protection provisions.

d. appropriate protective equipment required.

3.4.2 Maintains accountability of and communicates with personnel dispatched from the OSC.

3.4.3 Briefs dispatched response teams on plant conditions and emergency classification changes.

3.4.4 Assists the Control Room and OSC in communicating with response teams.

3.5 Site Radiation Protection Coordinator

3.5.1 Provides personnel exposure monitoring and record keeping.

3.5.2 Directs surveys and establishes radiation or contamination control area boundaries.

3.5.3 Determines radiological protection requirements for RCA access.

3.5.4 Determines when an emergency exposure authorization is required and provides justification to the SEC/RM.

3.5.5 Informs the Radiological Advisor, Emergency Maintenance Coordinator and the OSC Access Supervisor of team activities.

3.5.6 Coordinates with the OSC Access Supervisor to brief radiological conditions to personnel dispatched into affected plant areas.

3.6 Site Chemistry Coordinator

3.6.1 Directs sampling and radio-chemical and chemical analysis.

3.6.2 Informs the Radiological Advisor and Emergency Maintenance Coordinator of actions and findings.

3.6.3 Coordinates personnel dispatched for sampling or analysis with the Site Radiation Protection Coordinator and OSC Access Supervisor.

3.7 Operations Coordinator

3.7.1 Coordinates Operation's response outside the Control Room.

4. INSTRUCTIONS

4.1 Activate OSC per the appropriate checklist.

4.2 At the discretion of the Emergency Maintenance Coordinator, Site Radiation Protection Coordinator or their discipline Maintenance Coordinator, maintenance teams may be directed to don protective clothing and prepare respiratory protection prior to actual team or task assignment.

4.3 The representative from Operations Department coordinates with their organizations to provide general OSC support (under the direction of the Emergency Maintenance Coordinator).

5. RECORDS

5.1 Completed checklist are good business records and shall be retained for three years in accordance with OM10.DC1.

6. ATTACHMENTS

6.1 Form 69-20506, "Emergency Maintenance Coordinator Checklist," 11/13/01

6.2 Form 69-20507, "Team Predeparture Checklist," 11/13/01

6.3 Form 69-20508, "OSC Access Supervisor," 11/13/01

6.4 Form 69-20509, "Site Radiation Protection Coordinator," 11/13/01

6.5 Form 69-20510, "Site Chemistry Coordinator Checklist," 11/13/01

6.6 Form 69-20511, "Maintenance/Operations Coordinator Checklist," 11/13/01

6.7 Form 69-20512, "Maintenance Team Exposure Tracking Sheet," 11/13/01

6.8 Form 69-20513, "OPS Team Dispatch Decision Tree," 11/13/01

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.1

1 AND 2

TITLE: Emergency Maintenance Coordinator Checklist

Print Name _____ **Date** _____

☐ 1. Sign in on the Assembly and Accountability Checklist form as applicable.

☐ 2. Sign in on the OSC sign-in board.

☐ 3. Ensure OSC accountability is completed using the Assembly Area packet.

☐ 4. When minimum staffing is achieved, declare the OSC activated.

NOTE: Qualified individuals not already filling a minimum staff position may fill vacancies.

MINIMUM STAFF REQUIRED FOR ACTIVATION
Emergency Maintenance Coordinator
Site Radiation Protection Coordinator
Technical Maintenance Coordinator
Mechanical Coordinator
Electrical Coordinator
6 - C&RP Technicians
SUPPORT STAFF
Operations Coordinator
OSC Access Supervisor
Site Chemistry Coordinator
4 - Clerical Support Personnel

☐ 5. Notify the Control Room

☐ 6. Notify the TSC Maintenance Logistics Advisor

☐ 7. Request additional Mechanical, Electrical, and Technical Maintenance personnel.

☐ 8. Request additional clerical support from the TSC Administrative Advisor.

☐ 9. When required, request SEC authorization to waive administrative controls for emergency maintenance. See AD2.ID1 for further information.

☐ 10. Direct clerical assistants to:

- Coordinate with the TSC Administrative Advisor to develop a 24 hour shift schedule.
- Update OSC status boards.
- Assist in maintaining the EMC log.
- Maintain a log of significant communications and decisions.

