CURRENT

EMERGENCY PLAN

IMPLEMENTING PROCEDURES

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07/20/84

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

TITLE: NEW/REVISED/RESCINDED OFFICIAL PROCEDURE INSTRUCTION SHEET

TO: _____ For Plant Manual Copy No: ____ Date: 6-26-84
Responsible Person

NEW PROCEDURE

Proc No.	Rev No.	Vol No.	Section	Proc No.	Rev No.	Vol No.	Section

1. Remove the history sheet (for departmental use as determined by each dept head).
2. Insert the attached new procedure into the designated volume.
3. Enter the procedure title and revision on the Table of Contents.
4. Sign and return this instruction sheet as soon as you have completed above.

REVISED ~~PROCEDURE~~ form

Proc No.	Rev No.	Vol No.	Section	Proc No.	Rev No.	Vol No.	Section
EP R-1	13	3A	R form 69-9392: ATTACHED IS				
			Revised form dated 4/84, PLEASE				
			REPLACE AND SEND BACK SAME				
			form DATED 7/81 which WAS				
			SENT OUT W/ EP R-1 Rev 13 on 6-25.				

1. Remove the history sheet (for departmental use as determined by each dept head).
2. Insert the attached revised procedure into the designated volume.
3. Remove and return the out-of-date procedure and any on-the-spot procedure changes associated with the procedure.
4. Update the revision entry on the Table of Contents.
5. Sign and return this instruction sheet as soon as you have completed above.

RESCINDED PROCEDURE

Proc No.	Rev No.	Vol No.	Section	Proc No.	Rev No.	Vol No.	Section

1. Remove and return the cancelled procedure and any on-the-spot procedure changes associated with the procedure.
2. Line out the procedure entry on the Table of Contents.
3. Sign and return this instruction sheet once you completed the above.

REMARKS: _____

INSTRUCTIONS COMPLIED WITH: _____ Date: _____
Responsible Person

RETURN SIGNED INSTRUCTION SHEET TO: DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT
ATTENTION: Jessie Damiano (Document Control Clerk)

SEE REVERSE SIDE FOR INSTRUCTIONS

VOLUME NO 3A

COPY HOLDER NO	RESPONSIBLE PERSON	BOX NO	COPY HOLDER NO	RESPONSIBLE PERSON	BOX NO	COPY HOLDER NO	RESPONSIBLE PERSON	BOX NO	COPY HOLDER NO	RESPONSIBLE PERSON	BOX NO
1	RCThornberry	A3	41	MMNorem	N/A	81	W.'Keyworth	F4	121	DUnger TSC Lab	B8
2	BGiffin	N/A	42	PProvence	N/A	82	EGarcia/ DSchaefer	N/A	122		
3	JDShiffer	N/A	43	TJMartin	G3	83	POlsen	K11	123		
4	NRC	M9	44	Shift Sec Suprv	K9	84	TBrake Electric Shop	I12 C9	124	DCramins	L11
5	Library	N/A	45	ACMoss	N/A	85	WAO'Kara	B4	125	DMalone	A14
6			46	VRFoster	H5	86	M.'Peterson	B4			
7	SFM	D8	47	KWallace	H7	87	DMalone	A10			
8	Control Rm	D8	48	WEVidalin	D6	88	JHubble	K11			
9	Aux Bldg Cnt Brd	D8	49	RMManninga	C4	89	RLKalwenson	N/A			
10			50	Rel Shift Suprv	D8	90	WDDrake	K11			
11	Hot Shutdown Pnl	D8	51	Cold Shutdn Pnl	D8	91	BADettman/TMack/ JEnglish	N/A			
12	500KV Switchyd	D8	52	GVJohnson	H8	92	Clearance Coord	D8			
13			53	Press Calib Shop	A11	93	I&C Trng	G13			
14	JMGisclon	H3	54	P250 Comp Rm	H8	94	MRegoli	A11			
15	RSSnyder	B8	55	Rad Calib Fac/ LMoretti	B11/ B8	95	RJTucker	A11			
16	HAFerguson	B6	56	JMurphy	I6	96	JH111	I13			
17			57	JWWarrick/ KRhodes	N/A	97	MKunde	N/A			
18	Counting Room	B11	58	PPKristensen	I11	98	PSteiner	N/A			
19	I&C Foreman	A11	59	WGCrockett	D9	99	TOrtua	N/A			
20	Electronics Lab	A11	60	JASexton	D3	100	LFisher	K12			
21	Calib Shop	A11	61	OSRG	M10	101	MLiew	D11			
22	Hot Instr Shop	A11	62	JVBoots	B3	102	DGreen	E6			
23	BWGiffin	A10	63	MHFujimoto	N/A	103	RLFisher	D10			
24	Met Tower	A11	64			104	OESundquist	E3			
25	DBMiklush	C3	65	MRRyan	C10	105	EOF	N/A			
26	Mechanical Frmn	C11	66	TSC	N/A	106	EOF	N/A			
27	Electrical Frmn	C9	67	TSC	N/A	107	WBMcLane	I9			
28	Cold Mach Shop	C11	68	Oper Trng/ Security Trng	G4 / K12	108	MPHanrahan	A10			
29	Hot Mach Shop	C11	69	Oper Trng/ Security Trng	G4 / K12	109	Combustion Engr	B12			
30	RGTodaro	K9	70	Oper Trng/ Security Trng	G4 / K12	110	DWPierce	D12			
31	Avila Guard	K9	71	Oper Trng/ Security Trng	G4 / K12	111	Ron Besser - PIMS	H12			
32	Cent Alarm Stn	K9	72	Oper Trng/ Security Trng	G4 / K12	112	HFong	B12			
33	Sec Alarm Stn	K9	73	PSzalinski	N/A	113		-			
34	Quality Control	L11	74	EOF	N/A	114	LFWomack	H4			
35	QA	M11	75	EOF	N/A	115	SGBanton	H7			
36	QA Library TGDeVriate	N/A	76	EOF	N/A	116	SKRoberts	A11			
37	C Lampert	J12	77	LGLunsford	K10	117	DMNorton	A11			
38	Materials Fac	I14	78	DUnger	B8	118	AGMoore	A11			
39	CLEldridge	L9	79	TSC	N/A	119	C. Dyer	N/A			
40	EDWeeks	N/A	80	Vol 1 & 4 Mech Engrs	C11 C5	120	LGouveia	N/A			

