

ENCLOSURE 1

Location of Privacy/Proprietary Information

DCPP Emergency
Procedure:Volume 3AEP R-6 "Radiological Fire," Revision 12, August 20, 1987, Pages 2, 4, 12, 13,
and 15 of 15

ATTACHMENT 2, EP R-6, "FIRE FIGHTING PRE-PLANS," 12/86:

<u>UNIT #</u>	<u>PREPLAN TITLE</u>	<u>PAGES</u>
1 & 2	Auxiliary Building - E1. 55'	0-2R, 3R
1 & 2	Auxiliary Building - E1. 64'	1-2R, 3R
1 & 2	Auxiliary Building - E1. 73'	2-2R, 4R
1 & 2	Access Control & Chemistry Laboratory	3-2R, 3R
1 & 2	Auxiliary Building - E1. 85'	4-2R, 3R
1	Containment Penetration - E1. 85'	5-2R, 3R
2	Containment Penetration & Fuel Handling Building - E1. 85'	6-2R, 4R
1 & 2	Auxiliary Building - E1. 100'	7-2R, 3R
1	Containment Penetration - E1. 100'	8-2R, 3R
1	Fuel Handling Building - E1. 100'	9-2R, 3R
2	Containment Penetration - E1. 100'	10-2R, 3R
2	Fuel Handling Building - E1. 100'	11-2R, 3R
1 & 2	Auxiliary Building - E1. 115'	12-2R, 4R
1	Containment Penetration - E1. 115'	13-2R, 4R
1	Fuel Handling Building - E1. 115'	14-2R, 3R
2	Containment Penetration - E1. 115'	15-2R, 3R
2	Fuel Handling Building - E1. 115'	16-2R, 3R
1	Fuel Handling Building - E1. 140'	17-2R, 3R
2	Fuel Handling Building - E1. 140'	18-2R, 3R
1 & 2	Ventilation Rooms - E1. 154' & 164'	19-2R, 3R
1	Containment - E1. 91'	20-2R, 3R
1	Containment - E1. 117'	21-2R, 3R
1	Containment - E1. 140' & Above	22-2R, 3R
2	Containment - E1. 91'	23-2R, 3R
2	Containment - E1. 117'	24-2R, 3R
2	Containment - E1. 140' & Above	25-2R, 3R
1 & 2	Radwaste and Chem Storage - E1. 115'	26-2R, 3R, 4R
1 & 2	Radwaste Laundry Facility - E1. 132' & 142'	27-2R, 3R
1 & 2	Auxiliary Building Fan Rooms - E1. 140'	28-2R, 3R

8710010015 870917
PDR ADOCK 05000275
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Location of Privacy/Proprietary Information

DCPP Emergency
Procedure:

Volume 3A

EP M-6 "Nonradiological Fire," Revision 14, August 18, 1987, pages 2, 4, 12, 13 and 15 of 15

ATTACHMENT 2, EP M-6, "FIRE FIGHTING PRE-PLANS," 11/86:

<u>UNIT #</u>	<u>PREPLAN TITLE</u>	<u>PAGES</u>
1	12 KV Swgr and Cable Spreading Rooms	1-2, 3
1	DG's 1-1, 1-2 and 1-3	2-2, 3
1	Turbine Building El. 85' and Below	3-2, 3
1 & 2	Cold Machine Shop	4-2, 3
1	4160 Swgr Cable Spreading Rooms and ISO Phase Bus Area	5-3, 4
1	Diesel Generator Exhaust Area	6-2, 3
1	Turbine Building El. 104'	7-2, 3
1	4160 Swgr and Elec. Shop Area	8-3, 4
1	Turbine Building El. 119'	9-2, 3
1 & 2	Turbine Building Work Planning Center	10-2, 3
1	Turbine Building El. 140'	11-2, 3
1	Condensate Polishing Area	12-2, 3, 4
1	Package Boiler Area	13-2, 3
1	Transformers and R.O. Area	14-3, 4
1 & 2	480V Vital Swgr Area El. 100'	15-2, 3
1 & 2	Vital Battery Rooms El. 115'	16-2, 3
1 & 2	Cable Spreading Rooms - El. 127'	17-2, 3
1 & 2	Control Room	18-2, 3
2	12KV Swgr and Cable Spreading Room	19-2, 3
2	DG's 2-1, 2-2 & Document Storage	20-2, 4
2	Turbine Building El. 85' and Below	21-2, 3
2	Condensate Polishing Area	22-2, 3
2	East Buttress and Transformer Area	23-2, 3
2	DG. 2-1 & 2-2 Exhaust & Document Storage	24-2, 3
2	Turbine Building El. 104'	25-2, 3
2	Technical Support Center	26-2, 3
2	4160 Swgr Cable Spreading Rooms and ISO Phase Bus Area	27-2, 3
2	4160 Swgr Area	28-2, 3
2	Traveling Crews Quarters	29-2, 3

Location of Privacy/Proprietary Information

ATTACHMENT 2, EP M-6, "FIRE FIGHTING PRE-PLANS," 11/86: (continued)

<u>UNIT #</u>	<u>PREPLAN TITLE</u>	<u>PAGES</u>
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1 & 2	Intake Structure	33-2, 3
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0	Warehouse A	36-3, 4
0	Auxiliary Package Boiler	37-2, 3
0	Cold Machine Shop	38-2, 3, 4
0	Training Building	39-2, 3, 4
0	Maintenance Shop Building	40-2, 3, 4
0	Area 10 - Hazardous Waste Building Rotor Storage Building	41-3, 4 41-6
0	Reservoir Area - W.H.A.T. Facility Chlorination and Clarifier Buildings	42-3, 4 42-6, 7
0	Transmission Yards - 500 KV Control Bldg.	43-3, 5, 6
0	Transmission Yards - 230 KV Control Bldg.	43-8, 10
0	Mancamp - Mechanic's Shop Document Storage Bldg. #013	44-3, 4 44-6, 7
0	NPG Warehouse	45-3, 4, 5, 7

ENCLOSURE 2

Updates Included In This Submittal

DIABLO CANYON EMERGENCY PLAN
IMPLEMENTING PROCEDURES

Volume 3A

Updated Table of Contents

EP R-6 "Radiological Fire," Revision 12, August 20, 1987

EP M-6 "Nonradiological Fire," Revision 14, August 18, 1987

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PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR POWER GENERATION
DIABLO CANYON POWER PLANT

NUMBER EP R-6
REVISION 12
PAGE 1 OF 15
UNITS

1 AND **2**

TITLE: EMERGENCY PROCEDURE
RADIOLOGICAL FIRE

APPROVED:

Samuel L. ...
PLANT MANAGER

DATE

8-20-87
EFFECTIVE DATE

1.0 SCOPE

1.1 This procedure discusses the actions which are to be taken in the event of a fire which involves radioactive materials and/or radiation exposure. This procedure and changes thereto require PSRC review.

2.0 GENERAL

2.1 Fires at Diablo Canyon are generally classified as either radiological or nonradiological. A radiological fire is one which involves radiation exposure and/or radioactive materials. Examples of this type of fire are: Fires in the solid radwaste storage facility, drumming station, contaminated ventilation filters, and electrical or lube oil fires in radiation areas. All reasonable attempts to prevent the spread of radiological contamination should be made. Fires that occur outside of the radiologically controlled area or do not involve radioactive materials are handled in accordance with Emergency Procedure M-6, "Non-Radiological Fires".

3.0 SYMPTOMS

- 3.1 Fire or smoke is reported inside of the radiologically controlled area of the plant or in an area where radioactive materials are located.
- 3.2 The fire detection system annunciator indicates the presence of a fire within the radiologically controlled area of the plant or in one of the outside buildings where radioactive materials are located.
- 3.3 A firewater system flow alarm indicates system actuation, which is a potential fire condition.

TITLE: RADIOLOGICAL FIRE

3.4 A site fire pump start could indicate a potential fire condition.

4.0 AUTOMATIC ACTIONS

4.1 The appropriate automatic sprinkler system may activate. Site fire pumps may start on decreasing system pressure to provide adequate water pressure.

5.0 IMMEDIATE ACTION

5.1 Activate the fire signal by dialing [REDACTED]

5.1.1 The fire signal is a 30-second blast on the fire sirens. The signal will be followed by the code call signal repeated 8 times. The first five persons to dial [REDACTED] will be connected into a conference call. The priority of the conference call is:

- a. Shift Foreman (Interim Site Emergency Coordinator)
- b. Fire Brigade Leader (Typically the Senior Control Operator)
- c. Assistant Fire Brigade Leader
- d. Plant Manager
- e. Fire Marshal

5.2 The Shift Foreman and Senior Control Operator Dial [REDACTED] (Fire Conference Call)

5.2.1 The initiator of the alarm shall give the details regarding the fire, including the exact location and potential damage to the plant.

5.3 Shift Foreman should use the public address system to notify occupants of the emergency condition.

5.4 Members of the on-shift Fire Brigade should report to the Operations Ready Room to pick up their fire safety equipment.

5.5 The Fire Brigade Leader will receive instruction from the Shift Foreman.

TITLE: RADIOLOGICAL FIRE

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- 5.5.1 Typically, the Senior Control Operator (SCO) is designated Fire Brigade Leader. The Shift Foreman may assign a licensed operator who is qualified as a brigade leader to fill this position if the SCO is not available. The Shift Foreman is responsible for establishing an appropriate on-shift emergency organization and assuring that Technical Specifications for Control Room staffing are not violated.
- 5.6 If the fire occurs during normal working hours, members of the Maintenance Fire Brigade should report to the Unit 1 Cold Machine Shop.
- 5.6.1 The Assistant Fire Brigade Leader should enter the conference call to receive his instructions.
- 5.7 Evacuate the area affected by the fire.
- 5.7.1 This may be done by sounding the site emergency signal, utilizing the public address system, or other appropriate means.
- 5.8 Establish appropriate Control Room ventilation.
- 5.8.1 Isolate (Mode 3) the Control Room ventilation system to prevent the entry of smoke, gases or airborne radioactive contamination.
- 5.9 Protective Equipment
- 5.9.1 Responding fire brigade personnel should be provided with the appropriate dosimetry devices (TLD/PIC). Full fire response turnout equipment shall provide the necessary anti-contamination protection for fire response personnel.
- 5.9.2 Fire fighters should wear supplied air breathing apparatus unless air samples have been taken and indicate that there is no airborne activity hazard.
- 5.10 Security Department Support
- 5.10.1 A security officer shall report to the Operations Ready Room and establish liaison with the Fire Brigade Leader.

- 5.10.2 The Security Department shall assist with access and the staging of off-site fire response personnel including providing radios, dosimetry and escorts as necessary.
- 5.10.3 The Security Department shall assure plant security is not compromised during the emergency response.

6.0 SUBSEQUENT ACTIONS

- 6.1 The Shift Foreman, acting as Interim Site Emergency Coordinator, shall direct all subsequent actions from the Control Room until relieved by a long term Site Emergency Coordinator if the emergency warrants it. Such actions should include the following:
 - 6.2 Immediately notify California Department of Forestry, San Luis Obispo County (CDF/SLO) by calling [REDACTED]. If the telephone lines are unavailable, the CDF radio/telephone may then be used. Notification shall be made for any of the following conditions:
 - 6.2.1 An active fire, or an incipient fire that has the potential to become an active fire, is reported in a structure that requires a Fire Brigade response.
 - 6.2.2 Report of smoke within a structure with no known location for the smoke.
 - 6.2.3 The first report of a fire in a location where accessibility for extinguishment is known to be difficult.
 - 6.2.4 Any non-fire emergency that would require the use of CDF/SLO Heavy Rescue or Hazardous Materials Team.
 - 6.2.5 Any time the Fire Brigade Leader or Site Emergency Coordinator recommends additional assistance.
- 6.3 Notify Security of anticipated CDF/SLO response to the site (This is necessary to assure timely access via Avila Gate).
 - 6.3.1 The Security Shift Supervisor's telephone extension is [REDACTED]

- 6.4 Provide follow-up notifications to CDF/SLO within ten minutes of the initial request for assistance.
- 6.4.1 Sooner notification should be made if the fire has been extinguished and no off-site assistance is required. CDF/SLO may then decide to respond only one engine company for reporting purposes.
- 6.4.2 CDF/SLO may decide to provide additional resources if the fire emergency has escalated from the conditions described in the initial request for assistance.
- 6.5 CDF/SLO shall initially stage their personnel and equipment at Warehouse "B".
- 6.5.1 The first responding chief officer will take charge and identify himself. He may go to the fire scene initially, but will eventually go to the Control Room or the Technical Support Center to establish liaison with the Site Emergency Coordinator (A CDF radio/telephone is provided at both locations for use by the CDF chief officer).
- 6.5.2 Security shall provide dosimetry, PGandE radio and escorts to the CDF/SLO fire responders prior to entry into the Protected Area.
- 6.6 Maintain a record of notifications made to off-site personnel.
- 6.6.1 Form 69-9221, "Emergency Notification Record", may be used to provide this record.
- 6.7 Establish an initial emergency classification based on the criteria in Appendix Z and perform the actions required by the classification.
- NOTE: The County Sheriff's Office shall be notified within 15 minutes of the declaration of an unusual event or higher classification.

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- 6.8 Provide for protection of safe shutdown components and equipment.
- 6.8.1 Emergency Procedure EP M-10 provides the operator with a listing of safeguards equipment which may be affected by fires in various locations. This procedure should be consulted to assist in determining the operating strategy during the fire.
- 6.8.2 During the course of the fire, the Control Operator and those at the scene should pay particular attention for signs that the operability of the various engineered safeguards equipment is being affected. If the operability of any safeguards equipment is reduced below minimum Technical Specifications limits, or if such damage is imminent, shut down the Unit immediately.
- 6.8.3 Attachment 2 of this procedure, "Fire Fighting Preplans", provides layout sketches of major plant site fire areas. These preplans identify the fire protection provided in each area and should be used by Control Room personnel to assist the Fire Brigade Leader in developing the appropriate fire fighting tactics.
- 6.9 If the Control Room must be evacuated, follow the instructions given in Emergency Procedure OP-8.
- 6.10 Notify the Plant Fire Marshal, or his designee, of all plant fires. (See Appendix 1).
- 6.11 Provide additional breathing air.
- 6.11.1 A crew should be dispatched to an air bottle refilling station and prepare to refill the backpack bottles as required. The stations are located in the 85' elevation hallway at the Unit 1 Safety Injection pumps, on 140' elevation behind the Control Room, and in the Unit 2 East Buttress. High pressure SCBA units of the type used by CDF/SLO County Fire may only be recharged in the Unit 2 East Buttress.
- 6.12 Chemistry and Radiation Protection (C&RP) support.
- 6.12.1 The Shift C&RP Technicians should be contacted to provide support for radiation monitoring, contamination control, monitoring toxic atmospheres and assisting with the control of hazardous materials.

6.12.2 Shift C&RP personnel can also be called upon to help refill breathing air bottles.

6.13.3 The C&RP Shift Technician shall establish a liaison with the Site Emergency Coordinator.

7.0 EMERGENCY CLOSE OUT ACTIONS

7.1 Announce the fire is out.

7.1.1 Announcement made from the Control Room at the direction of the site Emergency Coordinator using the Plant public address system. Include post-fire safety and radiation protection precautions.

7.2 Restoration of Fire Suppression Systems

7.2.1 A fire watch should be established until the system has been restored and the fire area declared secure.

7.2.2 If a sprinkler system has been activated, the system must be reset after the fire is extinguished. Replace all fused sprinkler heads. Open the sprinkler system isolation valve and check for leaks.

7.2.3 Return all fire suppression equipment to its designated storage or maintenance location.

7.3 Complete verbal close out to off-site organizations and agencies.

7.4 Written close out.

7.4.1 Action Request (see Nuclear Plant Administrative Procedure C-12). To document the fire and the response.

7.4.2 Written summary to NRC within 24 hours for an Unusual Event or 8 hours for a higher classification.

8.0 FIRE FIGHTING PREPLANS

8.1 Attachment 2 contains fire fighting preplans for plant locations which routinely contain radioactive material or radiation hazards. These preplans are intended to aid the Fire Brigade Leader and the Site Emergency Coordinator during the fire emergency. Copies of Fire Fighting Preplans will be readily available to the Senior Control Operator and will be updated as appropriate by the Fire Marshal.

9.0 SPECIAL CONSIDERATIONS REGARDING RADIOLOGICAL FIRES

9.1 Radiation exposure control.

9.1.1 Know the radiation levels.

- a. Posted barrier signs.
- b. Surveys by Chemistry and Radiation Protection Technicians.

9.1.2 Radiation surveys may be required during the fire fighting as plant conditions change. The on-shift Chemistry and Radiation Protection Technician is designated to respond to all fire emergencies to provide monitoring support. Additional Technicians are assigned to the maintenance brigade crews to assist the shift C&RP technician.

9.1.3 All fire fighting personnel entering radiation or high radiation areas must wear and periodically monitor their dosimetry to avoid exceeding the exposure limits set forth in the DCPD Radiation Protection Manual. Off-site fire fighters shall be escorted by plant personnel in these areas.

9.2 Contamination Control

9.2.1 Surface Contamination

- a. Fires in the surface contamination areas will probably also create an airborne contamination hazard.
- b. Wear self-contained breathing apparatus.
- c. Turnout gear should provide adequate contamination protection to the fire fighters in most loose surface contamination areas of the plant. In areas of very high contamination, additional protective clothing may be required. Fire fighters should never wear polyethylene boots or gloves, since these may melt to the skin or clothing in a fire environment.

- d. A wide water fog pattern may help keep the contamination from going airborne.
- e. Care must be taken to minimize the spread of contamination and its potential release to the environment.
- f. Water use should consider processing capacity of Radwaste systems. Consider requiring water runoff be contained as much as possible for outside rad. fires (i.e. radwaste or laundry)
- g. Turnout gear for off-site fire fighters which may become contaminated at the plant will be replaced from spares in the warehouse if it cannot be readily decontaminated.

9.3 Airborne Contamination

- 9.3.1 Levels may be continually changing.
- 9.3.2 Always wear a self-contained breathing apparatus when fighting fires in surface contamination areas, airborne contamination areas, or radioactive material storage or processing areas.
- 9.3.3 Smoke will be radioactive and ventilation should be performed via filters and an effluent monitor.
- 9.3.4 A wide fog pattern will help to reduce airborne contamination levels by entraining the radioactive particles and carrying them to the floor.
- 9.3.5 High pressure water or dry chemical agent directed at areas of surface contamination will cause some of the contaminants to become airborne.
- 9.3.6 Radiation Protection personnel should monitor airborne contamination levels during the emergency and recommend actions and precautions to lower the concentrations.

9.4 Environmental Conditions

- 9.4.1 Minimize excess water usage due to limited capacity of waste tanks and activity discharge restrictions.

9.4.2 Minimize un-monitored releases to the atmosphere of water or airborne contamination.

9.5 Post-fire Fighting Activities

9.5.1 Monitor personnel for contamination.

a. External

b. Internal monitoring may also be required.

9.5.2 Monitor fire fighting and emergency equipment for contamination under the direction of radiation protection personnel.

9.5.3 Determine radiation exposure of fire fighting personnel. A radiation work permit may also need to be prepared to document exposures.

9.5.4 Areas in or adjacent to the fire area may require decontamination.

9.5.5 An environmental monitoring program for areas surrounding the plant may be required if contamination has spread outside the controlled area.

9.5.6 Smoke damage to electrical equipment and stainless steel piping must be assessed.

9.5.7 When dry chemical agents and halon have been used in areas of stainless steel piping or machinery, that equipment must be thoroughly cleaned and then inspected.

10.0 HAZARDOUS MATERIALS

10.1 Attachment 3 contains the appropriate Material Safety Data Sheets for hazardous materials that are expected to be found inside of the radiologically controlled area. Specific locations are identified on the appropriate fire fighting preplan.

11.0 REFERENCES

11.1 Diablo Canyon Power Plant Fire Protection Program.

DIABLO CANYON POWER PLANT

NUMBER EP R-6
REVISION 12
PAGE 11 OF 15
UNITS 1 AND 2

TITLE: RADIOLOGICAL FIRE


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- 11.2 Emergency Procedure G1, "Accident Classification and Emergency Plan Activation".
 - 11.3 Emergency Procedure G2, "Establishment of the Onsite and Emergency Organization".
 - 11.4 Emergency Procedure G-3, "Notification of Offsite Emergency Organizations".
 - 11.5 PGandE Fire Prevention Manual.
 - 11.6 Accident Prevention Rule No. 23.
 - 11.7 Emergency Procedure M-6, "Non-Radiological Fire".
- 12.0 APPENDICES
- 12.1 Table 1, "Fire and Medical Emergency Alarms".
 - 12.2 Appendix 1, "Fire Assistance Communication".
 - 12.3 Appendix Z, "Emergency Procedure Notification Instructions".
- 13.0 ATTACHMENTS
- 13.1 Form 69-9221, "Emergency Notification Record", 3/82.
 - 13.2 Attachment 2, "Fire Fighting Preplans", 12/86.
 - 13.3 Attachment 3, "Hazardous Material Safety Data Sheets", 12/86.

DIABLO CANYON POWER PLANT

TITLE: RADIOLOGICAL FIRE

NUMBER EP R-6
REVISION 12
PAGE 12 OF 15
UNITS 1 AND 2

TABLE 1
FIRE AND MEDICAL EMERGENCY ALARMS

<u>CODE</u>	<u>DESCRIPTION</u>
	Fire Emergency
	Fire Drill
	Alarm Test
	Medical Emergency

TITLE: RADIOLOGICAL FIRE

APPENDIX 1

FIRE ASSISTANCE COMMUNICATION

1. San Luis Obispo County Fire/
California Department of Forestry

OR

San Luis Obispo County Sheriff
(Request they dispatch the
SLO/California Dept. of Forestry)

2. Emergency Safety Supervisor
Randy Kohout

Fire Marshal
Carmon Johnson

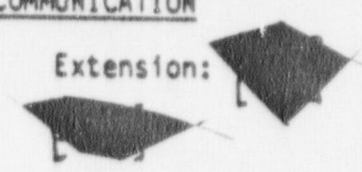
Jim McClintock
Fire Protection Specialist



MEDICAL ASSISTANCE COMMUNICATION

1. Site Medical Facility
2. Off-Site Ambulance

Extension:



APPENDIX Z

EMERGENCY PROCEDURE NOTIFICATION INSTRUCTIONS

1. When this emergency procedure has been implemented, and upon direction from the Shift Foreman, proceed as follows:
 - a. Designate this event a Notification of Unusual Event for fires within the site boundary if a verified fire is not under control within 10 minutes of initiating fire fighting efforts or if the California Department of Forestry assistance is requested. Notify plant staff and response organizations required for this classification by implementing Emergency 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 Plan Activation".
 - b. Designate this event an ALERT if a verified fire is not under control within 10 minutes of initiating fire fighting efforts and the fire threatens operability of safety related equipment located in one of the following areas containing safety systems:
 - 1) Containment
 - 2) Control Room
 - 3) Cable Spreading Rooms
 - 4) Diesel Generator Rooms
 - 5) Auxilliary Building
 - 6) Intake Structure Pump Rooms
 - 7) Switch Gear RoomsNotify Plant Staff and response organizations required by EP G-2 and EP G-3 in accordance with EP G-1.
 - c. Designate this event a Site Area Emergency if a verified fire is not under control within 10 minutes of initiating fire fighting efforts in an area containing safety systems, and causes a confirmed complete loss of a safety system function that causes entry into a technical specification action statement (i.e., loss of both trains of containment spray when in Modes 1, 2, 3, or 4, or loss of both safety injection pumps when in Modes 1, 2, or 3). Notify Plant Staff and response organizations required by EP G-2 and EP G-3 in accordance with EP G-1.

APPENDIX Z (continued)

- d. Designate this event a General Emergency if the fire causes massive damage to plant systems which, in the opinion of the Site Emergency Coordinator, is likely to lead to a core melt situation. Notify plant staff and response organizations required by EP G-2 and EP G-3 and implement the instructions in EP G-1 regarding on and offsite protective actions.
2. In addition to personnel required to be notified by EP GE-2 also notify the following:
- a. Fire Marshal (See Appendix 1)
 - b. System Dispatcher (if load may be affected).
- NOTE: In off-normal working hours, consideration should also be given to calling in additional members of the Plant Fire Brigade. This should not take precedence over calling SLO/CDF.
- c. All releases or potential releases of Hazardous Materials require immediate notification of the Office of Emergency Services (OES)

DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT

EMERGENCY NOTIFICATION RECORD

EMERGENCY IDENTIFICATION	DATE	SHEET				
PERSON CALLED	AFFILIATION	TIME	REACHED	BY	MESSAGE GIVEN	RESPONSE

X003050a.3A 15111

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

ATTACHMENT 2

TITLE: FIRE FIGHTING PREPLANS - EP R-6

UNIT #	PREPLAN TITLE	PAGE	REVISION
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1 & 2	AUXILIARY BUILDING - EL 64'	1-1,2,3 R	2
1 & 2	AUXILIARY BUILDING - EL 73'	2-1,2,3,4 R	2
1 & 2	ACCESS CONTROL & CHEMISTRY LABORATORY	3-1,2,3 R	2
1 & 2	AUXILIARY BUILDING - EL 85'	4-1,2,3 R	2
1	CONTAINMENT PENETRATION - EL 85'	5-1,2,3 R	2
2	CONTAINMENT PENETRATION & FUEL HANDLING BUILDING - EL 85'	6-1,2,3,4 R	2
1 & 2	AUXILIARY BUILDING - EL 100'	7-1,2,3 R	2
1	CONTAINMENT PENETRATION - EL 100'	8-1,2,3 R	2
1	FUEL HANDLING BUILDING - EL 100'	9-1,2,3 R	2
2	CONTAINMENT PENETRATION - EL 100'	10-1,2,3 R	2
2	FUEL HANDLING BUILDING - EL 100'	11-1,2,3 R	2
1 & 2	AUXILIARY BUILDING - EL 115'	12-1,2,3,4 R	2
1	CONTAINMENT PENETRATION - EL 115'	13-1,2,3,4 R	2
1	FUEL HANDLING BUILDING - EL 115'	14-1,2,3 R	2
2	CONTAINMENT PENETRATION - EL 115'	15-1,2,3 R	2
2	FUEL HANDLING BUILDING - EL 115'	16-1,2,3 R	2
1	FUEL HANDLING BUILDING - EL 140'	17-1,2,3 R	2
2	FUEL HANDLING BUILDING - EL 140'	18-1,2,3 R	2
1 & 2	VENTILATION ROOMS - EL 154' & 164'	19-1,2,3 R	2
1	CONTAINMENT - EL 91'	20-1,2,3 R	2
1	CONTAINMENT - EL 117'	21-1,2,3 R	2
1	CONTAINMENT - EL 140' & ABOVE	22-1,2,3 R	2
2	CONTAINMENT - EL 91'	23-1,2,3 R	2
2	CONTAINMENT - EL 117'	24-1,2,3 R	2
2	CONTAINMENT - EL 140' & ABOVE	25-1,2,3 R	2
1 & 2	RADWASTE AND CHEM STORAGE - EL 115'	26-1,2,3,4 R	2
1 & 2	RADWASTE LAUNDRY - EL 132' 7 142'	27-1,2,3,4 R	0
1 & 2	AUXILIARY BUILDING (FAN ROOMS) - EL 140'	28-1,2,3 R	0

NOTE: Preplan for package boiler area is contained in EP M-6, "Non-Radiological Fire", page 13-1.

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING EL. 55'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Cable insulation
2. Grease
3. Transient combustibles

MOST PROBABLE FIRE: 1. Transient combustibles
2. Cable insulation
3. Grease

ACCESS AND EGRESS ROUTES: 1. Primary - Stairway S-2 [EL. 55' Landing]
2. Secondary - Ladder at West Ends of Either U-I or U-II, via 64' EL.

FIRE BRIGADE STAGING AREA: 1. Primary - Stairway S-2 (EL. 55' Landing)
2. Secondary - West End of U-I or U-II, 64' EL.

HAZARDOUS MATERIALS: 1. Potential radiological airborne and surface contamination
2. Potential High Radiation Area.

MANAGEMENT OF PLANT SYSTEMS: 1. Hallways are provided with drains, and drainage is to the Auxiliary Bldg. Sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:



1. Water Fog should be used to cool exposures.
2. Fire Doors should be closed as necessary to retard flame spread and keep stairways smoke-free.
3. Smoke and hot gases will expose Elevation 64' equipment via open gratings, etc.

FIRE SUPPRESSION EQUIPMENT: 1. Fire Extinguishers - Three 20# MPDC's.
One by Door B-1
One by Door B-2
One at the East Hallway between U-I and U-II.

VENTILATION: 1. Open gratings along the north wall of the U-I side will allow smoke and gas to vent to 64' EL.
2. Exhaust fans E-1 and E-2 on the U-I side and exhaust fans 2E-1 and 2E-2 on the U-II side.

VENTILATION: (CONTINUED)

3. Portable smoke ejectors may be required, smoke could be exhausted via Stairwell S-2, open gratings in the north wall on the U-I side, or via the ladder openings on the west ends of both U-I and U-II. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
4. Negative pressure ventilation techniques could work best in this area.

- COMMUNICATIONS:
1. Plant telephones - 
 2. Portable Radios (OPS. Freq. 

- LIGHTING:
1. PL. 13-1 Unit I
PL. 23-1 Unit II
 2. Emergency Lighting

- SAFETY EQUIPMENT:
1. An eyewash station is located on 64' EL. of the U-I Aux. Bldg. by the U-I "Laundry and Hot Shower Drain Tanks".
 2. A first aid kit is located on the 64' EL. of the U-I Aux. Bldg. at the center of the main hallway area.

- SPECIAL PRECAUTIONS:
1. Self Contained breathing apparatus will be required.
 2. Portable hand-held lanterns may be necessary during rescue operations in heavy smoke.
 3. Wear radiation detection devices (TLD, pencil dosimeter)
 4. Turnout gear and SCBA will provide necessary anti-contamination functions.



GRATED OPENINGS AT CEILING FOR PIPE AND CABLE PENETRATION (OPENS INTO 60' EL.)

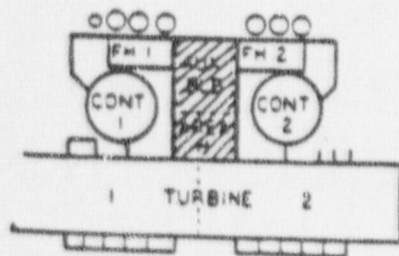
NOTE:

LOW CEILING (7') AND MANY OVERHEAD OBSTRUCTIONS (PIPES) IN THIS AREA.

WIRE MESH

LADDER TO 64' LEVEL

55' AUX. I & II



- | | | | |
|---|-----------------------|---------------------|------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊗ HAZ. WASTE CHROMATES ETC. | ⊖ EYE WASH | ● CO. | ⊖ CO. HOSE REEL |
| ◇ N ₂ H ₄ 35% NH ₃ | ⊖ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ◇ ACID | | ⊕ HALON | ○ 5 GALLON 2 1/2" HOSE |
| ◇ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ◇ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ◇ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | ⊖ FIRE WALL RATING |
| ◇ MISCELLANEOUS/OTHER | | | ☆ ANNUCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING EL. 64'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Lube oil
 2. Grease
 3. Cable insulation
 4. Hydrogen (Waste Gas Decay Tanks)
 5. Transient combustibles

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Lube oil
 3. Cable insulation
 4. Hydrogen from Waste Gas System
 5. Grease

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No's. B-7 for Unit-I or B-8 for Unit-II from center Stairway S-2 or Elev. No. 2
 2. Secondary Via Door No. B-15 from Stairway S-3 Unit No. 1 side or Via Door No. B-12 from Stairway S-4 Unit No. 2 side

- FIRE BRIGADE STAGING AREA:
1. Primary - Stairway S-2 (El. 64' Landing)
 2. Secondary - Access Control El. 85' or S-3 Stairway Unit 1 side or S-4 Stairway Unit 2 side
- NOTE: El. 115' Tank Area is the primary response location for outside agencies responding to a fire emergency in the Auxiliary Building.

- HAZARDOUS MATERIALS:
1. Combustion products (cable insulation, poly)
 2. Potential radiological airborne and surface contamination, especially around tanks and pumps
 3. Potential high radiation areas around waste tanks, monitor tanks, waste gas decay tanks, filters and RHR pumps and heat exchangers

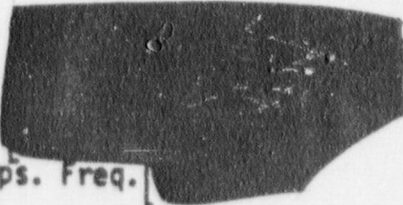

- MANAGEMENT OF PLANT SYSTEMS:
1. The source of hydrogen gas fires should be secured before total extinguishment.
 2. Hallways are provided with drains, and drainage is to the Auxiliary Building sump.
 3. Key control of Elev. No. 2 is accessed at El. 85'.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water fog should be used to cool exposures, especially redundant safe shutdown equipment.
2. Fire doors should be closed as necessary to retard fire spread.
3. RHR and CCW pumps are required for safe shutdown. Protect redundant trains from fire and smoke.

- FIRE SUPPRESSION EQUIPMENT:
1. Fire extinguishers - six - 20# Dry Chemicals
(3) Unit No. 1 side Hallway
(3) Unit No. 2 side Hallway
 2. Fire hose reels - six (3) Unit No. 1 side
(3) Unit No. 2 side

- VENTILATION:
1. Fans S-31 and S-32 Supply Air and E-1 and E-2 are exhaust fans.
 2. Open grating at the east end would allow smoke and gases to vent to E1. 115' where it could be exhausted to the outside via roll-up Door No. 354.
 3. Portable smoke exhausters may be required, smoke could be exhausted via Stairwells S-3 and S-4 to E1. 140' Hot Shop. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
 4. RHR pump cubicles are connected with ducts without fire dampers.
 5. Positive pressure ventilation techniques could work best in RHR pump rooms.
- NOTE: Smoke may be contaminated, contact C&RP.

- COMMUNICATIONS:
1. Plant telephones -  1 side
Unit No. 2 side
 2. Portable radios (Ops. Freq.) 

- LIGHTING:
1. Plant lighting panels - PL 13-1 Unit No. 1
PL 23-1 Unit No. 2
 2. Emergency lighting

- SAFETY EQUIPMENT:
1. A first aid kit is located on the wall by Door B-9 in the center of the Unit I hallway.
 2. An eyewash station is located by the Unit I "Laundry and Hot Shower Drain Tanks".

- SPECIAL PRECAUTIONS:
1. Self contained breathing apparatus will be required.
 2. An explosive possibility exists from H₂ in the gas decay tank area.
 3. Portable hand-held lanterns may be necessary during rescue operations in heavy smoke.
 4. Wear radiation detection devices (TLD, pencil dosimeter).
 5. Turnout gear and SCBA will provide necessary anti-contamination functions.

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING EL. 73'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Lube oil
 2. Cable insulation (Cable Trays and 480V MCC's)
 3. Grease
 4. Hydrogen (Gas Decay Tanks)
 5. Motor control centers
 6. Transient combustibles

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Cable insulation
 3. Motor Control Centers
 4. Lube oil
 5. Hydrogen
 6. Grease

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No's. B-31 Unit I side or B-32 Unit II side from center Stairway S-2, or Elev. No. 2
 2. Secondary - Via Door No. B-29 from Stairway S-3 Unit 1 side or Via Door No. B-34-2 from Stairway S-4 Unit 2 side

- FIRE BRIGADE STAGING AREA:
1. Primary - outside El. No. 2 El. 73' Landing
 2. Secondary - Access Control El. 85', or S-4 Stairway El. 85' Unit 2 side or S-3 Stairway EL. 85' Unit 1 side

NOTE: El. 115' Tank Area is the primary response location for outside agencies responding to a fire emergency in the Auxiliary Building.

- HAZARDOUS MATERIALS:
1. Sodium Hydroxide (NaOH)
 2. Hydrogen (H₂)
 3. Boric acid
 4. Combustion products (cable insulation, poly)
 5. Potential radiological airborne and surface contamination
 6. High radiation areas such as hold up tanks, BIT tank, and charging pumps

MANAGEMENT OF PLANT SYSTEMS:

1. Unit No. 1 sprinkler isolation valve is located above walkway outside CCW Pump Room 1-3 (FP-1-346). Unit No. 2 outside CCW Pump Room 2-3 (FP-2-349). The Main Sprinkler Isolation Valve is located at center stairway landing El. 78' (FP-0-30).
2. Key control of Elev. No. 2 is accessed at El. 85'.
3. Floor drains go to Auxiliary Building sump. Water may drain to El. 64' via open grating on cat walks.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water fog may be required to protect exposures such as redundant cables in fire retardant enclosures.
2. Fire doors should be closed as necessary to retard fire spread (especially between charging pump rooms and RHR heat exchangers).

FIRE SUPPRESSION EQUIPMENT:

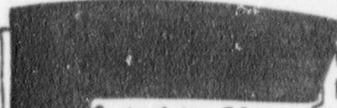
1. Fire extinguishers - Four 20# Dry Chemicals
Two 15# CO₂'s
2. Fire hose reels - Four (2) Unit No. 1 side
(2) Unit No. 2 side
3. Automatic Wet Sprinkler Systems (charging pump rooms and CCW pump cubicles)

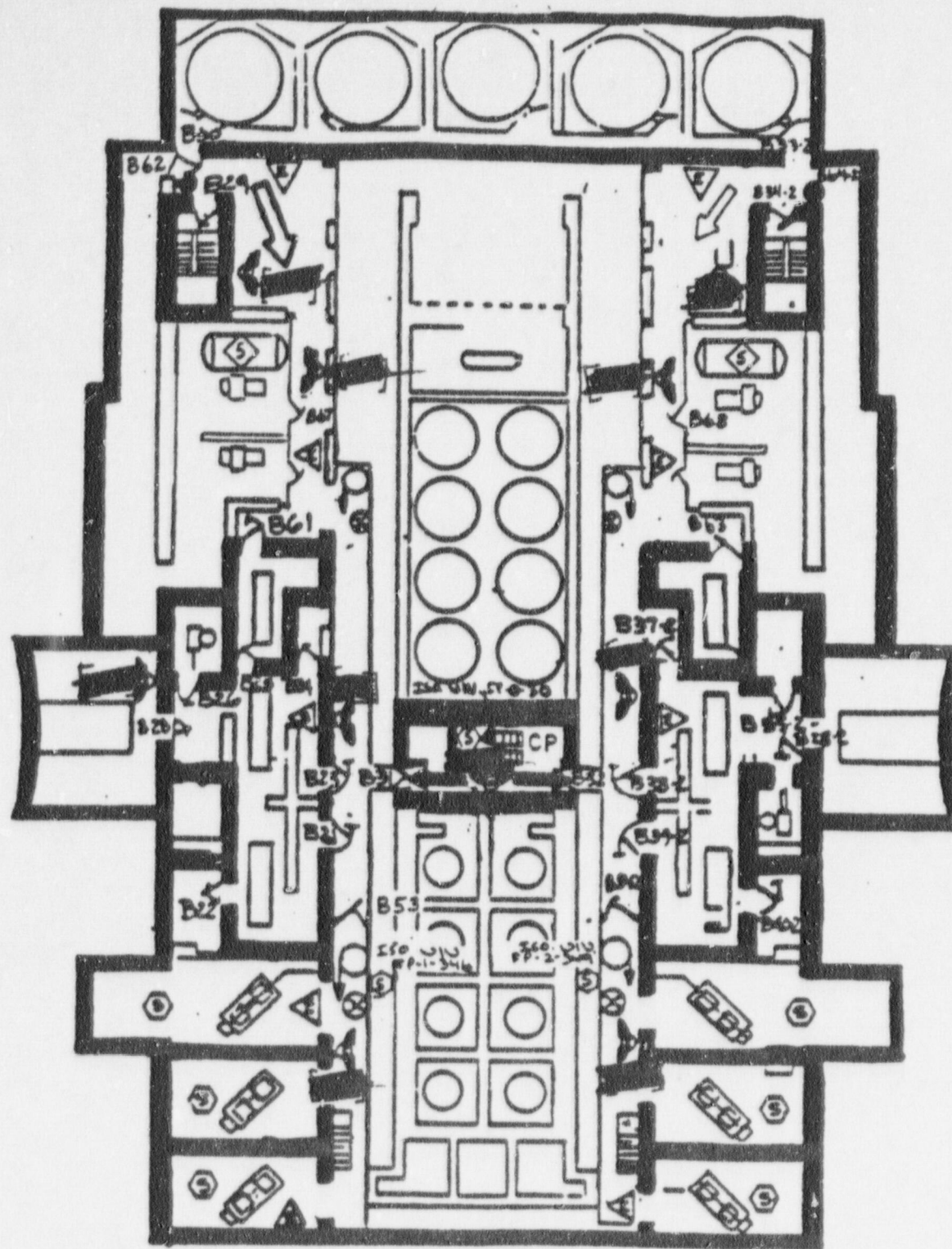
VENTILATION:

1. Fans S-31 and S-32 supply air and E-1 and E-2 are exhaust fans.
2. In each Component Cooling Water Pump Room, air ducts without dampers could allow smoke and hot gases to spread from one compartment to another.
3. Open grating at the east end would allow smoke and gases to vent to El. 115' where it could be exhausted to the outside via roll-up Door No. 354.
4. Portable smoke exhausters may be required, smoke could be exhausted via open Stairwells S-3 and S-4 up to El. 140' Hot Shop. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
5. Positive pressure ventilation techniques are recommended to ventilate the charging pump rooms.

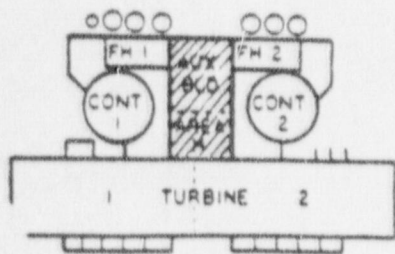
NOTE: Smoke may be contaminated, contact C&RP.

COMMUNICATIONS:

1. Plant telephones -  No. 2 side
No. 1 side
Outside Elev. No. 2 @ El. 73'
Outside Elev. No. 2 @ El. 85'
2. Portable radios (Ops.



73 AUX I, II



- | | | | |
|--|-----------------------|---------------------|---------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ◇ HAZ. WASTE CHROMATES ETC. | ⊞ EYE WASH | ● CO, | ⊖ CO, HOSE REEL |
| ◇ N ₂ H ₄ 35%, NH ₃ | ⊞ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊞ WHEELED DRY CHEN. |
| ◇ ACID | | ⊙ HALON | ○ ⚠️ |
| ◇ CAUSTIC | | CP COMMAND POST | ⚠️ EMERGENCY LIGHTS |
| ◇ TOXIC GASES | | ➔ PRIMARY ACCESS | ☎ TELEPHONE |
| ◇ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ⚡ FIRE WALL R. |
| ◇ MISCELLANEOUS/OTHER | | | ★ ANNUNCIATOR PANEL |

- LIGHTING: 1. Plant lighting panels - PL 13-2 Unit No. 1
23-2 Unit No. 2
2. Emergency lighting

- SAFETY EQUIPMENT: 1. Nearest eye wash station is located on the 64' EL. just west of the Radiological Laundry Drain Tanks, Northwest Area of Unit I side.
2. Nearest first aid kit located on the 64' EL, Unit I side, just north of the elevator.

- SPECIAL PRECAUTIONS: 1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be necessary during rescue operations.
3. An explosive possibility exists from H₂ in the gas decay tank area.
4. Wear radiation detection devices (TLD, pencil dosimeter).
5. Turnout gear and SCBA will provide necessary anti contamination functions.

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

ACCESS CONTROL & CHEMISTRY LABORATORY
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Flammable liquids (Acetone, etc.)
2. Class "A" combustibles
3. Cable insulation
4. Flammable gases

MOST PROBABLE FIRE: 1. Flammable liquids
2. Class "A" combustibles
3. Flammable gases
4. Cable insulation

ACCESS AND EGRESS ROUTES: 1. Primary - Via Door No's. 163 and 143 to E1. 85'
Turbine Building by Elev. No. 1
2. Secondary - Via Door No. 155 to E1. 85' Auxiliary
Building
3. Tertiary - Via Stairway S-5

FIRE BRIGADE STAGING AREA: 1. Primary - Outside Elev. No. 1 @ E1. 85' Turbine
Building
2. Secondary - Outside Elev. No. 2 @ E1. 85'
Auxiliary Building

HAZARDOUS MATERIALS: 1. Various corrosives and reagent chemicals in concentrated
form.
2. Various sources of radiation in main lab area in two (2)
safes and one (1) locked 4 drawer cabinet. Small
sources in counting room in locked drawers.
3. Potential surface or airborne radiation contamination
inside controlled area. Some low level radioactive
materials.
4. Storeroom contains various small containers of lab
chemicals and flammable liquid cabinets.

MANAGEMENT OF PLANT SYSTEMS: 1. The majority of this area is protected by a wet
sprinkler system. The system shut-off is located
above the ceiling in the hallway by Door No. 155
Valve No. FP-1-37.
2. Smoke detector remote indicating lights are
located below the drop ceilings in the Chemistry
Lab and Access Control.
3. Elevator key control to Elev. No. 1 is at
E1. 140'.
4. A smoke detector annunciator panel is located on
the wall several feet south of Door 152.
Detector locations are listed at the panel.

PAGE 3-1R

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose lines may be required as back up for the sprinkler system to cool exposures.
2. Vital cables in conduits are located north of the laboratory and south of the Chem & Rad office areas. Conduits are also located above the drop ceilings in the Chemistry Lab area and above the suspended ceiling in the Chem & Rad office areas.

FIRE SUPPRESSION EQUIPMENT: 1. Fire extinguishers - (4) 20# dry chems
(3) 15# CO₂'s
(2) 17# Halon's

2. Automatic sprinklers
3. Fire hose reels - Three (2) Auxiliary Building E1. 85' and (1) Cold Machine Shop

VENTILATION: 1. Maintain access control air conditioning system in service.
2. Maintain ventilation fans S-21, S-22, S-23, S-24 and S-25 running.
3. Portable smoke exhausters may be required. Positive ventilation can be used to force smoke into the Auxiliary Building for removal. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

NOTE: Smoke may be contaminated, obtain guidance from C&RP prior to ventilating with portable exhausters.

4. Fire dampers are generally provided between the Chemistry Lab and Access Control but 4 ducts do not have dampers.
5. Ducts with no fire dampers also connect the Unit 1 penetration area with the conduit chases north of the Chem. Lab.

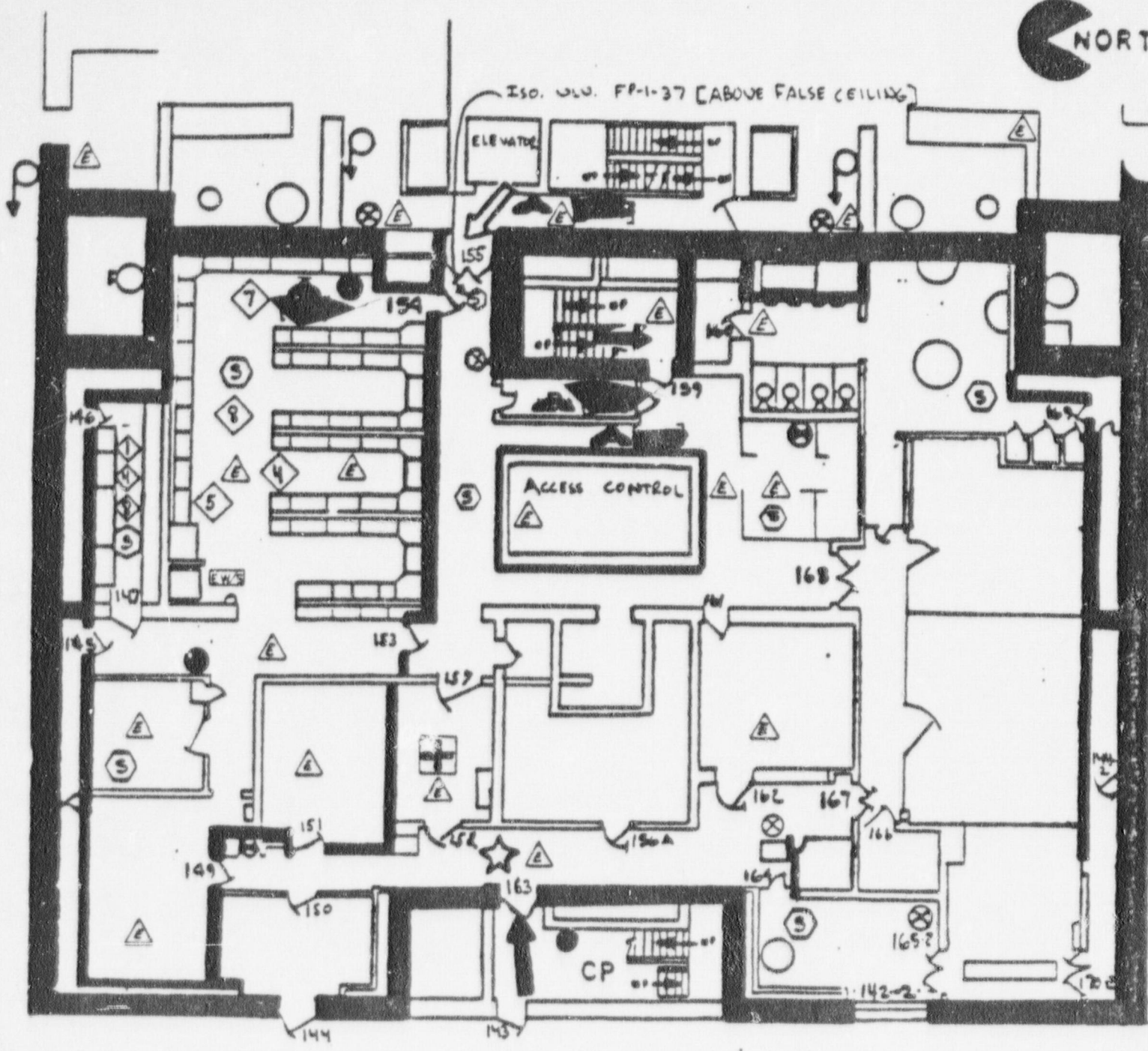
COMMUNICATIONS: 1. Plant telephones
2. Portable radios (Ops Freq.)

LIGHTING: 1. Normal plant lighting panels A-B-C and D
2. Emergency lighting

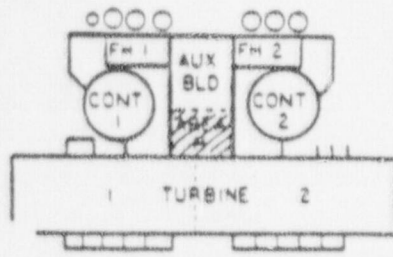
SAFETY EQUIPMENT: 1. First aid room located across the hall from the Command Post, accessed via Door 152 or 157.
2. Emergency eye wash and shower located in the Chemistry Lab accessed via Door 153.

SPECIAL PRECAUTIONS: 1. Self contained breathing apparatus will be required.
2. Three flammable liquid storage cabinets are located in the lab - two in stores room and one in hallway opposite Door No. 140. A hose stream may be required to protect these cabinets.
3. Protection of safety related cables in conduits above the drop ceiling is of special concern.
4. Contain hazardous liquid spills by diking or absorbing.

PAGE 3-2R



85' "H" I-II, ACCESS CONTROL



- | | | | |
|---|-------------------------|---------------------|-----------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ② HAZ. WASTE CHROMATES ETC. | EW EYE WASH | ● CO ₂ | ⊖ CO ₂ HOSE REEL |
| ③ N ₂ H ₄ 35% NH ₃ | EWS EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ④ ACID | | ⊖ HALON | ○ SAFETY EQUIPMENT |
| ⑤ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ⑦ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | ▬ FIRE WALL RATING |
| ⑧ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING EL. 85'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Cable insulation
2. Lube oil
3. Grease
4. Control panel
5. Transient combustibles

MOST PROBABLE FIRE: 1. Transient combustibles
2. Control panel
3. Cable insulation
4. Lube oil
5. Grease

ACCESS AND EGRESS ROUTES: 1. Primary - Via Door No. 155 from Access Control Hallway
2. Secondary - Via Door No. 187 from Stairway S-3 and Via Door No. 185-2 from Stairway S-4

FIRE BRIGADE STAGING AREA: 1. Primary - Access Control El. 85'
2. Secondary - Cold Machine Shop
NOTE: El. 115' tank area is the primary response location for outside agencies responding to a fire emergency in the Auxiliary Building.

HAZARDOUS MATERIALS: 1. Potential radiological airborne and surface contamination.
2. Potential high radiation area by sample panel at B.A. evaporators, in seal water and letdown heat exchanger rooms, safety injection pumps and radwaste concentrator.

MANAGEMENT OF PLANT SYSTEMS: 1. Hallways are provided with floor drains. Drainage is to the Auxiliary Building sump.
2. Breathing air refill station at El. 85' should not be used to refill air bottles during a fire in the Auxiliary Building.
3. Elev. No. 2 key control is accessed at El. 85'.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water fog may be required to protect exposures.
2. Fire doors should be closed as necessary to retard fire spread.
3. Open gratings should be protected to preclude fire spread to E1's. 100' and 115'.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Five 20# Dry Chemicals
One 15# CO₂
2. Fire hose reels Four (4) 2 - Unit No. 1
2 - Unit No. 2

VENTILATION:

1. Fans S-31 and S-32 supply air and E-1 and E-2 are exhaust fans.
2. Open grating at the east end would allow smoke and gases to vent to E1. 115' where it could be exhausted to the outside via roll-up Door No. 354.
3. Portable smoke exhausters may be required, smoke could be exhausted via open Stairways S-3 and S-4 to E1. 140' Hot Shop. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
NOTE: (Smoke may be contaminated, obtain guidance from C&RP prior to ventilating out of doors with portable exhausters.)
4. Ventilation ducts without dampers exist between the RHR heat exchanger rooms and the safety injection pump rooms.

COMMUNICATIONS:

1. Plant telephones [redacted] Unit No. 1
[redacted] Unit No. 2
2. Portable radios (Ops. Freq. [redacted])

NOTE: (The use of portable radios is prohibited in the Auxiliary Building Control Panel Area.)

LIGHTING:

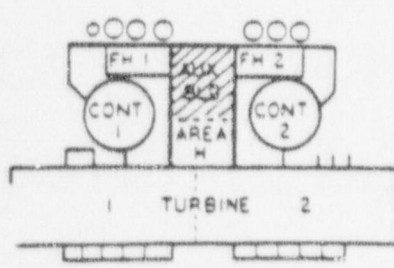
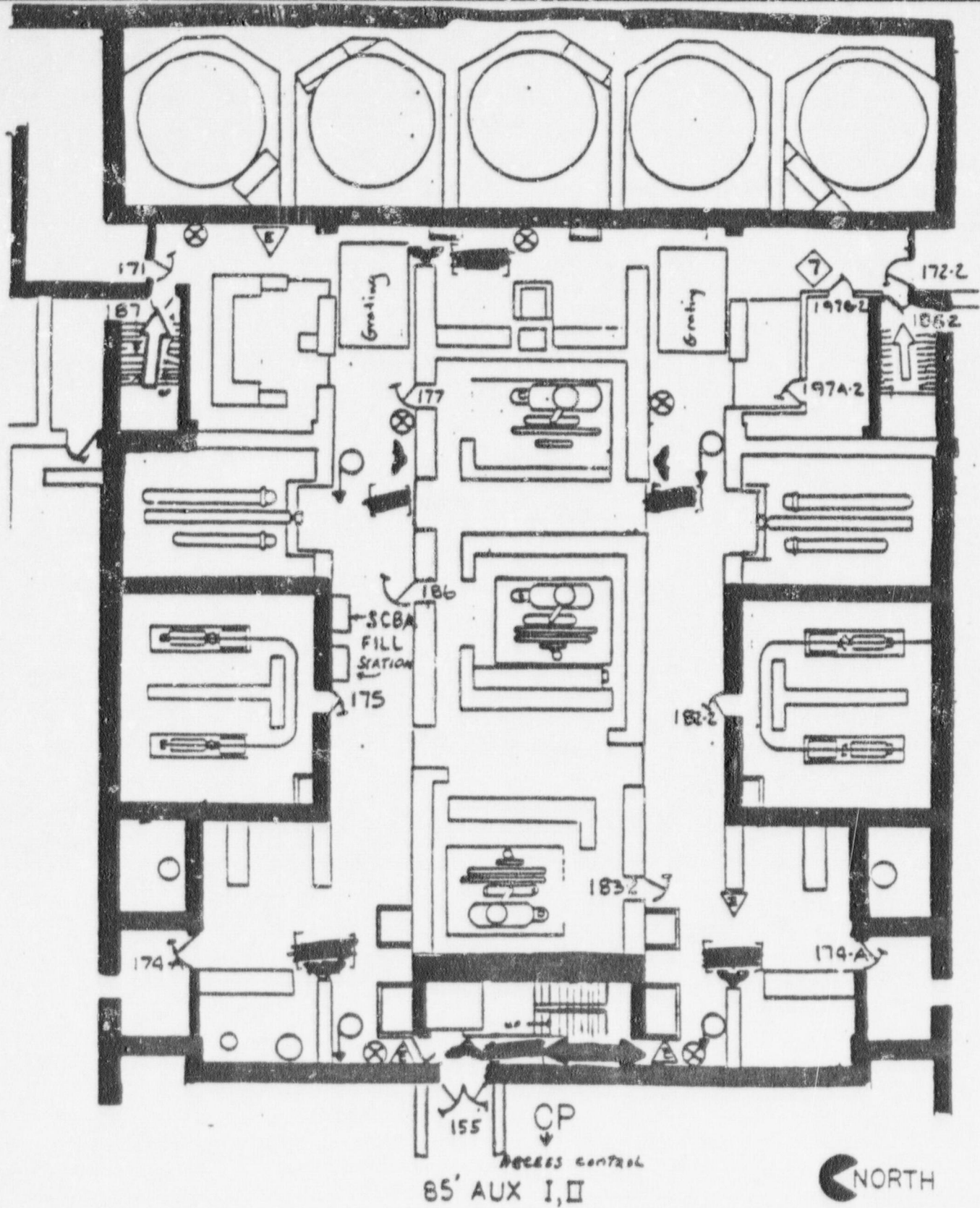
1. Plant lighting panel - PL 13-2 - Auxiliary Building E1. 85' Col. N17-4
2. Emergency lighting

SAFETY EQUIPMENT:

1. An eyewash station/shower is located in the Chemistry Lab. [Not indicated on this drawing]
2. The Plant First Aid Room is located in the Access Control Area. [Not indicated on this map]
3. A first aid kit is located on the 100' EL. of the U-I Aux. Bldg., at the West End of the main hallway.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Wear radiation detection devices (TLD, pencil dosimeter).
3. Turnout gear and SCBA will provide necessary anti-contamination functions.
4. Portable hand-held lanterns may be needed for rescue operations.



- | | | | |
|---|--------------------------|---------------------|-------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ② HAZ. WASTE CHROMATES ETC. | EW EYE WASH | ● CO, | ⊖ CO, HOSE REEL |
| ③ N ₂ H ₄ 35% NH ₃ | EW/S EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ④ ACID | | ⊗ HALON | ○ 5 GALLON 2 1/2 GALLON |
| ⑤ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | ➔ PRIMARY ACCESS | ☎ TELEPHONE |
| ◇ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | — FIRE WALL RATING |
| ⑧ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 1

CONTAINMENT PENETRATION EL. 85'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Grease
 3. Transient combustibles
 4. Hydrogen in primary system piping

- MOST PROBABLE FIRE:
1. Transient combustibles may be radiologically contaminated.
 2. Cable insulation
 3. Grease (motor operated valves)

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door Nos. 174 and 174A from Auxiliary Building El. 85' (Security Door)
 2. Secondary - Via Door No. 189 from Fuel Handling Building El. 85' (Security Door) or Via Door No. 116 from Turbine Building through Post LOCA Sampling Room (Card Reader, C&RP Lock)
- NOTE: This area is criss-crossed with pipe supports and other obstacles.

- FIRE BRIGADE STAGING AREA:
1. Primary - Access Control El. 85'.
 2. Secondary - Outside Auxiliary Building Control panel.

- HAZARDOUS MATERIALS:
1. Potential radiation area with possible localized high radiation hot spots.
 2. Possible on airborne radiological contamination.
 3. Consult with C&RP tech about radiation precautions. (Area Radiation Monitors, Radiation Surveys)
 4. Acknowledge posted radiation signs and barriers.

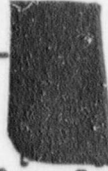

- MANAGEMENT OF PLANT SYSTEMS:
1. De-energize electrical equipment as necessary to reduce shock potential.
 2. Fire suppression water will drain to floor drain receivers (Conservative water use should be observed).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Fire streams may be required to cool conduits to reduce heat damage.
2. Fire doors should be kept closed to minimize fire or smoke spread.
3. Ventilation ducts without fire dampers could allow fire to spread to vital conduit vaults north of the Chemistry Lab.

- FIRE SUPPRESSION EQUIPMENT:
1. Fire extinguishers - Two 20# Dry Chemicals
One 15# CO₂ - Post LOCA Sample Room
 2. Fire hose reels - One-West of Door No. 174
One-Adjacent to Door No. 189
 3. No sprinklers are provided in this area.

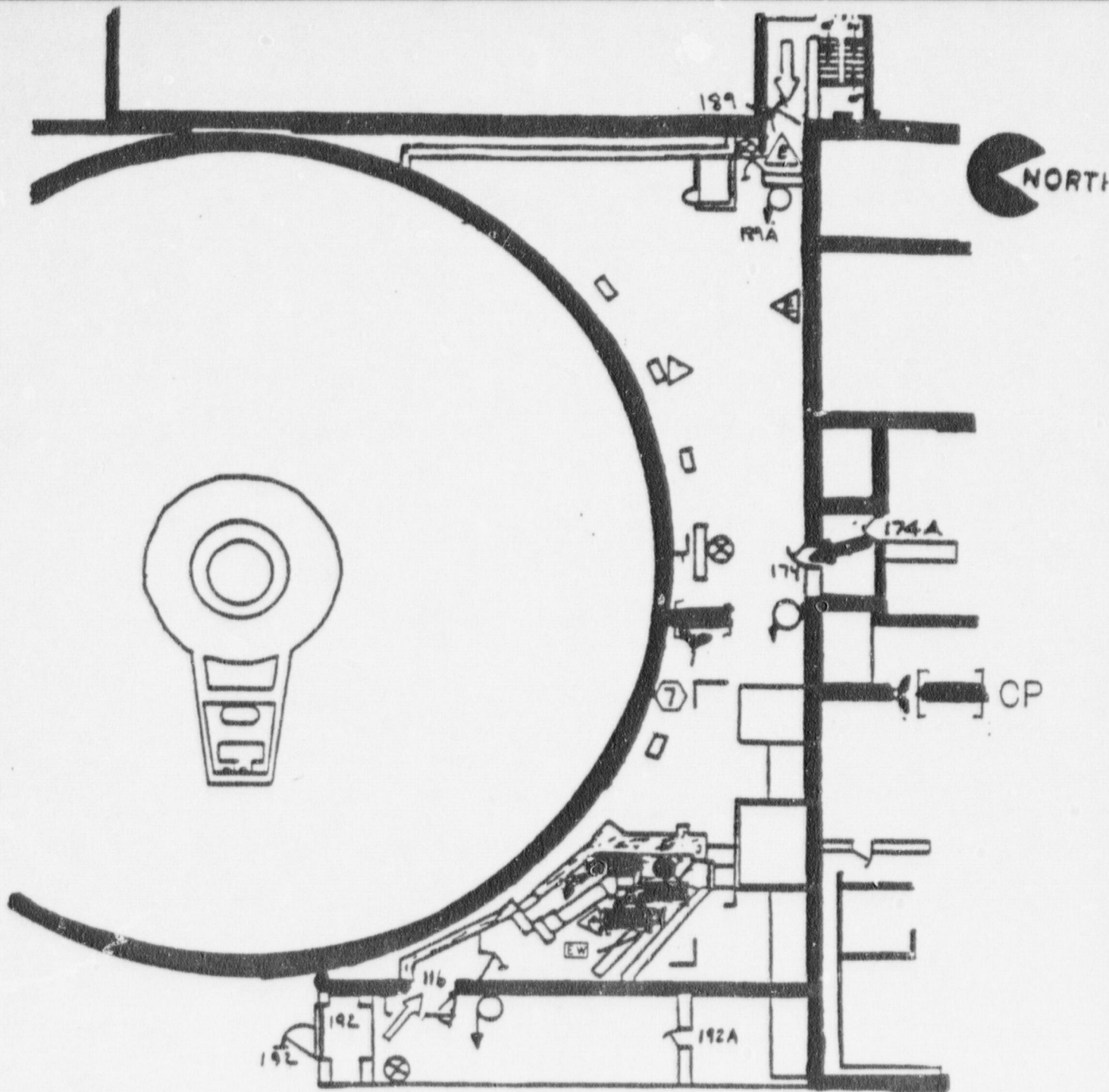
- VENTILATION:
1. An opening is provided between the containment structure and E1. 100' which would vent smoke and gases to the upper elevations.
 2. Portable smoke exhausters may be required. Smoke could be exhausted via Door No. 192 through the Post LOCA Sampling Room using positive pressure techniques. Open louvers are provided on the north side at E1's. 100' and 115'. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
 3. If high airborne contamination is present, air should be sampled prior to ventilation and filters used where possible.

- COMMUNICATIONS:
1. Plant telephones - 
 2. Portable radios (Ops. Freq.) 
NOTE: Use of portable radios could cause inadvertent reactor shutdown signals in the penetration area and at the Auxiliary Building control board.

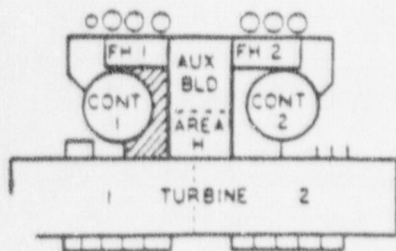
- LIGHTING:
1. Lighting Panel - PL 13-2 Auxiliary Building E1. 85' Col. N17-4
 2. Emergency lighting

- SAFETY EQUIPMENT:
1. There is an emergency eye wash station located in the Post LOCA Lab (Northwest Corner). However, since this lab is usually locked, the closest accessible eye wash station is in the Chemistry Lab, 85' Access Control.
 2. The closest first aid station is at the 85' Access Control First Aid Office, just southeast of Elevator No. 1.

- SPECIAL PRECAUTIONS:
1. Self contained breathing apparatus will be required.
 2. Portable hand-held lanterns should be considered for rescue operations.
 3. Wear TLD and pencil dosimeter.
 4. Observe good contamination control practices, minimize water.



- 85' CONT. I PENETRATION



- | | | | |
|---|--------------------------|---------------------|---------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊙ HAZ WASTE CHROMATES ETC. | EW EYE WASH | ● CO ₂ | ⊖ CO, HOSE REEL |
| ⊙ N ₂ H ₄ 35% NH ₃ | EW/S EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊙ ACID | | ⊙ HALON | ○ CO ₂ DELUGER |
| ⊙ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⊙ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ⊙ FLAMMABLE GASES | | → SECONDARY ACCESS | — FIRE WALL RATING |
| ⊙ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 2

CONTAINMENT PENETRATION EL. 85' & SEC. DIESEL GEN.
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Grease
 3. Transient combustibles (may be radiologically contaminated)
 4. Hydrogen in Primary Piping System
 5. Diesel Fuel (Security Diesel Generator Area)

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Cable insulation
 3. Grease (motor operated valves)
 4. Diesel Fuel (Security Diesel Generator Area)

ACCESS AND EGRESS ROUTES:

1. Primary - Penetration Area Via Door No's. 174A-2 and 174-2 from Auxiliary Building El. 85' (Security Doors)
2. Secondary Via Door No. 189-2 from FHB El. 85' (Security Door) or via Door No. 197-2 from Post LOCA Sampling Room (Security Door)
3. For FHB Fan Room South Side Via Door 194-2 (Security Door)
4. For Security Diesel Generator Area Via Door No's. 191A-2 and 199B (Security Doors)

FIRE BRIGADE STAGING AREA:

1. Primary - Access Control for Containment Penetration Area.
2. Secondary - Outside Auxiliary Building Control Panel for Containment Penetration Area.
3. For 2S-1 and 2S-2 Fan Room Area Outside Door No. 194-2.
4. For Security Diesel Generator Area Outside Door No. 199A.

- HAZARDOUS MATERIALS:
1. Probable Radiation Area with possible localized high radiation hot spots in the penetration area.
 2. Possible of airborne radiological contamination (except security diesel).
 3. Consult with C&RP tech about radiation precautions. (Area Radiation Monitors, Radiation Surveys)
 4. Acknowledge posted radiation signs and barriers.
 5. H₂SO₄ in batteries located in Security Diesel Generator area.

MANAGEMENT OF PLANT SYSTEMS:

1. Deenergize electrical equipment as necessary to reduce shock potential.
2. Fire suppression water will collect in floor drain receivers. Conservative water use should be observed.
3. Sprinkler shutoff valve for Security Diesel Generator and Tank Room located at NW corner, above Battery Room (FP-2-359).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Hose Streams may be required to cool conduits to reduce heat damage.
2. Fire Doors should be shut as necessary to retard spread of fire and smoke.



FIRE SUPPRESSION EQUIPMENT

1. Fire extinguishers - Four 20# Dry Chemicals
 - (2) Containment Penetration
 - (1) Fan Room Area South Side
 - (1) Security Diesel Generator Area
2. Fire hose reels - Three
 - (2) Containment Penetration
 - (1) Yard SW Fan Room Area
3. Automatic sprinkler system - Security Diesel Generator and Fuel Tank

VENTILATION:

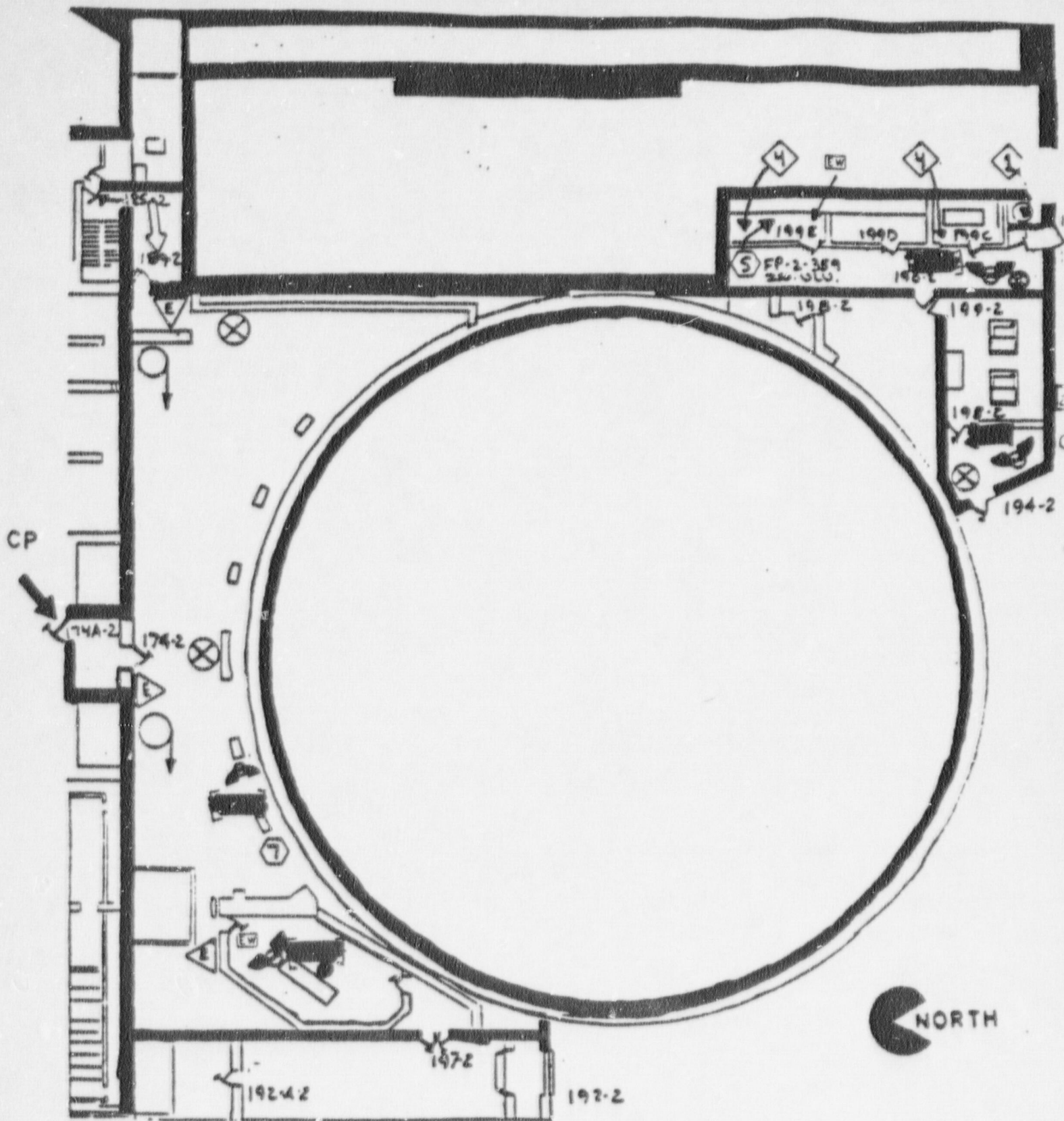
1. An opening is provided between the Containment structure and the E1. 100' which would vent smoke and gases to the upper elevations. Positive ventilation at E1. 85' can be utilized.
2. If High Airborne Contamination is present, air should be sampled prior to ventilation and filters used where possible.
3. Portable Smoke Exhausters may be required for the Fan Room Area and Security Diesel Generator Area. Smoke could be exhausted via doorways to the outside. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
NOTE: Smoke may be contaminated, contact C&RP prior to using portable smoke ejectors.
4. Hose stream ventilation could be used for exhausting smoke through open doors to the outside.

COMMUNICATIONS:

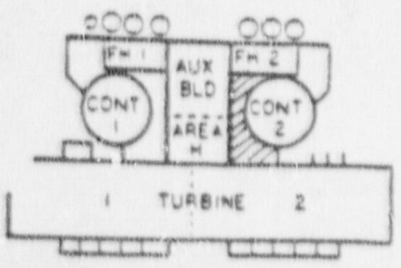
1. Plant telephones -  Containment Penetration
South Wall Outside
Inside Door No. 194-2
Security Diesel Generator Area
2. Portable radios (Ops. Freq. )
NOTE: Use of portable radios in the penetration area could cause inadvertent reactor shutdown signal.

LIGHTING:

1. Plant lighting panel - PL 23-2 at E1. 85' Auxiliary Building
2. Emergency lighting



85' CONT II PENETRATION



- | | | | |
|---|-----------------------|---------------------|---------------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | Ⓟ WATER HOSE REEL |
| ⊙ HAZ. WASTE CHROMATES ETC. | Ⓞ EYE WASH | ● CO, | Ⓢ CO, HOSE REEL |
| ⊚ N ₂ H ₄ 35% NH ₃ | Ⓞ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | Ⓛ WHEELED DRY CHEM |
| ⊙ ACID | | ⊙ HALON | ○ Ⓞ Ⓢ Ⓛ Ⓜ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ |
| ⊙ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIT |
| ⊙ TOXIC GASES | | ➡ PRIMARY ACCESS | ☎ TELEPHONE |
| ⊙ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | Ⓢ FIRE WALL RATING |
| | | | ☆ ANNUNCIATOR PANEL |

- SAFETY EQUIPMENT:
1. One emergency eye wash station is located in the Post LOCA Lab located in the northwest corner of the Penetration Area (normally locked).
 2. One emergency eye-wash station in the northeast area (inside North Room) of the Security Diesel Area.
 3. The nearest first aid kit is located in the Cold Machine Shop.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus and turnouts will provide contamination protection.
2. Portable hand-held lanterns may be needed for rescue operations.
3. Dosimetry should be worn (TLD, pencil dosimeter).
4. Sulfuric acid is contained in the batteries in the Security Diesel Generator Room Area and this acid "Reacts Violently with Water."
5. This area is criss crossed with pipe supports and other obstacles, caution should be exercised to avoid injuries.

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING EL. 100'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Lube oil
 2. Hydrogen (VCT)
 3. Cable insulation
 4. Grease
 5. Transient combustibles (may be radiologically contaminated)
 6. Demineralizer resins

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Cable insulation
 3. Hydrogen from VCT Piping
 4. Lube oil

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door Nos. 242 for Unit I or 241-2 for Unit II from center stairway S-2 or Elevator No. 2
 2. Secondary - Via Door No. 257 Stairway S-3 Unit No. 1 or via Door No. 251 Stairway S-4 Unit No. 2

- FIRE BRIGADE STAGING AREA:
1. Primary - Stairway S-2 at El. 100' Landing
 2. Secondary - Tank area at El. 115' Fuel Handling Building roll-up Door No. 35A
- NOTE: El. 115' tank area is the primary response location for outside agencies responding to a fire emergency in the Auxiliary Building.

- HAZARDOUS MATERIALS:
1. Potential radiological airborne and surface contamination.
 2. Potential high radiation areas such as CVCS filter gallery, demins, VCT tanks and liquid hold up tanks.

- MANAGEMENT OF PLANT SYSTEMS:
1. The east corridor is protected by an automatic sprinkler system. The system isolation valve FP-1-332 is located above hose reel FW-105-A25-1 N.E. corner.
 2. Hallways are provided with drains. Drainage is to the Auxiliary Building Main sump.
 3. Elev. No. 2 key control may be accessed at El. 85'.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use water fog from hose reels to protect exposures.
2. Fire doors should be closed as necessary to retard fire or smoke spread.
3. Ventilation ducts without fire dampers could expose RHR heat exchanger rooms.
4. Open gratings to E1. 115' should be protected to prevent fire spread.
5. Boric acid transfer pumps are located near each other and should be protected to preclude damage to redundant components.

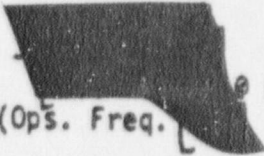

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Five 20# Dry Chemicals
2. Fire hose reels - (2) Unit No. 1 Side
(2) Unit No. 2 Side
3. Automatic sprinkler system - east end corridor only

VENTILATION:

1. Fans S-31 and S-32 supply air and E-1 and E-2 are exhaust fans.
2. Open grating at the east end would allow smoke and hot gases up to the E1. 115' to be exhausted outside via roll-up, Door No. 354 with portable fans or hose streams.
NOTE: (Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters.)
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
4. Positive pressure ventilation at E1. 100' could assist with ventilation out of E1. 115' if necessary.

COMMUNICATIONS:

1. Plant telephones -  Elev. No. 2
2. Portable radios (Ops. Freq. 

LIGHTING:

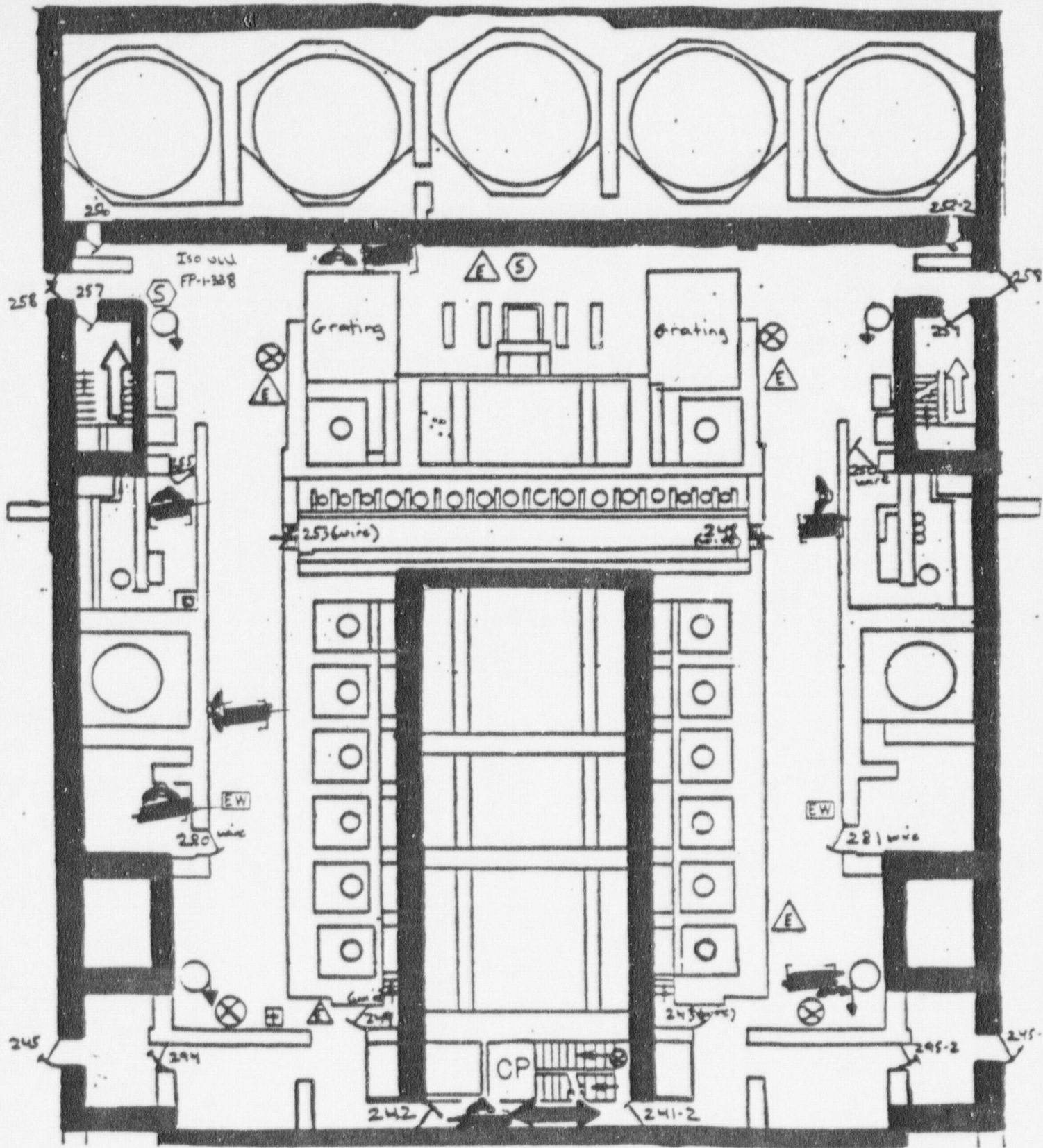
1. Plant lighting panels - PL 14-1
2. Emergency lighting

SAFETY EQUIPMENT:

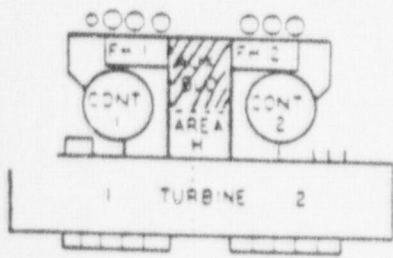
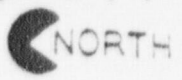
1. One first aid kit near Hose Reel in northwest corner.
2. Two eyewashes stations - (1) Unit I side, northwest area, by Door 280
(1) Unit II side, southwest area by Door 281.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Fire brigade members may need portable lanterns for rescue operations.
3. High radiation levels can be expected in the demineralizer and filter areas. Radiation monitoring will be necessary prior to entry in this area.
4. Dosimetry is required (TLD, pencil dosimeter).
5. Turnout gear and SCBA will provide necessary anti-contamination protection.



100' AUX I-I



- | | | | |
|--|--------------------------|---------------------|-----------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊙ WATER HOSE REEL |
| ② HAZ WASTE CHROMATES ETC. | EW EYE WASH | ● CO ₂ | ⊙ CO ₂ HOSE REEL |
| ③ N ₂ O 35% NH ₃ | EW/S EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊠ WHEELED DRY CHEM |
| ④ ACID | | ⊕ HALON | ○ S. GARDEN |
| ⑤ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ⊕ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | — FIRE WALL RATING |
| ⊕ MISCELLANEOUS, OTHER | | | ☆ ANNUNCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 1

CONTAINMENT PENETRATION EL. 100'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Grease
 3. Transient combustibles
 4. Hydrogen in primary system piping

- MOST PROBABLE FIRE:
1. Transient combustibles (may be radiologically contaminated)
 2. Cable insulation
 3. Grease (motor operated valves)

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door Nos. 294 and 245 from Auxiliary Building El. 100' (Security Door)
 2. Secondary - Via Door No. 265 from Fuel Handling Building El. 100' (Security Door)
- NOTE: This area is criss crossed with pipe supports and other obstacles making it difficult to access or egress. Use caution.

- FIRE BRIGADE STAGING AREA:
1. Primary - Outside Elev. No. 2 El. 100' Auxiliary Building
 2. Secondary - Fuel Handling Corridor East of Spent Fuel Pool. Hx. 1-1

- HAZARDOUS MATERIALS:
1. Probable Radiation Area with possible localized high radiation hot spots.
 2. Possible loose surface or airborne radiological contamination.
 3. Consult with C&RP tech about radiation precautions. (Area Radiation Monitors, Radiation Surveys)
 4. Acknowledge posted radiation signs and barriers.

- MANAGEMENT OF PLANT SYSTEMS:
1. The area is protected by an automatic wet sprinkler system. The isolation valve FP-1-338 is located in the S. E. corner immediately above Fire Hose Reel No. FW-105-A23-1.
 2. Deenergize electrical equipment as necessary to reduce shock potential.
 3. Fire suppression water will collect in floor drain receivers. Conservative water use should be observed.
 4. Water could flow through open pipe penetration and the seismic gap in the floor to El. 85'.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Hose Streams may be required to cool conduits to reduce heat damage.
2. Keep fire doors closed as necessary to reduce fire and smoke spread.
3. Open louvers at the north west corner could cause the spread of smoke and hot gases to the pipe rack outside.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 20# Dry Chemicals
2. Fire hose reels - Two-(1) West of Door No. 245 south wall
(1) East of Door No. 245 adjacent to Door No. 265
3. Automatic sprinkler system

VENTILATION:

1. An Opening is provided between the containment structure and the El. 115' which would vent smoke and gases to the upper elevation.
2. Portable smoke exhausters may be required. Positive ventilation techniques would be preferable. Smoke could be exhausted via Door No. 269 to the pipe racks. (Consult with C&RP prior to exhausting smoke out of doors if airborne contamination is present, air should be sampled prior to ventilation and filters used where possible.)
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - [REDACTED] E. of Door No. 245
2. Portable radios (Ops. Freq. [REDACTED])

NOTE: The use of portable radios could cause inadvertent reactor shutdown signals in the penetration area.

LIGHTING:

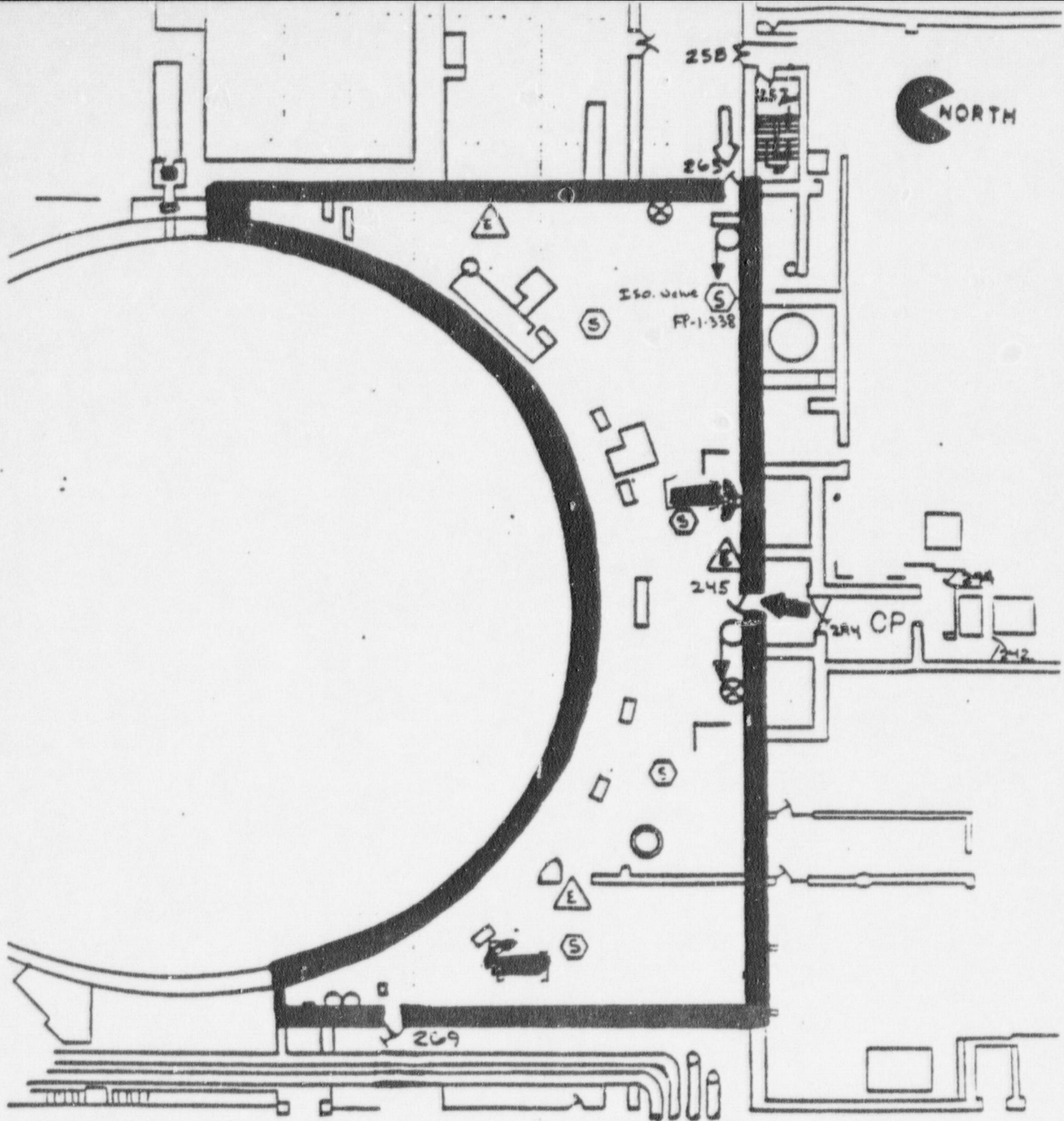
1. Plant lighting panel - PL 14-1 Auxiliary Building El. 100'
2. Emergency lighting

SAFETY EQUIPMENT:

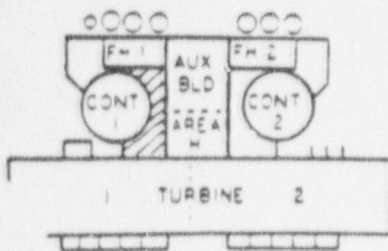
1. An eyewash station is located in the U-I Aux. Bldg., 100' EL. in the center of the main hallway. [Not shown on this map]
2. A first aid kit is located in the U-I Aux. Bldg., 100' EL. in the west end of the main hallway. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be needed for rescue operations.
3. Wear TLD and pencil dosimeter.
4. Observe good contamination control practices, SCBA and turnout gear will provide necessary personal anticontamination protection.



100' CONTAINMENT I PENETRATION AREA



- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none"> ① FLAMMABLE/COMBUSTIBLE LIQUIDS ② HAZ. WASTE CHROMATES ETC. ③ N_2H_4 35%, NH_3 ④ ACID ⑤ CAUSTIC ⑥ TOXIC GASES ⑦ FLAMMABLE GASES ⑧ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID EW EYE WASH EW/S EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO. ○ PRESSURIZED WATER ⊙ HALON CP COMMAND POST → PRIMARY ACCESS ⇨ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊖ WATER HOSE REEL ⊙ CO. HOSE REEL ⊠ WHEELED DRY CHEM ○ S. PORT △ EMERGENCY LIGHTS ☎ TELEPHONE ▬ FIRE WALL RATING ☆ ANNUNCIATOR PANEL |
|--|--|--|---|

DIABLO CANYON POWER PLANT
UNIT NO. 1

FUEL HANDLING BUILDING, EL. 100'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Filters (HEPA, carbon, roughing)
 2. Transient combustibles (Rad Control)
 3. Lube oil
 4. Cable insulation
 5. Grease

- MOST PROBABLE FIRE:
1. Transient combustibles during outage periods (potentially radiologically contaminated)
 2. Cable insulation, hot shorts
 3. Filters (HEPA, roughing, carbon)
 4. Lube oil

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No. 258 from Auxiliary Building El. 115' (Security Door).
 2. Secondary - Via Door No. 262 from El. 115' FHB (Security Door)
- Via Door No. 263 from El. 115' FHB (Security Door)
- Via Door No. 265 from Containment Penetration Area (Security Door)

- FIRE BRIGADE STAGING AREA:
1. Primary - Outside Door No. 258 Auxiliary Building El. 100'
 2. Secondary - Outside Door No. 360 El. 115' FHB or Containment Penetration El. 100'

- HAZARDOUS MATERIALS:
1. Smoke and fumes from HEPA, carbon and roughing filters or cable insulation.
 2. Potential radiological airborne and surface contamination.
 3. Potential high radiation areas such as SFP Heat Exchanger and ventilation filter.

- MANAGEMENT OF PLANT SYSTEMS:
1. The AFW pump rooms and East Hallway are protected by an automatic sprinkler system. The shut off valve FP-1-332 is located above fire hose reel FW-105-A25-1 N.E. corner Auxiliary Building El. 100'.
 2. Floor drains provided in the hallways allows drainage to the Auxiliary Building Main sump.
 3. Use of water on hot piping in turbine auxiliary feed water pump room could cause pipe and a major steam leak failure.
 4. A smoke detector annunciator panel is located on the 100' EL, several feet south of Door 258. Readout locations are for the Aux. Feedwater Pump Rooms. Specific locations are given on the panel.

PAGE 9-1R

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures, especially redundant AFW pumps.
2. Fire doors should be shut as necessary to retard fire and smoke spread.
3. Fire could propagate to E1. 115' through unsealed ventilation penetrations.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Three 20# Dry Chemicals
One 15# CO₂
2. Fire hose reels - Four (3) - Fuel Handling
(1) - Containment Penetration
3. Wet, Sprinkler System - AFW pump rooms and east hallway

VENTILATION:

1. Fans S-1 and S-2 supply air and E-4, E-5 and E-6 are exhaust fans.
2. Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters out of doors, positive pressure ventilation with portable fans could direct smoke and hot gases via stair wells to E1. 115' then out of doors. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

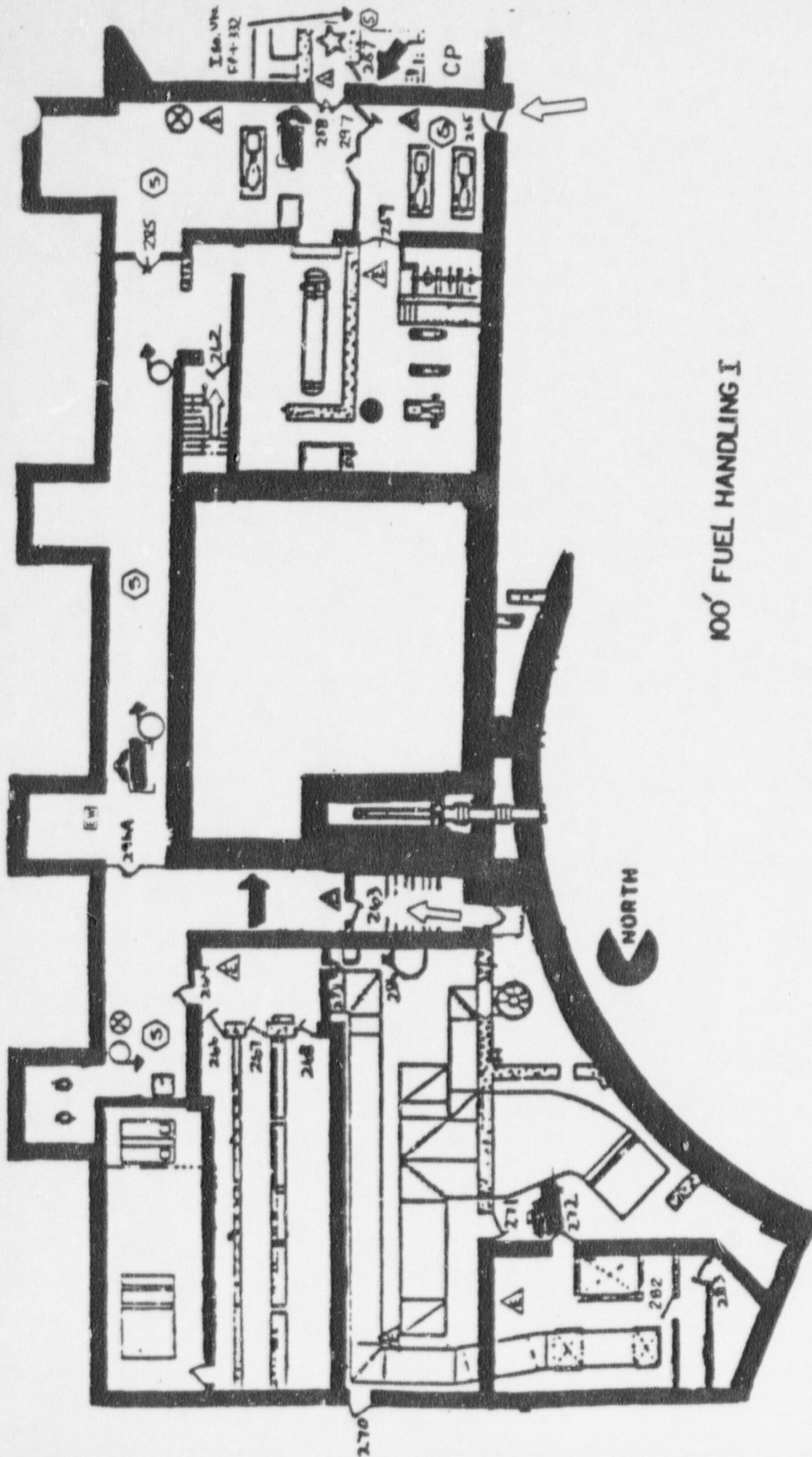
1. Plant lighting panel - PL 15-1
2. Emergency lighting

SAFETY EQUIPMENT:

1. An emergency eyewash station is located on the east wall near Door 296A.
2. A first aid kit is located in the U-I Aux. Bldg. 100' EL, at the western end of the main hallway.

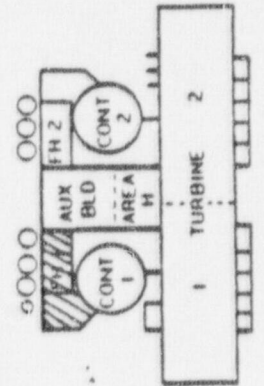
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be needed for rescue operations.
3. Turnout gear and SCBA will provide necessary personal anti-contamination protection.
4. TLD and pencil dosimeter should be worn.



100' FUEL HANDLING I

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
 - ◊ HAZ. WASTE CHROMATES ETC.
 - ◊ N₂, H₂, NH₃
 - ◊ ACID
 - ◊ CAUSTIC
 - ◊ TOXIC GASES
 - ◊ FLAMMABLE GASES
 - ◊ MISCELLANEOUS/OTHER
- ⊠ DRY CHEMICAL
 - ⊙ CO, HOSE REEL
 - ⊚ PRESSURIZED WATER
 - ⊙ HALON
 - CP COMMAND POST
 - PRIMARY ACCESS
 - SECONDARY ACCESS
- ⊠ FIRST AID
 - ⊠ EYE WASH
 - ⊠ EYE WASH AND SHOWER
- P WATER HOSE REEL
 - ⊙ CO, HOSE REEL
 - ⊚ WHEELED DRY CHEM
 - ⊙ HALON
 - △ EMERGENCY LIGHTS
 - ⊠ TELEPHONE
 - FIRE WALL RATING
 - ☆ ANNUNCIATOR PANEL



PAGE 0-50
REV 2

DIABLO CANYON POWER PLANT
UNIT NO. 2

CONTAINMENT PENETRATION EL. 100'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Grease
 3. Transient combustibles (may be radiologically contaminated)
 4. Hydrogen in primary system piping

- MOST PROBABLE FIRE:
1. Transient combustibles may be radiologically contaminated
 2. Cable insulation
 3. Grease - motor operated valves

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No. 245-2 From Auxiliary Building El. 100' (Security Door)
 2. Secondary - Via Door No. 265-2 From FHB El. 100'
- NOTE: This area is criss crossed with pipe supports and other obstacles. Use caution.

- FIRE BRIGADE STAGING AREA:
1. Primary - Outside Elev. No. 2 @ El. 100'
 2. Secondary - Fuel Handling Corridor East of Spent Fuel Pool Hx 2-1

- HAZARDOUS MATERIALS:
1. Probable radiation area with possible localized high radiation hot spots.
 2. Possible loose surface or airborne radiological contamination.
 3. Consult with C&RP tech about radiation precautions (Area Radiation Monitors, Rad Surveys).
 4. Acknowledge posted radiation signs and barriers.