Continuous Actions

☐ 1. If plant conditions warrant, direct the SRPC to establish periodic OSC radiological habitability surveys.

☐ 2. Notify the TSC Radiological Advisor of any OSC radiological habitability surveys.

☐ 3. If a team must be dispatched without an SWP, request SEC authorization.

☐ 4. Refer to EP RB-2, if the SRPC request authorization for emergency exposure.

☐ 5. Communicate the following to the TSC Maintenance Logistics Advisor:
- Significant accident mitigation
- Problem evaluation and team assignment
- Team dispatch times
- Update team status
- Team return time and results

☐ 6. Perform periodic OSC briefings.

☐ 7. If OSC evacuation is necessary, transfer operations to the backup OSC. Refer to EP EF-9.

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.2

1 AND 2

TITLE: Team Predeparture Checklist

TEAM NUMBER _____ **Date** _____ **Time** _____

Maintenance Coordinator

1) Team ☐ OPS ☐ TM ☐ MM ☐ Elect ☐ Chem ☐ RP ☐ Sec **Priority** ☐ High ☐ Med ☐ Low

2) Members

Name	Pager	Name	Pager
Name	Pager	Name	Pager
Name	Pager	Name	Pager

3) Pager or Radio

4) Work Location ☐ **Aux** ☐ **Turb** ☐ **Cont** **Other** _____

5) Unit ☐ 1 ☐ 2 **Purpose** _____

6) Tailboard Conducted ☐ Yes ☐ No

7) Rad brief needed? ☐ Yes ☐ No SWP # ☐ N/A

_____
RP Coordinator Signature

OSC Access Supervisor

8) ☐ **Verify Steps 1 - 7 Are Complete**

9) ☐ **Team Communications Established**

10) ☐ **EMC Notified of Team Dispatch**

11) ☐ **JOBSITE Phone #** _____

Team Debrief

12) Mission Status _____

13) Team Return Time/Date _____

14) EMC Notified of Team Return & Status _____
OSC Access Supervisor Signature

15) Technical Debrief _____
Maintenance Coordinator Signature

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.3

1 AND 2

TITLE: OSC Access Supervisor

Print Name _____ **Date** _____

☐ 1. Sign in on the Assembly and Accountability Checklist form as applicable.

☐ 2. Sign in on the OSC sign-in board.

☐ 3. IMMEDIATELY determine if teams were dispatched into the RCA. Provide this information to the EMC, SRPC and the OSC (DAAS) Designated Assembly Area Supervisor.

☐ 4. Contact Medical Facility (#_____).

☐ 5. Contact Security Watch Commander.

Continuous Actions

Maintain team accountability

☐ 1. Log all team departures and returns.

☐ 2. Review **Team Predeparture Checklist** for completeness and authorize departure.

☐ 3. Inform the EMC of team departures and returns.

Maintain communications with all teams.

☐ 4. Inform response teams of changes in emergency classification or plant conditions.

☐ 5. Periodically update the EMC of team status.

☐ 6. Periodically update the SRPC on team exposure status and radiological problems, dose rates encountered.

☐ 7. Maintain a log of significant communications and decisions.

☐ 8. Ensure returning teams report to the SRPC to receive a debriefing on radiological conditions, personnel exposure, and other hazards or problems encountered.

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.4

1 AND 2

TITLE: Site Radiation Protection Coordinator

Print Name _____ **Date** _____

☐ 1. Sign in on the Assembly and Accountability Checklist form as applicable.

☐ 2. Sign in on the OSC sign-in board.

☐ 3. IMMEDIATELY upon arrival, coordinate with the SCC to determine if additional Technicians must be called in.

☐ 4. Contact the TSC Radiological Advisor.

☐ 5. Obtain a computer printout record of current calendar year exposure for personnel who may be dispatched from the OSC.

Continuous Actions

☐ 1. Upon the arrival of the NRC Initial Site Team, the NRC Co-locator (NRC HP Specialist) may come to the OSC. Upon arrival, brief him on the emergency developments, mitigating actions, and current activities. Ensure the NRC Co-locator is familiar with telephone use, information flow, and has copies of the same documents used for your position.

☐ 2. Perform a predeparture analysis of the anticipated TEDE and determine if any identified team member requires an emergency exposure authorization prior to dispatch.