69-9392 4/84 (100)

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

SKIN AND CLOTHING DECONTAMINATION REPORT RCP G-4

NAME_____ EXPOSURE ID#_____ DATE/TIME_____

RWP/SWP NO._____ DECONTAMINATION LOG NO._____

Plant location where contamination occured_____

_____

Cause of contamination_____

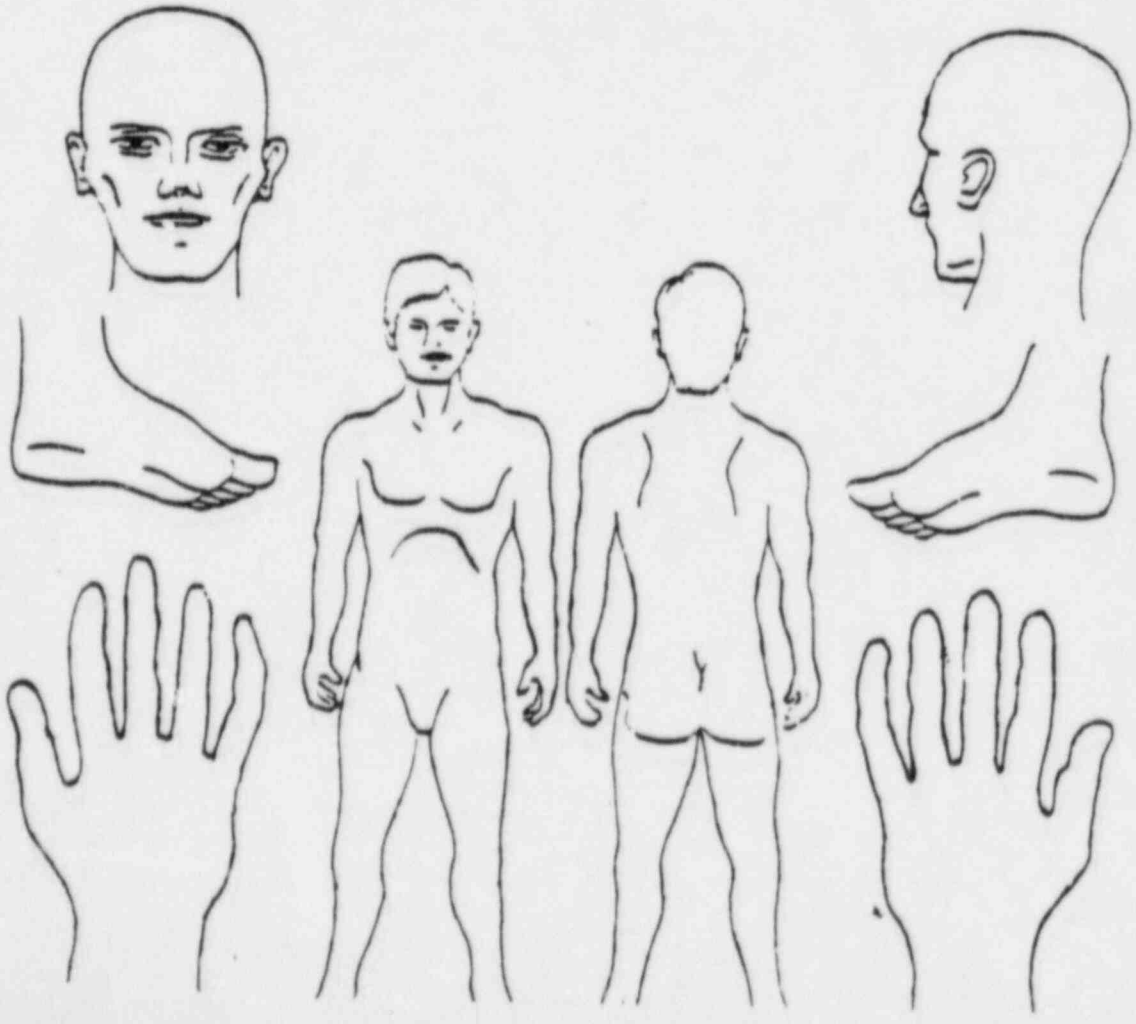
_____

Skin condition after decontamination_____

_____

_____
Radiation Protection Technician

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



PG&E
Nuclear Plant Operations
69-10709 6/84

DIABLO CANYON POWER PLANT
PROCEDURE ON-THE-SPOT CHANGE

Procedure No. EP R-1 Rev. 13 Unit No. 1 ☐ 2 ☐ 1 & 2 ☒

Title PERSONNEL INJURY OR ILLNESS (RADIOLOGICAL RELATED) AND/OR OVEREXPOSURE

Type of Change ☒ PERMANENT (green) ☐ TEMPORARY (yellow); Expiration Date _____

Requesting Department CHEM AND RAD. PROTECTION Originator V. Morales

ORIGINATOR

INSTRUCTIONS: Complete Appropriate Columns

1.) PROCEDURE

PAGE CHANGED	ADD PAGE	DELETE PAGE	NEW PAGE NUMBER
7			
10			

2.) ATTACHMENTS

Attachment Number (Include all pages with dates changed to date of this OTSC)
#2 page 10 FORM 69-11510

Reason for Change:

Incoporate use of new survey form.

Authorizations: # _____ (Plant Management Staff) James A Sexton (Plant Management Staff w/SRO License) 7/2/84 Date

Is immediate distribution required? ☐ YES ☒ NO
If YES, originator must distribute to Control Room, Shift Foreman and QC.

Initial Distribution Made By:

List other initial distribution to Controlled Copy Holders of this procedure _____

DOCUMENT CONTROL

Date Received by Document Control 7-3-84

PSRC Review and Plant Manager's approval no later than 7-16-84 Date above *plus 14 days

PSRC POST CHANGE REVIEW

Review Date _____

PSRC recommends approval ☐ Yes ☐ No

Meeting Number ☐☐ - ☐☐☐

_____ Plant Manager's Approval ☐ N/A

REQUESTING DEPARTMENT

Follow-up To Rejected On-the-Spot Change ☐ Additional Information ☐

Action Taken/Remarks:

DISTRIBUTION: ☐ Same as Original Procedure Distribution ☐ Others _____ Please see additional sheets ☐

b) 150 rem to the skin.

c) 375 rem to the extremities.