MANAGEMENT OF PLANT SYSTEMS:

1. The area is protected by an automatic sprinkler system. The isolation valve FP-2-861 is located in the SE corner immediately above Fire Hose Reel No. FW-105-A23-2.
2. Deenergize electrical equipment as necessary to reduce shock potential.
3. Fire suppression water will collect in floor drain receivers. Use water conservation.
4. Water may flow to El. 85' via open penetrations and seismic gap.
5. Large exhaust fan (25-88) may need to be shut down - could spread the fire.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Hose streams may be required to cool conduits to reduce heat damage. Do not apply water directly to exposed hot piping.
2. Fire doors should be closed as necessary to retard fire and smoke spread.
3. Open louvers at the south west corner could allow smoke and hot gases to impact the pipe rack area outside.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 20# Dry Chemicals
2. Fire hose reels - Two
3. Automatic sprinklers

- VENTILATION:
1. An opening is provided between the Containment structure and 115' El. which would vent smoke and gases to upper elevations.
 2. Portable smoke exhausters may be required. Positive ventilation techniques are preferable. Smoke could be exhausted via Door No. 269-2 to the pipe racks. (Obtain guidance from C&RP prior to exhausting out of doors. If high airborne contamination is present, air should be sampled prior to ventilation and filters used where possible.)
 3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

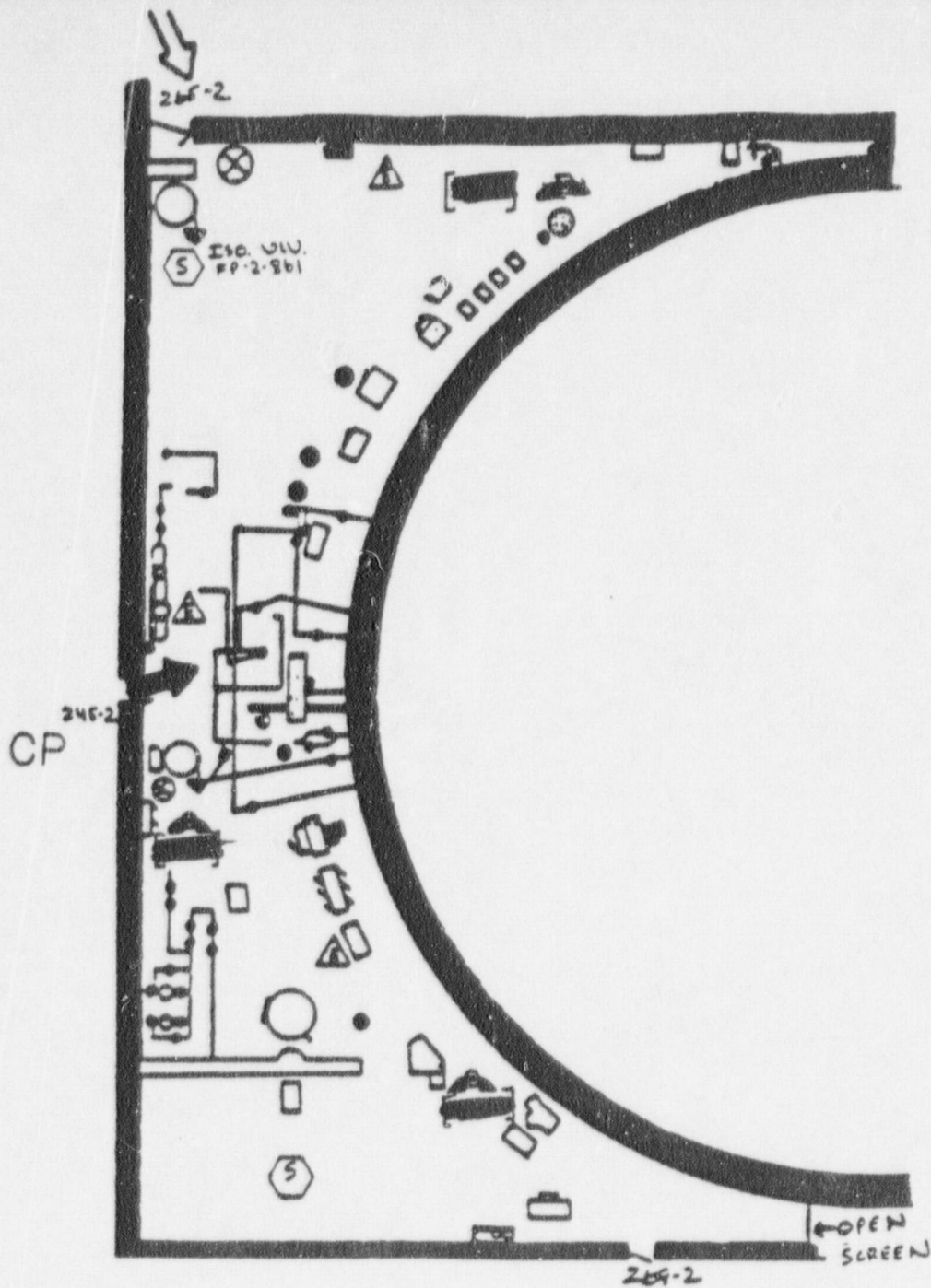
- COMMUNICATIONS:
1. Plant telephones
 2. Portable radios (Ops. Freq.)
- NOTE: The use of portable radios could cause inadvertent reactor shutdown signals.

- LIGHTING:
1. Plant lighting panel - PL 24-1 Auxiliary Building
 2. Emergency lighting

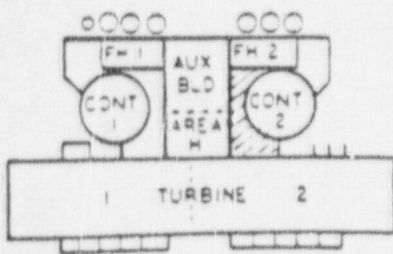
- SAFETY EQUIPMENT:
1. An eyewash station is located in the U-II Aux. Bldg., 100' EL., in the center of the main hallway. [Not shown on this map]
 2. A first aid kit is located in the U-I Aux. Bldg., 100' EL., at the western end of the main hallway. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be needed for rescue operations.
3. Observe good contamination control practices. Turnout gear and SCBA will provide adequate personal anti-contamination protection.
4. TLD and pencil dosimeter needed for exposure monitoring.



100' CONT. PENETRATION II



- | | | | |
|---|---------------------------|---------------------|-----------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊕ DRY CHEMICAL | ⊕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO ₂ | ⊕ CO ₂ HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊕ EWS EYE WASH AND SHOWER | ⊕ PRESSURIZED WATER | ⊕ WHEELED DRY CHEMICAL |
| ⊕ ACID | | ⊕ HALON | ⊕ EMERGENCY LIGHT |
| ⊕ CAUSTIC | | CP COMMAND POST | ⊕ TELEPHONE |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | ⊕ FIRE WALL RATING |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊕ MISCELLANEOUS OTHER | | | |

DIABLO CANYON POWER PLANT
UNIT NO. 2

FUEL HANDLING BLDG. EL 100'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Filters (HEPA, carbon, roughing)
 2. Transient combustibles (Rad Control)
 3. Lube oil
 4. Cable insulation
 5. Grease

- MOST PROBABLE FIRE:
1. Transient combustibles, during outage periods (potentially contaminated)
 2. Cable insulation, hot shorts
 3. Filters (HEPA, carbon, roughing)
 4. Lube oil

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No. 258-2 from Auxiliary Building El. 100' (Security Door)
 2. Secondary - Via Door No. 262-2 from El. 115' FHB (Security Door)
- Via Door No. 263-2 from El. 115' FHB (Security Door)

- FIRE BRIGADE STAGING AREA:
1. Primary - Outside Door No. 258 Auxiliary Building 100' El.
 2. Secondary - Outside Door No. 360 El. 115' FHB or Containment Penetration El. 100'

- HAZARDOUS MATERIALS:
1. Smoke and fumes from HEPA, carbon and roughing filters or cable insulation
 2. Potential radiological airborne and surface contamination
 3. Potential high radiation areas such as SFP heat exchanger and ventilation filter

MANAGEMENT OF PLANT SYSTEMS:

1. The AFW pump room and east hallway are protected by an automatic sprinkler system. The shutoff is located above fire hose reel FW-105-A25-1 NE Corner Auxiliary Building El. 100'.
2. Floor drains provided in the hallways allow drainage to the Auxiliary Building main sump.
3. Use of water on hot piping in the turbine AFW pump room could cause pipe failure and steam leaks.
4. A smoke detector annunciator panel is located several feet north of Door 258-2. Readout locations are for the Aux. Feedwater Pump Rooms, specific locations are given on the panel.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures, especially redundant AFW pumps.
2. Fire doors should be shut as necessary to retard fire and smoke spread.
3. Fire could propagate to E1. 115' through unsealed ventilation penetrations.

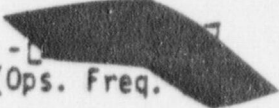

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 20# Dry Chemicals
- One 15# CO₂
2. Fire hose reels - Four (3) FHB, (1) Containment Penetration
3. Automatic sprinkler system

VENTILATION:

1. Fans 2S-1 and 2S-2 Supply Air and 2E-2, 2E-5 and 2E-6 are Exhaust Fans.
2. Smoke may be contaminated, obtain guidance from C&RP prior to ventilating with portable exhausters out of doors. Positive pressure ventilation techniques with portable exhausters could be used to direct smoke up stair towers to E1. 115' and then out side. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - 
2. Portable radios (Ops. Freq. 

LIGHTING:

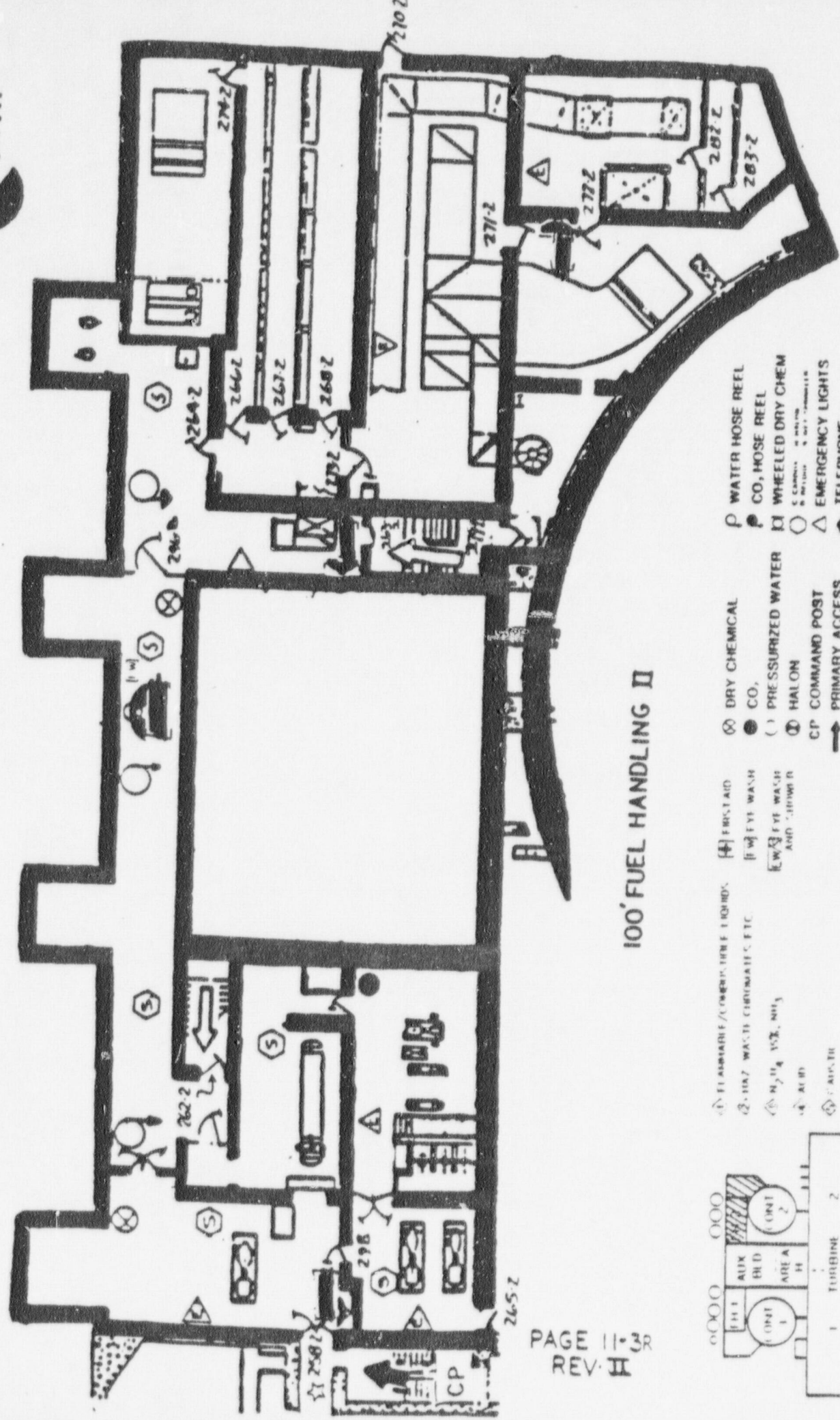
1. Plant Lighting Panel - PL 24-1
2. Emergency lighting

SAFETY EQUIPMENT:

1. Emergency eyewash station located in the center of the main hallway.
2. A first aid kit is located in the Unit I Aux. Bldg., 100' EL., at the western end of the main hallway. [Not indicated on this map]

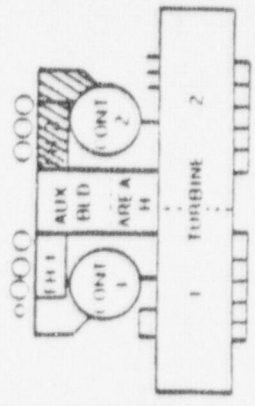
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be useful during rescue operations.
3. Turnout gear and SCBA will perform necessary anti-contamination function.
4. TLD and pencil dosimeter to be worn for exposure monitoring.



100' FUEL HANDLING II

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ FLAMMABLE/COMBUSTIBLE SOLIDS
- ⊕ HAZ WASTE CHEMICALS, ETC.
- ⊕ N₂, H₂, O₂, NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ EXPLOSION HAZARD
- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH AND SHOWER
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ⊕ AMMUNITION (AIR)



DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING - E1. 115'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Lube oil
 2. Cable insulation
 3. Transient combustibles (radwaste)
 4. Grease
 5. Demineralizer resins

- MOST PROBABLE FIRE:
1. Transient combustibles (radwaste)
 2. Lube oil
 3. Cable insulation
 4. Dry resins

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door Nos. 346 for Unit I or 344-2 for Unit II from center stairway S-2 or Elevator No. 2
 2. Secondary - from S-3 (Unit 1) Door 356,
S-4 (Unit 2) Door 350-2
- from 115' E1. tank area via Door No. 354 (Security Door)

- FIRE BRIGADE STAGING AREA:
1. Primary - Unit I, NW Side, near drum compactor or Unit II, SW side, drum storage
 2. Secondary - tank area outside roll-up Door No. 354

NOTE: E1. 115' tank area is the primary response location for outside agencies responding to a fire emergency in the Auxiliary Building.

- HAZARDOUS MATERIALS:
1. Sodium Hydroxide (NaOH)
 2. Sulfuric acid (H₂SO₄)
 3. Demineralizer resins
 4. Boric Acid
 5. Potential radiological airborne and surface contamination (especially in radwaste packaging areas)
 6. Potential high radiation areas such as spent resin storage tanks, or radwaste collection points

MANAGEMENT OF PLANT SYSTEMS:

1. Floor drains are provided at tank locations which drain to the Auxiliary Building floor drain receiver.
2. Hallways are provided with drains and drainage is to the Auxiliary Building sump.
3. Open penetrations such as gratings on hatch ways could allow water to impact lower levels of the Auxiliary Building.
4. Key control of Elev. No. 2 is accessed at E1. 85'.
5. a) Drum compactor sprinkler isolation FP-1-591 located by drum compactor. (Unit I)
b) Compacted drum storage sprinkler isolation FP-2-596 located by hose reel FW-120-A39-2. (Unit II)
c) Boxed radwaste compaction area isolation FP-2-1044 located at 18.6 and U line.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.
2. Fire doors should be closed as necessary to retard fire and smoke spread.
3. Non rated roll-up doors separate the auxiliary and fuel handling buildings.

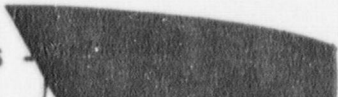
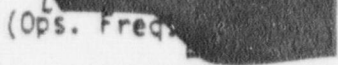
FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Five 20# Dry Chemicals
2. Fire hose reels - Four (4)
3. Fire hydrants located at Radwaste Building accessible via roll-up Door No. 354 E1. 115'
4. Sprinkler protection in the vicinity of radwaste drumming and storage area and the box compactor.

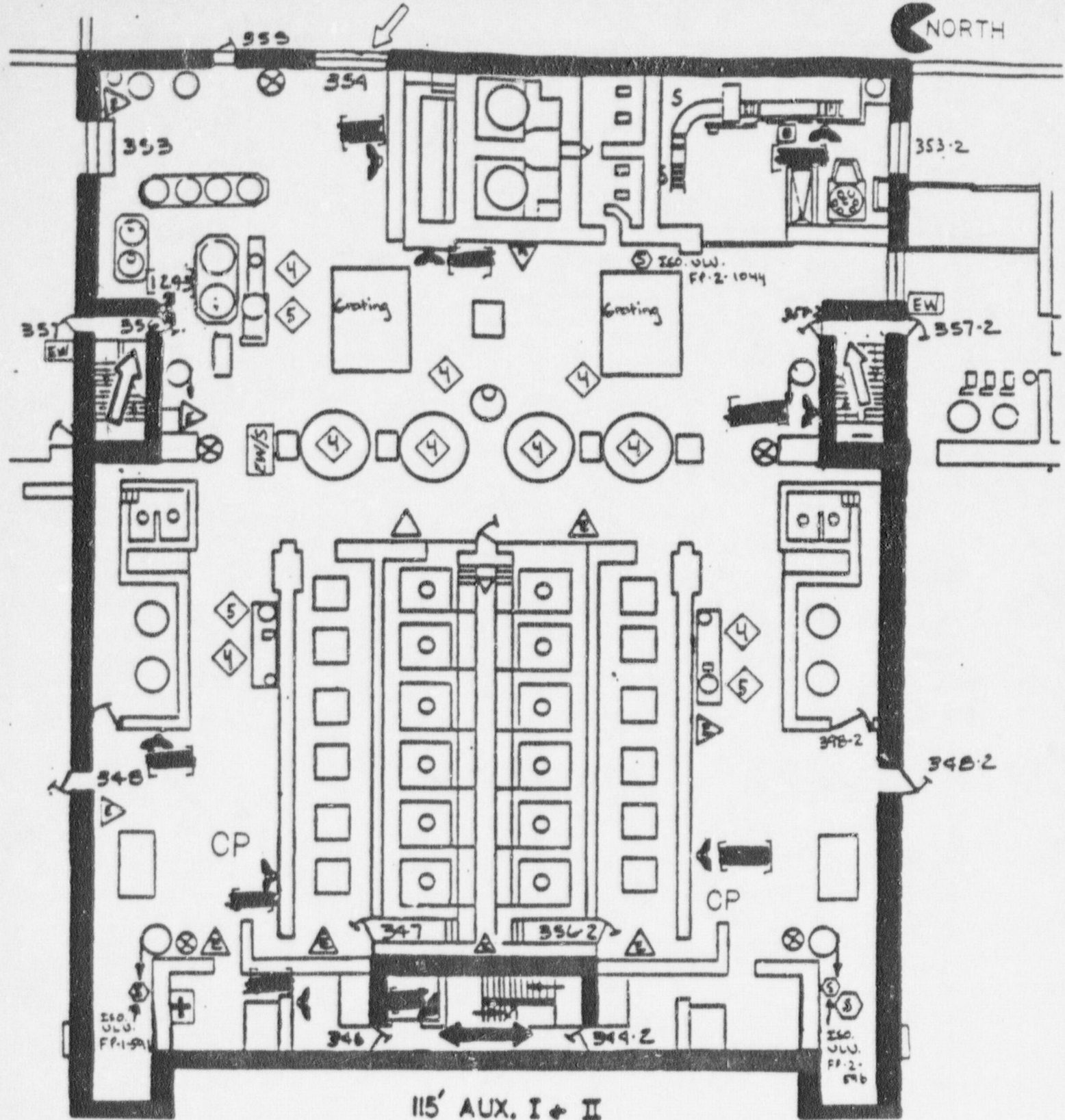
VENTILATION:

1. S-31 and S-32 supply air and E-1 and E-2 are exhaust fans.
2. Portable smoke exhausters, smoke could be exhausted to the outside via roll-up Door No. 354.
NOTE: (Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.)
3. Hose streams could also be used to ventilate via doors to the outside.

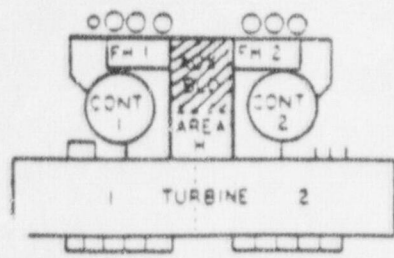
COMMUNICATIONS:

1. Plant telephones -  - Elev. 1392
2. Portable radios (Ops. Freq. )

NORTH



115' AUX. I + II



- | | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> ① FLAMMABLE/COMBUSTIBLE LIQUIDS ② HAZ WASTE CHROMATES ETC. ③ N₂H₄ 34% NH₃ ④ ACID ⑤ CAUSTIC ⑥ TOXIC GASES ⑦ FLAMMABLE GASES ⑧ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID EW EYE WASH EW/S EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO. ○ PRESSURIZED WATER ⊖ HALON CP COMMAND POST → PRIMARY ACCESS ⇨ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊖ WATER HOSE REEL ⊖ CO. HOSE REEL ⊖ WHEELED DRY CHEM ⊖ EMERGENCY LIGHTS ⊖ TELEPHONE ⊖ FIRE WALL RA ☆ ANNUNCIATOR PANEL |
|--|--|--|--|

- LIGHTING:
1. Plant lighting panel - PL 14-1
 2. Emergency lighting

- SAFETY EQUIPMENT:
1. One first aid kit located in the north west corner, via Door 346 north of Elevator No. 2
 2. One emergency eyewash and shower station is located on the Unit I side (northcentral area) by Boric Acid Storage Tank II.
 3. Two emergency eyewash stations - (1) Unit I side by Door 357
(1) Unit II side by Door 357-2

- SPECIAL PRECAUTIONS:
1. Self contained breathing apparatus will be required.
 2. Fire brigade members may need portable hand-held lanterns for rescue operations.
 3. Full protective clothing to be worn as contact with caustic and sulfuric acid can destroy skin tissue.
 4. Turnout gear and SCBA will provide necessary anti-contamination protection.
 5. TLD and pencil dosimeters to be worn for exposure monitoring.

DIABLO CANYON POWER PLANT
UNIT NO. 1

CONTAINMENT PENETRATION EL. 115'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Grease
 3. Transient combustibles
 4. Hydrogen in primary system piping

- MOST PROBABLE FIRE:
1. Transient combustibles may be radiologically contaminated
 2. Cable insulation
 3. Grease (motor operated valves)

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No. 348 from Auxiliary Building El. 115' (Security Door)
 2. Secondary - Via Door No. 358 from Fuel Handling Building Fire Pump area (Security Door) or via Door No. 364 from pipe rack area of Turbine Building (normally locked security grate)
- NOTE: This area is criss-crossed with pipe supports and other obstacles making access difficult, especially to the west side.

- FIRE BRIGADE STAGING AREA:
1. Primary - Outside Elev. No. 2 El. 115' Auxiliary Building
 2. Secondary - North of Spent Resin Storage Tanks
- NOTE: El. 115' tank area is the primary response location for outside agencies responding to a fire in the Auxiliary or Fuel Handling Buildings.

- HAZARDOUS MATERIALS:
1. Probable radiation area with possible localized high radiation hot spots.
 2. Possible loose surface on airborne radiological contamination.
 3. Consult with C&RP tech about radiation precautions. (Area Radiation Monitors, Radiation Surveys)
 4. Acknowledge posted radiation signs and barriers.

MANAGEMENT OF PLANT SYSTEMS:

1. The area is protected by an automatic sprinkler system. The isolation valve FP-1-29 is located in the S. E. corner immediately above Fire Hose Reel No. FW-120-A36-1.
2. Deenergize electrical equipment as necessary to reduce shock potential.
3. Fire suppression water will collect in floor drain receivers. Conservative water use should be observed.
4. Water may also drain to lower elevations through unsealed penetrations.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Hose streams may be required to cool conduits to reduce heat damage. Do not apply water directly to exposed hot piping, pipe failure and steam leaks could result.
2. Fire doors should be kept closed as necessary to retard fire and smoke spread.
3. Thermolag enclosures protect safety conduits. Water spray could assist in the protection of these circuits.

FIRE SUPPRESSION EQUIPMENT:



1. Fire extinguishers - Four 20# Dry Chemicals
2. Fire hose reels - Two-(1) West of Door No. 348 south wall
(1) East of Door No. 348 adjacent to Door No. 358
3. Automatic sprinkler system

VENTILATION:

1. Vent openings on the northeast and northwest sides of the area would allow smoke and gases to vent to the outside. Unsealed roof penetrations also allow venting to the Auxiliary Building roof.
2. Portable smoke exhausters may be required. Positive pressure ventilation techniques could aid in exhausting smoke out north side.

NOTE: Smoke may be contaminated. Obtain guidance from C&RP Tech prior to exhausting out of doors. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones -  - Fire Pump Room
- Penetration Area
- Penetration Area
- Penetration Area
- Penetration Area
- By Stairway No. 4
2. Portable radios (Ops. Freq. 

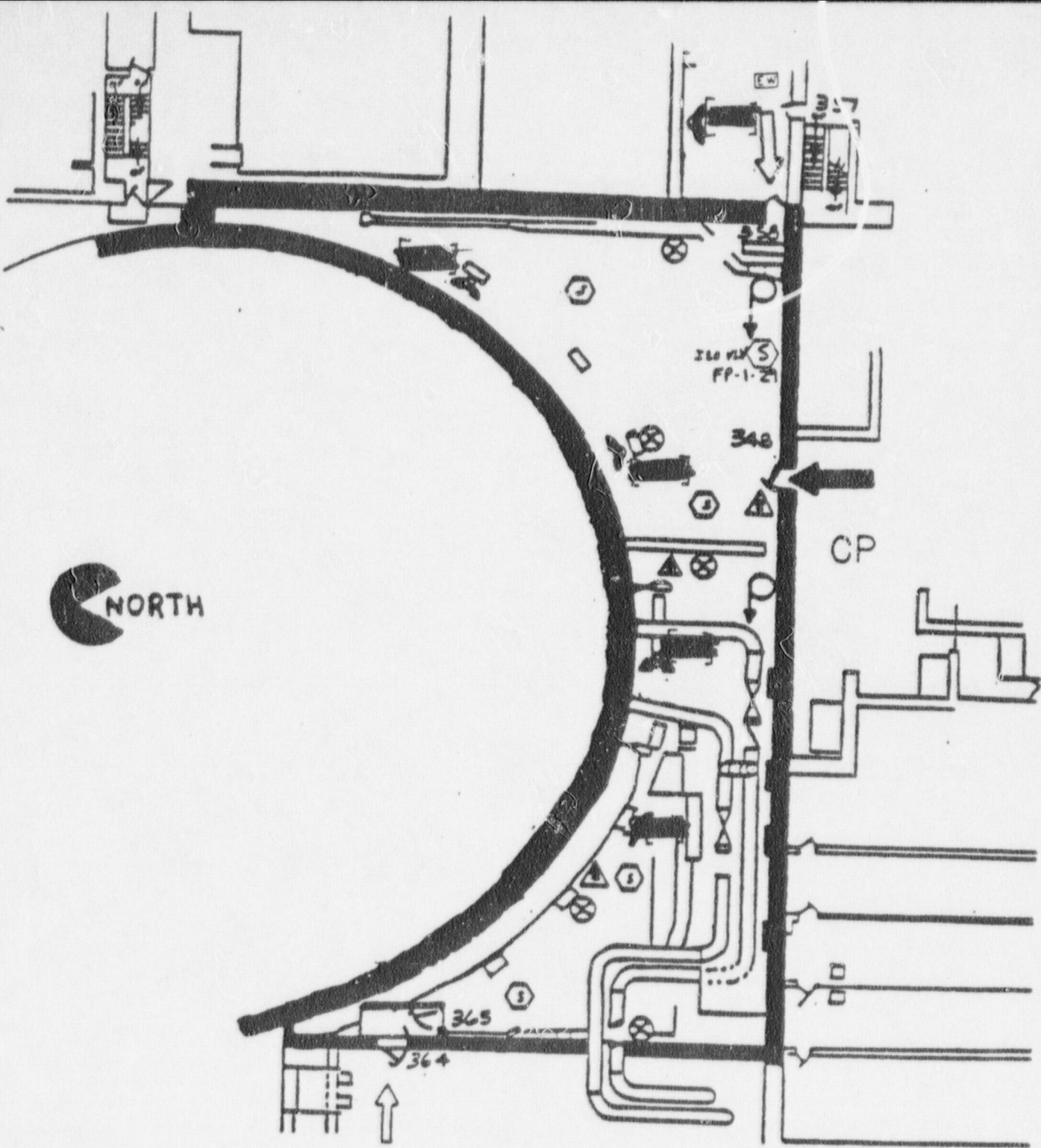
NOTE: The use of portable radios could cause inadvertent reactor shutdown signals.

- LIGHTING:
1. Plant lighting panel - PL 14-1 Auxiliary Building 100' El.
 2. Emergency lighting

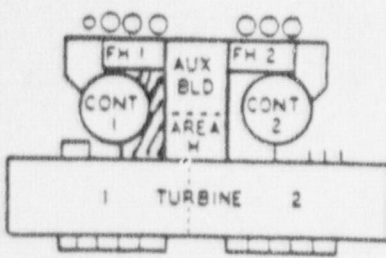
- SAFETY EQUIPMENT:
1. An eyewash station is located several feet east of Door 358.
 2. A first aid kit is located in the U-I Aux. Bldg, 115' El., at the west end of the main hallway. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be needed for rescue operations.
3. Hot steam lines traverse through the area. Use discretion when applying water to these lines. Steam leaks could develop from pipe failure.
4. TLD and pencil dosimeter to be worn for exposure monitoring.
5. Turnout gear and SCBA will provide effective personal anti-contamination protection.



15' CONT. I PENETRATION



- | | | | |
|---|-----------------------|---------------------|-----------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊖ EYE WASH | ● CO, | ⊖ CO, HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊖ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊕ ACID | | ⊖ HALON | ○ S. GARDEN S. GARDEN |
| ⊕ CAUSTIC | | CP COMMAND POST | ⊖ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | → PRIMARY ACCESS | ⊖ TELEPHONE |
| ⊕ FLAMMABLE GASES | | → SECONDARY ACCESS | ⊖ FIRE WALL RA* |
| ⊕ MISCELLANEOUS/ OTHER | | | ☆ ANNUNCIATOR PA. |

DIABLO CANYON POWER PLANT
UNIT NO. 1

FUEL HANDLING BUILDING, EL. 115'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Filters (HEPA, carbon, roughing)
2. Transient combustibles
3. Lube oil
4. Cable insulation
5. Resin

MOST PROBABLE FIRE: 1. Transient combustibles, during outage periods
2. Filters (HEPA, carbon, roughing)
3. Lube oil
4. Grease

ACCESS AND EGRESS ROUTES: 1. Primary - Ventilation area from Door No. 363
(Security Door)
- Fire Pump room from Door No. 353
(roll-up door)
2. Secondary - Via stairway from Door Nos. 359 or
362, or 361

FIRE BRIGADE STAGING AREA: 1. Primary - Vent. Area El. 115' outside tank area
Door 363.
- Auxiliary Building El. 115' near fire
pumps outside Door No. 353.
2. Secondary - Fire pump area, El. 115' outside
tank area, near Door 361.

HAZARDOUS MATERIALS: 1. Ammonia - NH_3
2. Hydrazine - $N_2 H_4$
3. Smoke and fumes from HEPA, carbon and roughing filters
and polyethelene
4. Potential radiological airborne and surface
contamination
5. Potential high radiation areas in filter rooms and in
the cask decon area

MANAGEMENT OF PLANT SYSTEMS: 1. Floor drains provided in the hallways allows
drainage to the Auxiliary Building sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. A water fog from hose lines may be required to protect exposures.
2. Redundant fire pumps are provided with little spacial separation and should be protected.

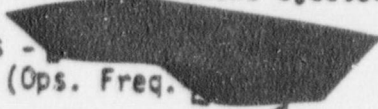

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 20# Dry Chemicals
One 15# CO₂
One Pressurized water
2. Fire hose reels - Four

VENTILATION:

1. Fans S-1 and S-2 supply air and E-4, E-5 and E-6 are exhaust fans.
NOTE: Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters or hose streams.
2. Ventilation could also be accomplished with fire hose streams via roll-up and personnel doors. (Negative ventilation techniques)
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - 
2. Portable radios (Ops. Freq. 

LIGHTING:

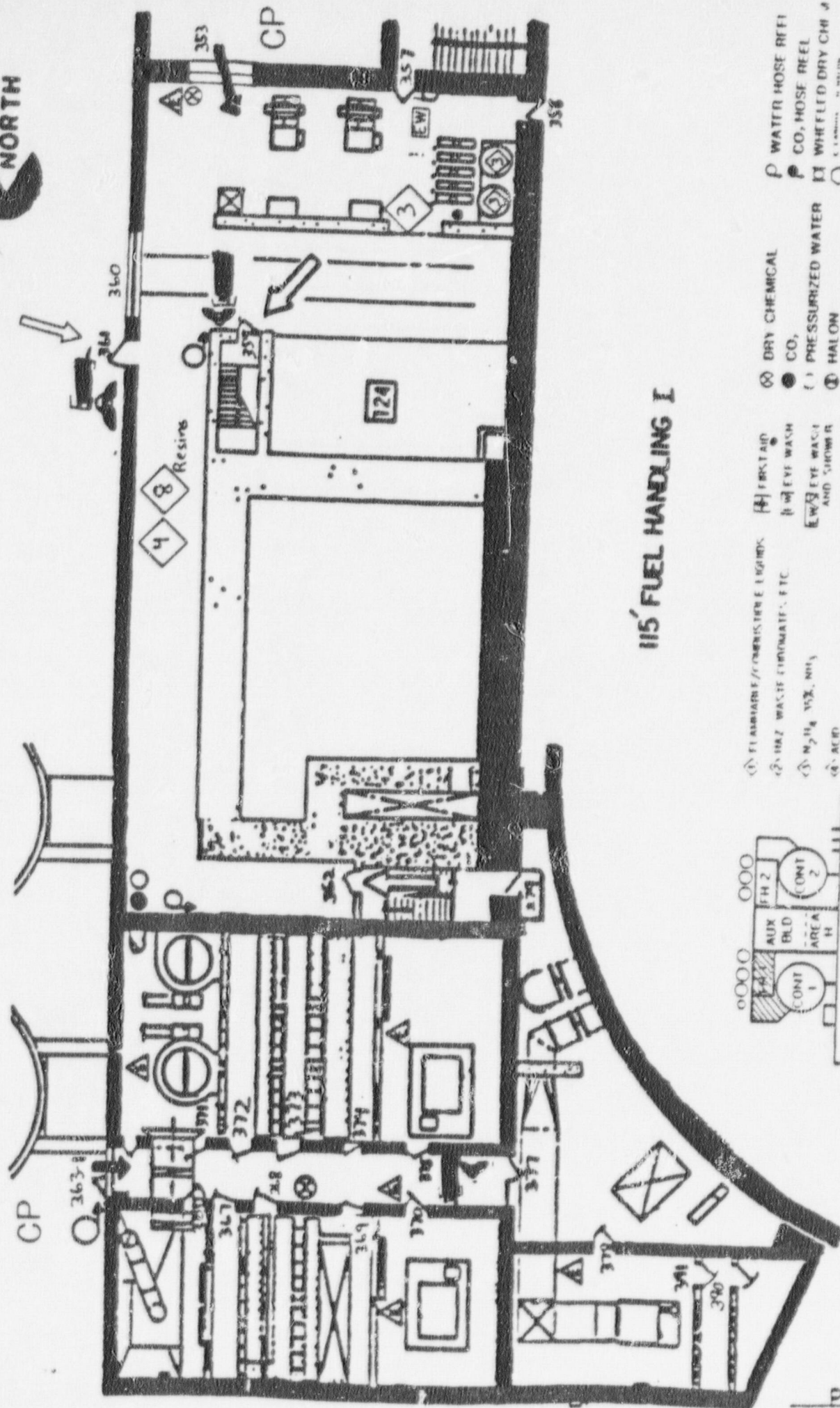
1. Lighting panel - PL 15-1
2. Emergency lighting

SAFETY EQUIPMENT:

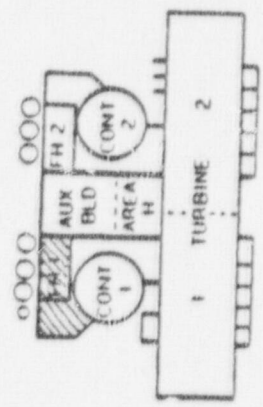
1. One emergency eyewash station is located in the southwest corner by Door 357.
2. A first aid kit is located in the U-I Aux. Bldg, 115' EL., at the western end of the main hallway. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Provide radiation detection devices (TLD, pencil dosimeter).
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. An ammonia tank is located in the fire pump room. Eye and skin protection is required, fire and explosion hazard is moderate when exposed to flame.
5. Contact with 35% hydrazine is very irritating to eyes and skin. This tank is also located in the fire pump room.
6. Skin should be flushed if contacted by chemicals. Seek medical assistance.



115' FUEL HANDLING I



- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊖ HAZ WASTE FORMATS, ETC.
- ⊖ N₂H₄ VSK, NH₃
- ⊖ ACID
- ⊖ CAUSTIC
- ⊖ TOX GASES
- ⊖ FLAMMABLE GASES
- ⊖ MULTIPLE HAZ/OTHER
- ⊗ DRY CHEMICAL
- ⊙ CO₂
- ⊖ PRESSURIZED WATER
- ⊖ HALON
- ⊖ CP COMMAND POST
- ⊖ PRIMARY ACCESS
- ⊖ SECONDARY ACCESS
- ⊖ WATER HOSE REEL
- ⊖ CO₂ HOSE REEL
- ⊖ WHEELED DRY CH
- ⊖ EMERGENCY LIGHTS
- ⊖ TELEPHONE
- ⊖ FIRE WALL RATING
- ☆ AMBULIAIR PART I
- ⊖ FIRST AID
- ⊖ EYE WASH
- ⊖ EYE WASH AND SHOWER

DIABLO CANYON POWER PLANT
UNIT NO. 2

CONTAINMENT PENETRATION EL. 115'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Grease
 3. Transient combustibles
 4. Hydrogen in primary system piping

- MOST PROBABLE FIRE:
1. Transient combustibles which may be radiologically contaminated
 2. Cable insulation
 3. Grease (motor operated valves)

- ACCESS AND EGRESS ROUTES:
1. Primary - Via Door No. 348-2 From Auxiliary Building El. 115' (Security Door)
 2. Secondary - Via Door No. 358-2 from FHB Ammonia and Hydrazine Tank Area (Security Door)
- NOTE: This area is criss crossed with pipe supports and other obstacles making access difficult, especially to the west side.

- FIRE BRIGADE STAGING AREA:
1. Primary - outside El. No. 2 at El. 115'
 2. Secondary - East of Ammonia and Hydrazine Tanks
- NOTE: El. 115' tank area is the primary response location for outside agencies responding to a fire in Auxiliary or Fuel Handling Buildings.

- HAZARDOUS MATERIALS:
1. Probable radiation area with possible localized high radiation hot spots.
 2. Possible loose surface on airborne radiological contamination.
 3. Consult with C&RP tech about radiation precautions. (Area Radiation Monitors, Radiation Surveys, etc.)
 4. Acknowledge posted radiation signs and barriers.

MANAGEMENT OF PLANT SYSTEMS:

1. The area is protected by an automatic sprinkler system. The isolation valve FP-2-30 is located in the NE corner immediately above fire hose reel, FW-120-A42-2.
2. Deenergize electrical equipment as necessary to reduce shock potential.
3. Fire suppression water will collect in floor drain receivers. Conservative water use should be observed.
4. Water may also drain to lower elevation via unsealed penetrations.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures. Do not apply water directly to exposed hot piping.
2. Fire doors should be kept closed as necessary to retard fire and smoke spread.
3. Thermolag enclosures protect safety circuits. Water spray could aid in the protection of these circuits.



FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Four 20# Dry Chemicals
2. Fire hose reels - Two
3. Automatic sprinkler system

VENTILATION:

1. Vent opening at El. 115' on the northwest side and northeast side of the Containment would allow smoke and gases to vent to the outside.
2. Portable smoke exhausters may be required. Smoke could be exhausted via north louvers to the outside.
NOTE: Consult C&RP tech prior to exhausting with portable fans or hose streams out of doors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed. Hose streams could also be used.
4. Some smoke will vent through unsealed penetrations at El. 140' to the Auxiliary Building roof.

COMMUNICATIONS:

1. Plant telephone - 
 2. Portable radios (Ops. Freq. 
- NOTE: Use of portable radios in this area could generate a spurious reactor trip signal.

LIGHTING:

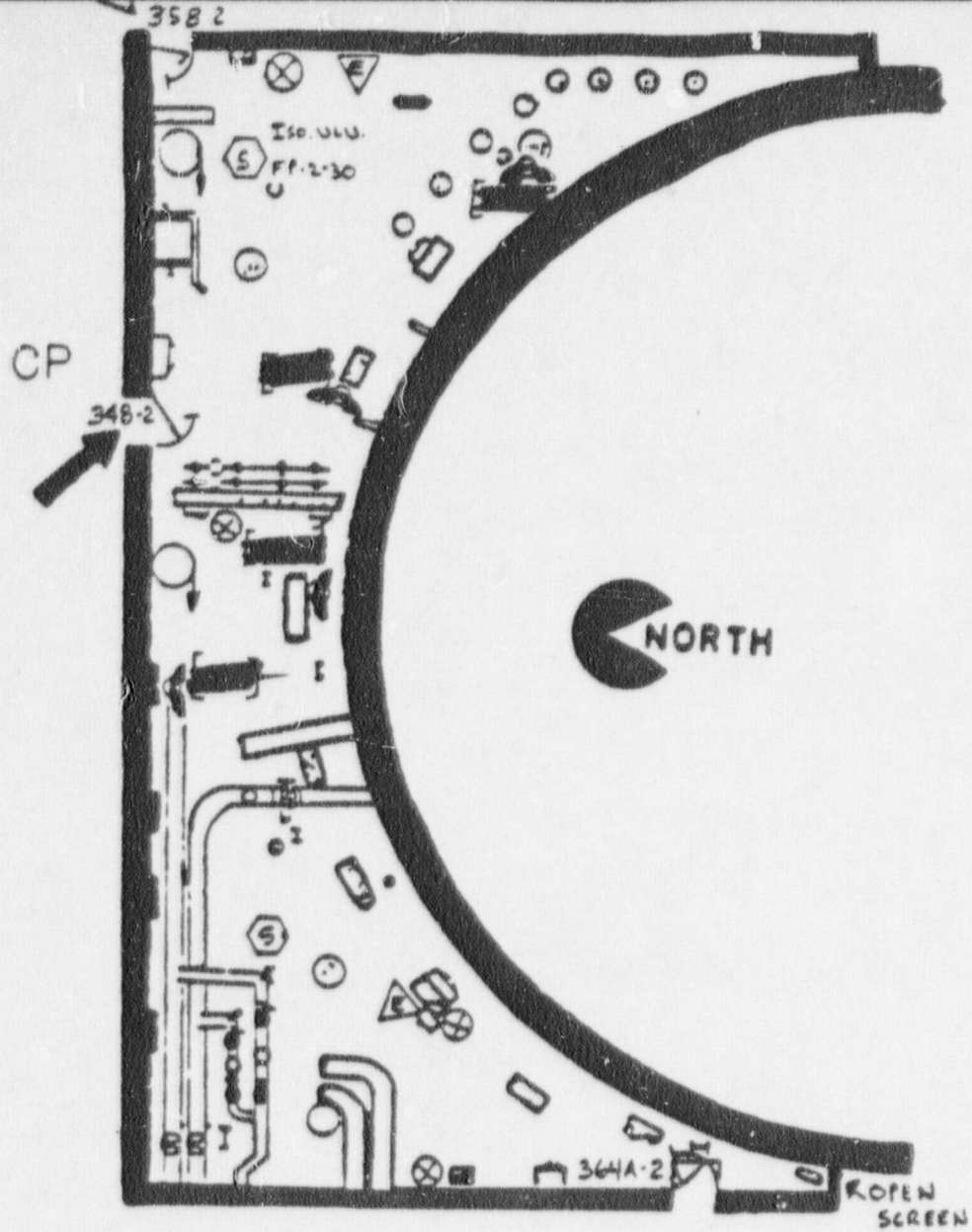
1. Plant lighting panel - PL 24-1
2. Emergency lighting

SAFETY EQUIPMENT:

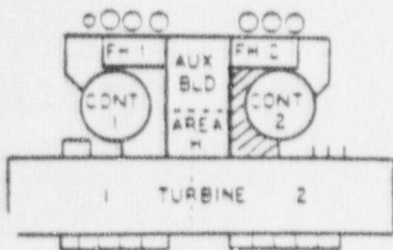
1. An eyewash station is located 20' east of Door 358-2. [Not shown on this map]
2. A first aid kit is located in U-I Aux. Bldg. 115' EL., at the west end of the main hallway. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be needed for rescue operations.
3. Hot steam lines traverse through the area. Use discretion when applying water to these lines. (Line failures could result in steam leaks.)
4. TLD and pencil dosimeters are to be worn for exposure monitoring.
5. Observe good contamination control practices.
6. Turnout gear and SCBA with provided necessary anti-contamination protection.



115 CONT II PENETRATION



- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> ① FLAMMABLE/COMBUSTIBLE LIQUIDS ② HAZ. WASTE CHROMATES ETC. ③ N₂H₄ 25% NH₃ ④ A.C. ⑤ CAUSTIC ⑥ TOXIC GASES ⑦ FLAMMABLE GASES ⑧ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID EW EYE WASH EW/S EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ⊙ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➞ SECONDARY ACCESS | <ul style="list-style-type: none"> P WATER HOSE REEL ⊙ CO₂ HOSE REEL ⊠ WHEELED DRY CHE ○ EMERGENCY LIGHT △ EMERGENCY LIGHT ☎ TELEPHONE — FIRE WALL RATING ☆ ANNUNCIATOR PANE |
|---|--|---|---|

DIABLO CANYON POWER PLANT
UNIT NO. 2

FUEL HANDLING BLDG EL. 115'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Filters (HEPA, carbon, roughing)
 2. Transient combustibles (radwaste)
 3. Lube oil
 4. Cable insulation

- MOST PROBABLE FIRE:
1. Transient combustibles, during outage periods and radwaste
 2. Filters (HEPA, carbon, roughing)
 3. Lube oil
 4. Grease

- ACCESS AND EGRESS ROUTES:
1. Primary - North end via Door No's. 360-2 or 361-2 (Security Door)
South end via Door No. 363-2 (Security Door) to filter areas
 2. Secondary - North end via Door No. 353-2
South end via Door No. 377-2
Center via Door No. 362-2

FIRE BRIGADE STAGING AREA:

1. Primary - N. End Tank Area By Door No. 360-2, El. 115'
- S. End, Auxilliary Building El. 115' By Door No. 363-2
2. Secondary - N. End, cask wash down area by Door 353-2 El. 115'

HAZARDOUS MATERIALS:

1. Ammonia - NH_3
2. Hydrazine - N_2H_4
3. Smoke and fumes from HEPA, carbon and roughing filters
4. Potential radiological airborne and surface contamination
5. Potential high radiation areas in filter rooms and cask decontaminated area

MANAGEMENT OF PLANT SYSTEMS:

1. Floor drains provided in the hallways allows drainage to the Auxilliary Building Main sump.
2. Sprinkler system isolation valve FP-2-1048 for the boxed radwaste storage area.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. A water fog from hose streams may be required to protect exposures.
2. Fire doors should be kept closed as necessary to retard fire and smoke spread.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Three (2) - FHB
(1) - Filter Room Corridor
2. Fire hose reels - Three (2) FHB
(1) Containment Penetration
3. Sprinklers in east corridor, boxed radwaste storage area

VENTILATION: 1. Fans 2S-1 and 2S-2 supply air and 2E-4, 2E-5 and 2E-6 are exhaust fans.

NOTE: Smoke may be contaminated; obtain guidance from C&RP prior to ventilating with portable exhausters.

2. Ventilation could also be accomplished by portable exhausters, or fire hose streams via roll-up door and man doors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS: 1. Plant telephone -

2. Portable radios (Ops. Freq.)

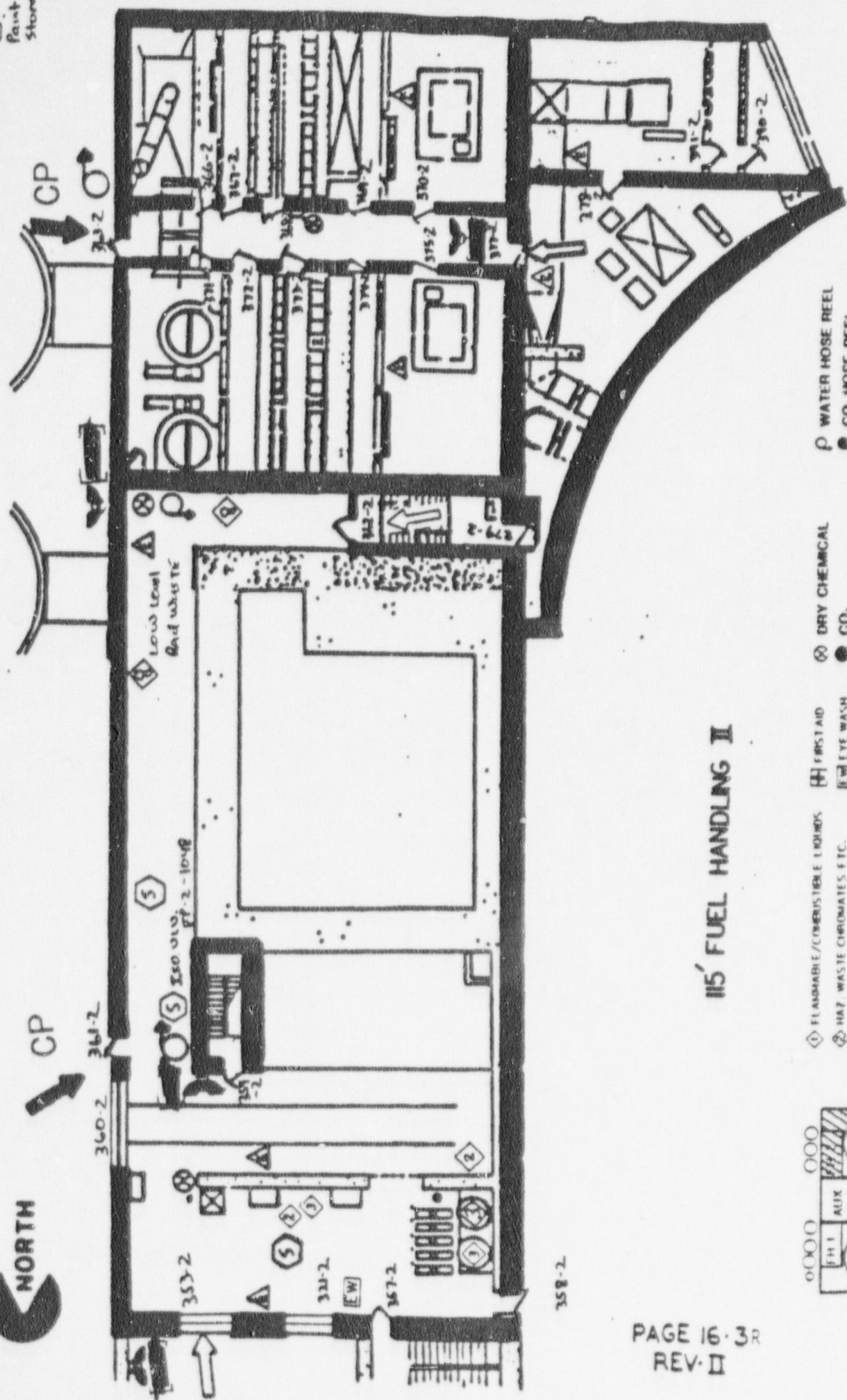
LIGHTING: 1. Plant lighting panel - PL 24-1
2. Emergency lighting

SAFETY EQUIPMENT: 1. An emergency eyewash station is located on the north wall by Door 357-2.
2. A first aid kit is located in the U-I Aux. Bldg., 115t E1., at the west end of the main hallway. [Not indicated on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. TLD and pencil dosimeter will provide exposure monitoring.
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. An ammonia tank is located in the N. end via Door No. 357-2. Eye and skin protection is required. Fire and explosion hazard is moderate when exposed to flame.
5. Contact with 35% Hydrazine is very irritating to eyes and skin. This tank is located in the N. end via Door No. 357-2.
6. Skin should be flushed if contacted by chemicals. Seek medical assistance.

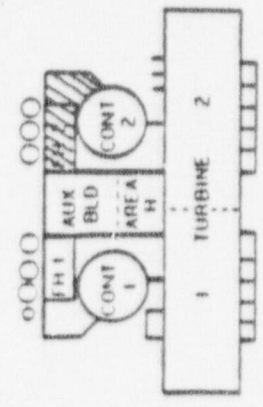
Paint Storage



115' FUEL HANDLING II

PAGE 16.3R
REV-II

- ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◇ HAZ. WASTE CHEMICALS, ETC.
- ◇ N₂, H₂, O₂, NH₃
- ◇ ACID
- ◇ CAUSTIC
- ◇ TOXIC GASES
- ◇ FLAMMABLE GASES
- ◇ MPELLANT/OTHER
- ⊗ DRY CHEMICAL
- CO₂
- PRESSURIZED WATER
- ⊙ HALON
- CP COMMAND POST
- PRIMARY ACCESS
- ⇨ SECONDARY ACCESS
- ⊞ FIRE HOSE REEL
- ⊞ CO₂ HOSE REEL
- ⊞ WHEELED DRY CHEM
- EMERGENCY LIGHT
- ⊞ TELEPHONE
- ⊞ FIRE WALL RATING
- ☆ ANNUNCIATOR PANEL



DIABLO CANYON POWER PLANT
UNIT NO. 1

FUEL HANDLING BUILDING, EL. 140'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Transient combustibles
 2. Acetylene in shop area
 3. Cable insulation
 4. Grease and solvents in Fab. Shops
 5. Filters (HEPA, carbon, roughing)

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Acetylene in shop area
 3. Cable insulation
 4. Grease and solvents
 5. Filters (HEPA, carbon, roughing)

- ACCESS AND EGRESS ROUTES:
1. Primary - from Door No. 528, El. 140' (Security Door)
 2. Secondary - from Door No. 529, El. 140' (Security Door)
 3. North fan areas to be accessed - from Door No. 540 or 541, El. 140'

- FIRE BRIGADE STAGING AREA:
1. Primary - outside roll-up Door No. 525, El. 140' - outside containment emergency hatch, El. 140'
 2. Secondary - tank area 115' El.
 3. Tertiary - Turbine Building 140' El.

- HAZARDOUS MATERIALS:
1. Smoke and fumes from HEPA, carbon and roughing filters
 2. Potential high radiation areas such as spent fuel pool and filter areas
 3. Potential radiological airborne and surface contamination
 4. Miscellaneous solvents, paints, oils, etc. in the Hot Machine Shop.

- MANAGEMENT OF PLANT SYSTEMS:
1. Floor drains provided in the hallways allow drainage to the Auxiliary Building sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.
2. Acetylene bottles in the hot shop should be cooled with water spray.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Three 20# dry chemicals
Two 15# CO₂'s
Two pressurized water
2. Fire hose reels - Five

VENTILATION:

1. Fans S-1 and S-2 provide air and E-4, E-5 and E-6 are exhaust fans.

NOTE: Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters or hose streams.

2. Negative ventilation could be accomplished by using portable exhausters or water hose streams via roll-up doors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

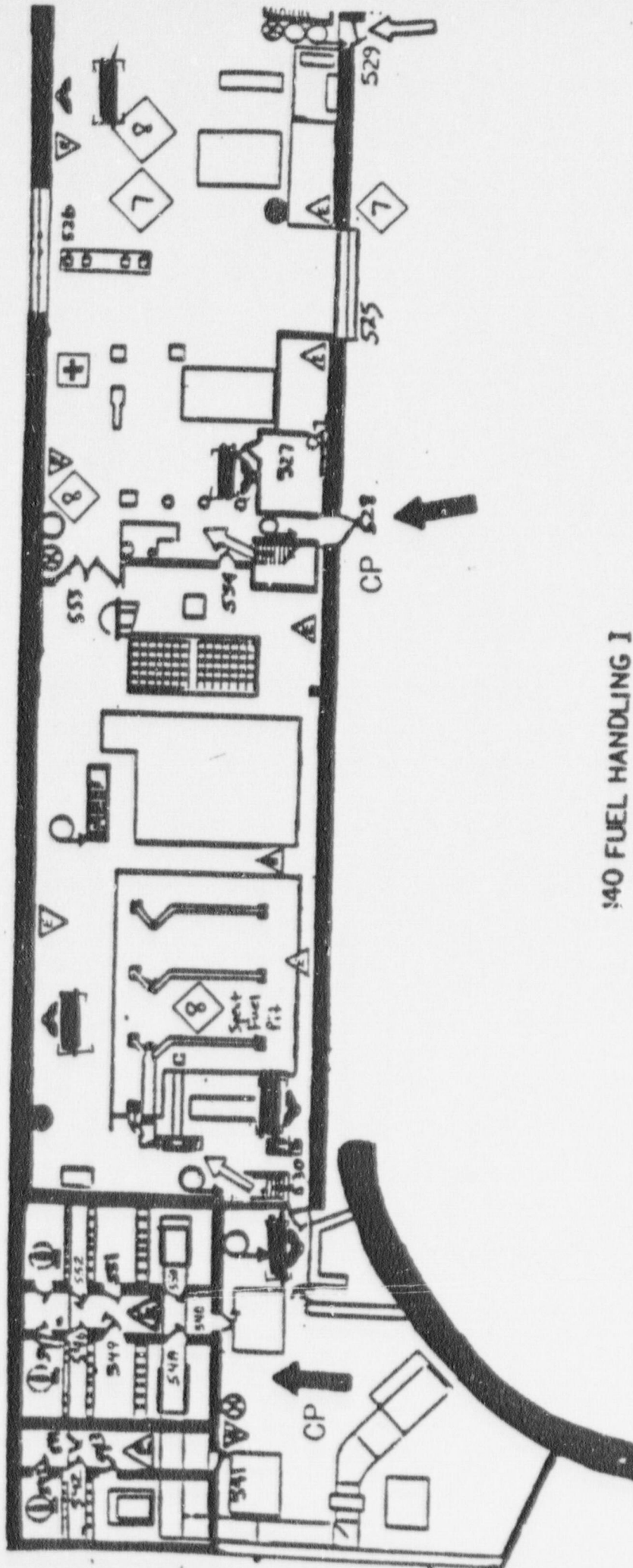
1. Lighting panels - PL 14-2, 15-2, 15-4 and 15-5
2. Emergency lighting

SAFETY EQUIPMENT:

1. One first aid kit located on the east wall, just north of Roll-Up Door 526.
2. One eyewash station/shower is located on 115' E1. of the Aux. Bldg., by the Boric Acid Tanks. An eyewash station is also on 115' E1., just north of Door 357. [Not indicated on this map]

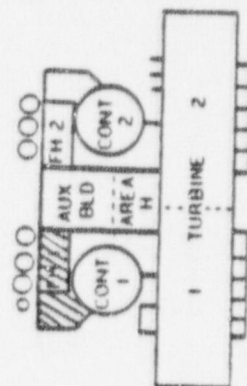
SPECIAL PRECAUTIONS:

1. Self-contained breathing apparatus will be required.
2. TLD and pencil dosimeter will provide exposure monitoring.
3. Do not use halon or dry chemical on new fuel.
4. Turnout gear and SCBA will provide necessary anti-contamination protection.



140 FUEL HANDLING I

- ① FLAMMABLE/COMBUSTIBLE LIQUIDS
- ② HAZ. WASTE CHROMATES ETC.
- ③ N₂, H₂, O₂, NH₃
- ④ ACID
- ⑤ CAUSTIC
- ⑥ TOXIC GASES
- ⑦ FLAMMABLE GASES
- ⑧ MISCELLANEOUS/OTHER
- ⊗ DRY CHEMICAL
- CO.
- PRESSURIZED WATER
- ⊕ HALON
- CP COMMAND POST
- ↑ PRIMARY ACCESS
- ⇌ SECONDARY ACCESS
- ⊞ FRST AID
- EW EYE WASH
- EW/S EYE WASH AND SHOWER
- ⊞ WATER HOSE REEL
- ⊞ CO. HOSE REEL
- ⊞ WHEELED DRY CHEM
- S. C. (S. C. 1000) (S. C. 1000) (S. C. 1000)
- △ EMERGENCY LIGHTS
- ⊞ TELEPHONE
- ⊞ FIRE WALL RATING
- ☆ ANNUNCIATOR PANEL



DIABLO CANYON POWER PLANT
UNIT NO. 2

FUEL HANDLING BLDG. EL. 140'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Cable insulation
2. Filters (HEPA, carbon, roughing)
3. Transient combustibles

MOST PROBABLE FIRE: 1. Cable insulation
2. Filters (HEPA, carbon, roughing)
3. Transient combustibles

ACCESS AND EGRESS ROUTES: 1. Primary - Via Door No. 557 or via Door No. 530
El. 140' to spent fuel
- Via Door No. 541-2 or via Door No. 540
El. 140' to vent area
2. Secondary - Via Door No. 556 El. 140' to spent
fuel pool
- Via sun roof El. 140' to vent area

FIRE BRIGADE STAGING AREA: 1. Primary - Outside roll-up Door No. 525 El. 140'
- Outside Containment Emergency Hatch,
El. 140'
2. Secondary - Tank Area El. 115'

HAZARDOUS MATERIALS: 1. Smoke and fumes from HEPA, carbon and roughing filters
2. Potential high radiation areas such as spent fuel pool
and filter areas
3. Potential radiological airborne and surface
contamination

MANAGEMENT OF PLANT SYSTEMS:

1. Floor drains provided in the hallways allow drainage to the Auxiliary Building Main sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.


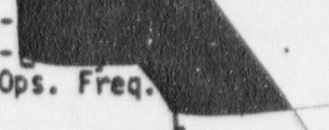
FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - One 20# Dry Chemicals
- One 20# CO₂
2. Fire hose reels - Three

VENTILATION: 1. Fans 2S-1 and 2S-2 Supply Air and 2E-4, 2E-5 and 2E-6 are exhaust fans.

NOTE: Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters.

2. Ventilation could be affected by using portable exhausters and hose streams exhausted via doors to outside.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

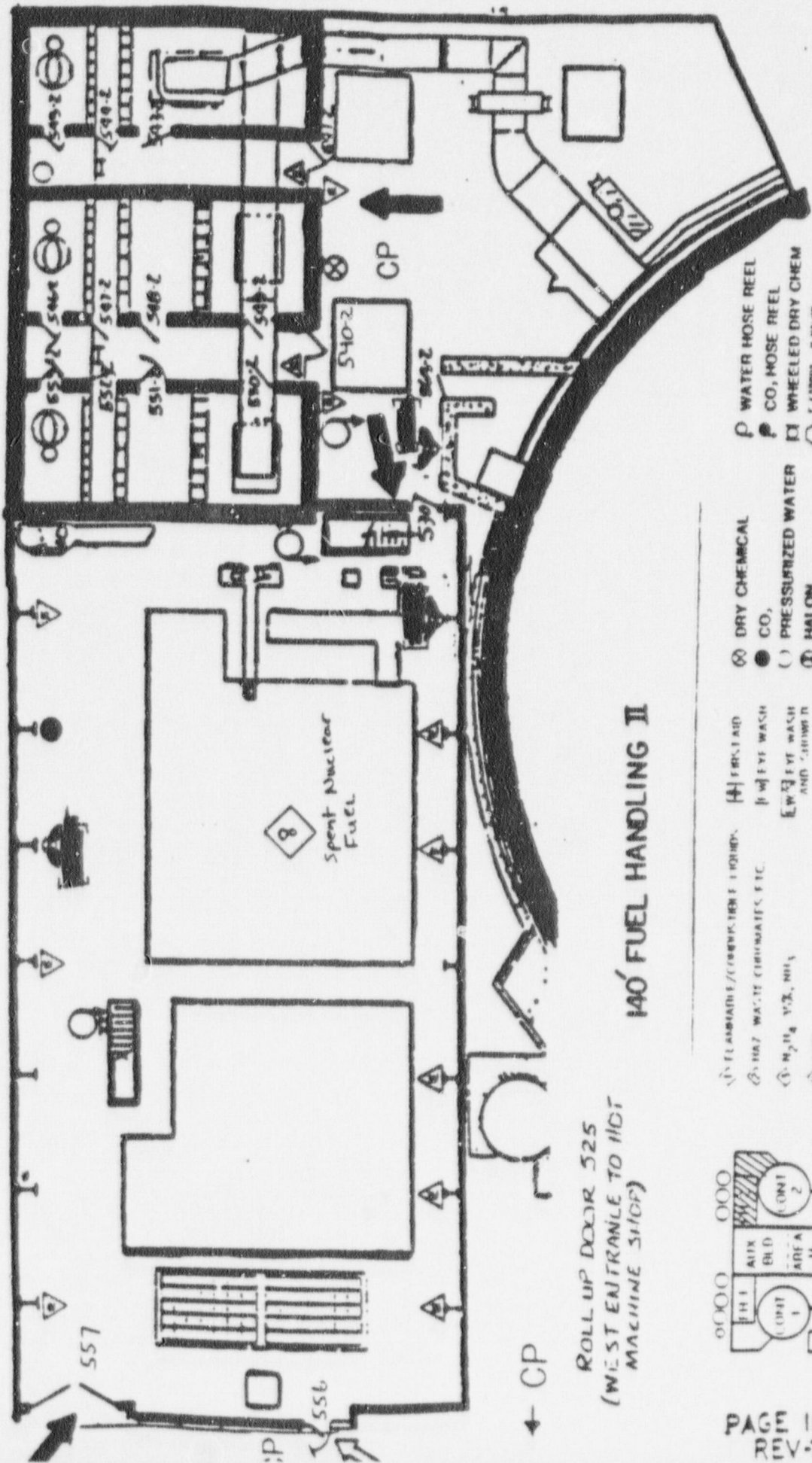
COMMUNICATIONS: 1. Plant telephones - 
2. Portable radios (Ops. Freq. 

LIGHTING: 1. Lighting panels - PL 25-5 - 25-2 and 24-2
2. Emergency lighting

SAFETY EQUIPMENT: 1. A first aid kit is located on the east wall of the hot machine shop by Roll-up Door 526. [Not indicated on this map]
2. An eyewash station is located on the 155' E1. of the Aux. Bldg. by Door 357-2. [Not indicated on this map]

SPECIAL PRECAUTIONS:

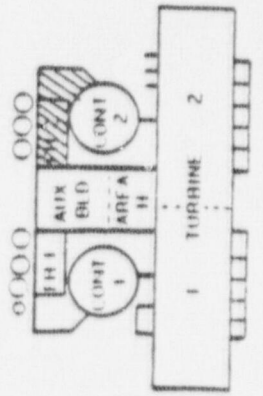
1. Self contained breathing apparatus will be required.
2. Provide radiation detection devices (TLD, pencil dosimeter).
3. Do not use dry chemical on new fuel.
4. Turnout gear and SCBA will provide necessary anti-contamination protection.



140 FUEL HANDLING II

ROLL UP DOOR 525
(WEST ENTRANCE TO HGT
MACHINE SHOP)

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ FLAMMABLE/COMBUSTIBLE SOLIDS
- ⊕ FIRST AID
- ⊕ HAZ WASTE CONTAINERS, ETC.
- ⊕ H₂O, V.O., NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ LOW GASES
- ⊕ FLAMMABLE GASES
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ CP COMMAND POST
- ➔ PRIMARY ACCESS
- ➔ SECONDARY ACCESS
- ⊕ WATER HOSE REEL
- ⊕ CO, HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ⊕ AIRBURNING PARTS



DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

VENTILATION ROOMS - E1. 154' & 164'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Filters (HEPA, carbon, roughing)
2. Cable insulation
3. Grease
4. Transient combustibles

MOST PROBABLE FIRE: 1. Transient combustibles
2. Filters (HEPA, carbon, roughing)
3. Cable insulation
4. Grease

ACCESS AND EGRESS ROUTES: 1. Primary - Via Door No's. 605 and 604 of Stairway S-2 only for E1. 154'
2. For fan and elevator machine room Door No. 612 or No. 613 to roof area at E1. 164'

FIRE BRIGADE STAGING AREA: 1. Primary - For E1. 154' outside Elev. No. 2 at E1. 140'
- For E1. 164' Fan and Elevator Machine Room, outside Elev. No. 1 E1. 140' on the control room roof

HAZARDOUS MATERIALS: 1. Smoke and fumes from HEPA, carbon and roughing filters
2. Potential for radiological contamination of filters from airborne particles

MANAGEMENT OF PLANT SYSTEMS: 1. Both Unit 1 and 2 rooms at E1. 164' are protected by a wet type automatic sprinkler system. The isolation valve is located at bottom of Stairway S-2 E1. 140' between Door No. 521 and Elev. No. 2 Valve FP-1-341.
2. Drains are provided in each 154' fan room as well as the condenser rooms.
3. Water from E1. 163' fan rooms can drain to the control room roof.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Close fire doors to reduce fire and smoke spread.
2. A water fog from hoses may be required to cool exposures.
3. Fire could spread into the control room from the open duct penetrations at the west side of E1. 154' fan rooms.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 15# CO₂'s
- One 20# Dry Chemical
 2. Automatic wet sprinkler system (E1. 154')
 3. Fire hose reel top of Stairway E1. 154'
Fire hose reel outside Door No. 521
E1. 154'
Fire hose reel adjacent to Elev. No. 1 E1. 140'
Turbine Deck for use at E1. 164' Fan Room
- NOTE: For E1. 154' an additional 100' of hose may be required. For E1. 164' an additional 150' of hose may be required to reach fan rooms S-27 and S-28.

VENTILATION:

1. Exhaust fans E-35 and E-36 are provided at E1. 154'.
2. Louvers are provided which could vent smoke to the outside.
3. Portable smoke exhausters may be required for the filter rooms and exhausted to the condenser rooms. For the Fan Rooms and Elev. Machine Room, exhaust to the outside using fans or hose streams.
NOTE: Obtain guidance from C&RP prior to ventilating out of doors.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - [REDACTED] - Unit No. 2
[REDACTED] - Unit No. 1
[REDACTED] Roof E. Wall
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

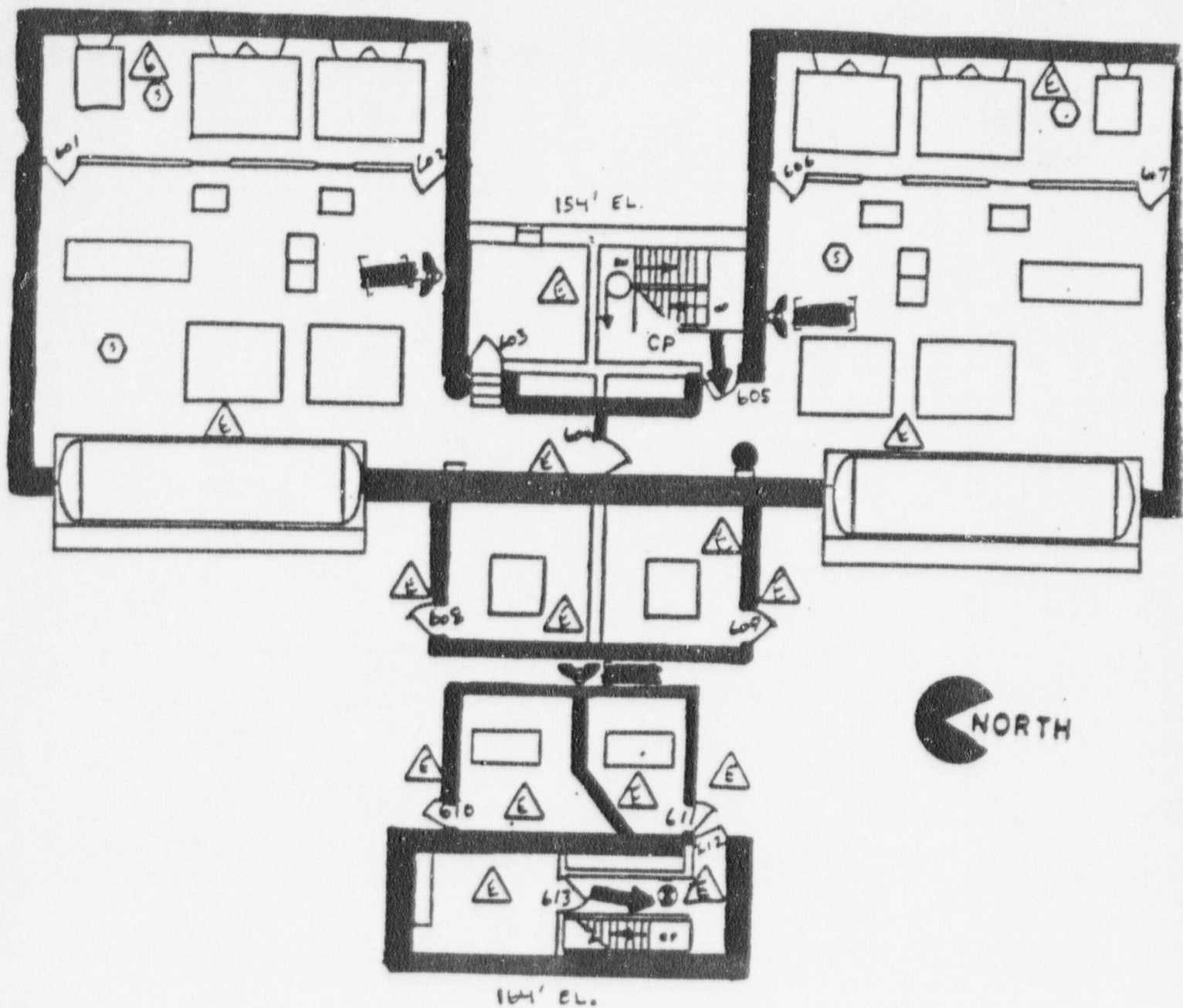
1. Lighting panel - PL 13-4 at E1. 140' Auxiliary Building Col. M-174
2. Emergency lighting

SAFETY EQUIPMENT:

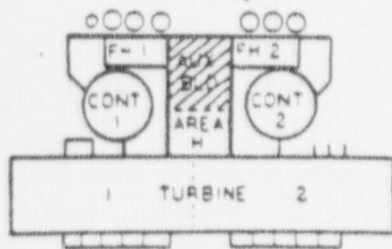
1. An eyewash station/shower is located in the U-I Aux. Bldg., 115' E1., by the Boric Acid Tanks.
2. A first aid kit is located on the east wall of the Hot Machine Shop.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Access and egress to E1. 154' is limited to one stairway only.



154', 164' VENTILATION ROOMS I-II



- | | | | |
|---|-----------------------|---------------------|---------------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ☉ WATER HOSE REEL |
| ② HAZ WASTE CHROMATES ETC. | 🚰 EYE WASH | ● CO, | ☉ CO, HOSE REEL |
| ③ N ₂ H ₄ 35% NH ₃ | 🚰 EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ☒ WHEELED DRY CHEM |
| ④ ACID | | ☼ HALON | ○ Ⓢ SAFETY Ⓢ 2511 Ⓢ 2511 Ⓢ 2511 |
| ⑤ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | ➡ PRIMARY ACCESS | ☎ TELEPHONE |
| ⑦ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | 🔥 FIRE WALL RATING |
| ⑧ MISCELLANEOUS OTHER | | | ☆ ANNUNCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 1

CONTAINMENT EL. 91'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Cable insulation
2. Lube oil reactor coolant pumps (265 gals. per pump)
3. Charcoal filters (iodine removal units)
4. Transient combustibles (outage periods)

MOST PROBABLE FIRE:

1. Transient combustibles (outage periods)
2. Cable insulation
3. Lube oil @ R. C. Pumps
4. Charcoal filters @ iodine removal units

ACCESS AND EGRESS ROUTES:

1. East stairway at approx. 100°
2. West stairway at approx. 270°

FIRE BRIGADE STAGING AREA:

1. Primary - Unit No. 1 Turbine Deck
2. Secondary - Hot Machine Shop - FHB El. 140'

HAZARDOUS MATERIALS:

1. Charcoal filters (iodine removal units)
2. Smoke from cable insulation
3. Potential radiological airborne and surface contamination
4. High radiation areas inside shield walls by RCPs and S/Gs

MANAGEMENT OF PLANT SYSTEMS:

1. Containment Fire Protection System.
Isolation Valve 1-FCV-633 open, Located in Containment Penetration El. 100' GW Col. Lines K&10' west of 129
NOTE: FCV-633 should be checked open or opened following a safety isolation signal if fire water is needed in Containment.
2. Floor Drains at El. 91' allows drainage to the Containment structure sump.
3. Containment evacuation alarm may be operated from the personnel hatch.
4. RCP lube oil collection tank located by fuel transfer tube (over flows to Containment sumps).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water spray from hose reels may be required to protect safety related conduits and sensing lines.
2. Do not spray water directly on exposed hot piping. Major steam leaks could result.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Four 15# CO₂'s
2. Fire hose reel stations - Four
3. Automatic sprinkler system @ reactor coolant pumps

NOTE: During Modes 1-4, the fire extinguishers are stored outside containment.

VENTILATION:

1. S-3 Containment Supply Fan
2. E-1 Containment Exhaust Fan
3. E-11, E-12, E-13 and E-14 CRDM Fans
4. E-15 and E-16 Exhaust Fans For iodine removal units
5. Hose streams may be effective from personnel hatch to ventilate out of doors as a last resort. C&RP should be notified first.
6. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
2. Portable radios (Ops. Freq.)

NOTE: Use of portable radios in Containment could cause a spurious reactor trip signal.

LIGHTING:

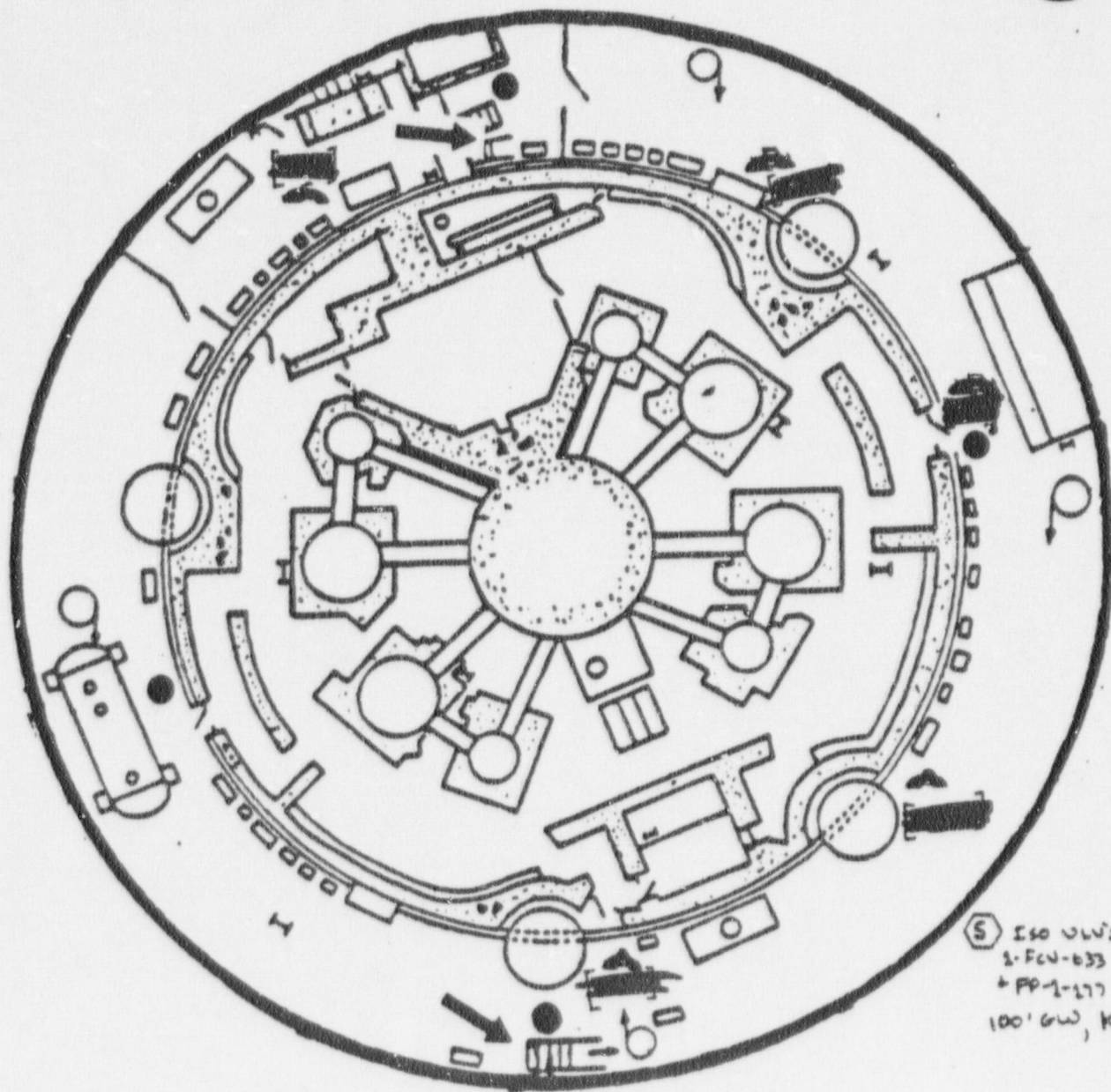
1. Lighting panels - PL 16-1 and 17-1
2. Emergency lighting

SAFETY EQUIPMENT:

1. An eyewash station/shower is located in the U-1 Aux. Bldg., 115' El., by the Boric Acid Tanks. [Not shown on this map]
2. A first aid kit is located on the east wall of the Hot Machine Shop. [Not shown on this map]

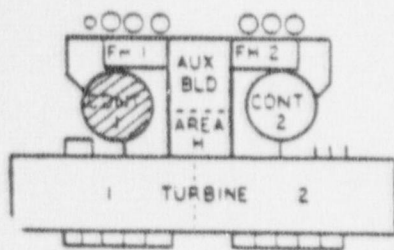
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns should be carried by Fire Brigade members for rescue operations.
3. Turnout gear and SCBA will provide effective anti-contamination protection.
4. TLD and pencil dosimeter to be worn for exposure monitoring.
5. "CAUTION": SCBA's air supply capacity may limit Fire Brigade to 5 minute stay time at El. 91'.



UNIT 1 TURBINE DECK
CP

91 CONT. I



- | | | | |
|--|------------------------|---------------------|-----------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ② HAZ WASTE CHROMATES ETC. | ⊞ EYE WASH | ● CO ₂ | ⊙ CO ₂ HOSE REEL |
| ③ N ₂ & 35% NH ₃ | EW EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊠ WHEELED DRY CHEM |
| ④ ACID | | ⊙ HALON | ⊙ E-DRY-CHEM |
| ⑤ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | ➔ PRIMARY ACCESS | ☎ TELEPHONE |
| ⑦ FLAMMABLE GASES | | ➞ SECONDARY ACCESS | — FIRE WALL RATING |
| ⑧ MISCELL. ANOD'S, OTHER | | | ☆ ANNUNCIATOR PANEL |

DIABLO CANYON POWER PLANT
UNIT NO. 1

CONTAINMENT EL. 117'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. RCP Pump oil
 3. Transient combustibles (during outages)

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Cable insulation
 3. RCP Pump oil

- ACCESS AND EGRESS ROUTES:
1. East stairway approx. 120°
 2. West stairway approx. 270°

- FIRE BRIGADE STAGING AREA:
1. Primary - Unit No. 1 Turbine Deck El. 140'
 2. Secondary - Hot Machine Shop - FHB El. 140'

- HAZARDOUS MATERIALS:
1. Smoke room cable insulation
 2. Potential radiological airborne and surface contamination
 3. High Radiation Areas inside shield walls by RCPs and S/Gs

- MANAGEMENT OF PLANT SYSTEMS:
1. Open grating and floor drains provided at El. 91' allows drainage to the Containment structure sump.
 2. Containment Evacuation Alarm may be operated from the personnel hatch.
 3. Containment Fire Protection System isolation valve (FCV-633), located in Containment penetration El. 100' GW Col. Lines K&10' west of 129.

NOTE: FCV-633 should be checked open or opened following a safety isolation signal if fire water is needed in Containment.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Fire Hose Streams may be required to protect safety related conduits and sensing lines.
2. Do not apply hose streams directly to exposed hot piping. Major steam leaks could result.
3. Thermolag junction boxes on south wall protect safety related circuits. Hose streams may help cool these boxes.

FIRE SUPPRESSION EQUIPMENT:



1. Fire extinguishers - Two 15# CO₂'s
2. Sprinklers for each RCP
3. Fire Hose must be routed from E1. 140' or E1. 91'

NOTE: During Modes 1-4, fire extinguishers are kept outside containment.

VENTILATION:

1. S-3 Containment Supply Fan
2. E-1 Main Containment Exhaust Fan
3. E-11, E-12, E-13 and E-14 CRDM Fans
4. E-15 and E-16 Exhaust Fans for iodine removal units
5. Hose streams may be effective from the personnel hatch as a last resort - C&RP should be notified first.
6. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - 
2. Portable radios (Ops. Freq. )

NOTE: Use of portable radios in Containment could cause a spurious reactor trip signal.

LIGHTING:

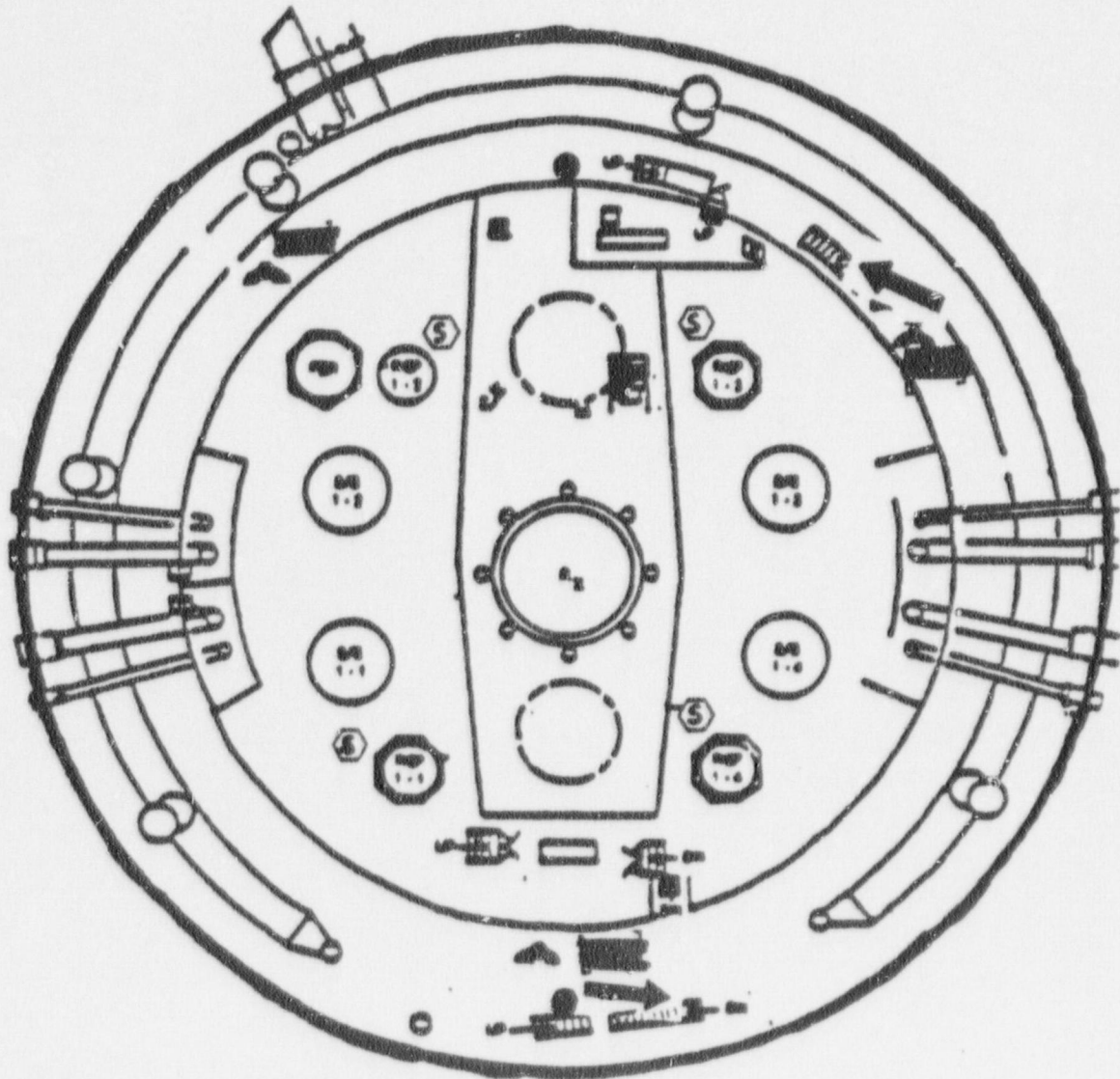
1. Plant lighting panel 16-2
2. Emergency lighting

SAFETY EQUIPMENT:

1. An eyewash/shower station is located in the U-I Aux. Bldg., 115' E1., by the Boric Acid Tanks. [Not shown on this map]
2. A first aid kit is located in the Hot Machine Shop along the east wall. [Not shown on this map]

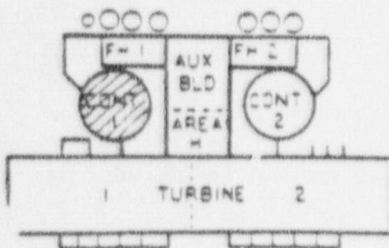
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns should be carried by Fire Brigade Members for rescue operations.
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. TLD and pencil dosimeter will provide exposure monitoring.



UNIT 1 TURBINE DECK CP

117 CONT I



- | | | | |
|---|------------------------------|---------------------|-----------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO ₂ | ⊕ CO ₂ HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊕ E.A.S. EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊕ WHEELED DRY CHEM |
| ⊕ ACID | | ⊕ HALON | ⊕ TELEPHONE |
| ⊕ CAUSTIC | | CP COMMAND POST | ⊕ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | ⊕ FIRE WALL RATING |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊕ MISCELLANEOUS OTHER | | | |

DIABLO CANYON POWER PLANT
UNIT NO. 1

CONTAINMENT EL. 140' AND ABOVE
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. HEPA and roughing filters (fan air coolers)
 3. Transient combustibles (during outages)
 4. Grease and Oil (cranes and fan cooler motors)

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Grease and oil
 3. Cable insulation
 4. HEPA and roughing filters

- ACCESS AND EGRESS ROUTES:
1. Personnel hatch
 2. Equipment hatch (if open)
 3. Emergency exit approx. 70° between fan coolers 1-3 and 1-4

- FIRE BRIGADE STAGING AREA:
1. Primary - Turbine Deck El. 140' Unit 1
 2. Secondary - Hot Machine Shop - FHB El. 140'

- HAZARDOUS MATERIALS:
1. HEPA and roughing filters (fan air coolers)
 2. Smoke from cable insulation
 3. Potential radiological airborne and surface contamination
 4. High radiation areas around the reactor cavity

- MANAGEMENT OF PLANT SYSTEMS:
1. Open grating and floor drains at El. 91' allows drainage to the Containment sump.
 2. Containment evacuation alarm may be operated from the personnel hatch.
 3. Containment Fire Protection System isolation valve (FCV-633) located in Containment - penetration El. 100' GW FP-1-177 Col. Lines K&10' west of 129.
 4. A smoke detector annunciator panel is located on the 140' El., several feet to the right of the personnel access hatch, at the Containment liner wall. Readout locations are given on the panel.

NOTE: FCV-633 could go shut on a safety isolation signal and may have to be re-opened.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect safety related conduits and sensing lines.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Five 15# CO₂'s (one on polar crane)
2. Fire hose reel stations - Four

NOTE: During plant operations, fire extinguishers are stored in a metal box outside Containment.

VENTILATION:

1. S-3 Containment Supply Fan
2. E-1 Main Containment Exhaust Fan
3. E-11, E-12, E-13 and E-14 CRDM Fans
4. E-15 and E-16 Exhaust Fans for iodine removal units
5. Hose streams may be effective from the equipment hatch as a last resort C&RP should be notified first.
6. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
2. Portable radios (Ops. Freq.)

NOTE: Use of portable radios in containment could cause a spurious reactor trip signal.

LIGHTING:

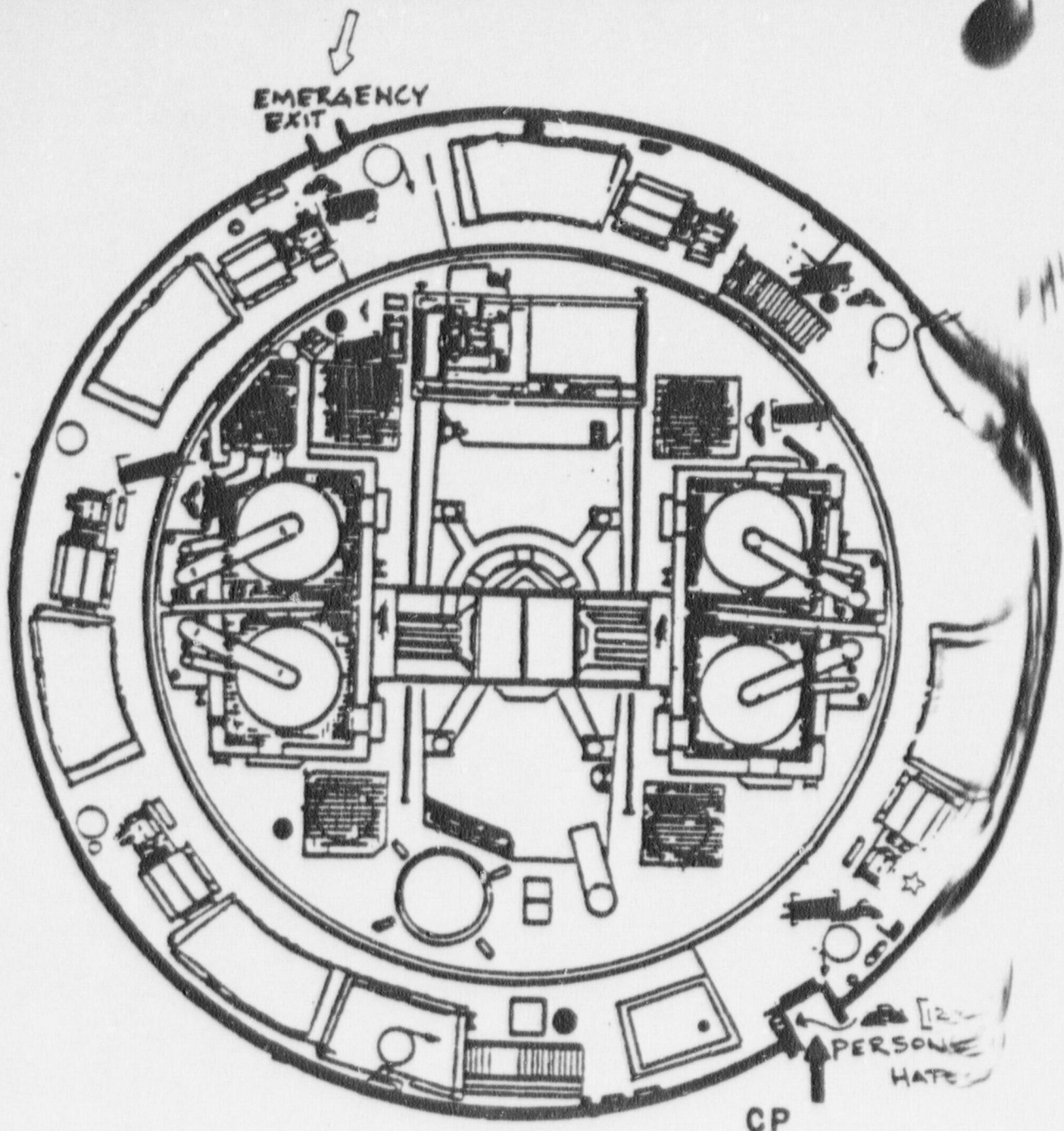
1. Plant lighting panels - 17-4 - 17-2 - 16-3 and 16-5
2. Emergency lighting

SAFETY EQUIPMENT:

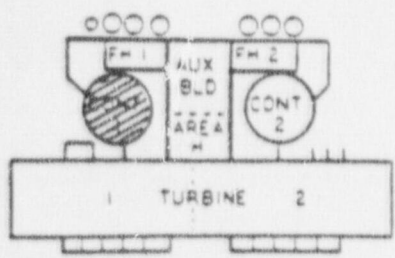
1. An eyewash station/shower is located in the U-I Aux. Bldg., 115' El., by the Boric Acid Tanks. [Not shown on this map]
2. A first aid kit is located in the Hot Machine Shop on the east wall. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns should be carried by Fire Brigade members for rescue operations.
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. TLD and pencil dosimeter to provide exposure monitoring.
5. "CAUTION" 30 Minute SCBA's will probably not provide sufficient air capacity for a Fire Fighting response above the Polar Crane.



140 CONT. I



- ① FLAMMABLE/COMBUSTIBLE LIQUIDS
- ② HAZ. WASTE CHROMATES ETC.
- ③ N_2 & 35% NH_3
- ④ ACID
- ⑤ CAUSTIC
- ⑥ TOXIC GASES
- ⑦ FLAMMABLE GASES
- ⑧ MISCELLANEOUS OTHER
- FIRST AID
- EYE WASH
- E.W.S. EYE WASH AND SHOWER
- ⊗ DRY CHEMICAL
- CO₂
- PRESSURIZED WATER
- ☼ HALON
- CP COMMAND POST
- PRIMARY ACCESS
- ⇨ SECONDARY ACCESS

DIABLO CANYON POWER PLANT
UNIT NO. 2

CONTAINMENT EL. 91'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Cable insulation
2. Lube oil (Reactor Cooling Pumps 265 gals. per pump)
3. Charcoal filters (iodine removal units)
4. Transient combustibles (outage periods)

MOST PROBABLE FIRE:

1. Transient combustibles
2. Cable insulation
3. Reactor Coolant Pump lube oil
4. Charcoal Filters

ACCESS AND EGRESS ROUTES:

1. West stairway approx. 100°
2. East stairway approx. 270°

FIRE BRIGADE STAGING AREA:

1. Primary - Unit No. 2 Turbine Deck
2. Secondary - Hot Machine Shop - FHB El. 140'

HAZARDOUS MATERIALS:

1. Charcoal filters (iodine removal units)
2. Smoke from cable insulation
3. Potential radiological airborne and surface contamination
4. High radiation areas inside shield walls by RCP's and S/G's

MANAGEMENT OF PLANT SYSTEMS:

1. Containment Fire Protection System. Isolation valves 2-FCV-633 and FP-2-864 located in Containment Penetration El. 100' Col. Lines K & 22.
NOTE: FCV-633 could go shut following a safety isolation signal and may have to be reopened.
2. Floor Drains at El. 91' allows drainage to the Containment Main sump.
3. Containment Evacuation Alarm may be operated from the personnel hatch.
4. RCP lube oil collection tank located by the fuel transfer tube (overflows to Containment sumps).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water spray from hose reels may be required to protect exposures such as safety related conduits and sensing lines.
2. Do not apply water directly on exposed hot piping. Major steam leaks could result.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Four 20# Dry Chemicals
2. Fire hose reels - Four
3. Automatic sprinkler system @ Reactor Cooling Pumps

NOTE: During Modes 1-4, the fire extinguishers are stored outside Containment.

VENTILATION:

1. 2S-3 Containment Supply Purge Fan
2. 2E-15 and 2E-16 Exhaust Fans for iodine removal units
3. 2E-11, 2E-12, 2E-13 and 2E-14 reactor exhaust fans
4. Fan coolers may also be run in their normal mode to recirculate and cool hot gases and smoke.
5. 2E- Main Containment Exhaust Fan
6. Hose streams may be effective from the personnel hatch to ventilate out of doors as a last resort. Notify C&RP first.
7. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
2. Portable radios (Ops. Freq.)

NOTE: Use of portable radios in Containment could cause a spurious reactor trip signal.

LIGHTING:

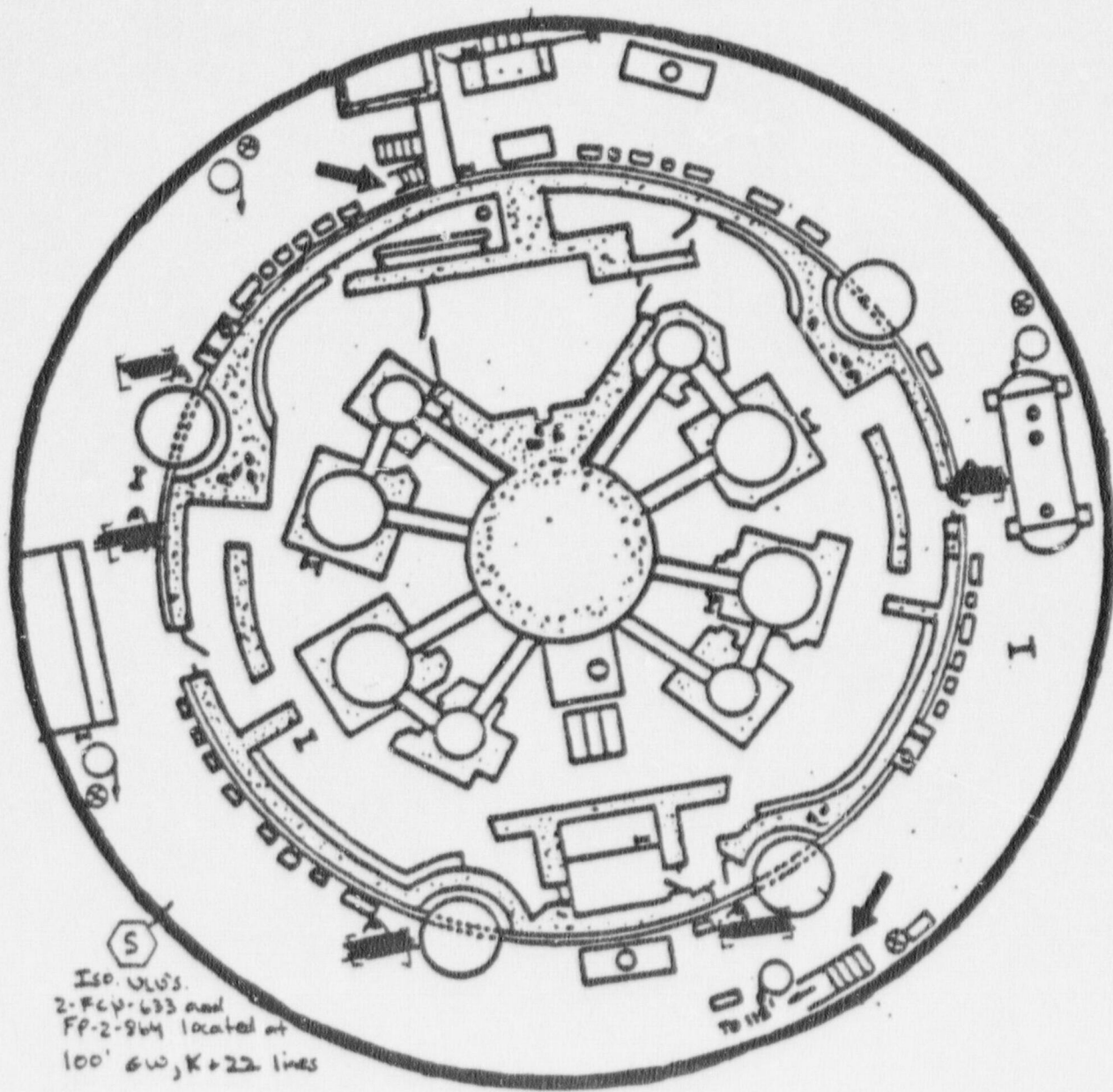
1. Lighting panel - PL 27-1
2. Emergency lighting

SAFETY EQUIPMENT:

1. An eyewash station is located in the U-II Fuel Handling Building, 115' E1., by Door 353-2. [Not shown on this map]
2. A first aid kit is located on the east wall of the Hot Machine Shop. [Not shown on this map]

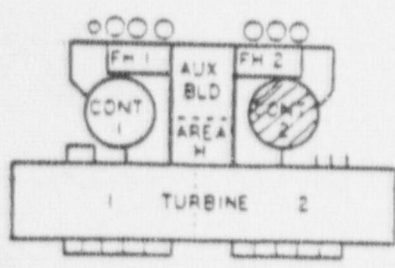
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. *CAUTION* SCBAs Air Supply Capacity may Limit Fire Brigade to 5 minute stay time at E1. 91'.
3. Portable hand-held lanterns should be carried by Fire Brigade members for rescue operations.
4. Turnout gear and SCBA will provide necessary anti-contamination protection.