☐ 3. If any team member may exceed the Federal Limit Calendar Year exposure criteria of 5 rem TEDE, an emergency exposure authorization is required for that individual.

☐ 4. Refer to EP RB-2, "Emergency Exposure Guides," for further instructions while continuing in this procedure.

☐ 5. Brief teams prior to departure.

☐ 6. Prepare an SWP prior to entry if time permits, although a verbal SWP is permissible. Perform verbal SWP, to be followed up by the written SWP, in accordance with EP RB-4.

☐ 7. Brief teams on the radiological conditions they will encounter and discuss travel routes.

☐ 8. Determine the requirements for personnel dosimetry in accordance with EP RB-1, "Personnel Dosimetry."

☐ 9. Initiate "Team Predeparture Checklist" for C&RP Personnel who are not part of a maintenance team.

☐ 10. If plant conditions warrant, recommend periodic OSC radiological habitability surveys to the EMC.

☐ 11. When the EMC directs, establish periodic radiological habitability surveys as required.

☐ 12. Continuously track personnel emergency exposure and maintain records to determine when individual limits are being approached.

☐ 13. Form 69-20512 may be used to track exposures.

NOTE: DCFs were developed for Field Monitoring Teams and DO NOT take credit for respiratory protection or other protective measures. If such protective measures are taken, DCF are not appropriate for in-plant use. All radiation protection measures in addition to DCFs should be taken in consideration for mitigating the emergency response.

☐ 14. If high airborne radio iodine conditions are present, coordinate the administration of Thyroid Blocking (KI) as directed by the TSC Radiological Advisor and in accordance with EP RB-3, "Stable Iodine Thyroid Blocking."

☐ 15. If any returning team personnel require decontamination and the normal access control decon facilities are not available, refer to EP RB-5, "Personnel Decontamination," for alternate locations during emergencies.

☐ 16. Provide a radiological debriefing of returning teams including exposures, radiological conditions and other hazards or problems encountered.

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.5

1 AND 2

TITLE: Site Chemistry Coordinator Checklist

Print Name _____ **Date** _____

☐ 1. Sign in on the Assembly and Accountability Checklist form as applicable.

☐ 2. Sign in on the OSC sign-in board.

☐ 3. IMMEDIATELY upon arrival, if the SRPC has not arrived, determine if additional Technicians must be called in.

☐ 4. Contact the TSC Radiological Advisor.

☐ 5. Obtain a record of current calendar year exposures for Chemistry personnel who may be dispatched from the OSC.

Continuous Actions

☐ 1. Coordinate with the TSC Radiological Advisor to determine plant chemistry sampling requirements.

☐ 2. Supervise radiochemical and chemical analysis.

☐ 3. Perform a predeparture analysis of the anticipated TEDE and determine if any identified team member requires an emergency exposure authorization prior to dispatch.

☐ 4. If any team member may exceed the Federal Limit Calendar Year exposure criteria of 5 rem TEDE, an emergency exposure authorization is required for that individual.

☐ 5. Notify the SRPC to refer to EP RB-2, "Emergency Exposure Guides," for further instructions while continuing with the team briefing.

NOTE: If necessary, an emergency exposure authorization of 5 rem TEDE may be obtained from the RM/SEC to permit sampling activity to proceed. Any individual who receives an emergency exposure shall be relieved of further emergency response duties and a replacement obtained.

☐ 6. Brief personnel dispatched for sampling or analysis.

☐ 7. If PASS is activated, make the necessary arrangements per EP RB-15, "Post-Accident Sampling System."

☐ 8. Keep the EMC informed of actions and findings.

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.6

1 AND 2

TITLE: Maintenance/Operations Coordinator Checklist

Print Name _____ **Date** _____

☐ 1. Sign in on the Assembly and Accountability Checklist form as applicable.

☐ 2. Sign in on the OSC sign-in board.

☐ 3. When the first Maintenance Coordinator arrives at the OSC, assume the responsibility of the OSC (DAAS) Designated Assembly Area Supervisor.

☐ 4. Determine the anticipated tasks, staffing and equipment requirements.

NOTE: During normal working hours maintenance personnel may be paged.

During off-normal working hours personnel must be called in from home.

☐ 5. Report staffing requirements to the EMC.