Iso. vlv's.
 2-FCV-633 and
 FP-2-964 located at
 100' @w, K+22 lines

91 CONT. II



- | | | | |
|---|-----------------------|---------------------|---------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊖ EYE WASH | ● CO, | ⊖ CO, HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊖ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊕ ACID | | ⊖ HALON | ⊖ EMERGENCY LIGHTS |
| ⊕ CAUSTIC | | ⊖ CP COMMAND POST | ⊖ TELEPHONE |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | ⊖ FIRE WALL RATING |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊕ MISCELLANEOUS OTHER | | | |

DIABLO CANYON POWER PLANT
UNIT NO. 2

CONTAINMENT EL. 117'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Cable insulation
2. RCP Pump oil
3. Transient combustibles (during outages)

MOST PROBABLE FIRE: 1. Transient combustibles
2. Cable insulation
3. RCP Pump oil

ACCESS AND EGRESS ROUTES: 1. West stairway approx. 120°
2. East stairway approx. 270°

FIRE BRIGADE STAGING AREA: 1. Primary - Turbine Deck El. 140' Unit 2
2. Secondary - Hot Machine Shop - FHB El. 140'

HAZARDOUS MATERIALS: 1. Smoke from cable insulation
2. Potential radiological airborne and surface contamination
3. High radiation areas inside shield walls by RCPs and SIGs

MANAGEMENT OF PLANT SYSTEMS:

1. Open grating and floor drains provided at El. 91' would allow water to drain to the Containment sump.
 2. Containment Evacuation Alarm may be operated from the personnel hatch.
 3. Containment Fire Protection System Isolation Valve 2-FCV-633 located in Containment Penetration El. 100' Col. Lines K & 10' west of 129
- NOTE: FCV-633 may go shut following a safety isolation signal and may need to be reopened.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose Streams may be required to protect exposures such as safety related conduits and sensing lines.
2. Do not apply hose streams directly on hot exposed piping. Major steam leaks could result.
3. Thermolag junction boxes on the north wall protect safety related circuits. Hose streams may help cool these boxes.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 20# Dry Chemicals
 2. Sprinklers for each RCP
 3. Fire Hose must be routed from E1. 140' or E1. 91'.
- NOTE: During Modes 1-4, the fire extinguishers are kept outside Containment.

VENTILATION:

1. 2S-3 Containment Supply Purge Fan
2. 2-E1 Main Containment Exhaust Fan
3. Fan Coolers may also be run in their normal mode to recirculate and cool hot gases and smoke.
4. 2E-15 and 2E-16 Exhaust Fans for iodine removal units
5. Hose streams may be effective from the personnel hatch to ventilate as a last resort. Notify C&RP first.
6. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
 2. Portable radios (Op's. Freq. [REDACTED])
- NOTE: Use of portable radios in containment could cause a spurious reactor trip signal.

LIGHTING:

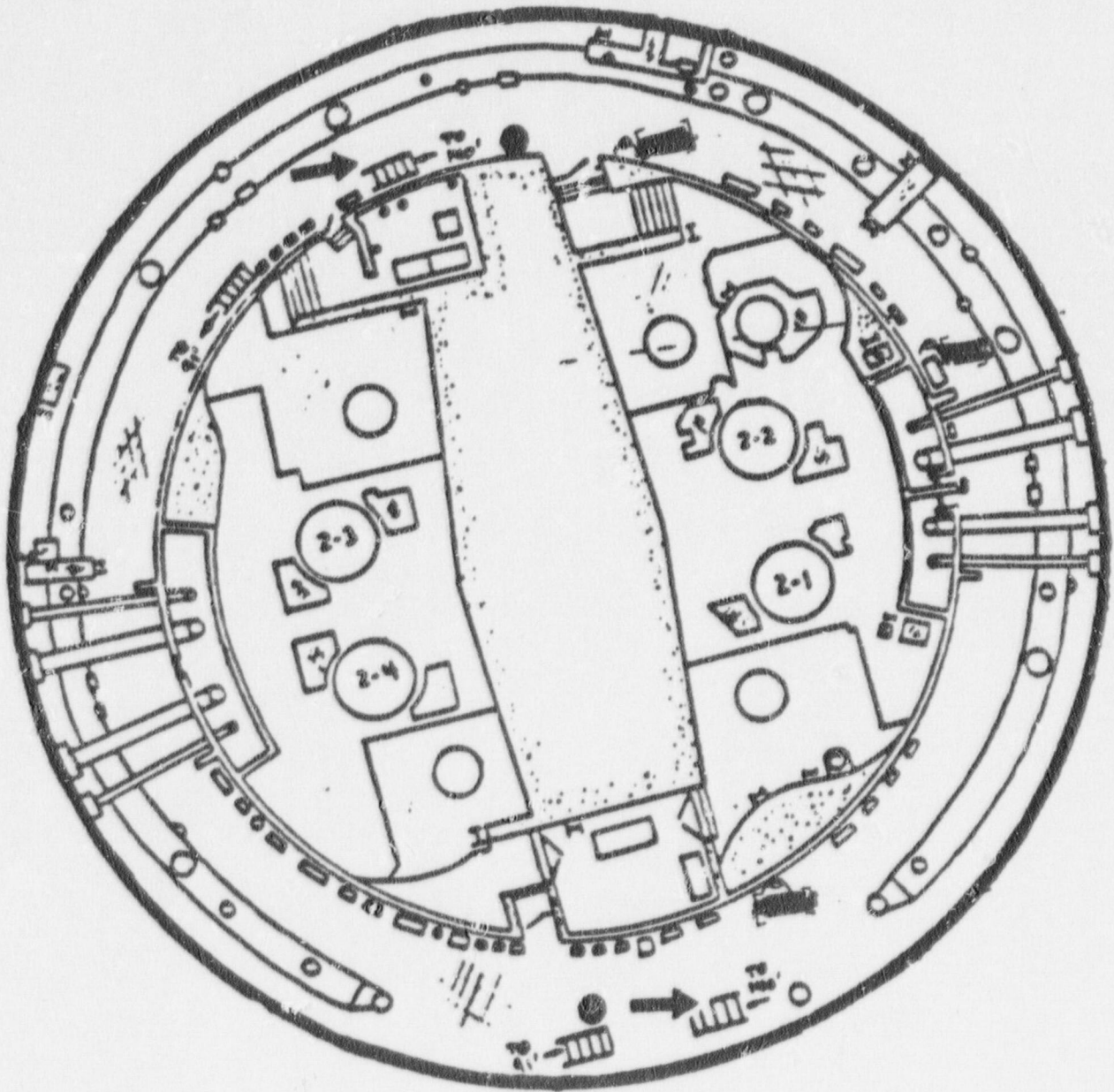
1. Lighting panel - PL 26-2
2. Emergency lighting

SAFETY EQUIPMENT:

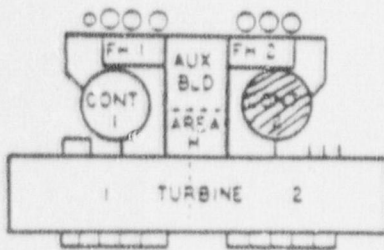
1. An eyewash station is located in the U-II Aux. Building, 115' E1., by the Ammonia and Hydrazine Tanks. [Not shown on this map]
2. A first aid kit is located on the east wall of the Hot Machine Shop. [Not shown on this map]

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns should be carried by Fire Brigade members for rescue operations.
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. TLD and pencil dosimeter will provide exposure monitoring.



117 CONT II



- | | | | |
|---|-----------------------|---------------------|---------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊕ DRY CHEMICAL | ⊕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊕ EYE WASH | ⊕ CO ₂ | ⊕ CO. HOSE REEL |
| ⊕ N ₂ H ₄ 34% NH ₃ | ⊕ EYE WASH AND SHOWER | ⊕ PRESSURIZED WATER | ⊕ WHEELED DRY CHEM. |
| ⊕ ACID | | ⊕ HALON | ⊕ EMERGENCY LIGHTS |
| ⊕ CAUSTIC | | ⊕ CP COMMAND POST | ⊕ TELEPHONE |
| ⊕ TOXIC GASES | | ➡ PRIMARY ACCESS | ⊕ FIRE WALL RATING |
| ⊕ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊕ MISCELLANEOUS/OTHER | | | |

DIABLO CANYON POWER PLANT
UNIT NO. 2

CONTAINMENT EL. 140'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. HEPA and roughing filters (fan air coolers)
 3. Transient combustibles (during outages)
 4. Grease and oil (cranes and fan cooler motors)

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Grease and oil
 3. Cable insulation
 4. HEPA and roughing filters

- ACCESS AND EGRESS ROUTES:
1. Personnel hatch
 2. Equipment hatch (if open)
 3. Emergency exit approx. 290° between fan coolers 2-3 and 2-4

- FIRE BRIGADE STAGING AREA:
1. Primary - Turbine Deck El. 140' Unit 2
 2. Secondary - Hot Machine Shop FHB El. 100'

- HAZARDOUS MATERIALS:
1. HEPA and roughing filters (fan air coolers)
 2. Smoke from cable insulation
 3. Potential radiological airborne and surface contamination.
 4. High radiation area around the reactor cavity

MANAGEMENT OF PLANT SYSTEMS:

1. Open grating and floor drains at El. 91' allows drainage to the Containment sump.
2. Containment Evacuation Alarm may be operated from the personnel hatch.
3. Containment Fire Protection System Isolation Valve 2-FCV-633 is located in Containment Penetration El. 100' Col. Lines K & 10' west of 129.

NOTE: 2-FCV-633 could go shut on a safety isolation signal and may have to be re-opened.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose Streams may be required to protect exposures such as safety related conduits and sensing lines.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Four 15# CO₂'s
2. Fire hose stations - Four

NOTE: During Modes 1-4, the fire extinguishers are kept outside Containment.

VENTILATION:

1. 2S-3 Containment Supply Purge Fan
2. 2E-3 Main Containment Exhaust Fan
3. Fan Coolers may also be run in their normal mode to recirculate and cool hot gases and smoke.
4. 2E-15 and 2E-16 Exhaust Fans for iodine removal units
5. 2E-11, 2E-12, 2E-13 and 2E-14 reactor exhaust fans
6. Hose streams may be effective from the equipment hatch as a last resort. Notify C&RP first.
7. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
2. Portable radios (Ops. Freq.)

NOTE: Use of portable radios in containment could cause a spurious reactor trip signal.

LIGHTING:

1. Plant lighting - PL 26-3, 26-5, 27-2 and 27-4, 27-3
2. Emergency lighting

SAFETY EQUIPMENT:

1. An eyewash station is located in the U-I Fuel Handling Building, by Door 357-2. [Not shown on this map]
2. A first aid kit is located in the U-I Hot Machine Shop, on the east wall. [Not shown on this map]

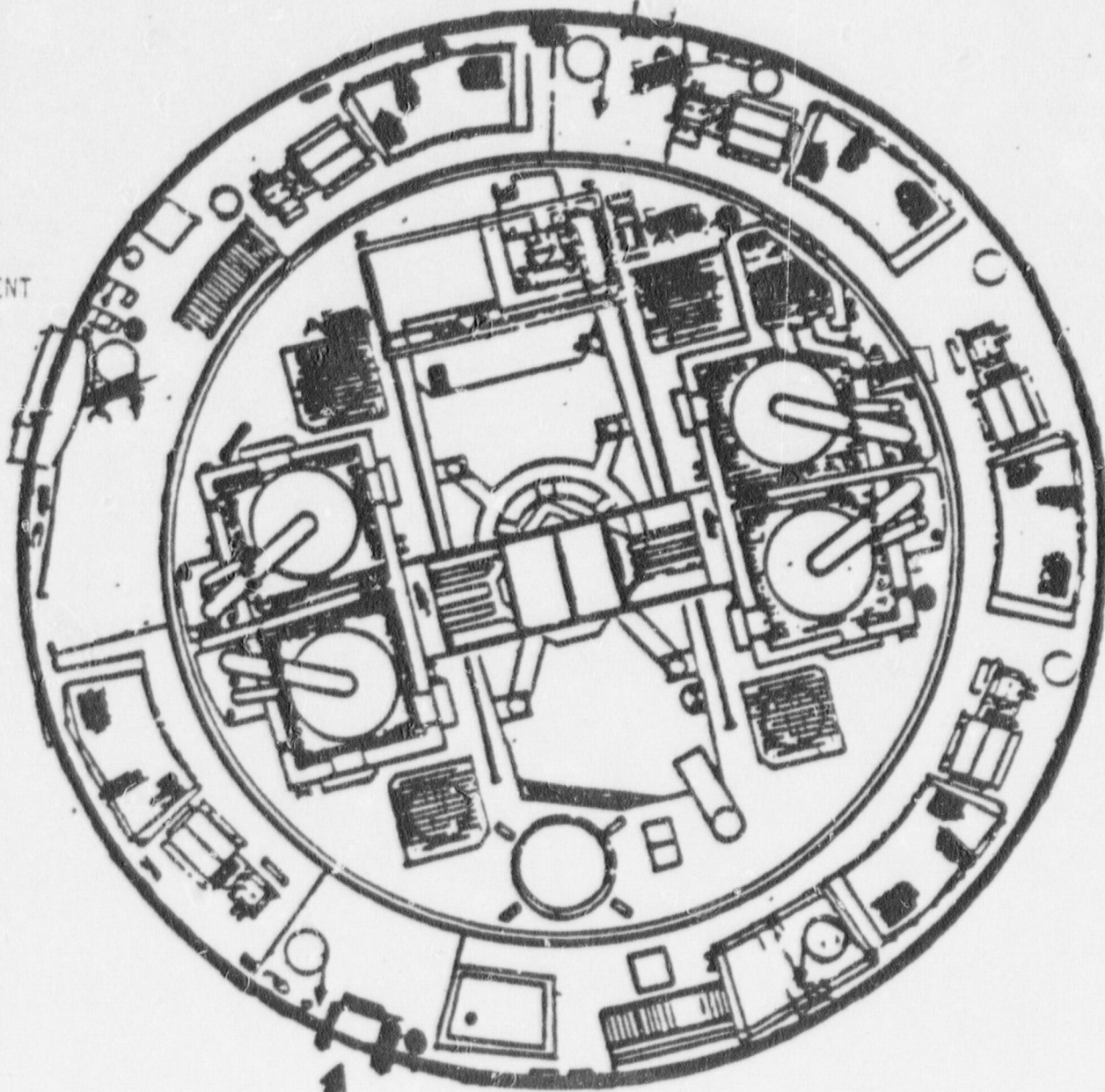
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns should be carried by Fire Brigade members for rescue operations.
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. TLD and pencil dosimeter will provide exposure monitoring.
5. "CAUTION" 30 minute SCBA's will probably not provide sufficient breathing air capacity for a fire fighting response above the Polar Crane.



↓
EMERGENCY HATCH

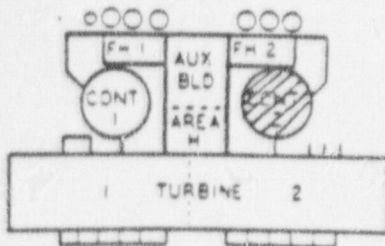
EQUIPMENT HATCH



CP

PERSONNEL HATCH

CONT II 140'



- | | | | |
|---|-----------------------|---------------------|-----------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊙ WATER HOSE REEL |
| ⊕ HAZ. WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO ₂ | ⊙ CO ₂ HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊕ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊕ WHEELED DRY CHEM |
| ⊕ ACID | | ⊙ HALON | ⊕ TELEPHONE |
| ⊕ CAUSTIC | | CP COMMAND POST | ⊕ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | → PRIMARY ACCESS | ⊕ TELEPHONE |
| ⊕ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | ⊕ FIRE WALL RATING |
| ⊕ MISCELLANEOUS OTHER | | | ☆ ANNUNCIATOR PANE. |

DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

RADWASTE AND CHEM STORAGE - EL 115'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Contaminated lube oil (approx. 2600 gals)
 2. Transient combustibles
 3. Class "A" combustibles (solid radwaste)
 4. Hydrogen (Storage Vault North End)
 5. HEPA and roughing filters

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Contaminated Lube oil
 3. Class "A" combustibles (solid radwaste)
 4. Hydrogen
 5. HEPA and roughing filters

- ACCESS AND EGRESS ROUTES:
1. Primary (North half of Bldg.) - Via Door No's. R-1, R-5, R6, R7, R8, R9, R11
 2. Primary (South half of Bldg.) - Via north and central rolling doors (west side)
Secondary (South half of Bldg) - Via Ventilation Room door, northwest corner

- FIRE BRIGADE STAGING AREA:
1. Primary - East end Auxiliary Building by roll-up Door No. 354

- HAZARDOUS MATERIALS:
1. Contaminated oil
 2. Hydrogen H₂
 3. Contaminated clothing
 4. Sulfuric acid - (H₂SO₄)
 5. Sodium Hydrazide (caustic soda) (NaOH)
 6. Contaminated HEPA and roughing filters
 7. Low level radioactive wastes

MANAGEMENT OF PLANT SYSTEMS:

1. The boxed waste area and contaminated oil storage areas are protected by an automatic sprinkler system. The isolation valve is located inside Door No. R-11 (Valve FP-0-207).
2. Should a leak or tank rupture occur at the caustic and sulfuric acid tanks, contact Chem and Rad to sample prior to removal of spilled liquid.
3. A 4 3/4" curb is provided at Doorways R-9 and R-10 to prevent a contaminated lube oil spill leaking to other areas.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose streams may be required to protect exposures.
2. Do not apply water to an H_2SO_4 or NaOH spill.
3. Cool hydrogen cylinders with hose streams if exposed to fire.

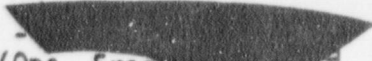

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Three 20# Halon
2. Fire hose reels - Five (3) Outside Building
(1) North End
(1) South End
3. Automatic sprinkler system (s. radwaste)
4. Fire hydrant - west of Vault Area
5. Fire Department connection located on the Southwest wall next to Door R11.

VENTILATION:

1. Fans E-401 and E-402 are exhaust fans.
2. Portable Smoke Exhausters may be required. Smoke could be exhausted via doorways to the outside (negative pressure techniques).
NOTE: Smoke may be contaminated. Obtain guidance from C&RP prior to ventilating with portable exhausters or hose streams.
3. Possible loose surface or airborne radiological contamination.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - 
2. Portable radios (Ops. Freq. )

LIGHTING:

1. Lighting panel - PL 25-6
2. Emergency lighting
3. Yard lighting

SAFETY EQUIPMENT:

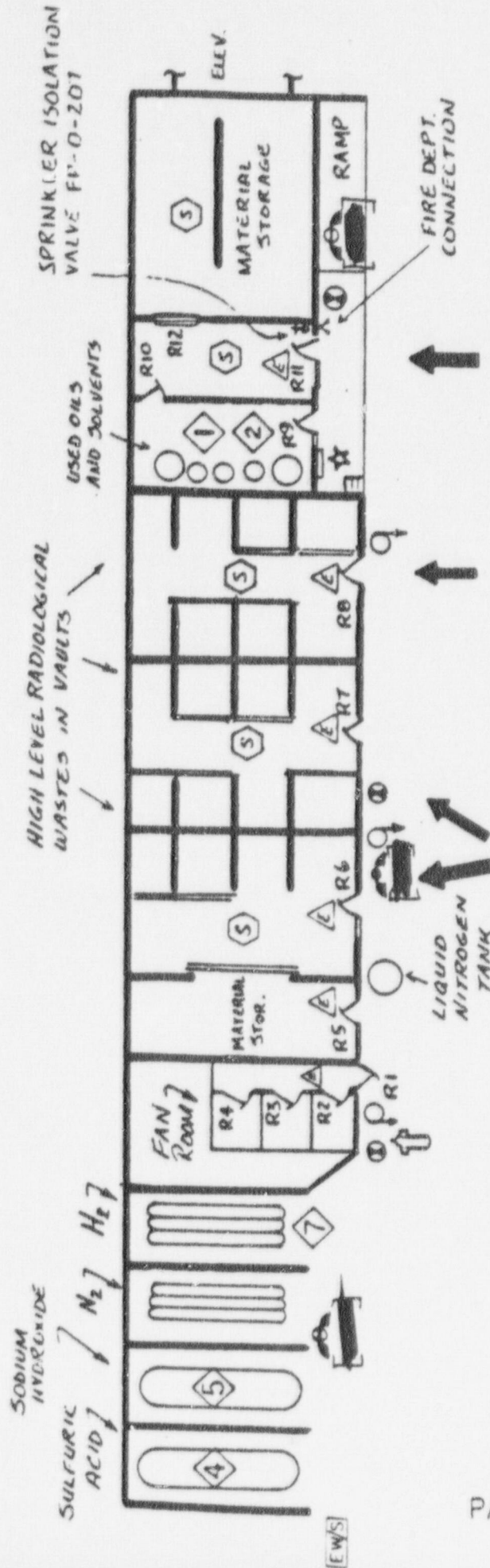
1. Emergency eyewash and shower station located by the Sulfuric Acid Storage Tank, Northwest corner of building.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. TLD and pencil dosimeter will provide exposure monitoring.
3. Turnout gear and SCBA will provide necessary anti-contamination protection.
4. Full protective clothing to be worn in the vicinity of the caustic and acid tank, as contact can destroy skin tissue.
5. Avoid water coming in contact with sulfuric acid as a violent reaction takes place.
6. If skin is contacted by acid or caustic flush with copious amounts of water and seek medical attention.

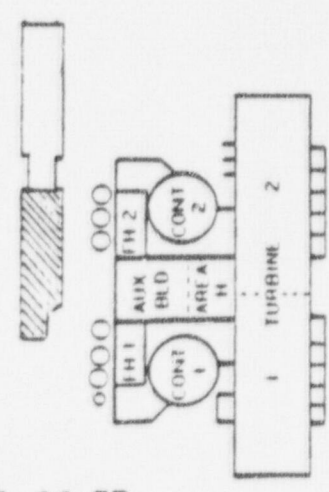


115' RADWASTE BLD
NORTH HALF



CP: AUX. BLD - ROLL UP DOOR 354

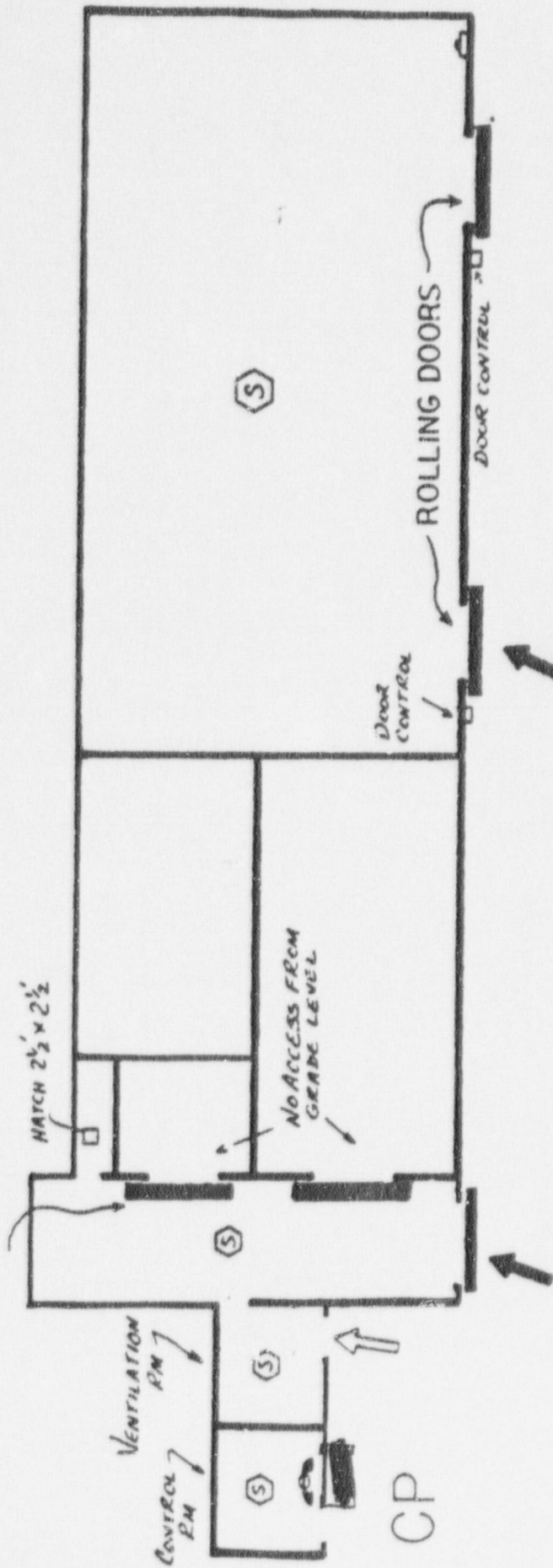
- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊙ HAZ WASTE CHROMATES, ETC.
- ⊙ N₂, H₂, O₂, NH₃
- ⊙ ACID
- ⊙ CAUSTIC
- ⊙ TOXIC GASES
- ⊙ FLAMMABLE GASES
- ⊙ MULTIPLE HAZARD OTHER
- ⊙ DRY CHEMICAL
- ⊙ CO₂
- ⊙ PRESSURIZED WATER
- ⊙ HALON
- ⊙ COMMAND POST
- ⊙ PRIMARY ACCESS
- ⊙ SECONDARY ACCESS
- ⊙ WATER HOSE REEL
- ⊙ CO₂ HOSE REEL
- ⊙ WHEELED DRY CHEM
- ⊙ EMERGENCY LIGHTS
- ⊙ TELEPHONE
- ⊙ FIRE WALL RATING
- ⊙ ANNUNCIATOR PANEL



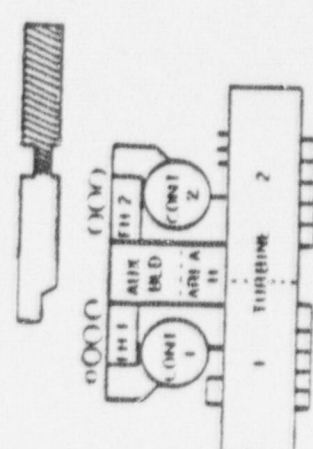


115' RADWASTE BLDG. - SOUTH HALF

ROLLING DOORS MOUNTED ABOUT 8' OFF GRADE LEVEL



- HAZMAT**
- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
 - ⊕ HAZ. WASTE CHEMICALS, ETC.
 - ⊕ H₂, N₂, NH₃, HCl
 - ⊕ ACID
 - ⊕ CAUSTIC
 - ⊕ TOXIC GASES
 - ⊕ FLAMMABLE GASES
 - ⊕ MISCELLANEOUS/OTHER
- SAFETY**
- ⊕ FIRST AID
 - ⊕ EYE WASH
 - ⊕ [EWS]
- FIRE**
- ⊕ DRY CHEMICAL
 - ⊕ CO.
 - ⊕ PRESSURIZED WATER
 - ⊕ HALON
 - ⊕ CP COMMAND POST
 - ⊕ PRIMARY ACCESS
 - ⊕ SECONDARY ACCESS
- OTHER**
- ⊕ WATER HOSE REEL
 - ⊕ CO. HOSE REEL
 - ⊕ WHEELED DRY CHEM
 - ⊕ EMERGENCY LIGHTS
 - ⊕ TELEPHONE
 - ⊕ FIRE WALL RATING
 - ⊕ ANNUNCIATOR PANEL



DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

RADWASTE LAUNDRY FACILITY - EL 132' AND 142'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Cloth (Anti-Contamination Clothes)
2. Transient combustibles
includes: Plastics, rubber, vinyl,
cardboard & wood

MOST PROBABLE FIRE: 1. Transient combustibles
2. Anti-Contamination Clothes

ACCESS AND EGRESS ROUTES: 1. Primary - Via the Roll-up Door or Personnel Door
at the north end of the Bldg. El. 132' (accessed
through C&RP Gate 8)
2. Secondary - Via Door, south east corner of the
Laundry Facility, adjacent to the Elevator.

FIRE BRIGADE STAGING AREA: 1. Primary - Outside the roll-up Door, North end of
the Bldg, El. 132' (Accessed through C&RP Gate
8).

HAZARDOUS MATERIALS: 1. Potential radiological airborne and surface
contamination (Anti-C's)
2. Freon 113
3. Combustion products (Plastics, Rubber, Vinyl)
NOTE: Freon 113 may produce acid gases when heated to
decomposition.

MANAGEMENT OF PLANT SYSTEMS: 1. The sprinkler isolation valve for the Laundry
and Storage areas (el. 132' and 142') is
located on the 2nd floor in the hallway
adjacent to the door into the Clean Clothes
Room (North east corner of Laundry Area), El.
132'
2. Elevator control key can be obtained at 85'
Access Control.
3. Floor drains in the Laundry Rooms, Hallway and
Storage Area (El. 132') go to the Laundry
Drain Holding Tank, Auxiliary Bldg. El. 60'

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water fog should be used to cool exposures.
2. Fire doors should be closed as necessary to retard smoke and fire spread.



FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - Two 10# Dry Chemicals
2. Fire hose reels - Two (2) in the hallway, 2nd Floor (E1. 132')
3. Automatic wet sprinkler system in each area

VENTILATION:

1. The building ventilation system may need to be shut off to prevent the spread of smoke throughout the rooms.
 2. Portable smoke exhausters and flexible ducting will be required to ventilate the Laundry Rooms to move smoke to the outside.
 3. Natural cross^o ventilation, mechanically assisted if necessary, could be effective to remove smoke in the storage areas (Mezzanine E1. 142') or lower level E1. 132') by opening the roll-up door on the north end and the door on the south end.
 4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
- NOTE: Smoke may be contaminated, contact C&RP before exhausting to the outside.

COMMUNICATIONS:

1. Plant telephones - 
 - (1) Inside the door to the Clean Laundry Room (east wall), E1. 132'
 - (1) On the south wall of the Laundry Washing Room, E1. 132'
2. Portable radios (Ops. Freq. 

LIGHTING:

1. Plant Lighting Panel - PL 25-6
2. Emergency lighting

SAFETY EQUIPMENT:

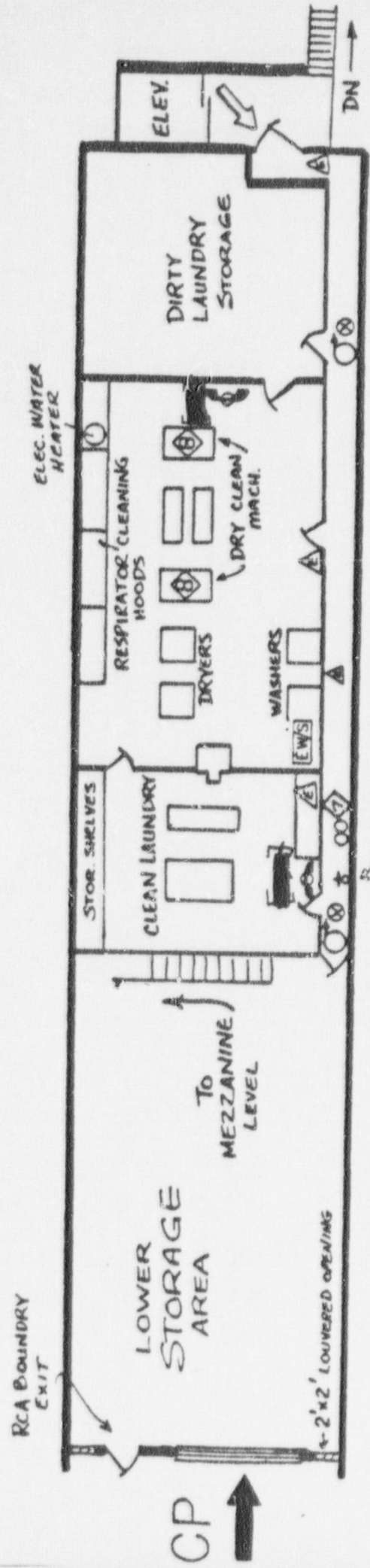
1. An emergency eyewash/shower station is located on the west side of the washer/dryer room, in the northwest corner.
2. A first aid kit is located in the U-I Aux. Bldg., 115' E1., at the west end of the main hallway.

SPECIAL PRECAUTIONS:

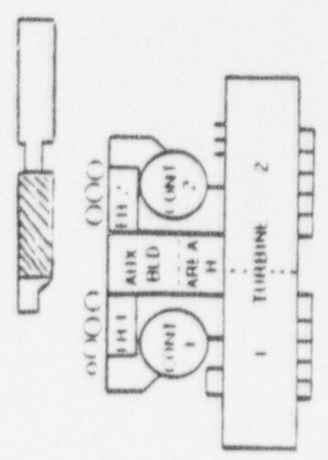
1. Self contained breathing apparatus will be required.
2. Portable hand-held lanterns may be necessary during rescue operations.
3. Wear radiation detection devices (TLD, pencil dosimeter)
4. Turnout gear and SCBA will provide necessary anti-contamination protection.
5. If electrical panel (southeast corner of Mezzanine) is energized, use fog setting to minimize likelihood of electrical shock.

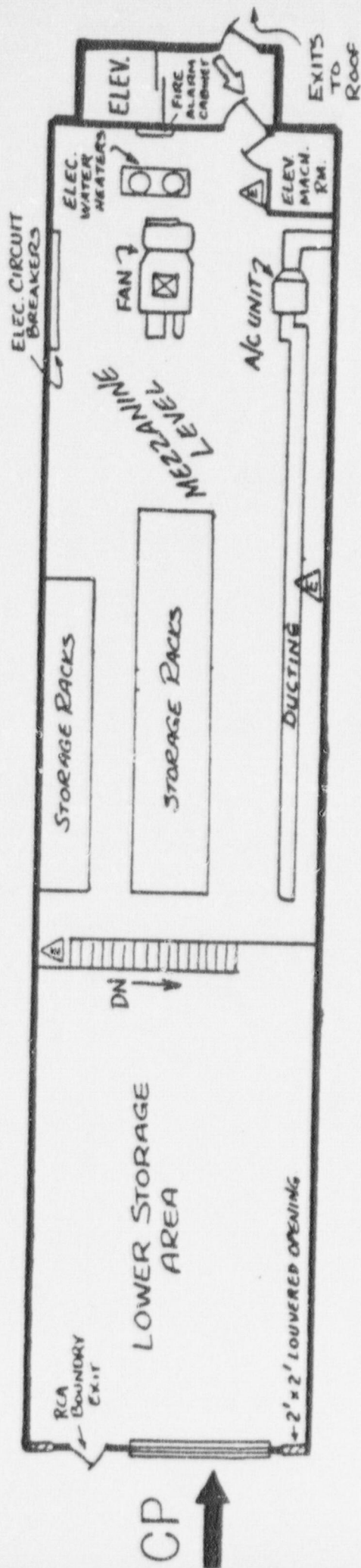


132' RAD WASTE LAUNDRY FACILITY



- ① FLAMMABLE/COMBUSTIBLE LIQUIDS
- ② HAZ. WASTE CHROMATIC, ETC.
- ③ N₂, H₂, O₂, NH₃
- ④ ACID
- ⑤ CAUSTIC
- ⑥ TOXIC GASES
- ⑦ FLAMMABLE GASES
- ⑧ METALLANINE/OTHER
- ⊗ DRY CHEMICAL
- CO,
- PRESSURIZED WATER
- ⊖ HALON
- CP COMMAND POST
- PRIMARY ACCESS
- ⇨ SECONDARY ACCESS
- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH AND SHOWER
- ⊕ WATER HOSE REEL
- ⊕ CO. HOSE REEL
- ⊕ WHEELED DRY CHEM
- C. CARDS
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ☆ ANNUNCIATOR PANEL





142' RAD WASTE LAUNDRY FACILITY

LEGEND

HAZMAT

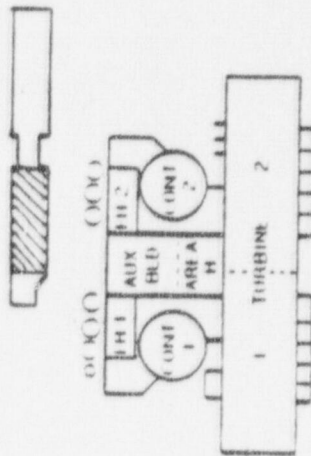
- ① FLAMMABLE/COMBUSTIBLE LIQUIDS
- ② HAZ. WASTE CHEMICALS, ETC.
- ③ N₂, H₂, O₂, NH₃
- ④ ACID
- ⑤ CAUSTIC
- ⑥ TOXIC GASES
- ⑦ FLAMMABLE GASES
- ⑧ MISCELLANEOUS/OTHER

SAFETY

- (H) FIRST AID
- (E) EYE WASH
- (F) [Symbol]

FIRE

- (X) DRY CHEMICAL
- (●) CO, HALON
- (○) PRESSURIZED WATER
- (CP) COMMAND POST
- (→) PRIMARY ACCESS
- (⇌) SECONDARY ACCESS
- (P) WATER HOSE REEL
- (F) CO, HOSE REEL
- (W) WHEELED DRY CHEM
- (△) EMERGENCY LIGHTS
- (☎) TELEPHONE
- (—) FIRE WALL RATING
- (☆) ANNUNCIATOR PANEL



DIABLO CANYON POWER PLANT
UNIT NO. 1 & 2

AUXILIARY BUILDING FAN ROOMS - EL 140'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Electrical cable insulation
2. Grease
3. Transient combustibles
4. Filters

MOST PROBABLE FIRE: 1. Transient combustibles
2. Filters
3. Electrical cable and motors
4. Grease

ACCESS AND EGRESS ROUTES: 1. Primary - Door 521 for Unit I side and 524-2 for Unit II side.
2. Secondary - Stairway S-2 or
- Thru Control Room or S-5 for Unit I side.

NOTE: Doors 520 and 523-2 are normally locked from the outside.

FIRE BRIGADE STAGING AREA: 1. Primary - 140' Area
2. Secondary - Control Room or S-5

HAZARDOUS MATERIALS: 1. Smoke and fumes from HEPA, carbon, and roughing filters.
2. Potential for radiological contamination of filters from airborne particles.

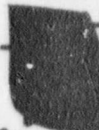

MANAGEMENT OF PLANT SYSTEMS: 1. The sprinkler system is controlled by Isolation Valve FP-1-241, right inside Door 522.
2. There are no floor drains.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Close fire doors to reduce fire and smoke spread.
2. A water fog from hose lines may be required to cool exposures.

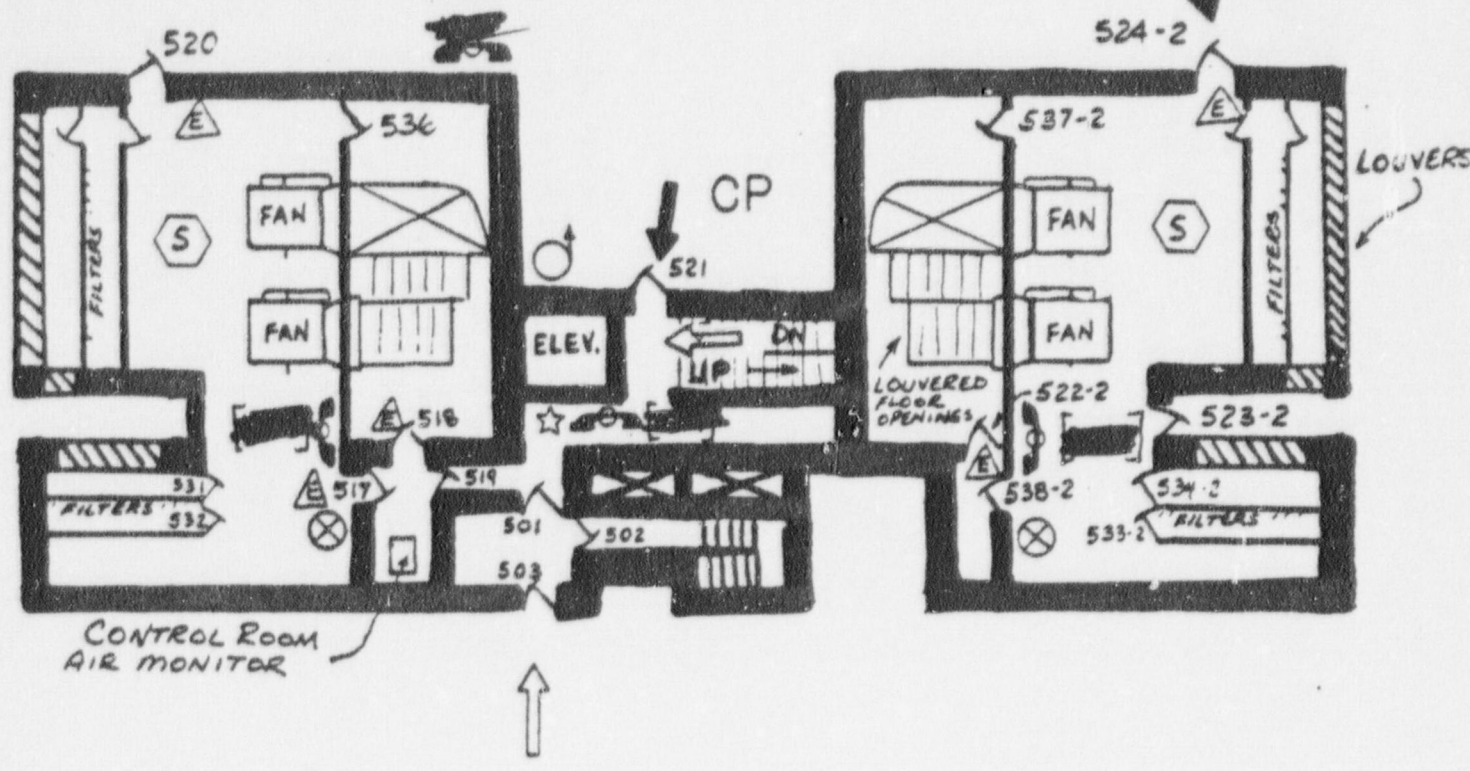
- FIRE SUPPRESSION EQUIPMENT:
1. Fire extinguishers - Two 20# Multipurpose Dry Chemical
 - (1) One in the Unit 1 Fan Room
 - (1) One in the Unit 2 Fan Room
 2. Automatic wet sprinkler system.
 3. Fire hose reel outside Door 521.

- VENTILATION:
1. Shut down large fans initially to minimize spread of smoke.
 2. Positive mechanical ventilation should be best for the fan and filter room areas.
 3. Smoke ejectors can be used to push smoke through the filter rooms to the outside.
 4. For the Supply Duct Rooms (inside Room 518 and 522-2), negative ventilation using smoke ejectors and ducting to an outside door (520 or 524-2) might be best.
NOTE: The large supply duct openings should be covered or louvers closed, if possible, to minimize smoke spread to lower elevations.
 5. After the duct openings are covered, the large supply fans could possibly be used for rapid smoke removal.

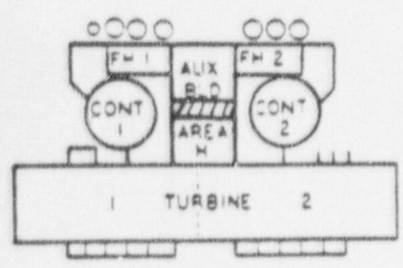
- COMMUNICATIONS:
1. Plant telephones -  - Unit No. I
- Unit No. II
- Outside Elevator No. 2
 2. Portable radios (Ops. freq. 

- LIGHTING:
1. Lighting Panel 13-4 Unit I
23-4 Unit II
 2. Emergency lighting

- SPECIAL PRECAUTIONS:
1. Self Contained Breathing Apparatus will be required.
 2. A fire in this area could intensify quickly due to the rapid air movement (high positive pressure). Also, when fans are operating, excessive positive pressure makes entry into duct rooms through Door 536 and 537-2 hazardous. Danger of traumatic injury to personnel from door slamming shut.



140' AUX. I & II



- | | | | |
|---|------------------------------|---------------------|-----------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ. WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO ₂ | ⊖ CO ₂ HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊕ E.W.S. EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊕ ACID | | ⊕ HALON | ○ C. CARDON |
| ⊕ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ⊕ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | ⊖ FIRE WALL RATING |
| ⊕ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

12/86

PAGE 1 OF 1

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

ATTACHMENT 3

TITLE: FIRE FIGHTING PREPLANS - EP R-6

<u>UNIT #</u>	<u>PREPLAN TITLE</u>	<u>MSDS NO.</u>	<u>REV. DATE</u>
1 & 2	Diesel Fuel Oil No. 2-D	470	10/81
1 & 2	Hydrogen	65	05/80
1 & 2	Sulfuric Acid	5152	02/86
1 & 2	Boric Acid	4	03/83
1 & 2	Sodium Hydroxide	N3A	10/85
1 & 2	Anhydrous Ammonia	N1	08/85
1 & 2	Hydrazine Aqueous (35%)	127	06/84

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

MATERIALS INFORMATION SERVICES

No. 470

DIESEL FUEL OIL NO. 2-D

Date October 1981

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: DIESEL FUEL OIL NO. 2-D
DESCRIPTION: Mixture of petroleum hydrocarbons; a distillate oil of low sulfur content
OTHER DESIGNATIONS: ASTM D975, CAS # 068 476 346
MANUFACTURER: Available from many suppliers

SECTION II. INGREDIENTS AND HAZARDS

	X	HAZARD DATA
Diesel Fuel Oil No. 2-D Complex mixture of paraffinic, olefinic, naphthenic and aromatic hydrocarbons** Sulfur content Benzene*** *Current OSHA standard and ACGIH (1981) TLV **Diesel fuels tend to be low in aromatics and high in paraffinics. A min. Cetane No. of 40 is required (ASTM D613). ***A low benzene level reduces carcinogenic risk. Fuel oils can be exempted under the benzene standard (29 CFR 1910.1028)	>95 <0.5 <100 ppm	8-hr TWA 5mg/m ³ * (mineral oil mist)

SECTION III. PHYSICAL DATA

Boiling point range, deg F, ----- Ca 340-675 Specific gravity (H₂O=1) ---- <0.86
 Solubility in water ----- negligible Cloud point (wax), deg C --- Ca 0
 Viscosity at 40 C, cSt ----- 1.9-4.1

Appearance and Odor: Clear, bright liquid with a mild petroleum odor.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
125F min (PM)	>500F	% by volume	0.6	7.5

Extinguishing Media: Dry chemical, carbon dioxide, foam, water spray. Use a water spray to cool fire exposed containers. Use a smothering technique for extinguishing fire of this combustible liquid. Do not use a forced water stream directly on oil fire as this will only scatter the fire. Material is a OSHA Class II combustible liquid. Firefighters should wear self-contained breathing apparatus and full protective clothing.

SECTION V. REACTIVITY DATA

This is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not undergo hazardous polymerization. Incompatible with strong oxidizing agents; heating greatly increases fire hazard. Thermal oxidative degradation may yield various hydrocarbons and hydrocarbon derivatives (partial oxidation products), CO₂ and CO and SO₂.

SECTION VI. HEALTH HAZARD INFORMATION

TLV 5 mg/m³ oil (mist) (See Sect II)

Inhalation of excessive concentrations of vapor or mist can be irritating to the respiratory passages and can cause the following symptoms: headache, dizziness, nausea, vomiting, and loss of coordination. Prolonged or repeated skin contact may cause irritation of the hair follicles and block the sebaceous glands. This produces a rash of acne pimples and spots, usually on the arms and legs. (Good personal hygiene will prevent this).

Chemical pneumonitis may result when ingestion occurs and oil is aspirated in the lungs.

FIRST AID:

Eye Contact: Flush thoroughly with running water for 15 min. including under eyelids.

Skin Contact: Remove contaminated clothing. Wipe excess oil off with a dry cloth. Wash affected area well with soap and water.

Inhalation: Remove to fresh air. Restore and/or support breathing as required.

Ingestion: Do not induce vomiting.

Seek medical assistance for further treatment, observation and support.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of leaks or spills. Remove sources of heat or ignition. Provide adequate ventilation. Clean-up personnel to use protection against liquid contact and vapor or mist inhalation. Contain spill by diking. Small spills can be contained by using absorbants, such as rags, straw, polyurethane foam, activated carbon, and sand. Clean up spills promptly to reduce fire or vapor hazards.

DISPOSAL: May be disposed of by a licensed waste disposal company, or by controlled incineration or burial in an approved landfill.

Follow Federal, State and Local regulations. Report large oil spills.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide adequate ventilation where operating conditions (heating or spraying) may create excessive vapors or mists. Use explosion-proof equipment. Provide approved respiratory apparatus for nonroutine or emergency use. Use an approved filter & vapor respirator when vapor/mist concentrations are high. Wear protective rubber gloves and chemical safety glasses where contact with liquid or high mist conc. may occur. Additional suitable protective clothing may be required depending on working conditions. An eye-wash fountain and washing facilities to be readily available near handling and use areas.

Laundry soiled or contaminated clothing before reuse (at least weekly laundering of work clothes is recommended).

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers in a cool, dry, well-ventilated area away from sources of open flame, heat, strong oxidizing agents, and ignition. Protect containers from physical damage. Use non sparking tools and explosion-proof electrical equipment. Prevent static electric sparks.

Avoid prolonged skin contact and breathing of vapors or mists.

No smoking in areas of use. Follow good hygienic practice in the use of this material.

Do not wear oil contaminated clothing. Do not put oily rags into pockets. Wash exposed skin areas several times a day with soap and warm water when working with this material.

DOT Classification: COMBUSTIBLE LIQUID

DATA SOURCE(S) CODE: 1,6,7,12

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company and its subsidiaries make no representations and assume no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS: MIS CRD *J. M. Miller*

Industrial Hygiene and Safety *SW 10-12-81*

MEDICAL REVIEW: 21 October 1981

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085

DIAL COM: 8*235-4085



No. 65

HYDROGEN GAS

Date May 1980

SECTION I. MATERIAL IDENTIFICATION				
MATERIAL NAME: HYDROGEN GAS DESCRIPTION: Supplied as compressed gas in cylinders (2000 psig). OTHER DESIGNATIONS: H ₂ , CAS #001 333 740, GE Material D27A5 MANUFACTURERS: Available from several suppliers, including:				
AIRCO, Inc. Industrial Gases Div. 575 Mountain Avenue Murray Hill, NJ 07974 (201) 464-8100		Union Carbide Corp. Linde Corp. 270 Park Ave, New York, NY 10017 (212) 551-3763		
SECTION II. INGREDIENTS AND HAZARDS		%	HAZARD DATA	
Hydrogen Gas		>99.9	Simple Asphyxiant*	
*The "TLV" for a simple asphyxiant gas (ACGIH, 1979) is a minimal oxygen content of 18% by volume under normal atmospheric pressure.				
SECTION III. PHYSICAL DATA				
Boiling point, 760 mm Hg, deg C	-- -252.7	Density, liquid, at -253 C, g/cc	-- 0.07	
Melting point, deg C	----- -259.2	Viscosity, at 15 C, atm, cps	----- 0.0087	
Specific gravity (Air=1)	----- 0.069	Critical temperature, deg C	----- -239.9	
Solubility in water at 60 F, 1 atm,		Critical pressure, atm	----- 12.8	
vol/vol H ₂ O	----- 0.019	Molecular weight	----- 2.02	
Appearance & Odor: Colorless, tasteless, odorless gas.				
SECTION IV. FIRE AND EXPLOSION DATA			LOWER	UPPER
Flash Point and Method	Autoignition Temp.	Flammability Limits In Air		
N/A Gaseous material	1075 F (580 C)	2 by Volume	4	75
Because of danger of re-ignition and possible explosion, hydrogen fire should not usually be extinguished until surroundings have been cooled and the supply of hydrogen has been controlled and can be shut off. When possible, in a pipe line fire for example, gradually reduce the H ₂ flow to a small jet. Do not stop flow completely before inert gas or steam system has been activated to control flashback. Fires at cylinders or storage tanks should be allowed to burn until nearly empty before closing off, keeping the containers & surroundings as cool as possible with water sprays. When necessary small hydrogen fires can be extinguished with carbon dioxide, dry chemical, or halogenated gas.				
SECTION V. REACTIVITY DATA				
Hydrogen is a stable material in closed containers at room temperature. It does not polymerize. It will react vigorously or explosively with many oxidizing agents. A mixture of flammable hydrogen gas and air is stable in the absence of catalysts until an ignition source is supplied. (An electric spark with energy of as little as 0.017 mJ can be sufficient.) Mixture with air can burn with a very hot nonluminous flame (difficult to see), or it can explode. Hydrogen/chlorine mixtures in the dark are stable, but explode if exposed to light. Fluorine reacts with hydrogen at -250 C when impurities are present in the mixture. Hydrogen/oxygen mixture with a platinum catalyst will explode. Lithium metal will burn in a hydrogen atmosphere to form the hydride. Hydrogen can interact with some metals (i.e., hardened steels) to cause embrittlement.				

SECTION VI. HEALTH HAZARD INFORMATION

TLV Simple Asphyxiant (See Sect. II)

Hydrogen is non-toxic. It can act as an asphyxiant by displacing air. Persons exposed to an oxygen deficient atmosphere for breathing become cyanotic, experience diminished mental alertness, impaired muscular coordination, and breathing impairment, followed by collapse and even death if exposure is prolonged at low oxygen levels.

FIRST AID: (Caution! Rescuers must be concerned for their own safety and use approved breathing apparatus.)

Remove victim to fresh air. Quickly proceed to restore and/or support breathing as required (mouth-to-mouth resuscitation should probably be used initially). Have trained person administer oxygen if available. Get medical attention.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Establish emergency procedures and training. Notify safety personnel of leaks. Provide optimum, explosion-proof ventilation. Shut off hydrogen source if possible. Remove (if it can be done safely) combustibles and sources of heat or ignition.

Find minor leaks by painting suspected area with a soap solution. (Note! Since hydrogen ignites readily and burns with a nearly invisible flame in daylight, leaks must be approached in a manner to protect against a jet flame.)

DISPOSAL: Remove leaking cylinder to isolated area outdoors or place into a hood with good forced ventilation. Allow gas to discharge at a slow rate. The defective cylinder should be tagged to indicate defect. Close the valve and return to supplier.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide adequate general and local exhaust ventilation (explosion-proof) to prevent workplace atmosphere from becoming oxygen deficient or from approaching the LEL (lower explosive limit) for hydrogen. Provide air-supplied or self-contained breathing equipment for emergency or nonroutine situations where the hydrogen level is excessive.

Confined areas need special attention to prevent build up of hydrogen concentration.

Safety shoes, gloves and safety glasses are recommended when handling hydrogen cylinders. Those involved in handling and using hydrogen must be trained in its safe use.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store hydrogen cylinders in a clean, cool, dry, well-ventilated, low fire-risk area, away from combustible materials, oxidizing agents, and sources of heat or ignition.

Follow the general safety procedures for handling a compressed, flammable gas in cylinders, including keep separate from oxygen cylinders, never expose any part of the cylinder to a temperature in excess of 125 F, ground cylinders and hydrogen handling equipment to prevent static charge build up. Use non-sparking tools.

Vessels and piping systems should be designed to the DOT, ASME, and ANSI pressure piping code. Piping systems and vessels from hydrogen service should be inerted by suitable purging procedures. Amount and storage conditions of hydrogen gas must meet codes and regulations.

DOT Classification - FLAMMABLE GAS

DATA SOURCE(S) CODE: 1-12,17,18,25

Assignments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS: MIS
CRD

Industrial Hygiene
and Safety

MEDICAL REVIEW: June 1980

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
120 ERIE BOULEVARD
SCHENECTADY, N.Y. 12305



NO 4
BORIC ACID
Revision B
DATE March 1983

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME BORIC ACID

OTHER DESIGNATIONS: Orthoboric Acid, Boracic Acid, Hydrogen Borate, H_3BO_3 ,
GE Material D4A6, CAS #010 043 353

MANUFACTURER: Available from several suppliers, including:

Kerr-McGee Chem. Corp. Ashland Chem. Co. U.S. Borax & Chem. Co.
Kerr-McGee Center P.O. Box 2219 3075 Wilshire Blvd.
Oklahoma City, OK 73125 Columbus, OH 43216 Los Angeles, CA 90010

SECTION II. INGREDIENTS AND HAZARDS

Boric Acid

%

HAZARD DATA

ca 100

No TLV Established*
Infant, Oral

*Control as a Nuisance Particulate has been
recommended: 10 mg/m³ total dust, or 5 mg/m³
respirable dust.

LDLo 934 mg/kg

Man, Inhalation

TCLo 22 mg/m³

Animal studies (dog and rat) have shown infertility
and damage to testes can result from acute or chronic
ingestion of boric acid. Evidence on reproductive
toxic effects in humans is inadequate.

(10-yr intermittent)
Toxic glandular
effects

Rat, Oral

LD50 2660 mg/kg

SECTION III. PHYSICAL DATA

Vapor pressure, 21C, mm Hg --- 15 (due to water)

Specific gravity, 20/4C ----- 1.435

Solubility in water, g/100g @ 0C ----- 2.6

pH @ 20C, 1% aqueous soln --- ca 5.2

@ 20C ----- 4.9

4% aqueous soln --- ca 3.9

@ 100C ----- 28

Molecular weight ----- 61.84

Melting point, deg C ----- 170-180

Appearance & Odor: Colorless crystals or a fine or granular white powder. No odor.

SECTION IV. FIRE AND EXPLOSION DATA

Lower

Upper

Flash Point and Method

Auto-ignition Temp.

Flammability Limits in Air

Non-combustible

Extinguishing media: Use that which is most appropriate for the surrounding fire. Boric acid does not support combustion and is non-combustible. Material decomposes on heating, giving off water (see Sect V); used as fire retardant.

SECTION V. REACTIVITY DATA

This is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not polymerize.

A weak acid. Loses chemically combined water upon heating, forming metaboric acid (HBO_2) at 100-105C, then pyroboric acid ($H_2B_4O_7$) at 140-160C, and at higher temperatures, boric anhydride (B_2O_3).

Reacts with basic materials such as alkali carbonates and hydroxides to form borate salts.

A mixture of potassium and boric acid may explode on impact. Mixture with acetic anhydride can react violently when heated to 58-60C.

If moisture is present boric acid can be corrosive to iron.

SECTION VI. HEALTH HAZARD INFORMATION

TLV None established (See Sect II)

Excessive inhalation of dust can cause irritation to mucous membranes of the respiratory tract. Not significantly absorbed through intact skin. Readily absorbed through damaged, abraded and burned skin, or open wounds and areas of active dermatitis when exposed to dry materials or aqueous solutions. Ingestion or absorption may cause nausea, vomiting, anuria, erythematous lesions on skin and mucous membranes, abdominal cramps, circulatory failure, and coma. Chronic exposures may cause dry skin, eruptions, and gastric disturbances. Poisoning can be acute or chronic. Adult acute fatal dose reported at 5 to >30g

FIRST AID:

(moderate to slightly toxic)

Eye Contact: Flush thoroughly with running water for 15 min. including under eyelids.

Skin Contact: Remove grossly contaminated clothing under safety shower. Flush affected area well with water.

Inhalation: Remove to fresh air. Restore and/or support breathing as required.

Ingestion: If conscious, rinse mouth with water. Give several glasses of water to drink to dilute. Induce vomiting.

Seek medical assistance for further treatment, observation and support after first aid.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Provide adequate ventilation. Clean-up personnel need protection to avoid inhalation of dust. Keep airborne particulate at a minimum when sweeping up. Collect solid spills and place in appropriate containers for reclaim or disposal. Liquid spills can be absorbed with inert solid. Residue and traces can be flushed to sewer with high dilution.

DISPOSAL: Reclaim dry material for salvage or reuse. Unsalvageable waste may be buried in approved landfill. (Note that this material can have herbicidal properties.)

Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide sufficient ventilation in the workplace to keep airborne particulate at a low level. Dust respirators should be available for dusty conditions.

Use protection (rubber gloves, aprons, etc) appropriate for work situation to minimize skin contact. Avoid eye contact by use of chemical safety goggles where dusty conditions occur or solution splashing is possible.

Provide periodic medical examinations to those regularly exposed to boric acid with emphasis on liver and kidney function.

Eyewash stations and safety showers should be accessible to areas of large quantity use or handling especially if splashing is possible.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers in a cool, dry, area. Storage bins should have a 60° sloping cone bottom with provision to prevent ingress of water. Carbon steel or aluminum containers are suitable for this dry storage. (Stainless steel needed for moist conditions.)

Use good housekeeping practices to prevent accumulation of dust and follow sound cleaning techniques that will keep airborne particulate at a low level.

Avoid breathing dust. Do not ingest. Avoid contact, especially when skin is cut or abraded or active dermatitis is present. Wash hands and face before eating, drinking or smoking after handling this material.

DATA SOURCE(S) CODE: 1,4-11,14,25,26,34,37,48,49

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APPROVALS: MIS/CRD

INDUST. HYGIENE/SAFETY

MEDICAL REVIEW:

21 March 1983

MATERIAL SAFETY DATA SHEET

GENIUM PUBLISHING CORPORATION

1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 377-8854



MSDS # N 1
ANHYDROUS AMMONIA
Revision C

Issued:
Revised: August, 1985

From Genium's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

MATERIAL NAME: ANHYDROUS AMMONIA
OTHER DESIGNATIONS: NH₃, Ammonia Gas, CAS #7664-41-7.
MANUFACTURER: Available from many suppliers/manufacturers including:
Dow Chemicals USA, Inorganic Chem. Dept.
2020 Dow Center
Midland, MI 48640
(517) 636-1000



SECTION 2. INGREDIENTS AND HAZARDS

AMMONIA, ANHYDROUS
* Current (1985-86) ACGIH TLV with STEL of 35 ppm.
** Current OSHA PEL.
NIOSH has recommended a 50 ppm ceiling limit (5 minute sampling period).
DESCRIPTION: Liquid or gas depending on temperature and pressure conditions. Supplied pressurized in cylinders or tanks.

%	HAZARD DATA
>99.5	8 hr TWA, 25 ppm* (18 mg/m ³) 8 hr TWA, 50 ppm** (35 mg/m ³) ----- Human, inhalation: TLCo: 20 ppm, irritation ----- Human, inhalation: LCLo: 30 000 ppm/5 min. Rat, inhalation: LCLo: 2000 ppm/4 hr.

SECTION 3. PHYSICAL DATA

Boiling point, 1 ATM -33.4°C (-28°F) Specific gravity, 60/60°F ... 0.62
Vapor pressure @ 60°F, mmHg ... 4800 Volatiles, % ca 100
Vapor density (Air=1) 0.6 pH of 1% water soln 11.7
Solubility in water, g/100 cc: Melting point, °C (F) 77.7 (-108)
 @ 0°C 89.9 Molecular weight 17.04
 @ 100°C 7.4
APPEARANCE & ODOR: Colorless liquid or gas (depending on temperature and pressure) with strong pungent odor
Odor is detectable at 5ppm; irritating at 25-50 ppm. Odor provides a warning of hazard.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
Gas at room temperature	1204°F/651°C*	% by volume	16	25

Extinguishing Media: Water spray or fog.
Stop flow of gas. Use water to keep fire exposed containers cool and protect personnel affecting shut-off (water reduces gas concentration due to solubility). It is a moderate fire and explosion hazard when exposed to heat and/or flame. The presence of oil or other combustible materials will increase the fire hazard. If gas is leaking or tanks are heavily exposed to heat, evacuate the area and the area downwind. Tanks should be equipped with appropriate pressure relief devices. Violent rupture can occur if relief valves fail. Stay clear of tank heads. Firefighters should wear positive pressure self-contained breathing apparatus with full facepiece & full protective clothing. * Iron catalyzed - 850°C/1562°F uncatalyzed.

SECTION 5. REACTIVITY DATA

Contained anhydrous ammonia is stable at room temperature. Decomposition to H₂ (flammable!) and N₂ begins above 450°C (840°F). It is an alkaline gas and reacts with acids with heat evolution. Contact of NH₃ with chemicals such as mercury, chlorine, iodine, bromine, silver oxide, and hypochlorites can form explosive compounds. Contact with chlorine or chlorine bleach can cause the evolution of hazardous chloramine gas. DO NOT USE copper, brass, bronze or galvanized steel in contact with ammonia. Welded joints are preferred threaded joints in ammonia service. Do not use brazed joints. Iron and steel construction is preferred. Piping should be of rigid steel.
Anhydrous ammonia does not polymerize.

SECTION 6. HEALTH HAZARD INFORMATION

TLV

See Section 2.

Ammonia gas can be suffocating and extremely irritating to the eyes, throat, and respiratory tract. Depending on exposure level and time, effects range from mild irritation to severe corrosion of body tissue due to its alkalinity. Symptoms include dyspnea, coughing, chest pains and pulmonary edema. Intense exposure can be fatal. High gas concentrations can cause burning and blistering of the skin and severe eye irritation with permanent corneal damage. Contact with liquid anhydrous ammonia causes severe burns of the eyes and skin. Extensive burns can be fatal. Anhydrous ammonia is not a carcinogen.

FIRST AID: EYE CONTACT: Flush eyes with copious amounts of running water immediately. Continue for at least 15 minutes, including under eyelids. Speed and thoroughness in rinsing eyes is important to avoid permanent injury. Obtain medical attention immediately. SKIN CONTACT: Immediately flush with water and remove contaminated clothing. Thaw frozen clothing before removal. Get medical help if irritation persists or large area is affected. INHALATION: Remove promptly to fresh air*. Restore and/or support breathing if required. Keep warm and at rest. Have trained person administer oxygen. Get medical help (Inplant, paramedic, community).

* Note: Rescuer requires proper respirator protective equipment to prevent his becoming a victim also.

SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES

Evacuate leak area and area downwind. Emergency personnel must be properly equipped (see Section 8) and trained. Preplanning will minimize risk of injury. Eliminate ignition sources and provide ventilation. An opened bottle of concentrated HCl can be used to detect sources of small leaks (dense white fumes will form). Shut off source, if possible. Use a cold water spray to absorb NH₃, staying upwind of leaks and spills. When possible, leakage should be adjusted to discharge gas rather than liquid. DO NOT try to neutralize liquid NH₃ spills with acid!!! Gaseous NH₃ may be discharged into cold water for collection; do not directly discharge the resulting solution to sewers, drains or surface water.

DISPOSAL: Unused surplus material may be returned to supplier. Limited amounts of ammonia solutions can be highly diluted with water for discharge. The discharge must not exceed established limits for ammonia. Follow all applicable federal, state and local regulations. EPA HAZARDOUS WASTE NO: D002 (liquid NH₃ & solutions with pH > 12.5 - corrosive 40 CFR261.22) REPORTABLE SPILL QUANTITY: 100 lbs (45.4kg) (40CFR117)

SECTION 8. SPECIAL PROTECTION INFORMATION

Provide general and exhaust ventilation to meet TLV requirements. For emergency and non-routine conditions, a chemical cartridge (for ammonia) respirator with full facepiece can be used for limited periods in concentrations below 300 ppm; above 300 ppm or for unknown concentrations, approved full facepiece self-contained breathing apparatus should be available. To prevent skin contact, use rubber suit, boots, gloves, apron, etc as appropriate for workplace conditions. Use safety goggles and faceshield to protect eyes from gas and direct splashing of liquid/solutions. Contact lenses should not be worn.

An eyewash station and safety shower should be immediately accessible to workers where ammonia is used or handled. Washing facilities and large amounts of clean water must be available for emergency use.

Cylinders in use should be in enclosed cabinets, etc., with an individual air ventilation source to control accidental leaks.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store cylinders or tanks in a cool, well-ventilated, fire-resistant location away from oxidizing agents, combustible materials, sources of heat and ignition, and exit points. Special outside storage, out of direct sunlight is preferred. Protect containers from physical damage. Follow good practice for handling compressed gas in cylinders. DO NOT use ammonia near sources of heat or ignition. Use explosion-proof electrical services for NH₃ in conformance with Class I hazardous locations. Work practices and equipment must be designed to prevent contact of liquid ammonia or ammonia solutions with a worker's body. Provide training to workers on safe handling.

The following standards on storage and handling of anhydrous ammonia should be followed: ANSI K61.1 - 1981 and OSHA 29CFR1910.111. DOT HAZARDOUS CLASSIFICATION: Non-flammable gas. LABEL: Non-flammable gas

DOT ID NO.: UN1005

DATA SOURCE(S) CODE (See Glossary) 2, 9, 12, 17, 19, 20, 24, 26, 27, 31, V.

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APPROVALS

J.D. Accorco 1/86

INDUST. HYGIENE/SAFETY

JW 1-86

MEDICAL REVIEW:

[Signature] Dec 85

MATERIAL SAFETY DATA SHEET

GENTIUM PUBLISHING CORPORATION

1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 371-8854



MSDS # N 3A
 SODIUM HYDROXIDE
 50% LIQUID
 Revision A
 Issued: October, 1977
 Revised: August, 1985

From Gentium's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

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MATERIAL NAME: SODIUM HYDROXIDE, 50% LIQUID
OTHER DESIGNATIONS: Liquid caustic soda, lye solution, CAS #1310-73-2 (NaOH).
MANUFACTURER: Available from many sources including:
 Diamond Shamrock Co., Chlor-Alkali Div.
 351 Phelps Court, Box 152300
 Irving, TX 75015-2300
 (800) 241-3134



SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
SODIUM HYDROXIDE (NaOH)	>48.5	Ceiling Limit: 2 mg/m ³ *
TYPICAL IMPURITIES:		
Carbonate (as Na ₂ CO ₃)	<0.25	1% NaOH Soln
Chloride (as NaCl)	<1.15	
Chlorate (as NaClO ₃)	<0.25	Eye, rabbit: Severe irritation
Sulfate (as Na ₂ SO ₄)	<0.03	
Silica (as SiO ₂)	<0.01	
Water	balance	
* Current (1985-86) ACGIH TLV. Current OSHA PEL is 2.0 mg/m ³ averaged over 8 hours.		

SECTION 3. PHYSICAL DATA

Boiling point, 1 atm ca 140°C
 Volatiles (water) 50%
 Water Solubility complete
 Viscosity @ 20°C, cps ... 50

Specific gravity, 60/60°F ... 1.53
 Density, lbs/gal 12.76

APPEARANCE & ODOR: Clear liquid - No odor.

DESCRIPTION: A 50% solution of sodium hydroxide (NaOH) in water.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
None - not combustible	N/A	N/A	N/A	N/A

EXTINGUISHING MEDIA:

Use extinguishing agents suitable for the surrounding fire. Use water spray to cool containers of this material which are involved in a fire situation to help prevent rupture.
 Sodium hydroxide will react with metals such as aluminum, tin, and zinc to generate flammable and explosive hydrogen gas.
 Firefighters should wear self contained breathing apparatus and full protective gear to prevent contact with this corrosive material.

SECTION 5. REACTIVITY DATA

This material is stable under normal storage conditions in sealed containers. Polymerization will not occur. There are no hazardous decomposition products. It reacts with CO₂ in the air to form sodium carbonate. It reacts violently with acids accompanied by heat generation and with many organic chemicals, especially nitrocarbons and halocarbons. It can react with trichloroethylene to form spontaneously flammable dichloroacetylene.
 Avoid contact with leather and wool. Contact with aluminum, tin, magnesium, zinc, and alloys that contain these metals causes the formation of hydrogen gas (MSDS #65) (Flammable).

SECTION 6. HEALTH HAZARD INFORMATIONTLV Ceiling Unit: 2 mg/m^3

Sodium Hydroxide is a strong alkali and is dangerous when improperly handled. It is destructive to all human tissue it contacts, producing severe burns. Eye contact causes severe, permanent injury. Skin contact causes irritation and, if not removed immediately, severe burns with scarring. The effects of inhalation of the mist varies from mild irritation to destructive burns. Pneumonitis may occur. Ingestion causes severe burns of the mouth, throat and stomach and may be fatal.

FIRST AID: Wash eyes immediately with plenty of running water for at least 15 minutes, including under eye-lids and all surfaces. Speed in rinsing eyes with water is important if permanent injury is to be avoided. Get medical help immediately. **SKIN CONTACT:** Flush exposed area promptly with large quantities of water. Remove contaminated clothes while washing. Prolong washing in serious cases until medical help arrives. Get medical attention for serious exposure. **INGESTION:** Immediately give person large quantities of water or milk to drink. (Never give anything by mouth to an unconscious person). Do not induce vomiting. Obtain medical assistance immediately. **INHALATION:** Remove from exposure to mist and get prompt medical help. (Paramedic, Inplant, community).

SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES

Planning ahead is essential for handling spills. Clean-up personnel should wear protective equipment to prevent skin and eye contact. Pick-up spill with vacuum equipment (alkali resistant) for disposal or flush to holding area with water. Neutralize residue with dilute acid and rinse with water.

DISPOSAL: Waste caustic must never be discharged directly to sewers, drains or surface waters. Dilute well with water and carefully neutralize with acid. Follow all applicable federal, state and local regulations.

EPA HAZARDOUS WASTE NUMBER: D002, corrosive (soln \bar{c} pH ≥ 12.5)-40CFR 261.22

REPORTABLE SPILL QUANTITY: 1000 lbs (40CFR117)

SECTION 8. SPECIAL PROTECTION INFORMATION

Provide adequate general ventilation and exhaust ventilation to meet TLV requirement, especially where the possibility of mist formation exists. Use a NIOSH-approved respirator with full face covering for mist, where needed. Use chemical safety goggles. A plastic faceshield, in addition to safety goggles, should be worn if splashing is probable. Use rubber gloves, apron or protective clothing and rubber boots where needed to prevent contact with sodium hydroxide solution.

Eyewash stations and safety showers must be immediately available.

THIS MATERIAL POSES A SPECIAL HAZARD TO CONTACT LENSES WEARERS; the slippery nature of this solution would make it extremely difficult to remove the contact lenses. Critical rinsing of the contaminated eye would be delayed.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store in well-sealed containers. Protect containers from physical damage. Avoid handling conditions which can lead to spills or mist formation. Have abundant water (preferably running water) available where material is stored, unloaded, and handled for emergency use. Drains servicing areas where this material is stored or used should have retention basins for pH adjustment and dilution of spills and flushings before discharge. Workers handling this material should be trained in proper handling precautions and emergency procedures, with proper protective equipment nearby.

DOT HAZARD CLASSIFICATION: Corrosive Material

DOT LABEL: Corrosive

DOT ID NUMBER: UN1824

DATA SOURCE(S) CODE (See Glossary) 2, 4, 9, 11, 12, 27, 55, 58.V.

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APPROVALS

D. J. Accorico, 11/85

INDUST. HYGIENE/SAFETY

D. J. Accorico, 11/85

MEDICAL REVIEW:

S. J. Accorico, 11/85

PACIFIC GAS AND ELECTRIC COMPANY
DEPARTMENT OF NUCLEAR POWER GENERATION
DIABLO CANYON POWER PLANT

NUMBER EF M-6
REVISION 14
PAGE 1 OF 15
UNITS

1 AND 2

TITLE: EMERGENCY PROCEDURE
NONRADIOLOGICAL FIRE

APPROVED: *Mr. [Signature]* 8/18/87 8-18-87
PLANT MANAGER DATE EFFECTIVE DATE

1.0 SCOPE

1.1 This procedure discusses the actions which are to be taken in the event of a fire which does not involve radioactive materials. This procedure and changes thereto require PSRC review.

2.0 GENERAL

2.1 Fires at Diablo Canyon are generally classified as either radiological or nonradiological. Nonradiological fires do not involve either radiation or radioactive material. Examples of such fires would be in the Turbine Building or outside grass fires. Fires that occur in the radiologically controlled area or involve radiological materials are handled in accordance with Emergency Procedure R-6, "Radiological Fires".

3.0 SYMPTOMS

- 3.1 Fire or smoke is reported outside of the radiologically controlled area of the plant and in an area where no radioactive materials are located.
- 3.2 The fire detection system annunciator indicates the presence of a fire within the nonradiologically controlled area of the plant in one of the outside buildings or involving site wildlands.
- 3.3 A firewater system flow alarm indicates system actuation which is a potential fire condition.
- 3.4 A carbon dioxide or halon system annunciator indicates a potential fire condition.
- 3.5 A site fire pump start could indicate a potential fire condition.

TITLE: NONRADIOLOGICAL FIRE

4.0 AUTOMATIC ACTIONS

- 4.1 The appropriate sprinkler, preaction, deluge, halon, or carbon dioxide fire systems may activate. Site fire pumps may start on decreasing system pressure to provide adequate water pressure.

5.0 IMMEDIATE ACTION

- 5.1 Activate the fire signal by dialing [REDACTED]
- 5.1.1 The fire signal is a 30-second blast on the fire sirens. The signal will be followed by the code call signal repeated 8 times. The first five persons to dial [REDACTED] will be connected into a conference call. The priority of the conference call is:
- a. Shift Foreman (Interim Site Emergency Coordinator)
 - b. Fire Brigade Leader (Typically the Senior Control Operator)
 - c. Assistant Fire Brigade Leader
 - d. Plant Manager
 - e. Fire Marshal
- 5.2 The Shift Foreman and Senior Control Operator Dial [REDACTED] (Fire Conference Call)
- 5.2.1 The initiator of the alarm shall give the details regarding the fire, including the exact location and potential damage to the plant.
- 5.3 Shift Foreman should use the public address system to notify occupants of the emergency condition.
- 5.4 Members of the on-shift Fire Brigade should report to the Operations Ready Room to pick up their fire safety equipment.
- 5.5 The Fire Brigade Leader will receive instruction from the Shift foreman.
- 5.5.1 Typically, the Senior Control Operator (SCO) is designated Fire Brigade Leader. The Shift Foreman may assign a licensed operator who is qualified as a brigade leader to fill this position if the SCO is not available. The Shift Foreman is responsible for establishing an appropriate on-shift emergency organization and assuring that Technical Specifications for Control Room staffing are not violated.

TITLE: NONRADIOLOGICAL FIRE

- 5.6 If the fire occurs during normal working hours, members of the Maintenance Fire Brigade should report to Unit 1 Cold Machine Shop.
 - 5.6.1 The Assistant Fire Brigade Leader should enter the conference call to receive his instructions.
- 5.7 Evacuate the area affected by the fire.
 - 5.7.1 This may be done by sounding the site emergency signal, utilizing the public address system, or other appropriate means.
- 5.8 Establish appropriate Control Room ventilation.
 - 5.8.1 Isolate (Mode 3) the Control Room ventilation system to prevent the entry of smoke or gasses. If the fire is within the Control Room, change the ventilation system to Mode 2 for 100% outside air makeup.
- 5.9 Manual actuation of fire systems.
 - 5.9.1 If the fire is in an area protected by either the cardox, halon or deluge systems, manual initiations of these systems may be accomplished from the Control Room or locally.

CAUTION: Carbon dioxide excludes oxygen and is life threatening in high concentrations. Ensure no personnel are in the rooms prior to manual initiation.

- 5.10 Security Department Support
 - 5.10.1 A security officer shall report to the Operations Ready Room and establish liaison with the Fire Brigade Leader.
 - 5.10.2 The Security Department shall assist with access and the staging of off-site fire response personnel including providing radios, dosimetry and escorts as necessary.
 - 5.10.3 The Security Department shall assume plant security is not compromised during the emergency response.

TITLE: NONRADIOLOGICAL FIRE

6.0 SUBSEQUENT ACTIONS

- 6.1 The Shift Foreman, acting as Interim Site Emergency Coordinator, shall direct all subsequent actions from the Control Room until relieved by the long term Site Emergency Coordinator if the emergency warrants it. Such actions should include the following:
- 6.2 Immediately notify California Department of Forestry, San Luis Obispo County Fire (CDF/SLO) by calling [REDACTED]. If the telephone lines are unavailable, the CDF radio/telephone may then be used. Notification shall be made for any of the following conditions:
- 6.2.1 An active fire, or an incipient fire that has the potential to become an active fire, is reported in a structure that requires a Fire Brigade response.
- 6.2.2 Report of smoke within a structure with no known location for the smoke.
- 6.2.3 The first report of a fire in a location where accessibility for extinguishment is known to be difficult (i.e., high pressure turbine insulation, etc.).
- 6.2.4 Any wild land fire.
- 6.2.5 Any non-fire emergency that would require the use of CDF/SLO Heavy Rescue or Hazardous Materials Team.
- 6.2.6 Any time the Fire Brigade Leader or Site Emergency Coordinator recommends additional assistance.
- 6.3 Notify Security of anticipated CDF/SLO response to the site. (This is necessary to assure timely access via Avila Gate).
- 6.3.1 The Security Shift Supervisor's telephone extension is [REDACTED].
- 6.4 Provide follow-up notifications to CDF/SLO within ten minutes of the initial request for assistance.
- 6.4.1 Sooner notification should be made if the fire has been extinguished and no off-site assistance is required. CDF/SLO may then decide to respond only one engine company for reporting purposes.

TITLE: NONRADIOLOGICAL FIRE

- 6.4.2 CDF/SLO may decide to provide additional resources if the fire emergency has escalated from the conditions described in the initial request for assistance.
- 6.5 CDF/SLO shall initially stage their personnel and equipment at Warehouse "B".
- 6.5.1 The first responding chief officer will take charge and identify himself. He may go to the fire scene initially, but will eventually go to the Control Room or the Technical Support Center to establish liaison with the Site Emergency Coordinator (a CDF radio/telephone is provided at both locations for use by the CDF chief officer).
- 6.5.2 Security shall provide dosimetry, PGandE radios and escorts to the CDF/SLO fire responders prior to entry into the Protected Area.
- 6.6 Maintain a record of notifications made to off-site personnel.
- 6.6.1 Form 69-9221, "Emergency Notification Record", may be used to provide this record.
- 6.7 Establish an initial emergency classification based on the criteria in Appendix Z and perform the actions required by the classification.
- NOTE: The County Sheriff's Office shall be notified within 15 minutes of the declaration of an unusual event or higher classification.
- 6.8 Wild land fires near the plant but outside the site boundary require PGandE liaison to assist CDF/SLO. The Shift Foreman shall assure that the minimum 5 person fire brigade is on site (within the owner controller area) to comply with technical specifications.
- 6.8.1 The liaison should be someone qualified as a Fire Brigade Leader.
- 6.8.2 The liaison shall assist CDF/SLO with communications to the Plant and with coordinating additional equipment or manpower as necessary.

-
- 6.9 Provide for protection of safe shutdown components and equipment.
- 6.9.1 Emergency Procedure EP M-10 provides the operator with a listing of safeguards equipment which may be affected by fires in various locations. This procedure should be consulted to assist in determining the operating strategy during the fire.
- 6.9.2 During the course of the fire, the Control Operator and those at the scene should pay particular attention for signs that the operability of the various engineered safeguards equipment is being affected. If the operability of any safeguards equipment is reduced below minimum Technical Specifications limits, or if such damage is imminent, shut down the Unit immediately.
- 6.9.3 Attachment 2 of this procedure, "Fire Fighting Preplans", provides layout sketches of major plant site fire areas. These preplans identify the fire protection provided in each area and should be used by Control Room personnel to assist the Fire Brigade Leader in developing the appropriate fire fighting tactics.
- 6.10 If the Control Room must be evacuated, follow the instructions given in Emergency Procedure OP-8.
- 6.11 Notify the Plant Fire Marshal, or his designee, of all plant fires. (See Appendix 1.)
- 6.12 Provide additional breathing air.
- 6.12.1 A crew should be dispatched to an air bottle refilling station and prepare to refill the backpack bottles as required. The stations are located in the 85' elevation hallway at the Unit 1 Safety Injection pumps, on 140' elevation behind the Control Room, and in the Unit 2 East Buttress. High pressure SCBA units of the type used by CDF/SLO County Fire may only be recharged in the Unit 2 East Buttress.
- 6.13 Chemistry and Radiation Protection (C&RP) support.
- 6.13.1 The Shift C&RP Technicians should be contacted to provide support for monitoring toxic atmospheres and assisting with the control of hazardous materials.

TITLE: NONRADIOLOGICAL FIRE

- 6.13.2 Shift C&RP personnel can also be called upon to help refill breathing air bottles.
- 6.13.3 The C&RP Shift Technician shall establish a liaison with the Site Emergency Coordinator.

7.0 EMERGENCY CLOSE OUT ACTIONS

- 7.1 Announce the fire is out.
 - 7.1.1 Announcement made from the Control Room at the direction of the site Emergency Coordinator using the Plant public address system. Include post-fire safety precautions.
- 7.2 Restoration of Fire Suppression Systems
 - 7.2.1 A firewatch should be established until the system has been restored and the fire area declared secure.
 - 7.2.2 If a deluge, halon or cardox system has been activated, the system must be reset after the fire is extinguished. The reset buttons for the cardox system are located in the terminal boxes on the south side of the cardox tank on the 104' elevation of the Turbine Building. The reset buttons for the deluge and halon systems are located locally. If the deluge system was activated by a thermal element, the thermal element must be replaced before the system can be reset. The halon system tank(s) will need to be refilled by a qualified vendor and the dampers reset.
 - 7.2.3 If a sprinkler system has been activated, the system must be reset after the fire is extinguished. Replace all fused sprinkler heads. Open the sprinkler system isolation valve and check for leaks. A fire watch should be established.
 - 7.2.4 Return all fire suppression equipment to its designated storage or maintenance location.
- 7.3 Complete verbal close out to off-site organizations and agencies.
- 7.4 Written close out.
 - 7.4.1 Action Request (see Nuclear Plant Administrative Procedure C-12). To document the fire and the response.

7.4.2 Written summary to NRC within 24 hours for an Unusual Event or 8 hours for a higher classification.

8.0 SPECIAL CONSIDERATIONS FOR WILDLAND FIRES

- 8.1 Because of the danger of rapid spreading, the CDF/SLO County Fire should always be called in case of a wildland fire.
- 8.2 Mobile fire suppression equipment is available on site to provide limited capability fighting wildland fires. Portable fire fighting water packs are located with the mobile equipment and in fire/emergency boxes located at convenient points along the Access Road.
- 8.3 Wildland fires that occur offsite (i.e. outside of the owner controlled area) will require a PGandE liason to support CDF/SLO County Fire. Technical Specifications require that the minimum five person fire brigade remain on site, therefore, fire brigade support may be very limited.
- 8.4 When fighting a brush fire there are several basic precautions which should be taken by plant personnel engaged in fire fighting.
 - 8.4.1 Always remain upwind of the fire.
 - 8.4.2 Stay downhill of a fire, if possible.
 - 8.4.3 Watch for fires circling behind the fire fighters.
 - 8.4.4 The safest location is within an already burned out area of the fire.
 - 8.4.5 Beware of helicopters working near the fire. They can fan the flames and spread a fire very quickly.
 - 8.4.6 Beware of fixed wing aircraft dropping retardant in your vicinity. If unable to retreat to a safe place when an air drop is eminent, lie face down with head toward incoming aircraft with hard hat in place and feet spread apart for body stability and to assist digging in. [NEVER STAND UP IN THE PATH OF AN AIR DROP]

TITLE: NONRADIOLOGICAL FIRE

9.0 FIRE FIGHTING PREPLANS

- 9.1 Attachment 2 contains fire fighting preplans for plant locations which will not routinely contain radioactive material or radiation hazards. These preplans are intended to aid the Fire Brigade Leader and the Site Emergency Coordinator during the fire emergency. Copies of Fire Fighting Preplans will be readily available to the Senior Control Operator and will be updated as appropriate by the Fire Marshal.
- 9.2 Guidelines for fighting fires involving flammable gases, liquids, and fires involving energized electrical equipment are as follows:
- 9.2.1 Flammable Gas Fires
- a. Protect surrounding equipment, usually providing a fog pattern to cool the equipment.
 - b. Shut off the source of the leakage prior to extinguishment. This reduces the potential for explosion.
 - c. Extinguish the remaining fire, usually with water or dry chemical-type agent.
- 9.2.2 Flammable Liquid Fires
- a. Isolate source of fuel (most easily done by securing the pump or shutting a valve).
 - b. In cases of a Turbine Building lubricating oil fire:
 - 1) Shutdown (trip) the centrifuge to prevent possible spread of the fire or contaminated oil to other reservoirs.
 - 2) Open the lube oil reservoir emergency dump valve to drain all the oil to the dump tank from the affected equipment (LO-1-30D for main LO reservoir, LO-1-23D for No. 11 feedwater pump, LO-1-22D for No. 12 feedwater pump, LO-2-22 for No. 21 feedwater pump, LO-2-24 for No. 22 feedwater pump, and LO-1-51 and LO-1-52 for the clean and dirty lube oil tank room).
 - 3) When all the oil has been drained to the dump tank, close the dump valve.

- c. Protect nearby heat sensitive equipment if possible with water fog.
- d. Extinguish the fire using halon, dry chemical, water, or foam.
- e. Attempt to minimize smoke and water damage.
- f. Refer to Emergency Procedure EP M-7, "Oil Spill Isolation and Clean Up" for oil spill containment procedures and notifications.

9.2.3 Energized Electrical Equipment Fires

- a. De-energize the equipment if possible.
- b. Use carbon dioxide or halon, if possible, to minimize the residue and cleanup time.
- c. Ensure the agent penetrates into the motor or cabinet via ports, vents, etc. Otherwise, the fire may reflash.
- d. If water must be used, use only a fog pattern and stand no closer than 6 feet from the energized 30KV or less electrical source.

9.2.4 Electrical Cable Fires

- a. Use self-contained breathing apparatus due to toxic products of combustion.
- b. Attempt to de-energize the source of electrical current.
- c. A lifeline may be needed due to the density of the smoke.
- d. Use halon or dry chemical extinguishers if practicable, since they are relatively non-conductive.
- e. Water may be used and is recommended on large cable fires, but recognize the potential shock hazard and use only a fog spray pattern no closer than 6 feet.

- f. Smoke control is very important to minimize damage to electrical equipment. Portable ventilation fans may be required.

10.0 HAZARDOUS MATERIALS

- 10.1 Attachment 3 contains the appropriate Material Safety Data Sheets for hazardous materials that are expected to be found outside of the radiologically controlled area. Specific locations are identified on the appropriate fire fighting preplan.

11.0 REFERENCES

- 11.1 Diablo Canyon Power Plant Fire Protection Program.
- 11.2 Emergency Procedure G-1, "Accident Classification and Emergency Plan Activation".
- 11.3 Emergency Procedure G-2, "Establishment of the Onsite and Emergency Organization".
- 11.4 Emergency Procedure G-3, "Notification of Offsite Emergency Organizations".
- 11.5 PGandE Fire Prevention Manual.
- 11.6 Accident Prevention Rule No. 23.
- 11.7 Emergency Procedure R-6, "Radiological Fire".

12.0 APPENDICES

- 12.1 Table 1, "Fire and Medical Emergency Alarms".
- 12.2 Appendix 1, "Fire Assistance Communication".
- 12.3 Appendix Z, "Emergency Procedure Notification Instructions".

13.0 ATTACHMENTS

- 13.1 Form 69-9221, "Emergency Notification Record", 3/82.
- 13.2 Attachment 2, "Fire Fighting Preplans", 11/86.
- 13.3 Attachment 3, "Hazardous Material Safety Data Sheets", 11/86.

DIABLO CANYON POWER PLANT

TITLE: NONRADIOLOGICAL FIRE

NUMBER EP M-6
REVISION 14
PAGE 13 OF 15
UNITS 1 AND 2

APPENDIX 1

FIRE ASSISTANCE COMMUNICATION

1. San Luis Obispo County Fire/
California Department of Forestry

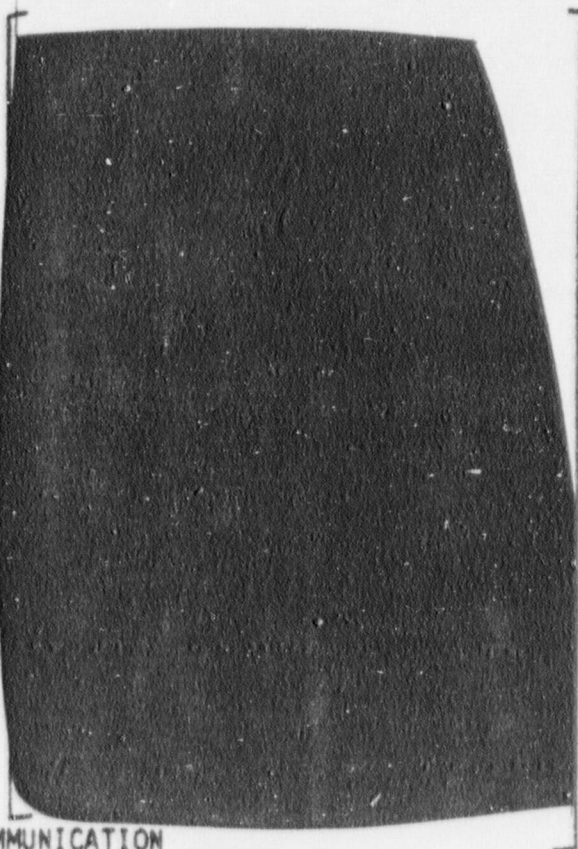
OR

San Luis Obispo County Sheriff
(Request they dispatch the
SLO/California Dept. of Forestry)

2. Emergency Safety Supervisor
Randy Kohout

Fire Marshal
Carmon Johnson

Jim McClintock
Fire Protection Specialist



MEDICAL ASSISTANCE COMMUNICATION

1. Site Medical Facility
2. Off-Site Ambulance

Extension: 


DIABLO CANYON POWER PLANT

NUMBER EP M-6
REVISION 14
PAGE 12 OF 15
UNITS 1 AND 2

TITLE: NONRADIOLOGICAL FIRE

TABLE 1

FIRE AND MEDICAL EMERGENCY ALARMS

<u>CODE</u>	<u>DESCRIPTION</u>
	Fire Emergency
	Fire Drill
	Alarm Test
	Medical Emergency

APPENDIX Z

EMERGENCY PROCEDURE NOTIFICATION INSTRUCTIONS


1. When this emergency procedure has been implemented, and upon direction from the Shift Foreman, proceed as follows:
 - a. Designate this event a Notification of Unusual Event for fires within the site boundary if a verified fire is not under control within 10 minutes of initiating fire fighting efforts or if the California Department of Forestry assistance is requested. Notify plant staff and response organizations required for this classification by implementing Emergency 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 Plan Activation".
 - b. Designate this event an ALERT if a verified fire is not under control within 10 minutes of initiating fire fighting efforts and the fire threatens operability of safety related equipment located in one of the following areas containing safety systems:
 - 1) Containment
 - 2) Control Room
 - 3) Cable Spreading Rooms
 - 4) Diesel Generator Rooms
 - 5) Auxiliary Building
 - 6) Intake Structure Pump Rooms
 - 7) Switch Gear Rooms

Notify Plant Staff and response organizations required by EP G-2 and EP G-3 in accordance with EP G-1.
 - c. Designate this event a Site Area Emergency if a verified fire is not under control within 10 minutes of initiating fire fighting efforts in an area containing safety systems, and causes a confirmed complete loss of a safety system function that causes entry into a technical specification action statement (i.e., loss of both trains of containment spray when in Modes 1, 2, 3, or 4, or loss of both safety injection pumps when in Modes 1, 2, or 3). Notify Plant Staff and response organizations required by EP G-2 and EP G-3 in accordance with EP G-1.

DIABLO CANYON POWER PLANT
TITLE: NONRADIOLOGICAL FIRE

NUMBER EP M-6
REVISION 14
PAGE 15 OF 15
UNITS 1 AND 2

APPENDIX Z (continued)

- d. Designate this event a General Emergency if the fire causes massive damage to plant systems which, in the opinion of the Site Emergency Coordinator, is likely to lead to a core melt situation. Notify plant staff and response organizations required by EP G-2 and EP G-3 and implement the instructions in Ep g-1 regarding on and offsite protective actions.
2. In addition to personnel required to be notified by EP G-2 also notify the following:
- a. Fire Marshal (See Appendix 1)
 - b. System Dispatcher (if load may be affected).
- NOTE: In off-normal working hours, consideration should also be given to calling in additional members of the Plant Fire Brigade. This should not take precedence over calling SLO/CDF.
- c. All releases or potential releases of Hazardous Materials require immediate notification of the Office of Emergency Services (OES)
- 

TITLE: FIRE FIGHTING PRE-PLANS - EP M-6

UNIT #	PREPLAN TITLE	PAGE	REVISION
1	12 KV Swgr and cable spreading room	1-1,2,3	2
1	DG's 1-1, 1-2 and 1-3	2-1,2,3	2
1	Turbine Building El. 85' and below	3-1,2,3	2
1 & 2	Cold machine shop	4-1,2,3	2
1	4160 Swgr cable spreading rooms and ISO Phase Bus Area	5-1,2,3,4	2
1	Diesel generator exhaust area	6-1,2,3	2
1	Turbine Building El. 104'	7-1,2,3	2
1	4160 Swgr and Elec. Shop Area	8-1,2,3,4	2
1	Turbine Building El. 119'	9-1,2,3	2
1 & 2	Turbine Building Work Planning	10-1,2,3	2
1	Turbine Building El. 140'	11-1,2,3	2
1	Condensate Polishing Area	12-1,2,3,4	2
1	Package Boiler Area	13-1,2,3	2
1	Transformers and R.O. Area	14-1,2,3,4	2
1 & 2	480V Vital Swgr Area - El. 100'	15-1,2,3	2
1 & 2	Vital Battery Rooms - El. 115'	16-1,2,3	2
1 & 2	Cable Spreading Rooms - El. 127'	17-1,2,3	2
1 & 2	Control Room	18-1,2,3	2
2	12 KV Swgr and Cable Spreading Room	19-1,2,3	2
2	DG's 2-1, 2-2 & Document Storage	20-1,2,3,4	2
2	Turbine Building El. 85' and Below	21-1,2,3	2
2	Condensate Polishing Area	22-1,2,3	2
2	East Buttress and Transformer Area	23-1,2,3	2
2	DG. 2-1 & 2-2 Exhaust & Document Storage	24-1,2,3	2
2	Turbine Building El. 104'	25-1,2,3	2
2	Technical Support Center	26-1,2,3	2
2	4160 Swgr Cable Spreading Rooms and ISO Phase Bus Area	27-1,2,3	2
2	4160 Swgr Area	28-1,2,3	2
2	Traveling Crews Quarters	29-1,2,3	2
2	Turbine Building El. 119'	30-1,2,3	2
2	Turbine Bldg. El. 140'	31-1,2,3	2
0	Security Building	32-1,2,3	2
1 & 2	Intake Structure	33-1,2,3	2
0	Administration Building	34-1 Thru 16	2
0	Warehouse B	35-1,2,3	2
0	Warehouse A	36-1,2,3,4	2
0	Auxiliary Package Boiler	37-1,2,3	0
0	Cold Machine Shop	38-1,2,3,4	0
0	Training Building	39-1,2,3,4	0
0	Maintenance Shop Building	40-1,2,3,4	0
0	Area 10-Rotor Storage, Hazardous Waste Bldg, Bio Lab, Fire Pump House, Fab Shop, Reverse Osmosis	41-1 Thru 7	0
0	Reservoir Area-W.H.A.T. Facility Chlorination and Clarifier Buildings	42-1 Thru 7	0
0	Transmission Yards - 500kV 1230kV	43-1 Thru 7	0
0	Man Camp-Mechanic's Shop-Document Storage	44-1 Thru 7	0
0	NPG Warehouse	45-1 Thru 7	0

NOTE: Preplan for security diesel generator room area is contained in EP R-6, "Radiological Fire". Page 6-1.

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1
12KV SWGR. AND CABLE SPREADING ROOMS
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Electrical cable insulation
2. Breaker components
3. Switchgear components

MOST PROBABLE FIRE: 1. Fire in breaker cubicles and switchgear control panels
2. Electric cable fire in cable spreading room below switchgear room

ACCESS AND EGRESS ROUTES: 1. Primary - from Turbine Building via Door #117 (Security Building)
2. Secondary - from Diesel Generator corridor via Door #118 or from transformer yard via Door #119 (Security Door)

FIRE BRIGADE STAGING AREA: 1. Primary - Turbine #1 E1. 85' South Door #117
2. Secondary - hallway by Diesel Generator 1-1 outside Door #118

HAZARDOUS MATERIALS: 1. Fumes from burning or overheated electrical cable insulation
2. CO₂ from hose reel discharge (especially at low elevations)

MANAGEMENT OF PLANT SYSTEMS: 1. Floor drain in cable spreading room E1. 73' is located along the east wall and drains to Turbine Building sump. E1. 85' drains to E1. 73' via stairs.
2. De-energize electrical equipment where feasible.
3. Automatic rolling fire doors are located at Door #119, Door #101 and ventilation openings on the east wall.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water spray may be necessary to protect exposures. Use in a fog pattern only at a distance of at least 6 feet due to energized electrical equipment.
2. Safe shutdown conduits in pyrocreted enclosures need protection.
3. Monitor concrete hatch at El. 104' for possible fire propagation.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - 3-CO₂'s in switchgear room
- 2-dry chem in cable spreading room
2. CO₂ hose reels - (1) by Door #117
(1) by Door #118
3. Water hose reels - (1) outside Door #118
(1) outside Door #117
4. Hydrants and hose reels outside roll-up Door #'s 101 and 119

VENTILATION:

1. Normal plant ventilation - FAN S-71
2. Portable smoke exhausters to aid in exhausting smoke. Positive pressure ventilation techniques may be most effective in smoke removal with fans. Gas powered fans or generators may be needed if electric power is not available.
3. Hose streams could exhaust smoke via Door #'s 101 or 119 to out of doors.

COMMUNICATIONS:

1. Plant telephone - [REDACTED] has an extension by 4160 switchgear
[REDACTED] on North Wall
3. Portable radios (Ops. Freq. #F-1)

LIGHTING:

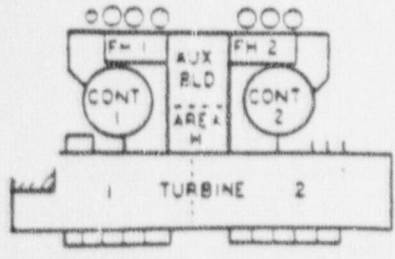
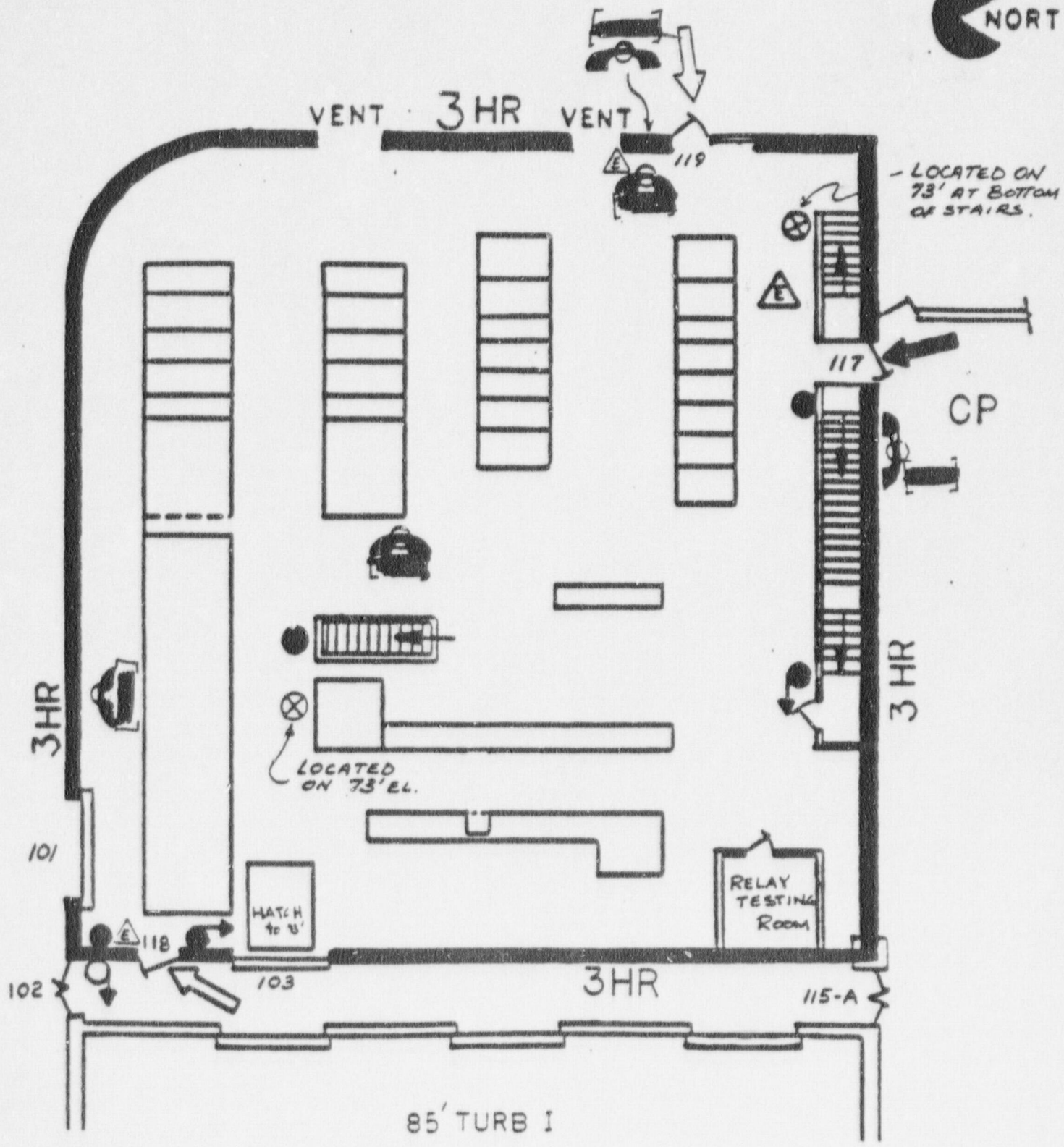
1. Normal plant lighting panel - PL 11-1 El. 85' Col. D-5
2. Emergency lighting in area

SAFETY EQUIPMENT:

1. Eye wash stations/showers are located in the U-1 Turbine Bldg., 85' El., at col's A-7 and F-7.
2. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus must be worn.
2. Smoke exhausters may be required particularly for a fire in the cable spreading room El. 76'. Exhaust smoke via roll-up Door #101 or Door #119.
3. CO₂ the agent of choice.
4. Water to be used in fog pattern only due to high voltage electrical equipment.
5. CO₂ may accumulate at low elevations. Monitor for O₂ concentration prior to removing SCBA's.



- | | | | |
|---|-----------------------|---------------------|---------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ② HAZ WASTE CHROMATES ETC. | ⊗ EYE WASH | ● CO. | ⊖ CO, HOSE REEL |
| ③ N ₂ H ₄ 35% NH ₃ | ⊗ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ④ ACID | | ⊗ HALON | ○ E. LIGHT |
| ⑤ CAUSTIC | | CP COMMAND POST | ⊖ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | ➡ PRIMARY ACCESS | ⊖ TELEPHONE |
| ⑦ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | ⊖ FIRE WALL RATING |
| ⑧ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1
DG's 1-1 1-2 1-3
FIRE FIGHTING PRE-PLAN

-
- POTENTIAL COMBUSTIBLES:
1. Fuel oil
 2. Lubricating oil
 3. Cable insulation
 4. Transient combustibles during maintenance

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Fuel oil
 3. Lubricating oil

- ACCESS AND EGRESS ROUTES:
1. Primary - South Door #115A from E1. 85' Turbine Building (Security Door)*
 2. Secondary - North Door #102 from yard (Security Door) or via 12KV switchgear room Door #118

- FIRE BRIGADE STAGING AREA:
1. Primary - outside Door #115A in the Turbine Building
 2. Secondary - outside Door #102 in transformer area

- HAZARDOUS MATERIALS:
1. CO₂ discharge
 2. Fumes from burning or overheated electrical cable insulation
 3. Chromates in Diesel Generator coolers

MANAGEMENT OF PLANT SYSTEMS:

1. A 2 3/4" curb is provided at each automatic door to prevent oil spread to adjacent areas.
2. All three generators are protected by an automatic CO₂ system. The generators are surrounded by 3 hour fire walls and ceilings. The overhead rolling doors are also 3 hour fire rated. The CO₂ system may be actuated automatically, manually from the control room, or manually from the Turbine Building North wall by the Turbine Pedestal area.
3. The west roll-up doors may not shut automatically on CO₂ manual discharge since they are activated by heat detectors only. The shut-off for the hallway sprinklers (FP-1-42) is located in the N.W. corner by booster pump 1-1.
4. Fuel oil leaks drain to the Turbine Building Main sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels located in the hallway, the Turbine Building or the yard loop may be required to protect exposures.
2. Maintain fire barrier integrity to assure protection of redundant equipment.
3. West side of diesel rooms are open to the outside. Redundant equipment could be exposed to smoke or hot gases. Establish protection as necessary. Check E1. 107' for possible fire spread.

- FIRE SUPPRESSION EQUIPMENT:
1. Fire extinguishers - (3) 20# dry chemicals (1 each bay)
150# dry chemical wheeled unit - CO₂ hose reel 12KV switchgear room by Door #118
 2. Fire hose reels - (1) hallway at Door #118
(2) Turbine Building E. and W. stairways
(3) Yard Loop hose trailer
 3. Automatic CO₂ System Diesel Generator rooms
 4. Sprinkler system in hallway
 5. Foam (Maintenance Brigade Locker - Fire Brigade Station, Fire Truck, Stairway #1)
- NOTE: A second manual discharge of CO₂ should be considered if a re-flash occurs or to assure sufficient concentration.

VENTILATION:

1. Normal plant ventilation. Louvers are provided in the west wall. Automatic carbox activation will isolate ventilation.
2. Portable smoke exhausters may be required. Smoke can be exhausted to the outside via west ventilation openings using positive ventilation techniques.
3. Hose stream ventilation is also possible via Door #102.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - [REDACTED] Diesel Generator 1-1
[REDACTED] Diesel Generator 1-2
[REDACTED] Diesel Generator 1-3
[REDACTED] 12KV switchgear room
2. Portable radio (Ops. Freq. [REDACTED])

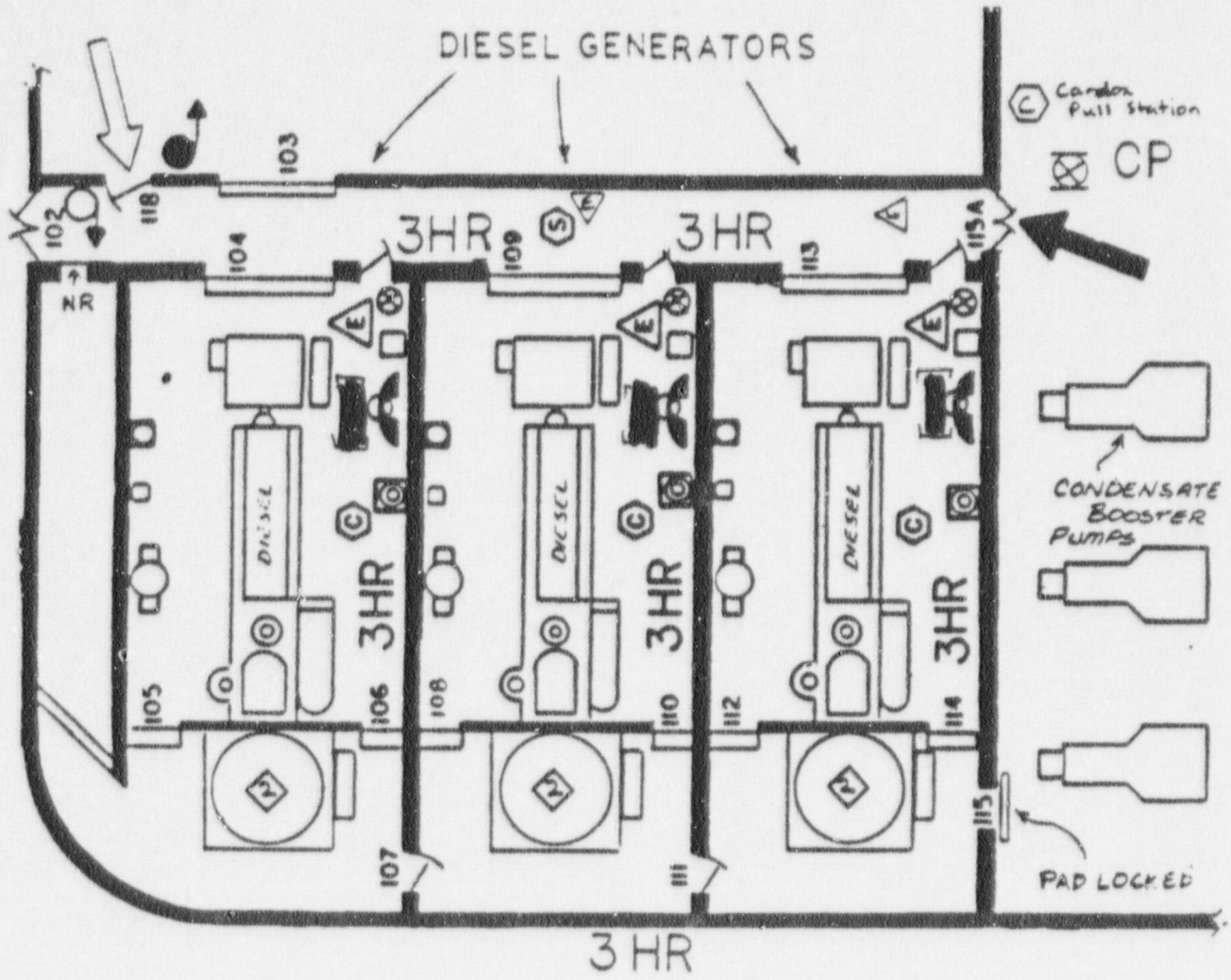
- LIGHTING:
1. Normal plant lighting panel - PL 11-1 E1. 85' Col D-5 in the 12KV switchgear room
Distribution panel PLD 11 Bk 5 breaker #'s 13-15 and 17
 2. Emergency lighting in area

SAFETY EQUIPMENT:

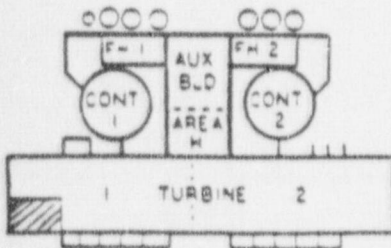
1. Eye wash/stations stations are located in the U-1 Turbine Bldg., 85' E1., at col's A-7 and at F-7.
2. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Portable smoke exhausters may be required. Smoke in the corridor can be exhausted via Door #102 to the outside.
2. Self contained breathing apparatus will be required due to smoke and CO₂ discharge.
3. Tests should be conducted to determine CO, O₂ and flammable vapors prior to removal of SCBA.
4. Reopening of roll-up doors for ventilation requires engaging the ratchet mechanism above the door and opening the door with the chain operator.



85' TURB. I
DIESEL GENERATORS



- | | | | |
|---|------------------------------|---------------------|---------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO, | ⊕ CO, HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊕ E.W.S. EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊕ WHEELED DRY CHEM |
| ⊕ ACID | | ⊕ HALON | ⊕ FIRE WALL RATING |
| ⊕ CAUSTIC | | CP COMMAND POST | ☆ ANNUNCIATOR PANEL |
| ⊕ TOXIC GASES | | → PRIMARY ACCESS | |
| ⊕ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | |
| ⊕ MISCELLANEOUS/OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

TURBINE BLDG. EL. 85' AND BELOW
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Lube oil
2. Cable insulation
3. Batteries

MOST PROBABLE FIRE:

1. Lube oil leakage
2. Transient combustibles
3. Cable insulation
4. Battery casings

ACCESS AND EGRESS ROUTES:

1. Primary - via Door #'s 126-127 and 129 to west side El. 85'
2. Secondary - via Door #102 N. end at Diesel Generators via Door #122 East Wall by R.O. Unit

FIRE BRIGADE STAGING AREA:

1. Primary - Cold Machine Shop
2. Secondary - Fire Equipment Storage Area El. 85'

HAZARDOUS MATERIALS:

1. Hydrazine, Ammonia, Sulphuric Acid cable insulation, Battery Acid

MANAGEMENT OF PLANT SYSTEMS:

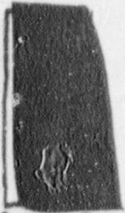

1. The clean and dirty lube oil room is surrounded by 3 hour fire barriers, raised Doorways and sealed pipeways thus preventing oil from a ruptured tank leaking to an outside area.
2. Water deluge systems protect the main feedwater pumps 1-1 and 1-2 and H₂ Seal oil Unit. Shut off valves are located at:
FWP-1-1 El. 85' FCV-200 wall west of 6 heater drain cooler
FWP-1-2 El. 85' FCV-201 on column east of clean & dirty L.O. tanks room
H₂ Seal oil El. 85' FCV-203 at S.E. corner of fire equipment locker
3. Wet sprinkler system protects the entire El. 85'. Shut off valves are located at:
FP-1-50 south system above and behind vacuum pump S.W. Corner.
FP-1-42 north system N.W. corner by booster pumps
4. Lube oil reservoir dump valves LO-1-23D (Feed water pump 11) and LO-1-22D (Feedwater Pump 12) are located below the pumps. Lube oil reservoir dump valves LO-1-51 and LO-1-52 for the clean and dirty lube oil tanks are located below the south access catwalk.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels may be required to protect exposures. Do not spray cold water directly on exposed hot steam piping.

- FIRE SUPPRESSION EQUIPMENT:
1. Fire extinguishers - (2) 15# CO₂'s battery rooms
(6) - 20# Dry Chemicals
(1) - 150# Dry Chem Wheeled Unit
(1) - 2½ Gallon H₂O
 2. Fire hose reels - (5)
Deluge Systems - may be manually actuated from Control Room
 3. Foam-Maintenance Brigade Locker (85' Elev. Unit 2 Buttress) stairway locker (stairway 1) Operation Ready Room (140' E1).

- VENTILATION:
1. Vent Fan #'s S-51, S-52 and S-53 located on the east wall and exhaust outlets are located on the west wall of the fire zone.
 2. If extreme smoke conditions are encountered smoke could be exhausted by hose streams through outside opening doorways.
 3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

- COMMUNICATIONS:
1. Plant telephone - 
 2. Portable radios (Ops. Freq. 

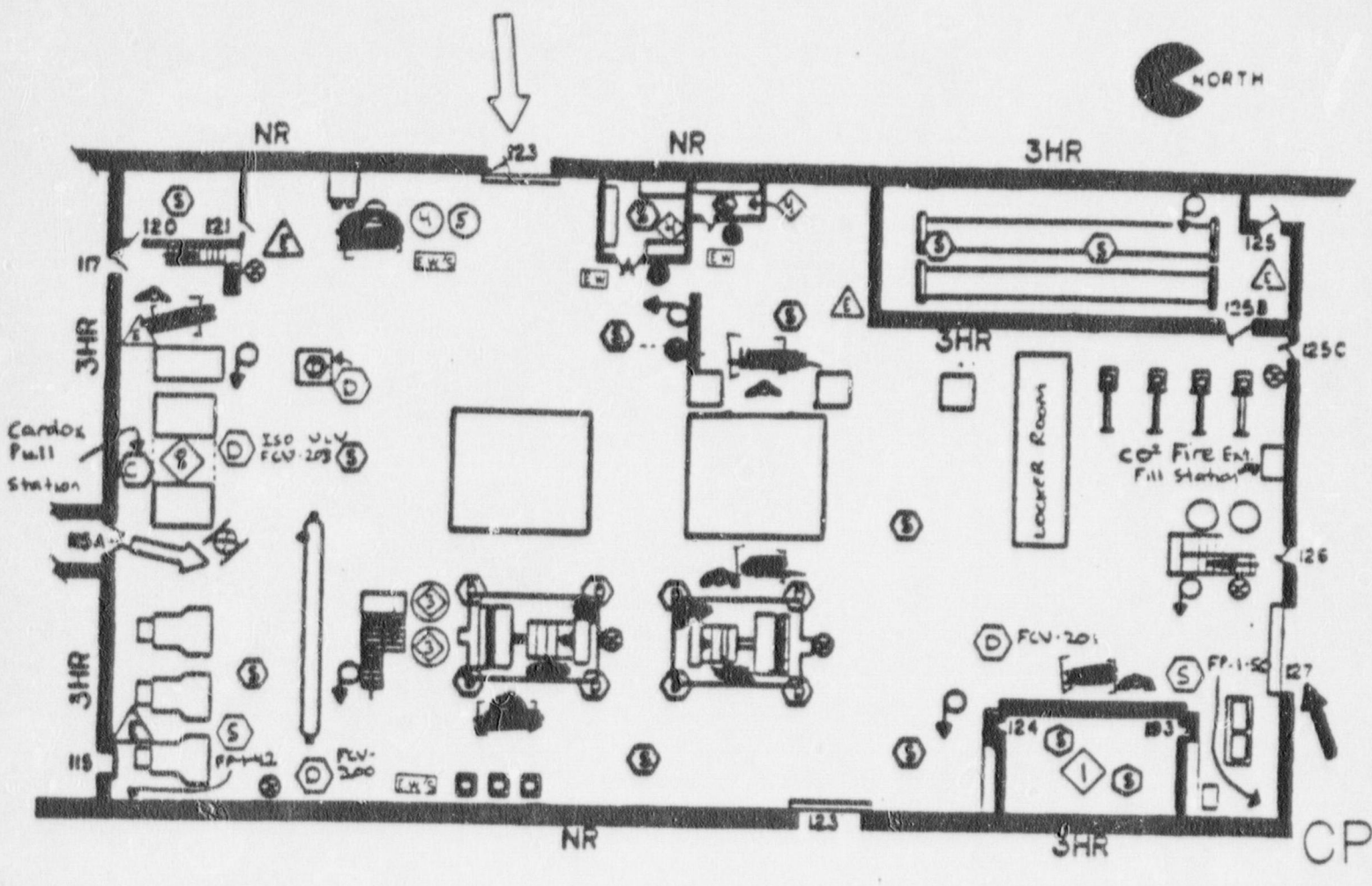
- LIGHTING:
1. Normal plant lighting panels located at:
PL 11-1- E1. 85' Col D-5
PJ 11-2- E1. 85' Col B-6
PLD-11- E1. 85' Col D-5
PJ-11-1- E1. 85' Col D-5
PL-12-1- E1. 85' Col D-17
 2. Emergency lighting in area

SAFETY EQUIPMENT:

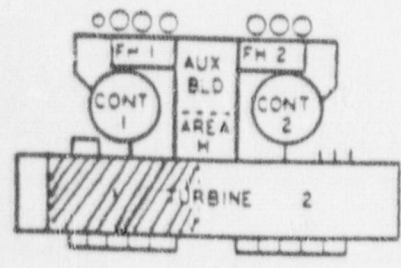
1. Eyewash stations are located at col's F-10 and F-11.
2. Eyewash/Shower stations are located at col's A-7 and between F and G at col 7.
3. A first aid kit is located in the cold machine shop by the entrance to the welder's booth [not pictured on this map]
4. The First Aid room is located near the entrance to the RCA [Not pictured on this map.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus and other personal protective equipment will be required.
2. Portable hand lanterns may be required if smoke conditions dictate.
3. Special protective clothing will be necessary if sulphuric acid, ammonia or hydrazine spills occur.



85' TURBINE I



- | | | | |
|--|-----------------------|---------------------|-----------------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ② HAZ. WASTE CHROMATES ETC. | Ⓞ EYE WASH | ● CO, | Ⓞ CO, HOSE REEL |
| ③ N ₂ H ₄ 35%, NH ₃ | Ⓞ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊠ WHEELED DRY CHEM |
| ④ ACID | | ⊙ HALON | ○ 5 GAL. CO ₂ FIRE EX. |
| ⑤ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⑥ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ⑦ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | ▬ FIRE WALL RATING |
| ⑧ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NOS. 1 AND 2

COLD MACHINE SHOP
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Acetylene
2. Lube oil tank
3. Electrical panels
4. Misc. combustibles (Tool Room)
5. Solvents

MOST PROBABLE FIRE:

1. Transient combustibles
2. Welding fire
3. Electrical panels
4. Solvent spill

ACCESS AND EGRESS ROUTES:

1. Primary Access - hallway via Door #131, E1. 85'
2. Secondary Access - hallway via Door #135, E1. 85'
OR
3. via Door #138 to Unit No. 2 Turbine Building,
E1. 85'

FIRE BRIGADE STAGING AREA:

1. Primary - Unit 1 Turbine Building 85' E1.,
outside Door #131
2. Secondary - Access Control, outside Door #135
OR
3. Unit 2 Turbine Building 85' E1., outside
Door #138

HAZARDOUS MATERIALS: 1. Some small quantities of solvents may pose a small health risk.

MANAGEMENT OF PLANT SYSTEMS:

1. The entire shop offices, tool crib and welding shop are protected by automatic sprinklers.
2. The system shut off is located on E1. 85' above and behind Mash vacuum pump (valve #FP-1-50).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use water spray to cool compressed gas and acetylene cylinders and flammable liquid lockers.



FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) 20# Dry Chem. shop area
(2) 15# CO₂'s shop area
(2) 2½ Gal. water shop area
2. Water hose reels - (1) by Door #135 shop area
(1) Turbine Building via Door #131
3. Wet sprinkler system - shop area, offices, tool room and welding shop

VENTILATION:

1. Normal plant ventilation system. Smoke from a fire in this area would exhaust through the equipment opening to 140' E1. roof. Portable exhausters could be used to ventilate offices and welding shop areas.

COMMUNICATIONS:

1. Plant telephone - shop area (1)  tool crib counter south Door #130
2. Portable radios (Ops. Freq. 

LIGHTING:

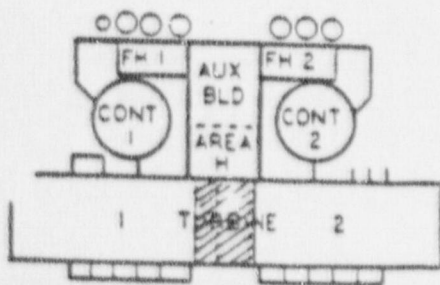
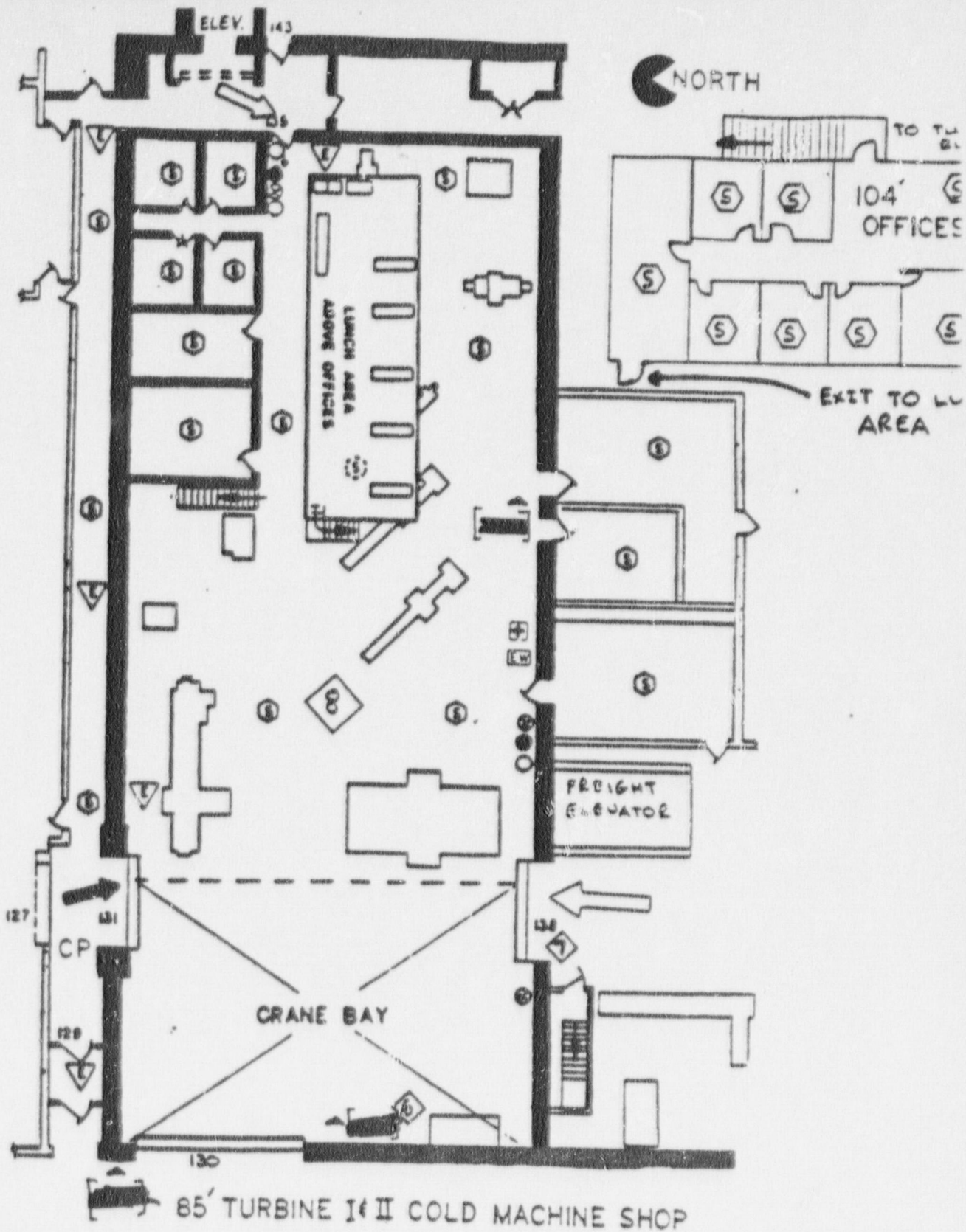
1. Normal plant lighting control panel located at panel PL 12-1 E1. 85' Col. D-17 (Machine Shop)
2. Emergency lights indicated by E on drawing

SAFETY EQUIPMENT:

1. An eye wash station is located on the south wall at the entrance to the welder's booth.
2. A first aid kit is located on the south wall at the entrance to the welder's booth.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required, especially in the offices, tool room and welding shop.
2. The possibility of an explosion exists from leaking acetylene.



- | | | | |
|--------------------------------------|-----------------------|---------------------|---------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊖ EYE WASH | ● CO. | ⊖ CO. HOSE REEL |
| ⊖ N ₂ 35% NH ₃ | ⊖ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊖ ACID | | ⊖ HALON | ○ EMERGENCY LIGHTS |
| ⊖ CAUSTIC | | CP COMMAND POST | ☎ TELEPHONE |
| ⊖ TOXIC GASES | | ➔ PRIMARY ACCESS | ⊖ FIRE WALL RATING |
| ⊖ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊖ MISCELLANEOUS/OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT
UNIT NO. 1

4160 SWGR CABLE SPREADING ROOMS AND ISO PHASE BUS AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Cable insulation - cable spreading rooms
2. ISO phase bus cooler panels
3. Transient combustibles

MOST PROBABLE FIRE:

1. Class "A" transient combustibles
2. Electrical fire in cable spreading rooms
3. Fire in ISO phase bus cooler panels

ACCESS AND EGRESS ROUTES:

1. Primary - via Door #213, E1. 104' Turbine Building (Security Door)
2. Secondary - via Door #'s 212 and 209 (Security Door)
via Door #210, up from 12KV switchgear room (Security Door)

NOTE: To maintain separation of vital bus cable spreading rooms. Enter bus G and H rooms via Door #'s 202 and 204 respectively.

FIRE BRIGADE STAGING AREA:

1. Primary - outside Door #213 @ E1. 104'
2. Secondary - corridor to east of Emergency Diesel Generator exhaust stack area via Door #'s 212 and 209.

HAZARDOUS MATERIALS:

1. Fumes from cable insulation
2. CO₂ discharge from hose reels

MANAGEMENT OF PLANT SYSTEMS:

1. No floor drains are provided in the cable spreading rooms (minimize water use).
2. Isolate affected buses if possible.

The following table lists equipment powered from the 3 different buses.

Bus F ACB's

52HF7	Diesel-Generator #13 Source
52HF8	Auxiliary Salt Water Pump #11
52HF9	Auxiliary Feedwater Pump #13
52HF10	480V Load Center 1F Feeder
52HF11	Centrifugal Charging Pump #11
52HF12	Component Cooling Water Pump #11
52HF13	Auxiliary Transformer Source
52HF14	Startup Transformer Source
52HF15	Safety Injection Pump #11

Bus G ACB's

52HG5	Diesel-Generator #12 Source
52HG6	Auxiliary Salt Water Pump #12
52HG7	Containment Spray Pump #11
52HG8	Residual Heat Removal Pump #11
52HG9	Centrifugal Charging Pump #12
52HG10	480V Load Center 1G Feeder
52HG11	Reciprocal Charging Pump #13
52HG12	Component Cooling Water Pump #12
52HG13	Auxiliary Transformer Source
52HG14	Startup Transformer Source
52HG15	Startup Transformer Feeder to Buses F, G, H

Bus H ACB's

52HH7	Diesel-Generator #11 Source
52HH8	Auxiliary Feedwater Pump #12
52HH9	Containment Spray Pump #12
52HH10	480V Load Center 1H Feeder
52HH11	Residual Heat Removal Pump #12
52HH12	Component Cooling Water Pump #13
52HH13	Auxiliary Transformer Source
52HH14	Startup Transformer Source
52HH15	Safety Injection Pump #12

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use water fog only if necessary to cool and protect exposures due to high voltage electrical hazards.
2. Maintain fire barrier penetration seals to protect redundant equipment.
3. Maintain separation of vital 4kV cable spreading rooms if at all possible (especially during fire suppression and ventilations).

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (5) 15# CO₂'s
2. CO₂ hose reels - (1) inside Door #213
(1) inside Door #201
3. Fire hose reel - (1) hallway N.E. End by Door #201
(1) by N. Stairway
El. 104' Turbine Building

VENTILATION:

1. Each CSR is provided with a grating at ceiling level which would allow smoke to exhaust to the 4160 switchgear rooms (E1. 119'). The 4160 switchgear rooms are provided with ceiling grating with fusible link closers (E1. 140') which would allow smoke to exhaust at the Turbine Deck area N.E. corner.
2. Portable smoke exhausters could be used to exhaust smoke through Doors 203-205 and 207 to Door 213 at E1. 107' Turbine Building.
3. Plant ventilation fans on the west wall of the ISO phase bus room would force smoke to open louvers on the east wall leading to the outside. An open stairway leads to E1. 140' Turbine Deck. Maintain the following vent fans running-S-67, S-68 and S-69 for Bus rooms-F,G and H respectively at E1. 119'.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - (Iso phase bus area)
2. Portable Radios (Ops. Freq.)

LIGHTING:

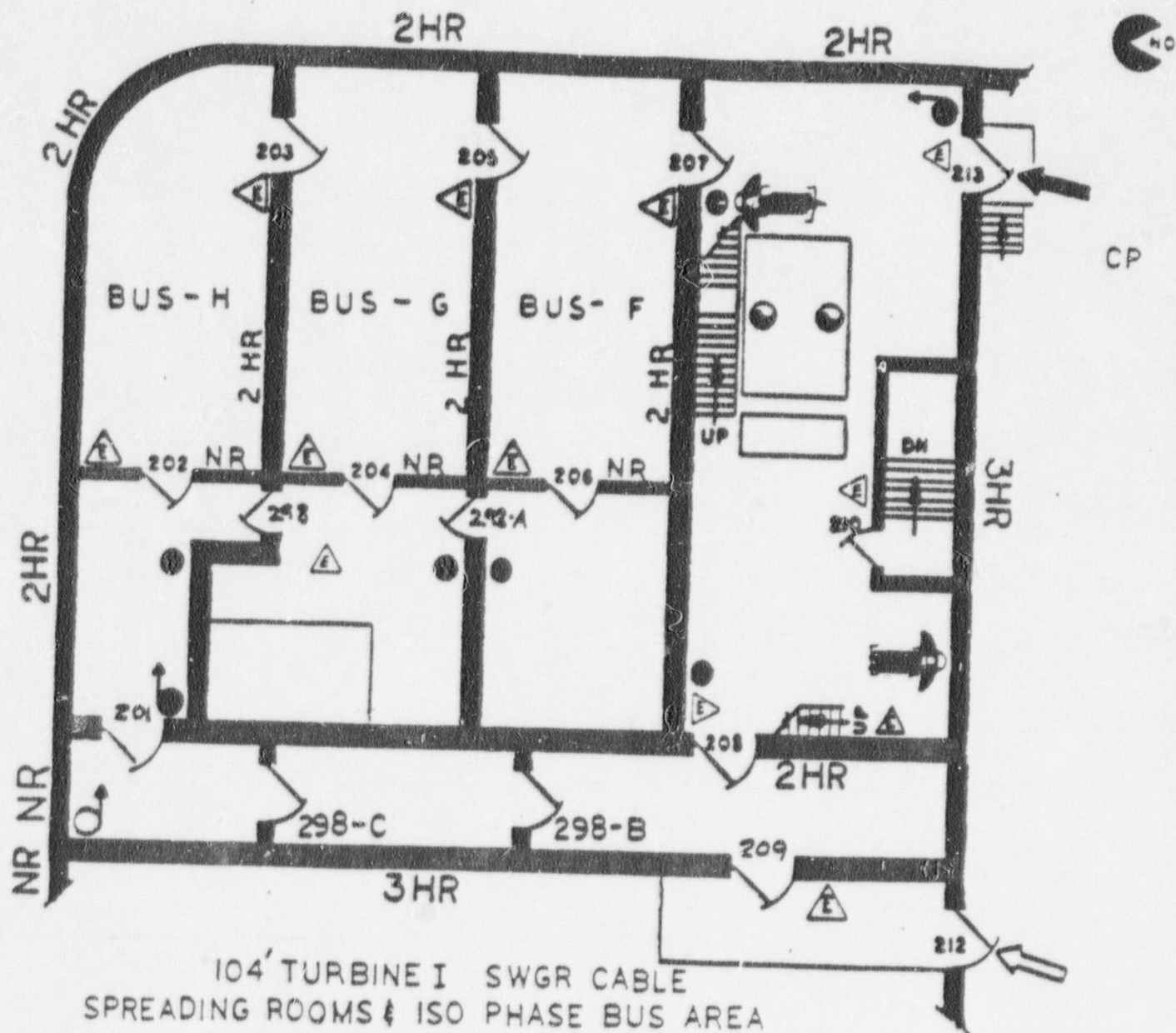
1. Normal plant lighting panel - PL 11-4 E1. 119' Turbine Building exciter switchgear room. Panel fed from dist. panel PLD. 11 breaker 6-85A.
2. Emergency lighting in area

SAFETY EQUIPMENT:

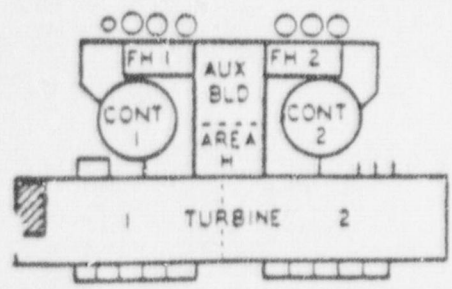
1. Eye wash/shower stations are located in the U-1 Turbine Building, 85' EL, at Col's A-7 and at F-7.
2. A first aid kit is located in the U-1 Turbine Building, 104'EL, by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required for a fire in these rooms.
2. High voltage equipment, especially by Iso phase bus panels. Minimize water use.
3. Keep redundant safety trains separated where possible.



104' TURBINE I SWGR CABLE
SPREADING ROOMS & ISO PHASE BUS AREA



- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS ⊕ HAZ. WASTE CHROMATES ETC. ⊕ N₂H₄ 35% NH₃ ⊕ ACID ⊕ CAUSTIC ⊕ TOXIC GASES ⊕ FLAMMABLE GASES ⊕ MISCELLANEOUS/OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ○ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➔ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO₂ HOSE REEL ⊕ WHEELED DRY CHEM ○ EMERGENCY LIGHTS △ TELEPHONE — FIRE WALL RA ☆ ANNUNCIATOR PANEL |
|---|--|---|---|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

DIESEL GENERATOR EXHAUST AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Transient combustibles

MOST PROBABLE FIRE: 1. Transient combustibles in contact with hot exhaust piping

ACCESS AND EGRESS ROUTES:

1. Primary - via Doorway 212 at E1. 104' (Security Door)
2. Secondary - via Door #209

NOTE: Access to DG 1-1 and 1-3 exhaust plenums is through a sheet metal hatch. Access to Diesel Generator 1-3 is via Door #209B.

FIRE BRIGADE STAGING AREA:

1. Primary - Turbine Building
E1. 104' outside Door #'s 211 and 212
2. Secondary - hallway to the east

HAZARDOUS MATERIALS: None

MANAGEMENT OF PLANT SYSTEMS:

1. A flat head screwdriver will be required to gain entrance to exhaust areas, available in fire brigade tool boxes.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Do not use water on hot Diesel Generator exhaust pipes because cracking may occur.
2. Diesel Generator plenum is common at the north wall and separation of redundant equipment is minimal.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguisher - (1) 20# Dry Chemical inside Door #212
 - Fire hose reels - (1) located at N.W. stairs El. 104
(1) hallway by Door #201
- To effectively fight a fire using the above two hose reels, an additional 100' of hose would be required for each reel.

VENTILATION:

1. Louvers in the permanently open position are located on the west wall.
2. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - Turbine Building between Doorways 211 and 212
- Iso Phase Bus Room
2. Portable radios (Ops. Freq.)

LIGHTING:

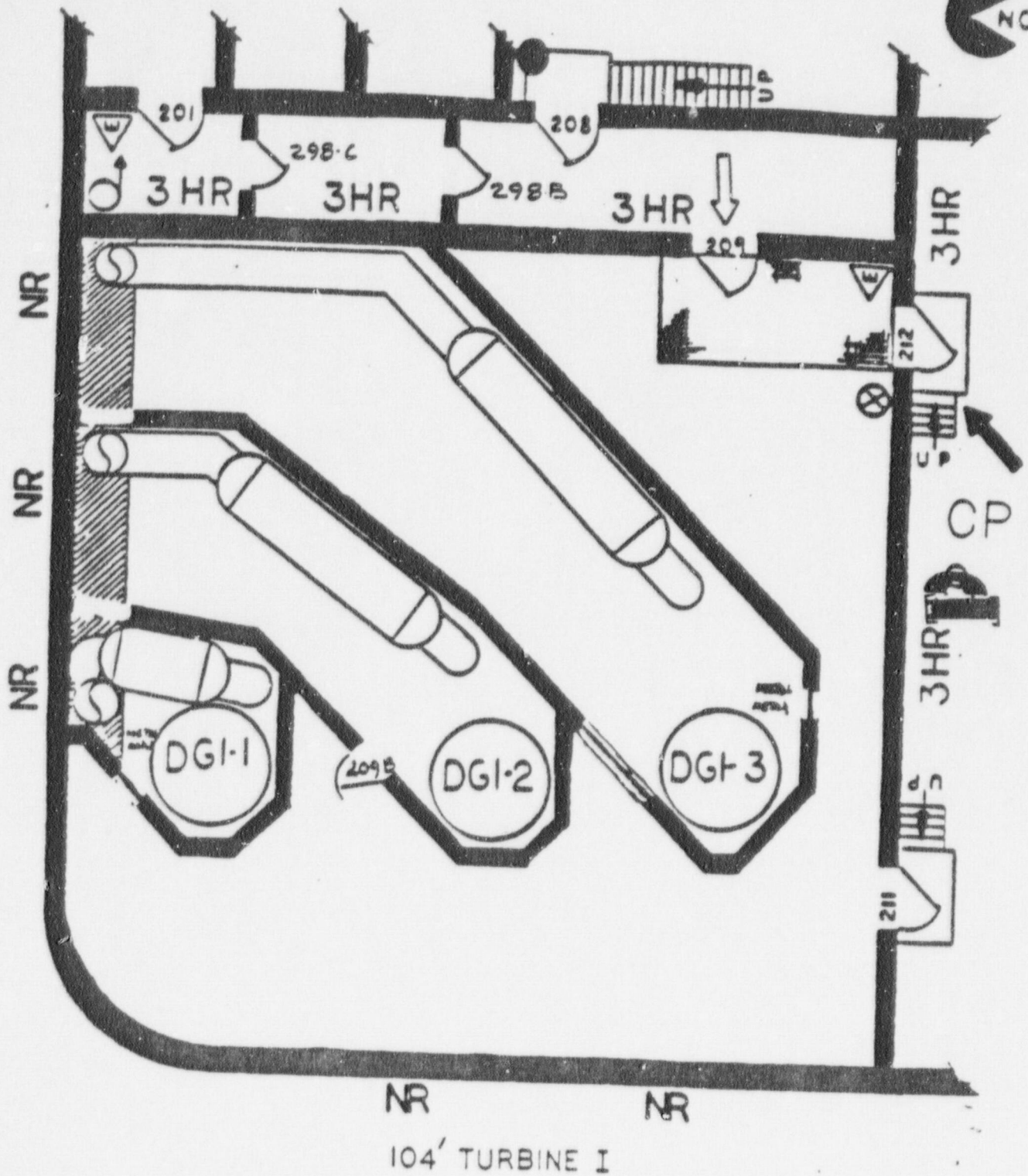
1. Normal plant lighting - PL 11-4 El. 119' Col. D-2
2. Emergency lighting in area
3. Hand-held lanterns required in the Diesel Generator exhaust rooms.

SAFETY EQUIPMENT:

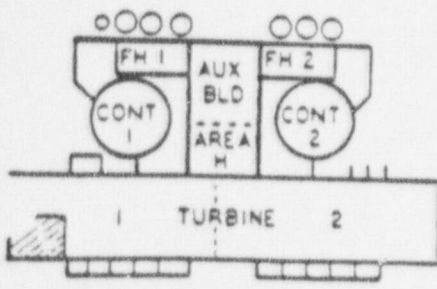
1. Eye wash/shower stations are located in the U-1 Turbine Building, 85' EL, at Col's A-7 and F-7.
2. A first aid kit is located in the U-1 Turbine Building, 104' EL, by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self-contained breathing apparatus will be required.



NR NR
104' TURBINE I



- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> ① FLAMMABLE/COMBUSTIBLE LIQUIDS ⊕ HAZ WASTE CHROMATES ETC ⊕ N₂H₄ 35% NH₃ ⊕ ACID ⊕ CAUSTIC ⊕ TOXIC GASES ⊕ FLAMMABLE GASES ⊕ MISCELLANEOUS/OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ⊕ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➔ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO₂ HOSE REEL ⊕ WHEELED DRY CHEM ○ EMERGENCY LIGHTS ⊕ TELEPHONE — FIRE WALL RATING ☆ ANNUNCIATOR PANEL |
|---|--|---|---|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

TURBINE BLDG. EL. 104'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Lube oil
2. Cable insulation

MOST PROBABLE FIRE: 1. Lube oil
2. Overheated cables
3. Electrical panels
4. Transient combustibles

ACCESS AND EGRESS ROUTES: 1. Primary - via stairway S.W. Turbine Building
2. Secondary - via Elevator #1 or adjacent stairway
OR via Door 213 from Iso phase bus area

FIRE BRIGADE STAGING AREA: 1. Primary - cold machine shop El. 85'
2. Secondary - outside Elevator #1
OR Iso phase bus area

HAZARDOUS MATERIALS: 1. Fumes from burning or overheated
cable insulation
2. CO₂ total flooding system in Main Turbine L.O.
Reservoir Room

MANAGEMENT OF PLANT SYSTEMS:

1. The entire floor area is protected by wet piped automatic sprinklers. North system shut off valve #FP-1-50 located on El. 85' N.W. corner by booster pumps. South system shut off valve #FP-1-42 located on El. 85' above and behind vacuum pump S.W. corner.
2. The main Turbine L.O. reservoir is protected by a total flooding CO₂ system that can be activated manually from Control Room or outside the north wall of the L.O. reservoir room.
3. The main lube oil reservoir dump valve LO-1-300 is located at El. 140' immediately west of the Shift Foreman/Clearance Coordinator's office.
4. Floor drains below the L.O. reservoir allow drainage to the U-1 main lube oil tank located under the machine shop.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels may be required to protect exposures. Do not spray cold water on exposed hot steam piping.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (7) 20# Dry Chemicals
2. Fire hose reels - (5)
3. Cardox System - L.O. Reservoir Room
4. Wet sprinkler system
5. Foam-(Maintenance Brigade Locker, Fire Brigade Station, Fire Truck, Stairway #1 Locker)

VENTILATION:

1. Ventilation Fans S-55 and S-56 are located in the N.E. corner.
2. Four (4) exhaust fans are located on the west wall.
3. Smoke ejectors may be required to ventilate pockets under solid flooring.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - [REDACTED] also phase bus Elevator. #1
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

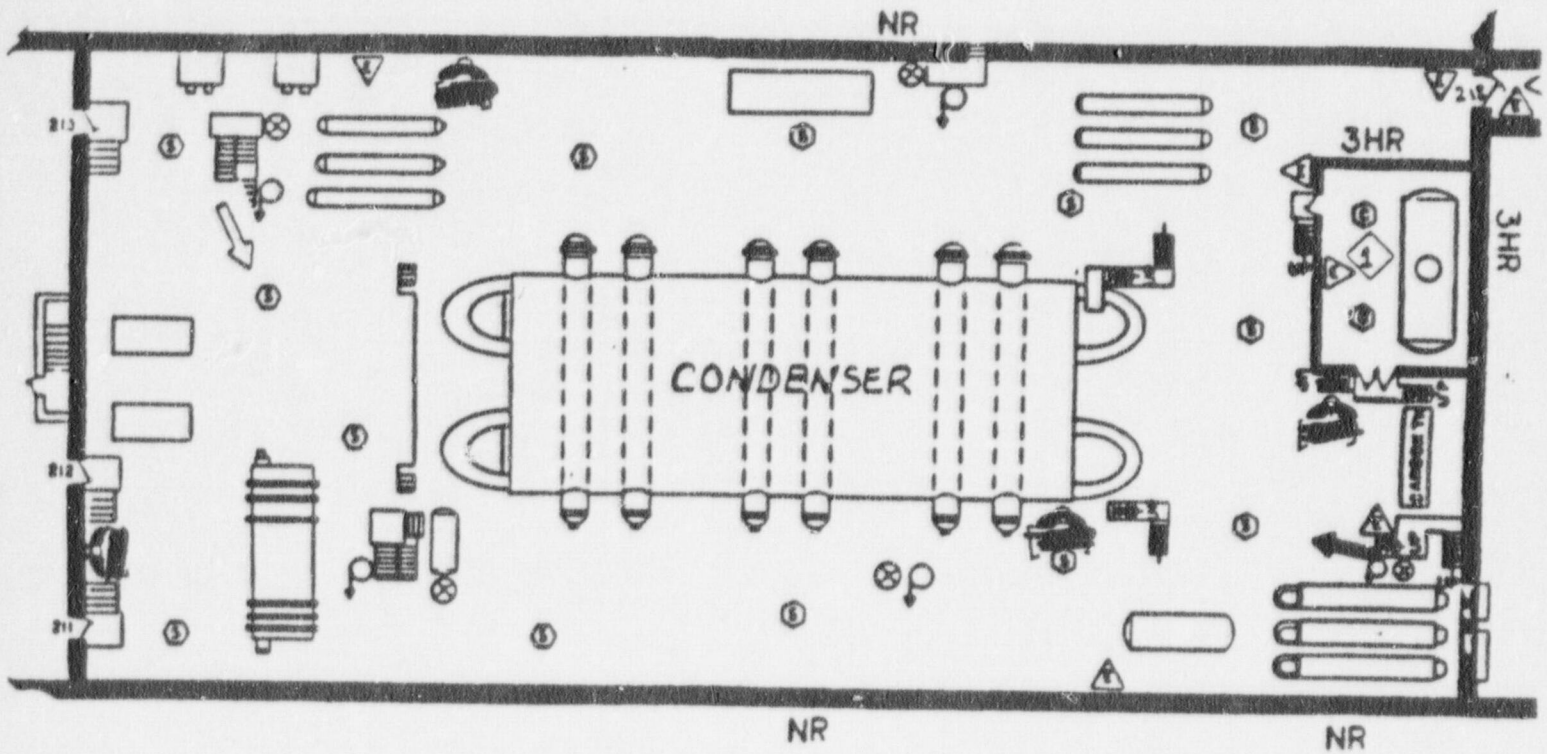
1. Plant lighting panels - PL-11-2 E1. 104' Col F-6
PL-11-3 E1. 104' Col B-7
PL-12-2 E1. 123' Col C-16
2. Lube oil reservoir
3. Emergency lighting in area

SAFETY EQUIPMENT:

1. Eye wash/shower stations are located in the U-1 Turbine Building, 85' E1., at col's A-7, at F-7; eye wash stations located at F-10 and at F-11.
2. A first aid kit is located in the Turbine Building, 104' E1. by the personnel elevator.

SPECIAL PRECAUTIONS:

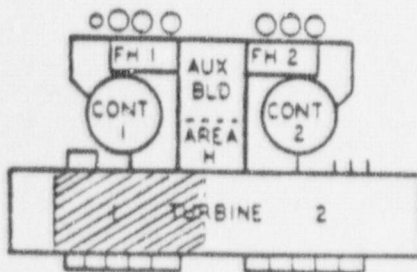
1. Self contained breathing apparatus will be required, particularly for a fire in the lube oil reservoir.
2. Portable hand lanterns should also be available.
3. A lube oil fire may also involve the E1. 85' below or E1. 119' above.
4. Use extreme caution in areas of open grating.



104' TURBINE 1

CP

LOCATED IN
THE COLD PA.
SW



- | | | | |
|---|-----------------------|---------------------|-----------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC | ⊖ EYE WASH | ● CO ₂ | ⊖ CO ₂ HOSE REEL |
| ⊖ N ₂ H ₄ 35% NH ₃ | ⊖ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊖ ACID | | ⊕ HALON | ○ Ⓞ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ |
| ⊖ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⊖ TOXIC GASES | | ➡ PRIMARY ACCESS | ☎ TELEPHONE |
| ⊖ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | ▬ FIRE WALL RATING |
| ⊖ MISCELLANEOUS OTHER | | | ☆ ANNUNCIATOR PANEL |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

4160 SWGR. AND ELEC. SHOP AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Cable insulation
2. Switchgear components
3. Transient combustibles - shop area

MOST PROBABLE FIRE:

1. Fire in switchgear components
2. Transient combustibles
3. Cleaning solvents
4. Overheated cables

ACCESS AND EGRESS ROUTES:

1. Primary - via Door #303 from the Turbine machinery area (Door #305 Security Door)
2. Secondary - via Door #304 to Iso phase bus room (Security Door)

NOTE: Access 4kV switchgear rooms via Door #'s 306, 308, and 310 to maintain separation of redundant components.

FIRE BRIGADE STAGING AREA:

1. Primary - outside Door #303 in the Turbine spaces
2. Secondary - via Door #304 from Iso phase bus room

HAZARDOUS MATERIALS:

1. Fumes from cable insulation
2. CO₂ from hose reel discharge

NOTE: CO₂ is heavier than air
check O₂ level at E1. 104'
after discharge.

MANAGEMENT OF PLANT SYSTEMS:

1. Sprinkler isolation valve (FP-1-47) for electric shop, vent fan area, is located on Turbine Building side of Door #303.
2. De-energize affected buses if possible.
3. No drains are provided for the vital 4kV switchgear area. Minimize water use. Water will drain to E1. 104' cable spreading rooms via open ventilation opening in the floor.

The following table lists equipment powered from the 3 different buses.

Bus F ACB's

52HF7	Diesel-Generator #13 Source
52HF8	Auxiliary Salt Water Pump #11
52HF9	Auxiliary Feedwater Pump #13
52HF10	480V Load Center 1F Feeder
52HF11	Centrifugal Charging Pump #11
52HF12	Component Cooling Water Pump #11
52HF13	Auxiliary Transformer Source
52HF14	Startup Transformer Source
52HF15	Safety Injection Pump #11

Bus G ACB's

52HG5	Diesel-Generator #12 Source
52HG6	Auxiliary Salt Water Pump #12
52HG7	Containment Spray Pump #11
52HG8	Residual Heat Removal Pump #11
52HG9	Centrifugal Charging Pump #12
52HG10	480V Load Center 1G Feeder
52HG11	Reciprocal Charging Pump #13
52HG12	Component Cooling Water Pump #12
52HG13	Auxiliary Transformer Source
52HG14	Startup Transformer Source
52HG15	Startup Transformer Feeder to Buses F, G, H

Bus H ACB's

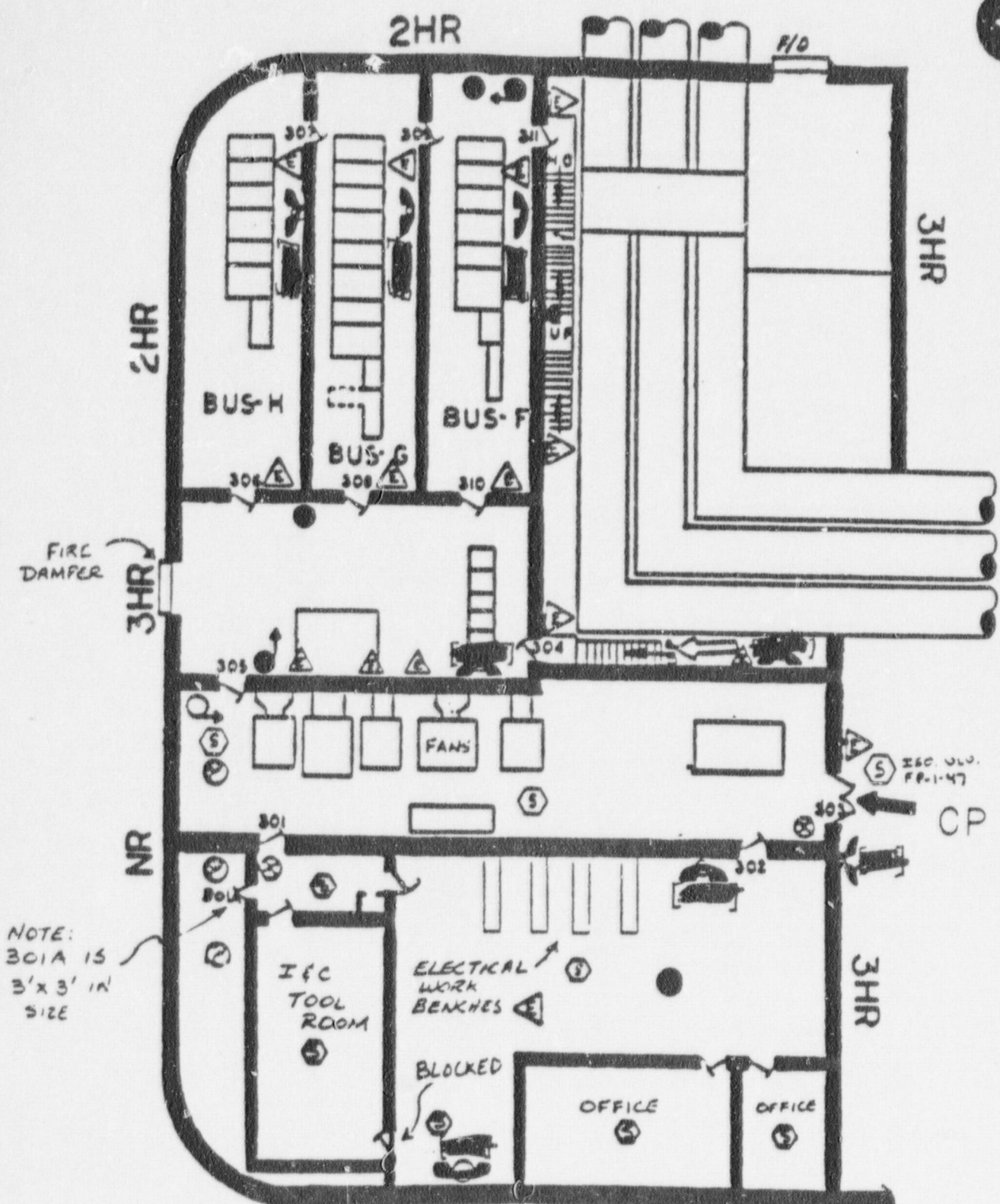
52HH7	Diesel-Generator #11 Source
52HH8	Auxiliary Feedwater Pump #12
52HH9	Containment Spray Pump #12
52HH10	480V Load Center 1H Feeder
52HH11	Residual Heat Removal Pump #12
52HH12	Component Cooling Water Pump #13
52HH13	Auxiliary Transformer Source
52HH14	Startup Transformer Source
52HH15	Safety Injection Pump #12

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.
2. Water should be used in a fog pattern no less than 6 feet away from energized electrical equipment.

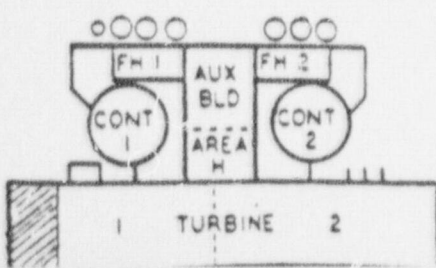
FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (2) 20# Dry Chemical
(4) 15# CO₂'s
2. CO₂ hose reels each - (2) - Door #305
- (1) - Door #311
3. Fire hose reel - Door #305
4. Sprinkler system in shop and fan areas



NOTE:
301A IS
3' x 3' IN
SIZE

119' TURBINE I SWGR & ELEC. SHOP



- | | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS ⊕ HAZ WASTE CHROMATES ETC. ⊕ H₂H₄ 35% N₂ ⊕ ACID ⊕ CAUSTIC ⊕ TOXIC GASES ⊕ FLAMMABLE GASES | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO. ○ PRESSURIZED WATER ⊕ HALON CP COMMAND POST → PRIMARY ACCESS ⇨ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO. HOSE REEL ⊕ WHEELED DRY CHE ○ △ EMERGENCY LIGHTS ☎ TELEPHONE — FIRE WALL RATING ⚡ ANNUNCIATOR PANEL |
|--|--|--|--|

VENTILATION:

1. Switchgear vent fans #'s S-67 through S-72 are located in the switchgear vent fan room. Switchgear room supply duct has fire dampers.
2. Smoke exhausters may be required. Positive pressure techniques with ventilation exhaust directed through ceiling grating to E1. 140' Turbine Deck is preferred. Ceiling opening has a fire damper at E1. 140' that may need to be opened.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - [REDACTED] bus rooms F, G and H
exciter switchgear room
shop area
outside Door #303
bottom Stairway #30
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

1. Normal plant lighting panel - PL 11-4 E1. 119' Col D-2
2. Emergency lighting in area

SAFETY EQUIPMENT:

1. Eye wash/shower stations are located in the U-1 Turbine Building, 85' E1., at col's A-7 and at F-7.
2. A first aid kit is located in the Unit 1 Turbine Building, 119' E1. by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Smoke exhausters may be required, particularly for a fire in the Electrical Shop and store room.
3. CO₂ is the agent of choice (sample for O₂ after use).
4. If water used in fog pattern only due to high voltage electrical equipment, minimize water on floor areas.

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

TURBINE BLDG. EL. 119'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Lubricating oil
2. Electric wiring
3. Transient combustibles

MOST PROBABLE FIRE: 1. 480 volt nonvital motor control center
2. Transient combustibles
3. Broken lube oil line, oil soaked insulation

ACCESS AND EGRESS ROUTES: 1. Primary - via Elevator #1 or adjacent stairs
2. Secondary - via S.W. stairway or
via N.E. stairway

FIRE BRIGADE STAGING AREA: 1. Primary - outside Elevator #1
2. Secondary - cold machine shop crane bay or
by Maintenance Fire Brigade
Locker

HAZARDOUS MATERIALS: 1. None anticipated beyond products of combustion.

MANAGEMENT OF PLANT SYSTEMS:

1. The entire floor area is protected by wet piped automatic sprinklers, shutoffs are located at, North system El. 85' behind condensate booster pumps #FP-1-42. South system El. 85' above and behind Nash vacuum pump S.W. corner #FP-1-50.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Fire hose reels may be required to protect exposures.
2. Caution should be used when applying water to hot steam lines, rapid cooling can cause cracking and steam leaks.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (4) 20# dry chemicals
(2) 15# CO₂
2. Fire hose reels - (6) each
3. Foam - Operation Ready Room, Maintenance Brigade Locker, Stairway #1 Locker, Fire Truck).

VENTILATION:

1. Ventilation Fans S-57, S-58 and S-59 are located in the N.E. area of the building. There are no exhaust outlets on the west wall. Smoke would vent to E1. 140' via stairways and open grating in the N.W. corner. Smoke exhausters will be required for a fire in the S.E. corner of this area and smoke vented to E1. 140'.
2. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant communication telephone Nos. [REDACTED]
2. Portable Radios. (Ops. Freq [REDACTED] by elevator

LIGHTING:

1. Normal plant lighting panels located at
PL 11-4 E1. 119' Col. D-2
PL 12-3 E1. 119' Col. F-16
2. Emergency lighting in area

SAFETY EQUIPMENT:

1. Eye wash/shower stations are located in the U-1 Turbine Building, 85' E1., at col's A-7 and at F-7.
2. A first aid kit is located in the Unit 1 Cold Machine Shop by the welder's booth.

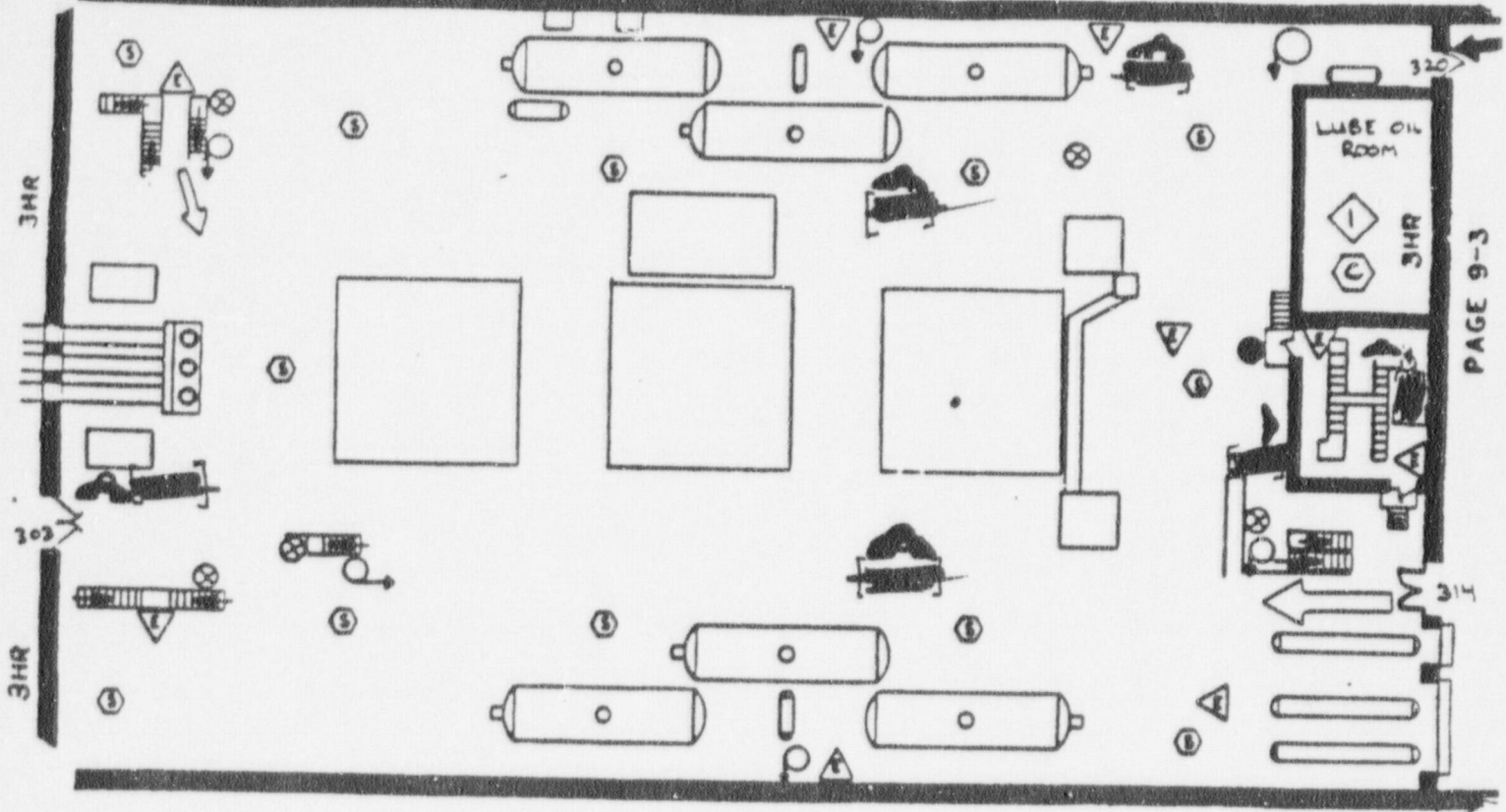
SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand lanterns should be carried by members of the fire brigade.
3. Seismic bracing makes access very difficult. Lube oil fires may also involve lower elevations, exercise extreme caution while working on open gratings.

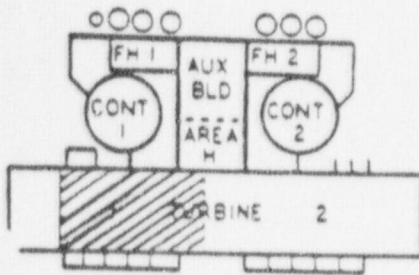


NR

CF



119' TURBINE I



- | | | | |
|---|-----------------------|---------------------|---------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ. WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO. | ⊖ CO. HOSE REEL |
| ◇ N ₂ H ₄ 35% NH ₃ | ⊕ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ◇ ACID | | ⊕ HALON | ○ ⚠ |
| ◇ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ◇ TOXIC GASES | | ➡ PRIMARY ACCESS | ☎ TELEPHONE |
| ◇ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | ⊖ FIRE WALL RATING |
| ◇ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

TURBINE BLDG. WORK PLANNING CENTER
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Paper
2. Office Furniture

MOST PROBABLE FIRE: 1. Paper
2. Office Furniture

ACCESS AND EGRESS ROUTES: 1. Primary - West entrance via warehouse office
or sliding fire Door #381
2. Secondary - East entrance via Door #319
El. 119' elevator lobby

FIRE BRIGADE STAGING AREA: 1. Primary - El. 119' outside 480V MCC 15 Room
2. Secondary - at elevator lobby east of
warehouse

HAZARDOUS MATERIALS: 1. Dense smoke from combustibles

MANAGEMENT OF PLANT SYSTEMS:

1. The area is protected by automatic wet piped sprinklers. Shut off valve is located on El. 85' - above and behind Nash vacuum pump (valve #FP-1-50).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Level "A" storage is heat and humidity sensitive.
2. Flammable liquids - protect exposures with water spray.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) #17 Halon
(2) 20# Dry Chemical
(1) 2.5 gal. H₂O
2. CO₂ hose reel outside 480V MCC 15
3. Fire hose reel - crane bay hallway
4. Automatic sprinkler system

VENTILATION:

1. Normal plant ventilation - supply fan S-74
2. Portable smoke exhausters to exhaust smoke through either door #319 or #318.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone No. [REDACTED] Warehouse Office
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

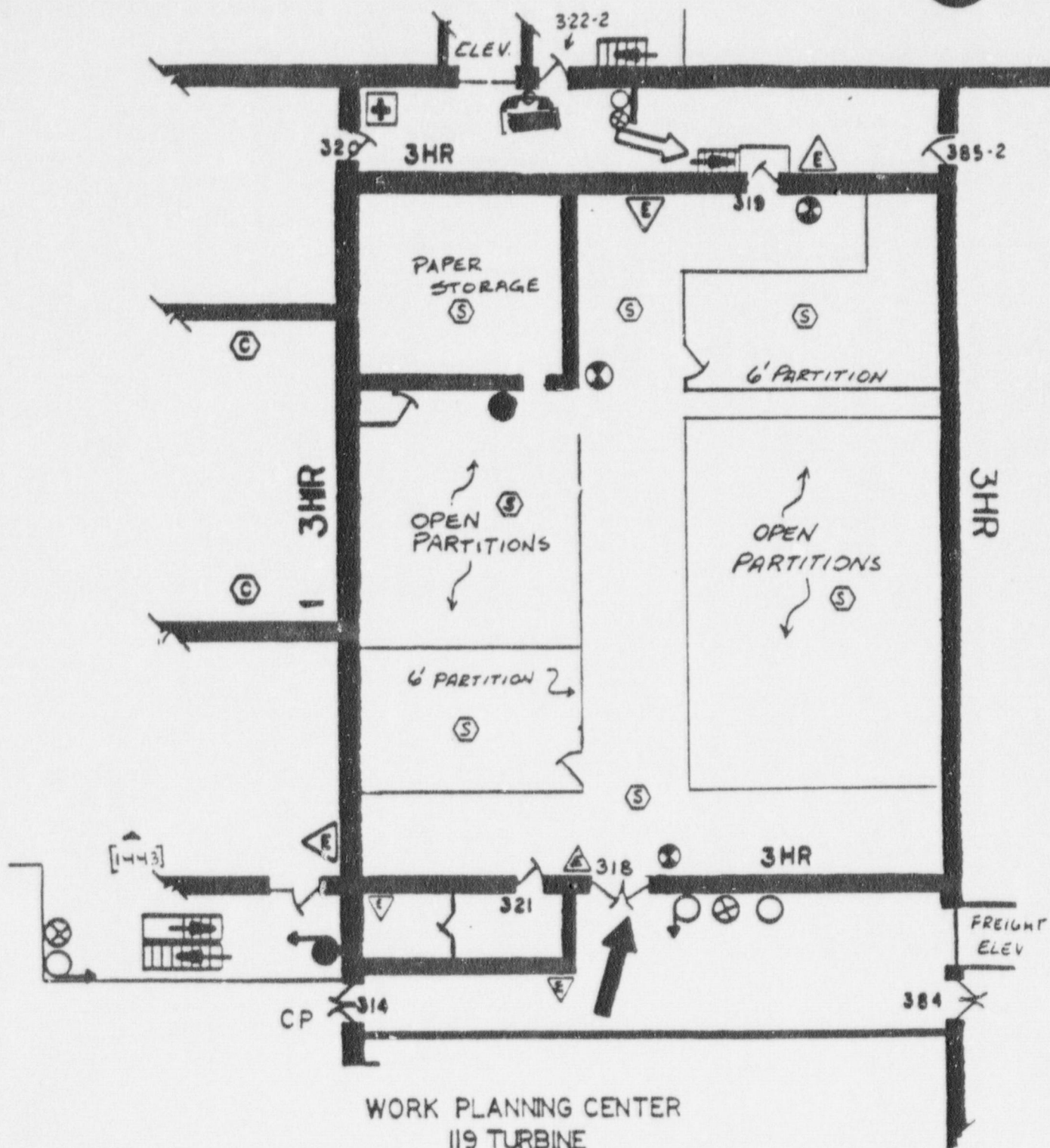
1. Normal plant lighting power supply panel - PC 12-3
2. Emergency lighting in area

SAFETY EQUIPMENT:

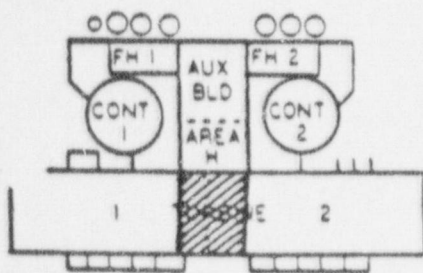
1. Eye wash stations are located at 115' E1. "H" area inside Battery Rooms 2-1, 1-2, and 2-3.
2. A first aid kit is located at 119' E1. Turbine 1 by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self-contained breathing apparatus will be required.



WORK PLANNING CENTER
119 TURBINE



- | | | | |
|---|------------------------------|---------------------|---------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO. | ⊕ CO. HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ⊕ E.A.S. EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊕ WHEELED DRY CHEM |
| ⊕ ACID | | ⊕ HALON | ⊕ EMERGENCY LIGHTS |
| ⊕ CAUSTIC | | CP COMMAND POST | ⊕ TELEPHONE |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | ⊕ FIRE WALL RATING |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊕ MISCELLANEOUS OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

TURBINE BLDG EL. 140'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Lube oil
2. Hydrogen
3. Class "A" combustibles in office areas
4. Solvents repair shops
5. Transient combustibles

MOST PROBABLE FIRE:

1. Class "A" combustibles
2. Hydrogen leak
3. Lube oil leak

ACCESS AND EGRESS ROUTES:

1. Primary - stairway or Elevator No.1
2. Secondary - N.E. stairway or
- S.W. stairway

FIRE BRIGADE STAGING AREA:

1. Primary - outside Operations Ready Room
2. Secondary - outside Instrument Repair Shop

HAZARDOUS MATERIALS:

1. CO₂ discharge at #10 bearing
2. Chromates in stator cooling system

MANAGEMENT OF PLANT SYSTEMS:

1. Cardox control valve FCV-216 is located between vent fans S-62 and S-63 on the east wall.
2. Deluge control valves are located at Turbine Pedestals (FCV-204, 205, 206, and 207).
3. Sprinkler control valve, Shift Clerks Office, is located outside the Control Room by Elevator #1 (FP-1-145).
4. Instrument Shop sprinkler control valve is located by Booster Pumps E1. 85'.
5. Hydrogen shut off valve is located at 85' E1. near seal oil unit (#GGS-1-5).
6. Main hydrogen shut off valve is located at the south end of the west buttress E1. 85' (#GGS-1-81).
7. Hydrogen is vented to the roof from vent valve shut off at seal oil Unit E1. 85'.
8. Cardox tie in to No-10 bearing is located at E1. 104', Cardox Tank (O-FCV-215).
9. Sprinkler control valve for Operations Trailers is at E1. 130' in Turbine Stairway #13.
10. Sprinkler control valve for Clearance Coordinators Office, Xerography Room, Instrument Shop, and Calibration Lab is at 119' Turbine I Col. E-15 FP-1-1042.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water spray from hose reels may be used to cool housing of Turbine Hoods, the Turbine and Generator Exciter Unit. Care must be exercised as water may cause steam leaks when applied to hot metal. Water spray should be used to protect exposures from a hydrogen leak.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (7) 20# Dry Chemical
(3) 15# CO₂'s
(2) 17# Halon
(6) fire hose reels
2. Deluge Spray System (Turbine Bearings 1 thru 9).
3. CO₂ system to #10 Bearing
4. Wet sprinkler system - Offices and Instrument Repair Shop

VENTILATION:

1. Supply Fans - S-61, S-62, S-63, S-64 and S-65
2. Smoke from any fire would probably vent through the roof via the open vents.

COMMUNICATIONS:

1. Plant telephone - West
East
Inst. Repair
Inst. Repair
2. Portable radios (Ops. Freq.)

LIGHTING:

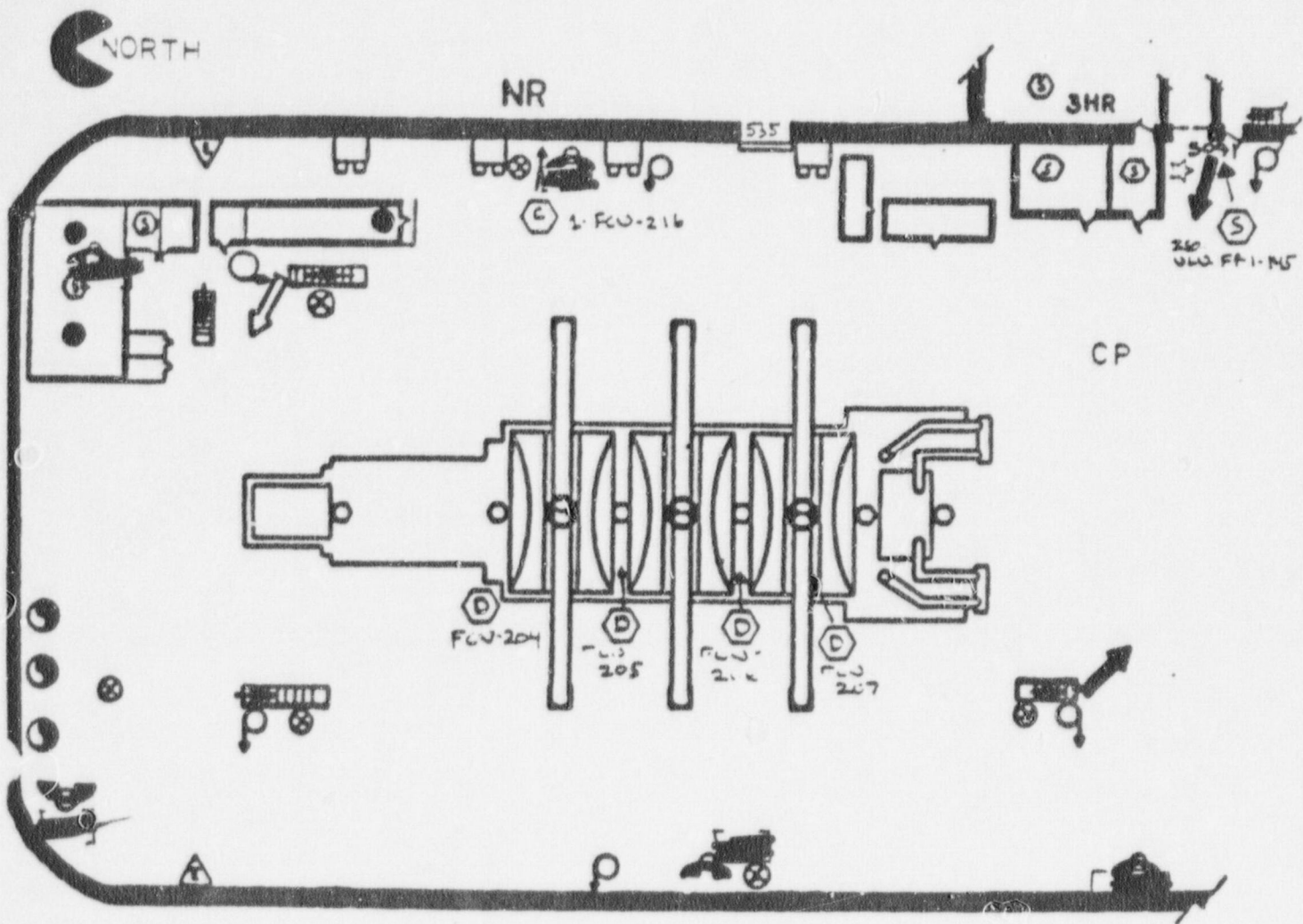
1. Normal plant lighting panel - PL 12-4 E1. 140' Col. G-14
PL 12-5 E1. 140' Col. A-14
PL 11-5 E1. 140' Col. D-1
2. Emergency lighting in area

SAFETY EQUIPMENT:

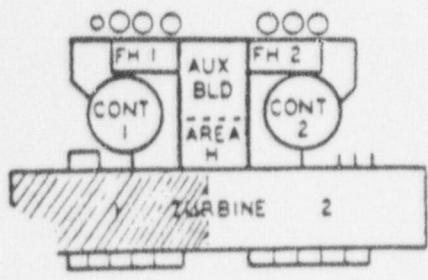
1. Eye wash/shower stations are located on the 85' E1. of the U-1 Turbine Bldg. at col's A-7 and F-7.
2. A first aid kit is located in the Operator/Fire Brigade Ready Room.
3. A Burn-Pack is located in the U-1 Control Room.

SPECIAL PRECAUTIONS:

1. In the event of a hydrogen leak, do not attempt to extinguish the fire until such time as the hydrogen supply has been shut off at valve located by Seal Oil Unit 1-1 E1. 85'.
2. Self contained breathing apparatus is required.



140' TURBINE I



- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ WASTE CHROMATES ETC
- ⊕ H_2 , CH_4 35%, NH_3
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISCELLANEOUS/OTHER
- ☒ FIRST AID
- ☒ EYE WASH
- ☒ EYE WASH AND SHOWER
- ⊗ DRY CHEMICAL
- CO.
- PRESSURIZED WATER
- ⊕ MALON
- CP COMMAND POST
- PRIMARY ACCESS
- ⇨ SECONDARY ACCESS
- ⊖ WATER HOSE REEL
- ⊖ CO. HOSE REEL
- ⊖ WHEELED DRY CHEM
- EMERGENCY LIGHTS
- ☒ TELEPHONE
- FIRE WALL RATING
- ☆ ANNUNCIATOR PANEL

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

CONDENSATE POLISHING AREA
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Electrical control panels
 3. Monomethylamine
 4. Hydrogen Storage (S. End)
 5. Fuel oil
 6. Dry Resin Storage

- MOST PROBABLE FIRE:
1. Cable insulation
 2. Electrical control panels
 3. Overheated pump bearings
 4. Monoethylamine
 5. Hydrogen leak
 6. Fuel oil spill during loading
 7. Transient combustibles

- ACCESS AND EGRESS ROUTES:
1. Primary - via door at south end E1. 85'
 2. Secondary - via door north end E1. 85'
(for E1. 104' Via stairways north) or
via center roll-up door

- FIRE BRIGADE STAGING AREA:
1. Primary - North end E1. 85'
 2. Secondary - South end E1. 85'
- NOTE: Staging area selected should be upwind of
smoke plume.

HAZARDOUS HAZARDS:

1. Monoethylamine - Health Hazards: Vapors are irritating to the nose, throat, lungs and eyes. Liquid can cause burns to the skin.
2. Sulfuric Acid (H₂SO₄) - Health Hazard: Causes severe, deep burns to tissue; very corrosive effect. Avoid any contact.
3. Caustic (Sodium Hydroxide)(NaOH) - Health Hazard: Toxic. A severe eye hazard; solid or concentrated solution destroys tissue on contact. Deep tissue burns.

MANAGEMENT OF PLANT SYSTEMS:

1. Fuel oil transfer pump shut offs are located at the 480V MCC - #1-7 cubicle (manually) or automatically from the control room.
2. The acid and caustic controls are located at the individual tanks.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose reels located on west side of building may be required in the event a fire cannot be extinguished using portable extinguishers. Exposure protection is necessary for the H₂ storage until source of gas is secured.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) 15# CO₂'s 85' E1.
(3) 15# CO₂'s 104' E1.
(1) Halon Ext. Control Cubicle
(1) 20# Dry Chem @H₂ Storage
(4) #17 Halon Seg. Lab Sample
2. Fire hose reels - (2) west side north and south ends next to office complex
(1) Col. B-14 Turbine Building E1. 85' via roll-up Door #123
3. Fire hose trailer
4. Fire Hydrants - (1) south end @ office complex
(1) N.W. corner at fence

NOTE: Multi purpose dry chemical or foam should be used on fuel oil spills or fires.

VENTILATION:

1. Exhaust fans - E-82 E1. 104' N. end
E-74 E1. 104' control cubicle
E-47 E1. 104' above acid and caustic tanks
E-68 E1 85' between acid and caustic tanks
2. Portable smoke exhausters will be required. Smoke can be exhausted via doors @ N and S end and rolling doors west side all on E1. 85' and via double doors E1. 104' opposite resin hopper.

COMMUNICATIONS:

1. Plant telephones - [redacted] E1. 85' and control cubicle
[redacted] E1. 85' and control cubicle
2. Portable radios (Ops. Freq. [redacted])

LIGHTING:

1. Normal plant lighting panel - PL 19-1 located on west wall in #1-7 resin tank bay
2. Emergency lighting in area

SAFETY EQUIPMENT:

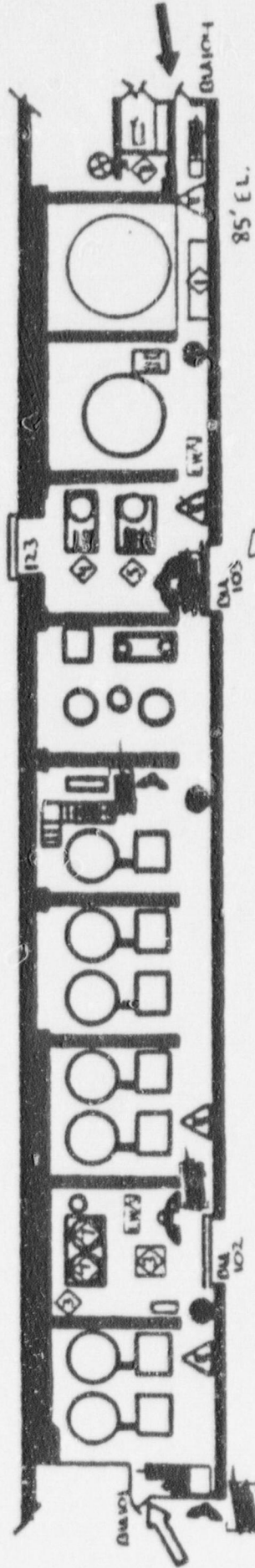
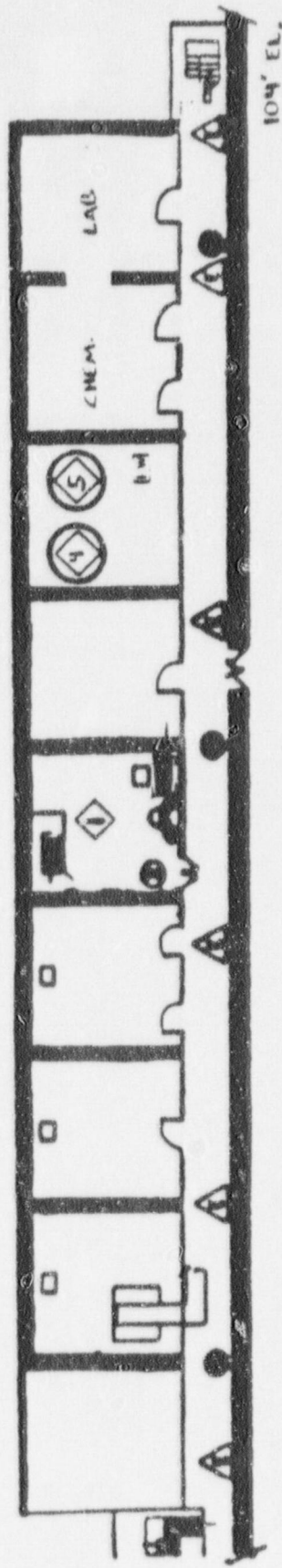
1. Eye wash/shower stations are located at both the northern and southern ends of the 85' E1. Condensate Polishing Area. An eye wash station is located near the Acid/Caustic Storage Tanks on the 104' E1.
2. A first aid kit is located in the U-1 Cold Machine Shop.

SPECIAL PRECAUTIONS:

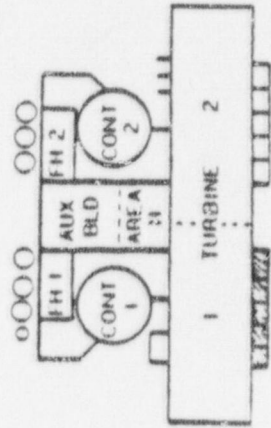
1. Self contained breathing apparatus and Personal Protective Equipment will be required due to large quantities of sulfuric acid and caustic.
2. H₂ Explosive Hazard
3. Provide additional dry chemical extinguishers when unloading fuel oil.
4. Monoethylamine is very flammable and is a dangerous fire hazard when exposed to heat and flame. Vapors are heavier than air. Avoid contact with strong oxidizers.

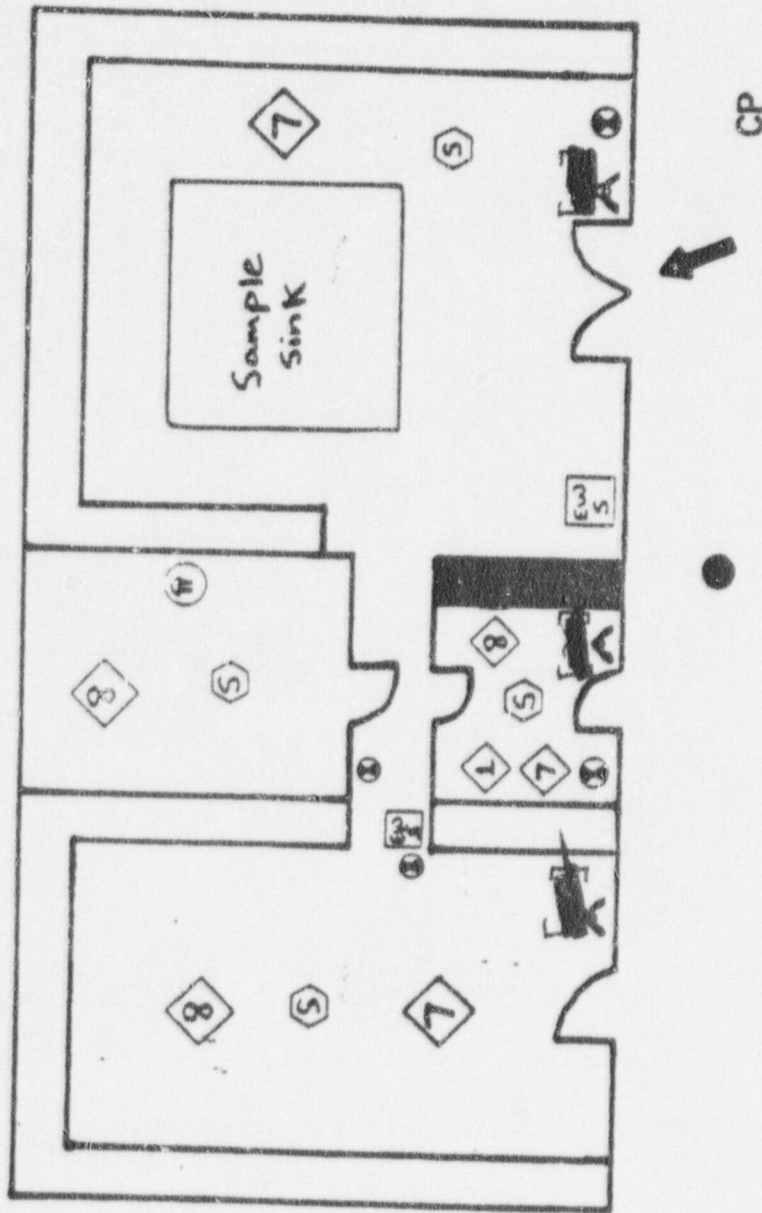


UNIT 1 CONDENSATE POLISHING AREA



- ⊕ FLAMMABLE / COMBUSTIBLE LIQUIDS
- ⊕ HAZ WASTE CIRCUMSTANCES, ETC
- ⊕ N₂, O₂, VZ, NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ H₂O₂ / BLENDING / STORAGE
- ⊕ FIBERGLASS
- ⊕ FIBERGLASS FLOOR
- ⊕ FIBERGLASS PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ MALON
- CP COMMAND POST
- PRIMARY ACCESS
- ↔ SECONDARY ACCESS
- ⊕ WATER HOSE REEL
- ⊕ CO. HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ⊕ FIBERGLASS PANEL





Page 12-4
Revision 0

SECONDARY CHEM. LAB

LEGEND

- | | | |
|--|-----------------------------|-------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊙ DRY CHEMICAL | ⊙ SPRINKLER RISER |
| ② HAZ. WASTE CHROMATES, ETC. | ⊙ CO ₂ | ⊙ AUTO. SPRINKLER |
| ③ H ₂ , 35% NH ₃ | ⊙ PRESSURIZED WATER | ⊙ STAMPPIPE |
| ④ ACID | ⊙ HALON | ⊙ UNDERGROUND ISO VALVE |
| ⑤ CAUSTIC | ⊙ WATER HOSE REEL | ⊙ PWA VALVE |
| ⑥ TOXIC GASES | ⊙ CO ₂ HOSE REEL | ⊙ FIRE DEPT. COMM. |
| ⑦ FLAMMABLE GASES | ⊙ WHEELED DRY CHEM. | ⊙ HYDRANT-3 HOSE |
| ⑧ MISC./OTHER | ⊙ HYDRANT-3 HOSE | ⊙ HYDRANT-3 HOSE |
| ⑨ FIRST AID | ⊙ APPROPRIATOR PAINT | ⊙ HYDRANT-3 HOSE |
| ⊙ EYE WASH | ⊙ COMMAND POST | ⊙ HYDRANT-3 HOSE |
| ⊙ EYE WASH & SHOWER | ⊙ PRIMARY ACCESS | ⊙ HYDRANT-3 HOSE |
| ⊙ TELEPHONE | ⊙ SECONDARY ACCESS | ⊙ HYDRANT-3 HOSE |
| ⊙ COMMAND POST | ⊙ EMERGENCY LIGHTS | ⊙ HYDRANT-3 HOSE |
| ⊙ PRIMARY ACCESS | ⊙ FIRE WALL RATING | ⊙ HYDRANT-3 HOSE |
| ⊙ SECONDARY ACCESS | ⊙ APPROPRIATOR PAINT | ⊙ HYDRANT-3 HOSE |
| ⊙ EMERGENCY LIGHTS | | ⊙ HYDRANT-3 HOSE |
| ⊙ FIRE WALL RATING | | ⊙ HYDRANT-3 HOSE |
| ⊙ APPROPRIATOR PAINT | | ⊙ HYDRANT-3 HOSE |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

PACKAGE BOILER AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Diesel fuel to boiler
2. Startup propane to boiler

MOST PROBABLE FIRE: 1. Burner oil leak
2. Propane leak
3. Overheated pumps

ACCESS AND EGRESS ROUTES: 1. Primary - North Door #191 E1. 85'
2. Secondary - Door #194 Fuel Handling Building
Fan Room (access only)
NOTE: Egress from Door #190 is restricted since
Door #199 is a locked security door.

FIRE BRIGADE STAGING AREA: 1. Primary - North end E1. 85' yard area

HAZARDOUS MATERIALS: 1. Toxic fumes or skin contact from 35% Hydrazine

MANAGEMENT OF PLANT SYSTEMS: 1. Diesel fuel shut off located at top of
stairway in area covered by asphalt, control
valve in same location.
2. Propane shut off in small penetration above
bottles.
3. Sprinkler system shut off located at E1. 85'
indicated by FP-1-20 on drawing.
4. Shut off fuel oil rather than de-energize.
This allows 30 second purge.
5. Floor drains. Drain to Auxiliary Building
sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use water fog to cool exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguisher - 20# Dry Chem. in room
2. Sprinkler system
3. Fire hose reel outside north end
4. Fire hydrant north end E1. 85'
5. Foam - Maintenance Brigade Locker - Fire Truck - Fire Brigade Station, Stairway #1.

NOTE: Additional fire hose will be required to reach south end of room.

VENTILATION:

1. Fuel Handling Building ventilation
2. Fire hose stream ventilation capability via Door #191
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone
2. Portable radios (Ops. Freq.)

LIGHTING:

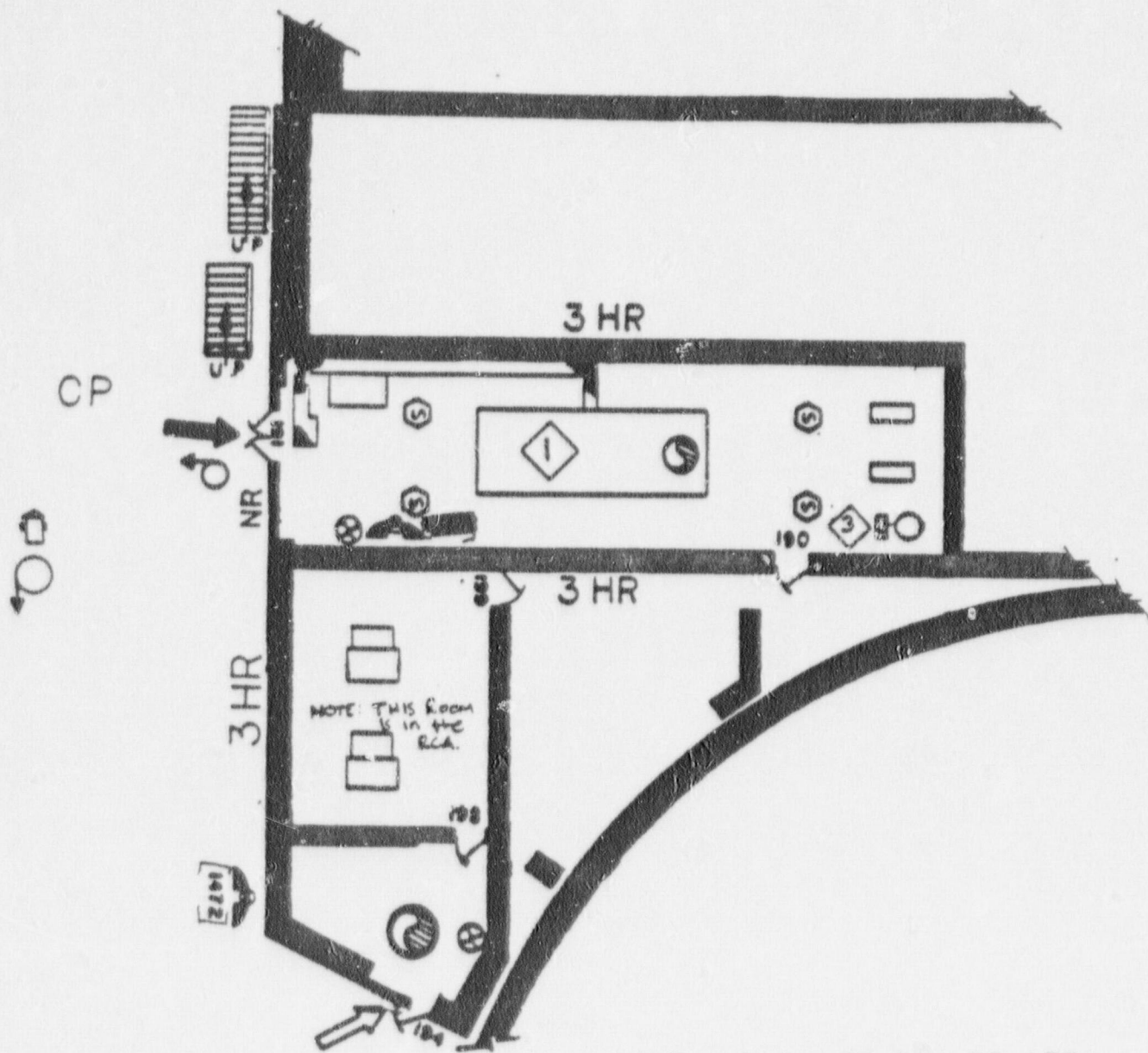
1. Normal plant lighting control panel - PL 15-1
1. Emergency lighting in area

SAFETY EQUIPMENT:

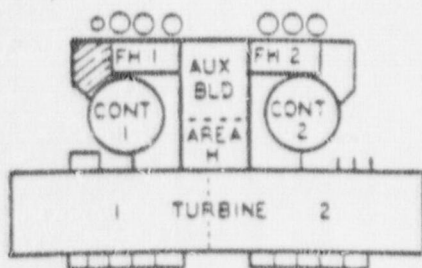
1. An eye wash/shower station is located in the Reverse Osmosis Area in the U-1 East Buttress.
2. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Contact with 35% Hydrazine very irritating to eyes and skin. Personal protective equipment should be worn. Use SCBA to prevent inhalation of hydrazine vapors.
2. Secure source of propane prior to extinguishment to avoid explosion.