☐ 6. Maintenance personnel should be staged in the OSC.

☐ 7. Coordinate maintenance team dispatch with the Access Supervisor.

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.7

1 AND 2

TITLE: Maintenance Team Exposure Tracking Sheet

SRD Dose Conversion Factors

Source Term	TEDE DCF No KI	TEDE DCF With KI	THY. DCF No KI	THY. DCF With KI
CORE	13	5	162	16
GAP	24	3	515	52
DB RCS	3	1	40	4
SG Normal	1	1	4	0.4
SG Empty	3	1	40	4
SG Flooded	15	2	285	29

Use the tables above and below to convert PIC readings to Dose.

NOTE: DCFs were developed for Field Monitoring Teams and DO NOT take credit for respiratory protection or other protective measures. If such protective measures are taken, DCF are not appropriate for in-plant use. All radiation protection measures in addition to DCFs should be taken in consideration for mitigating the emergency response.

1) Obtain the source term from the Radiological Data Processor - Dose Assessment in the TSC.
2) Record the time and readings for both the high and low range PICs.
3) Multiply by the dose conversion factors (DCFs). If the source term changes, use the new DCF multiplier.
4) If a PIC is re-zeroed, circle the last TEDE and Thyroid CDE values and add the circled values to determine the Cumulative TEDE and Thyroid CDE.
5) Refer to EP RB-2 for emergency worker PAGs.

Name of Individual:

	Only use highest onscale PIC reading		See table above.				Only necessary when PIC is re-zeroed.	
Time Reported	Low Range PIC (mR)	High Range PIC* (Roëntgen)	TEDE DCF	Thyroid CDE DCF	TEDE (mrem)	Thyroid CDE (mrem)	Cumulative TEDE (mrem)	Cumulative Thyroid CDE (mrem)

Name of Individual:

	Only use highest onscale PIC reading		See table above.				Only necessary when PIC is re-zeroed.	
Time Reported	Low Range PIC (mR)	High Range PIC* (Roëntgen)	TEDE DCF	Thyroid CDE DCF	TEDE (mrem)	Thyroid CDE (mrem)	Cumulative TEDE (mrem)	Cumulative Thyroid CDE (mrem)

EP EF-2 (UNITS 1 AND 2)
ATTACHMENT 6.7

TITLE: Maintenance Team Exposure Tracking Sheet

Name of Individual:								
▨	Only use highest onscale PIC reading		See table above.		▨		Only necessary when PIC is re-zeroed.	
Time Reported	Low Range PIC (mR)	High Range PIC* (Roëntgen)	TEDE DCF	Thyroid CDE DCF	TEDE (mrem)	Thyroid CDE (mrem)	Cumulative TEDE (mrem)	Cumulative Thyroid CDE (mrem)

Name of Individual:								
▨	Only use highest onscale PIC reading		See table above.		▨		Only necessary when PIC is re-zeroed.	
Time Reported	Low Range PIC (mR)	High Range PIC* (Roëntgen)	TEDE DCF	Thyroid CDE DCF	TEDE (mrem)	Thyroid CDE (mrem)	Cumulative TEDE (mrem)	Cumulative Thyroid CDE (mrem)

Name of Individual:								
▨	Only use highest onscale PIC reading		See table above.		▨		Only necessary when PIC is re-zeroed.	
Time Reported	Low Range PIC (mR)	High Range PIC* (Roëntgen)	TEDE DCF	Thyroid CDE DCF	TEDE (mrem)	Thyroid CDE (mrem)	Cumulative TEDE (mrem)	Cumulative Thyroid CDE (mrem)

Name of Individual:								
▨	Only use highest onscale PIC reading		See table above.		▨		Only necessary when PIC is re-zeroed.	
Time Reported	Low Range PIC (mR)	High Range PIC* (Roëntgen)	TEDE DCF	Thyroid CDE DCF	TEDE (mrem)	Thyroid CDE (mrem)	Cumulative TEDE (mrem)	Cumulative Thyroid CDE (mrem)

NOTE: the high range PIC reading must be multiplied by 1,000 to convert from Roëntgen to mR.

DIABLO CANYON POWER PLANT
EP EF-2
ATTACHMENT 6.8

1 AND 2

TITLE: OPS Team Dispatch Decision Tree