UNIT 1 PACKAGE BOILER AREA



- | | | | |
|--|-----------------------|---------------------|-----------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ☒ FIRST AID | ⊗ DRY CHEMICAL | Ⓕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ☒ EYE WASH | ● CO ₂ | Ⓖ CO ₂ HOSE REEL |
| ⊕ N ₂ & 35% NH ₃ | ☒ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊠ WHEELED DRY CHEM |
| ⊕ ACID | | ⊕ HALON | ○ E. SAFETY LIGHT |
| ⊕ CAUSTIC | | CP COMMAND POST | △ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | ☎ TELEPHONE |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | Ⓕ FIRE WALL RATING |
| ⊕ MISCELLANEOUS/OTHER | | | ☆ ANNUNCIATOR PANEL |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1

TRANSFORMERS AND R.O. AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Transformer oil
2. Cable insulation
3. Electrical control panel (R.O. area)
4. Transient combustibles (R.O. area)
5. Temporary structures

MOST PROBABLE FIRE:

1. Transformer oil
2. Control panel (R.O. area)
3. Transient combustibles (temporary structures)

ACCESS AND EGRESS ROUTES:

1. R.O. area E1. 85' via roll-up or personnel doors
2. R.O. area E1. 104' via stairway from E1. 85'

FIRE BRIGADE STAGING AREA:

1. Primary - transformers north end Turbine Building R.O. Area Northeast of Turbine Building
2. Secondary - transformers east end Turbine Building

HAZARDOUS MATERIALS:

1. Citric acid
2. Sodium Bisulfate (inorganic salt solution)
3. Hypochlorite (bleach)
4. Formaldehyde (HCHO) (see special precautions)

MANAGEMENT OF PLANT SYSTEMS:

1. All nine (9) transformers are protected by automatic deluge water spray systems that can be manually operated locally or remotely from the Control Room.
2. The pavement around the transformers is sloped so that spilled transformer oil would drain away from the Turbine Building. Rock blotters with drains are provided around each transformer which prevents oil from reaching the Turbine Building. A sliding gate valve located opposite Fire Hose Station YL-5, North side of roadway controls discharge to Diablo Creek.
3. Burning oil discharging to Diablo Creek could ignite a wild land fire.
4. Deenergize involved transformer.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Fire hose streams may be required to provide exposure protection for transformers and the Turbine Building.
2. The interior of the Turbine Building should be checked for heat damage in vicinity of exterior exposure fire.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (2) 15# CO₂'s
2. Fire Hose Stations - (YL-6) N.W. by fence
(YL-7) N.E. by fence
(YL-8) at transformer 2-1
(YL-9) N.E. corner
(YL-10) East side
(YL-11) N.W. Corner
Turbine Building
3. Fire hose trailer - N.W. Corner Turbine Building
Hose control device available for exposure protection.
4. Deluge Systems - FCV-209 Startup Transformer 2-1
FCV-208 Startup Transformers 1-2/1-1
FCV-210 Auxiliary Transformer - 1-1
Unit 1 Main Transformer SP
Unit 1 Main Transformer Ø-C
FCV-211 Auxiliary Transformer 1-2 Unit 1 Main Transformer ØA Locker /B
5. Foam - Maintenance Brigade Locker 85' El.
Unit II Buttress - Stairway #1 Locker -
Operation Fire Brigade locker 140' El.
6. Master Stream - 800 GPM flow for exposure protection - located on the fire truck.

VENTILATION:

1. Open grating at ceiling level of the R.O. Area would allow smoke and gases to vent to the degasifier room above and be exhausted by S1-81 exhaust fan to the outside.
2. Smoke can also be exhausted to the outside by opening the three overhead rolling doors with hose streams or portable smoke exhausters.

COMMUNICATIONS:

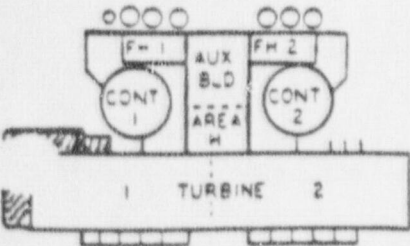
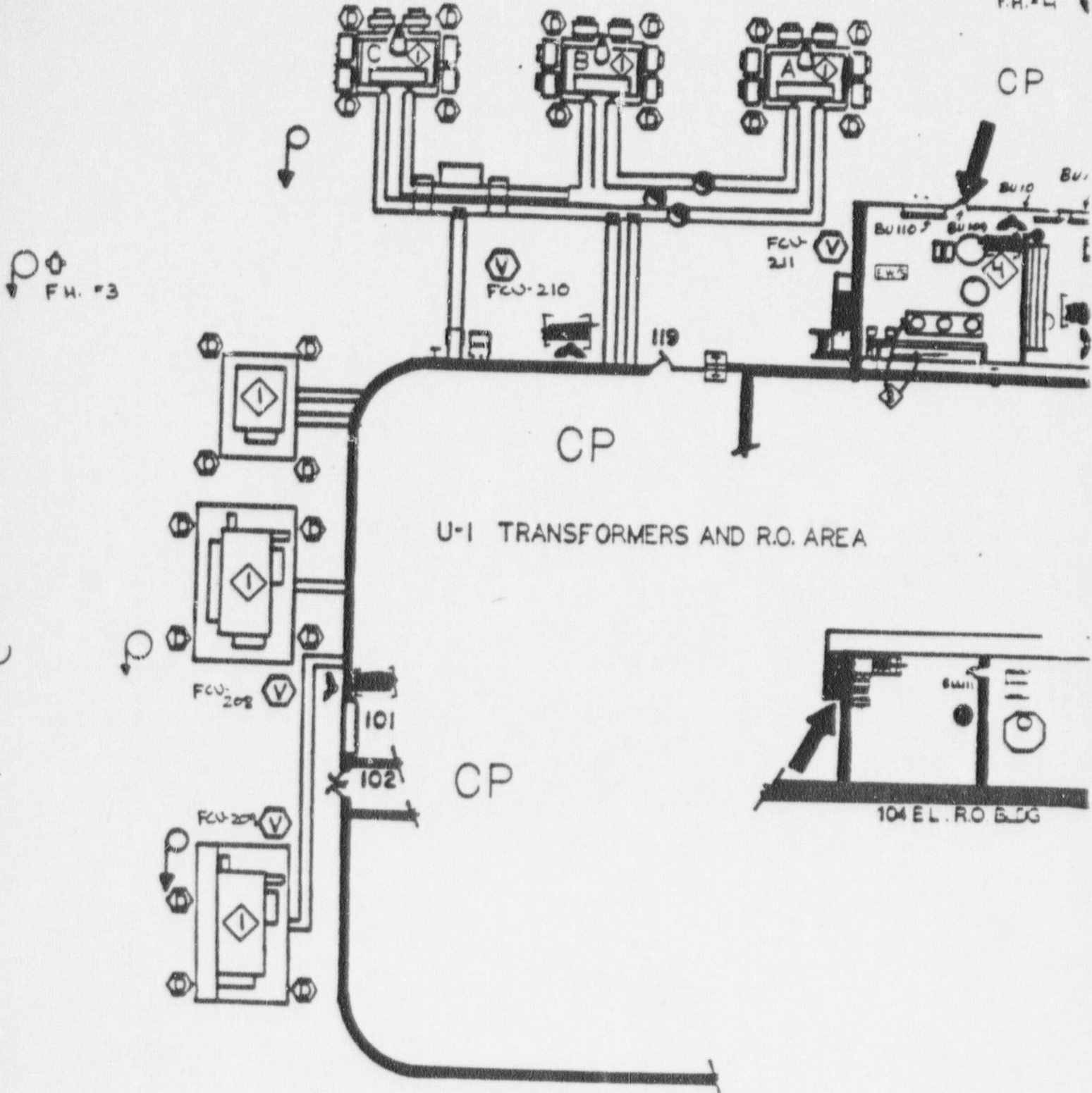
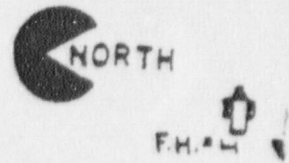
1. Plant telephone - [redacted] R.O. Area.
[redacted] N. end condensate polishing
[redacted] ding
[redacted] outside Door #119 12 KV
[redacted] switchgear
[redacted] outside package boiler
[redacted] N. end - outside of door #102
2. Portable radios (Ops. Freq [redacted])

- LIGHTING:
1. Plant lighting panels PJRO and PPRO in R.O. area
 2. Yard lighting in area
 3. Emergency lighting in area

- SAFETY EQUIPMENT:
1. An eye wash/shower station is located in the East Buttress on the north wall.
 2. A first aid kit is located in the U-1 Cold Machine Shop next to the welder's booth.

SPECIAL PRECAUTIONS:

1. Fire hose streams in fog pattern only should be used when fighting a transformer fire due to extreme high voltage. If foam is used, it is more conductive, so application should be very cautious.
2. Self contained breathing apparatus will be required.
3. Formaldehyde - vaporizes readily from solution and is flammable in air. Life Hazard, eyes, skin and respiratory irritant.
4. Sodium Bisulfate, when heated, releases sulfur dioxide (SO₂).
5. Eye and skin protection should be worn in the R.O. area. Eye contact with sodium bisulfate requires immediate flushing for a minimum of fifteen (15) minutes followed by calling a physician.



- | | | | |
|---|-----------------------|---------------------|---------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊙ WATER HOSE REEL |
| ② HAZ. WASTE CHROMATES ETC. | ⊖ EYE WASH | ● CO ₂ | ⊙ CO. HOSE REEL |
| ③ N ₂ H ₄ 35% NH ₃ | ⊙ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊞ WHEELED DRY CHEM |
| ④ ACID | | ⊙ HALON | ○ EMERGENCY LIC |
| ⑤ CAUSTIC | | CP COMMAND POST | ☎ TELEPHONE |
| ⑥ TOXIC GASES | | ➔ PRIMARY ACCESS | — FIRE WALL RATING |
| ⑦ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⑧ MISCELLANEOUS OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1 & 2

480 VITAL SWGR AREA EL.100'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Electrical switchgear panels
2. Cable insulation

MOST PROBABLE FIRE: 1. Switchgear panels
2. Cable insulation
3. Transient combustibles

ACCESS AND EGRESS ROUTES: 1. Primary - via Door #222 by west stairway
(Security Door)
2. Secondary - via Door #231 by east stairway

FIRE BRIGADE STAGING AREA: 1. Primary - outside Elevator #1 @ El. 104'
2. Secondary - access control at bottom of
Stairway #S-5 leading to Door
#231

HAZARDOUS MATERIALS: 1. CO₂ discharge from hose reels
2. Cable insulation products of combustion
NOTE: Due to non rated steel
hatches. CO₂ and toxic
combustion products could
drift down to El. 85' or
smoke could impact El. 119.
Sample both areas for O₂,
CO, etc.

MANAGEMENT OF PLANT SYSTEMS:

1. No floor drains are provided in this area. Water would have to be removed via the equipment hatches or stairways.
2. De-energize affected equipment from control room where possible.
3. Minimize water usage. Water on floor could cause breaker failures.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Protect exposures with water fog if required on a large fire (use sparingly).
2. Maintain fire barrier penetration seals to separate redundant safe shutdown trains (480 volt vital switchgear).
3. Keep fire doors closed as necessary to retard spread of flames and smoke.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (9) 15# CO's
2. CO₂ hose reels - (1) at bus 1-H room
(1) at bus 2-F room
3. Fire hose reels - (1) stairway by Door #231
(1) Turbine Building, by Door #221

VENTILATION:

1. The ventilation to each switchgear bus room is equipped with automatic fire dampers in both the supply and exhaust ducts. These dampers are designed for fire confined to one bus room. Ventilation is cut off to the room with the fire by these dampers. Maintain ventilation fans S-27 and E-27 in service to provide ventilation to the redundant buses. Portable smoke exhausters may be required. Smoke can be exhausted via stairways to upper elevations. Positive pressure techniques could be used to keep redundant areas free of smoke. Gasoline fans or generators may be needed on a loss of A/C power.

COMMUNICATIONS:

1. Plant telephones - [REDACTED] outside Elevator #1 @ E1. 100'
south wall outside bus 1-F by Door #2 switchgear room bus rooms 1F-1G and 1H bus rooms 2F-2G and 2H Stairway #1 @ E1. 100'
2. Portable radios (Ops. Freq. [REDACTED])

- LIGHTING:
1. Normal plant lighting panel - PL 13-3 located @ E1. 100' - Col L-18 Auxiliary Building
 2. Emergency lighting in area

SPECIAL EQUIPMENT:

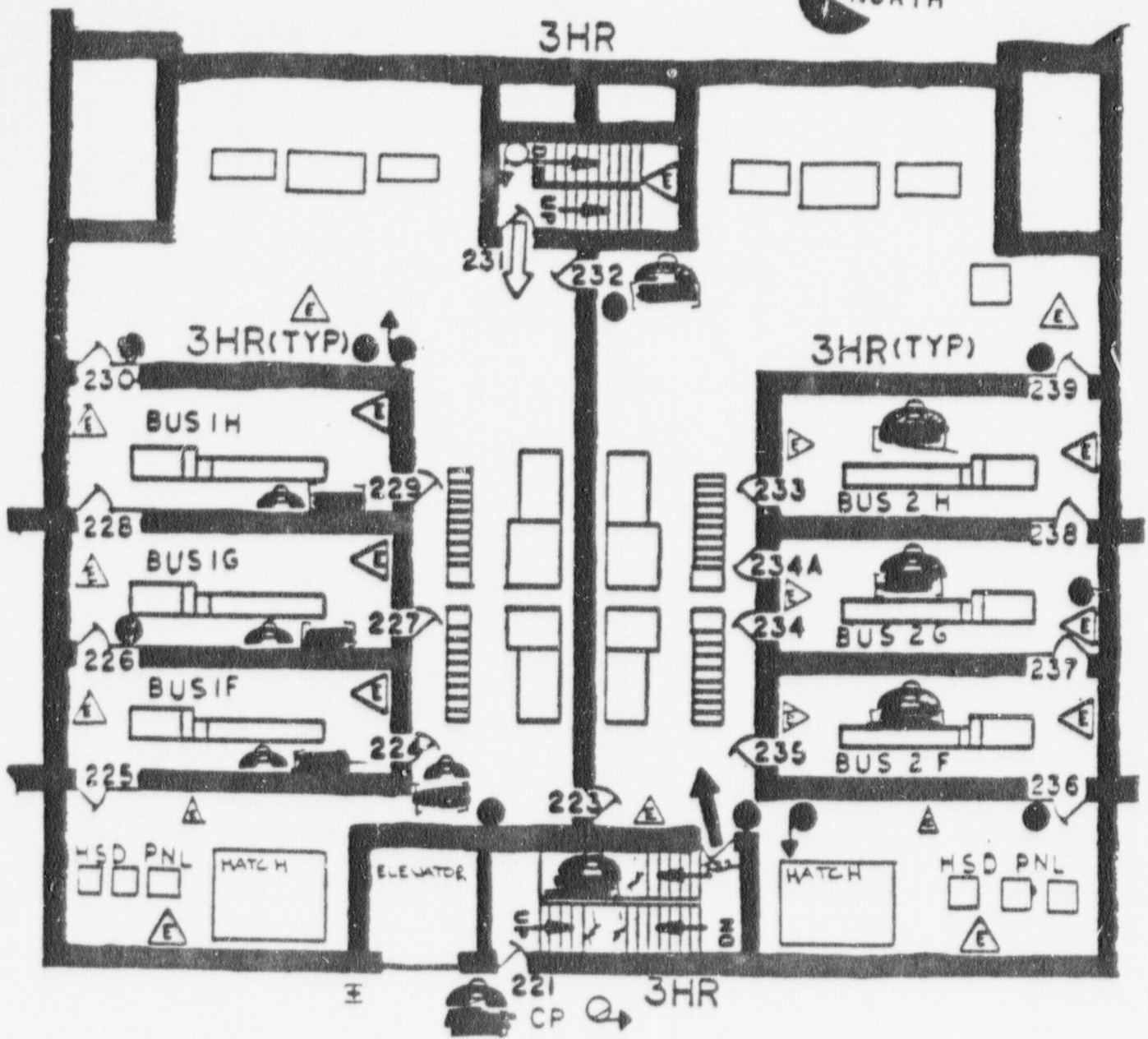
1. Eye wash stations are located in the battery rooms at 115' E1., "H" Area, or in the U-1 Cold Machine Shop.
2. A first aid kit is located by the personnel elevator on 104' E1.

SPECIAL PRECAUTIONS:

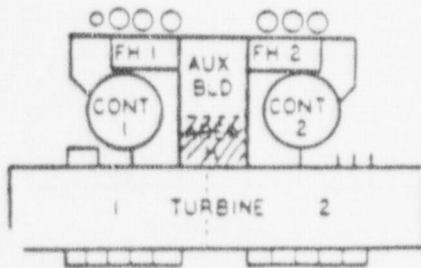
1. Self contained breathing apparatus will be required.
2. CO₂ is fire fighting agent of choice.
3. Water from hose reels in fog pattern only to reduce electric shock potential.
4. Minimize water use due to absence of floor drains.



3HR



100' EL. "H" AREA



HAZMAT

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ WASTE CHROMATES ETC.
- ⊕ N₂ & O₂ GASES
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISCELLANEOUS/OTHER

SAFETY

- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH AND SHOWER

FIRE

- ⊕ DRY CHEMICAL
- ⊕ CO.
- PRESSURIZED WATER
- ⊕ HALON
- CP COMMAND POST
- ➔ PRIMARY ACCESS
- ➔ SECONDARY ACCESS
- ⊕ WATER HOSE REEL
- ⊕ CO. HOSE REEL
- ⊕ WHEELED DRY CHEM
- ANNUNCIATOR PANEL
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ☆ ANNUNCIATOR PANEL

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1 & 2

VITAL BATTERY ROOMS EL. 115'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Electrical cabinets
 3. Hydrogen (battery rooms)
 4. Battery casings

- MOST PROBABLE FIRE:
1. Electrical cabinets and inverters
 2. Transient combustibles
 3. Cable insulation

- ACCESS AND EGRESS ROUTES:
1. Primary - via Door #323 from west stairway (Security Door)
 2. Secondary - via Door #'s 342 and 343 from east stairway

- FIRE BRIGADE STAGING AREA:
1. Primary - outside Elevator #1 Turbine Building at El. 104'
 2. Secondary - access control via east stairway
 3. Tertiary - outside Elevator #2 Auxiliary Building at El. 100'

- HAZARDOUS MATERIALS:
1. Batteries (Hydrogen-H₂/Sulfuric Acid-H₂SO₄)
 2. No floor drains are provided in this area; water used would have to be drained via equipment hatches or stairways.
 3. CO₂ discharge from hose reels
- NOTE: CO₂ and toxic gases could migrate to lower adjacent areas via stairways and unrated steel hatches. Sample lower adjacent areas for CO, O₂, etc.

MANAGEMENT OF PLANT SYSTEMS:

1. De-energize electrical equipment where feasible.
2. No floor drains are provided in this area. Water used would have to be drained via equipment hatches or stairways. Minimize water usage. Excessive water on floor could cause equipment failures.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Water spray may be required to protect exposures. Use a fog pattern only. Maintain a minimum distance of six (6) feet from potentially energized electrical equipment.
2. Minimize water usage since floor drains are not provided.
3. Keep fire doors closed as necessary to retard spread of flames and smoke.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (9) 15# CO₂'s
2. CO₂ hose reels - (2) east side, (1) west side
3. Fire hose reel - east stairway at E1. 115'

NOTE: An additional 100' of fire hose will be required to reach 1-2 and 2-1 battery rooms with water spray.

VENTILATION:

1. Battery rooms ventilation is supplied by S-27 and E-27 Unit 1 side, S-28 and E-28 for Unit 2 side.
2. Fans S-43 and S-44 supply inverter rooms Unit 1 side, S-45 and S-46 supply inverter rooms Unit 2 side. The inverter rooms have natural draft exhaust to E1. 140' Turbine Building east side.
3. Portable smoke exhausters may be required. Smoke could be exhausted via Door #'s 323 and 324. Care should be taken to minimize smoke in the redundant battery or inverter rooms.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones - [redacted] Unit 1
[redacted] Unit 2
[redacted] by west stairway E1. 115'
2. Portable radios (Ops. Freq. [redacted])

LIGHTING:

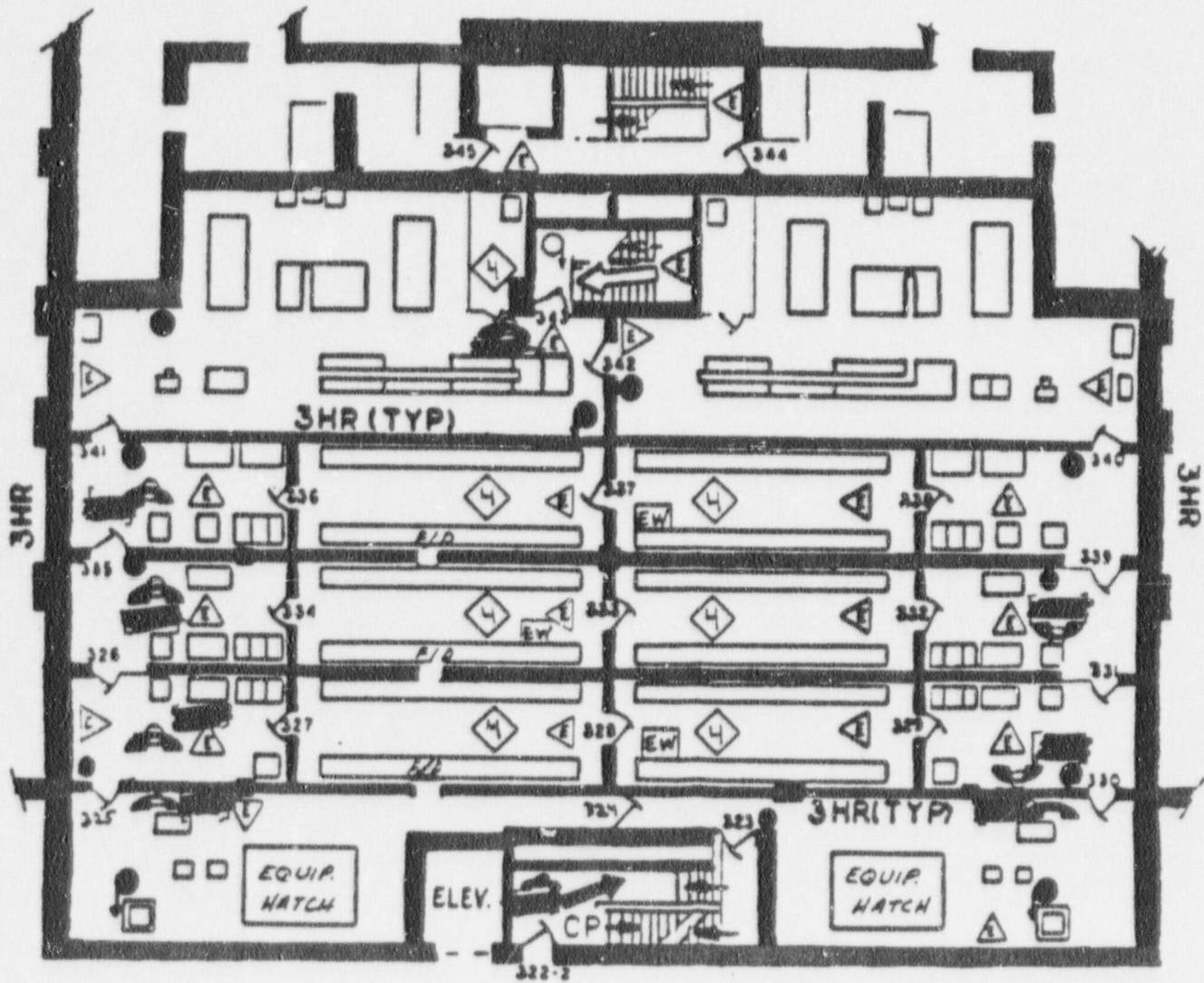
1. Plant lighting panel - PL 13-3 Auxiliary Building 100' E1. Col. L-18
2. Emergency lighting in area

SAFETY EQUIPMENT:

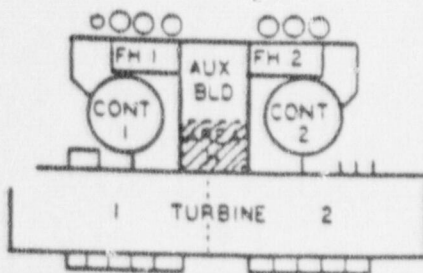
1. Eye wash stations are located in Battery Rooms 2-1, 1-2, and 2-3.
2. A first aid kit is located in the U-1 Turbine Building, 119' E1, by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Water to be used in fog pattern only due to high voltage electrical equipment.
3. Should the exhaust system fail, concentrations of hydrogen could exist, presenting an explosive atmosphere.
4. Sulfuric acid is contained in the batteries and "Reacts Violently with water".
5. Full protective clothing to be worn, as skin contact with sulfuric acid causes severe deep burns.
6. Flush skin that contacts acid with copious amounts of water. Seek medical attention.



UNIT I & II VITAL BATTERY ROOMS
115' "H" AREA



- | | | | |
|---|-----------------------|---------------------|-----------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊙ WATER HOSE REEL |
| ⊙ HAZ WASTE CHROMATES ETC | ⊞ EYE WASH | ● CO ₂ | ⊙ CO ₂ HOSE REEL |
| ⊙ N ₂ H ₄ , 35% NH ₃ | ⊞ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊞ WHEELED DRY CHEM |
| ⊙ ACID | | ⊙ MALON | ⊙ EMERGENCY LIGHTS |
| ⊙ CAUSTIC | | ⊞ CP COMMAND POST | ⊞ TELEPHONE |
| ⊙ TOXIC GASES | | → PRIMARY ACCESS | ⊞ FIRE WALL RATING |
| ⊙ FLAMMABLE GASES | | ⇨ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊙ MISCELLANEOUS/OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1 & 2

CABLE SPREADING ROOMS-EL. 127'
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Communication room equipment
 3. Transient combustibles

- MOST PROBABLE FIRE:
1. Transient combustibles exposing cables
 2. Overheated electrical cables and cabinets

- ACCESS AND EGRESS ROUTES:
1. Primary - west stairway El. 128' via Door #401 (Security Door)
 2. Secondary - east stairway El. 128' via Door #405

- FIRE BRIGADE STAGING AREA:
1. Primary - Turbine Deck El. 140' outside west stairway
 2. Secondary - access control El. 85' outside east stairway

- HAZARDOUS MATERIALS:
1. Cable insulation products of combustion
 2. CO₂ discharge
 3. Battery acid in communications rooms
- NOTE: CO₂ may migrate to El. 115' through unrated steel hatches. Perform O₂ sampling at all levels to assure breathable atmosphere. Also sample Communications Room and Stair Towers S-1 and S-5.
4. A Nitrogen tank is located in the U-1 Communications Room.

MANAGEMENT OF PLANT SYSTEMS:

1. CO₂ total flooding system is activated automatically by thermal detectors in the cable spreading rooms, manually from the control room or locally outside Door #401. Master control located at cardox tank El. 104'.
2. There are no floor drains provided in these rooms. Keep water usage to a minimum. De-energize electrical equipment if possible.
3. Refer to EP M-10 Fire Area 7-A (Unit 1) or 7-B (Unit 2) for safe shutdown equipment that could be damaged or lost.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT

1. Use CO₂ where possible for extinguishment.
2. Use water fog to protect exposures if necessary.
3. Maintain fire barrier penetration seals and fire doors shut between Units 1 and 2 to the extent possible.

FIRE SUPPRESSION EQUIPMENT:

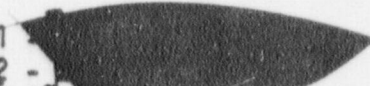


1. Fire extinguishers - (5) 15# CO₂'s
2. CO₂ flood system both rooms, local actuator top of west stairway @ E1. 128'
3. Fire hose reel at east stairway E1. 128'

NOTE: A second manual discharge of CO₂ should be considered if reflash occurs or to assure sufficient concentration.

VENTILATION:

1. A 1 1/2 hr ventilation exhaust duct fire damper separates the cable spreading room from a concrete encased exhaust plenum. Dampers close on CO₂ discharge making normal ventilation impossible.
2. 3 Hour rated fire dampers in the rooms will shut on high temperature and automatic CO₂ actuation. CAUTION: If the CO₂ system is manually initiated, these dampers may not shut automatically. It will be necessary to secure fans E-43 and E-44 secure in order to maintain CO₂ concentration and prevent possible CO₂ contamination at control room ventilation supply.
3. Portable smoke exhausters may be required. Smoke could be exhausted via Door #401 to Turbine Deck or Door #405 to Auxiliary Building roof. If A/C power is not available, gasoline powered fans or generators may be needed.

COMMUNICATIONS:

1. Plant telephones - Unit No. 1 
Unit No. 2 - 
2. Portable radios (Ops. Freq. )
CAUTION: Use of portable radios may cause a spurious reactor trip signal.

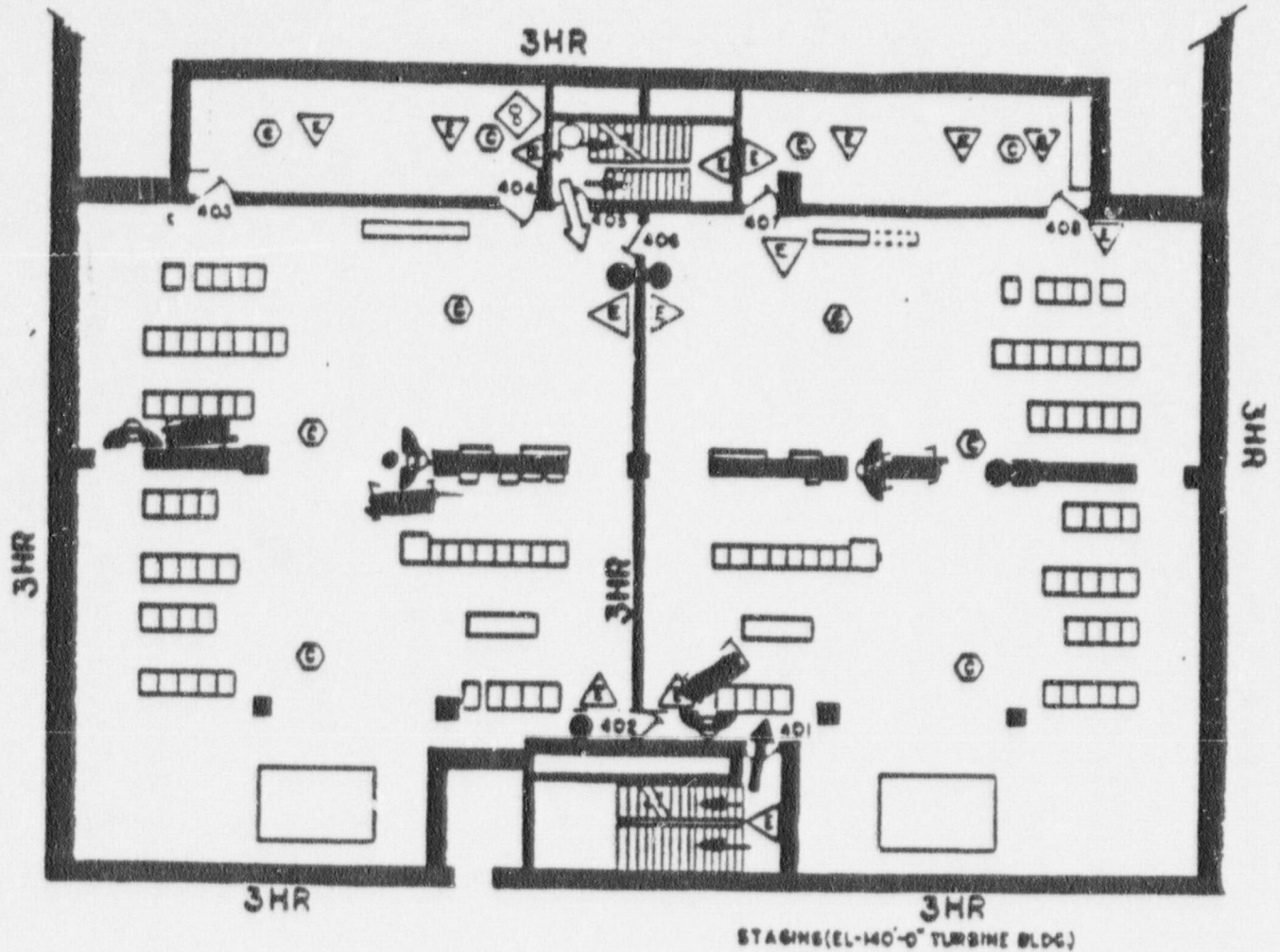
- LIGHTING:
1. Normal plant lighting panel - PL 13-3 Auxiliary Building E1. 100'
Col. L-18 Breaker #'s 8-10 and 12
 2. Emergency lighting in area

SAFETY EQUIPMENT:

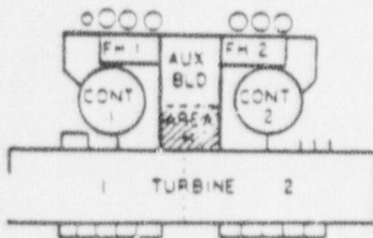
1. Eye wash stations are located at 115' E1. "H" area, in Battery Rooms 2-1, 1-2, and 2-3.
2. A first aid kit is located at 119' E1. of the Turbine Building by the personnel elevator.

SPECIAL PRECAUTIONS:

1. A cardox discharge in the cable spreading room could cause erratic control room indications, could contaminate elevations 115' and 100' and stairways S-1 and S-5. CO₂ exhausted via fans E-43 and E-44 could be picked up by the control room air intake.
2. Self contained breathing apparatus will be required due to possibility of large quantities of smoke, toxic fumes and CO₂ discharge.
3. Sample atmosphere for O₂ prior to removing SCBA after CO₂ system discharge. Sample all elevations including stair towers.
4. Minimize water usage since no floor drains are provided.



127' "H" AREA I, II



- | | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS ⊕ HAZ. WASTE CHROMATES ETC ⊕ N₂H₄ 35% NH₃ ⊕ ACID ⊕ CAUSTIC ⊕ TOXIC GASES ⊕ FLAMMABLE GASES ⊕ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO, ○ PRESSURIZED WATER ⊕ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➔ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO, HOSE REEL ⊕ WHEELED DRY CHEM ⊕ TELEPHONE ⊕ EMERGENCY LIGHTS ⊕ ANNUNCIATOR PANEL |
|--|--|--|--|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1 & 2

CONTROL ROOM
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Class "A" combustibles (paper)
2. Control panels
3. Cable insulation
4. Lighting diffusers
5. Carpet

MOST PROBABLE FIRE:

1. Class "A" combustibles (paper)
2. Control panels
3. Cable insulation

ACCESS AND EGRESS ROUTES:

1. Primary - via Door #508
2. Secondary - via Door #503 or
- via Door #560

FIRE BRIGADE STAGING AREA:

1. Primary - outside Elevator #1, Turbine
Building, El. 140'
2. Secondary - outside Elevator #2, Auxiliary
Building Roof, El. 140'

HAZARDOUS MATERIALS:

1. Cable insulation products of
combustion
2. Halon discharge inside SSPS rooms

MANAGEMENT OF PLANT SYSTEMS:

1. Automatic Halon Fire Protection is provided by two (2) automatic systems, one for each SSPS room. A manual activation switch and a reserve tank switch are provided in each computer room. A Halon abort switch is provided for each system as well.
2. The SFM Office, Clerk's Office, and CAS are provided with wet piped sprinklers. The shut-off control valve, FP-1-145, is located next to Elevator #1, El. 140' Turbine Deck.
3. A control room fire could necessitate shutdown from the hot shutdown panel (OP AP-8).

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams in fog pattern only may be required in an extreme case.
2. Smoke should be ventilated as soon as practicable to avoid damage to sensitive equipment.


FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (7) 17# Halon
2. Fire hose reels - (1) by Elevator #1 Turbine Deck
(1) Roof Outside Elevator #2
3. Halon Systems - SSPS rooms only
4. Wet sprinkler system - Shift Foreman's and Central Alarm Station

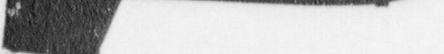
VENTILATION:

1. a. Main supply fan (S-35 or S-36 for Unit 1, and S-37 or S-38 for Unit No. 2)
b. Filter booster fan (S-39 or S-40 for Unit No. 1, and S-41 or S-42 for Unit No. 2)
c. Pressurization supply fans (S-96 and S-97 are located on Unit No. 2, while S-98 and S-99 are located on Unit No. 1).
2. Portable smoke exhausters may be required. Smoke can be exhausted through Doors 503 and 501 to the outside. Also, through Door #508 to the Turbine Deck. If A/C power is lost, gas powered fans or generators may be used.

COMMUNICATIONS:

1. Plant telephones - 

2. Radio console

3. Portable radios (Ops. Freq. 

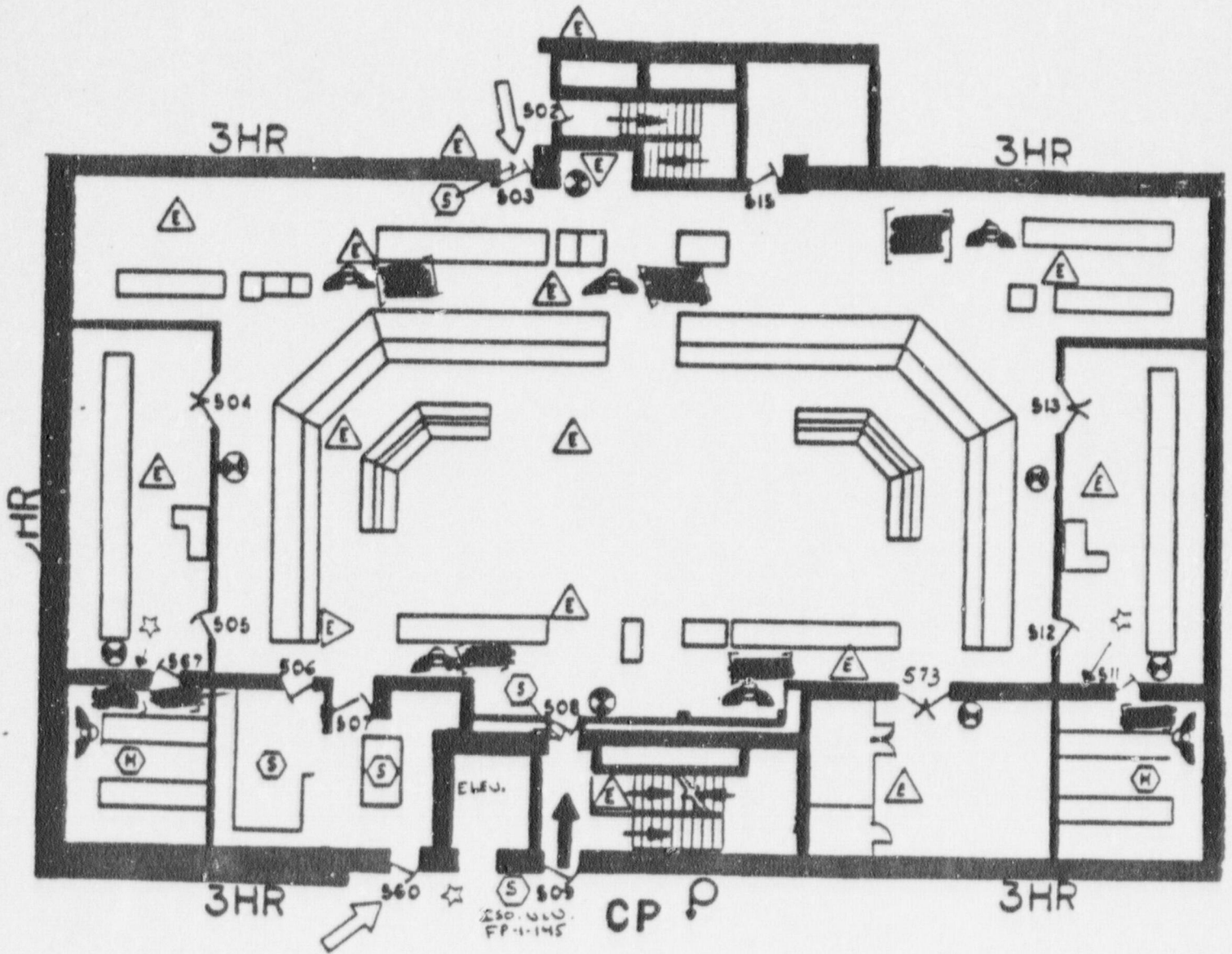
CAUTION: Portable radios should not be used in the Control Room due to interference with the MI's and seismic detection equipment. Portable radios could cause a spurious reactor trip signal.

- LIGHTING:
1. Normal plant lighting panel - PL 23-5 Unit 2
13-5 Unit 1
 2. Emergency lighting in area

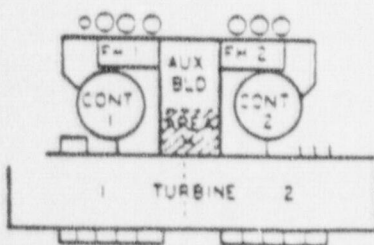
- SAFETY EQUIPMENT:
1. Eye wash stations are located at 115' E1. "H" area in Battery Rooms 2-1, 1-2, and 2-3.
 2. A first aid kit is located in the Operator/Fire Brigade Ready Room on the 140' E1. deck of the Turbine Building.
 3. A Burn-Pack is located in the U-1 Control Room by Door #505.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Minimize any use of water or dry chemical agent.



UNIT 14-II CONTROL RM.
140' x 145' AREA



- | | | | |
|---|--|---|--|
| <ul style="list-style-type: none"> ⊠ FLAMMABLE/COMBUSTIBLE LIQUIDS ⊠ HAZ. WASTE CHROMATES ETC. ⊠ N₂H₄ 35% NH₃ ⊠ ACID ⊠ CAUSTIC ⊠ TOXIC GASES ⊠ FLAMMABLE GASES ⊠ MISCELLANEOUS/OTHER | <ul style="list-style-type: none"> ⊠ FIRST AID ⊠ EYE WASH ⊠ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊠ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ⊠ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➔ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊠ WATER HOSE REEL ● CO₂ HOSE REEL ⊠ WHEELED DRY CHEM ○ EMERGENCY LIGHTS ⊠ TELEPHONE — FIRE WALL RATING ☆ ANNUCIATOR PANEL |
|---|--|---|--|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

12KV SWGR. AND CABLE SPREADING ROOM
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Cable insulation
2. Breaker components
3. Switchgear components

MOST PROBABLE FIRE:

1. Fire in breaker cubicles and switchgear control panels
2. Electric cable fire in cable spreading room below switchgear room

ACCESS AND EGRESS ROUTES:

1. Primary - from Turbine Building via Door #117-2 (Security Door)
2. Secondary - from Diesel Generator corridor via Door #118-2 or from yard area via Door #119-2 (Security Door)

FIRE BRIGADE STAGING AREA:

1. Primary - Turbine #1 El. 85' south Door #117-2
2. Secondary - Hallway by Diesel Generator 2-1 outside Door #118-2

HAZARDOUS MATERIALS:

1. Fumes from burning or overheated electrical cable insulation
2. CO₂ from hose reel discharge (especially at low elevations)

MANAGEMENT OF PLANT SYSTEMS:

1. Floor drain in cable spreading room is located along the east wall and drains to Turbine Building sump, El. 85' water also drains to El. 73' via stairs.
2. Deenergize electrical equipment where feasible.
3. Automatic rolling fire doors are located at Doors #119-2, 101-2, and at ventilation openings on the east wall.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water spray from hose streams may be necessary to protect exposures. Use in fog pattern only at a distance of at least 6 feet due to energized electrical equipment.
2. Safe shutdown circuits in pyrocrete enclosures need protection.
3. Monitor concrete hatch on El. 104' for possible fire propagation.



FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) CO₂ switchgear rooms
(2) dry chem in cable spreading rooms
2. CO₂ hose reels - (2)
3. Water hose reel in Diesel Generator corridor
4. Hydrants and hose reels outside roll-up Door #'s 101-2 and 119-2

VENTILATION:

1. Normal plant ventilation
2. Portable smoke exhausters may be required. Smoke can be exhausted via roll-up Door #101-2, south end or Door #119-2. Positive pressure ventilation techniques may be most effective in smoke removal with fans. If A/C power is not available, gasoline powered fans or generators should be used.
3. Hose streams could exhaust smoke via Doors 101-2 or 119-2 to the out of doors.

COMMUNICATIONS:

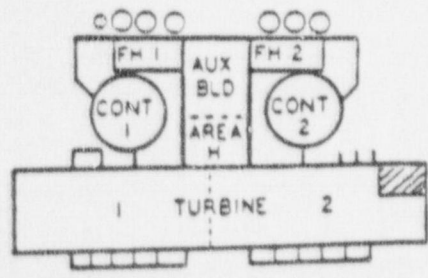
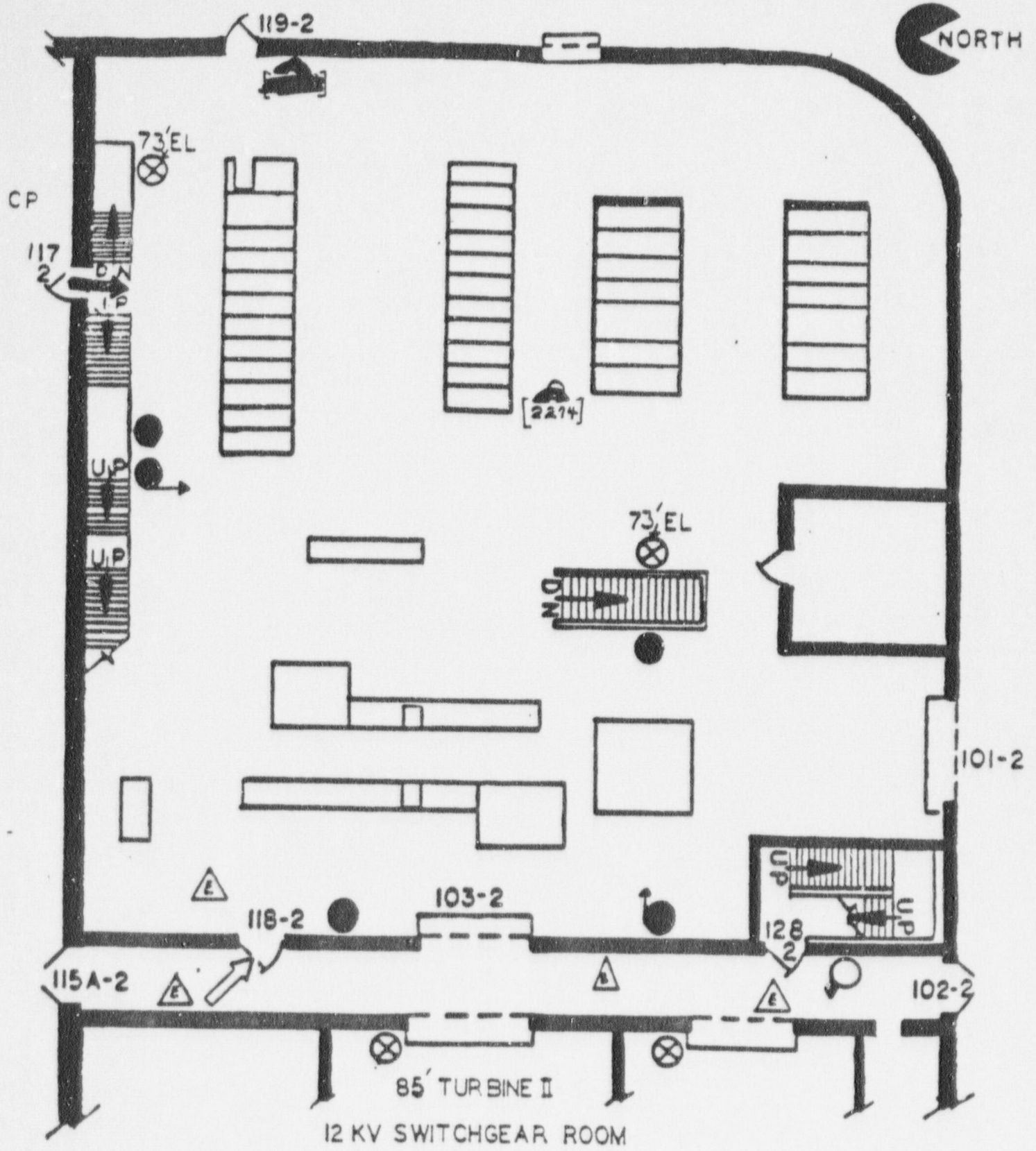
1. Plant telephone - 
2. Portable radios (Ops. Freq. 

- LIGHTING:
1. Plant lighting panel - PL 21-1
 2. Emergency lighting in area

- SAFETY EQUIPMENT:
1. An eye wash station/shower is located in the U-2 Turbine Building., 85' El. at col's A-29, just north of the Condensate Booster Pumps.
 2. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus must be worn.
2. Smoke Exhausters may be required, particularly for a fire in the cable spreading room, El. 76'. Exhaust smoke via roll-up Doors 101-2 or 119-2.
3. CO₂ is the agent of choice.
4. Water to be used in fog pattern only due to high voltage electrical equipment.
5. CO₂ may accumulate at low elevations. Monitor for O₂ concentration prior to removing SCBA's.



- | | | | |
|-------------------------------------|-----------------------|---------------------|-----------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊕ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ⊕ EYE WASH | ● CO ₂ | ⊕ CO ₂ HOSE REEL |
| ⊕ N ₂ 35% N ₂ | ⊕ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊕ WHEELED DRY CHEM |
| ⊕ ACID | | ⊗ HALON | ⊕ TELEPHONE |
| ⊕ CAUSTIC | | CP COMMAND POST | ⊕ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | ⊕ FIRE WALL RATING |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊕ MISCELLANEOUS OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

DG's 2-1, 2-2 & DOCUMENT STORAGE
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Fuel oil
 2. Lube oil
 3. Cable insulation
 4. Transient combustibles during maintenance
 5. Class "A" combustibles (document storage)

- MOST PROBABLE FIRE:
1. Transient combustibles
 2. Fuel oil
 3. Lube oil
 4. Class "A" combustibles

- ACCESS AND EGRESS ROUTES:
1. Primary - via Door #102-2 from yard at Building El. 85' (Security Door)
 2. Secondary - via Door #115A-2 from Turbine Building El. 85' (Security Door)
- via 12KV switchgear Door #118-2
 3. For document storage - via Door #115-2 (Primary)
- via Door #112-2 (Secondary - Security Door)

- FIRE BRIGADE STAGING AREA:
1. Primary - outside Door 115A-2 Turbine Building El. 85'
 2. Secondary - outside Door 102-2 South End Turbine Building (south yard)

- HAZARDOUS MATERIALS:
1. CO₂ discharge at Diesel Generators and document storage
 2. Cable insulation products of combustion
 3. Chromates in Diesel Generator coolers

MANAGEMENT OF PLANT SYSTEMS:

1. A 2 3/4" curb is provided at each automatic door to prevent oil spread to adjacent areas.
2. Both generators are protected by an automatic CO₂ system. The CO₂ system may be actuated automatically, manually from the Control Room, or from the Turbine Building south end behind the condensate booster pumps. The west roll-up doors may not shut automatically on CO₂ manual discharge since they are activated by heat detectors only.
3. The shut off for the automatic sprinkler system in hallway is located behind condensate booster pump 2-1 SW corner.
4. A manual activation of the CO₂ system for the document storage area is located on the wall adjacent to Door #113-2.
5. Fuel oil leaks drain to the Turbine Building sump.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels located in the hallway, Turbine Building or the yard loop may be required to protect exposures.
2. Maintain fire barrier integrity to assure protection of redundant equipment.
3. Protect from exposure outside west side intake louvers.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) 20# dry chemicals
(2) 17# Halon
(1) 150# dry chem wheeled unit
(2) 2.5 gal H₂O
2. Automatic CO₂ system generator rooms and document storage rooms
3. CO₂ hose reel in the 12KV switchgear room
4. Sprinkler system in hallway
5. Foam - Maintenance Brigade Locker - Fire Brigade Station - Stairway Locker #1 - Fire Truck

NOTE: A second manual discharge of CO₂ should be considered if a reflash occurs or to assure sufficient concentration.

VENTILATION:

1. Louvers are provided in the west wall. Automatic CO₂ discharge will block ventilation ducts.
2. Portable smoke exhausters may be required. Smoke can be exhausted via west ventilation or Door #102-2 to the outside.
3. Hose stream ventilation is possible via Door #102-2.
4. Portable smoke exhausters will be required for a fire in document storage and can exhaust via Door # 112-2 to E1. 85' polishing area.

COMMUNICATIONS:

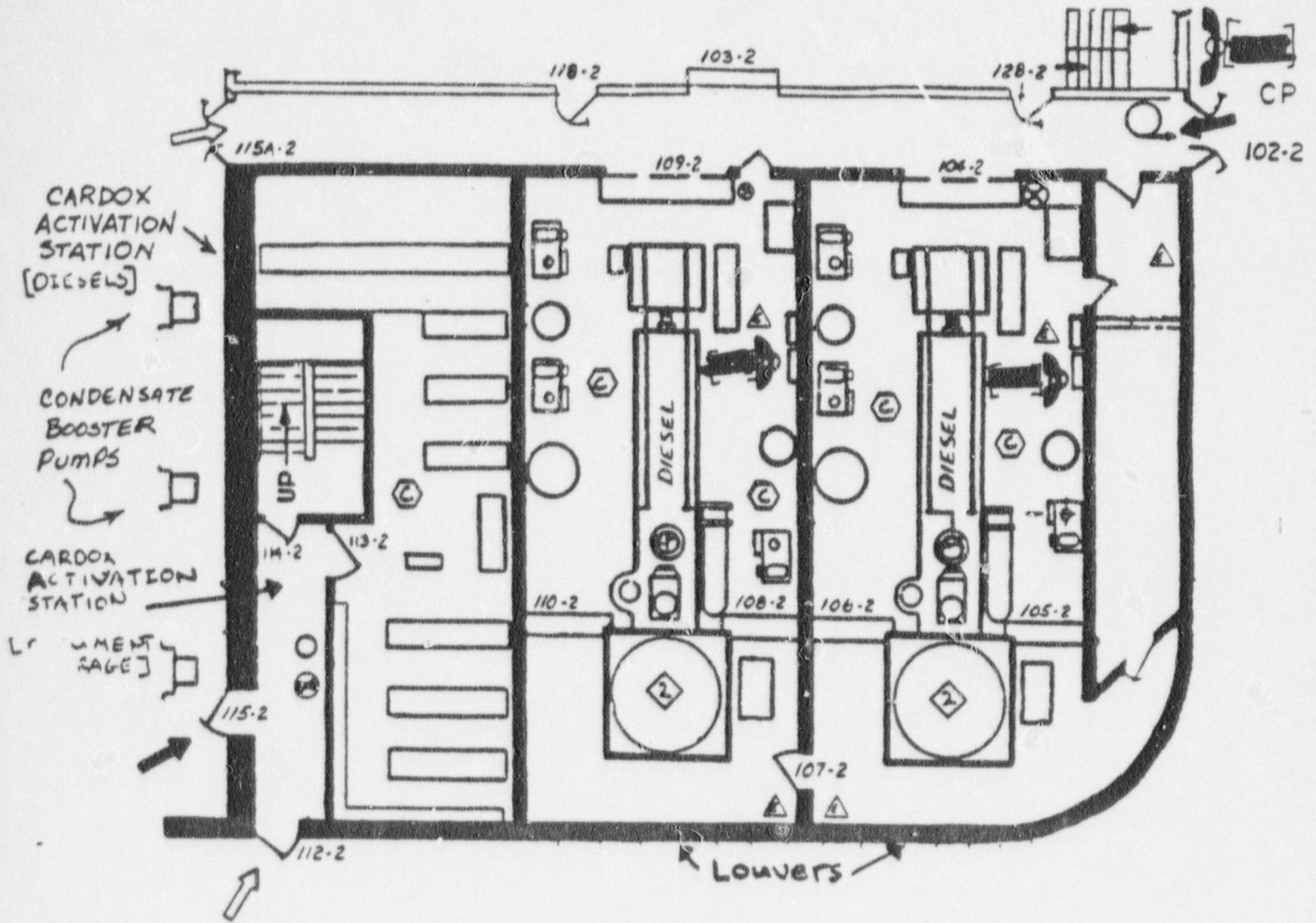
1. Plant telephone - [redacted] document storage
[redacted] Diesel Generator Room 2-1
[redacted] Diesel Generator Room 2-2
[redacted] 12KV switchgear room
2. Portable radios (Ops. Freq. [redacted])

- LIGHTING:
1. Plant lighting panel - PL 21-1
 2. Emergency lighting in area

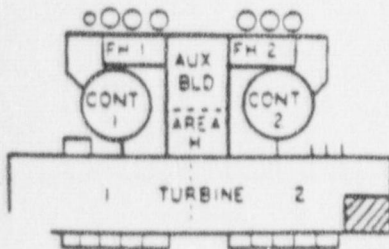
- SAFETY EQUIPMENT:
1. An eye wash/shower station is located in the U-2 Turbine Building, 85' El., at col's A-29, just north of the Condensate Booster Pumps.
 2. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Portable smoke exhausters may be required.
2. Self contained breathing apparatus will be required due to smoke and CO₂ discharge.
3. Tests should be conducted to determine CO₂, O₂ and flammable vapors prior to removal of SCBA in Diesel Generator Rooms.
4. Reopening of roll-up doors for ventilation requires engaging the ratchet mechanism above the door and opening the door with the chain operator.
5. Access to document storage is locked, with keys controlled by the Shift Foreman and Document Control.



85' UNIT II DIESEL GENERATORS



- | | | | |
|--|-----------------------|---------------------|--------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ② HAZ. WASTE CHROMATES ETC. | ⊞ EYE WASH | ● CO. | ⊙ CO. HOSE REEL |
| ③ N ₂ H ₄ 35%, NH ₃ | ⊞ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ④ ACID | | ⊕ HALON | ⊖ EMERGENCY LIGHTS |
| ⑤ CAUSTIC | | CP COMMAND POST | ⊖ TELEPHONE |
| ⑥ TOXIC GASES | | ➡ PRIMARY ACCESS | ⊖ FIRE WALL RATIO |
| ⑦ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | ☆ ANNUNCIATOR PAN |
| ⑧ MISCELLANEOUS/OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

TURBINE BLDG. EL. 85' and Below
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Lube oil
 2. Cable insulation
 3. Batteries
 4. Solvent - waste solvent, diesel oil

- MOST PROBABLE FIRE:
1. Lube oil leakage
 2. Transient combustibles
 3. Oil Reclamation Room (approximately 3000 gal. flammable liquids)
 4. Cable insulation

- ACCESS AND EGRESS ROUTES:
1. Primary - via Cold Machine Shop
 2. Secondary - via Door #'s 102-2 and 115-2 south end
- via roll-up Door #125-2 west side

- FIRE BRIGADE STAGING AREA:
1. Primary - Cold Machine Shop
 2. Secondary - outside roll-up Door #125-2 west side
- Diesel Generator hallway by Door #115A-2

- HAZARDOUS MATERIALS:
1. Hydrazine, Ammonia, Sulphuric Acid, cable insulation and battery acid
 2. Calibration facility contains radioactive sources

MANAGEMENT OF PLANT SYSTEMS:

1. The oil drum storage room is surrounded by 3 hour fire barriers, raised doorways and sealed pipeways thus preventing oil from a ruptured tank leaking to an outside area.
2. Water deluge protects the feedwater pumps 2-1 and 2-2 and the H₂ seal oil unit. Shut off valves are located at:
At Col. Line 21/C north end for FWP 2-1
At Col. Line 28/B, by Hydrazine and Ammonia Tanks for FWP 2-2
At S.E. corner by Stator Cooling Unit for H₂ seal oil unit deluge
3. Wet sprinkler systems protect the entire 85' El. north system shut-off valve FP-2-59 is located at the N.W. side of the freight elevator. South system shut-off valve FP-2-66 is located by Condensate Booster Pump 2-1.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels may be required to protect exposures.
2. Do not spray cold water directly on exposed steam piping.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (1) 14# Halon
(7) 20# Dry Chemicals
(1) 150# D.C. Wheeled Unit
2. Automatic sprinklers - general floor area, oil reclamation, paint storage and drum storage, and non vital battery rooms
3. Deluge Systems - feed pumps and H₂ seal oil
4. Foam - Maintenance Brigade locker - 85' E1. - Fire Truck, Stairway #1 95' E1, Operation Ready Room 140' E1
5. Fire Hose Reels - Four

VENTILATION:

1. Vent Fans 2S-53, 2S-52 and 2S-51 are located on the East wall and exhaust outlets are located on the West wall of the fire gone.
2. If extreme smoke conditions are encountered, smoke could be exhausted by hose steams through outside opening doorways or if power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones
2. Portable radios (Ops. Freq.)

LIGHTING:

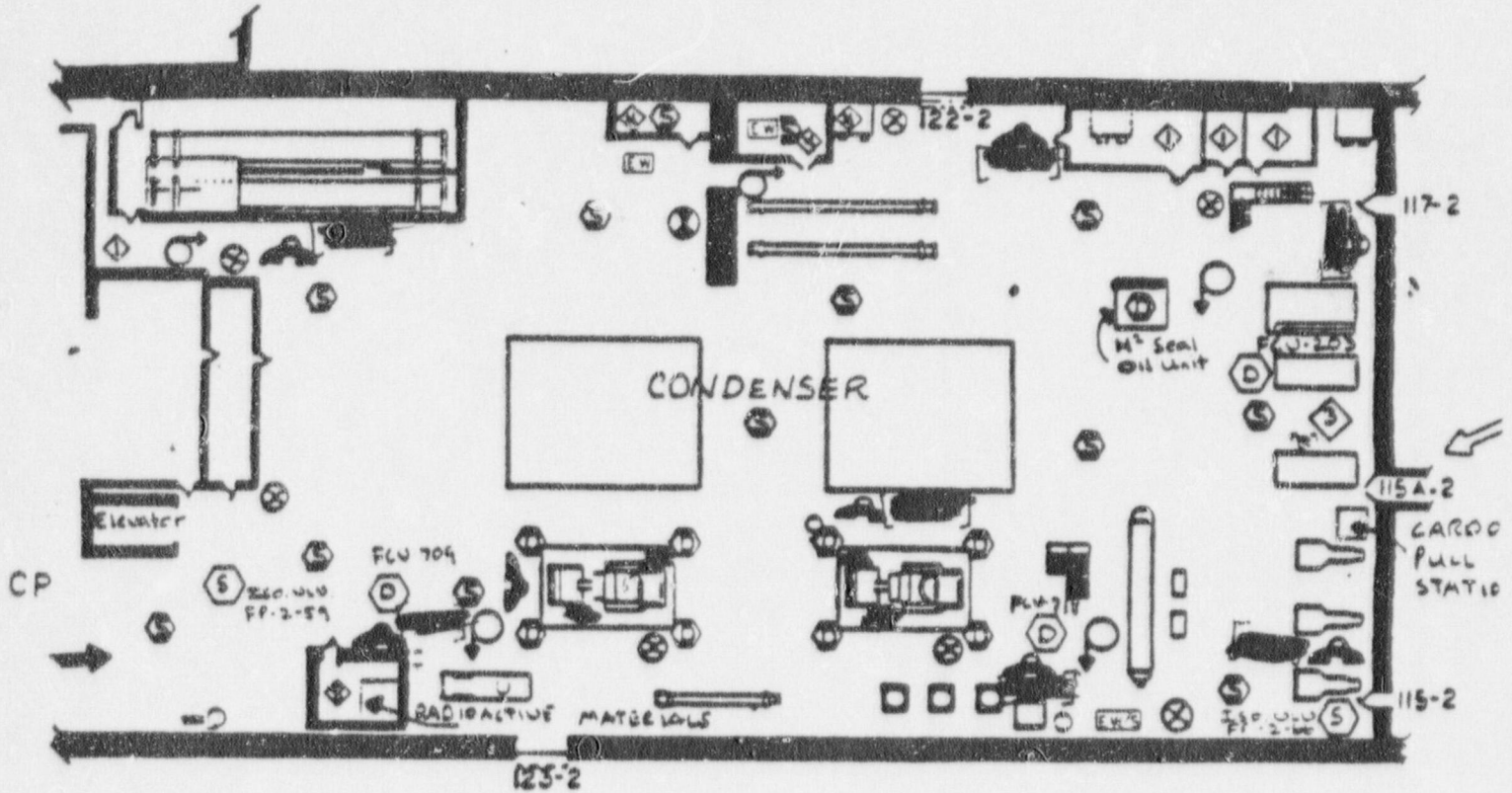
1. Plant lighting - PL's PJ21-2, PJ22-1
2. Emergency lighting in area

SAFETY EQUIPMENT:

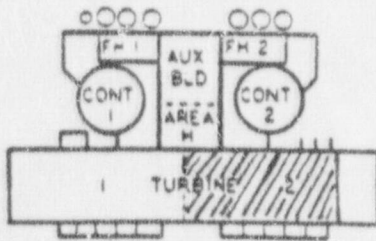
1. Eye wash stations are located at col's G-25, one outside the northern battery room and one inside the southern battery room.
2. An eyewash/shower station is located at col's A-29.
3. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus and other personal protective equipment will be required in the event of a fire.
2. Portable hand lanterns may be required if smoke conditions dictate.
3. Special protective clothing may be necessary to cleanup sulphuric acid, ammonia or hydrazine spills.



85' TURBINE II



- | | | | |
|---|------------------------------|---------------------|---------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ☒ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊕ HAZ WASTE CHROMATES ETC. | ☒ EYE WASH | ● CO. | ⊖ CO, HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ☒ E.W.S. EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊕ ACID | | ⊕ MALON | ⊖ ⚠️ DANGER ⚠️ |
| ⊕ CAUSTIC | | CP COMMAND POST | ⚠️ EMERGENCY LIGHTS |
| ⊕ TOXIC GASES | | → PRIMARY ACCESS | ☎ TELEPHONE |
| ⊕ FLAMMABLE GASES | | → SECONDARY ACCESS | ⚠️ FIRE WALL RATING |
| ⊕ MISCELLANEOUS/OTHER | | | ★ ANNUNCIATOR PANEL |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

CONDENSATE POLISHING AREA
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Cable insulation
 2. Electrical control panels
 3. Monoethylamine
 4. Hydrogen storage (N. End)
 5. Dry resin storage

- MOST PROBABLE FIRE:
1. Cable insulation
 2. Electrical control panels
 3. Overheated pump bearings
 4. Monoethylamine
 5. Hydrogen leak
 6. Transient combustibles

- ACCESS AND EGRESS ROUTES:
1. Primary - via door at N. end E1. 85'
 2. Secondary - via door at S. end E1. 85' or
- via center roll-up doors

- FIRE BRIGADE STAGING AREA:
1. Primary - north end E1. 85'
 2. Secondary - south end E1. 85'
- NOTE: Staging area selected should be up-wind of smoke plume.

HAZARDOUS MATERIALS:

1. Monoethylamine - Health Hazards: Vapors are irritating to the nose, throat, lungs and eyes. Liquid can cause burns to the skin.
2. Sulfuric Acid (H₂SO₄) - Health Hazards: causes severe deep burns to tissue; very corrosive effect. Avoid any contact.
3. Caustic (Sodium Hydroxide) - Health Hazards: toxic, a severe eye hazard; solid or concentrated solution destroys tissue on contact. Deep tissue burns.

MANAGEMENT OF PLANT SYSTEMS:

1. The acid and caustic controls are located at the individual tanks.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels located on the west side of the building may be required in the event a fire cannot be extinguished using portable extinguishers. Exposure protection is necessary for the H₂ storage until source of gas is secured.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) CO₂
2. Fire Hose Stations - (3) west side (yard loop)
(1) via roll-up Door #123-2 E1. 85' Turbine Building
3. Fire Hydrants - (2) west side (yard loop)

VENTILATION

1. Supply fans are 2S and 2S-77. Exhaust fans are 2E-60 and 2E-61.
2. Portable smoke exhausters will be required. Smoke can be exhausted via doors @ north and south ends and rolling doors west side E1. 85'.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

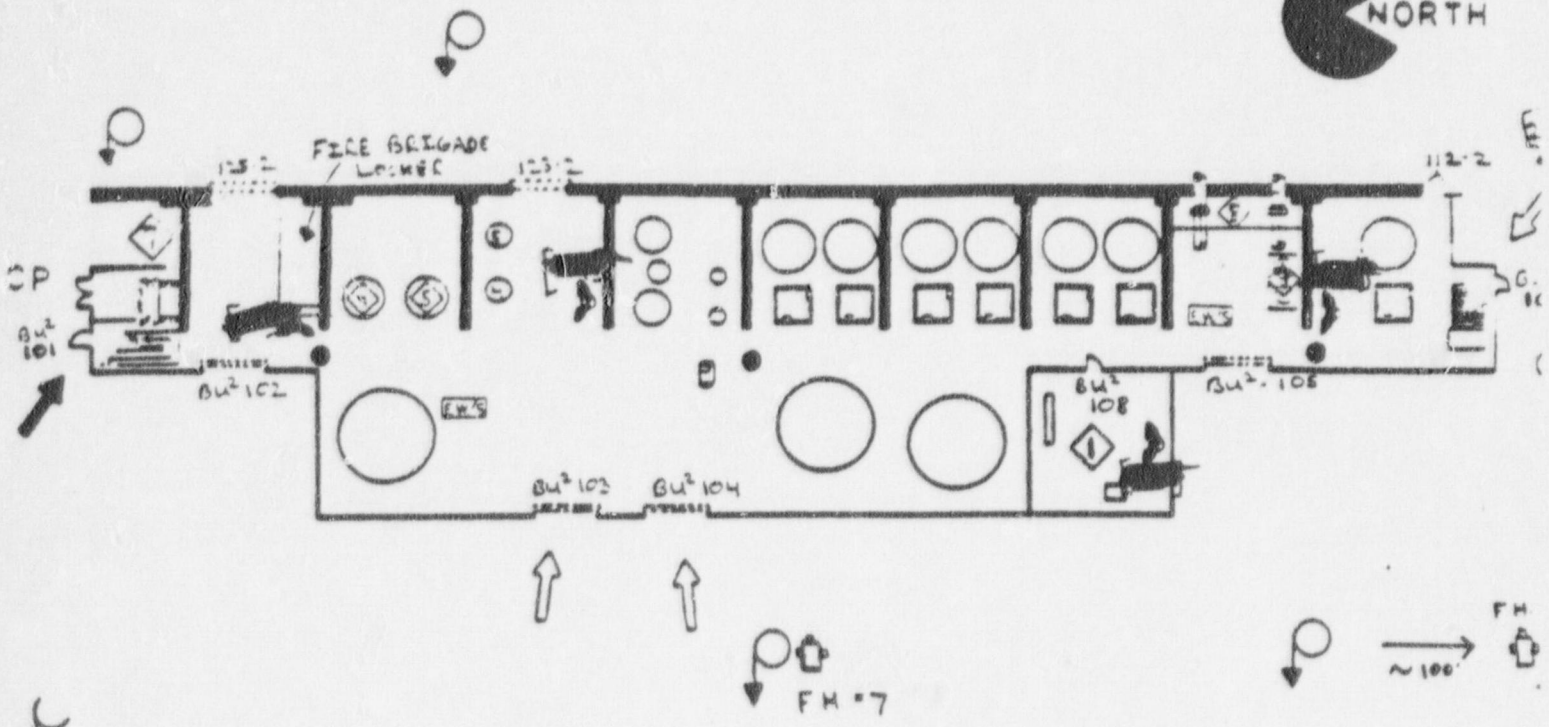
1. Plant telephone
2. Portable radios (Ops. Freq.)

- LIGHTING:
1. Normal plant lighting panels - PL 29-1 and 29-2
 2. Emergency lighting in area

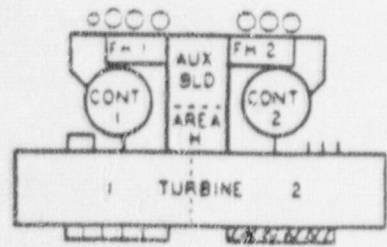
- SAFETY EQUIPMENT:
1. Eye wash/shower stations are located at both the north and south ends of the Condensate Polishing Area.
 2. A first aid kit is located in the U-2 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus and personal protective equipment will be required.
2. H₂ explosive hazard



UNIT II CONDENSATE POLISHING AREA, 85'



- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none"> ⬇ FLAMMABLE/COMBUSTIBLE LIQUIDS ⬇ HAZ WASTE CHROMATES ETC. ⬇ N₂H₄ 35%, NH₃ ⬇ ACID ⬇ CAUSTIC ⬇ TOXIC GASES ⬇ FLAMMABLE GASES ⬇ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ⊕ MALON CP COMMAND POST ➔ PRIMARY ACCESS ➔ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO₂ HOSE REEL ⊕ WHEELED DRY CHEM ⊕ EMERGENCY LIGHTS ⊕ TELEPHONE ⊕ FIRE WALL RATING ☆ ANNUNCIATOR PANEL |
|---|--|---|---|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

EAST BUTTRESS AND TRANSFORMER AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Transformer oil
2. Cable insulation
3. Transient combustibles

MOST PROBABLE FIRE: 1. Transformer oil
2. Transient combustibles
3. Cable insulation

ACCESS AND EGRESS ROUTES: 1. Primary buttress area
NOTE: Access through security barriers from Unit
1 to Unit 2 on El. 140' and El. 85' only.

FIRE BRIGADE STAGING AREA: 1. Primary - south end Turbine Building
2. Secondary - east side Turbine Building

HAZARDOUS MATERIALS: 1. Lubricating/cooling oil inside the transformer. Each
transformer contains 16,000 gallons.

MANAGEMENT OF PLANT SYSTEMS:

1. All transformers are protected by automatic deluge water spray systems that can be manually operated locally and remotely from the Control room.
2. The pavement around the transformers is sloped so that spilled oil would drain away from the Turbine Building. Rock blotters with drains are provided around each transformer which prevents oil from reaching the Turbine Building.
3. Deenergize involved transformer.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to provide exposure protection for transformers and the Turbine Building.
2. The interior of the Turbine Building should be checked for heat damage in the vicinity of an exterior exposure fire.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Hose Stations - (YL-20) N. of Main Transformers
(YL-19) S.W. of Standby Transformer 2-2
2. Fire hydrants - by each Hose Station YL-19 and YL-20
3. Foam - 1. Maintenance Brigade Locker
2. Fire Brigade Station
3. Fire Truck
4. Stairway #1 Locker
4. Deluge Systems-FCV-214 Main Transformers, B and C phase and Auxiliary Transformers 2-2. FCV-213 Main Transformer A phase and Auxiliary Transformer 2-1. FCV-212 Standby Startup Transformer 2-2.

VENTILATION: N/A (out of doors)

COMMUNICATIONS:

1. Plant telephones - [redacted] by roll-up Door #122-2 Turbine Building
[redacted] 12KV switchgear room by Door #119-2
[redacted] S. end Turbine Building between doors #'s 101-2 and 102-2
2. Portable radios (Ops. Freq. [redacted])

LIGHTING: 1. Yard lighting

SAFETY EQUIPMENT:

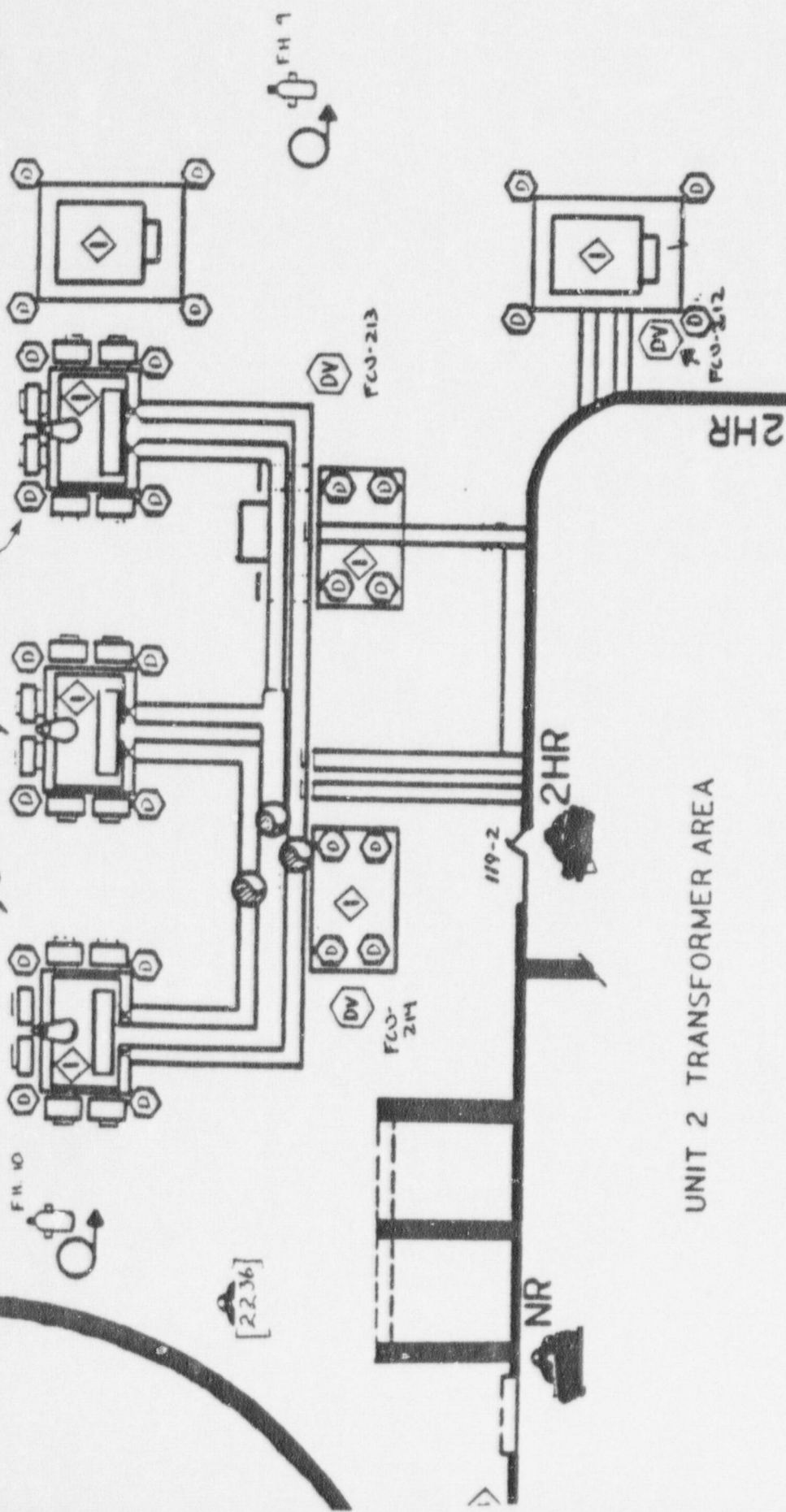
1. An eye wash station is located in the U-2 Turbine Building, 85' El. at Col's F-25, by the Battery Rooms.
2. A first aid kit is located in the U-1 Cold Machine Shop by the welder's booth.

SPECIAL PRECAUTIONS:

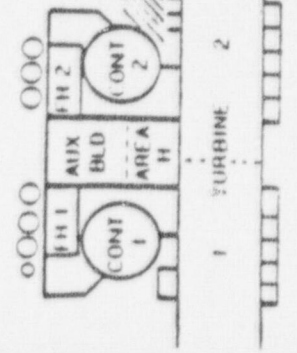
1. Fire hose streams in fog pattern only should be used when fighting a transformer fire due to extreme high voltage. If foam is used, it is more conductive, so application should be cautious.
2. Self-contained breathing apparatus will be required.



TRANSFORMERS



UNIT 2 TRANSFORMER AREA



- FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ WASTE CIRCULATES, ETC.
- ⊕ N₂/O₂ VOL. RATIO
- ⊕ GASEOUS
- ⊕ FLAMMABLE SOLIDS
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ FLAMMABLE LIQUIDS
- ⊕ FLAMMABLE SOLIDS
- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH AND SHOWER
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ COMMAND POST
- PRIMARY ACCESS
- SECONDARY ACCESS
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ⊕ AMMUNITION PANEL

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

DG 2-1 & 2-2 EXHAUST & DOCUMENT STORAGE
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Class "A" combustibles
2. Transient combustibles

MOST PROBABLE FIRE: 1. Transient combustibles in contact with hot exhaust piping
2. Class "A" combustibles (records storage)

ACCESS AND EGRESS ROUTES: 1. Primary - via Door #'s 211-2 and 289-2 - E1. 104'
2. Secondary - hallway via Door #290-2 E1. 104" for Diesel Generator exhaust area
3. For records storage via door #115-2 and stairway at E1. 85'. Turbine Building to Door #'s 129-2 and 130-2

FIRE BRIGADE STAGING AREA: 1. Primary - for Diesel Generator exhaust area outside Door #211-2 E1. 104' Turbine Building
2. Secondary - hallway outside Door #290-2 E1. 104'
3. Primary only for records storage outside Door #115-2 Turbine Building E1. 85'

HAZARDOUS MATERIALS: 1. CO₂ discharge in records storage area

MANAGEMENT OF PLANT SYSTEMS:

1. Access keys to record storage must be obtained from Document Control during normal hours and from the Shift Foreman on back shifts.
2. Automatic CO₂ system local actuator and abort valve is located immediately inside Door #129-2.
3. Sprinkler system isolation valve, FP-2-269, is located at E1. 104' east of Door #211-2.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Do not use water directly on hot exposed Diesel Generator exhaust. Pipe cracking may occur.
2. Diesel Generator plenum is common at the south wall with minimal separation of redundant equipment.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - a. (2) #17 Halon
(3) 20# dry chemical
(2) pressurized water
2. Automatic CO₂ system (records storage)
3. Automatic sprinkler system, hallway between Door #'s 211-2 and 289-2, hallway outside Door #290-2 and storage rooms

VENTILATION:

1. Louvers in the permanently open position are provided on the west wall Diesel Generator exhaust area.
2. Portable smoke exhausters will be required for a fire in the records storage room. Smoke could be exhausted via Door #'s 130-2 and 129-2.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - [redacted] records storage
El. 104' Turbine Building
2. Portable radios (Ops. Freq. [redacted])

LIGHTING:

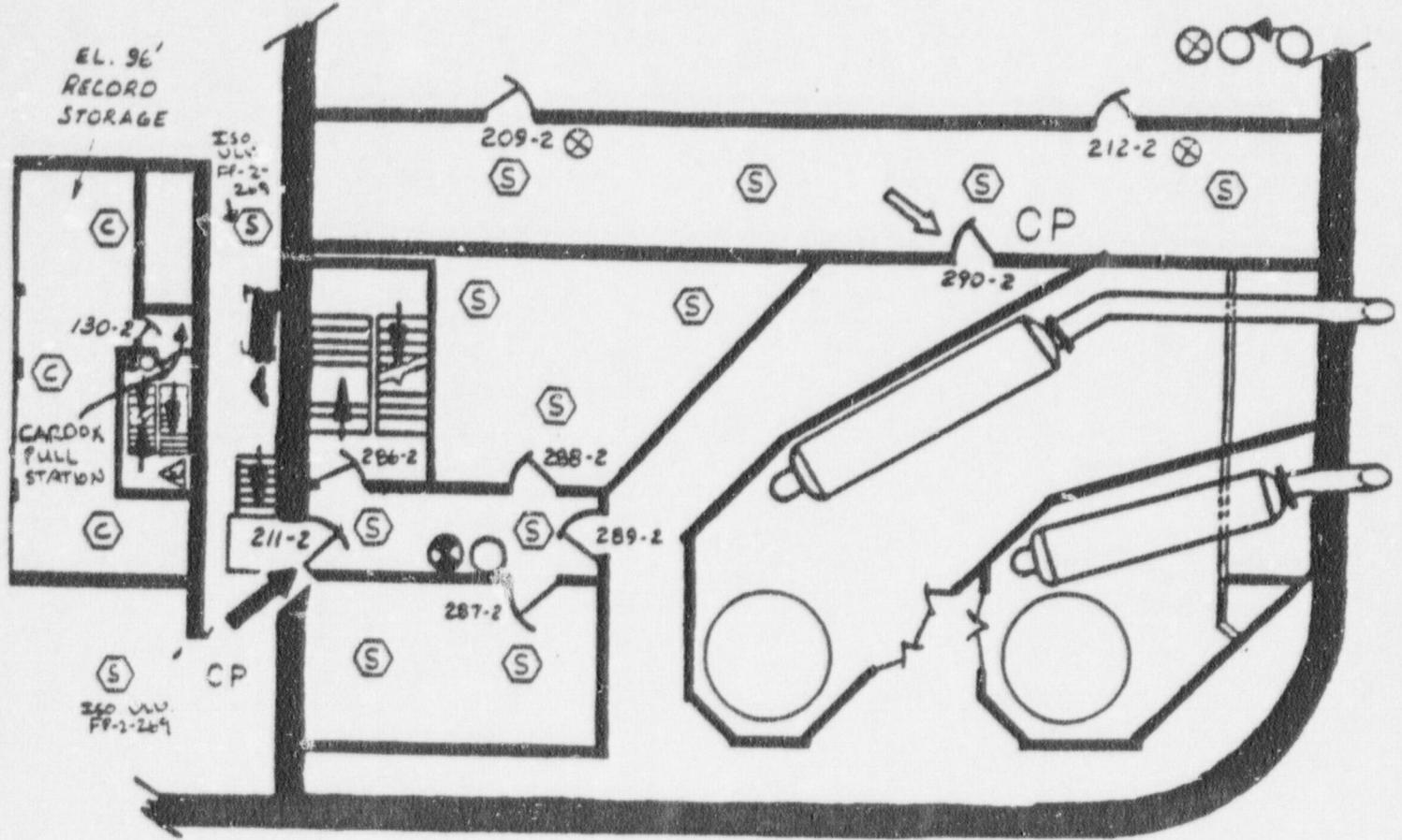
1. Plant lighting panel - PL 21 - 4
2. Emergency lighting in area

SAFETY EQUIPMENT:

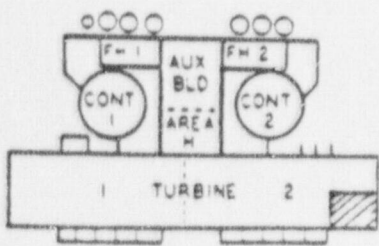
1. An eye wash/shower station is located in the U-2 Turbine Building on the 85' El. at Col's A-29, just north of the Condensate Booster Pumps.
2. A first aid kit is located in the Turbine Building at the 104' El. by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required in the records storage area until air quality is checked. CO₂ could migrate to the stairway and below. Sample all areas for O₂ concentration.
2. Access and egress to and from records storage area on El. 96' is limited to stairway from Door #115-2 SW corner Turbine Building behind Condensate Booster Pump 2-1.



104' TURBINE II
DIESEL GENERATORS (EXHAUST AREA)



- | | | | |
|--|--|---|---|
| <ul style="list-style-type: none"> ⬇ FLAMMABLE/COMBUSTIBLE LIQUIDS ⬇ HAZ WASTE CHROMATES ETC. ⬇ N₂H₄ 35% NH₃ ⬇ AOT ⬇ CALUST ⬇ TOXIC GASES ⬇ FLAMMABLE GASES ⬇ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ⊙ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➔ SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO₂ HOSE REEL ⊕ WHEELED DRY CHEM ○ EMERGENCY LIGHTS △ EMERGENCY LIGHTS ☎ TELEPHONE — FIRE WALL RATING ☆ ANNUNCIATOR PANEL |
|--|--|---|---|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

TURBINE BUILDING EL. 104'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Lube oil
2. Cable insulation

MOST PROBABLE FIRE: 1. Lube oil
2. Overheated cables

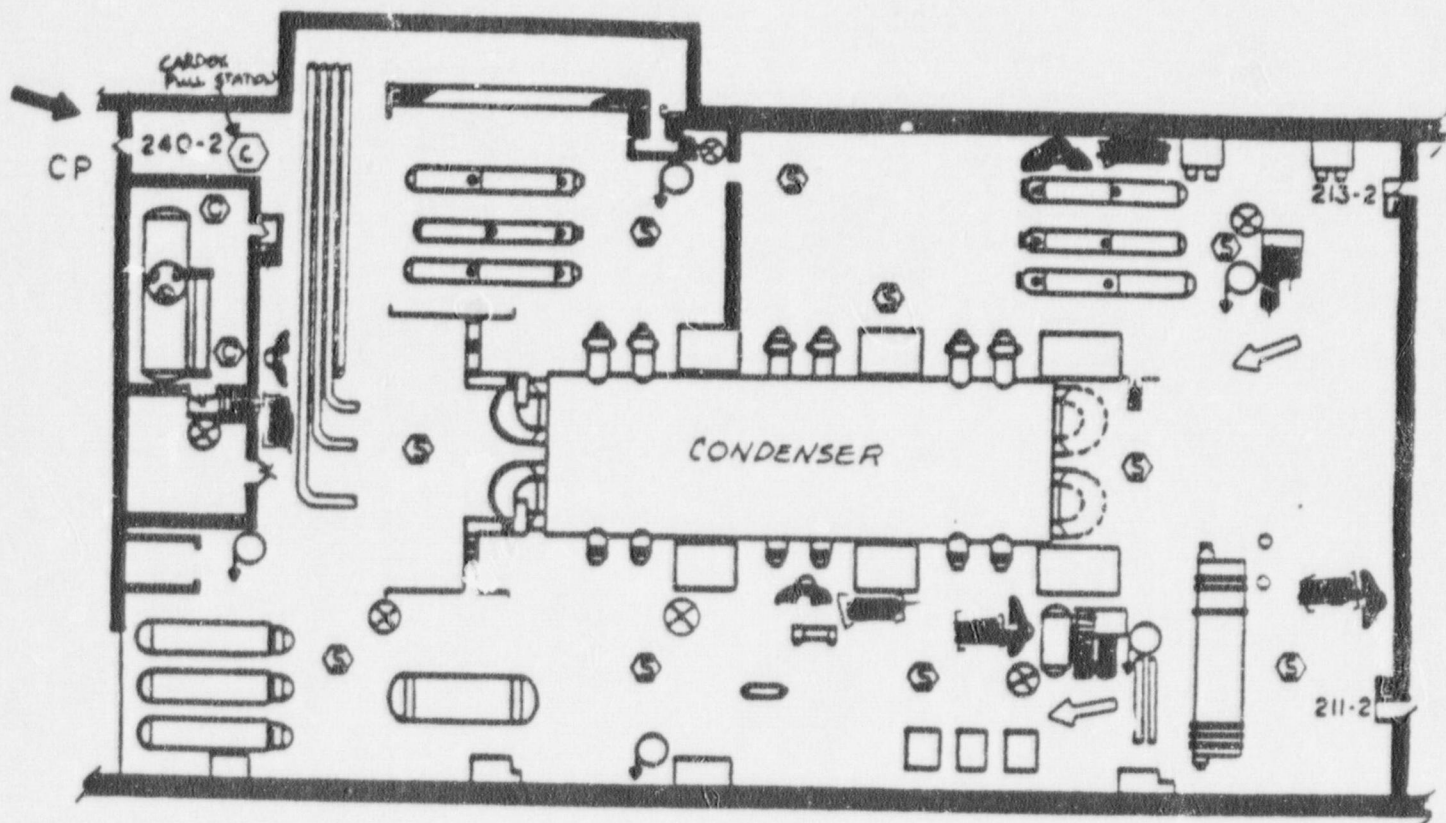
ACCESS AND EGRESS ROUTES: 1. Primary - via Elevator #1 to Doorway #240-2
2. Secondary - via S.E. stairway or
- via S.W. stairway

FIRE BRIGADE STAGING AREA: 1. Primary - outside Door #240-2 at lube oil
Reservoir Room (when Security
Barrier removed)
2. Secondary - S.E. stairway from El. 85' or
140' or S.W. stairway from El.
85' or 140'

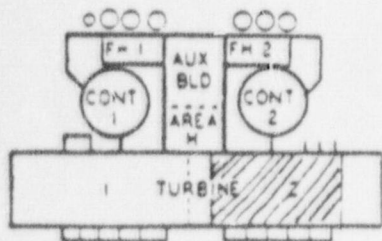
HAZARDOUS MATERIALS: 1. Toxic fumes from cable insulation
2. CO₂ discharge-lube oil reservoir

MANAGEMENT OF PLANT SYSTEMS:

1. The general floor area is protected by wet piped automatic sprinklers. North system shutoff valve located at El. 85' N. end immediately west of freight elevator. South system shutoff located at El. 85' S.W. corner by Condensate Booster Pump 2-1.
2. The main lube oil reservoir is protected by a total flooding CO₂ system that can be activated manually from the Control Room or E. end of Room.
3. The main lube oil reservoir dump valve is located at El. 140' of the Turbine Deck.
4. Floor drains below the L.O. Reservoir allow drainage to the Unit 2 main lube oil tank located under the Machine Shop.



104' TURBINE II



- | | | | |
|--|-----------------------|---------------------|-----------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | Ⓕ WATER HOSE REEL |
| ② HAZ WASTE CHROMATES ETC. | Ⓔ EYE WASH | ● CO ₂ | Ⓖ CO ₂ HOSE REEL |
| ③ N ₂ H ₄ 35%, NH ₃ | Ⓕ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | Ⓚ WHEELED DRY CHEM |
| ④ ACID | | ⊙ HALON | Ⓛ EMERGENCY LIGHTS |
| ⑤ CAUSTIC | | CP COMMAND POST | ☎ TELEPHONE |
| ⑥ TOXIC GASES | | ➡ PRIMARY ACCESS | Ⓜ FIRE WALL RATING |
| ⑦ FLAMMABLE GASES | | ➡ SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⑧ MISCELLANEOUS/OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

RESERVOIR AREA - CHLORINATION AND CLARIFIER BUILDINGS

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Type "A" combustibles
2. Transitory Combustibles
3. Cable Insulation

MOST PROBABLE FIRE:

1. Type "A" combustibles
2. Transitory Combustibles

ACCESS AND EGRESS ROUTES

1. Via the roadway to the south

FIRE BRIGADE STAGING AREA:

1. Primary: To the south of the building

HAZARDOUS MATERIALS:

1. Acid
2. Caustic
3. Chlorine

MANAGEMENT OF PLANT SYSTEMS:

1. Each building has its own electrical shut-off, as follows:
Acid Storage Building: outside at the north-east corner
Clarifier Building: inside at the north-west corner
Chlorination Building: inside along the east wall of the Chlorine Tank Room

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - two 20# MPDC's

NOTE: There is no other fire suppression equipment available at this location.

VENTILATION:

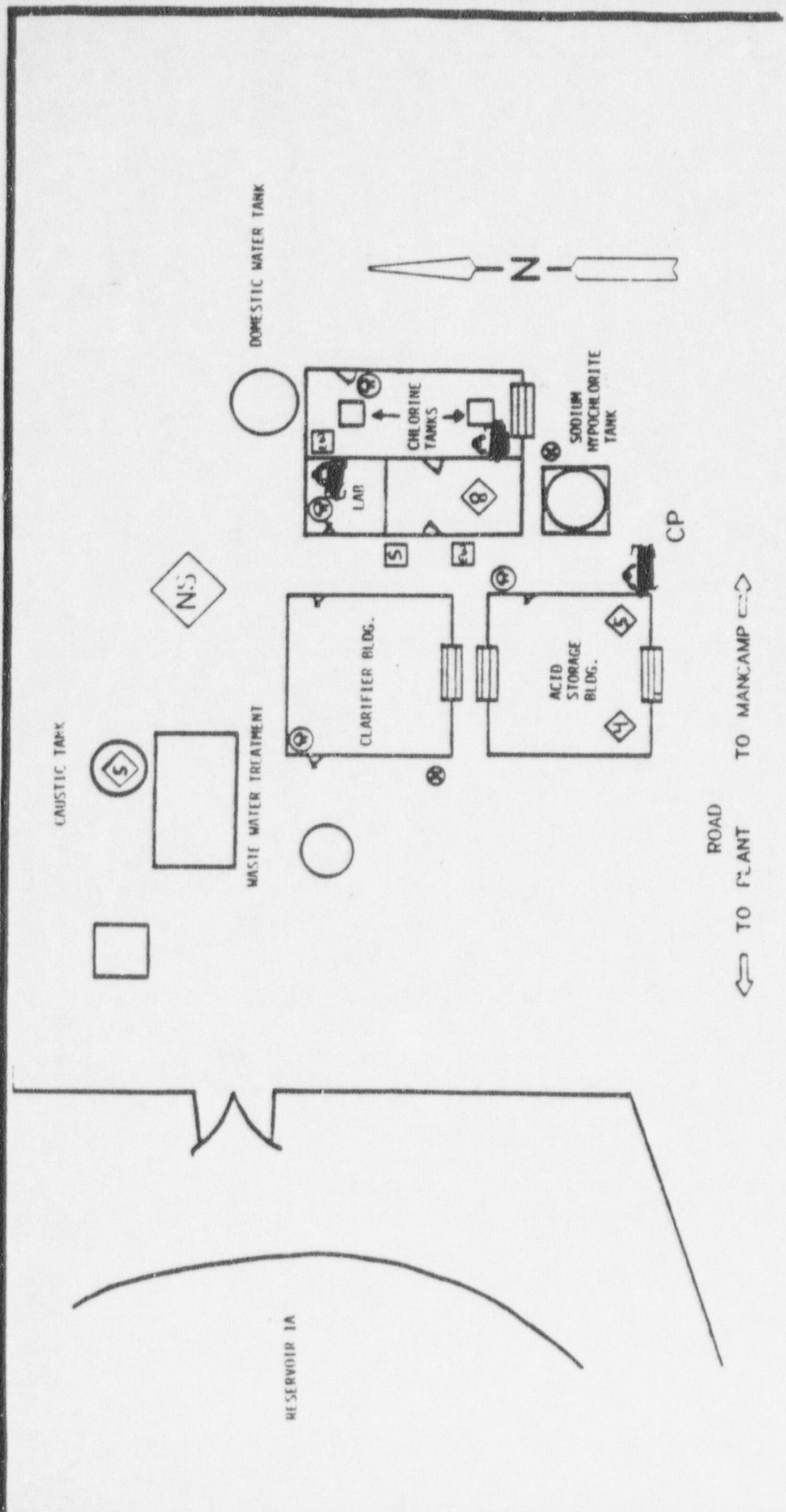
1. Natural ventilation via doors
2. Mechanical ventilation using portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

Via plant telephones [REDACTED] [REDACTED]
Via Portable Radio (Ops Frequency) [REDACTED]

SAFETY EQUIPMENT:

1. Eyewash stations are located at the east wall of the Chlorine Tank Room and on the west side of the Chlorinator Building.
2. An emergency shower is located on the west side of the Chlorinator Building.

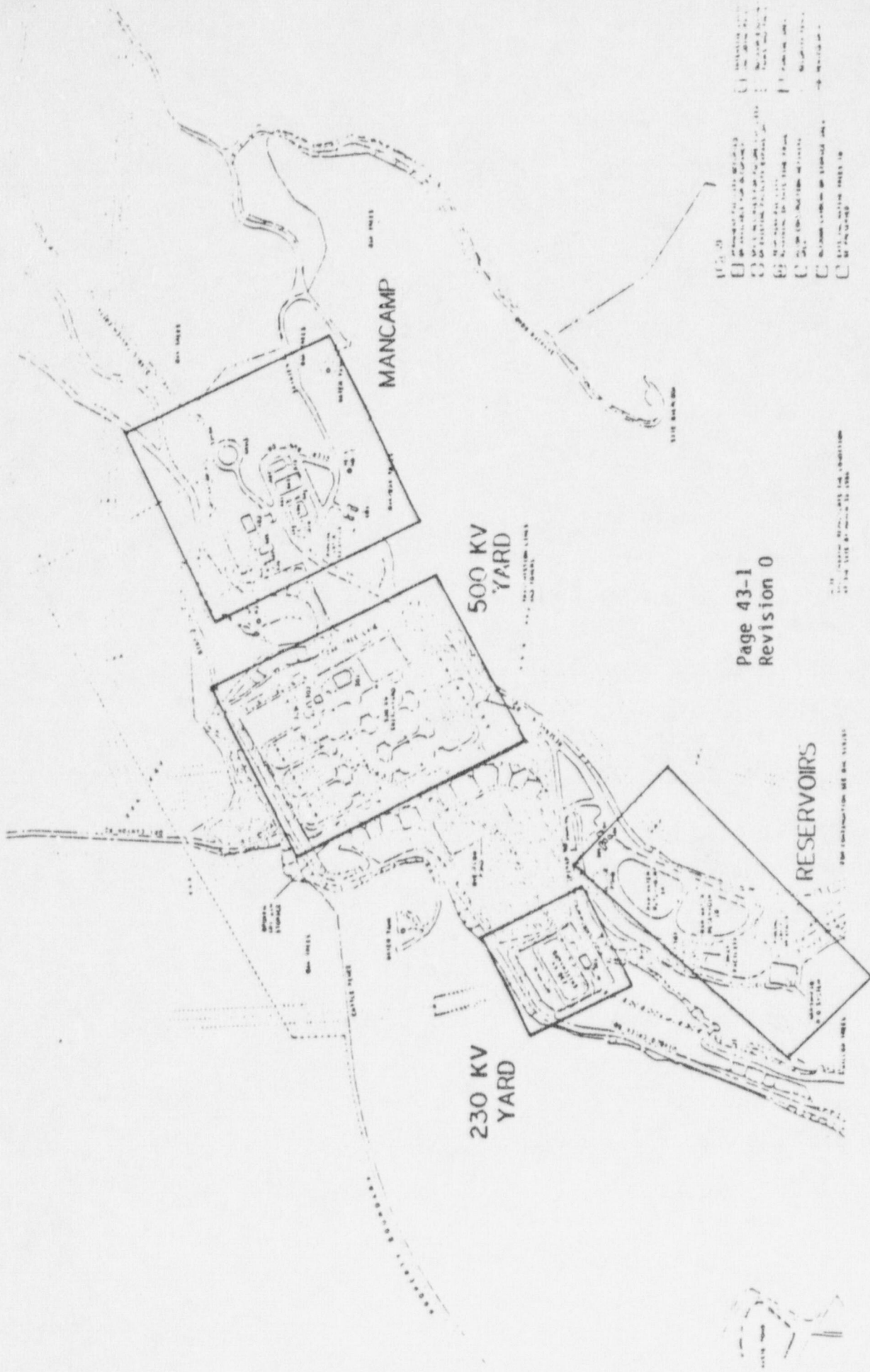


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CHLORINATION BLDGS. +
CLARIFIER BLDG.

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHROMATES, ETC.
- ◊ H₂A, 35% NH₃
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISC./OTHER
- (1) FIRST AID
- ◊ EYE WASH
- ◊ EYE WASH & SHOWER
- ☎ TELEPHONE
- ☎ COMMAND POST
- PRIMARY ACCESS
- SECONDARY ACCESS
- △ EMERGENCY LIGHTS
- FIRE WALL RATING
- ▲ AMBULATORY PANEL
- ◊ DRY CHEMICAL
- ◊ CO₂
- ◊ PRESSURIZED WATER
- ◊ MALLON
- ◊ WATER HOSE REEL
- ◊ CO₂ HOSE REEL
- ◊ WHEELED DRY CHEM
- ◊ SPRINKLER RISER
- ◊ AUTO. SPRINKLER
- ◊ STAMPING
- ◊ UNDERGROUND P
- ◊ PWA VALVE
- ◊ FIRE DEPT. C
- ◊ HYDRANT-2 HOSE OUTLET
- ◊ HYDRANT-3 HOSE W/PUMP



- LEGEND
- [Symbol] 1. UNIDENTIFIED BUILDINGS
 - [Symbol] 2. BUILDINGS WITH IDENTIFIED PURPOSES
 - [Symbol] 3. UNIDENTIFIED TERRAIN FEATURES
 - [Symbol] 4. IDENTIFIED TERRAIN FEATURES
 - [Symbol] 5. UNIDENTIFIED UTILITIES
 - [Symbol] 6. IDENTIFIED UTILITIES
 - [Symbol] 7. UNIDENTIFIED OBSTACLES
 - [Symbol] 8. IDENTIFIED OBSTACLES

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THIS DRAWING REPRESENTS THE LOCATION
OF THE SITE AS OF 15 APRIL 1968.

FOR INFORMATION SEE THE
DRAWING

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

TRANSMISSION YARDS - 500 KV SWITCHYARD CONTROL BUILDING

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Cable Insulation
2. Class "A" combustibles
3. Transitory Combustibles

MOST PROBABLE FIRE:

1. Cable Insulation
2. Class "A" Combustibles
3. Transitory Combustibles

ACCESS AND EGRESS ROUTES

1. Primary - Via the northern door
2. Secondary - via the eastern door
3. The basement is accessible via the stairway at the southern end of the building.

FIRE BRIGADE STAGING AREA:

1. Primary: at the north-east corner of the building
2. Secondary: to the south of the building

HAZARDOUS MATERIALS:

1. Battery Acid

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

N/A

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - One 150# MPDC
Five 15# CO₂'s
One 17# Halon
Two 20# MPDC's
2. Fire Hose Stations: None
3. Fire Hydrants: None
4. An annunciator panel is located along the north wall of the first floor.

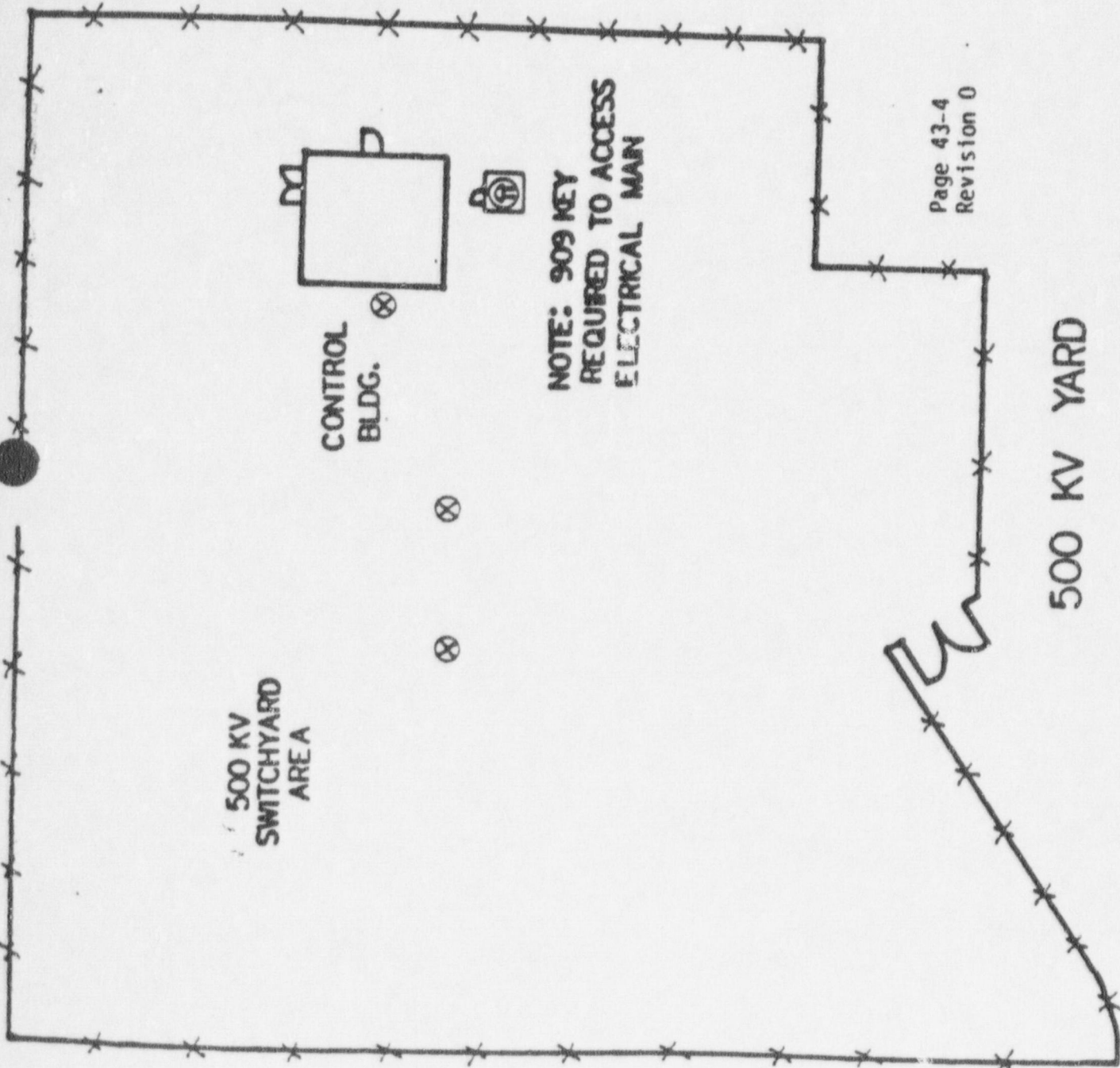
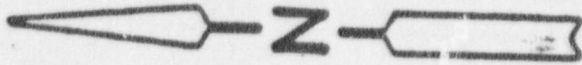
VENTILATION:

1. Mechanical ventilation, portable smoke ejector will be required to exhaust smoke.
2. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

Via plant telephones [REDACTED]
Via Portable Radio (Ops Frequency) [REDACTED]

LIGHTING: None



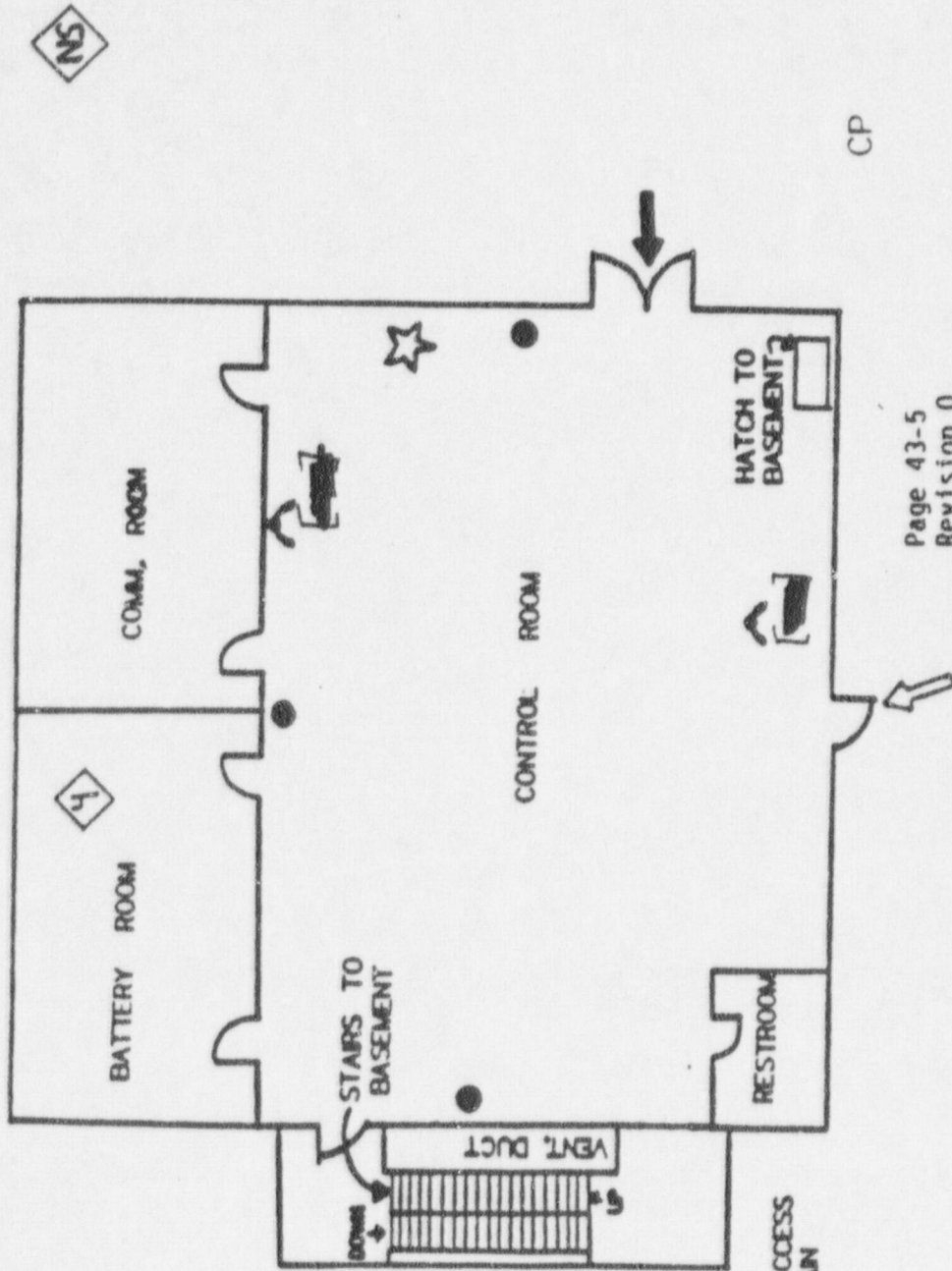
NOTE: 909 KEY
REQUIRED TO ACCESS
ELECTRICAL MAIN

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ROAD TO MANCAMP →

500 KV
SWITCHYARD
AREA

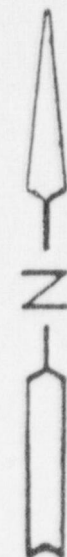
500 KV YARD



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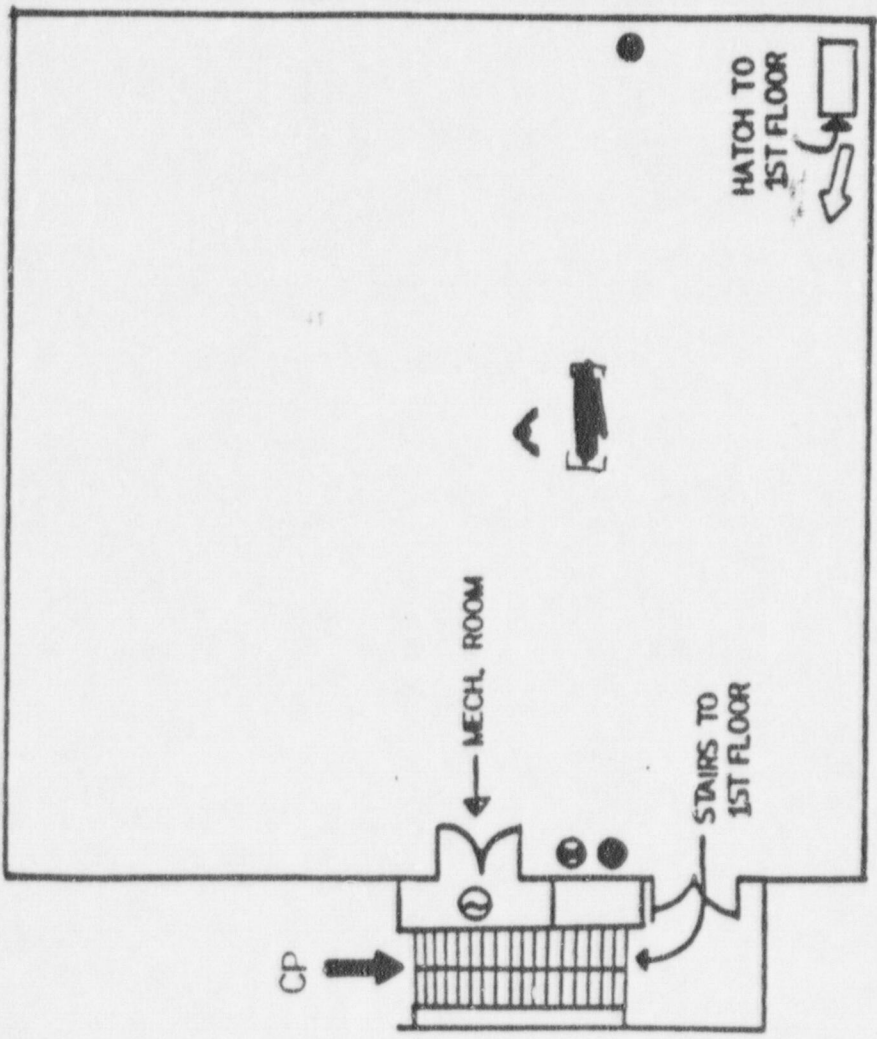
LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ NAZ. WASTE CHROMATES, ETC.
- ◊ H₂N, 35% NH₃
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISCELL./OTHER
- || FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ AMBULATORY PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO. HOSE ROLL
- ⊕ WHEELED DRY CHEM
- ⊕ SPARK TEST
- ⊕ PRE-ACTION
- ⊕ SPINKLER RISER
- ⊕ AUTO. SPINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND F
- ⊕ PWA VALVE
- ⊕ FIRE DEPT
- ⊕ HYDRANT - 1.5" USE OUTLET
- ⊕ HYDRANT - 2 HOSE W/PUMP
- ⊕ FIRE TMC Meter



500 KV YARD
CONTROL BUILDING
1ST FLOOR

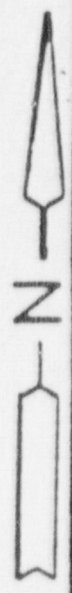
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LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂, 35% NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- (H) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL BATHING
- ⊕ AMBULCIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ P. CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDBY
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PIVA VALVE
- ⊕ FIRE DEPT. CONN.
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE
- ⊕ ELECTRIC MAIN
- ⊕ IMPER CONCL



500 KV YARD
CONTROL BUILDING
BASEMENT

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

TRANSMISSION YARDS - 230 KV YARD CONTROL BUILDING

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Cable Insulation
2. Type "A" combustibles
3. Transitory Combustibles

MOST PROBABLE FIRE:

1. Cable Insulation
2. Type "A" Combustibles
3. Transitory Combustibles

ACCESS AND EGRESS ROUTES

1. Primary - Via the eastern door
2. Secondary - via the northern door
3. Access to the basement is by two hatches; one at the south-east corner, the other at the north-west corner.

FIRE BRIGADE STAGING AREA:

1. At the south-east corner outside the building

HAZARDOUS MATERIALS:

1. Sulfuric Acid in batteries

MANAGEMENT OF PLANT SYSTEMS:

The electrical main is located to the south of the Control Building. A #909 key is required for access.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

N/A

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - Four 15# CO₂'s
2. A smoke detector read-out panel is located inside on the north wall of building.
3. There is no other fire protection/suppression equipment in the 230 kV yard or the Control Building.

VENTILATION:

1. Mechanical ventilation, portable smoke ejector will be required to exhaust smoke.
2. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

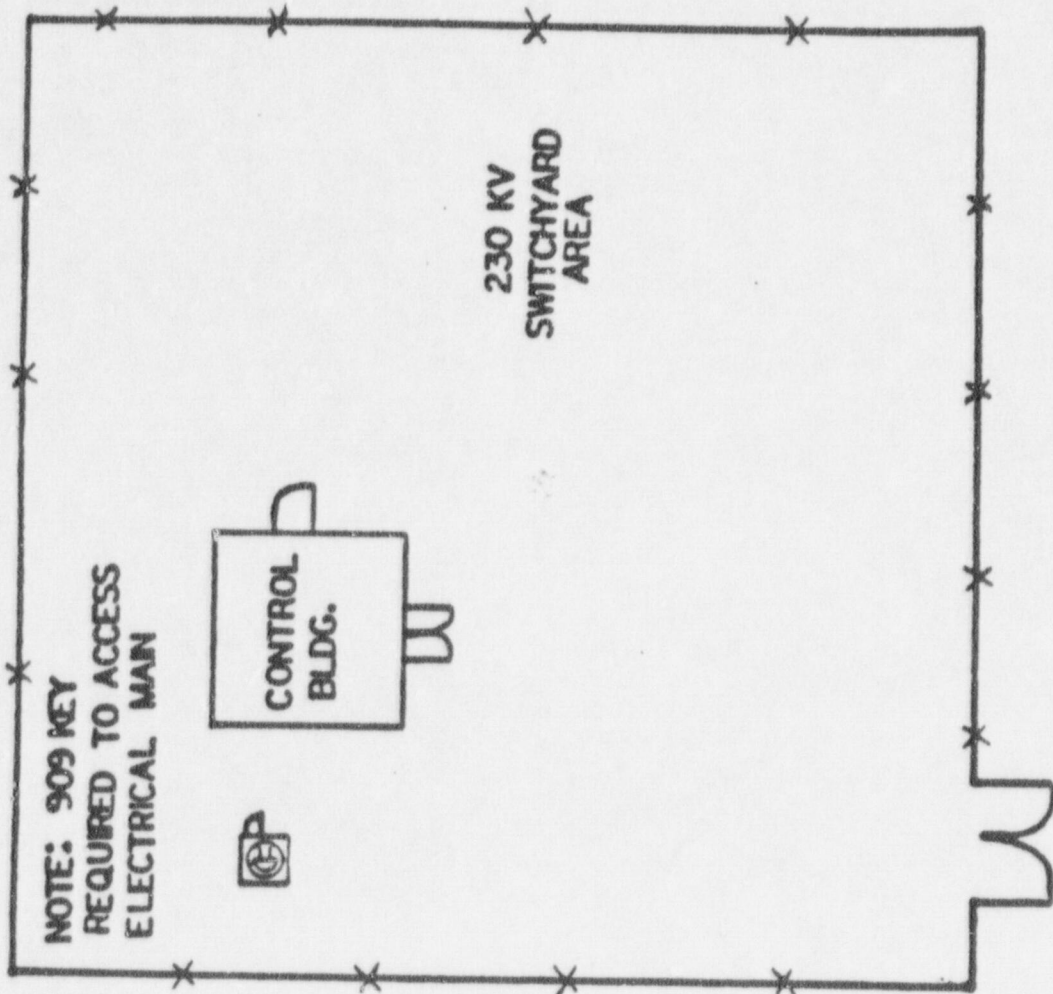
COMMUNICATIONS:

Via plant telephones [REDACTED]
Via Portable Radio (Ops Frequency [REDACTED])

LIGHTING: None

SAFETY EQUIPMENT:

An eyewash station is located inside on the west wall of the building.



NOTE: 909 KEY
REQUIRED TO ACCESS
ELECTRICAL MAIN

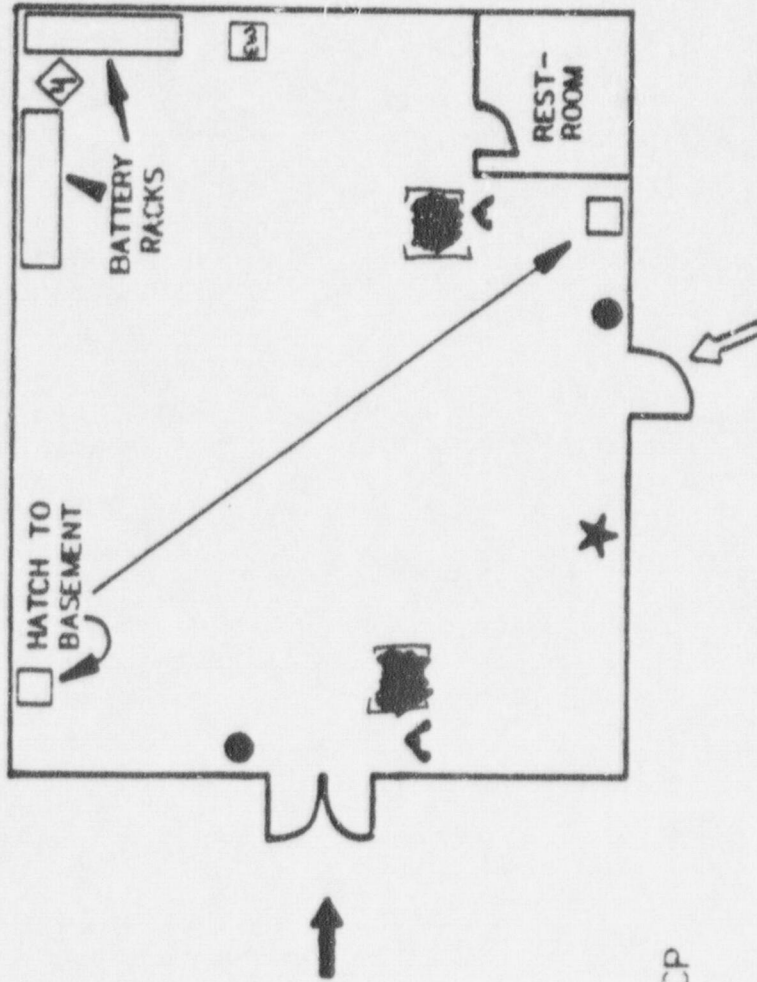
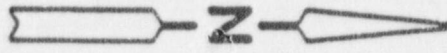


230 KV
SWITCHYARD
AREA

230 KV YARD



NOTE: 909 KEY
REQUIRED TO ACCESS
ELECTRICAL MAN



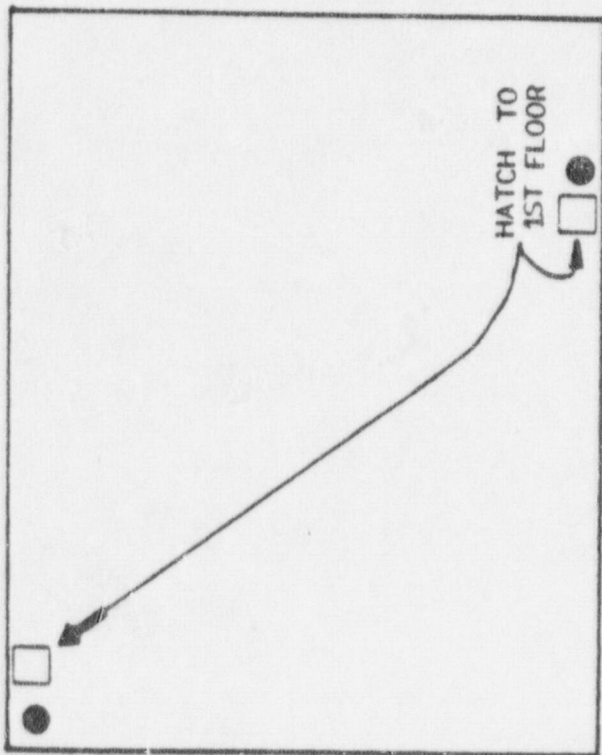
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230 KV YARD CONTROL BUILDING
1ST FLOOR

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHLORINATES, ETC.
- ◊ H₂A, 35% NH₃
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISC./OTHER
- (1) FIRST AID
- ⊠ EYE WASH
- ⊠ EYE WASH & SHOWER
- ⊠ TELEPHONE
- ⊠ COMMAND POST
- ⊠ PRIMARY ACCESS
- ⊠ SECONDARY ACCESS
- ⊠ EMERGENCY LIGHTS
- ⊠ FIRE WALL RATING
- ⊠ AMBULATORY PLANT
- ⊠ DRY CHEMICAL
- ⊠ CO₂
- ⊠ PRESSURIZED WATER
- ⊠ HALON
- ⊠ WATER HOSE REEL
- ⊠ CO₂ HOSE REEL
- ⊠ WHEELED DRY CEM
- ⊠ SPRINKLER RISER
- ⊠ AUTO. SPRINKLER
- ⊠ STAMPING
- ⊠ UNDERGROUND ISO VALVE
- ⊠ PWA VALVE
- ⊠ FIRE DEPT. COMPL.
- ⊠ HYDRANT-2 INCH
- ⊠ HYDRANT-2 IN PUMPER COMPL.

NS

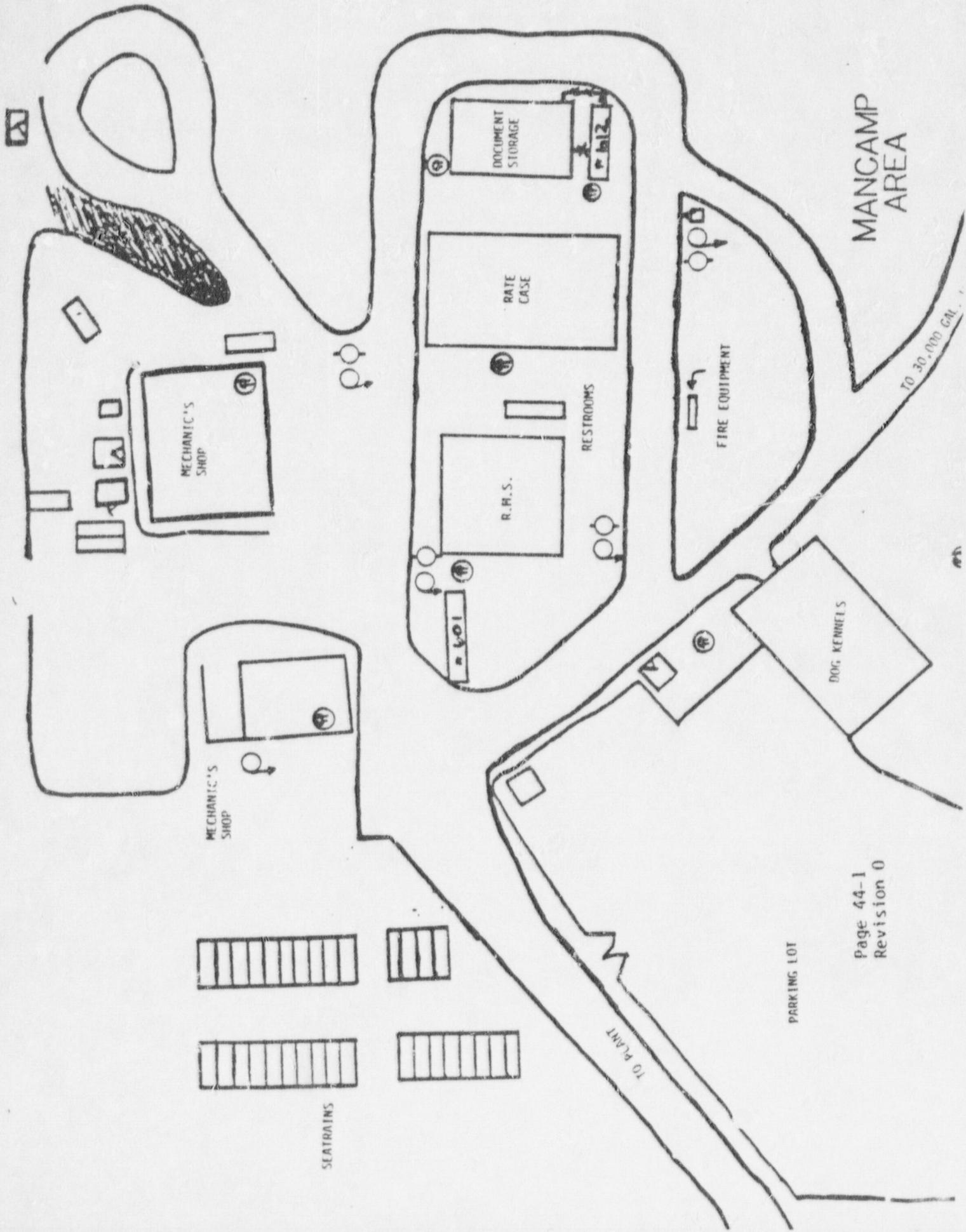


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LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHROMATES, ETC.
- ◊ M, H, 35% NH₃
- ◊ ACD
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ GASC./OTHER
- (+) FIRST AID
- ⊠ EYE WASH
- ⊠ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊠ COMMAND POST
- PRIMARY ACCESS
- ⇨ SECONDARY ACCESS
- △ EMERGENCY LIGHTS
- ⊠ FIRE WALL RATING
- ⊠ AMBULCIATOR PANEL
- ⊠ DRY CHEMICAL
- ⊠ CO₂
- ⊠ PRESSURIZED WATER
- ⊠ MALLOW
- ⊠ WATER HOSE REEL
- ⊠ CO₂ HOSE REEL
- ⊠ WHEELED DRY CHEM
- ⊠ PRE-ACTION
- ⊠ SPRINKLER RISER
- ⊠ AUTO. SPRINKLER
- ⊠ STANDPIPE
- ⊠ UNDERGROUND IS
- ⊠ PVA VALVE
- ⊠ FIRE DEPT.
- ⊠ HYDRANT-2 HOSE OUTLET
- ⊠ HYDRANT-2 HOSE W/PUMP
- ⊠ ELECTRIC MAIN

230 KV YARD CONTROL BUILDING
HATCHMENT



MANGCAMP
AREA

Page 44-1
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MECHANIC'S
SHOP

MECHANIC'S
SHOP

DOCUMENT
STORAGE

RATE
CASE

R.R.S.

RESTROOMS

FIRE
EQUIPMENT

DOG
KENNELS

SEATRAINS

PARKING
LOT

TO PLANT

TO 30,000 GAL.

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

MANCAMP - MECHANIC'S SHOP

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Transient Combustibles
2. Flammable Liquids (gasoline, diesel fuel, oil, etc.)
3. Grease
4. Type "A" Combustibles

MOST PROBABLE FIRE:

1. Flammable Liquids
2. Type "A" Combustibles
3. Transient Combustibles
4. Grease

ACCESS AND EGRESS ROUTES

1. Primary - Via the southern roll-up doors.
2. Secondary - Via the personnel doors to the west, to the north, or via the eastern roll-up door.

FIRE BRIGADE STAGING AREA:

1. Primary - to the south-west of the building

HAZARDOUS MATERIALS:

1. Oil
2. Gasoline
3. Diesel fuel
4. Misc. aerosol cans commonly used in a garage.
5. Battery Acid

MANAGEMENT OF PLANT SYSTEMS:

The electrical shut-off is located inside the building at the south-east corner.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

N/A

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - Two 20# MPDC's
2. A fire hydrant and hose station are located south of the building.
3. There is no other fire protection/suppression equipment in this building.

VENTILATION:

1. Natural ventilation via roll-up doors.
2. Mechanical ventilation, portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

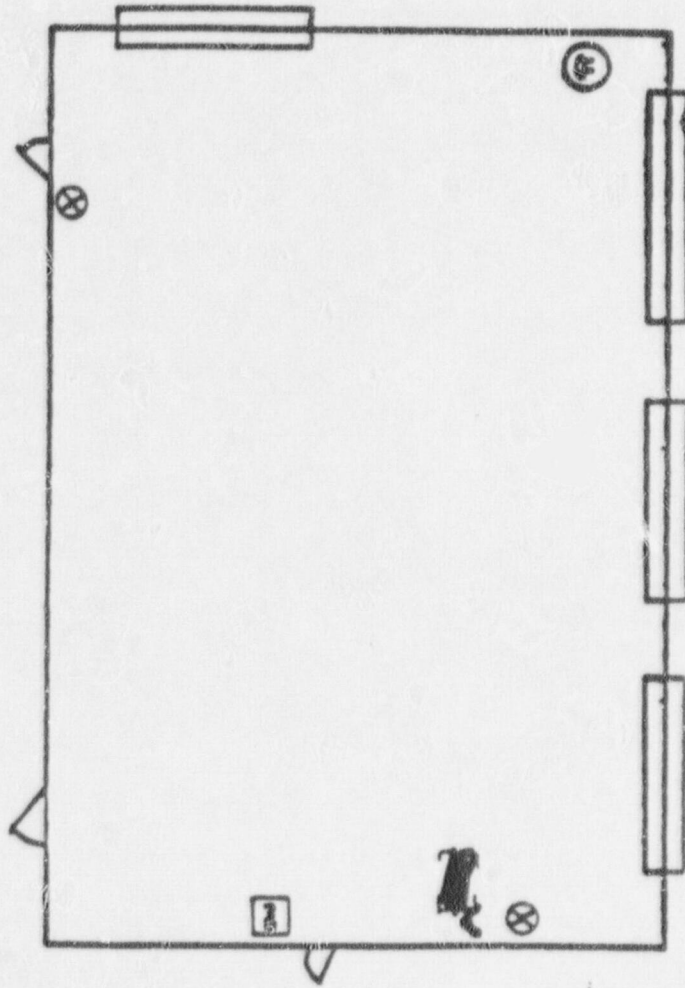
COMMUNICATIONS:

Via plant telephone [REDACTED]
Via Portable Radio (Ops Frequency [REDACTED])

LIGHTING: N/A

SAFETY EQUIPMENT:

An eyewash station is located inside on the west wall of the building.



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Revision 0

MECHANIC'S SHOP

LEGEND

- | | | |
|---|-----------------------------|-------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊙ DRY CHEMICAL | ⊙ SPRINKLER REGR |
| ⊕ HALZ. WASTE CHROMATE. ETC. | ⊙ CO ₂ | ⊙ AUTO. SPRINKLER |
| ⊕ NH ₃ , 35% NH ₃ | ⊙ PRESSURIZED WATER | ⊙ STAIRWELL |
| ⊕ ACID | ⊙ HALON | ⊙ UNDERGROUND ISO VALVE |
| ⊕ CAUSTIC | ⊙ WATER HOSE REEL | ⊕ SWA VALVE |
| ⊕ TOXIC GASES | ⊙ CO ₂ HOSE REEL | ⊕ FIRE DEPT. CONNECTION |
| ⊕ FLAMMABLE GASES | ⊕ WHEELED DRY CHEM | ⊕ HYDRANT-3 HOSE OUTLET |
| ⊕ MISC./OTHER | ⊕ FIRE WALL RATING | ⊕ HYDRANT-3 H |
| (H) FIRST AID | ⊕ AMBUCATER PANEL | ⊕ PUMPER COMB. |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

MANCAMP - DOCUMENT STORAGE BUILDING #013

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Stored Documents
2. Type "A" Combustibles
3. Transitory Combustibles

MOST PROBABLE FIRE:

1. Stored Documents
2. Type "A" Combustibles
3. Transitory Combustibles

ACCESS AND EGRESS ROUTES

1. Primary - Via the door to the south.
2. Secondary - Via the door to the north

FIRE BRIGADE STAGING AREA:

1. Primary - to the south-west of the building

HAZARDOUS MATERIALS:

1. Halon
2. Smoke, fumes, products of combustion

MANAGEMENT OF PLANT SYSTEMS:

The electrical shut-off is located outside of the building at the north-west corner.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

N/A

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - One 14# Halon
2. A total-flooding Halon system, both manually and automatically activated.
3. Hose reels and hydrants are located south-west of the building and north-west of the building.

VENTILATION:

1. Natural ventilation via opening personnel doors.
2. Mechanical ventilation, portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

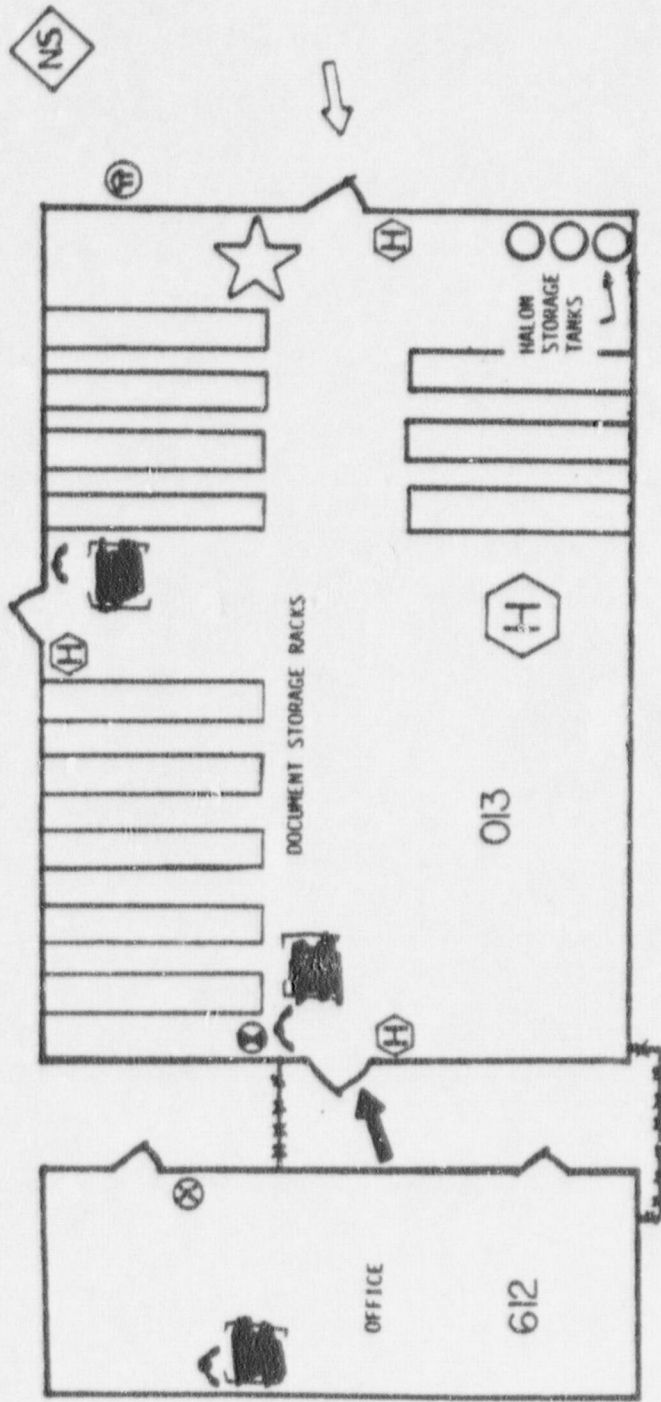
COMMUNICATIONS:

Via plant telephone [REDACTED]
Via Portable Radio (Ops Frequency [REDACTED])

LIGHTING: N/A

SAFETY EQUIPMENT:

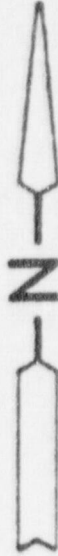
None



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LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ N/A, 35% NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MSC./OTHER
- (H) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL BARRIERS
- ⊕ ANNIHILATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER REEL
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND IS
- ⊕ PWA VALVE
- ⊕ FIRE DEPT. 1
- ⊕ HYDRANT-1 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE W/PUMP
- ⊕ ELECTRIC MAIN
- ⊕ PRE-ACTION



TRAILERS 013 + 612

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

NPG WAREHOUSE

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Class "A" Combustibles [wood, paper, etc.]
2. Transient Combustibles
3. Combustible Liquids [stored oil, etc.]

MOST PROBABLE FIRE:

1. Transient Combustibles
2. Class "A" Combustibles
3. Stored Materials

ACCESS AND EGRESS ROUTES

1. Primary - Via north entrance [stair #1]
2. Secondary - Via main warehouse entrance, on the west side of the building by stair #2.
3. Access to the roof via stairway #2.

FIRE BRIGADE STAGING AREA:

1. Primary - Outside elevator enclosure [140' E1.], at the north end of the warehouse.
2. Secondary - Outside the main warehouse entrance on the west side of the building by Stair #2.

HAZARDOUS MATERIALS:

1. Acid/Caustic is stored inside the Misc. Storage Room in south-west corner of the warehouse.
2. Flammable liquids are also stored in the Misc. Storage Room.
3. Acid is present inside batteries inside the Battery Charging Room at the extreme north-east corner of the Warehouse.

MANAGEMENT OF PLANT SYSTEMS:

1. There are 18 fire hose reels spaced throughout the warehouse.
2. There are six fire hydrants surrounding the warehouse. Three hydrants are located on the east side, three others are located on the west side of the warehouse. Each hydrant has its own underground shut-off valve.
3. Two PIVA valves, FP-0-1220 and FP-0-1221, are located west of the warehouse, one PIVA valve, FP-0-1219, is located north of the warehouse.

4. Four underground isolation valves are located on the outside perimeter of the warehouse. FP-0-1119 is on the east side. FP-0-1123, FP-0-1122, and FP-0-1118 are located on the west side.
5. The following valves, all located inside the warehouse, isolate the following systems:
 - FP-0-1126 controls portions of the sprinkler system.
 - FP-0-1128 controls the hose reel system.
 - FP-0-1120 controls the rack storage system.
 - FP-0-1132 controls the Pre-Action system protecting the environmental storage room.The above four valves are located at the north-east system riser. The entire riser can be isolated by PIVA FP-0-1219.
6. FP-0-1156 - controls the sprinkler system in the Misc. Storage Room and other areas on the southern end of the warehouse. It is located in the north-west corner of the Misc. Storage Room and can be isolated by PIVA FP-0-1220.
7. FP-0-1150 - Controls the balance of the sprinkler systems. It is located along the center of the west wall of the warehouse, and it can be isolated by PIVA FP-0-1221.
8. The High-Bay storage racks are protected by a rack storage system designed to prevent vertical fire spread. The main isolation valve is FP-0-1130, located at the north-east riser. In addition, each protected storage rack has its own isolation valve, located across the rack near the roof, approx. 40' off the floor. Access to these valves is very difficult.
9. Fire department connections are located on the north and west warehouse walls.
10. The controls for the roof fans are located in the main Electrical Room at the extreme northeast corner of the warehouse.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

N/A

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - 26 14# Halon. A fire extinguisher is located at each hose station, 8 extinguishers are located upstairs.
2. 18 Hose reel stations.
3. Sprinklers throughout the entire warehouse including a rack-storage sprinkler system, and a pre-action system.

VENTILATION:

1. Natural ventilation via roll-up doors.
2. Photoelectric smoke detectors are in the supply and return air systems of the air conditioning. The detectors are resettable at the temperature control panel on the exterior of the main duct.
3. Fire dampers are curtain type, 3-hour rated, with 165° fusible links.
4. Controls for roof exhaust fans are in the switchboard room (fire control room) located at the north-east corner of the warehouse.
5. Mechanical ventilation, portable smoke ejectors to exhaust the smoke.
6. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Telephones:

Main warehouse area:

- downstairs Reception Desk
 - Issue Counter
 - Electrical Room
 - Security Inspection
 - Multi-Purpose Room
 - Misc. Storage Room
2. Mezzanine (north)
- Secretary's Desk
3. Mezzanine (south)
- Secretary's Desk
4. Upper Elevation
- Secretary's Desk (south)
- Secretary's Desk (north)
5. The site fire and evacuation alarm system is located in the ground floor Main Electrical Room at the extreme north-east corner of the warehouse. Panel has P.A. system for the building.

SAFETY EQUIPMENT:

1. Eye-wash/shower stations are located in the Misc. Storage Room and outside the north-east corner of the warehouse.
2. An eye-wash station is located in the Battery Charging Room.
3. First aid kits are located under stair #5 and in the Misc. Storage Room by the double doors to the Acid Storage Room.

FH-25

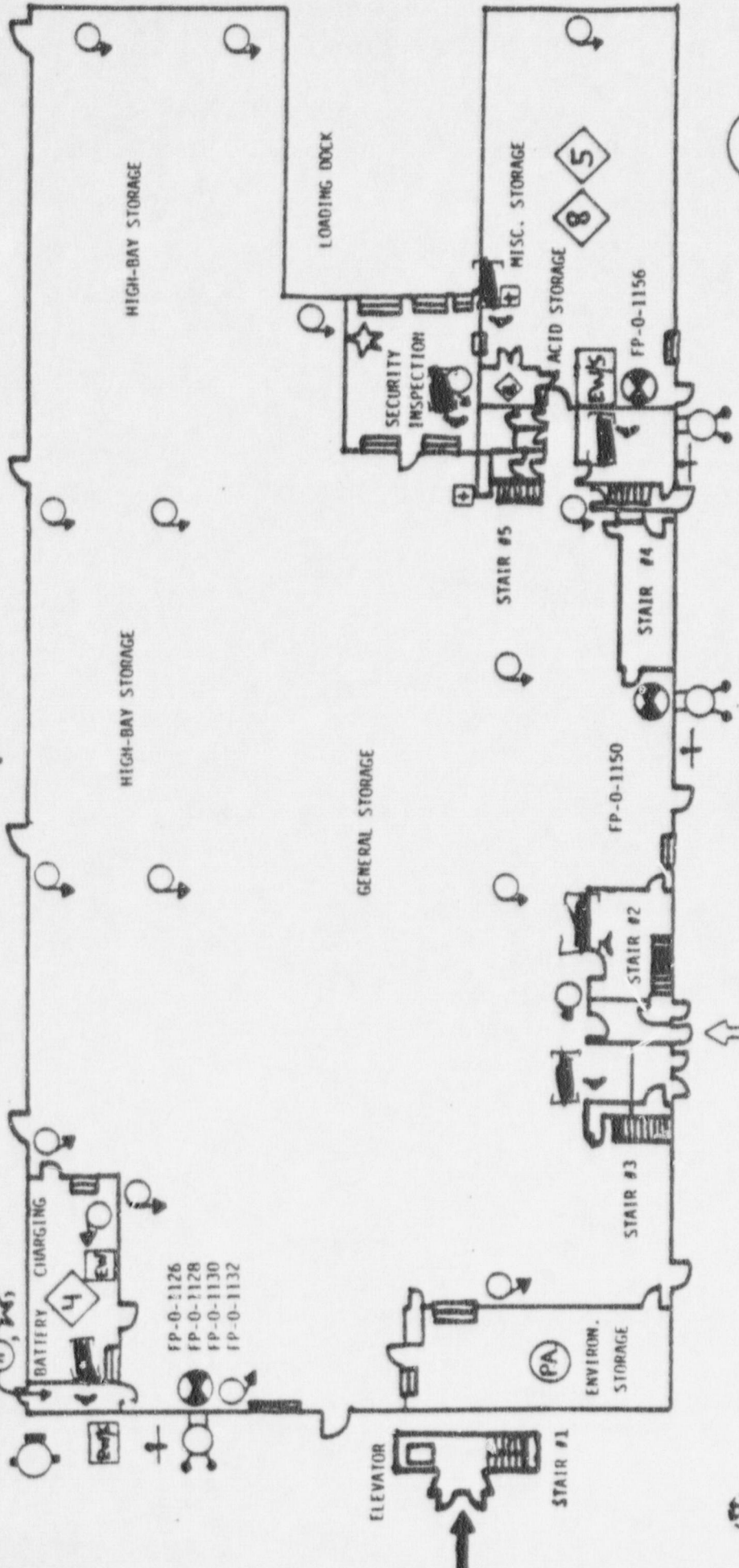
FH-26

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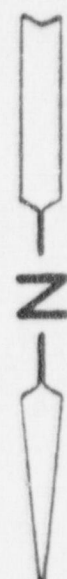
SITE EPER. ALARM PANELS



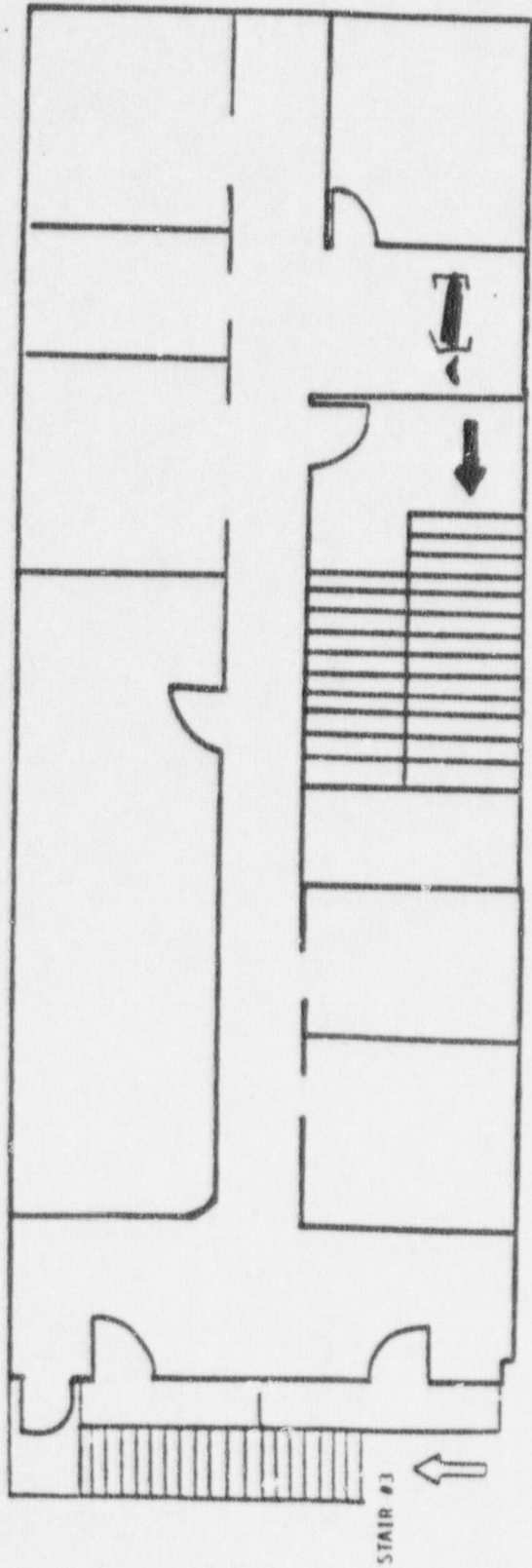
Page 45-4
Revision 0

LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ NH₃, 35% NH₃
- ⊕ ACID
- ⊕ CARBONIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- (-) FIRST AID
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ FIRE WALL RATING
- ⊕ AMBULATORY PANEL
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STAIRPIPE
- ⊕ UNDERGROUND GAS VALVE
- ⊕ PWA VALVE
- ⊕ FIRE DEPT. COMM.
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 NF
- ⊕ PLUMBER COMM.



NPG WAREHOUSE
GROUND FLOOR



AS

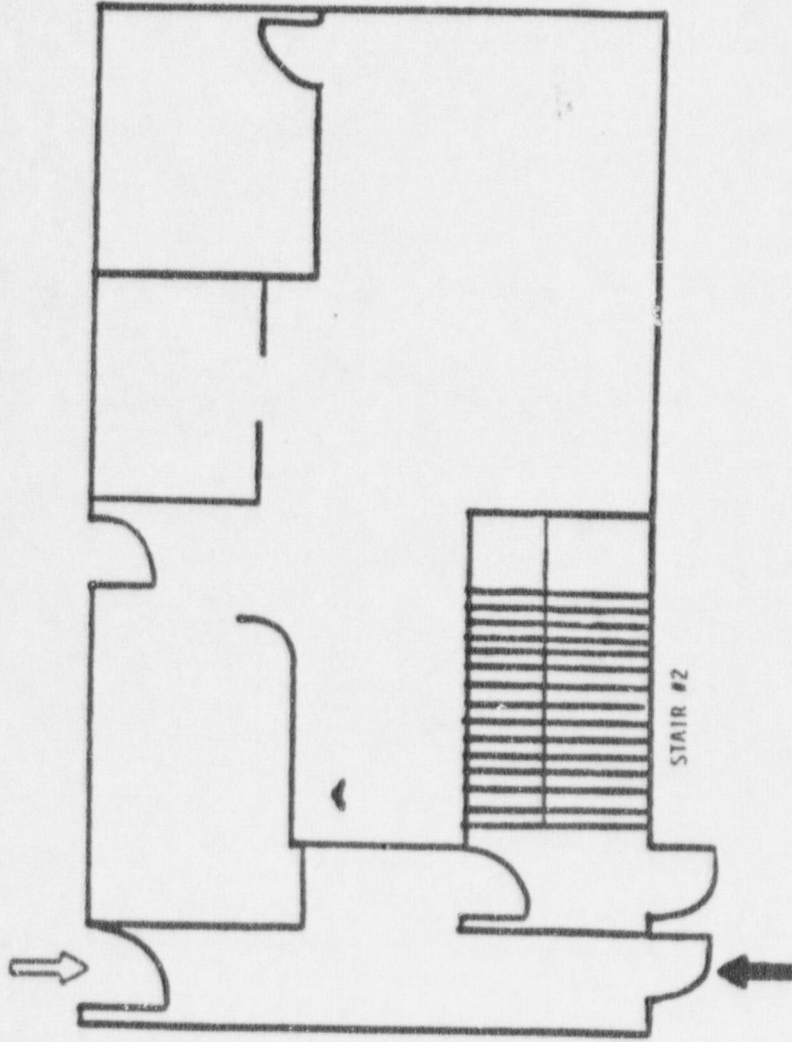
Page 45-5
Revision 0

LEGEND

- | | | |
|---|----------------------------------|------------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊙ DRY CHEMICAL | ⊙ SPRINKLER RISER |
| ② HAZ. WASTE CHROMATES, ETC. | ⊙ CO ₂ | ⊙ AUTO. SPRINKLER |
| ③ NH ₄ , 35% NH ₃ | ○ PRESSURIZED WATER | ⊙ STAIRPIPE |
| ④ ACP | ⊙ HALON | ⊙ UNDERGROUND 1" |
| ⑤ CAUSTIC | ⊙ WATER NOSE REEL | ⊙ PWA VALVE |
| ⑥ TOXIC GASES | ⊙ CO ₂ NOSE REEL | ⊙ FIRE DEPT. |
| ⑦ FLAMMABLE GASES | ⊙ WHEELED DRY CHEM | ⊙ HYDRANT-2 . . . USE OUTLET |
| ⑧ MSC./OTHER | ○ 1.5" HOSE 2 1/2" GPM @ 100 PSI | ⊙ HYDRANT-2 NOSE W/PUMP |
| (H) FIRST AID | ⊙ PRE-ACTION | ⊙ 1 1/2" TYP. MAIN |
| | ⊙ EYE WASH | |
| | ⊙ EYE WASH & SHOWER | |
| | ⊙ TELEPHONE | |
| | ⊙ COMMAND POST | |
| | ⊙ PRIMARY ACCESS | |
| | ⊙ SECONDARY ACCESS | |
| | ⊙ EMERGENCY LIGHTS | |
| | ⊙ FIRE WALL RATING | |
| | ⊙ AMBULIATOR PANEL | |

PLAN-MEZZANINE FLOOR OFFICES

EL. 151'-10 1/2"



AS

Page 45-6
Revision 0

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHROMATES, ETC.
- ◊ H₂A, 35% H₂S
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISC./OTHER
- (1) FIRST AID

- ⊞ EYE WASH
- ⊞ EYE WASH & SHOWER
- ⊞ TELEPHONE
- ⊞ COMMAND POST
- ⊞ PRIMARY ACCESS
- ⊞ SECONDARY ACCESS
- ⊞ EMERGENCY LIGHTS
- ⊞ FIRE WALL RATING
- ⊞ AIR INDICATOR PANEL

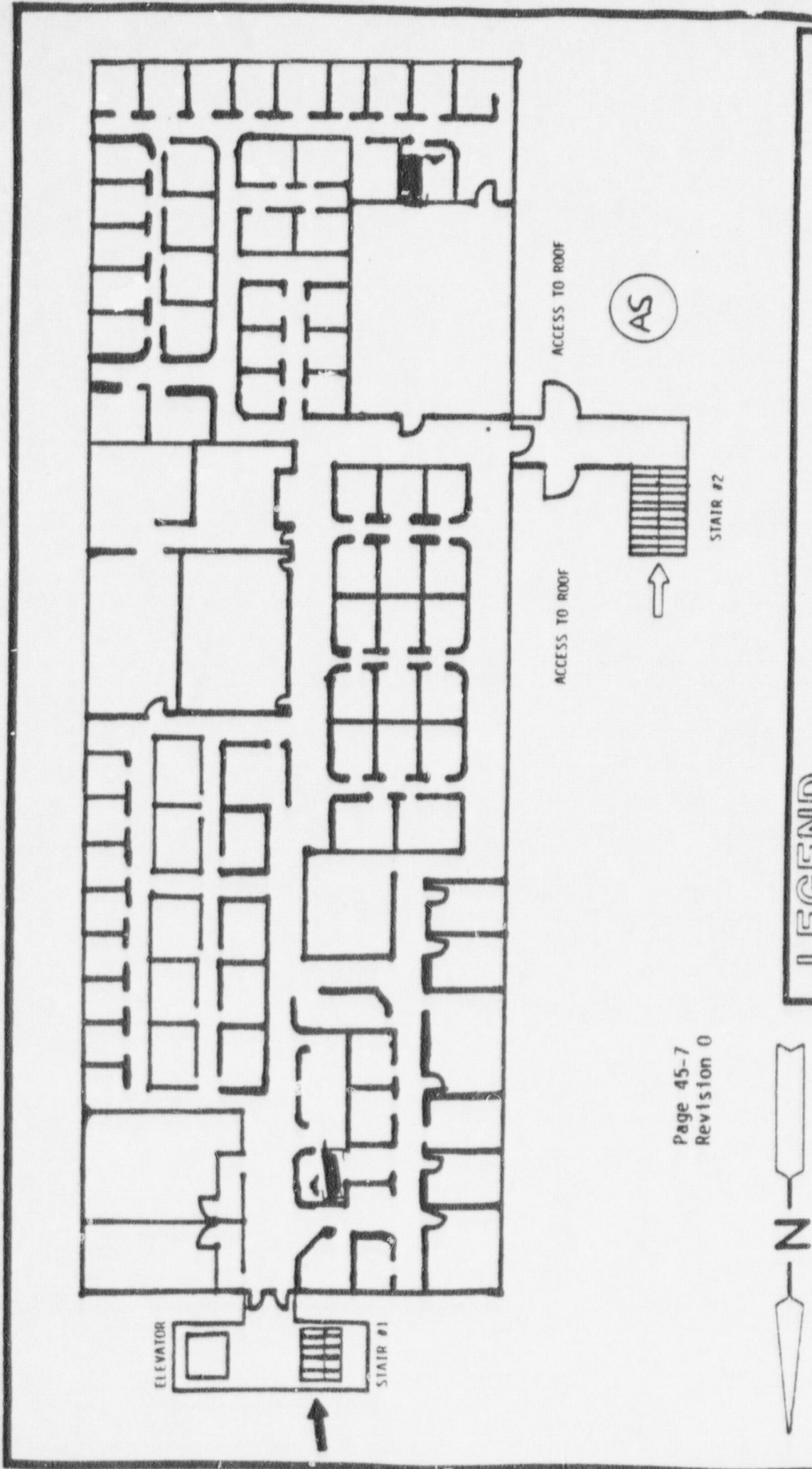
- ⊞ DRY CHEMICAL
- ⊞ CO₂
- ⊞ PRESSURIZED WATER
- ⊞ HALON
- ⊞ WATER HOSE REEL
- ⊞ CO₂ HOSE REEL
- ⊞ WHEELED DRY CHEM
- ⊞ AIR RATING
- ⊞ AIR INDICATOR PANEL

- ⊞ SPYGLASS REEL
- ⊞ AUTO. SPRINKLER
- ⊞ STAIRWAY
- ⊞ UNDERGROUND HO VALVE
- ⊞ PWA VALVE
- ⊞ FIRE SEPT. COMB.
- ⊞ HYDRANT-2 HOSE
- ⊞ HYDRANT-2 HOSE TLET
- ⊞ LUMBER COMB.

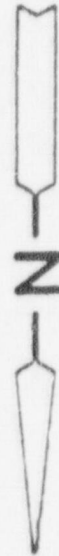


PLAN-GROUND FLOOR OFFICES

EL. 100'-0"



Page 45-7
Revision 0



NPG WAREHOUSE
UPPER ELEVATION

LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ NAZ. WASTE CHROMATES, ETC.
- ⊕ MJA, 35% NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MSC./OTHER
- H) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ AMBULIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PREPRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ P CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ 1/2" JACKETED
- ⊕ UNDERGROUND
- ⊕ PVA VALVE
- ⊕ FIRE DEPT
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE W/PUMP

12/86

PAGE 1 01

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

ATTACHMENT 3

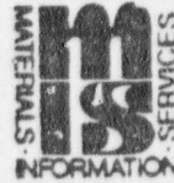
TITLE: FIRE FIGHTING PREPLANS - EP M-6

<u>UNIT #</u>	<u>PREPLAN TITLE</u>	<u>MSDS NO.</u>	<u>REV. DATE</u>
1 & 2	Diesel Fuel Oil No. 2-D	470	10/81
1 & 2	Hydrogen	65	05/80
1 & 2	Sulfuric Acid	5152	02/86
1 & 2	Boric Acid	4	03/83
1 & 2	Sodium Hydroxide	N3A	10/85
1 & 2	Anhydrous Ammonia	N1	08/85
1 & 2	Hydrazine Aqueous (35%)	127	06/84
1 & 2	Carbon Dioxide	54	06/87
1 & 2	Ethylamine	540	06/87
1 & 2	Halon 1301	79C 01260	06/87

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305



No. 470

DIESEL FUEL OIL NO.

Date October 1981

SECTION I. MATERIAL IDENTIFICATION			
MATERIAL NAME: DIESEL FUEL OIL NO. 2-D DESCRIPTION: Mixture of petroleum hydrocarbons; a distillate oil of low sulfur content OTHER DESIGNATIONS: ASTM D975, CAS # 068 476 346 MANUFACTURER: Available from many suppliers			
SECTION II. INGREDIENTS AND HAZARDS		%	HAZARD DATA
Diesel Fuel Oil No. 2-D Complex mixture of paraffinic, olefinic, naphthenic and aromatic hydrocarbons** Sulfur content Benzene*** *Current OSHA standard and ACGIH (1981) TLV **Diesel fuels tend to be low in aromatics and high in paraffinics. A min. Cetane No. of 40 is required (ASTM D613). ***A low benzene level reduces carcinogenic risk. Fuel oils can be exempted under the benzene standard (29 CFR 1910.1028)		>95 <0.5 <100 ppm	8-hr TWA 5mg/m ³ * (mineral oil mist)
SECTION III. PHYSICAL DATA			
Boiling point range, deg F, -----	Ca 340-675	Specific gravity (H ₂ O=1) -----	<0.86
Solubility in water -----	negligible	Cloud point (wax), deg C ---	Ca 0
Viscosity at 40 C, cSt -----	1.9-4.1		
Appearance and Odor: Clear, bright liquid with a mild petroleum odor.			
SECTION IV. FIRE AND EXPLOSION DATA			LOWER UPPER
Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	
125F min (PM)	>500F	% by volume	0.6 7.5
Extinguishing Media: Dry chemical, carbon dioxide, foam, water spray. Use a water spray to cool fire exposed containers. Use a smothering technique for extinguishing fire of this combustible liquid. Do not use a forced water stream directly on oil fire as this will only scatter the fire. Material is a OSHA Class II combustible liquid. Firefighters should wear self-contained breathing apparatus and full protective clothing.			
SECTION V. REACTIVITY DATA			
This is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not undergo hazardous polymerization. Incompatible with strong oxidizing agents; heating greatly increases fire hazard. Thermal oxidative degradation may yield various hydrocarbons and hydrocarbon derivatives (partial oxidation products), CO ₂ and CO and SO ₂ .			

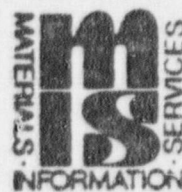
MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085

DIAL COM: 8*235-4085



No. 65

HYDROGEN GAS

Date May 1980

SECTION I. MATERIAL IDENTIFICATION				
<p>MATERIAL NAME: HYDROGEN GAS DESCRIPTION: Supplied as compressed gas in cylinders (2000 psig). OTHER DESIGNATIONS: H₂, CAS #001 333 740, GE Material D27A5 MANUFACTURERS: Available from several suppliers, including: AIRCO, Inc. Union Carbide Corp. Industrial Gases Div. Linde Corp. 575 Mountain Avenue 270 Park Ave, New York, NY 10017 Murray Hill, NJ 07974 (212) 551-3763 (201) 464-8100</p>				
SECTION II. INGREDIENTS AND HAZARDS		%	HAZARD DATA	
Hydrogen Gas		>99.9	Simple Asphyxiant*	
<p>*The "TLV" for a simple asphyxiant gas (ACGIH, 1979) is a minimal oxygen content of 18% by volume under normal atmospheric pressure.</p>				
SECTION III. PHYSICAL DATA				
Boiling point, 760 mm Hg, deg C --	-252.7	Density, liquid, at -253 C, g/cc --	0.07	
Melting point, deg C -----	-259.2	Viscosity, at 15 C, atm, cps -----	0.008	
Specific gravity (Air=1) -----	0.069	Critical temperature, deg C -----	-239.9	
Solubility in water at 60 F, 1 atm,		Critical pressure, atm -----	12.8	
vol/vol H ₂ O -----	0.019	Molecular weight -----	2.02	
Appearance & Odor: Colorless, tasteless, odorless gas.				
SECTION IV. FIRE AND EXPLOSION DATA			LOWER	UPPER
Flash Point and Method	Autoignition Temp.	Flammability Limits in Air		
N/A Caseous material	1075 F (580 C)	% by Volume	4	75
<p>Because of danger of re-ignition and possible explosion, hydrogen fire should not usually be extinguished until surroundings have been cooled and the supply of hydrogen has been controlled and can be shut off. When possible, in a pipe line fire for example, gradually reduce the H₂ flow to a small jet. Do not stop flow completely before inert gas or steam system has been activated to control flashback. Fires at cylinders or storage tanks should be allowed to burn until nearly empty before closing off, keeping the containers & surroundings as cool as possible with water sprays. When necessary small hydrogen fires can be extinguished with carbon dioxide, dry chemical, or halogenated gas.</p>				
SECTION V. REACTIVITY DATA				
<p>Hydrogen is a stable material in closed containers at room temperature. It does not polymerize. It will react vigorously or explosively with many oxidizing agents. A mixture of flammable hydrogen gas and air is stable in the absence of catalysts until an ignition source is supplied. (An electric spark with energy of as little as 0.017 mJ can be sufficient.) Mixture with air can burn with a very hot nonluminous flame (difficult to see), or it can explode.</p> <p>Hydrogen/chlorine mixtures in the dark are stable, but explode if exposed to light. Fluorine reacts with hydrogen at -250 C when impurities are present in the mixture. Hydrogen/oxygen mixture with a platinum catalyst will explode. Lithium metal will burn in a hydrogen atmosphere to form the hydride. Hydrogen can interact with some metals (i.e., hardened steels) to cause embrittlement.</p>				

"FOR INTERNAL USE ONLY"

MATERIAL SAFETY DATA SHEET



MANUFACTURING DIV ADDRESS

MOBAY CHEMICAL CORPORATION
 AGRICULTURAL CHEMICALS DIVISION
 P.O. Box 4913, 8400 Hawthorn Road
 Kansas City, Missouri 64120

DATA SHEET

5152

DIVISION

8 CHEM

ISSUE DATE

8/83

ISSUED BY

SUPERSEDES

870

ISSUE OF

CHEMTRAC CHEMICAL TRANSPORTATION EMERGENCY TELEPHONE NO: 800-424-9080; DISTRICT OF COLUMBIA 202-462-7918		MOBAY NON-TRANSPORTATION EMERGENCY NO: (816) 242-2582	
PRODUCT NAME Sulfuric Acid (93%)		PRODUCT CODE NUMBER Formula No. 101019	
CHEMICAL FAMILY Acid	CHEMICAL NAME & SYNONYMS Sulfuric acid		
CHEMICAL FORMULA H ₂ SO ₄	TRADE NAME & SYNONYMS Oil of vitriol CAS No. 7664-93-9		

HAZARDOUS INGREDIENTS

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES	%	CURRENT %

PHYSICAL DATA

APPEARANCE (SOLID LIQUID GAS) Liquid	MOLECULAR WEIGHT 98.08	MELT POINT -29° F	SPECIFIC GRAVITY 1.84 @ 15.6° C
VAPOR DENSITY (AIR = 1) NE	COLOR Colorless to dark brown	BULK DENSITY NA	BOILING POINT 330° C
VAPOR PRESSURE 1 mm @ 145° C	SOLUBILITY (WATER) Totally miscible	ODOR None	% VOLATILE BY VOLUME 100%

FIRE & EXPLOSION DATA

FLASH POINT (METHOD USED) NA	FLAMMABLE LIMIT Lel NA Uel	EXTINGUISHING MEDIA
---------------------------------	-------------------------------	---------------------

SPECIAL FIRE FIGHTING PROCEDURES, UNUSUAL FIRE OR EXPLOSION HAZARDS

Hydrogen can form when in contact with metal; emits toxic vapors when heated.

Wear self-contained breathing equipment.

TOXICITY DATA

LD50 ORAL (INGESTION) Rat: 2,140 mg/kg	LD50 DERMAL (SKIN CONTACT) NE	INHALATION (LD50) Guinea pig: 0.018 mg/l
FISH (LD50) (LETHAL CONCENTRATION) NE	TLV (UNITS) (THRESHOLD LIMIT VALUE) 1 mg/m ³	SKIN IRRITATION Corrosive
EFFECTS TO EYE Corrosive	EFFECTS TO LUNG Irritant	OTHER Human lethal dose: 135 - 200 g

EMERGENCY AND FIRST AID PROCEDURES, EFFECTS OF OVER EXPOSURE

Remove contaminated clothing and flush eyes and skin for 20 minutes. Wash skin with soap and water. Symptoms of overexposure are eye, skin, respiratory tract burns or irritation and pulmonary edema. Consult physician.

REACTIVITY DATA Formula No. 101019

STABILITY Stable	CONDITIONS TO AVOID
POLYMERIZATION None	CONDITIONS TO AVOID
INCOMPATIBILITY (MATERIALS TO AVOID) Bases, water, alcohols, metals	
HAZARDOUS DECOMPOSITION PRODUCTS	

SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Contain spilled material and recover as much as possible. Cover contaminated area with sodium bicarbonate or 50/50 mixture of slaked lime/soda ash. Add water continuously to form slurry. Rinse with water.
WASTE DISPOSAL METHOD Neutralize as above.

SPECIAL PROTECTION DATA

RESPIRATOR TYPE NIOSH-approved chemical cartridge or full face respirator with acid gas cartridges or cannister. Self contained breathing equipment if large spill.	
EYE PROTECTION I Splash proof goggles or full face respirator	GLOVES Rubber
OTHER PROTECTIVE EQUIPMENT Face shield, rubber aprons and boots.	

SPECIAL PRECAUTIONS & STORAGE DATA

STORAGE TEMPERATURE (OPTIMUM) Min. Max.	AVERAGE SHELF LIFE
SPECIAL SENSITIVITY (HEAT LIGHT MOISTURE)	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	

SHIPPING DATA

DOT SHIPPING NAME For internal use only		TECHNICAL SHIPPING NAME	
DOT HAZARD CLASSIFICATION	UN NA NO	RD	
DOT LABELS REQUIRED	LABEL	TSCA STATUS	
REASON FOR ISSUE Revision	FRT CLASS BLK FRT CLASS PKG		
INITIATED BY Larry R. Thompson, Industrial Hygienist	TITLE	APPROVED BY Wm. J. Brinkman, Industrial Hygiene Manager	TITLE
DATE INITIATED September 15, 1983	<i>Larry Thompson</i>	DATE APPROVED September 15, 1983	<i>W.J. Brinkman</i>

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
120 ERIE BOULEVARD
SCHENECTADY, N.Y. 12305



NO. 4

BORIC ACID

Revision B

DATE March 1983

SECTION I. MATERIAL IDENTIFICATION		
MATERIAL NAME BORIC ACID OTHER DESIGNATIONS: Orthoboric Acid, Boracic Acid, Hydrogen Borate, H_3BO_3 , GE Material D4A6, CAS 9010 043 353 MANUFACTURER: Available from several suppliers, including: Kerr-McGee Chem. Corp. Ashland Chem. Co. U.S. Borax & Chem. Co. Kerr-McGee Center P.O. Box 2219 3075 Wilshire Blvd. Oklahoma City, OK 73125 Columbus, OH 43216 Los Angeles, CA 90010		
SECTION II. INGREDIENTS AND HAZARDS		HAZARD DATA
Boric Acid	ca 100	No TLV Established* Infant, Oral <u>LDLo 934 mg/kg</u> Man, Inhalation TCLo 22 mg/m ³ (10-yr intermittent) Toxic glandular effects Rat, Oral LD50 2660 mg/kg
*Control as a Nuisance Particulate has been recommended: 10 mg/m ³ total dust, or 5 mg/m ³ respirable dust. Animal studies (dog and rat) have shown infertility and damage to testes can result from acute or chronic ingestion of boric acid. Evidence on reproductive toxic effects in humans is inadequate.		
SECTION III. PHYSICAL DATA		
Vapor pressure, 21C, mm Hg --- 15 (due to water)	Specific gravity, 20/4C ----- 1.435	
Solubility in water, g/100g @ 0C ----- 2.6	pH @ 20C, 1% aqueous soln --- ca 5.2	
@ 20C ----- 4.9	4% aqueous soln ---- ca 3.9	
@ 100C ----- 28	Molecular weight ----- 61.84	
Melting point, deg C ----- 170-180		
Appearance & Odor: Colorless crystals or a fine or granular white powder. No odor.		
SECTION IV. FIRE AND EXPLOSION DATA		
Fresh Point and Method	Autoignition Temp	Flammability Limits in Air
Non-combustible		
Extinguishing media: Use that which is most appropriate for the surrounding fire. Boric acid does not support combustion and is non-combustible. Material decomposes on heating, giving off water (see Sect V); used as fire retardant.		
SECTION V. REACTIVITY DATA		
This is a stable material in closed containers at room temperature under normal storage and handling conditions. It does not polymerize. A weak acid. Loses chemically combined water upon heating, forming metaboric acid (HBO_2) at 100-105C, then pyroboric acid ($H_2B_4O_7$) at 140-140C, and at higher temperatures, boric anhydride (B_2O_3). Reacts with basic materials such as alkali carbonates and hydroxides to form borate salts. A mixture of potassium and boric acid may explode on impact. Mixture with acetic anhydride can react violently when heated to 58-60C. If moisture is present boric acid can be corrosive to iron.		

MATERIAL SAFETY DATA SHEET

GENTUM PUBLISHING CORPORATION

1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 377-8854



MSDS # N 3-
SODIUM HYDROX.
50% LIQUID
Revision A
Issued: October, 19
Revised: August, 1985

From Gentum's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

MATERIAL NAME: SODIUM HYDROXIDE, 50% LIQUID
OTHER DESIGNATIONS: Liquid caustic soda, lye solution, CAS #1310-73-2 (NaOH).
MANUFACTURER: Available from many sources including:
 Diamond Shamrock Co., Chlor-Alkali Div.
 351 Phelps Court, Box 152300
 Irving, TX 75015-2300
 (800) 241-3134



SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
SODIUM HYDROXIDE (NaOH)	>48.5	Ceiling Limit: 2 mg/m ³ *
TYPICAL IMPURITIES:		
Carbonate (as Na ₂ CO ₃)	<0.25	1% NaOH Soln
Chloride (as NaCl)	<1.15	Eye, rabbit: Severe irritation
Chlorate (as NaClO ₃)	<0.25	
Sulfate (as Na ₂ SO ₄)	<0.03	
Silica (as SiO ₂)	<0.01	
Water	balance	
* Current (1985-86) ACGIH TLV. Current OSHA PEL is 2.0 mg/m ³ averaged over 8 hours.		

SECTION 3. PHYSICAL DATA

Boiling point, 1 atm ca 140°C
 Volatiles (water) 50%
 Water Solubility complete
 Viscosity @ 20°C, cps ... 50

Specific gravity, 60/60°F ... 1.53
 Density, lbs/gal 12.76

APPEARANCE & ODOR: Clear liquid - No odor.

DESCRIPTION: A 50% solution of sodium hydroxide (NaOH) in water.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
			N/A	N/A
None - not combustible	N/A	N/A	N/A	N/A

EXTINGUISHING MEDIA:
 Use extinguishing agents suitable for the surrounding fire. Use water spray to cool containers of this material which are involved in a fire situation to help prevent rupture.
 Sodium hydroxide will react with metals such as aluminum, tin, and zinc to generate flammable and explosive hydrogen gas.

Firefighters should wear self contained breathing apparatus and full protective gear to prevent contact with this corrosive material.

SECTION 5. REACTIVITY DATA

This material is stable under normal storage conditions in sealed containers. Polymerization will not occur. There are no hazardous decomposition products. It reacts with CO₂ in the air to form sodium carbonate. It reacts violently with acids accompanied by heat generation and with many organic chemicals, especially nitrocarbons and halocarbons. It can react with trichloroethylene to form spontaneously flammable dichloroacetylene.

Avoid contact with leather and wool. Contact with aluminum, tin, magnesium, zinc, and alloys that contain these metals causes the formation of hydrogen gas (MSDS #6S) (Flammable).

SECTION 6. HEALTH HAZARD INFORMATIONTLV Ceiling Unit: 2 mg/m³

Sodium Hydroxide is a strong alkali and is dangerous when improperly handled. It is destructive to all human tissue it contacts, producing severe burns. Eye contact causes severe, permanent injury. Skin contact causes irritation and, if not removed immediately, severe burns with scarring. The effects of inhalation of the mist varies from mild irritation to destructive burns. Pneumonitis may occur. Ingestion causes severe burns of the mouth, throat and stomach and may be fatal.

FIRST AID: Wash eyes immediately with plenty of running water for at least 15 minutes, including under eyelids and all surfaces. Speed in rinsing eyes with water is important if permanent injury is to be avoided. Get medical help immediately. **SKIN CONTACT:** Flush exposed area promptly with large quantities of water. Remove contaminated clothes while washing. Prolong washing in serious cases until medical help arrives. Get medical attention for serious exposure. **INGESTION:** Immediately give person large quantities of water or milk to drink. (Never give anything by mouth to an unconscious person). Do not induce vomiting. Obtain medical assistance immediately. **INHALATION:** Remove from exposure to mist and get prompt medical help. (Paramedic, Inplant, community).

SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES

Planning ahead is essential for handling spills. Clean-up personnel should wear protective equipment to prevent skin and eye contact. Pick-up spill with vacuum equipment (alkali resistant) for disposal or flush to holding area with water. Neutralize residue with dilute acid and rinse with water.

DISPOSAL: Waste caustic must never be discharged directly to sewers, drains or surface waters. Dilute well with water and carefully neutralize with acid. Follow all applicable federal, state and local regulations.

EPA HAZARDOUS WASTE NUMBER: D002, corrosive (soln @ pH >12.5)-40CFR 261.22

REPORTABLE SPILL QUANTITY: 1000 lbs (40CFR117)

SECTION 8. SPECIAL PROTECTION INFORMATION

Provide adequate general ventilation and exhaust ventilation to meet TLV requirement, especially where the possibility of mist formation exists. Use a NIOSH-approved respirator with full face covering for mist, where needed. Use chemical safety goggles. A plastic faceshield, in addition to safety goggles, should be worn if splashing is probable. Use rubber gloves, apron or protective clothing and rubber boots where needed to prevent contact with sodium hydroxide solution.

Eyewash stations and safety showers must be immediately available.

THIS MATERIAL POSES A SPECIAL HAZARD TO CONTACT LENSES WEARERS; the slippery nature of this solution would make it extremely difficult to remove the contact lenses. Critical rinsing of the contaminated eye would be delayed.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store in well-sealed containers. Protect containers from physical damage. Avoid handling conditions which can lead to spills or mist formation. Have abundant water (preferably running water) available where material is stored, unloaded, and handled for emergency use. Drains servicing areas where this material is stored or used should have retention basins for pH adjustment and dilution of spills and flushings before discharge. Workers handling this material should be trained in proper handling precautions and emergency procedures, with proper protective equipment nearby.

DOT HAZARD CLASSIFICATION: Corrosive Material

DOT LABEL: Corrosive

DOT ID NUMBER: UN1824

DATA SOURCE(S) CODE (See Glossary) 2, 4, 9, 11, 12, 27, 55, 58.V.

Judgements as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, Genium Publishing Corporation assumes no responsibility, makes no representations and assumes no liability as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS

D. Accrocco, 11/85

INDUST. HYGIENE/SAFETY

D. W. 11/85

MEDICAL REVIEW:

S. P. Dec 85

MATERIAL SAFETY DATA SHEET

GENTUM PUBLISHING CORPORATION

1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 377-8854



MSDS # _____
 ANHYDROUS _____
 Revision _____
 Issued: _____
 Revised: August, _____

From Gentium's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

17

MATERIAL NAME: ANHYDROUS AMMONIA
OTHER DESIGNATIONS: NH₃, Ammonia Gas, CAS #7664-41-7.
MANUFACTURER: Available from many suppliers/manufacturers including:
 Dow Chemicals USA, Inorganic Chem. Dept.
 2020 Dow Center
 Midland, MI 48640
 (517) 636-1000



SECTION 2. INGREDIENTS AND HAZARDS

AMMONIA, ANHYDROUS

%	HAZARD DATA
>99.5	8 hr TWA, 25 ppm* (18 mg/m ³) 8 hr TWA, 50 ppm** (35 mg/m ³) ----- Human, inhalation: TCLo: 20 ppm, irritation Human, inhalation: LCLo: 30 000 ppm/5 min. Rat, inhalation: LCLo: 2000 ppm/4 hr.

- * Current (1985-86) ACGIH TLV with STEL of 35 ppm.
- ** Current OSHA PEL.

NIOSH has recommended a 50 ppm ceiling limit (5 minute sampling period).

DESCRIPTION: Liquid or gas depending on temperature and pressure conditions. Supplied pressurized in cylinders or tanks.

SECTION 3. PHYSICAL DATA

Boiling point, 1 ATM -33.4°C (-28°F)	Specific gravity, 60/60°F ... 0.62
Vapor pressure @ 60°F, mmHg ... 4800	Volatiles, % ca 100
Vapor density (Air=1) 0.6	pH of 1% water soln 11.7
Solubility in water, g/100 cc:	Melting point, °C (F) 77.7 (-108)
@ 0°C 89.9	Molecular weight 17.04
@ 100°C 7.4	

APPEARANCE & ODOR: Colorless liquid or gas (depending on temperature and pressure) with strong pungent odor. Odor is detectable at 5ppm; irritating at 25-50 ppm. Odor provides a warning of hazard.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp	Flammability Limits in Air	Lower	Upper
Gas at room temperature	1204°F/651°C*	% by volume	16	25

Extinguishing Media: Water spray or fog.

Stop flow of gas. Use water to keep fire exposed containers cool and protect personnel affecting shut-off (water reduces gas concentration due to solubility). It is a moderate fire and explosion hazard when exposed to heat and/or flame. The presence of oil or other combustible materials will increase the fire hazard. If gas is leaking or tanks are heavily exposed to heat, evacuate the area and the area downwind. Tanks should be equipped with appropriate pressure relief devices. Violent rupture can occur if relief valves fail. Stay clear of tank heads. Firefighters should wear positive pressure self-contained breathing apparatus with full facepiece & full protective clothing. * Iron catalyzed - 850°C/1562°F uncatalyzed.

SECTION 5. REACTIVITY DATA

Contained anhydrous ammonia is stable at room temperature. Decomposition to H₂ (flammable!) and N₂ begins above 450°C (840°F). It is an alkaline gas and reacts with acids with heat evolution. Contact of NH₃ with chemicals such as mercury, chlorine, iodine, bromine, silver oxide, and hypochlorites can form explosive compounds. Contact with chlorine or chlorine bleach can cause the evolution of hazardous chloramine gas. DO NOT USE copper, brass, bronze or galvanized steel in contact with ammonia. Welded joints are preferred to threaded joints in ammonia service. Do not use brazed joints. Iron and steel construction is preferred. Piping should be of rigid steel. Anhydrous ammonia does not polymerize.

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
120 ERIE BOULEVARD
SCHENECTADY, N.Y. 12305



NO. 127

HYDRAZINE, AQUEOUS
(35-64%)

DATE June 1984

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: HYDRAZINE, AQUEOUS (35-64%)
OTHER DESIGNATIONS: Hydrazine Hydrate, or Monohydrate, $\text{NH}_2\text{NH}_2\cdot\text{H}_2\text{O}$, CAS #007 803 578;
64.0% max, 54.4%, and 35% min Hydrazine in water; SCAV-6X (Trade name)
MANUFACTURER: Available from several suppliers, including:
Olin Chemicals
120 Long Ridge Road
Stamford, CT 06904 Telephone: (203) 356-2473

SECTION II. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Hydrazine (CAS #000 302 012) (MSDS #126)	64.0	8-hr TWA 0.1 ppm or 0.1 mg/m ³ (skin)*
Water	Bal.	--
*ACGIH TLV (1983); suspected to have carcinogenic potential for man. OSHA PEL is 1 ppm or 1.3 mg/m ³ . NIOSH (1978) recommended a ceiling level of 0.03 ppm or 0.04 mg/m ³ , determined by any 2-hr sample. Hydrazine and salts are carcinogenic in mouse and rat tests. IARC, Vol 4, pp. 127-136 (1974). Possible fetal malformation with hydrazine exposure reported in animal tests.		Hydrazine Monohydrate K ₁ , O ₁ LD ₅₀ 129 mg/kg Mouse, Skin TDLo 80g/kg/43W-I (Carcinogenic Effect)

SECTION III. PHYSICAL DATA

	(Hydrazine Hydrate)	54.4%	(SCAV-6X)
Boiling point, 1 atm, deg C	120.1	119.8	109.5
Freezing point, deg C	-51.7	-57	-65
Specific gravity, 25/4 C	1.032	1.031	1.021
Viscosity at 25 C, cps	1.55	1.45	1.02
Solubility in water	Miscible	Miscible	Miscible
Flash point, deg C (F): (CC) -- Ignitable	73 (163)	89 (192)	None
(OC) --			None
Appearance & Odor: Clear, colorless liquids with an ammonia-like odor. (64% fumes in air.) Odor detected at 3-4 ppm. (Take protective action if odor detected!)			

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
(See Sect. III)	Can vary with the contact surface*	% by volume (Hydrazine)	>4.7	-

40% hydrazine in water is considered the approx. lower limit for ASTM flash point and fire point.

Extinguishing media: Water, carbon dioxide and dry chemical. Use water spray to put out fire and dilute spills to nonflammable mixtures, to disperse vapors, and to cool fire-exposed containers. Fight fires from safe distance and protected location.

Hydrazine vapor is flammable and can be an explosion hazard with oxidizers or heating.

Firefighters need self-contained respirator, eye protection and full protective clothing. Iron oxide can catalyze hydrazine vapor ignition with air as low as 74 F.

SECTION V. REACTIVITY DATA

This reactive reducing agent is stable in suitable closed containers at room temperature, especially under inert atmosphere in the absence of UV radiation. It does not polymerize and is not shock or friction sensitive. Keep out of direct sunlight. Solution is alkaline (pH for 1% hydrazine in water is 10.7). It is incompatible with acids & oxidizing agents (including air). Contact of vapor with metal oxides (such as iron, copper, lead, molybdenum) can result in fire & possible explosion. Solutions can attack glass, rubber, cork; molybdenum-containing steels such as Stainless Steel 316 should not be used in contact with hydrazine. Obtain supplier help in selecting compatible materials. Prevent contamination!

SECTION VI. HEALTH HAZARD INFORMATION

TLV 0.1 ppm (skin) (See Sect II)

Hydrazine is poisonous, very toxic by ingestion, inhalation and skin absorption (acute or chronic). Early systemic effects from chronic excessive exposure include anorexia, weight loss, weakness & tremors. Overexposure to mists or vapors can immediately irritate nose & throat followed by itching, burning & swelling of the eyes (possible temporary blindness if exposure severe), and possible dermatitis. 80 ppm IDLH is reported. Systemic effects can include dizziness, nausea, convulsions and sensitization. Liquid contact can be corrosive to tissue, producing penetrating burns and possible permanent corneal opacity. Systemic toxicity: Liver, kidneys & blood forming system.

FIRST AID:

Eye or Skin Contact: Immediately flush with running water! Continue eye flushing for at least 15 min, including under eyelids. Remove contaminated clothing under safety shower. Contact physician! Continue flushing with water. Skin burns to be treated like alkali or thermal burns.

Inhalation: Remove to fresh air. Restore and/or support breathing. Contact physician! Keep warm and at rest. Pulmonary edema may occur from severe exposure.

Ingestion: Promptly give 2-3 glasses of milk, water or citrus juice to drink and induce vomiting. Repeat. Contact physician!

Concentration considered immediately dangerous to life and health

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Institute plan prepared with supplier's guidance. Notify safety personnel of spills. Evacuate all except trained clean-up personnel who are protected against inhalation & contact. Use optimum explosion-proof ventilation. Remove sources of heat or ignition. Promptly dilute spill with water spray to less than 40% hydrazine to control fire hazard; flush to provided containment or otherwise contain and collect liquid as may be feasible. Use sand (not combustible absorbent) to collect small spills and residues, & place in closed containers for disposal; then flush spill area with much water.

DISPOSAL: Follow Federal, State, and Local regulations. 2% soils can be decomposed with hypochlorite or 10% H₂O₂. The Air Force has used special mobile incinerators for hydrazine or its mixtures with water (NO evolution). Open pit burning of alcohol solutions has been reported. Dil. sulfuric acid has been used for neutralization.

EPA (RCRA) HW No. is U133 (40 CFR 261).

SECTION VIII. SPECIAL PROTECTION INFORMATION

Use general and local exhaust ventilation (explosion-proof) to meet TLV (exhaust scrubber may be needed). Use enclosed processes where feasible. Hoods to have 150 lfm face velocity. Use approved self-contained respirator with full facepiece in a pressure-demand mode for non-routine conditions to 80 ppm or for emergency.

NIOSH recommends using a regulated work area, excluding unauthorized personnel.

Use impervious*, body-covering protection (gloves, apron, boots, full suit, etc.) as conditions require to prevent skin contact. Use chemical safety goggles and faceshield to protect eyes. Contaminated impervious protection to be thoroughly washed off with water before & during removal. Contaminated clothing & equipment can be fire and health hazard. Wear clean work clothing. Shower after work. Control laundering and cleaning procedures used for hydrazine-contaminated items. Destruction of contaminated leather has been recommended.

Eye wash fountains, washing facilities and safety showers to be readily available where hydrazine is used or handled. /*Butyl rubber has been recommended.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store in tightly closed containers in a clean, cool, well-ventilated area with controlled drainage, away from oxidizing agents, acids, direct sunlight, & sources of heat or ignition. Water sprinkler-protected, sheltered, outside or detached storage preferred. Protect containers from physical damage; ground & bond for transfers to prevent static sparks; inert with nitrogen atmosphere. Prevent contamination of hydrazine. Concrete pads, dikes, drains and containment have been recommended for large tanks and drums.

Avoid breathing & contact with vapors! Prevent liquid contact with eyes, skin, clothing! Do not ingest! Practice good personal hygiene. Wash well after handling. Observe label precautions. Rigidly follow proper handling requirements. Obtain guidance from supplier. Use with proper ventilation. Follow code for electrical services.

DOT Classification: CORROSIVE MATERIAL I.D. No. UN2030 Label: CORROSIVE POISON

IMO Class: 8

DATA SOURCE(S) CODE: 1-12, 14, 16, 19, 20, 23, 25, 26, 31, 37, 38, 42, 47-49, 52

Approval is to the accuracy of information herein for purchaser's purposes and necessarily not for other purposes. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no representation, warranty or indemnification and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS: MIS/CRD

INDUST. HYGIENE SAFETY

MEDICAL REVIEW: 15 June 1984

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085

DIAL COMM: 8*235-4085



No. 54

CARBON DIOX.

Date July 1979

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: CARBON DIOXIDE

OTHER DESIGNATIONS: Carbonic Anhydride, Dry Ice, CO₂, CAS# 000 124 389, GE D27A6

DESCRIPTION: Material supplied in steel cylinders as a liquid under its own vapor pressure (ca 870 psig at 70 F) or in a solid form as dry ice. Also CO₂ is formed as a product of fermentation, animal metabolism, & combustion of carbonaceous matter.

MANUFACTURERS: Available from many suppliers including: Airco, Inc., Industrial Gases Div. and Liquid Carbonic Corp.

SECTION II. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Carbon dioxide	>99.5	8-hr TWA 5000 ppm or 9000 mg/m ³ *
nitrogen	<0.34	Human, inhalation TCLo 2000 ppm pulmonary effects
oxygen	<0.09	Rat, inhalation LCLo 657,190 ppm for 15 min
water	<0.07	Rat (10 days preg.) inhalation TCLo 60,000 ppm, 24 hours teratogenic effects

*Current OSHA & ACGIH TLV. NIOSH (1976) recommended a 10 hour TWA of 10,000 ppm with a ceiling level of 30,000 ppm (10 minute sample).

SECTION III. PHYSICAL DATA

Boiling point, at 1 atm, deg C -- -78.5	Gas density, at 0 C, g/l ----- 1.976
(sublimes)	Melting pt., @ 5.2 atm, deg C ---- -56.6
Vapor pressure at -82 C, mm Hg ----- 569.1	Critical temperature, deg C ----- 31.0
Solubility in water at 1 atm, 25 C	Molecular weight ----- 44.01
g/100 ml ----- 0.145	

Appearance & odor: Colorless gas, clear colorless, volatile liquid, or a white solid; odorless. (At high concentrations an "Acidic taste" is detectable.)

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
Noncombustible gas	None	None	--	---

Extinguishing media: Use water spray to cool fire-exposed containers to prevent rupture. This material is non-combustible. It can be used as a fire extinguishing agent primarily for its smothering effect (reduction of oxygen concentration to the point where the immediate atmosphere cannot support combustion).

It is not effective for use on fires involving chemicals that have their own oxygen supply (i.e., cellulose nitrate); or on fires involving reactive metals (such as, potassium, sodium, magnesium, aluminum, titanium, and zirconium) or their hydrides as these materials can decompose carbon dioxide.

SECTION V. REACTIVITY DATA

CO₂ is stable under ordinary conditions of use and storage. It does not polymerize. It does cause violent polymerization of acrylaldehyde or ethyleneimine. It decomposes to CO and O₂ when heated above 1700 C. This weakly acidic material will react with alkaline materials to form carbonates and bicarbonates.

An explosion can occur when CO₂ contacts mixtures of sodium peroxide with aluminum or magnesium. Reactive metals (such as alkali metals, magnesium, aluminum, titanium, or zirconium), their hydrides, and materials like diethyl magnesium, moist cesium oxide, or lithium acetylide with ammonia can ignite in a CO₂ atmosphere. Dry ice can form shock sensitive mixtures with sodium, potassium, or sodium-potassium alloy.

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT
120 ERIE BOULEVARD
SCHENECTADY, N.Y. 12305



NO. 127
HYDRAZINE, AQUEOUS
(35-64%)
DATE June 1984

SECTION I. MATERIAL IDENTIFICATION				
MATERIAL NAME: HYDRAZINE, AQUEOUS (35-64%) OTHER DESIGNATIONS: Hydrazine Hydrate, or Monohydrate, $\text{NH}_2\text{NH}_2\text{H}_2\text{O}$, CAS #007 803 578; 64.0% max, 54.4%, and 35% min Hydrazine in water; SCAV-OK (TFadename) MANUFACTURER: Available from several suppliers, including: Olin Chemicals 120 Long Ridge Road Stamford, CT 06904 Telephone: (203) 356-2473				
SECTION II. INGREDIENTS AND HAZARDS		%	HAZARD DATA	
Hydrazine (CAS #000 302 012) (MSDS #126)		64.0	8-hr TWA 0.1 ppm or 0.1 mg/m ³ (skin)*	
Water		Bal.	--	
*ACGIH TLV (1983); suspected to have carcinogenic potential for man. OSHA PEL is 1 ppm or 1.3 mg/m ³ . NIOSH (1978) recommended a ceiling level of 0.03 ppm or 0.04 mg/m ³ , determined by any 2-hr sample. Hydrazine and salts are carcinogenic in mouse and rat tests. IARC, Vol 4, pp. 127-136 (1974). Possible fetal malformation with hydrazine exposure reported in animal tests.			Hydrazine Monohydrate Rat, DPEL LD ₅₀ 129 mg/kg Mouse, Skin TDLo 80g/kg/43W-I (Carcinogenic Effect)	
SECTION III. PHYSICAL DATA (Hydrazine hydrate)				
		54.4% (SCAV-OK)	35%	
Boiling point, 1 atm, deg C	120.1	119.8	109.5	
Freezing point, deg C	-51.7	-57	-65	
Specific gravity, 25/4 C	1.032	1.031	1.021	
Viscosity at 25 C, cps	1.55	1.45	1.02	
Solubility in water	Miscible	Miscible	Miscible	
Flash point, deg C (F): (CC) --	Ignitable	Ignitable	None	
(OC) --	73 (163)	89 (192)	None	
Appearance & Odor: Clear, colorless liquids with an ammonia-like odor. (64% fumes in air.) Odor detected at 3-4 ppm. (Take protective action if odor detected!)				
SECTION IV. FIRE AND EXPLOSION DATA			Lower	Upper
Flash Point and Method	Autoignition Temp.	Flammability Limits in Air		
(See Sect. III)	Can vary with the contact surface*	3 by volume (Hydrazine)		
40% hydrazine in water is considered the approx. lower limit for ASTM flash point and fire point.			>4.7	-
Extinguishing media: Water, carbon dioxide and dry chemical. Use water spray to put out fire and dilute spills to nonflammable mixtures, to disperse vapors, and to cool fire-exposed containers. Fight fires from safe distance and protected location. Hydrazine vapor is flammable and can be an explosion hazard with oxidizers or heating. Firefighters need self-contained respirator, eye protection and full protective clothing. Iron oxide can catalyze hydrazine vapor ignition with air as low as 74 F.				
SECTION V. REACTIVITY DATA				
This reactive reducing agent is stable in suitable closed containers at room temperature, especially under inert atmosphere in the absence of UV radiation. It does not polymerize and is not shock or friction sensitive. Keep out of direct sunlight. Solution is alkaline (pH for 1% hydrazine in water is 10.7). It is incompatible with acids & oxidizing agents (including air). Contact of vapor with metal oxides (such as iron, copper, lead, molybdenum) can result in fire & possible explosion. Solutions can attack glass, rubber, cork; molybdenum-containing steels such as Stainless Steel 316 should not be used in contact with hydrazine. Obtain supplier help in selecting compatible materials. Prevent contamination!				

MATERIAL SAFETY DATA SHEET

GENTUM PUBLISHING CORPORATION

1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 377-8854



MSDS # _____
 ANHYDROU _____
 Revision _____

Issued: _____
 Revised: August, _____

From Gentum's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

MATERIAL NAME: ANHYDROUS AMMONIA
OTHER DESIGNATIONS: NH₃, Ammonia Gas, CAS #7664-41-7.
MANUFACTURER: Available from many suppliers/manufacturers including:
 Dow Chemicals USA, Inorganic Chem. Dept.
 2020 Dow Center
 Midland, MI 48640
 (517) 636-1000



SECTION 2. INGREDIENTS AND HAZARDS

AMMONIA, ANHYDROUS

%

HAZARD DATA

* Current (1985-86) ACGIH TLV with STEL of 35 ppm.
 ** Current OSHA PEL.

>99.5

8 hr TWA, 25 ppm*
 (18 mg/m³)
 8 hr TWA, 50 ppm**
 (35 mg/m³)

NIOSH has recommended a 50 ppm ceiling limit (5 minute sampling period).

 Human, inhalation:
 TCLo: 20 ppm, irritation

 Human, inhalation:
 LCLo: 30 000 ppm/5 min.
 Rat, inhalation:
 LCLo: 2000 ppm/4 hr.

DESCRIPTION: Liquid or gas depending on temperature and pressure conditions. Supplied pressurized in cylinders or tanks.

SECTION 3. PHYSICAL DATA

Boiling point, 1 ATM -33.4°C (-28°F)	Specific gravity, 60/60°F ... 0.62
Vapor pressure @ 60°F, mmHg ... 4800	Volatiles, % ca 100
Vapor density (Air=1) 0.6	pH of 1% water soln 11.7
Solubility in water, g/100 cc:	Melting point, °C (F) 77.7 (-108)
@ 0°C 89.9	Molecular weight 17.04
@ 100°C 7.4	

APPEARANCE & ODOR: Colorless liquid or gas (depending on temperature and pressure) with strong pungent odor. Odor is detectable at 5ppm; irritating at 25-50 ppm. Odor provides a warning of hazard.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
Gas at room temperature	1204°F/651°C*	% by volume	16	25

Extinguishing Media: Water spray or fog.

Stop flow of gas. Use water to keep fire exposed containers cool and protect personnel affecting shut-off (water reduces gas concentration due to solubility). It is a moderate fire and explosion hazard when exposed to heat and/or flame. The presence of oil or other combustible materials will increase the fire hazard. If gas is leaking or tanks are heavily exposed to heat, evacuate the area and the area downwind. Tanks should be equipped with appropriate pressure relief devices. Violent rupture can occur if relief valves fail. Stay clear of tank heads. Firefighters should wear positive pressure self-contained breathing apparatus with full facepiece & full protective clothing. * Iron catalyzed - 850°C/1562°F uncatalyzed.

SECTION 5. REACTIVITY DATA

Contained anhydrous ammonia is stable at room temperature. Decomposition to H₂ (flammable!) and N₂ begins above 450°C (840°F). It is an alkaline gas and reacts with acids with heat evolution. Contact of NH₃ with chemicals such as mercury, chlorine, iodine, bromine, silver oxide, and hypochlorites can form explosive compounds. Contact with chlorine or chlorine bleach can cause the evolution of hazardous chloramine gas. DO NOT USE copper, brass, bronze or galvanized steel in contact with ammonia. Welded joints are preferred to threaded joints in ammonia service. Do not use brazed joints. Iron and steel construction is preferred. Piping should be of rigid steel. Anhydrous ammonia does not polymerize.

SECTION VI. HEALTH HAZARD INFORMATION	TLV 5000 ppm (See Sect. II)
<p>Nervous system control of respiration is dependent on the CO₂ level breathed in air. Also, by reducing the oxygen level in air, CO₂ can cause suffocation. Symptoms of overexposure include headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears. High concentrations produce a faint acid taste and can cause paralysis of the breathing control centers of the nervous system: 2% by volume in the atmosphere will cause a 50% increase in breathing rate; 3%, a 100% rate increase; >4% produces labored breathing and is dangerous for even a few minutes of exposure; >12% causes rapid unconsciousness; a few hours exposure at 25% results in death. Contact with the liquid or solid can produce frostbite and freeze burns.</p> <p>FIRST AID:</p> <p><u>Skin/eye contact:</u> Treat frostbite and burns from excessive dry ice contact.</p> <p><u>Inhalation:</u> Remove immediately to fresh air. Give oxygen and/or artificial respiration as needed. Get medical attention for serious exposure.</p>	
SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES	
<p>Evacuate area of major spill or release of CO₂. Notify safety personnel. Provide ventilation. Clean-up personnel need special training and protection against contact with very cold materials or excessive inhalation of gaseous CO₂.</p> <p>DISPOSAL: Remove leaking cylinder or scrap solid ("snow" or dry ice) to a hood with forced ventilation or to a remote outside area. Allow gas to bleed off at a moderate rate or solid to sublime.</p>	
SECTION VIII. SPECIAL PROTECTION INFORMATION	
<p>Provide general and local exhaust ventilation to meet TLV requirements. Provide approved supplied-air or self-contained respirators for use in non-routine or emergency situations with exposure above the TLV. A full facepiece is required for concentrations >10%. Provide standby person(s) with rescue equipment where work is required at >15% CO₂ in air.</p> <p>Workers should use gloves and may require additional protective clothing (apron, face shield, etc. which are resistant to low temperatures) to prevent freeze burns and frostbite if more than momentary contact with CO₂ at low temperature is possible.</p>	
SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS	
<p>Store in a cool, dark, <u>well-ventilated</u> area, away from sources of heat. Do not store in enclosed or sub-surface areas! If storage temperature drops below 32 F, <u>gentle</u> (bath at 125 F) warming of cylinders may be needed. Follow standard safety practices for handling of compressed gas cylinders. Use an unsealed, insulated storage chest or container for dry ice. <u>Do not put dry ice in a closed container where evolved gas cannot escape!</u></p> <p>Persons with cardiovascular or pulmonary problems may need reduced exposure to CO₂ as compared to the normal worker.</p>	
<p>DATA SOURCE(S) CODE: 2-10, 12, 14, 17-19, 25, 26</p> <p><small>Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.</small></p>	<p>APPROVALS: MIS, <i>J.M. Thayer</i> Industrial Hygiene and Safety <i>[Signature]</i></p> <p>MEDICAL REVIEW: 12/79</p>

MATERIAL SAFETY DATA SHEET
GENTUM PUBLISHING CORPORATION
 1145 CATALYN ST., SCHENECTADY, NY 12303 USA (518) 377-8854



MSDS # 540
 ETHYLAMINE
 Issued: May, 1985
 Revised:

From Gentum's MSDS Collection, to be used as a reference

SECTION 1. MATERIAL IDENTIFICATION				
<p>MATERIAL NAME: ETHYLAMINE Other Designations: Aminoethane, Monoethylamine, $CH_3CH_2NH_2$, CAS #000 075 047; UN #1036 Manufacturers: Available from several suppliers including: Union Carbide Corp. Ethylene Oxide Derivatives Div. Old Ridgebury Rd. Danbury, CT 06817 Emergency #: (504) 744-3487</p>				
SECTION 2. INGREDIENTS AND HAZARDS		%	HAZARD DATA	
ETHYLAMINE		97	8 hr TW _A 10 ppm or 18 mg/m ³ * STEL not established ----- Rat, oral LD 50 1850 mg/kg ----- Rat, inhal. LCLo: 3,000 ppm, 4 hrs.	
* Current ACGIH (1984-85) TLV and OSHA PEL.				
SECTION 3. PHYSICAL DATA				
Boiling Point, 1 atm, deg °F (°C) .. 61.7 (16.5)		Volatiles, % ca 100		
Vapor Pressure at 20°C, mmHg 400		Evaporation Rate (Ether=1) .. N/A		
Vapor Density (Air=1) 1.56		Molecular Weight 45.09		
Solubility in Water Miscible		Melting Point, deg °F (°C) .. -113.8/-117.4		
Specific Gravity 15/15°C 0.689		(-81/-85)		
Appearance & Odor: Colorless liquid or gas having a strong, unpleasant ammonia-like odor.				
SECTION 4. FIRE AND EXPLOSION DATA			Lower	Upper
Flash Point and Method		Autoignition Temp	Flammability Limits in Air	
0°F (-18°C) O.C.		723°F (383°C)	Volume %	
			3.5	14 ^{1/2}
<p>Extinguishing Media: Carbon dioxide, alcohol type foam, dry chemical. Do not use a solid stream of water, since the stream will scatter and spread the fire. Use water spray to cool tank/container. Ethylamine is very flammable and is a dangerous fire hazard when exposed to heat or flame. Its vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback. Contact with strong oxidizers may cause a fire or explosion. Firefighters should wear self-contained breathing apparatus and full protective clothing.</p>				
SECTION 5. REACTIVITY DATA				
<p>Ethylamine is stable in closed containers at room temperature under normal storage and handling conditions. It may burst container if heated. Ethylamine is incompatible with strong acids, oxidizing agents and chlorine or hypochlorites. Contact with strong acids will cause violent spattering. Reactions with chlorine and alkaline hypochlorites are highly exothermic and produce chloramines which may be explosive. Liquid Ethylamine will attack some forms of plastics, rubber and coatings. Thermal decomposition or burning may produce oxides of nitrogen and carbon monoxide.</p>				

SECTION 6. HEALTH HAZARD INFORMATION	TLV 10 ppm (See Section 2)
<p>Ethylamine vapors are irritating to the nose, throat and lungs and cause eye irritation with lacrimation, conjunctivitis and corneal edema. Prolonged exposure to vapor may cause headache, nausea, vomiting, difficulty in breathing, pulmonary edema, and corneal injury. The liquid is severely irritating to the skin and may cause burns leading to necrosis and scarring. It may be absorbed through the skin. If the liquid is splashed into the eyes, permanent damage may occur. Ingestion of Ethylamine will cause burning of the mouth and digestive tract and may be fatal. Long-term effects of overexposure are not known. The TLV is established to prevent irritating effects.</p> <p>FIRST AID: <u>EYE CONTACT:</u> Promptly flush eyes, including under eyelids, with running water for at least 15 minutes. If irritation persists, or damage is observed, cover eyes with a dry bandage and transport to a medical facility that treats eye injuries. <u>SKIN CONTACT:</u> Promptly flush skin for at least 15 minutes while removing contaminated clothing. If skin is burned, cover with a dry, sterile bandage and get medical attention. <u>INHALATION:</u> Remove to fresh air. Restore and/or support breathing, if necessary. Get medical attention (In-plant, Paramedic, Community). <u>INGESTION:</u> Give victim water or milk as quickly as possible. Get medical attention and call Poison Control Center. Do not induce vomiting unless directed to do so. Transport victim to medical facility. Never give anything by mouth to a person who is unconscious or is having convulsions.</p>	
SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES	
<p>Notify safety personnel of large spills or leaks. Evacuate the area if necessary. Provide maximum explosion-proof ventilation to remove vapors from the area. Turn off heat and ignition sources. When performing clean-up, wear suitable protective clothing and equipment (see Section 8).</p> <p>Absorb small quantities of liquid with paper towel or vermiculite and place in closed containers for disposal. Dike large spills and collect for reclamation or disposal. Don't flush to sewer. Use non-sparking tools when performing clean-up. If in gaseous form, turn off gas.</p> <p>DISPOSAL: Incinerate or place in suitable container for disposal by licensed contractor.</p> <p>EPA (CWA) RQ is 1000 lb/400 kg (40CFR117)</p>	
SECTION 8. SPECIAL PROTECTION INFORMATION	
<p>Provide general and local exhaust ventilation (explosion-proof) to meet TLV requirements. For emergency or non-routine exposures where the TLV may be exceeded, wear an appropriate NIOSH approved respirator. Wear splash-proof safety goggles if there is any possibility of liquid Ethylamine or solutions getting into the eyes. Wear gloves, face shield, and impervious clothing to prevent skin contact when skin contact may occur. If skin contact occurs, the exposed area should be drenched with water immediately. Do not wear contaminated clothing until it has been properly laundered.</p> <p>Eye wash stations and safety showers should be accessible to areas of use and handling. Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants. All electrical service in use or storage areas should have an "explosion-proof" design.</p>	
SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS	
<p>Store in a cool, dry, well-ventilated area away from acid, oxidizing agents and ignition sources. Protect containers from physical damage and use proper handling procedures for pressurized liquid. Bond and ground containers and equipment when transferring liquid to avoid static sparks. Do not smoke in use or handling areas. Use only with adequate ventilation.</p> <p>DOT Classification: Flammable gas, UN 1036.</p> <p>The material is designated as a hazardous substance by the EPA (40CFR 116-117).</p> <p>DATA SOURCE(S) CODE (See Glossary) 1-9, 12, 23, 25, 42, 48, 69, 70, 71.</p>	
<p><small>Information on the quantity of information beyond the standard progress are necessary to determine the hazard. The user should consult the MSDS for the appropriate use of such information. GENIUM PUBLISHING CORPORATION cannot be held responsible for any inaccuracies or omissions in this information or for any consequences of its use.</small></p>	<p>APPROVALS <i>JORAC</i> 5/85</p> <p>INDUST HYGIENE/SAFETY <i>JW</i> 7/85</p> <p>MEDICAL REVIEW <i>SPH</i></p>

ANSUL ANSUL FIRE PROTECTION
MILWAUKEE, WI 53143-2542

MATERIAL SAFETY DATA SHEET

HALON 1301 FREON FE 1301
GASEOUS BLENDED IN FLAMMABLE COMPONENT

Manufacturer's Name	ANSUL FIRE PROTECTION, WORMLEAD U.S. INC.	Emergency Telephone No.	(715) 735-7111
Address	One Barton Street, Marinette, WI 54143-2542	Other Information Code	Sechs
Prepared By	Safety and Health Department	Date Prepared	June 1, 1996

SECTION 1 - IDENTITY

Common Name used on label (Trade Name and Synonyms)	Halon 1301, Freon FE 1301	CAS No.	75-63-6
Chemical Name	Monobromotrifluoromethane	Chemical Family	Halogenated Methane
Formula	CBF ₃		

SECTION 2 - INGREDIENTS**PART A - HAZARDOUS INGREDIENTS**

Principal Hazardous Component's name(s) and common names	%	CAS No.	ACGIH TLV	Acute Toxicity Class
Monobromotrifluoromethane	Greater than 99	75-63-6	1,000 ppm (TWA)	2.1.2 mg/L, 4 hrs

PART B - OTHER INGREDIENTS

Other Component's name(s) and common names	%	CAS No.	Acute Toxicity Class
None	N/A	N/A	N/A

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point	-72.0 °F	Specific Gravity (H ₂ O = 1)	1.57	Vapor Pressure (mm Hg)	11.2 @ 70 °F
Freezing Point	-108 °F	Water Density (Air = 1)	8.2	Evaporation Rate	N/A (Gas at room temperature)
Flammability	Negligible	Reactivity in Water	Unreactive		
Appearance and Odor	Colorless gas, sweet odor				

Flash Point	None	Potential Limits in Air % by Volume	N/A	Explosion Limits	N/A	Auto-ignition Temperature	N/A
Special Fire Fighting Procedures	THIS IS AN FIRE EXTINGUISHING AGENT. Use water to cool fire-exposed cylinders or other containers. Self-contained breathing apparatus with full facepiece and protective clothing when re-entring unventilated fire areas where product has been used.						
Unusual Fire and Explosion Hazards	Containers are equipped with pressure and temperature relief devices, but rupture may occur under fire conditions and toxic decomposition by-products may be formed if used in fires over 800 °F.						

SECTION 4 - PHYSICAL HAZARDS

Stability	Unstable to Heat	Conditions to Avoid	Decomposes under fire conditions above 800 °F
Reactivity	Reactivity in Water		Active metals and fires involving metal hydrides.

Thermal Decomposition Product	Thermal decomposition at temperatures above 800 °F forming hydrogen fluoride and hydrogen bromide. These by-products have a sharp irritating odor. They are dangerous even in low concentrations, and in sufficient concentrations can result in pulmonary edema.		
Reactivity	Reactivity with Water	Conditions to Avoid	N/A

NOTE: As used in Ansul extinguishers or cylinders, Halon 1301 is a gas compressed under pressure.

SECTION 5 -- HEALTH HAZARDS

Threshold Limit Value	1000 ppm is the OSHA PEL and the ACGIH TLV
Routes of Entry	The effects of exposure to Helon 1301 should disappear quickly upon removal from exposure. LC50 rats greater than 800,000 ppm / v-hr / hr
Eye Contact	The liquid form of this material can produce chilling sensations and discomfort
Skin Contact	Evaporation of liquid from the skin can produce chilling sensations. Frostbite can occur
Inhalation	Vapor is heavier than air and can cause asphyxiation by reducing oxygen available for breathing. Breathing very high concentrations of vapor can cause lightheadedness, giddiness, shortness of breath, and may lead to narcosis, cardiac irregularities, unconsciousness or even death
Ingestion	Ingestion is not likely to occur since this material is gas at room temperature
Signs and Symptoms	Acute Overexposure: Dizziness, impaired coordination, reduced mental acuity, and cardiac effects can occur. Unconsciousness or even death in high concentrations with longer exposures
Chronic Overexposure	None known when occupational exposures are below the TLV
Medical Conditions Generally Aggravated by Exposure	Cardiac problems

Chemical Listed as Carcinogen or P-Potential	National Research Council	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	AIRC Monographs	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	OSHA	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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SECTION 6 -- EMERGENCY AND FIRST AID PROCEDURES

Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. If redness, itching or a burning sensation develops, get medical attention. Treat for moisture if necessary.
Skin Contact	Wash the material off the skin with copious amounts of soap and water for at least 15 minutes. If redness, itching or burning occurs, get medical attention. Treat for moisture if necessary.
Inhalation	Remove victim to fresh air. If cough or other respiratory symptoms occur, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult medical personnel.
Ingestion	Ingestion is not likely to occur since this material is gas at room temperature.

NOTE TO PHYSICIAN: Product is an asphyxiant and can induce cardiac muscle sensitization to circulating adrenaline-like compounds. Do NOT give adrenalin or similar sympathomimetic drugs. Do NOT allow victim to exercise until 24 hours following specific exposures. Freeze burns of mucosal tissue can develop following specific exposures.

SECTION 7 -- SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type)	Not normally necessary if controls are adequate. For high concentrations exceeding 10% or if exposure is prolonged, use positive pressure air-supplied respirator.			
Ventilation	Local Exhaust	Recommended to control exposures. See mechanical.	Mechanical Exhaust	Recommended in low areas or indoors where vapors may collect.
Protective Gloves	Plastic if working with liquid		Eye Protection	Chemical goggles recommended. Full face shield in addition if splashing of liquid form is possible.
Other Protective Clothing or Equipment	Eye wash and safety showers are good safety practice in work areas when working with liquefied product.			

SECTION 8 -- SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage	Store as a liquefied compressed gas in DOT approved pressure vessels away from high temperatures. If cylinder is not connected to a system, it must be safety capped to protect against actuation of valve and release of agent.
Other Precautions	Note incompatibility information in Section 4.
Spills or Releases in Case of Fire	Evacuate area, ventilate to outside atmosphere. Cool or remove hot metal surfaces or source of non-extinguished flames.
Spill Cleanup Methods	Dispose of in accordance with all local, state and federal regulations.

N/A = Not Applicable NDA = No Data Available

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

TECHNICAL SUPPORT CENTER
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Class A combustibles
2. Computer equipment
3. Filters in HVAC room

MOST PROBABLE FIRE: 1. Class A combustibles
2. Overheated computer equipment

ACCESS AND EGRESS ROUTES: 1. Primary - computation center - west door from
condensate demin area
2. Secondary - office N.E. door via E1. 104'
Turbine Building or NRC office E.
door via E1. 104' Turbine
Building

FIRE BRIGADE STAGING AREA: 1. Primary - E1. 104' condensate demineralizer
catwalk
2. Secondary - E1. 104' Unit 2 Turbine Building

HAZARDOUS MATERIALS:

1. Toxic products of combustion from cable insulation and plastic furnishings.
2. Halon 1211 from portable extinguishers.
3. Low level radiation calibration sources.

MANAGEMENT OF PLANT SYSTEMS:

1. TSC is not provided with floor drains.
2. Sprinkler system isolation valve, FP-2-275, is at about E1. 114' of the Turbine Building along the east wall of the TSC and between the office and NRC office doors.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use Halon 1211 as the agent of choice for fires involving computer equipment.

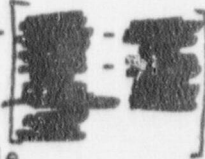

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (5) 17# Halon 1211
2. Automatic sprinklers
3. Fire hose reel stations - (1) operation center
(1) E1. 104' Turbine Building
4. Fire hydrants and hose reels of the yard loop
5. Fire hose trailer

VENTILATION:

1. TSC ventilation system is self contained in the HVAC room located between NRC Office and the laboratory.
2. Supply fans OS-92, OS-94, and OS-95.
3. Portable smoke exhausters - exhaust to the west (cond demins) or the east (Turbine Building 104').

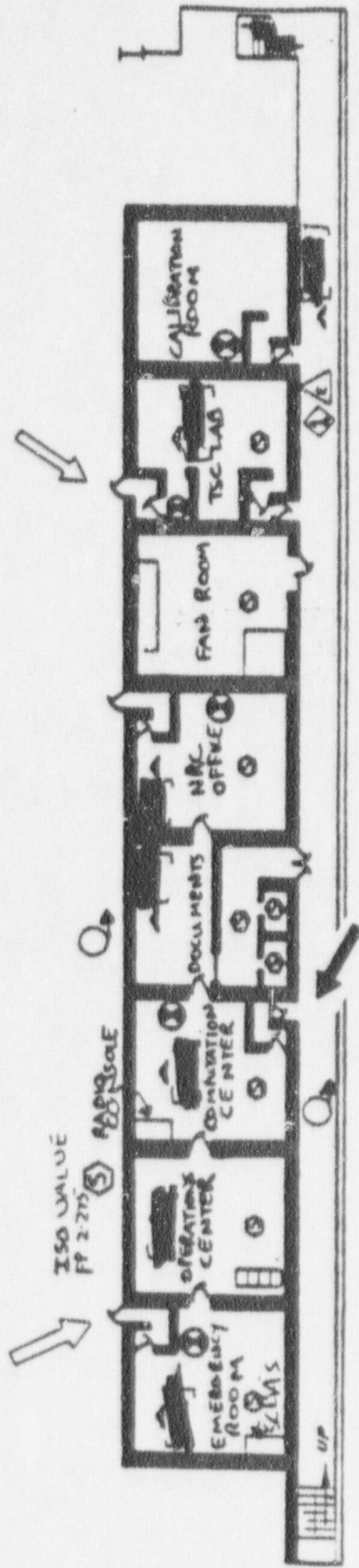
COMMUNICATIONS:

1. Plant telephones - 
2. Plant radio console
3. CDF radio telephone stored in emergency locker
4. Portable Radios (OPS Freq. 

- LIGHTING:
1. Plant lighting panels - PL 29-1 and PL 30-1
 2. Emergency battery powered lighting

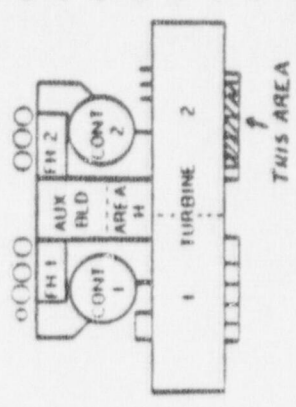
SPECIAL PRECAUTIONS:

1. De-energize electrical equipment where possible prior to attempting extinguishment.
2. Hose line protection for a westerly attack will require 2½" hose from yard hydrants to the E1. 104' of the condensate demineralizer corridor, reduced to 1½" lines for attack and personal protection.
3. Self-contained breathing apparatus will be required.



104' TURBINE II TSC

- ① FLAMMABLE / CORROSIVE / TOXIC, ETC.
 - ② HAZ WASH CHEMICALS, ETC.
 - ③ N₂, H₂, O₂, NH₃
 - ④ ACID
 - ⑤ CAUSTIC
 - ⑥ TOXIC GASES
 - ⑦ FLAMMABLE GASES
 - ⑧ ALL OTHERS
- ⑨ FIRST AID
 - ⑩ EYE WASH
 - ⑪ EYE WASH AND SHOWER
- ⊗ DRY CHEMICAL
 - CO₂
 - () PRESSURIZED WATER
 - ⊙ HALON
 - CP COMMAND POST
 - PRIMARY ACCESS
 - ↔ SECONDARY ACCESS
- ⊖ WATER HOSE REEL
 - ⊖ CO. HOSE REEL
 - ⊖ WHEELED DRY CHEM
 - ⊖ EMERGENCY LIGHTS
 - ⊖ TELEPHONE
 - ⊖ FIRE WALL RATING
 - ☆ ANNUNCIATOR PANEL



PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

4160 SWGR CABLE SPREADING ROOMS AND ISO PHASE BUS AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Cable insulation - cable spreading rooms
2. Iso Phase Bus Cooler panels
3. Transient combustibles

MOST PROBABLE FIRE:

1. Class "A" transient combustibles
2. Electrical fire in cable spreading rooms
3. Fire in iso phase bus cooler panels

ACCESS AND EGRESS ROUTES:

1. Primary - via Door #213-2 E1. 104' Turbine Building (Security Door)
2. Secondary - via Door #'s 201-2 and 284-2 or via Door #208-2

FIRE BRIGADE STAGING AREA:

1. Primary - outside Door #213-2 @ E1. 104'
2. Secondary - corridor outside Doors #201-2

HAZARDOUS MATERIALS:

1. Fumes from cable insulation
2. CO₂ discharge from hose reels

MANAGEMENT OF PLANT SYSTEMS:

1. No floor drains are provided in cable spreading rooms (minimize water usage).
2. Isolate affected buses if possible.
3. Keep redundant safety trains separated where possible.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use water fog only if necessary to protect exposures due to electrical hazards.
2. Maintain fire barrier penetration seals to protect redundant equipment.
3. Maintain separation of vital 4kV cable spreading rooms if at all possible (especially during fire suppression and ventilation).

- FIRE SUPPRESSION EQUIPMENT:
1. Fire extinguishers - (5) 15# CO₂'s
(3) 20# dry chemical
(1) pressurized water
 2. Two CO₂ hose reels
 3. Two fire hose reels - (1) next to Door #201-2
(1) Turbine Building
E1. 104' north of
Door #213-2

VENTILATION:

1. Each cable spreading room is provided with a grating at ceiling level which would allow smoke to vent to the 4160 switchgear rooms at E1. 119'. The 4160 switchgear rooms are provided with dampers (fusible link closers) @ E1. 140' which would allow smoke to exhaust at the Turbine Deck area SE corner.
2. Portable smoke exhausters could be used to provide positive ventilation through Doors 200-2, 204-2 and 202-2 to force smoke up to E1. 140'.
3. Plant ventilation fans on the west wall of the Iso phase bus room would force smoke to open louvers on the east wall to the outside.
5. Maintain the following vent fans running: 2S-67, 2S-68 and 2S-69 in bus rooms F, G and H at E1. 119".
6. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

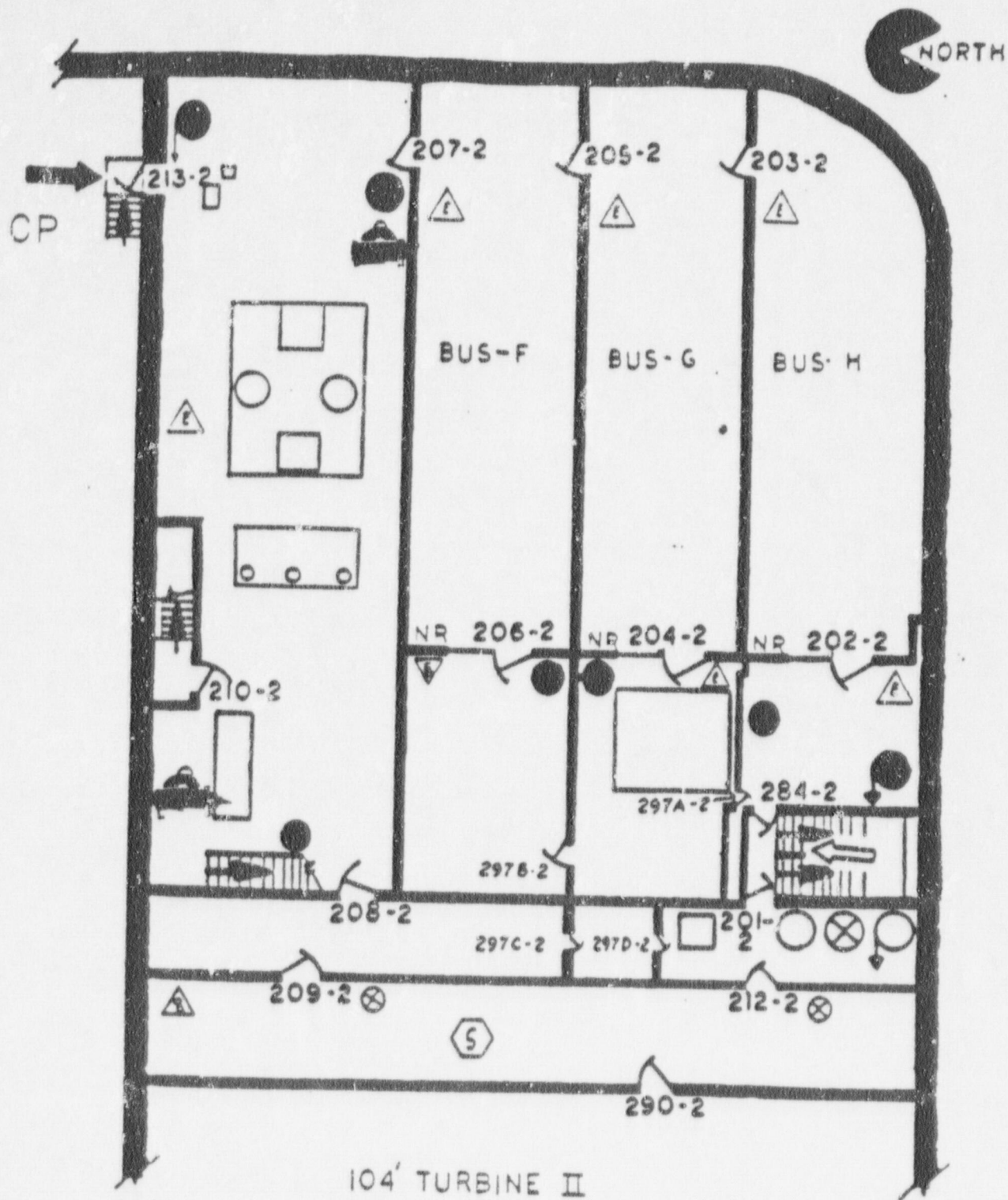
1. Plant telephone - [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

- LIGHTING:
1. Plant lighting panel - PL 21-4
 2. Emergency lighting in area

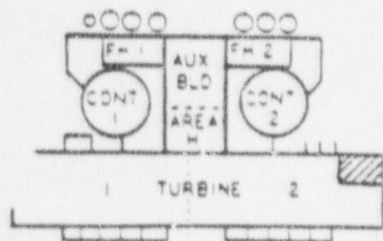
- SAFETY EQUIPMENT:
1. An eye wash/shower station is located in the U-2 Turbine Building, 85' E1. at Col's A-29, just north of the Condensate Booster Pumps.
 2. A first aid kit is located at the 104' E1. of the Turbine Building by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. High voltage by Iso phase bus panels.
3. Minimize water use since no drains are provided.
4. Keep redundant vital equipment separated where possible.



104' TURBINE II



- | | | | |
|---|-----------------------|---------------------|-----------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ☒ FIRST AID | ⊗ DRY CHEMICAL | ⊖ WATER HOSE REEL |
| ⊗ HAZ. WASTE CHROMATES ETC. | ☒ EYE WASH | ● CO ₂ | ⊖ CO ₂ HOSE REEL |
| ⊕ N ₂ H ₄ 35% NH ₃ | ☒ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊖ WHEELED DRY CHEM |
| ⊕ ACID | | ⊗ HALON | ⊖ FIRE WALL RATING |
| ⊕ CAUSTIC | | CP COMMAND POST | ☆ ANNUNCIATOR PANEL |
| ⊕ TOXIC GASES | | ➔ PRIMARY ACCESS | |
| ⊕ FLAMMABLE GASES | | ➔ SECONDARY ACCESS | |
| ⊕ MISCELLANEOUS/OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

4160 SWGR AREA
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Cable insulation
2. Switchgear components
3. Transient combustibles

MOST PROBABLE FIRE: 1. Switchgear components
2. Transient combustibles
3. Overheated cables

ACCESS AND EGRESS ROUTES: 1. Primary - via Door #304-2 to switchgear
vent fan area
2. Secondary - via Door #302-2 to switchgear
components from stairway
(Security Door) or
via Door #311-2 (Security Door)

FIRE BRIGADE STAGING AREA: 1. Primary - outside Door #304-2 E1. 119'
Turbine Building
2. Secondary - Turbine Building E1. 140' by
stairway leading down to Door #302-2

HAZARDOUS MATERIALS: 1. Fumes from burning cable insulation
2. CO₂ from hose reel discharge

MANAGEMENT OF PLANT SYSTEMS:

1. The Vent Fan Room is protected by an automatic sprinkler system. The isolation valve, FP-2-980, is located outside Door #304-2 Turbine Building E1. 119'.
2. De-energize vital 4kV buses as necessary.
3. No floor drains are provided in the vital 4kV switchgear area. Minimize water use. Water will drain to E1. 104' cable spreading rooms via ventilation openings in the floor.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.
2. Water should be used in a fog pattern at least 6 feet away from energized electrical equipment.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) 15# CO₂'s
(1) 20# Dry Chemical
2. CO₂ hose reels - (2)
3. Fire hose reel - (1) by Door #301-2
4. Automatic sprinklers in fan area

VENTILATION:

1. Switchgear vent fans #'s 2S-67, 2S-68, 2S-69, 2S-70 and 2S-71 are located in the switchgear vent fan room. (Switchgear supply ducts are equipped with fire dampers.)
2. Smoke exhauster may be required. Positive pressure techniques with ventilation exhaust directed through ceiling grating to El. 140' is preferred. Dampers are provided with fusible links at El. 140' and may need to be reopened.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be used.

COMMUNICATIONS:

1. Plant telephone - [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

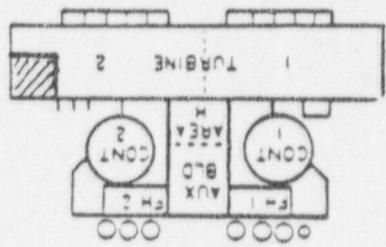
1. Plant lighting panel - PL 21-4
2. Emergency lighting in area

SAFETY EQUIPMENT:

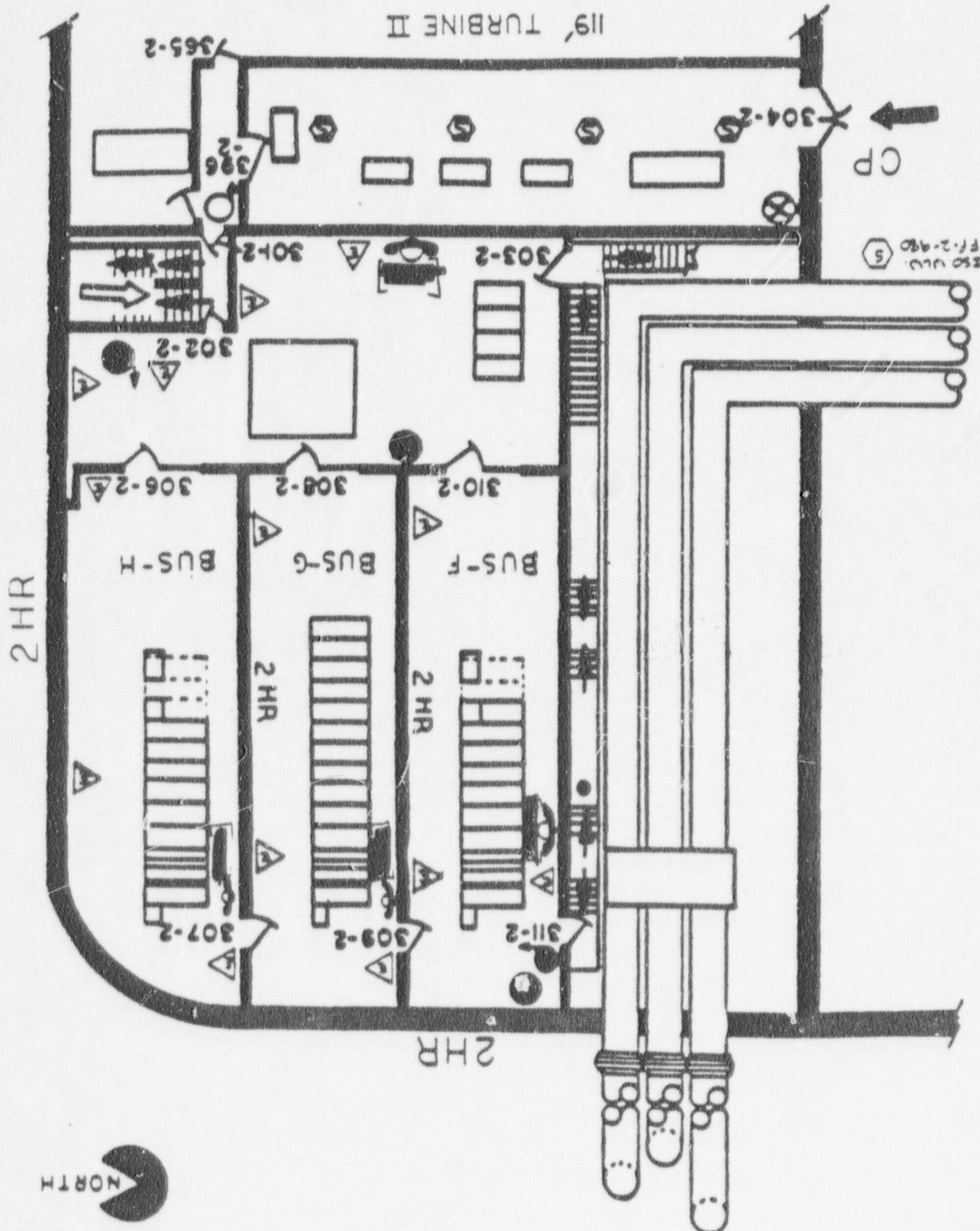
1. An eye wash/shower station is located in the U-2 Turbine Building, 85' El., at col's A-29, just north of the Condensate Booster Pumps.
2. A first aid kit is located at 119' of the U-1 Turbine Building by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. CO₂ is the agent of choice (sample for O₂ after use).
3. If water is used it should be applied in a fog pattern only due to high voltage electrical equipment and from no closer than 6 feet. Minimize water on floor especially in the vicinity of 4kV switchgear.



- ⊕ MISCELLANEOUS/OTHER
- ◇ FLAMMABLE GASES
- ◇ TOXIC GASES
- ◇ CAUSTIC
- ◇ ACID
- ◇ N₂ 35% NH₃
- ◇ HAZ. WASTE CHROMATES ETC.
- ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ FIRST AID
- ⊕ EYE WASH AND SHOWER
- ⊕ EYE WASH
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ CP COMMAND POST
- ➔ PRIMARY ACCESS
- ➔ SECONDARY ACCESS
- ➔ FIRE WALL RATING
- ☆ ANNUNCIATOR PANEL
- TELEPHONE
- EMERGENCY LIGHTS
- WHEELED DRY CHEM.
- CO. HOSE REEL
- WATER HOSE REEL



PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

TRAVELING CREWS QUARTERS
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Class "A" combustibles
2. Electric stove in kitchenette
3. Flammable/combustible liquids
4. Flammable gasses

MOST PROBABLE FIRE:

1. Class "A" combustibles
2. Kitchen fire (grease)
3. Flammable/combustible liquids
4. Flammable gasses

ACCESS AND EGRESS ROUTES:

1. Primary - via Door #305-2 from E1. 119'
Turbine Building
2. Secondary - via Door #301-2 from Stairway S-7
or via Door Nos. 393-2 and 392-2 from
Stairway S-6

FIRE BRIGADE STAGING AREA:

1. Primary - outside Door #305-2 at 119' E1.
Turbine Building
2. Secondary - top of Stairway S-7 at E1. 140'

HAZARDOUS MATERIALS:

1. Toxic products of combustion
2. Flammable/combustible liquids
3. Flammable gasses

MANAGEMENT OF PLANT SYSTEMS:

1. Isolation Valve, FP-2-358, for automatic sprinkler system located overhead
and outside Door #305-2 E1. 119' Turbine Building.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose Streams may be required to protect exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (1) 20# Dry Chemical
(1) Halon
2. Automatic sprinkler system
3. Fire hose reel - outside Doorway #301-2

VENTILATION:

1. Normal plant ventilation
2. Smoke Ejectors may be required. Smoke could be exhausted via Door #305-2 to E1. 119' Turbine Building or up stairway S-7 to the E1. 140' Turbine Deck.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

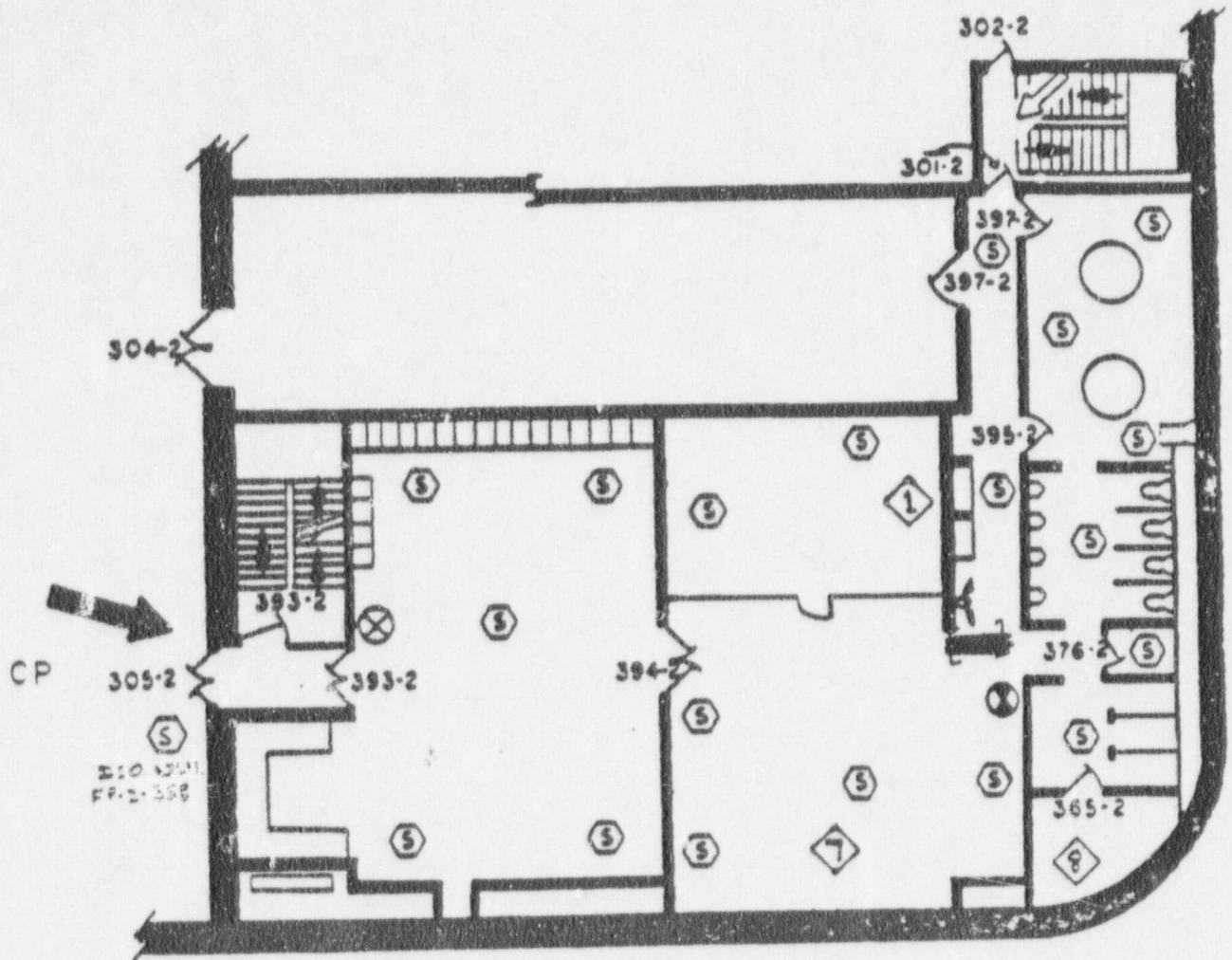
1. Plant telephones - [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

- LIGHTING:
1. Plant lighting panel - PL 21-4
 2. Emergency lighting

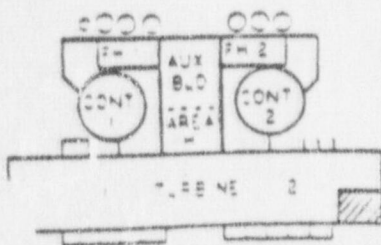
- SAFETY EQUIPMENT:
1. An eye wash/shower station is located in the U-2 Turbine Building, 85' E1., at col's A-29.
 2. A first aid kit is located in the U-1 Turbine Building at 119' E1. by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable hand lanterns should be carried by Fire Brigade members.



119' TURB II
TRAVELING CREWS QUARTERS



- | | | | |
|--|-----------------------|---------------------|---------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ FIRST AID | ⊗ DRY CHEMICAL | ⊙ WATER HOSE REEL |
| ⊙ HAZ WASTE CHROMATER ETC. | ⊞ EYE WASH | ● CO, | ⊙ CO, HOSE REEL |
| ⊙ N ₂ , H ₂ , O ₂ , NH ₃ | ⊞ EYE WASH AND SHOWER | ○ PRESSURIZED WATER | ⊞ WHEELED DRY CHEM |
| ⊙ ACID | | ⊙ HALON | ⊙ EMERGENCY LIGHTS |
| ⊙ CAUSTIC | | CP COMMAND POST | ⊞ TELEPHONE |
| ⊙ TOXIC GASES | | → PRIMARY ACCESS | ⊞ FIRE WALL RATING |
| ⊙ FLAMMABLE GASES | | → SECONDARY ACCESS | ☆ ANNUNCIATOR PANEL |
| ⊙ MISCELLANEOUS OTHER | | | |

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

TURBINE BLDG. EL 119'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Lubricating oil
2. Electric cable insulation
3. Transient combustibles

MOST PROBABLE FIRE:

1. Broken lube oil line, oil soaked insulation
2. Transient combustibles
3. Overheated electric motor or control wiring

ACCESS AND EGRESS ROUTES:

1. Primary - via southeast stairway from El. 85' or 140'
2. Secondary - via southwest stairway from El. 85' or 140'.

FIRE BRIGADE STAGING AREA:

1. Primary - by Door #304-2 in 4160 switchgear fan area
2. Secondary - Top of SE stairway El. 140' or Top of SW stairway El. 140'

HAZARDOUS MATERIALS:

1. Toxic products of combustion

MANAGEMENT OF PLANT SYSTEMS:

1. The entire floor area is protected by wet pipe and automatic sprinklers. Shutoffs are located at north system @ El. 85' immediately west of freight elevator south system @ El. 85' S.W. corner by Condensate Booster Pump 2-1.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose Steams may be required to protect exposures.
2. Caution should be used when applying water to hot steam lines. Rapid cooling can cause cracking and steam leaks.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (1) CO₂
(4) 20# Dry Chemicals
2. Fire hose reels - (6)
3. Automatic wet sprinkler system
4. Foam - Maintenance Brigade locker, Fire Brigade Station, Fire Truck, Stairway #1 Locker.

VENTILATION:

1. Ventilation Fans 2S-57, 2S-58 and 2S-59 are located in the Southeast end. There are no exhaust outlets on the west wall. Smoke would vent to El. 140' via stairways and open grating in the SE corner.
2. Smoke Exhausters will be required for a fire in the NE area and smoke vented to El. 140'.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephones [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

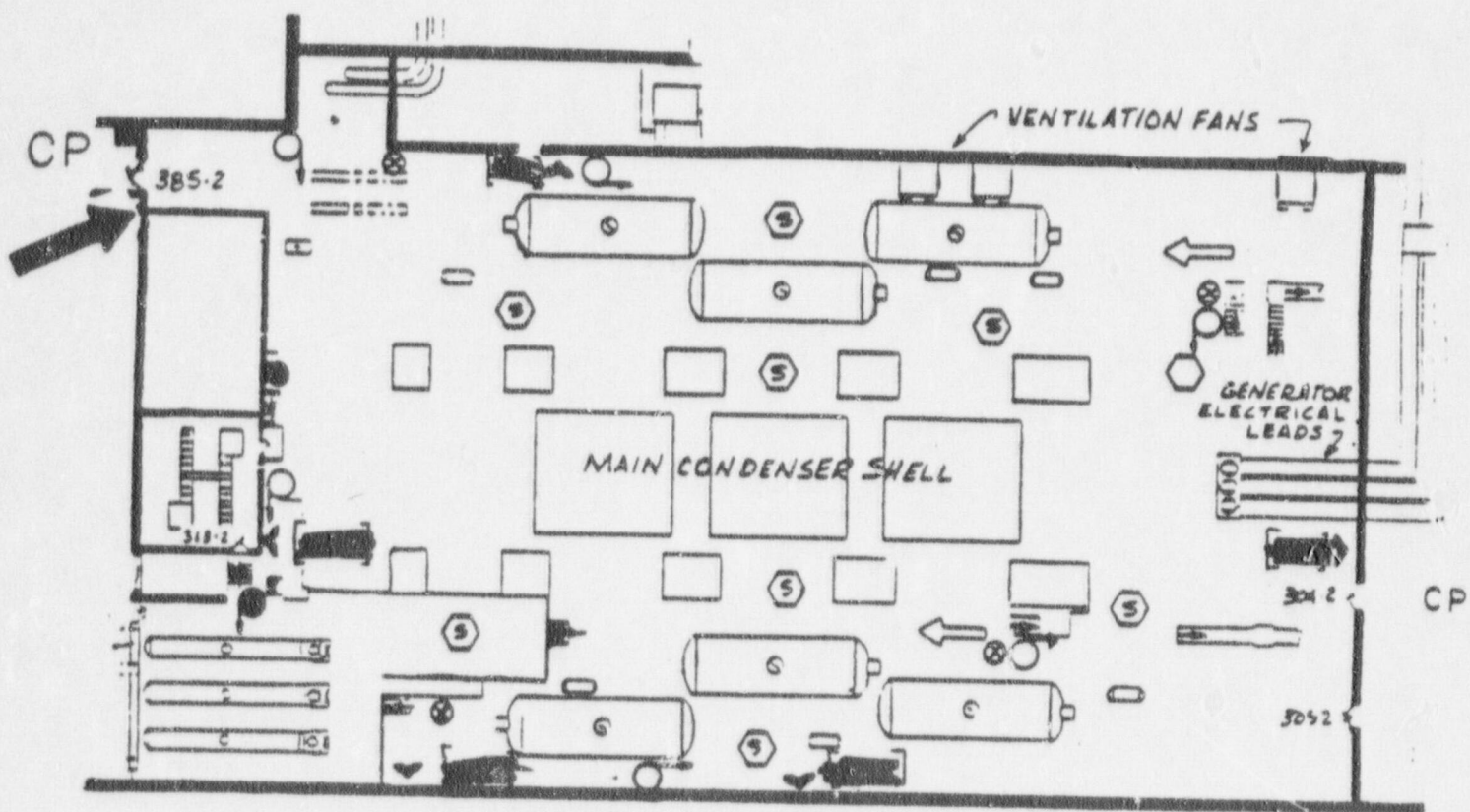
1. Plant lighting panels - PL 22-3 and 22-2
2. Emergency lighting

SAFETY EQUIPMENT:

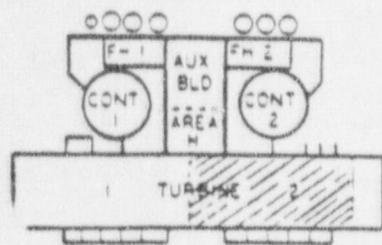
1. An eye wash/shower station is located in the U-2 Turbine Building, 85' El, at Col's A-29, just north of the Condensate Booster Pumps.
2. A first aid kit is located in the U-2 Turbine Bldg., 119' El. by the personnel elevator.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Portable Hand Lanterns should be available.
3. Seismic bracing makes access very difficult.
4. Lube oil fires may also involve lower elevations.
5. Exercise extreme caution while working on open gratings.



119' TURB II



- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS ◇ HAZ. WASTE CHROMATES ETC. ◇ N₂H₄ 35% NH₃ ◇ ACID ◇ CAUSTIC ◇ TOXIC GASES ◇ FLAMMABLE GASES ◇ MISCELLANEOUS/OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID EW EYE WASH EWS EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ● CO₂ ○ PRESSURIZED WATER ⊕ HALON CP COMMAND POST ➔ PRIMARY ACCESS ➞ SECONDARY ACCESS | <ul style="list-style-type: none"> P WATER HOSE REEL ⊕ CO₂ HOSE REEL ⊠ WHEELED DRY CHEM ○ EMERGENCY LIGHTS △ EMERGENCY LIGHTS ☎ TELEPHONE — FIRE WALL RATING ☆ ANNUNCIATOR PANEL |
|---|---|---|---|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 2

TURBINE BLDG. EL. 140'
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Lube oil
2. Hydrogen
3. Class "A" transient combustibles

MOST PROBABLE FIRE: 1. Lube oil
2. Hydrogen leak
3. Class "A" transient combustibles

ACCESS AND EGRESS ROUTES: 1. Primary - Stairway #1 from Unit 1 Turbine Deck
2. Secondary - S.E. stairway from El. 85'
S.W. stairway from El. 85'

FIRE BRIGADE STAGING AREA: 1. Primary - Unit 1 Turbine Deck, north end
2. Secondary - El. 85' by S.E. stairway OR
El. 85' by S.W. stairway

HAZARDOUS MATERIALS: 1. CO₂ discharge at #10 Bearing
2. CO₂ in generator casing during outage periods

MANAGEMENT OF PLANT SYSTEMS:

1. Cardox control valve located between vent_fans 2S-62 and 2S-63 east wall.
2. Deluge control valves located at Turbine pedestals.
3. Hydrogen shutoff valve located at El. 85' near seal oil unit.
4. Main hydrogen shutoff valve north end of west buttress 85' El.
5. Hydrogen is vented to the roof, vent valve shutoff at seal oil unit 2-1.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Water spray from hose reels may be used to cool housing of Turbine generator. Care must be exercised as water may cause steam leaks when applied to hot Turbine parts or piping.
2. Water spray should be used to protect exposures from a hydrogen fire.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (1) 17# Halon
(7) 20# Dry Chemicals
2. Deluge spray system
3. CO₂ flooding system at #10 Bearing
4. Fire hose reels - (5)

VENTILATION:

1. Supply fans 2S-61, 2S-62, 2S-63, 2S-64 and 2S-65
2. Smoke from any fire should vent via center roof vents.

COMMUNICATIONS:

1. Plant telephone - [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

LIGHTING:

1. Plant lighting panels - PL 22-5 and 22-4
2. Emergency lighting in area

SAFETY EQUIPMENT:

1. Eye wash stations are located in 115' E1., "H" area in Battery Rooms 2-1, 1-2, and 2-3. An eye wash/shower station is located in the U-2 Turbine Building, 85' E1. at col's A-29 just north of the Condensate Booster Pumps.
2. A first aid kit is located in the Operator Ready Room/Fire Brigade Room on the 140' deck of the Turbine Building.
3. A Burn Kit is located in the Unit 1 Control Room.

SPECIAL PRECAUTIONS:

1. In the event of a hydrogen leak, do not attempt to extinguish the fire until such time as the hydrogen supply has been shut off at valve located at seal oil unit 2-1 E1. 85'.
2. Self contained breathing apparatus will be required.

NORTH

BRIDGE TO
ADMIN. BLDG.

CARDOK FULL
STATIONS

OPEN
GROUP
WATCH

MAIN ELEC. GENERATOR

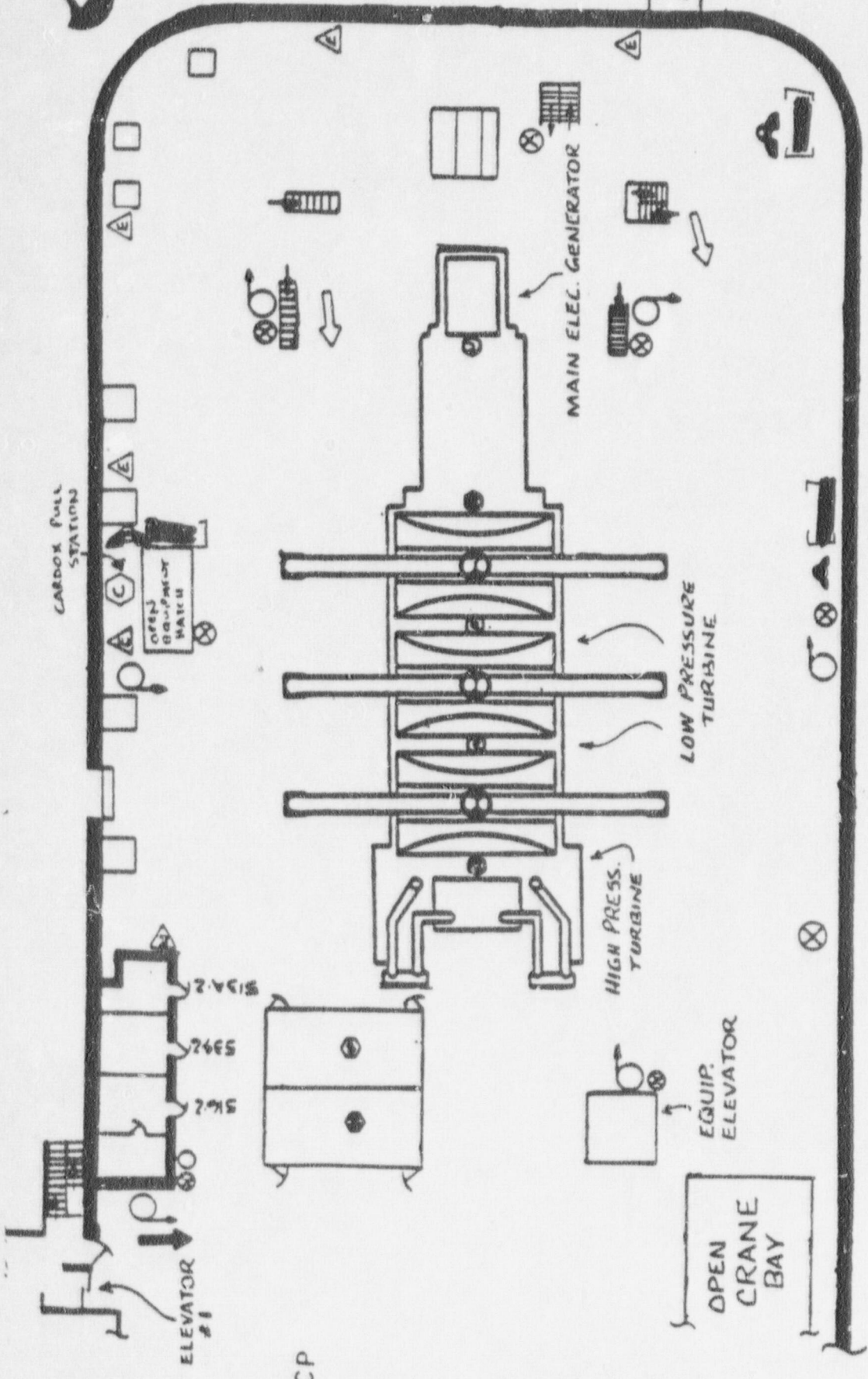
LOW PRESSURE
TURBINE

HIGH PRESS.
TURBINE

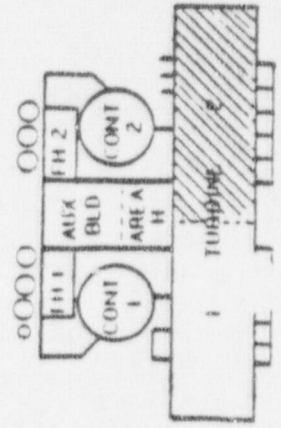
EQUIP.
ELEVATOR

OPEN
CRANE
BAY

140' TURBINE II



- ⊕ FLAMMABLE LIQUIDS
- ⊕ HAZ WASH (CHLORINE, ETC.)
- ⊕ N₂ & O₂ M₃
- ⊕ ACID
- ⊕ EMP. TR
- ⊕ IONIZ. GAGE
- ⊕ FLAMMABLE GAS
- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH AND SHOWER
- ⊕ DRY CHEMICAL
- ⊕ CO.
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ CP COMMAND POST
- ➔ PRIMARY ACCESS
- ➔ SECONDARY ACCESS
- ⊕ WATER HOSE REEL
- ⊕ CO. HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ EMERGENCY LIGHTS
- ⊕ TELEPHONE
- ⊕ FIRE WALL RATING
- ⊕ ANNIHILATOR PAGE 1



PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

SECURITY BUILDING
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Class "A" combustibles
2. Electric wiring to control panels

MOST PROBABLE FIRE: 1. Class "A" combustibles
2. Electric wiring

ACCESS AND EGRESS ROUTES: 1. Primary - via Door #'s 19, 20, 21, 14, 17, 18
2. Secondary - via Door #'s 1 and 2

FIRE BRIGADE STAGING AREA: 1. Primary - north end outside Door #'s 19
and 20
2. Secondary - south end outside Door #'s 1
and 2

HAZARDOUS MATERIALS: 1. Toxic products of combustion

MANAGEMENT OF PLANT SYSTEMS:

1. Security Building fire protection system isolation valve FP-0-360

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire Hose streams may be required to protect exposures.
2. Care should be taken to protect sensitive computer equipment.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (3) 20# dry chemicals
(1) 15# CO₂
2. Fire hose reels - (2) hallway by Door #26
outside N.W. corner
3. Fire hydrant - yard loop

VENTILATION:

1. Building ventilation system
2. Portable smoke exhausters may be required. Smoke could be exhausted via doorways to the outside.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

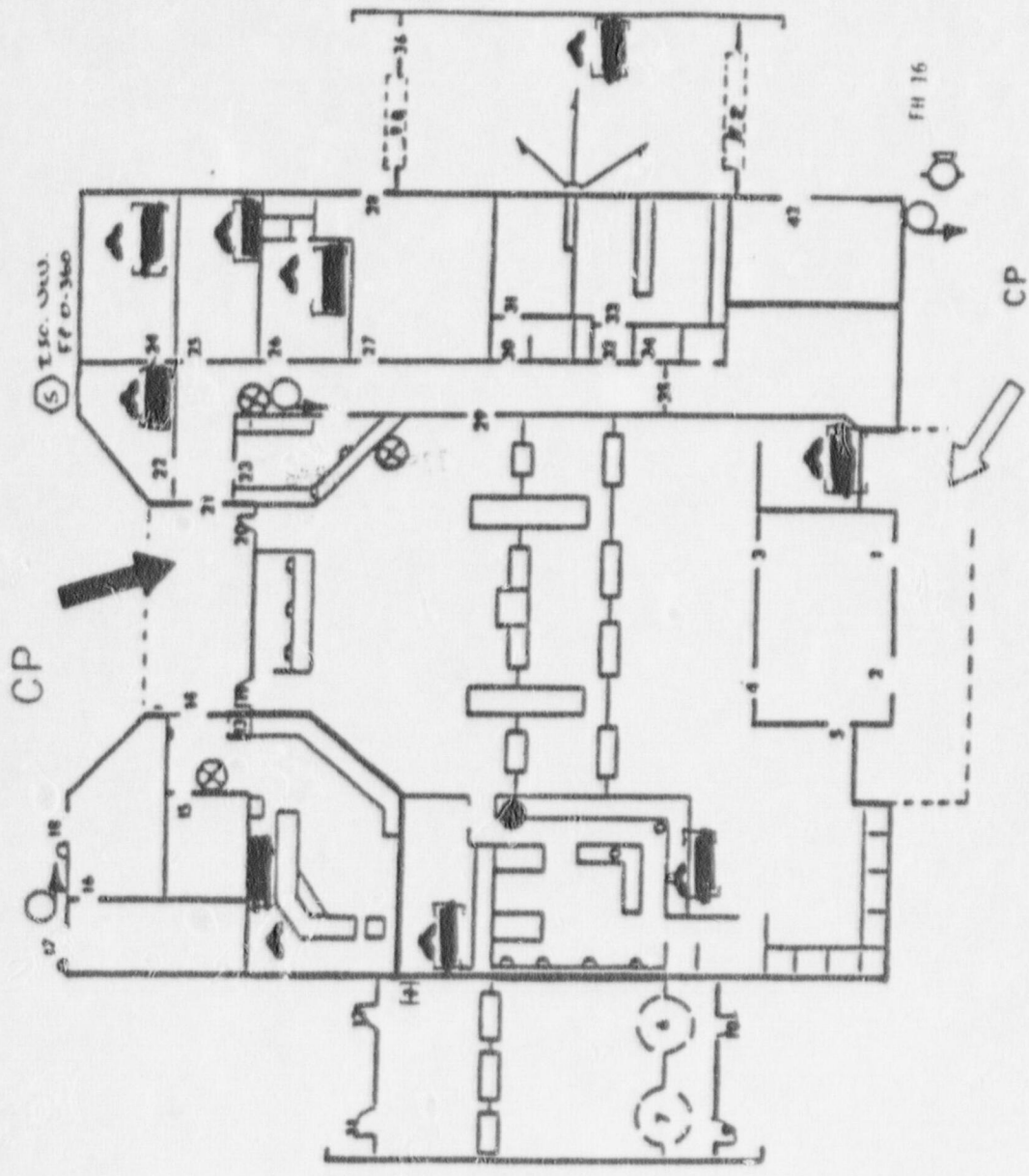
1. Plant telephone - [REDACTED]
2. Portable Radios (Ops. Freq. [REDACTED])

- LIGHTING:
1. Normal plant lighting panels - LB - UP - LA and HL
 2. Emergency lighting - SAS

- SAFETY EQUIPMENT:
1. A first aid kit is located on the far west side of the building by the Radiation Portal Monitors.

SPECIAL PRECAUTIONS:

1. Self contained breathing apparatus will be required.
2. Ammunition storage is provided inside Door #13. Access may be gained via Door #14.



Page 32-3
Revision 2

LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ NH₃, 35% NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ BNSC/OTHER
- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIBER WALL MOUNTING
- ⊕ APPROXIMATE POSITION
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ P CO₂ HOSE REEL
- ⊕ WHEELD DRY CHEM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ EMERGENCY ISO VALVE
- ⊕ PWA VALVE
- ⊕ FIRE DEPT. COUPLER
- ⊕ HYDRANT - 2 HOSE OUTLET
- ⊕ HYDRANT - 3 HOSE W/ PUMPER COUPLER

SECURITY BUILDING

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 1 & 2
INTAKE STRUCTURE
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES:

1. Lube oil
2. Cable insulation
3. 480V switchgear panels
4. Transient combustibles

MOST PROBABLE FIRE:

1. Transient combustibles
2. Lube oil
3. Cable insulation
4. 480V switchgear panels

ACCESS AND EGRESS ROUTES:

1. Via stairway east side
2. Via stairways N and S ends Door #'s 11 and 12

FIRE BRIGADE STAGING AREA:

1. Primary - outside east side of intake structure (Security Door)

HAZARDOUS MATERIALS:

1. Chlorine (CL₂) (heavier than air)
2. Fumes from cable insulation
3. CO₂ discharge at circulating pumps (CO₂ will drift to lower elevations)

MANAGEMENT OF PLANT SYSTEMS:

1. Water circulating pumps are protected by an automatic CO₂ flood system.
2. Each circulating pump has a local CO₂ manual actuator.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose reels may be required to protect exposures.
2. Maintain separation of redundant auxiliary salt water pumps by keeping water tight doors shut.
3. Safe shutdown cables have thermolag protected junction boxes outside of ASW cubicles.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers - (6) CO₂'s
2. Fire hose reels - Eight (4) exterior and (4) interior
3. Fire Hydrants - (2)

VENTILATION:

1. Portable smoke exhauster may be required. Smoke can be exhausted via the three stairways to the outside.
2. Hose streams can also be used to ventilate smoke and hot gases out of doors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Plant telephone - [REDACTED]
2. Portable radios (Ops. Freq. [REDACTED])

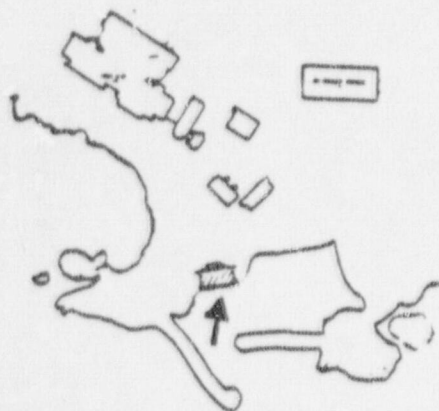
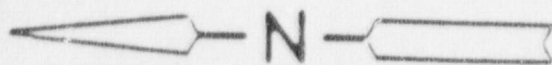
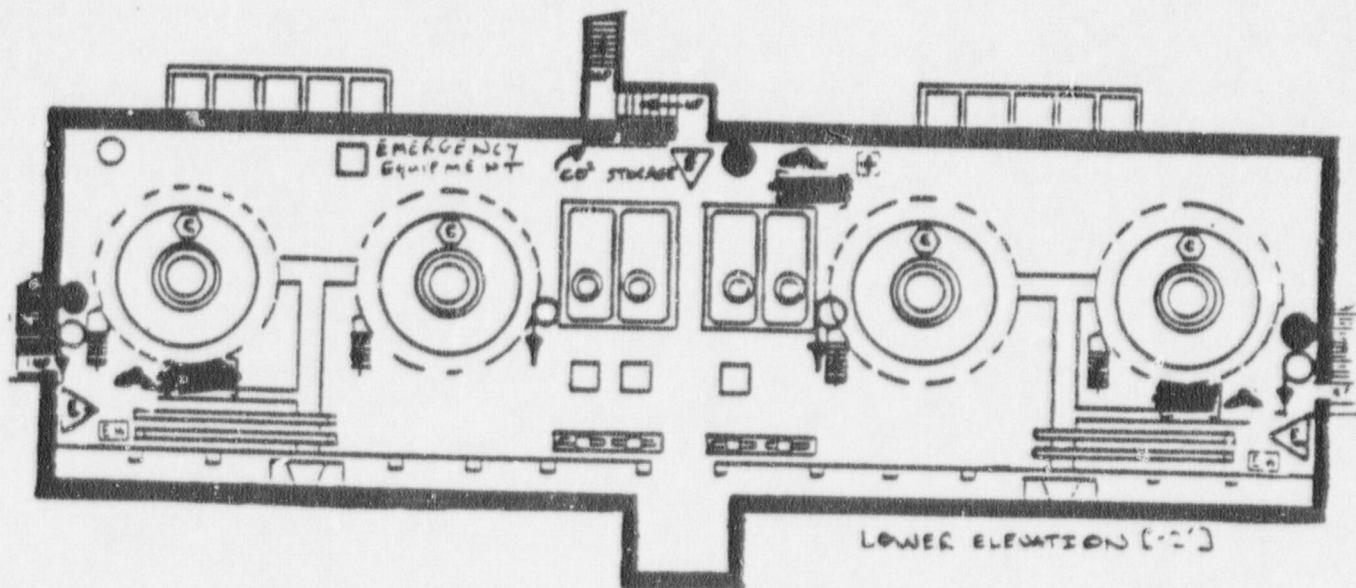
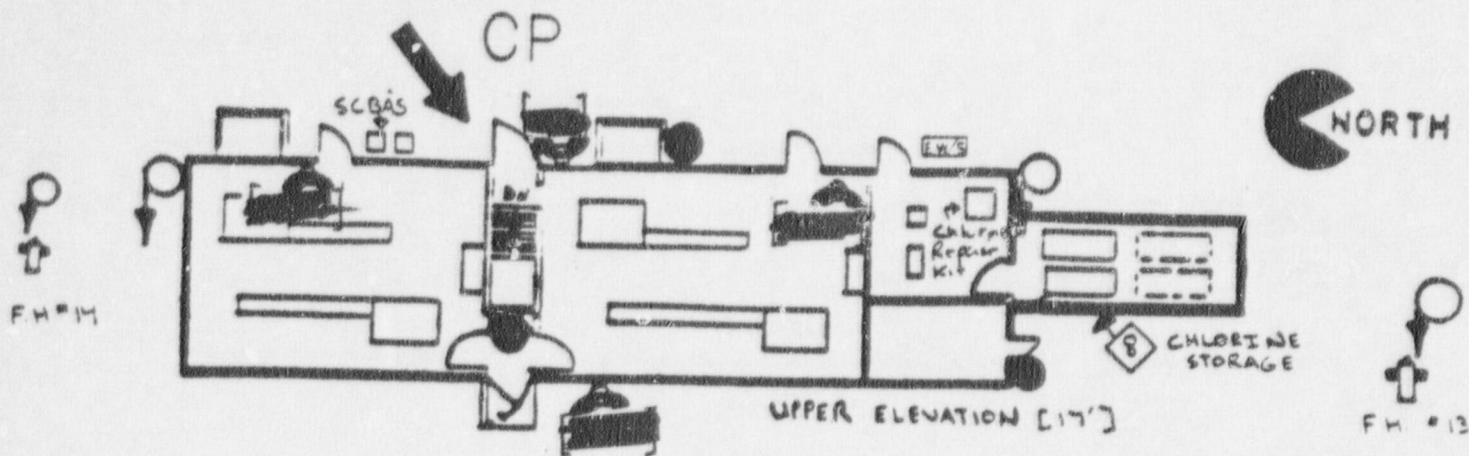
- LIGHTING:
1. Plant lighting panel - PL 18-1, PL 18-1
 2. Emergency lighting in area

SAFETY EQUIPMENT:

1. An Eye Wash/Shower station is located on the east side of the upper elevation of Intake by the Chlorine Storage Tanks.
Eye Wash Stations are located in the N.W. and S.W. corners of the lower elevation of Intake.
2. A first aid kit is located on the east wall of the lower elevation just south of the stairs.

SPECIAL PRECAUTIONS:

1. Liquid chlorine (CL₂) will cause serious skin burns. Gaseous CL₂ will form HCl when inhaled causing possible respiratory arrest.
2. Self contained breathing apparatus will be required.
NOTE: (A) Use water to keep fire-exposed chlorine tanks cool.
(B) Two (2) Self contained breathing apparatus are wall mounted outside on the east wall between the 480V switchgear rooms.
(C) Chlorine emergency kit is located in the chlorinator room to plug chlorine cylinder leaks.



- | | | | |
|--|--|---|---|
| <ul style="list-style-type: none"> ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS ⊕ HAZ. WASTE CHROMATES ETC ⊕ N₂H₄ 35% NH₃ ⊕ ACID ⊕ CAUSTIC ⊕ TOXIC GASES ⊕ FLAMMABLE GASES ⊕ MISCELLANEOUS OTHER | <ul style="list-style-type: none"> ⊕ FIRST AID ⊕ EYE WASH ⊕ EYE WASH AND SHOWER | <ul style="list-style-type: none"> ⊗ DRY CHEMICAL ○ CO₂ ○ PRESSURIZED WATER ⊕ HALON CP COMMAND POST → PRIMARY ACCESS → SECONDARY ACCESS | <ul style="list-style-type: none"> ⊕ WATER HOSE REEL ⊕ CO₂ HOSE REEL ⊕ WHEELED DRY CHEM ○ EMERGENCY LIGHTS ⊕ EMERGENCY LIGHTS ⊕ TELEPHONE ⊕ FIRE WALL RATING ☆ ANNUNCIATOR PANEL |
|--|--|---|---|

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

ADMINISTRATION BUILDING
FIRE FIGHTING PRE-PLAN

- POTENTIAL COMBUSTIBLES:
1. Class "A" combustibles
 2. Transient combustibles
 3. Electrical appliances
 4. Cable insulation

- MOST PROBABLE FIRE:
1. Electrical appliances
 2. Electrical equipment
 3. Cable insulation

ACCESS AND EGRESS ROUTES:

1. Primary - On the west side of the building there is a stairtower that runs from the first floor to the roof. The east side of the building has a stairtower running from the first thru sixth floors. Both stairtowers open to an exit access with the main exits/entrances nearby.
2. The elevator lobby is located on the first floor at the south-west corner of the building by the main entrance. Elevators #1 and #2 run from the first thru sixth floors. The #3 elevator runs from the first floor to the roof.
3. The Turbine Building bridge also serves as a primary means of access/egress. The bridge runs from the fifth floor of the Administration Building to the 140' deck of the Turbine Building.

Secondary: There are numerous secondary access/egress routes available on the first floor, located on all sides of the building.

- FIRE BRIGADE STAGING AREA:
1. Primary - A. First floor in the elevator lobby.
B. 140' deck of the Unit 2 Turbine Building.
 2. Secondary - The floor below whichever floor the fire is on.

- HAZARDOUS MATERIALS:
1. Sulfuric Acid (in batteries)
 2. Smoke, fumes, products of combustion.

MANAGEMENT OF PLANT SYSTEMS:

1. The electrical main is located in the electrical equipment room on the east end of the first floor.
2. Fireman's elevator key controls are located in the first floor elevator lobby between elevators #1 and #2.
3. For HVAC and ventilation, see section titled VENTILATION.

FIRE PROTECTION/DETECTION EQUIPMENT:

NOTE: For ease of understanding, this section is broken down on a floor-by-floor basis.

1. Perimeter of Building:

- A. Fire hydrants: 4
- B. Hose Reel Stations: 4
- C. Underground Isolation Valve FP-0-1222, located south-east of the building, isolates the building from the yard loop.

2. Ground (First) Floor:

- A. The entire first floor, (with the exception of the telecommunications room located in the north-center of the building) is protected by automatic sprinklers.
- B. The system riser is located in a plumbing closet in the center of the south side of the building.
- C. A fire department connection is located in the center of the south side of the building.
- D. FP-0-1166, located in the same plumbing closet as the system riser, isolates the first floor and mezzanine sprinklers.
- E. FP-0-1171, located north of FP-0-1166 and above the false ceiling, isolates firewater to the west stairwell.
- F. The telecommunications room located on the north side of the building is protected by an automatic Halon system that can be manually activated. A manual Halon Abort/Reset switch is located in the room.
- G. The kitchen hood systems are protected by Ansul Dry Chem that can be released either manually or automatically.
- H. An annunciator panel is located on the first floor in back of the receptionist's desk.
- I. Building Evacuation and Fire Emergency Panels are located in the electrical room south of Elevator #2.
- J. Fire Hose Reels: 4 (four)
- K. Fire Extinguishers: 4 (four) 17# halons, one located in each Hose Reel Station Cabinet.
- L. Smoke detectors are located in the elevator lobby area, return air supply and telecommunications room.

3. Intermediate Floor (Mezzanine)

- A. The intermediate floor is protected by automatic sprinklers.
- B. A 2½" standpipe is located just west of the stairs.
- C. A hose reel station is located north of the stairs at the entrance to the building storage room.
- D. FP-0-1170, located in the southern mechanical equipment room, isolates firewater to the east stairwell.
- E. A 17# Halon fire extinguisher is located in the hose reel cabinet.

NOTE: TWO HIGH RISE PACKS LOCATED IN ROOM M05 "EMERGENCY RESPONSE STORAGE"

4. Second Floor

- A. The second floor is protected by automatic sprinklers.
- B. One 2½" standpipe is located in the west stairwell, one 2½" standpipe is located in the east stairwell.
- C. Hose reel stations: 4 (four)

4. Second Floor (continued)

- D. Fire extinguishers 4 (four), 17# Halons, one located in each hose reel station cabinet.
- E. FP-0-1177, located in the west stairwell landing, isolates the second floor sprinklers and hose reel stations.
- F. Smoke detectors are located throughout the floor.

5. Third Floor

- A. The entire third floor is protected by automatic sprinklers.
- B. One 2½" standpipe is located in the west stairwell, one 2½" standpipe is located in the east stairwell.
- C. Hose reel stations: 4 (four)
- D. Fire Extinguishers: 4 (four) 17# Halon, one located in each hose reel station cabinet.
- E. FP-0-1178, located in the west stairwell landing, isolates the third floor sprinklers and hose reel stations.
- F. Smoke detectors are located throughout the floor.

6. Fourth Floor

- A. The entire fourth floor is protected by automatic sprinklers.
- B. One 2½" standpipe is located in the west stairwell, one 2½" standpipe is located in the west stairwell.
- C. Hose reel stations: 4 (four)
- D. Fire Extinguishers: 4 (four) 17# Halon, one located in each hose reel station cabinet.
- E. FP-0-1179, located in the west stairwell landing, isolates the fourth floor sprinklers and hose reel stations.
- F. Smoke detectors are located throughout the floor.
- G. To provide remote annunciation capability, a fire system automated phone dialing system has been installed in room 423 of the administration building. When an alarm condition exists, a computer generated message will identify the building number and type of alarm, the automated phone dialing system will then begin sequentially dialing up to 8 telephone numbers until the alarm condition is acknowledged. Acknowledgement is achieved by depressing the "star" key on a touch-tone telephone. Once the alarm condition has been acknowledged, emergency responders need to report to the fire control panel on the 6th floor in the administration building to determine the type and extent of the problem.

7. Fifth Floor

- A. The entire fifth floor, including the bridge to the 140' deck of the Turbine Building, is protected by automatic sprinklers.
- B. One 2½" standpipe is located in the west stairwell, one 2½" standpipe is located in the east stairwell.
- C. Hose reel stations: 4 (four)
- D. Fire Extinguishers: 4 (four) 17# Halon, one located in each hose reel station cabinet.
- E. FP-0-1180, located in the west stairwell landing, isolates the fifth floor sprinklers and hose reel stations.
- F. Smoke detectors are located throughout the floor.
- G. An annunciator readout panel is located on the turbine side of the bridge.

8. Sixth Floor

- A. The perimeter of the sixth floor is protected by automatic sprinklers.
- B. One 2½" standpipe is located in the west stairwell, one 2½" standpipe is located in the east stairwell.
- C. Hose reel stations: 4 (four)
- D. Fire Extinguishers: 4 (four) 17# Halon, one located in each hose reel station cabinet.
- E. FP-0-1181, located in the west stairwell landing, isolates the sixth floor sprinklers and hose reel stations.
- F. A Pre-Action system protects the computer rooms, the tape library, the pallet storage room, the north-west conference room, and the computer-operators-center room. FP-0-1182 isolates the Pre-Action system, it is located in a plumbing closet on the sixth floor just north of the west stairwell.
- G. A Halon system protects the micro-fiche and P.C.N. network rooms. The Halon can be released either manually or automatically (cross zone smoke detection) from each room, and can also be aborted from each room. The Halon can also be cut-out at the Annunciator/Reset panel on the sixth floor. There are three Halon storage tanks, one is a reserve, located in a closet on the north-west side of the sixth floor, about 30' north of elevator #1.
- H. The building Annunciator/Reset panel is located in the electrical room (#611) directly east of elevators #1 and #2.
- I. An annunciator panel dedicated solely to the 6th floor pre-action system is located in the north-west corner of the computer-operation center room.
- J. Smoke detectors are located throughout this floor.

9. Roof:

- A. A standpipe with 3 2½" outlets is located north-west of the west penthouse. Another standpipe of the same configuration is located at the south-west corner of the east penthouse.
- B. An automatically opening stairwell vent (which vents the east stairwell) is located west of the east penthouse.

10. West (Elevator) Penthouse

- A. The west penthouse is protected by automatic sprinklers.
- B. Hose reel stations: 1 (one)
- C. Fire Extinguishers: 1 (one), located in the hose reel station cabinet.
- D. FP-0-1183 isolates the west penthouse sprinklers and hose reel station.
- E. Automatically opening stairwell vent (which vents the west stairwell) is located at the second floor of the west penthouse.
- F. Smoke detectors are located in the west penthouse.

11. East (Mechanical) Penthouse:

- A. The east penthouse is protected by automatic sprinklers.
- B. Hose reel stations: None
- C. Fire Extinguishers: None
- D. FP-0-1199, located in the north-east corner of the mechanical room, isolates the east penthouse sprinklers.
- E. Smoke detectors are located in the east penthouse.

VENTILATION:

1. Supply Fans

- A. Supply fan SF1 and return fan REF1 serve the first, second, and third floors and are located on the south-east side of the Administration Building. The supply fan is on the Intermediate floor and the return fan is on the first floor.
- B. Supply Fan SF-2 and Return Fan REF2 serve the fourth and fifth floors and are located in the east (mechanical) penthouse, on the roof at the east end of the building.

2. Fan Coil Units

- A. FC-1: Restaurant fan located above the ceiling in the kitchen area, supplies air to the kitchen and dining room.
- B. FC-2: Fan located above the ceiling in the kitchen area, provides kitchen make-up air.
- C. FC-3: Fan located in the intermediate floor area, provides air to the electrical/UPS rooms.
- D. FC-4: Fan located on the north end of the roof, supplies air to the sixth floor.
- E. FC-6: Fan located west of the telecommunications room on the first floor, supplies air to the telecommunications room.

3. Smoke Control Mechanical Ventilation

A. Supply Fans

- 1) Duct smoke detectors are located on the suction side of the Supply and Return fans. Upon sensing smoke in the supply duct both the supply and return fans will be de-energized and the outside and exhaust dampers will close and the return will open. This action will transmit an alarm to the fire alarm panel.
- 2) Upon smoke being sensed in the return detectors both fans will remain on. The outside and exhaust will open 100% and the return will close. Inlet vane controls will be matched to provide maximum smoke removal.

B. Fan Coil Units

- 1) FC-1 and FC-3 will de-energize if smoke is sensed and the alarm will be annunciated in the fire alarm panel.
- 2) FC-4: A smoke detector in the return air will upon sensing smoke leave the fans running and position the outside and exhaust damper 100% open and close the return 100%. The inlet vanes will be matched to provide maximum smoke removal. Detector activation will be annunciated by the fire alarm panel.
- 3) FC-6: smoke detectors for the telecommunication room which are tied to the Halon System will de-energize the fan coil when activated.
- 4) FC-2: has no duct smoke detectors.

B. Fan Coil Units (continued)

4. Smoke control - Natural Ventilation

A. An interior manual operating roof vent is located at the top of the east stairwell (stairway #2) for ventilating smoke on the east side of the building.

B. Opening the doors leading from the top of the west stairwell (stairway #1) through the elevator penthouse to the outside roof area will ventilate smoke out of the west side of the building.

C. Safety Glass Windows

- 1) At strategic locations throughout the interior of each floor level are windows designed to be shattered with a minimal impact for the venting of smoke and heat. The glass is identified by a red dot placed on the window frame.
- 2) To identify the safety glass on the exterior, there are reflecting red dots attached to the skin of the building - one red dot is placed above a sixth floor window and one red dot above the first floor window. In a straight line from dot to dot all window are safety glass.

D. Portable Smoke Ejectors for Smoke Removal

- 1) The building mechanical or natural ventilation capabilities should always be assisted by the use of portable smoke ejectors, when encountering moderate to heavy smoke.

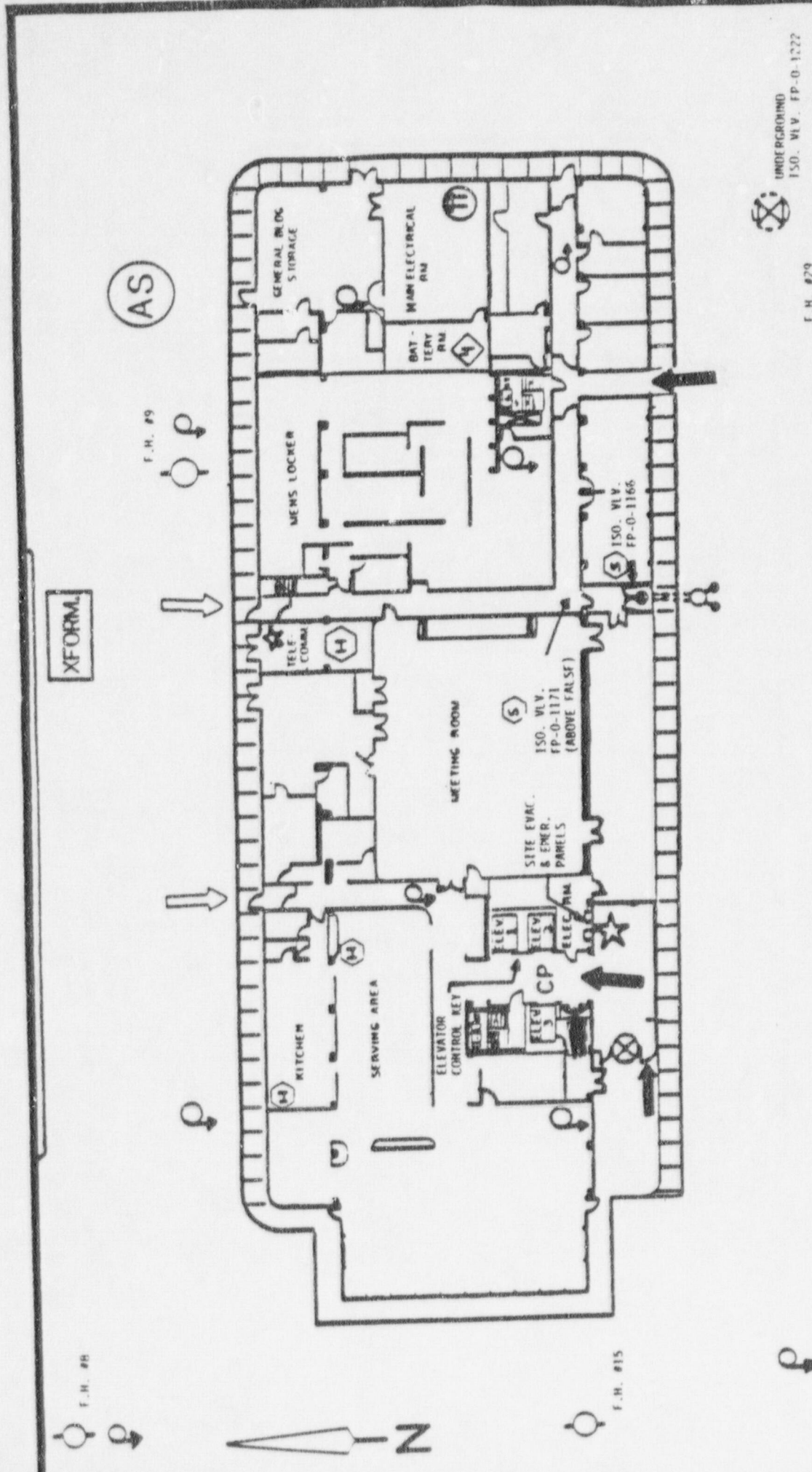
COMMUNICATIONS:

1. Telephones
Receptionist's Desk - [REDACTED]
Elevator Lobby - [REDACTED]
6th floor Annunciator/Reset Panel - [REDACTED]
2. Portable radios (Ops. Freq. # [REDACTED])
3. Site Evacuation and Fire Emergency Panels (located on the first floor).

LIGHTING: 1. Emergency lighting

SAFETY EQUIPMENT:

1. An eyewash/shower station is located in the first floor battery room.
2. First-Aid kits are located inside the building fire hose reel station cabinets.



UNDERGROUND
ISO. VLV. FP-0-1172

F.H. #79

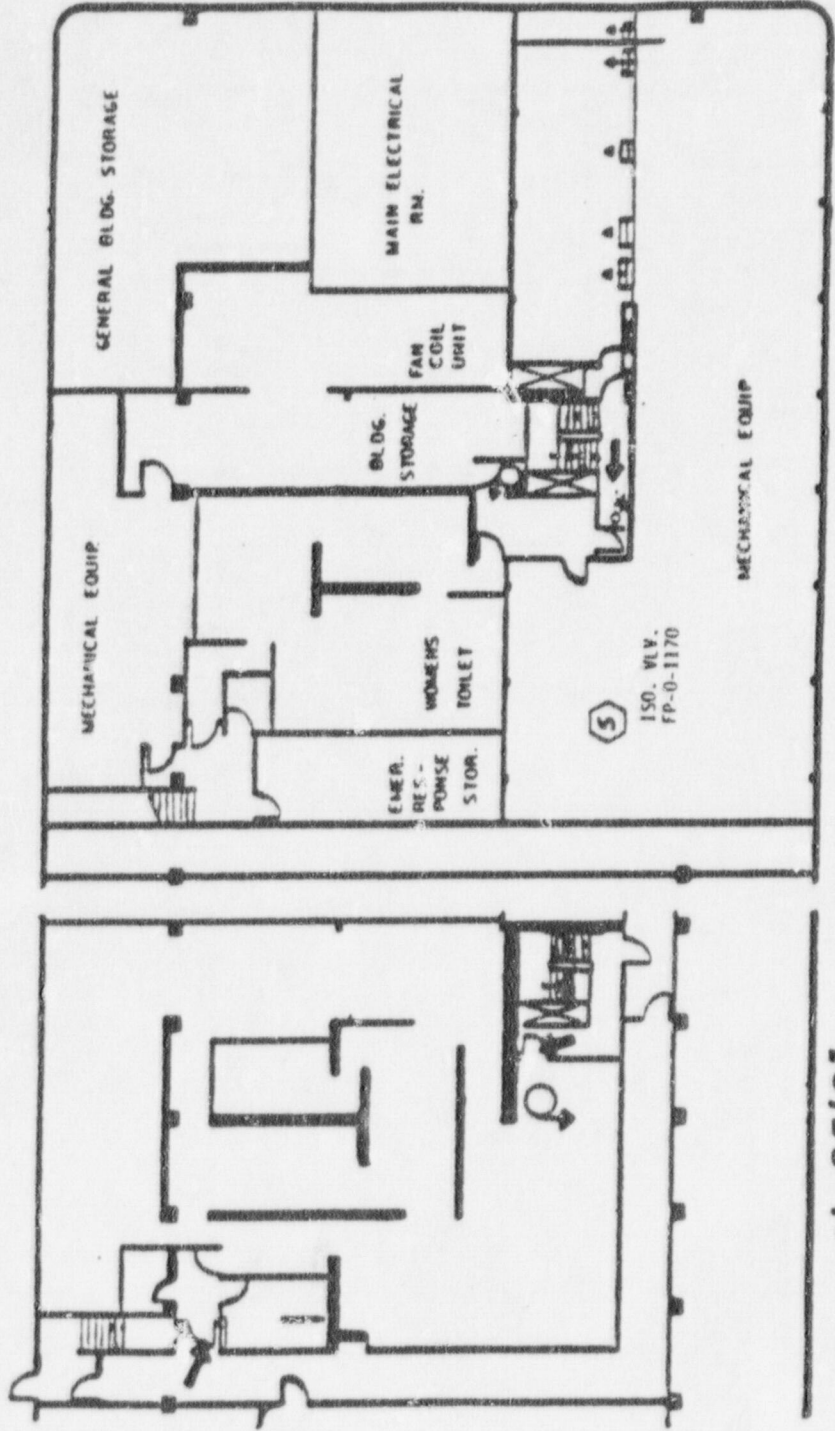
LEGEND

- ⊙ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊙ HAZ. WASTE CHROMATED, ETC.
- ⊙ H₂O, 35% NH₃
- ⊙ ACID
- ⊙ CAUSTIC
- ⊙ TOXIC GASES
- ⊙ FLAMMABLE GASES
- ⊙ MISC./OTHER
- ⊙ DRY CHEMICAL
- ⊙ CO₂
- ⊙ HALON
- ⊙ COMMAND POST
- ⊙ PRIMARY ACCESS
- ⊙ SECONDARY ACCESS
- ⊙ EMERGENCY LIGHTS
- ⊙ WALL RATING
- ⊙ SPRINKLER RISER
- ⊙ AUTO. SPRINKLER
- ⊙ STANDPIPE
- ⊙ UNDERGROUND ISO VALVE
- ⊙ PWA VALVE
- ⊙ FIRE DEPT. CONNL
- ⊙ HYDRANT-2 HOSE OUTLET
- ⊙ HYDRANT-2 HOSE W/PUMPER CONNL
- ⊙ EYE WASH
- ⊙ EYE WASH & SHOWER
- ⊙ TELEPHONE
- ⊙ PRESURIZED WATER
- ⊙ WATER HOSE REEL
- ⊙ CO₂ HOSE REEL
- ⊙ WHEELED DRY CHEM
- ⊙ WHEEL RATING

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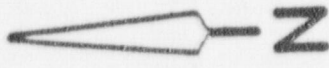
Plan - Ground Floor
el. 85'0"

AS



el. 85'0"

el. 93'4"



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Revision 2

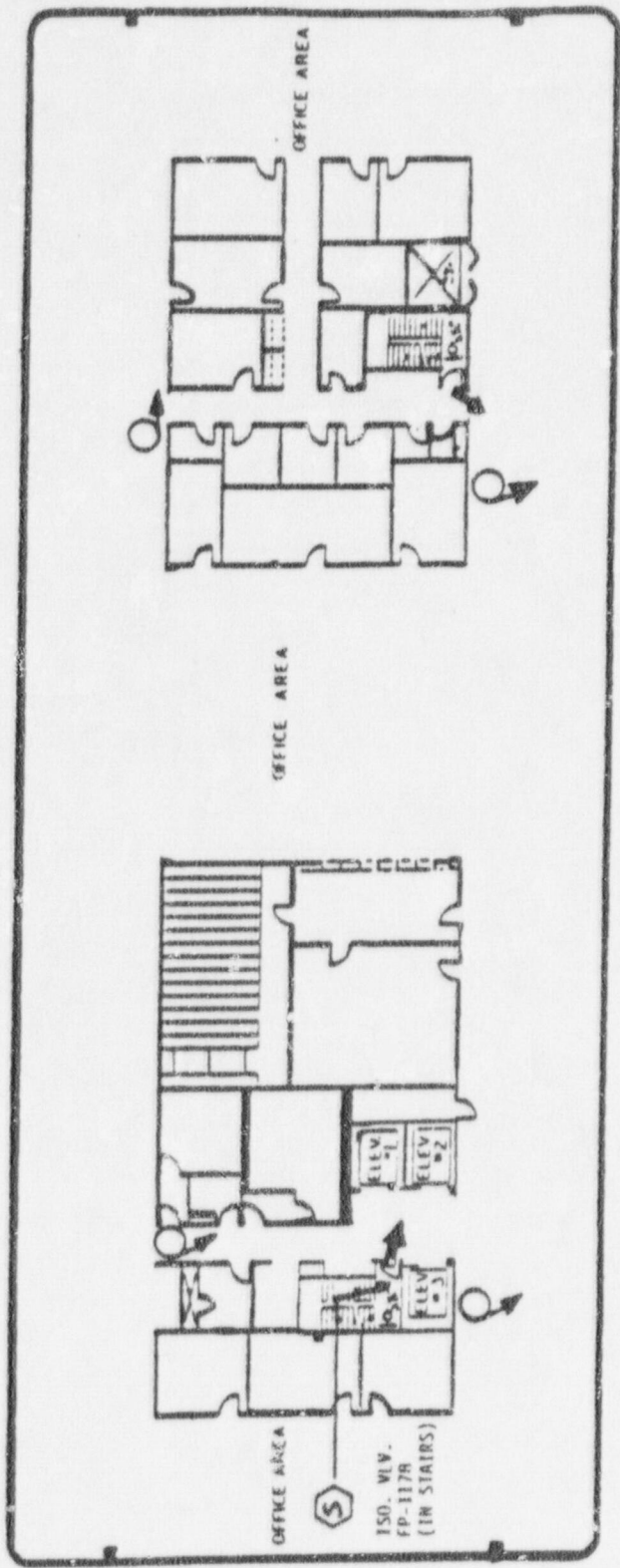
LEGEND

- ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◇ HAZ. WASTE CHROMATES, ETC.
- ◇ H₂, 35% NH₃
- ◇ ACID
- ◇ CAUSTIC
- ◇ TOXIC GASES
- ◇ FLAMMABLE GASES
- ◇ MISC./OTHER

- ⊠ EYE WASH
- ⊠ EYE WASH & SHOWER
- ⊠ TELEPHONE
- ⊠ COMMAND POST
- ⊠ PRIMARY ACCESS
- ⊠ SECONDARY ACCESS
- ⊠ EMERGENCY LIGHTS
- ⊠ FIRE WALL RATING
- ⊠ DRY CHEMICAL
- ⊠ CO₂
- ⊠ PRESURIZED WATER
- ⊠ HALON
- ⊠ WATER HOSE REEL
- ⊠ CO₂ HOSE REEL
- ⊠ WHEELED DRY CHEM
- ⊠ SPRINKLER RISER
- ⊠ AUTO. SPRINKLER
- ⊠ STANDPIPE
- ⊠ UNDERGROUND MSD VALVE
- ⊠ PVA VALVE
- ⊠ FIRE DEPT. CONNL
- ⊠ HYDRANT-2 NO.
- ⊠ HYDRANT-2 NO.
- ⊠ RUBBER CONNL

Ground Floor Plan
at Men's Locker Room
Intermed' 'e Floor Plan
& Womn' Locker Room

AS



OFFICE AREA
 ISO. VLV.
 FP-117R
 (IN STAIRS)

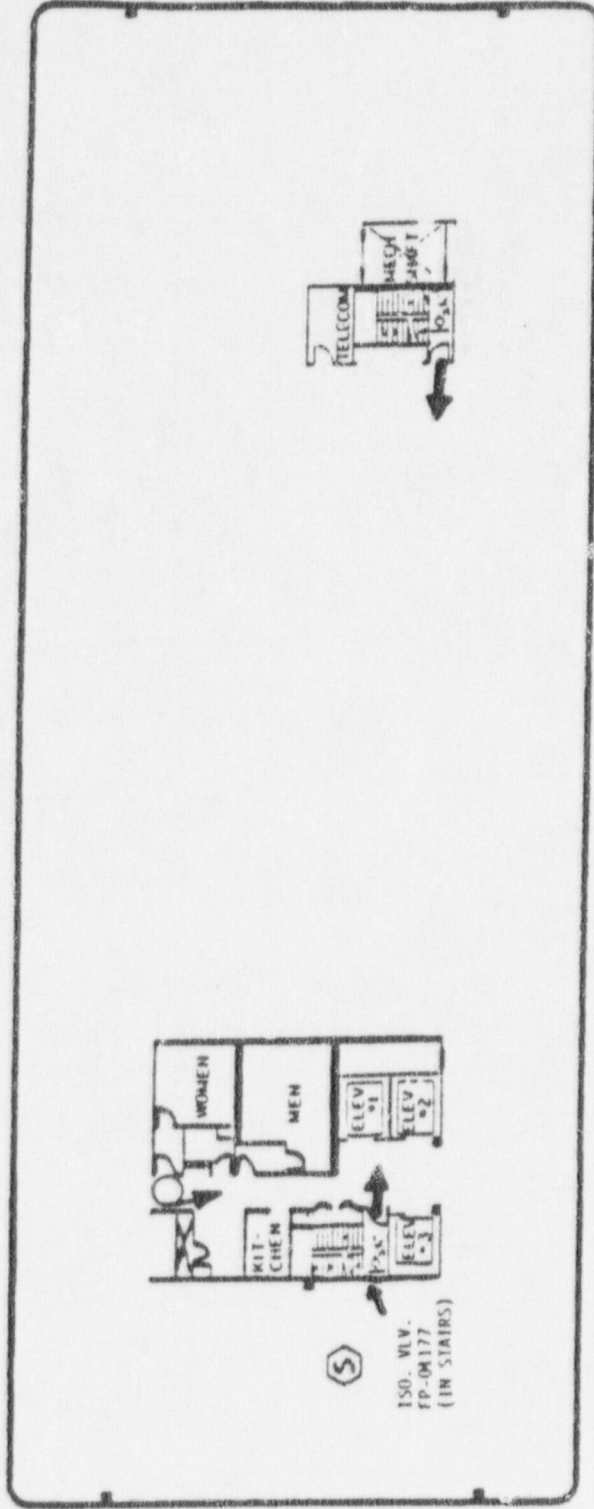
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 Revision 2

Plan - Third Floor Offices
 el. 114'8"

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHROMATES, ETC.
- ◊ NH₃, 35% NH₃
- ◊ ACD
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISC./OTHER
- (H) FIRST AID
- ⊠ EYE WASH
- ⊠ EYE WASH & SHOWER
- ⊠ TELEPHONE
- ⊠ COMMAND POST
- ⊠ PRIMARY ACCESS
- ⊠ SECONDARY ACCESS
- ⊠ EMERGENCY LIGHTS
- ⊠ FIRE WALL RATING
- ⊠ DRY CHEMICAL
- ⊠ CO₂
- ⊠ PRESSURIZED WATER
- ⊠ MALLON
- ⊠ WATER HOSE REEL
- ⊠ P CO₂ HOSE REEL
- ⊠ WHEELED DRY CHEM
- ⊠ SPINKLER RIDER
- ⊠ AUTO. SPINKLER
- ⊠ STANDPIPE
- ⊠ UNDERGROUND ISO VALVE
- ⊠ PVA VALVE
- ⊠ FIRE DEPT. CONNL
- ⊠ HYDRANT-2 HOF
- ⊠ HYDRANT-2 HOL
- ⊠ LUMBER CONNL

AS



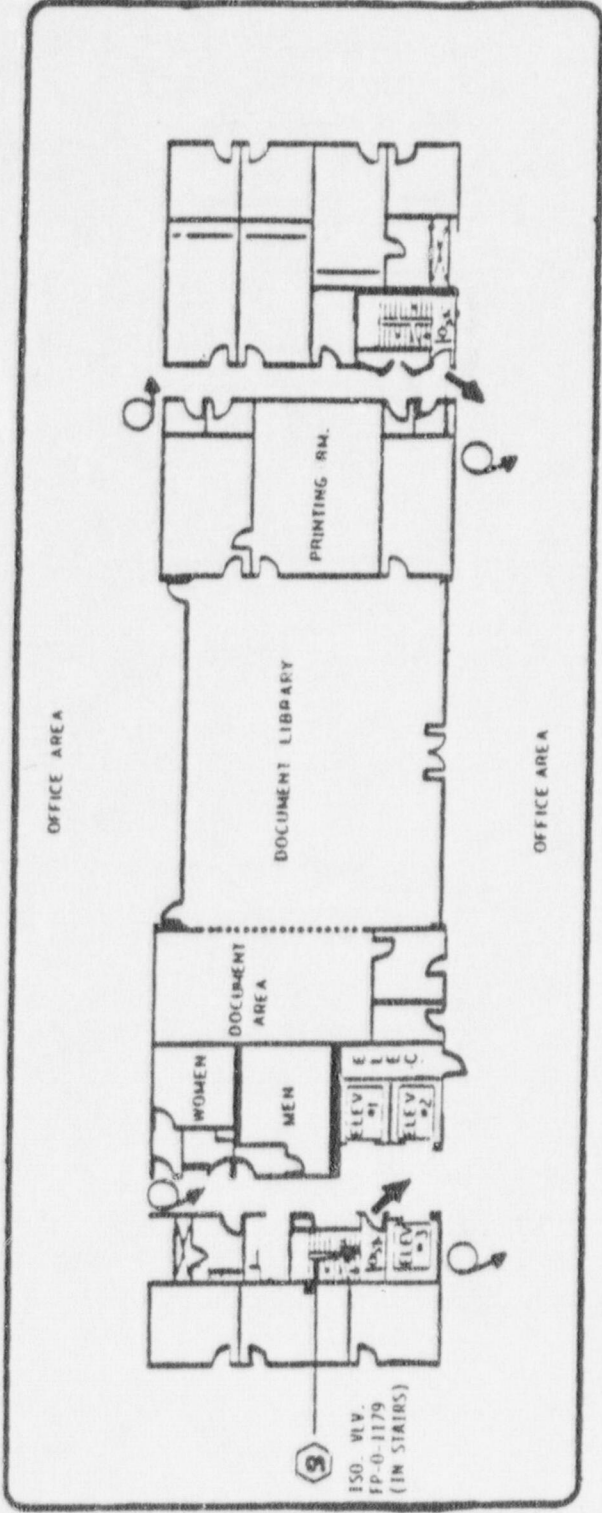
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Revision 2

Plan - Second Floor Offices
el. 101'8"

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
 - ◊ HAZ. WASTE CHROMATES, ETC.
 - ◊ H₂A, 35% NH₃
 - ◊ ACID
 - ◊ CAUSTIC
 - ◊ TOXIC GASES
 - ◊ FLAMMABLE GASES
 - ◊ MISC./OTHER
- ⊠ EYE WASH
 - ⊠ EYE WASH & SHOWER
 - ☎ TELEPHONE
 - ⊠ COMMAND POST
 - ⊠ PRIMARY ACCESS
 - ⊠ SECONDARY ACCESS
 - ⊠ EMERGENCY LIGHTS
 - ⊠ FIRE WALL RATING
- ⊠ DRY CHEMICAL
 - ⊠ CO₂
 - ⊠ PRESSURIZED WATER
 - ⊠ HALON
 - ⊠ WATER HOSE REEL
 - ⊠ P CO₂ HOSE REEL
 - ⊠ WHEELED DRY CHEM
- ⊠ SPRINKLER INSER
 - ⊠ AUTO. SPRINKLER
 - ⊠ STANDPIPE
 - ⊠ UNDERGROUND ISO VALVE
 - ⊠ PIVA VALVE
 - ⊠ FIRE DEPT. CONN.
 - ⊠ HYDRANT-2 HOSE OUTLET
 - ⊠ HYDRANT-2 HOSE W/PUMPER CONN.

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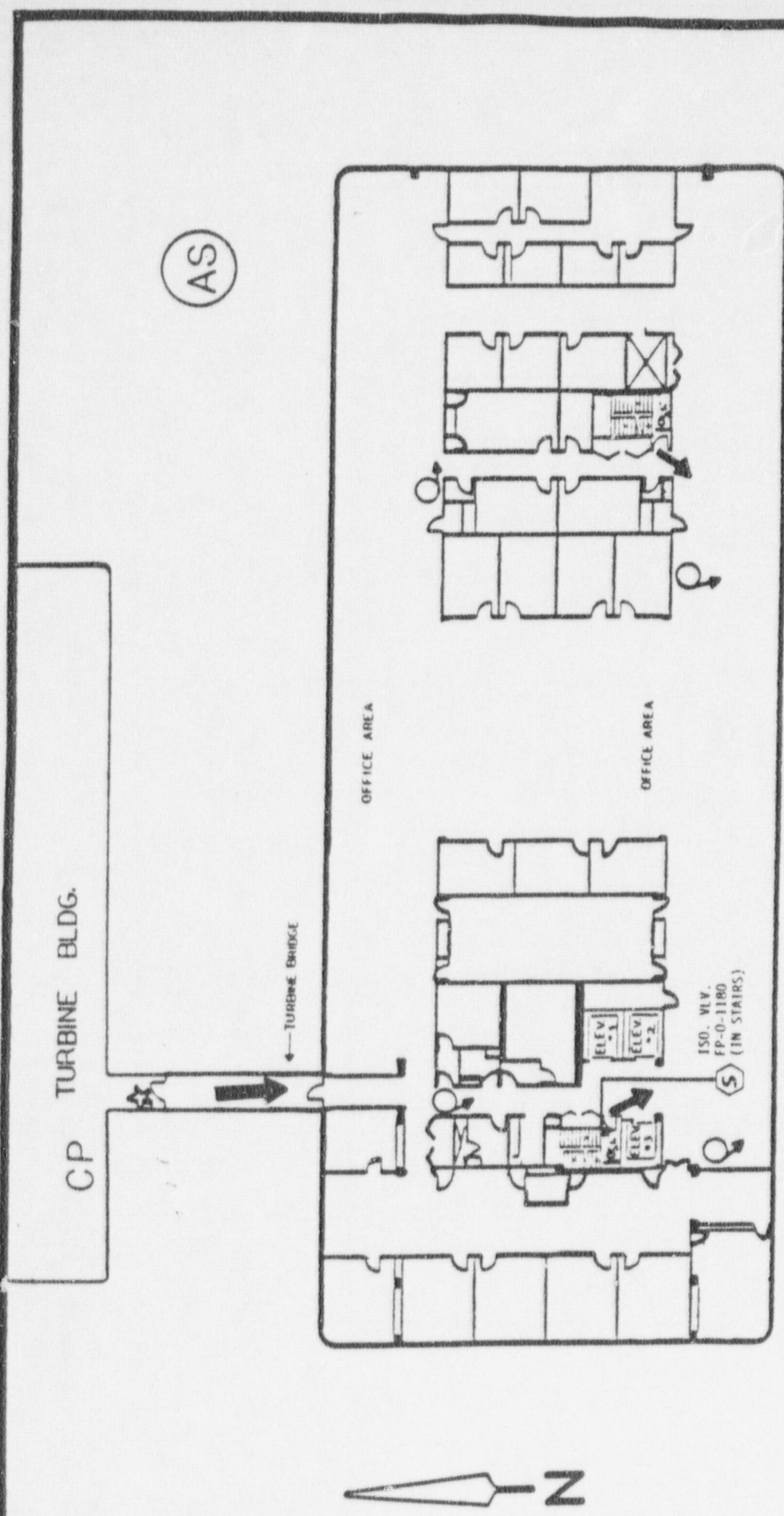


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Revision 2

Plan - Fourth Floor Offices
el. 127'8"

LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂L, 35% M₄
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ LBSC./OTHER
- (H) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ P CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER RESE
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PWA VALVE
- ⊕ FIRE DEPT. CORR
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE W/PUMPER CORR



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Plan - Fifth Floor Offices
el. 140'8"

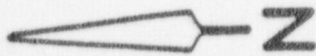
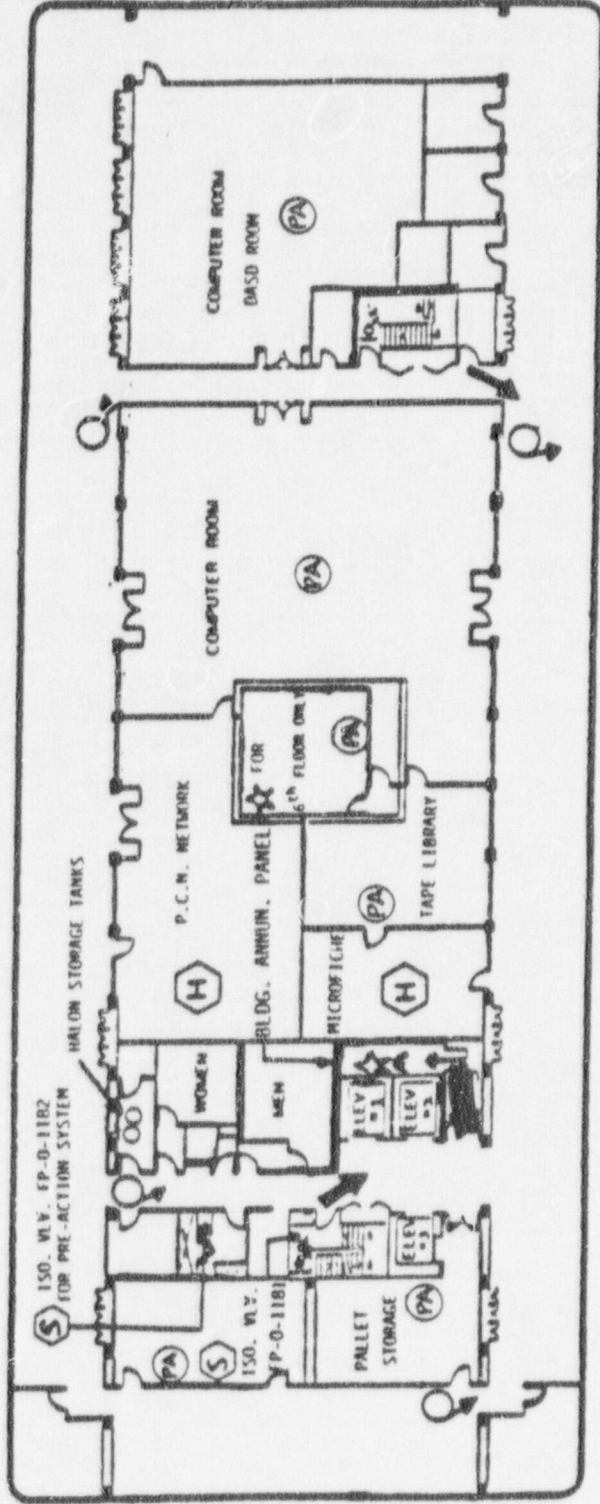
LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHROMATES, ETC.
- ◊ N/A, 35% NH₄
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MSC./OTHER
- ◊ DRY CHEMICAL
- ◊ CO₂
- ◊ PRESSURIZED WATER
- ◊ HALON
- ◊ WATER HOSE REEL
- ◊ CO₂ HOSE REEL
- ◊ WHEELED DRY CHEM
- ◊ HYDRANT-2 HOSE
- ◊ HYDRANT-7 HOSE
- ◊ SPRINKLER RISER
- ◊ AUTO. SPRINKLER
- ◊ STANDPIPE
- ◊ UNDERGROUND ISO VALVE
- ◊ PVA VALVE
- ◊ FIRE DEPT. COMM.
- ◊ HYDRANT-2 HOSE
- ◊ HYDRANT-7 HOSE
- ◊ UPPER CORNER

- ◊ EYE WASH
- ◊ EYE WASH & SHOWER
- ◊ TELEPHONE
- ◊ COMMAND POST
- ◊ PRIMARY ACCESS
- ◊ SECONDARY ACCESS
- ◊ EMERGENCY LIGHTS
- ◊ FIRE WALL RATING

- ◊ DRY CHEMICAL
- ◊ CO₂
- ◊ PRESSURIZED WATER
- ◊ HALON
- ◊ WATER HOSE REEL
- ◊ CO₂ HOSE REEL
- ◊ WHEELED DRY CHEM
- ◊ HYDRANT-2 HOSE
- ◊ HYDRANT-7 HOSE
- ◊ SPRINKLER RISER
- ◊ AUTO. SPRINKLER
- ◊ STANDPIPE
- ◊ UNDERGROUND ISO VALVE
- ◊ PVA VALVE
- ◊ FIRE DEPT. COMM.
- ◊ HYDRANT-2 HOSE
- ◊ HYDRANT-7 HOSE
- ◊ UPPER CORNER

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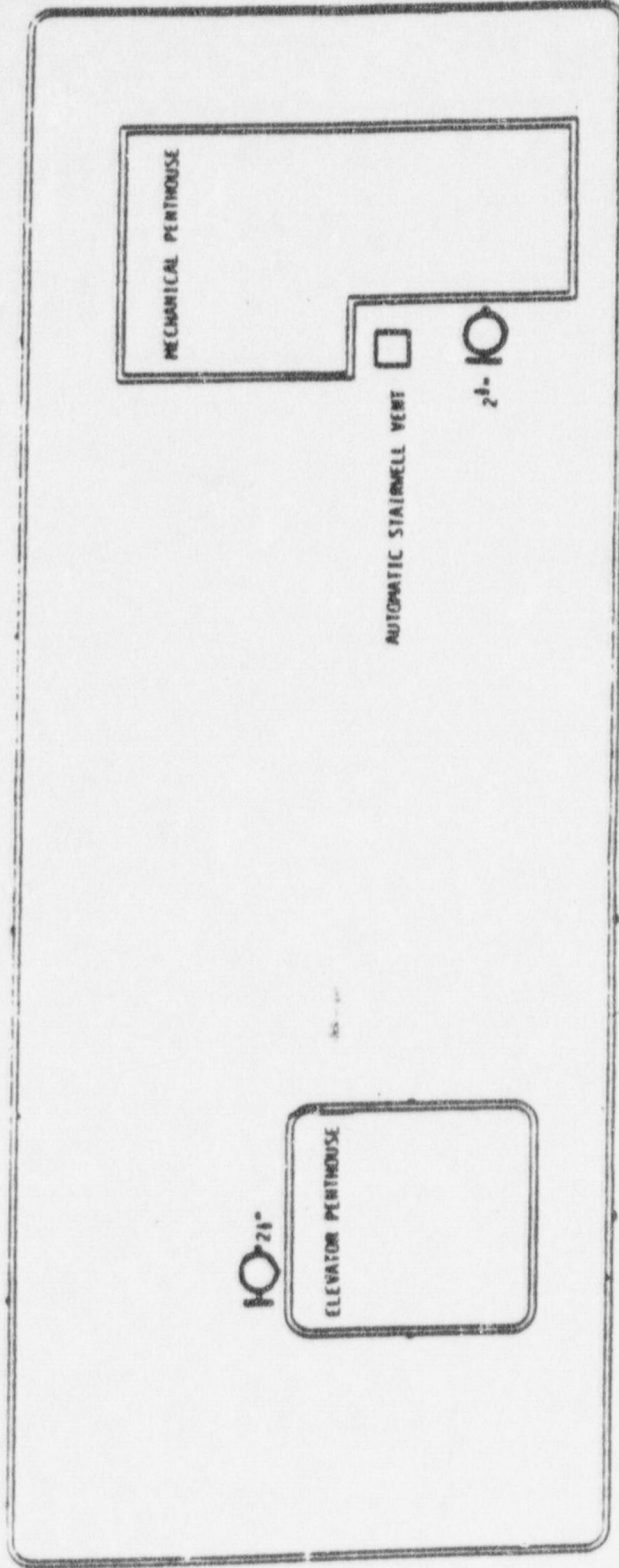


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Revision 2

LEGEND

- ⊙ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊙ HAZ. WASTE COMPARTS, ETC.
- ⊙ N/A, 36% NH₃
- ⊙ ACID
- ⊙ CAUSTIC
- ⊙ TOXIC GASES
- ⊙ FLAMMABLE GASES
- ⊙ MSC./OTHER
- HI FIRST AID
- ⊙ EYE WASH
- ⊙ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊙ COMMAND POST
- ⊙ PRIMARY ACCESS
- ⊙ SECONDARY ACCESS
- ⊙ EMERGENCY LIGHTS
- ⊙ FIRE WALL RATING
- ⊙ DRY CHEMICAL
- ⊙ CO₂
- ⊙ PRESURIZED WATER
- ⊙ HALON
- ⊙ WATER HOSE REEL
- ⊙ CO₂ HOSE REEL
- ⊙ WHEELER DRY CHEST
- ⊙ SPRINKLER RESEAL
- ⊙ AUTO. SPRINKLER
- ⊙ STAIRWELL
- ⊙ UNDERGROUND ISO VALVE
- ⊙ PWA VALVE
- ⊙ FIRE DEPT. CONN.
- ⊙ HYDRANT-2 HOSE OUTLET
- ⊙ HYDRANT-2 HOSE W/PUMPER CONN.

Plan - Sixth Floor Offices
el. 155'6"



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Revision 2

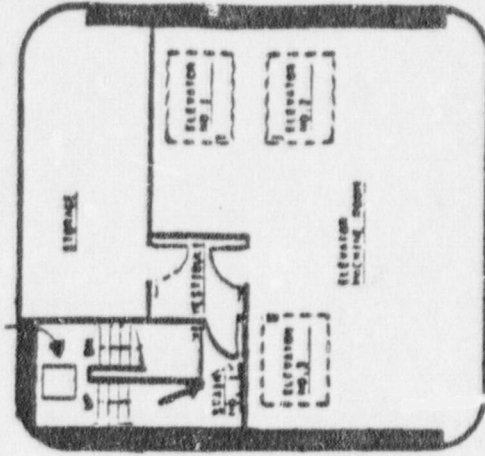
Roof Plan - Penthouse

LEGEND

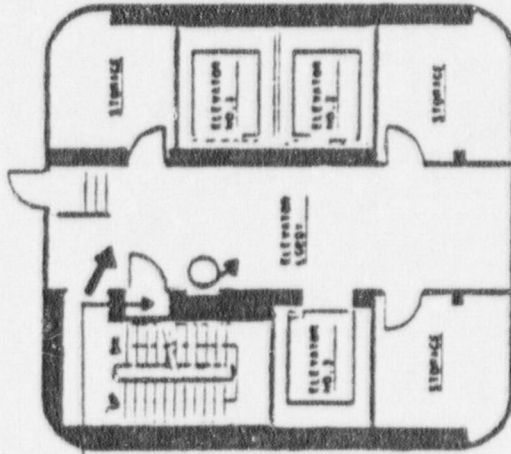
- | | | |
|---|-----------------------------|-------------------------|
| ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊗ DRY CHEMICAL | ⊗ SPRINKLER RISER |
| ◇ HAZ. WASTE CHROMATES, ETC. | ⊗ CO ₂ | ⊗ AUTO. SPRINKLER |
| ◇ NH ₃ , 35% NH ₃ | ○ PRESSURIZED WATER | ⊗ STANDPIPE |
| ◇ ACID | ⊗ HALON | ⊗ UNDERGROUND ISO VALVE |
| ◇ CAUSTIC | ⊗ WATER HOSE REEL | ⊗ PWA VALVE |
| ◇ TOXIC GASES | ⊗ CO ₂ HOSE REEL | ⊗ FIRE DEPT. CONSL |
| ◇ FLAMMABLE GASES | ⊗ WHEELED DRY CHEM | ⊗ HYDRANT-2 HC |
| ◇ MISC./OTHER | ⊗ FIRE WALL RATING | ⊗ TLET |
| | ⊗ EYE WASH | |
| | ⊗ EYE WASH & SHOWER | |
| | ⊗ TELEPHONE | |
| | ⊗ COMMAND POST | |
| | ⊗ PRIMARY ACCESS | |
| | ⊗ SECONDARY ACCESS | |
| | ⊗ EMERGENCY LIGHTS | |
| | ⊗ FIRE WALL RATING | |

AS

AUTOMATIC STAIRWELL VENT



Plan at el. 184'8" (2nd Floor)



Plan at el. 169'3" (Roof Level)

(S)

150. VI V. FP-0-1183



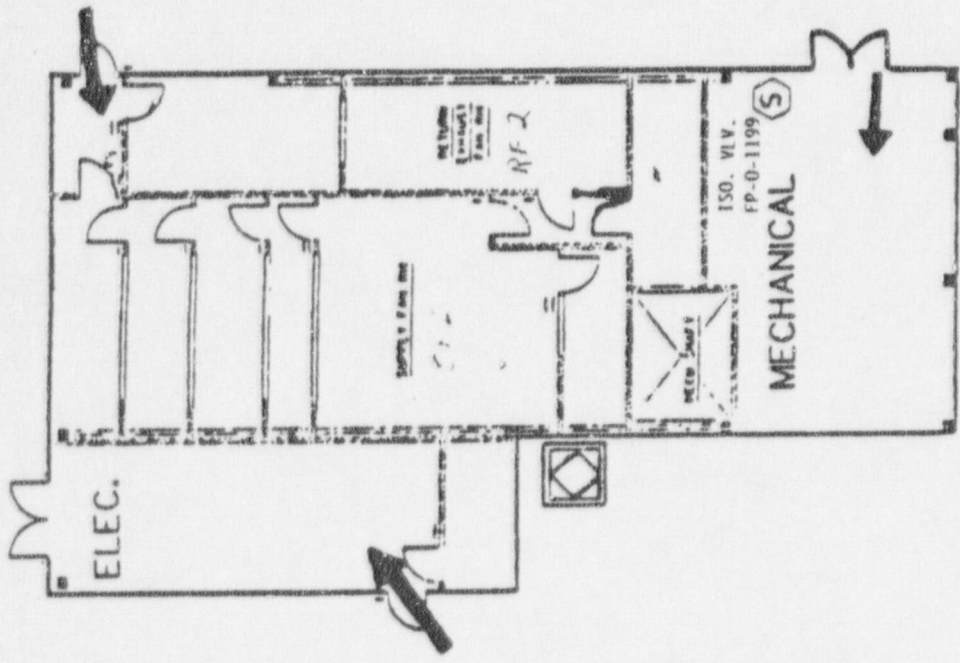
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Revision 2

West (Elevator) Penthouse
Floor Plan

LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂A, 35% H₂S
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- HI FRIST AND
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ☎ TELEPHONE
- ☎ COMMAND POST
- PRIMARY ACCESS
- SECONDARY ACCESS
- △ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ AMBULCIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ LIQUID
- ⊕ PRE-ACTM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STAIRWELL
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PWSA VALVE
- ⊕ FIRE DEPT. COUPLER
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE W/PUMPER CONNECTION

AS



Page 34-16
Revision 2

East Penthouse Floor Plan

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ HAZ. WASTE CHROMATES, ETC.
- ◊ H₂N, 35% NH₃
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISC./OTHER
- ⊞ EYE WASH
- ⊞ EYE WASH & SHOWER
- ⊞ TELEPHONE
- ⊞ COMMAND POST
- ⊞ PRIMARY ACCESS
- ⊞ SECONDARY ACCESS
- ⊞ EMERGENCY LIGHTS
- ⊞ FIRE WALL RATING
- ⊞ DRY CHEMICAL
- ⊞ CO₂
- ⊞ PRESSURIZED WATER
- ⊞ HALON
- ⊞ WATER HOSE REEL
- ⊞ P CO₂ HOSE REEL
- ⊞ WHEELED DRY CHEM
- ⊞ SPINKLER RISER
- ⊞ AUTO. SPINKLER
- ⊞ STANDPIPE
- ⊞ UNDERGROUND ISO VALVE
- ⊞ PIVA VALVE
- ⊞ FIRE DEPT. COMP
- ⊞ HYDRANT-2 H
- ⊞ HYDRANT-2 H / PUMPER CONN.

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

WAREHOUSE B
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES: 1. Class "A" combustibles
2. Flammable liquids (storage cabinet).
3. Grease

MOST PROBABLE FIRE: 1. Class "A" combustibles
2. Flammable liquids

ACCESS AND EGRESS ROUTES: 1. Primary - Via Overhead Rolling Doors
2. Secondary- - Via man doors NE End & SW Side.

NOTE: Axes, prybars or bolt cutters may be required to gain access.

FIRE BRIGADE STAGING AREA: 1. Primary - Dock Unloading Area West Side

HAZARDOUS MATERIALS: 1. Potassium Hydroxide
2. Ammonium Hydroxide
3. Resin in Drums
4. Calgon Containers (35% Hydrazine)
5. Reagent chemicals

MANAGEMENT OF PLANT SYSTEMS:

1. The entire building is protected by two automatic wet sprinkler systems. The sprinkler isolation valves are located in the center of the building, and at the northeast corner of the warehouse.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Brush and grass should be wetted down to preclude potential wild land fire.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers: 8 (eight) 20# dry chemicals
2. Automatic Sprinkler System
3. Fire hydrant located north end of warehouse - water supply from 100,000 gallon tank.

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VENTILATION:

1. Normal building ventilation system.
2. Portable smoke exhausters may be required. Smoke could be exhausted via overhead rolling doors to the outside using hose streams from offsite fire engines.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

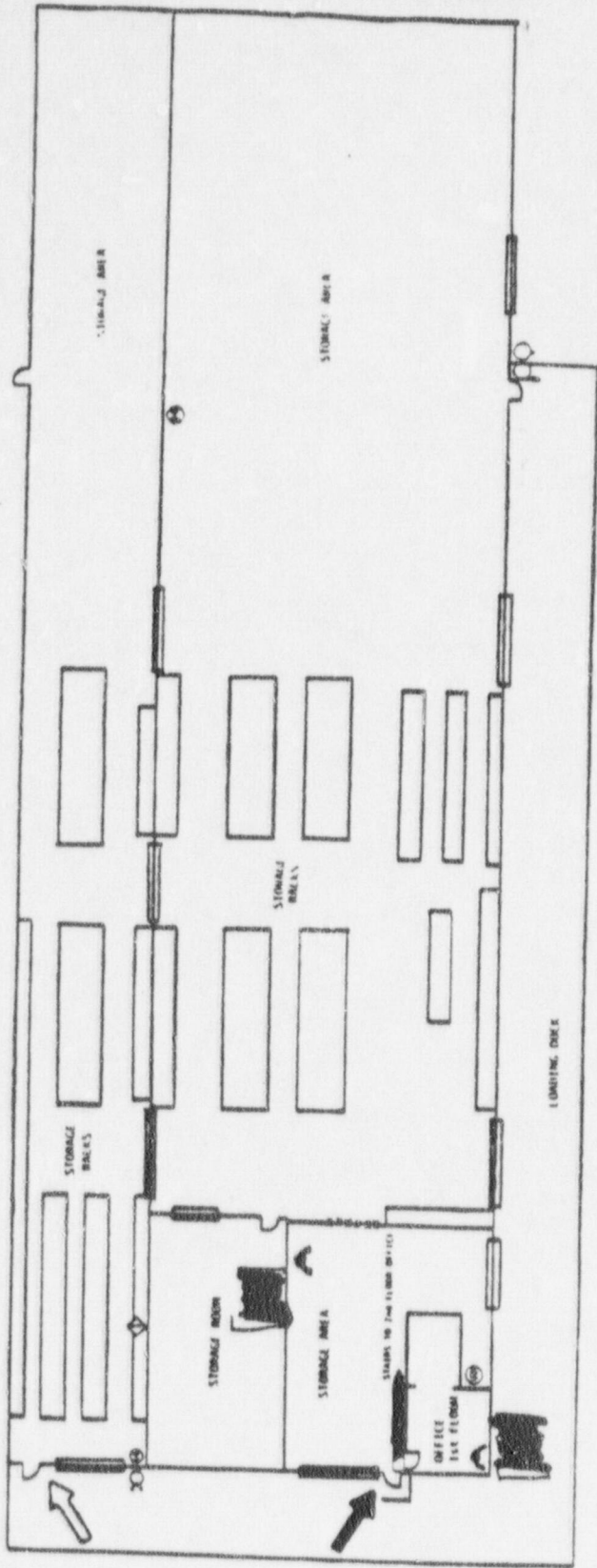
1. Plant Telephones - [REDACTED]
2. Portable Radios (OPS Freq. [REDACTED])

LIGHTING:

1. Plant Lighting Panel located in the Office at the N.W. corner.

SPECIAL PRECAUTIONS:

1. Self-contained breathing apparatus will be required.
2. Portable hand lanterns available on the engine.
3. For a fire involving this building, full protective clothing will be required.
4. The possibility of a flammable liquid fire exists in the northeast portion of the building.
5. Access to the NPO Storage area requires a master key available from the Shift Foreman.



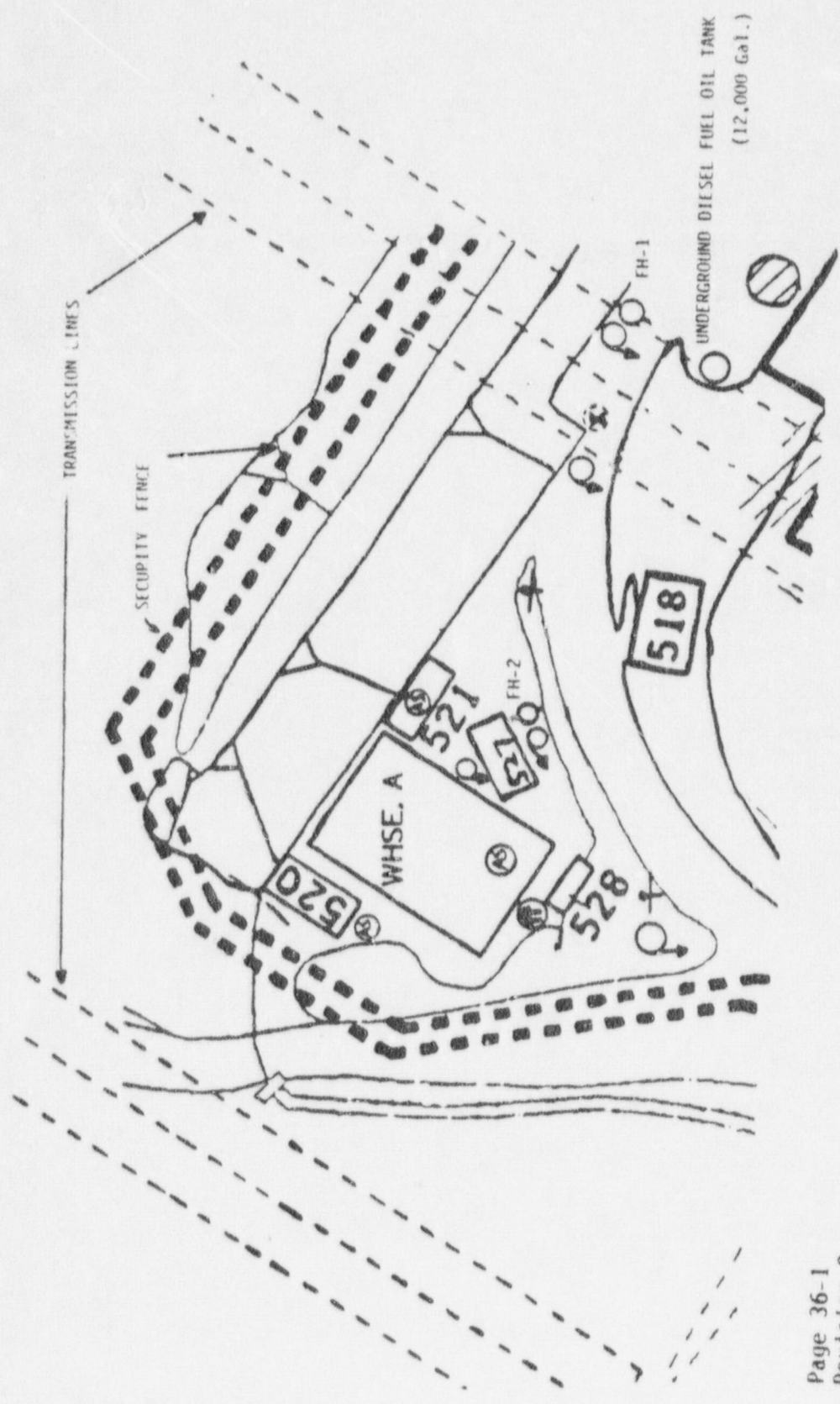
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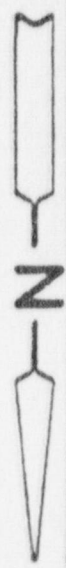
LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂, 35% NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- ⊕ FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ AMBULCIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELS DRY CHEM
- ⊕ SPYGLASS REEFER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PWA VALVE
- ⊕ FIRE DEPT. CONN.
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE W/PUMPER CONN.

WAREHOUSE B



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Revision 2



WAREHOUSE A
AND
SURROUNDING AREA

LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂, 35% NH₃
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- (h) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL: RATMO
- ⊕ ANNUNCIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ P. CO., HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ L. L. HOSE
- ⊕ L. L. HOSE
- ⊕ PRE-ACTION
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PVA VALVE
- ⊕ FIRE DEPT. CONN.
- ⊕ HYDRANT-2 HOSE W/ PUMPER CONN.
- ⊕ HYDRANT-2 HOSE W/ PUMPER CONN.
- ⊕ ELECTRIC MAIN

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

WAREHOUSE A
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Flammable/combustible liquids
2. Flammable/combustible gasses
3. Type "A" combustibles [wood, etc.]
4. Transient combustibles
5. Cable insulation

MOST PROBABLE FIRE:

1. Flammable/combustible liquids
2. Flammable/combustible gasses
3. Transient combustibles
4. Type "A" combustibles
5. Cable insulation

ACCESS AND EGRESS ROUTES

1. Primary - via the door on the south side.
2. Secondary - via the door on the north side.
3. The roll-up doors on the north and south sides can also be used for access/egress.

FIRE BRIGADE STAGING AREA:

1. Primary: on the south side of the building.
2. Secondary: on the west side of the building.

HAZARDOUS MATERIALS:

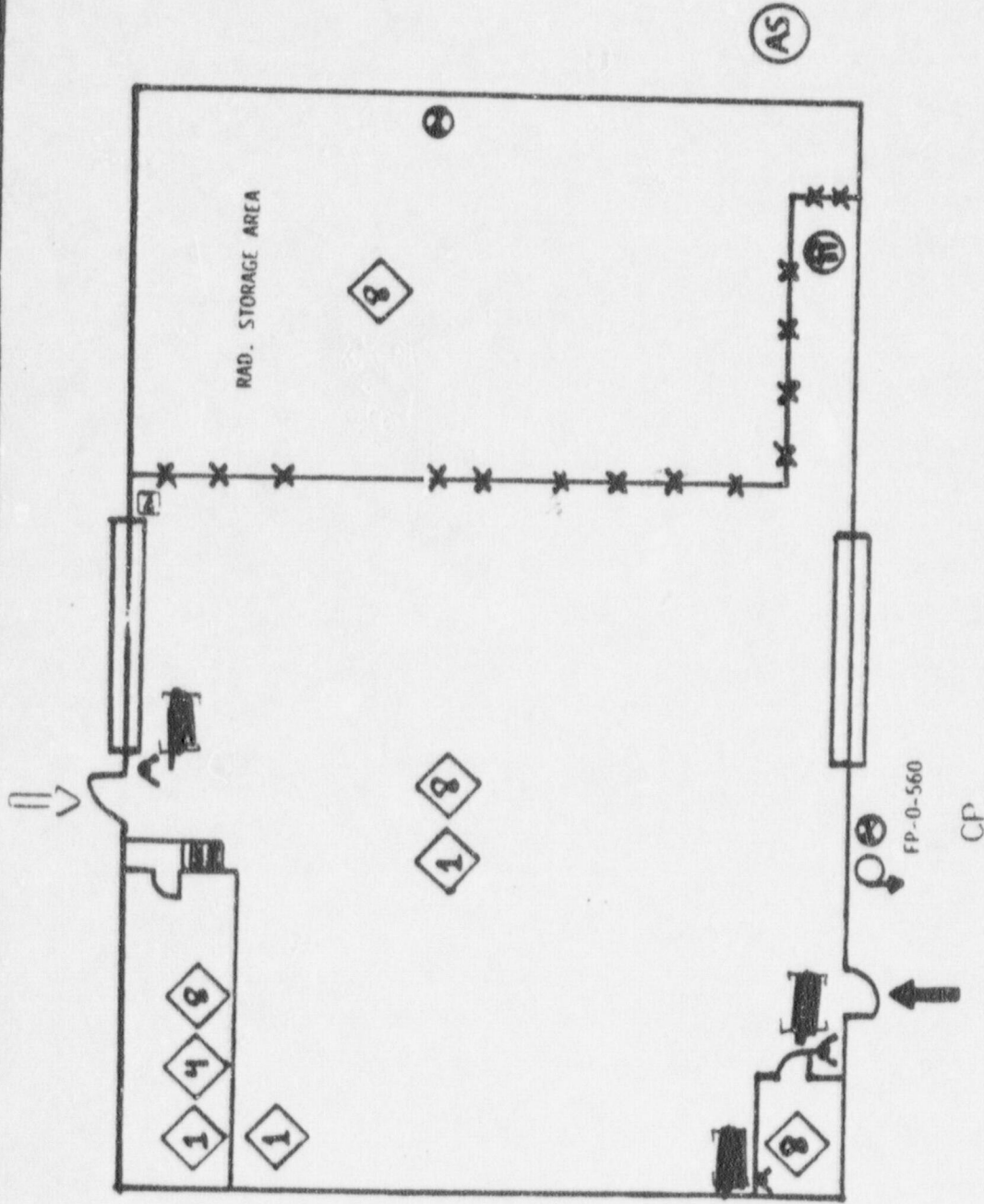
1. Cleaning solvent
2. Oil
3. Misc. flammable liquids
4. Flammable gasses

MANAGEMENT OF BUILDING SYSTEMS:

1. The electrical main is located in the south-east corner of the building.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

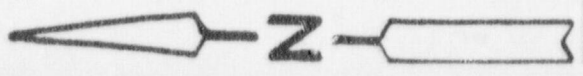


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WAREHOUSE A

LEGEND

- ① FLAMMABLE/COMBUSTIBLE LIQUIDS
- ② HAZ. WASTE CHROMATES, ETC.
- ③ H₂A, 35% NH₃
- ④ ACID
- ⑤ CAUSTIC
- ⑥ TOXIC GASES
- ⑦ FLAMMABLE GASES
- ⑧ MISC./OTHER
- (1) FIRST AID
- E EYE WASH
- E EYE WASH & SHOWER
- ⚡ TELEPHONE
- ① COMMAND POST
- ② PRIMARY ACCESS
- ③ SECONDARY ACCESS
- △ EMERGENCY LIGHTS
- ▬ FIRE WALL BATHING
- ⊕ AIR PURIFICATION PLANT
- ⊙ DRY CHEMICAL
- ⊙ CO₂
- PRESSURIZED WATER
- ⊙ HALON
- P WATER HOSE REEL
- P CO₂ HOSE REEL
- ⊓ WHEELED DRY CHEM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊙ STANDPIPE
- I UNDERGROUND ISO VALVE
- † PWA VALVE
- ⊙ FIRE DEPT. CONN.
- ⊙ HYDRANT-2 HO
- LET
- UMPER CORR.



FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers: 6 (six) dry chemicals
2. Fire hose reel stations: 1 (one), located outside on the south side of the building.
3. The warehouse is protected by automatic sprinklers. FP-0-560, located at the riser on the south side of the building, isolates the warehouse.
4. Fire hydrant #2 is located along the road south of the start-up shack (building 527).

VENTILATION:

1. Natural ventilation via roll-up doors.
2. Mechanical ventilation - portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

LIGHTING:

SAFETY EQUIPMENT: An eyewash station is located just east of the north roll-up door, along the north wall.

COMMUNICATIONS: Telephones: [REDACTED]
Radio: OP Frequency [REDACTED]

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

AUXILIARY PACKAGE BOILER
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Diesel fuel to boiler
2. Start-up propane to boiler
3. Transient combustibles
4. Paint stored in the adjacent paint storage seatrain.

MOST PROBABLE FIRE:

1. Burner oil leak
2. Propane leak
3. Overheated pumps
4. Transient combustibles
5. Diesel fuel oil.

ACCESS AND EGRESS ROUTES

1. Primary - via the west door.
2. Secondary - via the north roll-up door or the east door.

FIRE BRIGADE STAGING AREA:

1. Primary: north-west of the building.

HAZARDOUS MATERIALS:

1. Diesel fuel oil
2. Propane
3. Toxic fumes or skin contact from 35% Hydrazine.
4. Smoke, fumes, products of combustion.
5. Oil
6. Ammonia

MANAGEMENT OF BUILDING SYSTEMS:

1. The electrical shutoff is located along the west wall.
2. The propane shutoff is located at the bottles on the east side of the building.
3. Diesel fuel shutoff is located east of the building at the top of the stairway and north of the stairway. The package boiler draws fuel from 2 underground tanks located in that area.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Use water fog to cool exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers: 2 (two) 20# MPDC's.
2. Sprinkler system (controlled by FP-0-995, located inside package boiler 0-1.
3. Fire hydrant #4 and hose reel are to the south-west of the building.
4. Foam - located on the Fire Truck, the Maintenance Brigade Locker, and the Operations Brigade Locker.

VENTILATION:

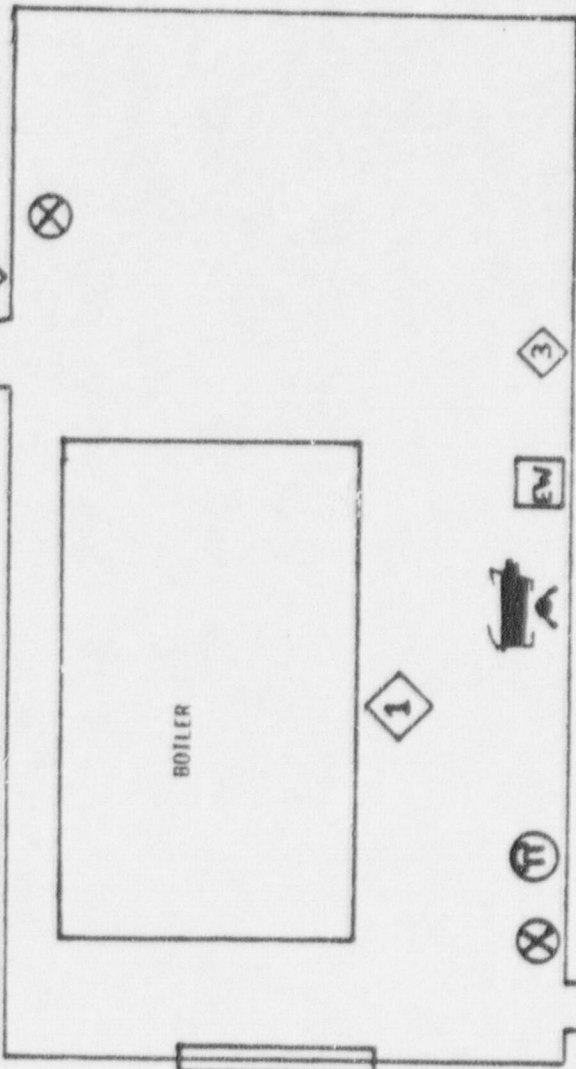
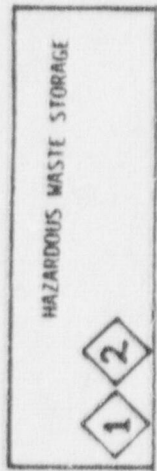
1. Natural ventilation via roll-up door on the north end of the building.
2. Mechanical ventilation - portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
4. Fire hose stream ventilation techniques may be used.

LIGHTING:

- 1 Emergency lighting is provided.

SAFETY EQUIPMENT: An eyewash station is located at the center of the west wall.

COMMUNICATIONS: Telephones: [REDACTED]
Radio: OP Frequency [REDACTED]



AS

FH 4

CP

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Revision 0



AUXILIARY PACKAGE BOILER

LEGEND

- ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◇ HAZ. WASTE CHROMATES, ETC.
- ◇ NH₃, 35% NH₃
- ◇ ACID
- ◇ CAUSTIC
- ◇ TOXIC GASES
- ◇ FLAMMABLE GASES
- ◇ MSC./OTHER
- HI FIRST AID
- ⊠ EYE WASH
- ⊠ EYE WASH & SHOWER
- ☎ TELEPHONE
- ⊠ COMMAND POST
- ⊠ PRIMARY ACCESS
- ⊠ SECONDARY ACCESS
- ⊠ EMERGENCY LIGHTS
- ⊠ FIRE WALL RATING
- ⊠ AMBULIATOR PANEL
- ⊠ PRE-ACTION
- ⊠ DRY CHEMICAL
- ⊠ CO₂
- ⊠ PRESSURIZED WATER
- ⊠ HALON
- ⊠ WATER HOSE REEL
- ⊠ CO₂ HOSE REEL
- ⊠ WHEELED DRY CHEM
- ⊠ SPRINKLER RISER
- ⊠ AUTO. SPRINKLER
- ⊠ STAIRPIPE
- ⊠ UNDERGROUND ISO VALVE
- ⊠ PVA VALVE
- ⊠ FIRE DEPT. CONN.
- ⊠ HYDRANT-2 HOSE OUTLET
- ⊠ HYDRANT-2 HOSE W/PUMPER CONN.
- ⊠ ELEC. TRNC. MAIN

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

COLD MACHINE SHOP
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Flammable liquids
2. Flammable gasses
3. Cable Insulation
4. Type "A" combustibles
5. Transient combustibles

MOST PROBABLE FIRE:

1. Flammable liquids
2. Flammable gasses.
3. Transient combustibles

ACCESS AND EGRESS ROUTES

1. Primary - North end via the sliding doors, or personnel doors; south end via the doors at the enclosed stairway.
2. Secondary - on the east side via the welding shop or at the east end of the office hallway.

FIRE BRIGADE STAGING AREA:

1. Primary: At either the north or south ends of the building.
2. Secondary: On the east side of the building.

HAZARDOUS MATERIALS:

1. Combustible liquids
2. Combustible gasses
3. Misc./transient hazardous material may be brought in temporarily on a job-specific basis.

MANAGEMENT OF PLANT SYSTEMS:

1. The electric main is located on the east side of the first floor in the room just south of the welding shop.
2. Ventilation fans are located in the third floor mechanical room.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.
2. Compressed gas storage bottles stored in the welding shop may pose a hazard.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers: 18 Halon.
2. Fire hose reels - 8
3. The following valves control the flow of firewater in the cold machine shop:
FP-0-1158: Isolates the entire building.
FP-0-1161: Isolates first floor sprinklers.
FP-0-1162: Isolates hose reel stations.
FP-0-1163: Isolates second floor sprinklers.
The four valves mentioned above are located in the first floor electric shop, north wall, under stairs #3. FP-0-1225, an underground isolation valve located several feet south-west of the cold machine shop, also isolates the entire building.
4. Fire hydrant #29 is located to the north of the building, Fire hydrant #28 is located to the south.
5. A fire department connection is located at the south-east corner of the building.
6. A building fire annunciator panel is located in the lobby by stair #2. The site evacuation fire alarm panels are located on the other side of the wall from the annunciator panel, in the electric shop reception area.


VENTILATION:

1. Fans are located in the third floor ventilation room. Controls for the fans are at this location and at the Motor Control Center of the second floor electric shop. Photoelectric smoke detectors are used to shut down the supply and return air systems. Detectors are resettable at the temperature control panels that are on the exterior of the main duct.
2. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.
3. Natural ventilation via sliding or roll-up doors.

COMMUNICATIONS:

1. Telephones:



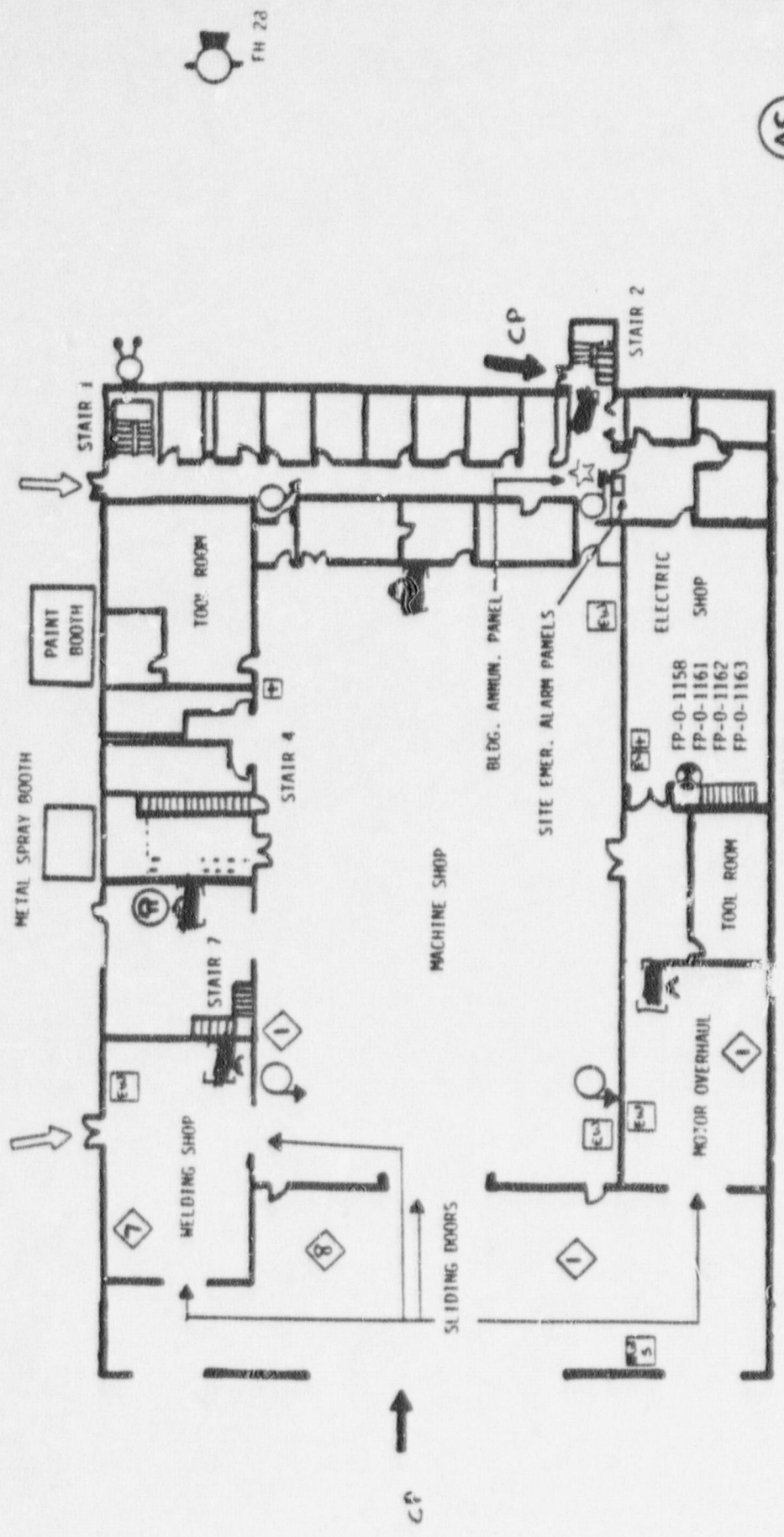
2. Portable Radios (Ops Freq. .

LIGHTING:

1. Emergency lighting is provided.
2. Building lights are controlled at Breaker LP-6, located at the center of the west wall of the machine shop.

SAFETY EQUIPMENT:

1. An eyewash/shower is located in the laydown area at the north end of the shop.
2. Eye-wash stations are located in the north-west and south-west corners of the main shop, on the east walls of the motor overhaul shop and the electric shop, and on the east wall of the welding shop.
3. First aid kits are located on the east walls of the electric shop and the machine shop.



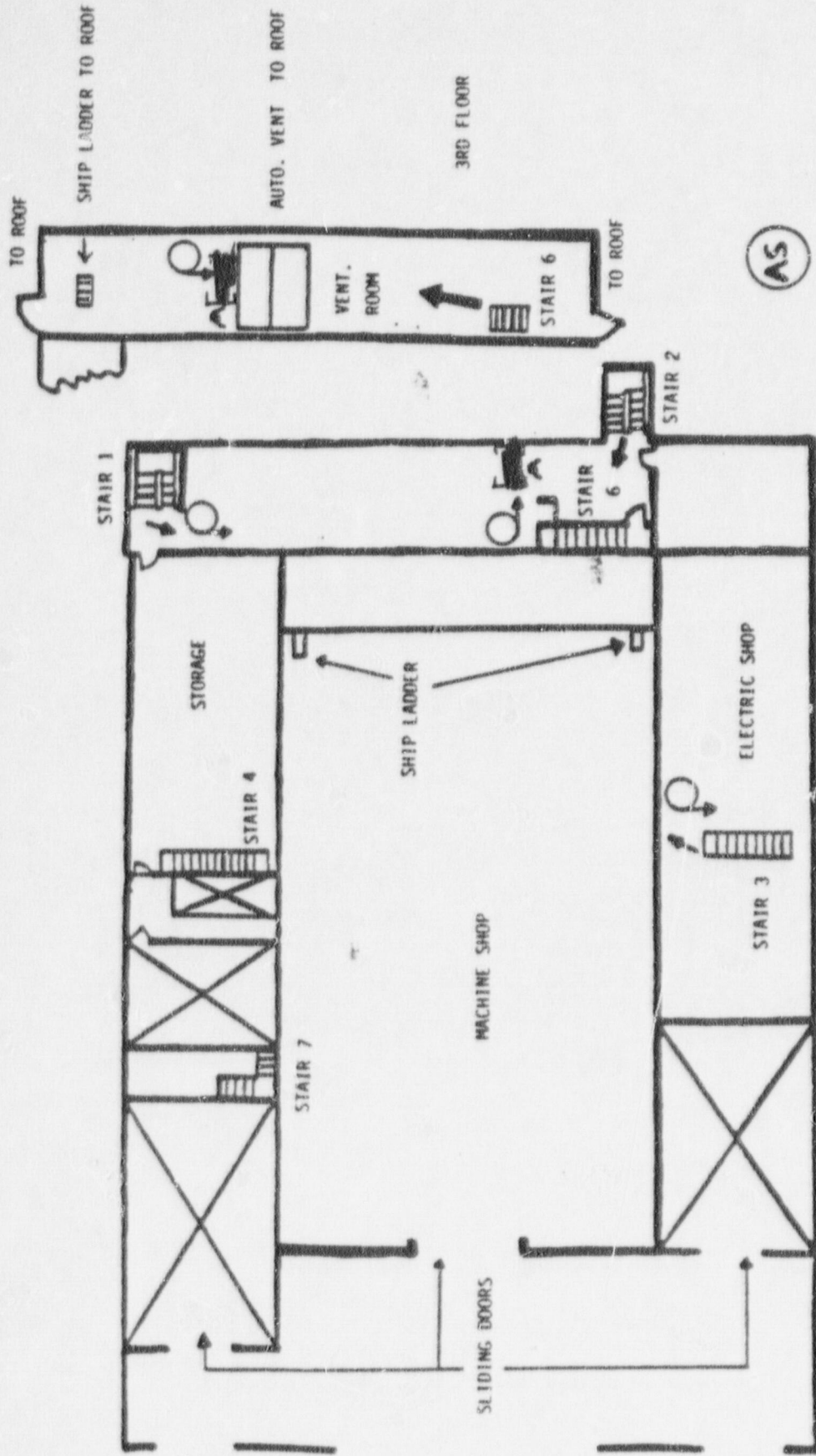
AS
FP-0-1225

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LEGEND

- ◇ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◇ HAZ. WASTE CHROMATES, ETC.
- ◇ H₂N₂, 35% NH₃
- ◇ ACID
- ◇ CAUSTIC
- ◇ TOXIC GASES
- ◇ FLAMMABLE GASES
- ◇ MISC./OTHER
- (H) FIRST AID
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PVA VALVE
- ⊕ FIRE DEPT. CONNL
- ⊕ HYDRANT-2 HOSE W/ PUMPER CONNL
- ⊕ HYDRANT-2 HOSE W/ PUMPER CONNL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RAISING
- ⊕ AMBULIATOR PANEL

COLD MACHINE SHOP
GROUND FLOOR



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Revision 0

LEGEND

- | | | |
|---------------------------------|-----------------------------|-------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ DRY CHEMICAL | ⊕ SPRINKLER RISER |
| ⊕ HAZ. WASTE CHROMATES, ETC. | ⊕ CO ₂ | ⊕ AUTO. SPRINKLER |
| ⊕ N/A, 35% NH ₃ | ⊕ PRESSURIZED WATER | ⊕ STANDPIPE |
| ⊕ ACID | ⊕ HALON | ⊕ UNDERGROUND ISO VALVE |
| ⊕ CAUSTIC | ⊕ WATER HOSE REEL | ⊕ PYRA VALVE |
| ⊕ TOXIC GASES | ⊕ CO ₂ HOSE REEL | ⊕ FIRE DEPT. CONN. |
| ⊕ FLAMMABLE GASES | ⊕ WHEELED DRY CHEM. | ⊕ HYDRANT-2 HOSE |
| ⊕ MISC./OTHER | ⊕ FIRE WALL Rm TRND | ⊕ HYDRANT-2 HOSE |
| | ⊕ RMPER CONN. | |



COLD MACHINE SHOP
2ND + 3RD FLOOR

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

TRAINING BUILDING
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Cable Insulation
2. Transient combustibles
3. Type "A" combustibles
4. Elevator hydraulic oil

MOST PROBABLE FIRE:

1. Cable Insulation
2. Transient combustibles
3. Type "A" Combustibles

ACCESS AND EGRESS ROUTES

1. Primary - via the entry plaza door (on the east side of the building).
2. Secondary - via doors on the north and south ends of the building.
3. Access to the roof may be obtained by a ladder in the upstairs Mechanical Room.

FIRE BRIGADE STAGING AREA:

1. Primary: At the entry plaza by the building Annunciator Panel.
2. Secondary: At either the north or south ends of the building.

HAZARDOUS MATERIALS:

1. Smoke, fumes, and products of combustion.
2. Halon discharge in the simulator room and other adjoining rooms.

MANAGEMENT OF PLANT SYSTEMS:

1. The electric main is located in the downstairs mechanical room by the site emergency alarm panels.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers: 17 Halon fire extinguishers.
2. Fire hose reels - 4 on the first floor and 4 on the second floor.
3. The following valves control the flow of firewater in the Training Building:
 - FP-0-567: Controls first floor sprinklers.
 - FP-0-568: Controls second floor sprinklers.
 - FP-0-569: Controls hose reel stations, both floors.
 - FP-0-567, 568, AND 569 are located in the south-west stairwell, on the first floor.
 - FP-0-1063, an underground valve south-east of the Training Building isolates the entire building from the yard loop.
4. A fire department connection is located at the south-west corner of the building.
5. Fire hydrant 20 is located south-east of the building, fire hydrant 17 is located north-east of the building. Fire hydrant 30 is located south-west of the building.
6. The simulator room and adjoining rooms are protected with a Halon system which can be automatically or manually activated. The Halon tanks and controls are located in the second floor Mechanical Room.
7. A. A grid display illumination annunciator panel is located outside of the building on the east side near the entry-plaza.
 - B. Site/Fire Evacuation Alarm panels are located in the first floor mechanical room.
 - C. Building annunciator reset control panels are located in the second floor mechanical room (room 242) - panel contains silence/reset capabilities, zone lights (red LED for alarm, yellow LED for trouble) for detectors, Halon and sprinkler activation (panel has abort capabilities for Halon).

VENTILATION:

1. Fire dampers throughout the building for passive fire protection.
2. Halon protected areas - The activation of both detectors (detectors cross-zoned) shall activate electrical circuits causing shutdown of the air conditioning, close-up of the ETL duct dampers and shutdown of the power supply to simulator area.
3. Mechanical ventilation - use building ventilation or portable smoke ejectors to remove smoke.
4. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

1. Telephones:



2. Portable Radios (Ops Freq. [redacted])
3. Emergency Evacuation Control Panels located in Room 125.

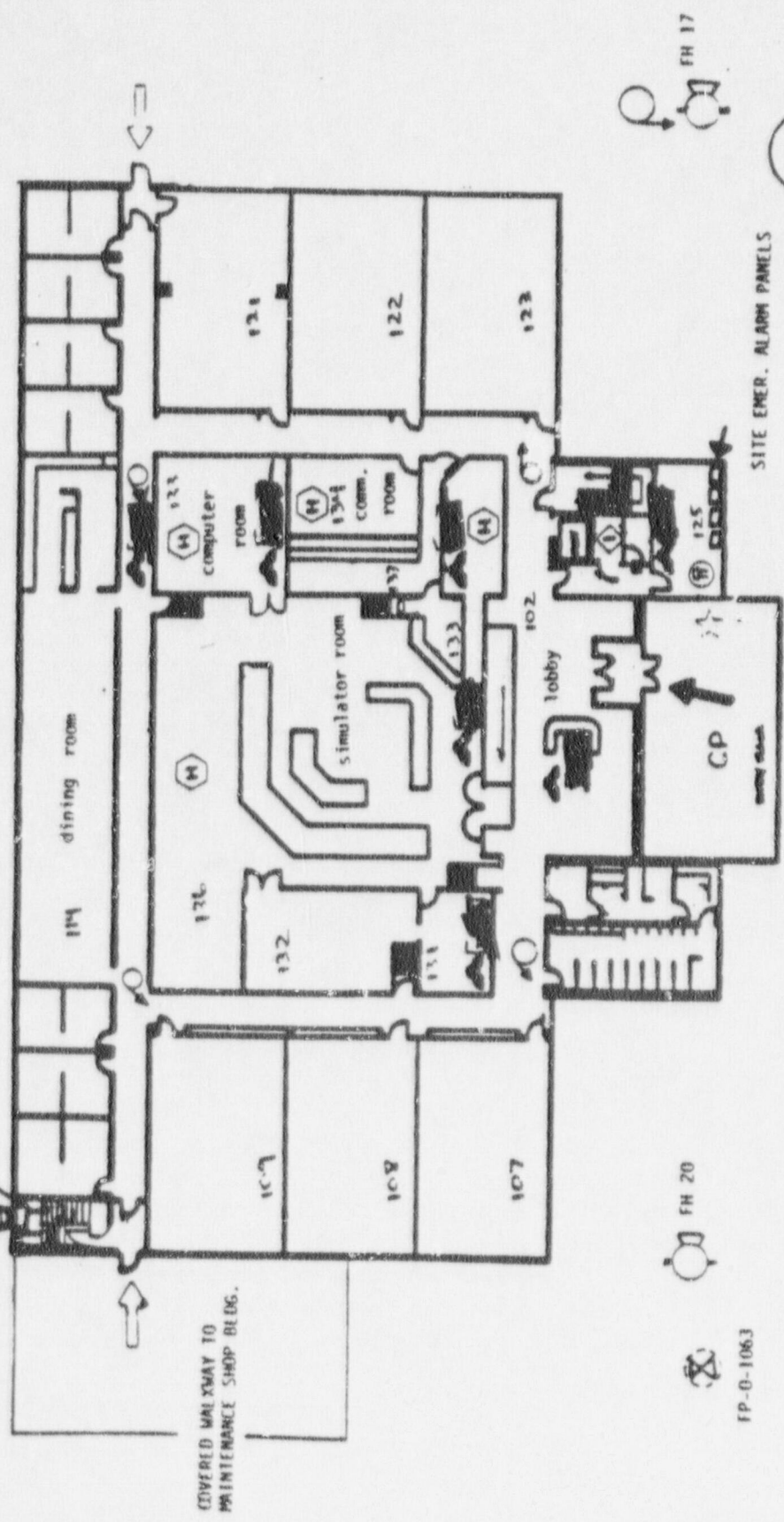
LIGHTING:

1. Emergency lighting in area.

SAFETY EQUIPMENT:

1. A first aid kit is located on the first floor next to Room 125.

FP-0-567
 FP-0-568
 FP-0-569



COVERED WALKWAY TO
 MAINTENANCE SHOP BLDG.

FP-0-1063

SITE EMER. ALARM PANELS

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LEGEND

- ⊕ FLAMMABLES/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂A, 35% M/L
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- (H) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ APPROPRIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PVA VALVE
- ⊕ FINE DEPT. CONN.
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE W/PUMPER CONN.
- ⊕ ELECTRIC MASH

DCPD Training Building
 FIRST FLOOR

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

MAINTENANCE SHOP BUILDING
FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Cable Insulation
2. Transient combustibles
3. Type "A" combustibles
4. Misc. combustible liquids/gasses stored in the chemistry lab and machine shop.

MOST PROBABLE FIRE:

1. Cable Insulation
2. Transient combustibles
3. Misc. combustible liquids/gasses
4. Type "A" Combustibles

ACCESS AND EGRESS ROUTES

1. Primary - via the entranceway on the north side of the building.
2. Secondary - via the east entranceway or thru the Training Building; first or second floors.
3. Access to the roof may be gained thru Room 203, at the north-west corner of the second floor, next to the elevator.

FIRE BRIGADE STAGING AREA:

1. Primary: On the north side of the building
2. Secondary: On the east side of the building

HAZARDOUS MATERIALS:

1. Smoke, fumes, and products of combustion.
2. Chemicals stored in the chemistry lab.
3. Flammables stored in maintenance shop.

MANAGEMENT OF PLANT SYSTEMS:

1. The electrical main is located in Room 106 at the north-west end of the building.
2. Emergency evacuation and alarm panels are located in the same room.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire extinguishers: 21 #14 Halon
2. Fire hose reels - 7 total, 3 on the ground floor and 4 on the second floor.
3. The building is completely sprinklered.
4. The following valves control the flow of firewater in the building:
FP-0-1230: Isolates the second floor sprinklers.
FP-0-1231: Isolates the hose reel stations and first floor sprinklers.
FP-0-1230 and FP-0-1231 are located in Room 124 at the north-east corner of the first floor.
FP-0-1227: Isolates the entire building. It is an underground valve located approximately 20' from the north-east corner of the building.
5. A fire department connection (two 2½") is located on the north side of the building at the east end.
6. Fire hydrants
 - A. Number 20 is located in the parking lot north west of the building.
 - B. Number 30 is located west of the building on Breakwater Blvd.
7. The annunciator panel for the maintenance shop building is located at the Training Building entry plaza. The reset annunciator panel is located on the second floor mechanical room in the Training Building.
- 8.. Site/Fire Evacuation Alarm panels are located in Room 106 at the north-west end of the building.

VENTILATION:

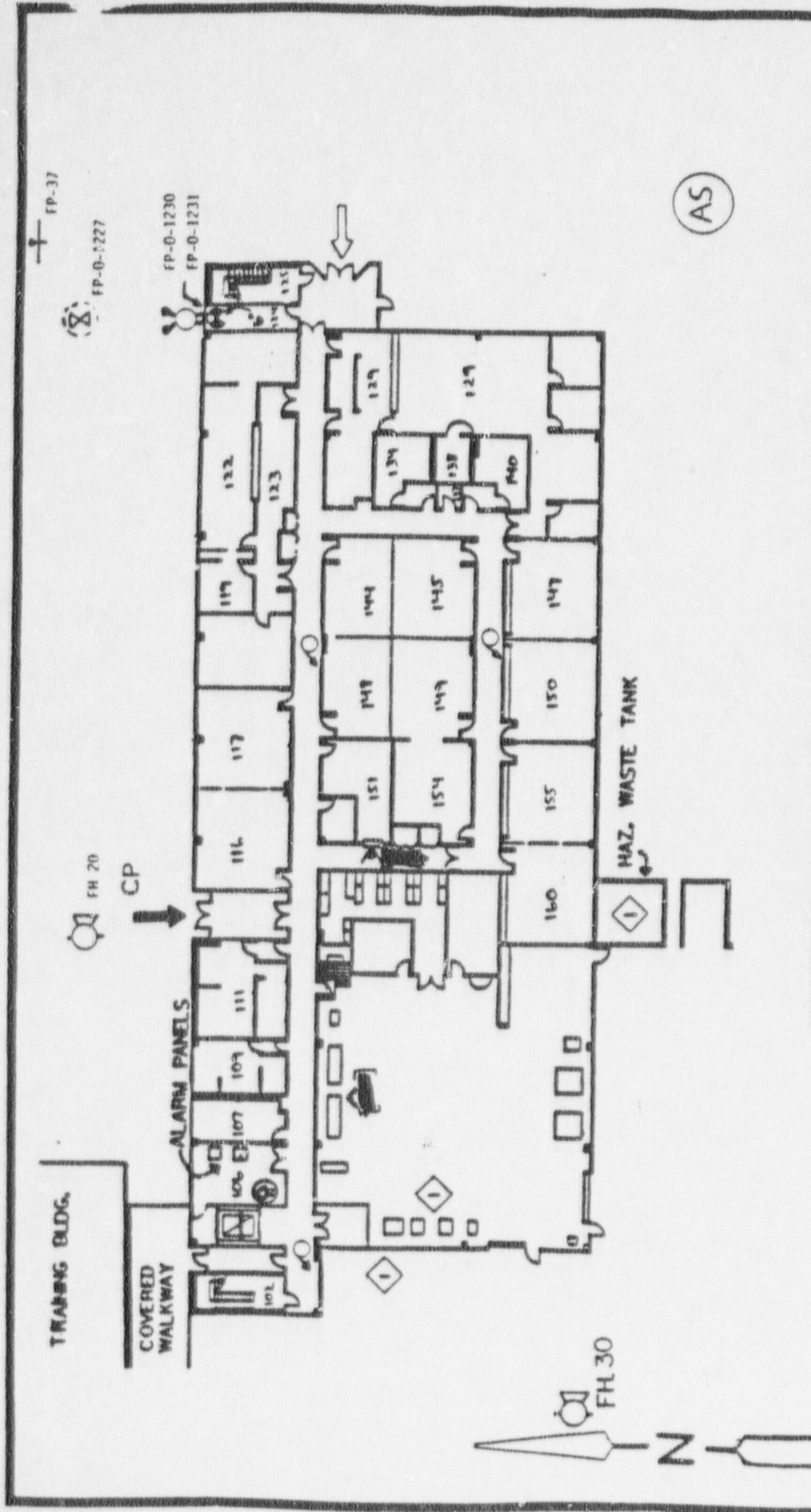
1. The building is served by four operating HVAC systems.
 - A. Main building (variable volume)
 - B. Security Access Control and Dosimetry (variable volume)
 - C. Chemistry laboratory (constant air volume)
 - D. Mechanical Shop - Heating and ventilating system.
2. All air conditioning equipment for the main building, security access control, dosimetry, and chemistry are located in a common penthouse on the roof.
3. fire dampers throughout the building for passive fire protection.

COMMUNICATIONS:

1. Telephones:
 - A. First floor comm. room #124 Ext. [REDACTED]
 - B. First floor Shop Ext. [REDACTED]
 - C. First floor south-west hallway near room [REDACTED] [Ext. [REDACTED]]
 - D. Second floor chem lab Room 239 Ext. [REDACTED]
 - E. Second floor south-west office Ext. [REDACTED]
2. Radios (Ops Freq. [REDACTED]).

SAFETY EQUIPMENT:

1. An eyewash/shower is located in the upstairs chemistry lab. A separate eyewash is also located in the lab.

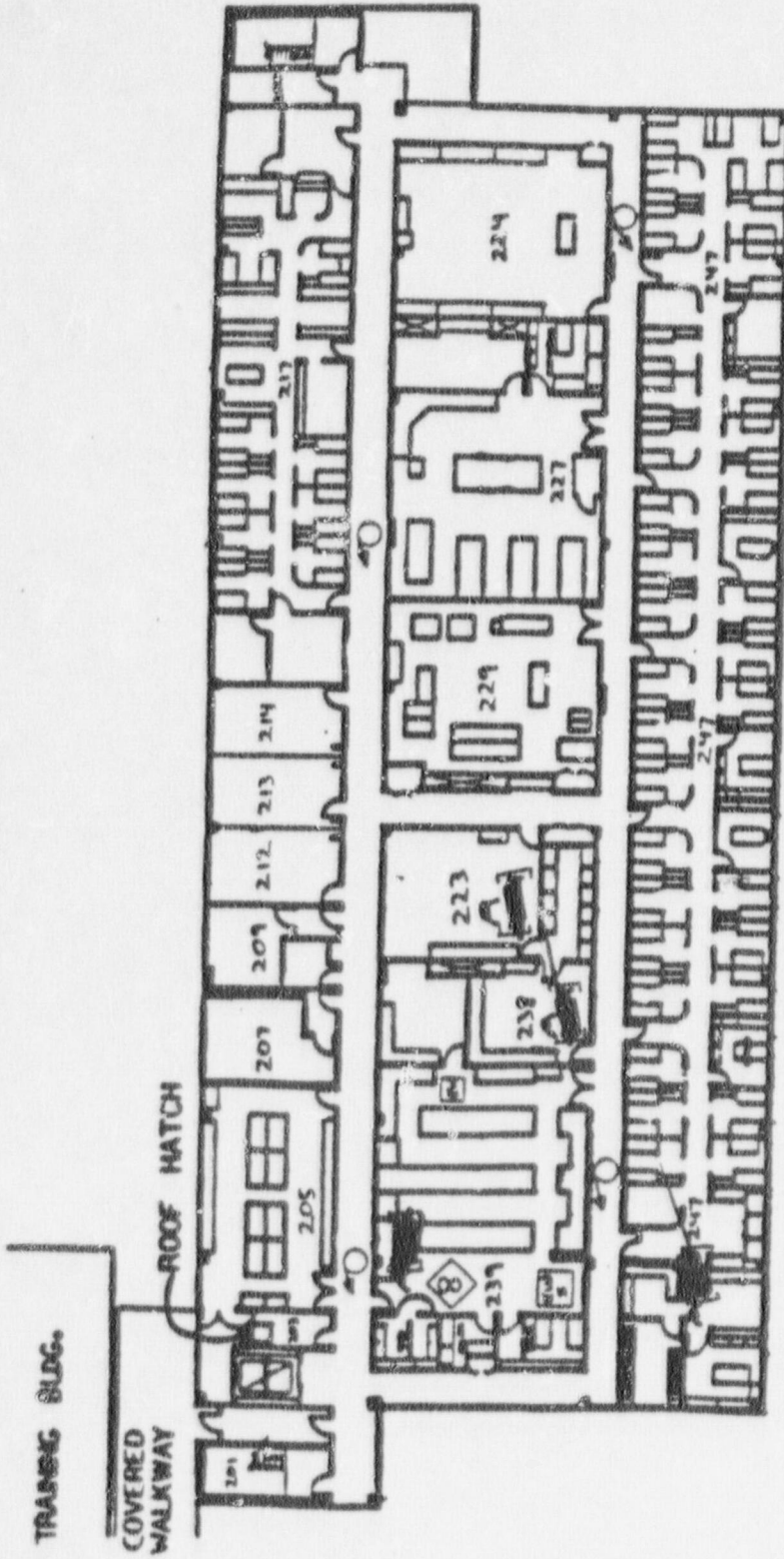


LEGEND

- | | | |
|---|-----------------------------|---------------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ DRY CHEMICAL | ⊕ SPRINKLER RISER |
| ② HAZ. WASTE CHEMICALS, ETC. | ⊕ CO ₂ | ⊕ AUTO SPRINKLER |
| ③ H ₂ O, 35% NH ₃ | ⊖ PRESSURIZED WATER | ⊖ STOPPAGE |
| ④ ACID | ⊖ HALON | ⊖ UNDERGROUND ISO VALVE |
| ⑤ CAUSTIC | ⊖ WATER HOSE REEL | ⊖ PWA VALVE |
| ⑥ TOXIC GASES | ⊖ CO ₂ HOSE REEL | ⊖ FIRE DEPT. CO ₂ |
| ⑦ FLAMMABLE GASES | ⊖ WHEELIE DRY CHEM | ⊖ HYDRANT-2 HOSE OUTLET |
| ⑧ MISC./OTHER | ⊖ FIRE WALL BATTEN | ⊖ HYDRANT-2 HOSE W/PUMPER COVER |
| ⊕ FIRST AID | ⊖ ANNUNCIATOR PANEL | ⊖ ELECTRIC MAIN |
| | ⊖ EYE WASH | |
| | ⊖ EYE WASH & SHOWER | |
| | ⊖ TELEPHONE | |
| | ⊖ COMMAND POST | |
| | ⊖ PRIMARY ACCESS | |
| | ⊖ SECONDARY ACCESS | |
| | ⊖ EMERGENCY LIGHTS | |
| | ⊖ FIRE WALL BATTEN | |
| | ⊖ ANNUNCIATOR PANEL | |
| | ⊖ PRE-ACTION | |

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MAINTENANCE SHOP BUILDING
GROUND FLOOR PLAN EL. 0'-0"



AS

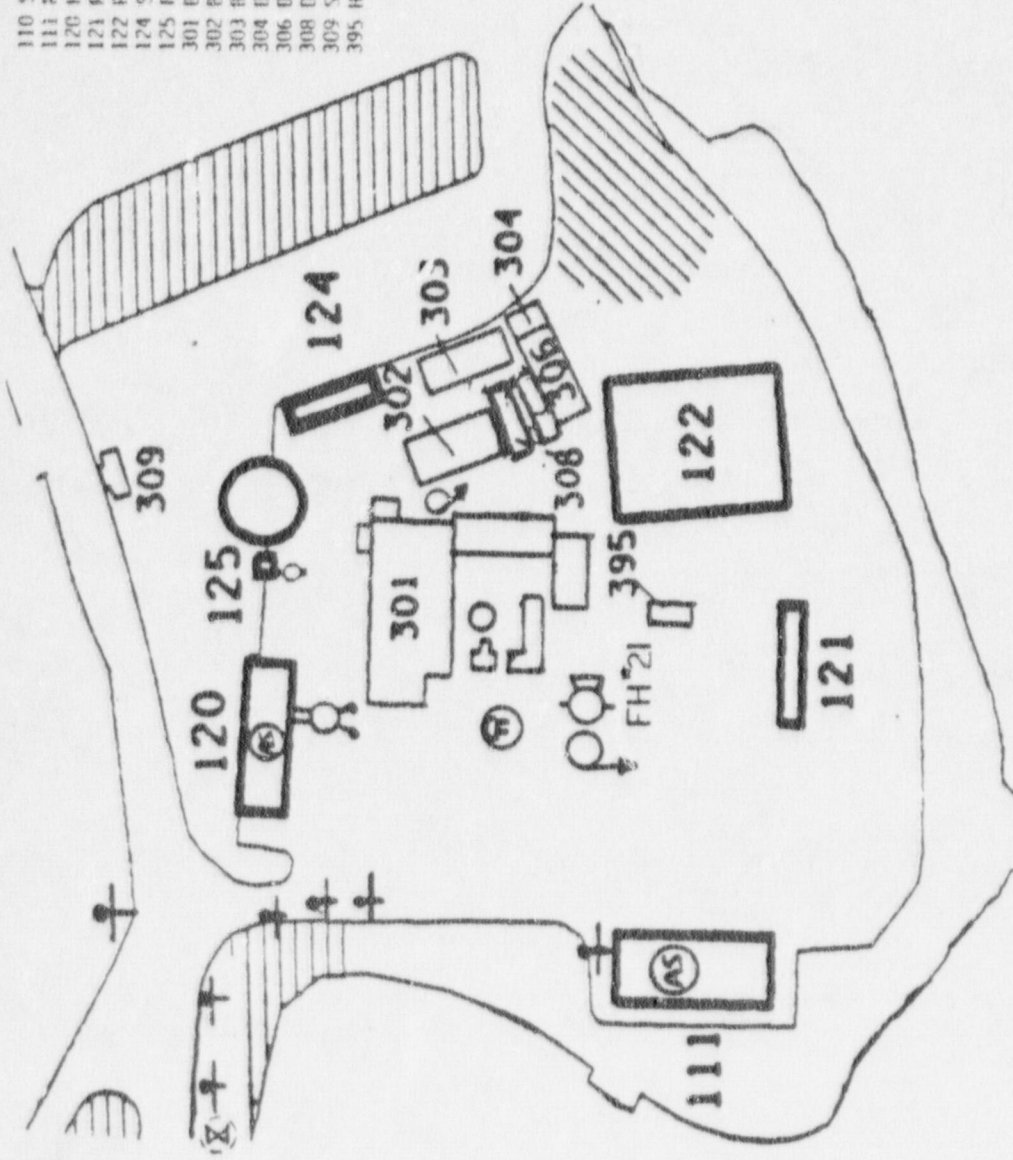
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MAINTENANCE SHOP BUILDING
SECOND FLOOR PLAN EL. 97'-0"

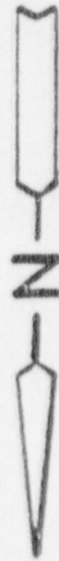
LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ H₂A, 25% OH₂
- ⊕ ACID
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MSC./OTHER
- (H) FIRST AID
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ AMBULCIATOR PANEL
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER REEL
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- ⊕ UNDERGROUND ISO VALVE
- ⊕ PWA VALVE
- ⊕ FIRE DEPT. CONNA
- ⊕ HYDRANT-2 HOSE OUTLET
- ⊕ HYDRANT-2 HOSE
- ⊕ ELECTRIC MAIN

- 110 SANDBLASTING
- 111 ROTOR STORAGE
- 120 HAZARDOUS WASTE FACILITY
- 121 REVERSE OSMOSIS
- 122 FABRICATION SHOP
- 124 SEWAGE TREATMENT PLANT
- 125 FIREWATER TANK AND PUMP HOUSE
- 301 BIO LAB
- 302 BIO LAB
- 303 BIO LAB
- 304 DFR
- 306 DFR/DOSIMETRY/BIO LAB OFFICES
- 308 DFR
- 309 SECURITY
- 395 HYDROMAUTICS



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AREA 10

LEGEND

- | | | |
|---------------------------------|-----------------------------|----------------------------------|
| ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊕ DRY CHEMICAL | ⊕ SPRINKLER REEL |
| ⊕ HAZ. WASTE CHROMIATES, ETC. | ⊕ CO ₂ | ⊕ AUTO. SPRINKLER |
| ⊕ MHA, 35% IHA, | ⊕ PRESSURIZED WATER | ⊕ STAIRWELL |
| ⊕ ACID | ⊕ HALON | ⊕ UNDERGROUND ISO VALVE |
| ⊕ CAUSTIC | ⊕ WATER HOSE REEL | ⊕ PVA VALVE |
| ⊕ TOXIC GASES | ⊕ CO ₂ HOSE REEL | ⊕ FIRE DEPT. CONN. |
| ⊕ FLAMMABLE GASES | ⊕ WHEELED DRY CHEM | ⊕ HYDRANT-2 HOSE OUTLET |
| ⊕ MISC./OTHER | ⊕ FIRE WALL RATING | ⊕ HYDRANT-2 HOSE W/PLUMPER CONN. |
| ⊕ FIRST AID | ⊕ ANNUNCIATOR PANEL | ⊕ 117 TRIC MARI |

- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL RATING
- ⊕ ANNUNCIATOR PANEL

- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ HALON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ FIRE WALL RATING
- ⊕ ANNUNCIATOR PANEL

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

AREA 10 - HAZARDOUS WASTE BUILDING

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Flammable Liquids
2. Type "A" combustibles
4. Transient Combustibles

MOST PROBABLE FIRE:

1. Flammable Liquids
2. Transient combustibles
3. Type "A" combustibles

ACCESS AND EGRESS ROUTES

1. Primary - via the personnel door or the roll-up door on the west side.
2. Secondary - via the personnel door on the south side.
NOTE: Access from the northern doors to the main building area is very difficult.

FIRE BRIGADE STAGING AREA:

1. Primary: On the west side of the building
2. Secondary: By fire hydrant #21.

HAZARDOUS MATERIALS:

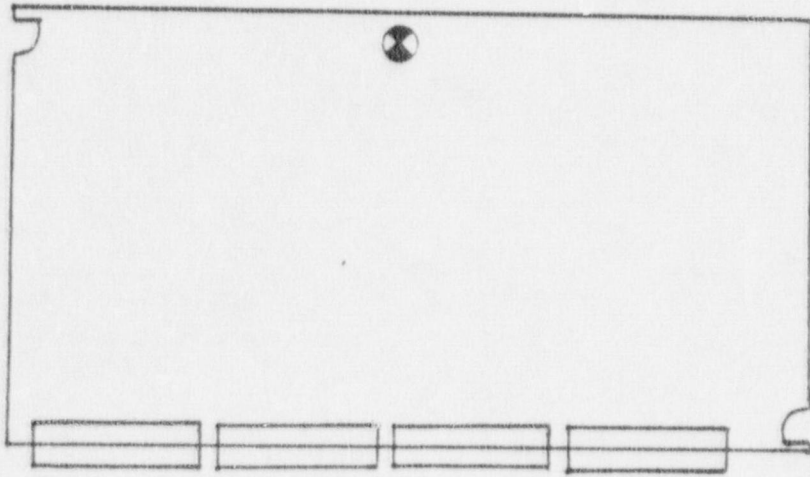
1. Acids
2. Caustics
3. Hydrazine/Ammonia
4. Flammable/Combustible Liquids
5. Chromated water
6. Flammable gasses (on a transitory basis).
7. Smoke, fumes, and products of combustion.
NOTE: All materials in this building should be assumed to be hazardous.

MANAGEMENT OF PLANT SYSTEMS:

1. The electrical main is located along the west wall of the building.
2. The sump drain control valve is located north-east of the building. It is a P10A assembly.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

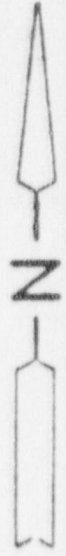


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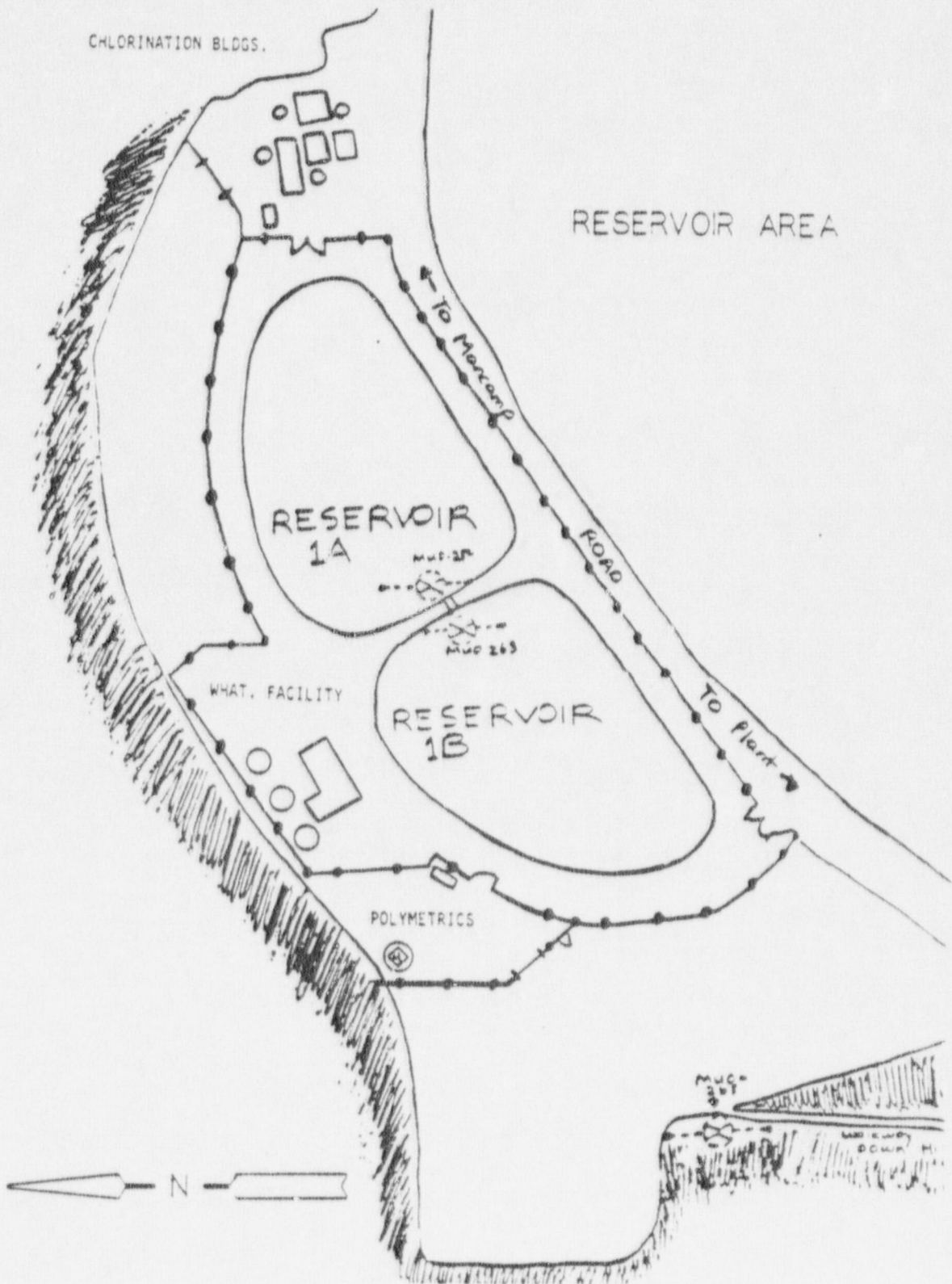
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LEGEND

- ⊕ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ⊕ HAZ. WASTE CHROMATES, ETC.
- ⊕ N₂, 35% NH₃
- ⊕ ACD
- ⊕ CAUSTIC
- ⊕ TOXIC GASES
- ⊕ FLAMMABLE GASES
- ⊕ MISC./OTHER
- ⊕ EYE WASH
- ⊕ EYE WASH & SHOWER
- ⊕ TELEPHONE
- ⊕ COMMAND POST
- ⊕ PRIMARY ACCESS
- ⊕ SECONDARY ACCESS
- ⊕ EMERGENCY LIGHTS
- ⊕ FIRE WALL, RATRAC
- ⊕ DRY CHEMICAL
- ⊕ CO₂
- ⊕ PRESSURIZED WATER
- ⊕ MALLON
- ⊕ WATER HOSE REEL
- ⊕ CO₂ HOSE REEL
- ⊕ WHEELED DRY CHEM
- ⊕ SPRINKLER RISER
- ⊕ AUTO. SPRINKLER
- ⊕ STANDPIPE
- 1 UNDERGROUND ISO VALVE
- † PIVA VALVE
- ⊕ FIRE DEPT. CONN.
- ⊕ HYDRANT - 2 HOSE OUTLET
- ⊕ HYDRANT - 2 HOSE W/PIPPER CONN.



ROTOR STORAGE



PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

RESERVOIR AREA - W.H.A.T FACILITY

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Type "A" combustibles
2. Transient Combustibles

MOST PROBABLE FIRE:

1. Type "A" combustibles
2. Transient Combustibles

ACCESS AND EGRESS ROUTES

1. Primary - via the west door
2. Secondary - via the east door or the rollup door.

FIRE BRIGADE STAGING AREA:

1. Primary: On the west side of the building
2. Secondary: On the east side of the building

HAZARDOUS MATERIALS:

1. Acid
2. Caustic

MANAGEMENT OF PLANT SYSTEMS:

1. The electrical main is located along the north wall.
2. An emergency spill kit is located along the south wall.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers - One 17# Halon

NOTE: There is no other fire suppression equipment available at this location.

FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers: 4 17# Halon
2. The building is fully sprinklered. FP-0-1152 isolates the sprinkler system; it is located at the riser on the west wall.
3. A fire department connection is located on the west wall.
4. Fire Hydrant #21 and a hose reel station are located several hundred feet west of the building.
5. A standpipe with two 2½" outlets is located at the fire pump house, just south of the building.

VENTILATION:

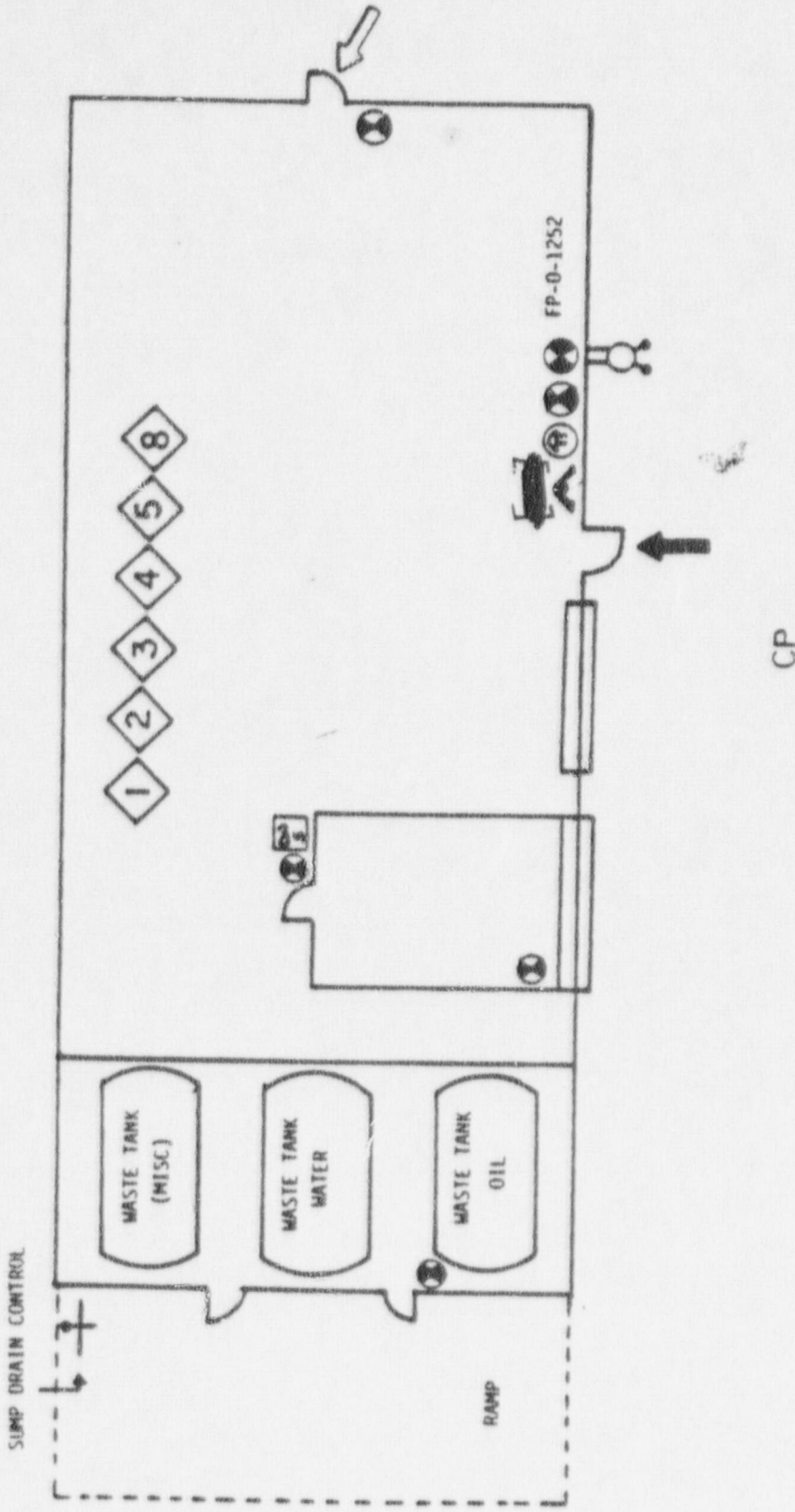
1. Natural ventilation via roll-up doors
2. Mechanical ventilation portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

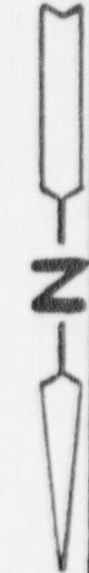
Via plant telephone [REDACTED]
Via Portable Radio (Ops Freq. [REDACTED])

SAFETY EQUIPMENT:

1. An eyewash/shower station is located in the center of the building.
2. SCBA's and full turnouts should be worn to afford protection from hazardous materials.



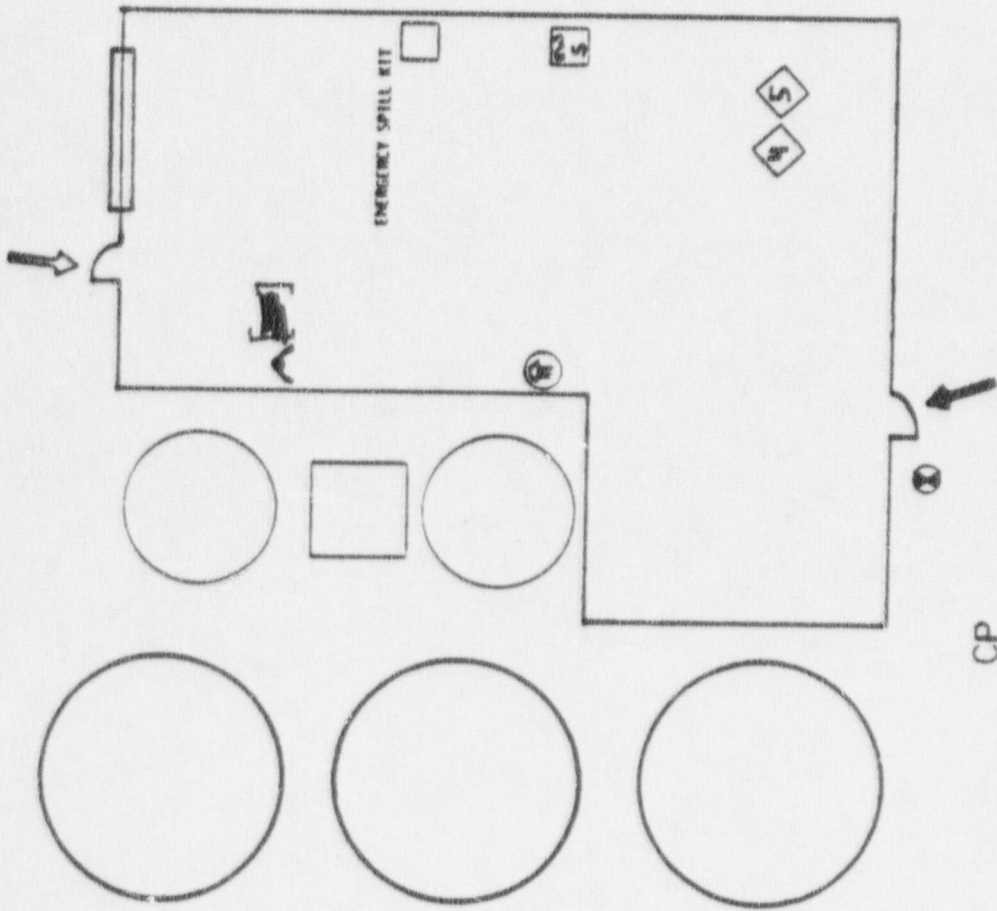
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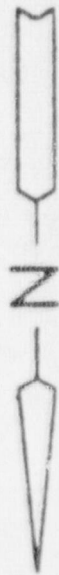
HAZARDOUS WASTE
BLDG.

LEGEND

- ◊ FLAMMABLE/COMBUSTIBLE LIQUIDS
- ◊ MAZ. WASTE CHROMIATES, ETC.
- ◊ H₂A, 35% NH₃
- ◊ ACID
- ◊ CAUSTIC
- ◊ TOXIC GASES
- ◊ FLAMMABLE GASES
- ◊ MISC./OTHER
- (H) FIRST AID
- ◊ EYE WASH
- ◊ EYE WASH & SHOWER
- ☎ TELEPHONE
- ◊ COMMAND POST
- ◊ PRIMARY ACCESS
- ◊ SECONDARY ACCESS
- ◊ EMERGENCY LIGHTS
- ◊ FIRE WALL RATING
- ◊ ANNUNCIATOR PANEL
- ◊ DRY CHEMICAL
- ◊ CO₂
- ◊ PRESSURIZED WATER
- ◊ HALON
- ◊ WATER HOSE REEL
- ◊ P CO, HOSE REEL
- ◊ WHEELED DRY CHEM
- ◊ SPINKER REEL
- ◊ AUTO. SPINKER
- ◊ STAIRPIPE
- ◊ UNDERGROUND ISO VALVE
- ◊ PWA VALVE
- ◊ FINE DEPT. CONN.
- ◊ HYDRANT-2 HOSE
- ◊ HYDRANT-2 IN
- ◊ RUBBER CONN.



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W.H.A.T. FACILITY

LEGEND

- | | | |
|---|---------------------|-------------------------|
| ① FLAMMABLE/COMBUSTIBLE LIQUIDS | ⊞ DRY CHEMICAL | ⊞ SPRINKLER RISER |
| ② HAZ. WASTE CHROMATES, ETC. | ⊞ CO ₂ | ⊞ AUTO. SPRINKLER |
| ③ NH ₃ , 35% NH ₃ | ○ PRESSURIZED WATER | ⊞ STAIRWELL |
| ④ ACID | ⊞ MALLON | ⊞ UNDERGROUND ISO VALVE |
| ⑤ CAUSTIC | ⊞ WATER NOSE REEL | ⊞ PWA VALVE |
| ⑥ TOXIC GASES | ⊞ CO, NOSE REEL | ⊞ FIRE DEPT. CONNL |
| ⑦ FLAMMABLE GASES | ⊞ WHEELED DRY CHEM | ⊞ HYDRANT-2 NOSE |
| ⑧ MISC./OTHER | ⊞ FIRE WALL RATING | ⊞ HYDRANT-2 NOF |
| ⑨ FIRST AID | ⊞ ANNUNCIATOR PANEL | ⊞ UPPER CONNL |
| | ⊞ EYE WASH | |
| | ⊞ EYE WASH & SHOWER | |
| | ⊞ TELEPHONE | |
| | ⊞ COMMAND POST | |
| | ⊞ PRIMARY ACCESS | |
| | ⊞ SECONDARY ACCESS | |
| | ⊞ EMERGENCY LIGHTS | |
| | ⊞ FIRE WALL RATING | |
| | ⊞ ANNUNCIATOR PANEL | |

VENTILATION:

1. Natural ventilation via roll-up door
2. Mechanical ventilation using portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

Via plant telephone [REDACTED]
Via Portable Radio (Ops Frequency [REDACTED])

SAFETY EQUIPMENT:

An eyewash/shower station is located along the south wall.

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON POWER PLANT

UNIT NO. 0

AREA 10 - ROTOR STORAGE BUILDING

FIRE FIGHTING PRE-PLAN

POTENTIAL COMBUSTIBLES

1. Transient Combustibles
2. Wood Dunnage
3. Type "A" combustibles

MOST PROBABLE FIRE:

1. Transient Combustibles
2. Wood Dunnage
3. Type "A" combustibles

ACCESS AND EGRESS ROUTES

1. Primary - via the east door
2. Secondary - via the south rollup door or the west door.

FIRE BRIGADE STAGING AREA:

1. Primary: On the east side of the building
2. Secondary: By fire hydrant #21.

HAZARDOUS MATERIALS:

1. Smoke, fumes, and products of combustion.

MANAGEMENT OF PLANT SYSTEMS:

1. The electrical main is located on the east side of the building.

RECOMMENDATION FOR PROTECTION OF HEAT SENSITIVE EQUIPMENT:

1. Fire hose streams may be required to protect exposures.

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FIRE SUPPRESSION EQUIPMENT:

1. Fire Extinguishers: 1 17# Halon
2. Hose Reels: None
3. The building is protected by wet sprinklers. The following valves control the flow of firewater in the building:
FP-0-1056 located on the north wall of the building, isolates the entire sprinkler system.
4. Fire Hydrant #21 and a hose reel station are located to the south-east of the building.

VENTILATION:

1. Natural ventilation via roll-up doors
2. Portable smoke ejectors.
3. If power is lost, gas powered smoke ejectors or portable generators to power electric smoke ejectors may be needed.

COMMUNICATIONS:

Via plant telephone [REDACTED]
Via Portable Radio (Ops Frequency) [REDACTED]

SAFETY EQUIPMENT:

None