2) The patient shows signs of radiation sickness, such as nausea, vomiting, extreme sweating, weakness, diarrhea, extreme anxiety, incoherence, sensitivity of the nerves (tingling or itching sensation).

3) The patient shows evidence of radiation dermatitis (skin damage). Except for extremely high skin dose (greater than 5,000 rem), in which case pain occurs promptly and is intense, the symptoms at the time of exposure are a sensation of warmth and itching. Redness, blistering and other effects may not appear for several days.

c. If the patient requires transportation to the hospital, during the interval until the ambulance arrives keep the patient comfortable. Survey the individual and perform any decontamination which circumstances require and/or permit. Do not aggravate any injury or unduly alarm the patient in performing these operations. Record survey results on the "Skin and Clothing Decontamination" Form (Form 69-9392) and/or "~~Radiation Dose Rate Survey Record" (Form 69-9316)~~. In cases of severe contamination, handle as in Step 3.c to the extent practical.

RADIATION AND CONTAMINATION SURVEY FORM (FORM 115-10)

d. To the extent practical, save all vomit, urine, feces or other samples which may assist the long-term Site Emergency Radiological Advisor in evaluating the accident. This is particularly important if internal deposition of radioactive materials is suspected.

e. Collect the patient's personnel dosimetry and any materials which may have been activated (if a neutron exposure is suspected) such as belt buckles, watches, jewelry, prior to sending him to the hospital or releasing him. This will be processed for evaluation.

f. Subsequent actions will be based upon the results of the evaluation of the external exposure.

5. Overexposure From Internal Sources

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

a. Take any medical action which may be required as a result of injury or external dose received (Steps 3 and 4 above). The treatment of these effects should take precedence over the evaluation of internal exposure.

b. Remove and retain for subsequent radiological analysis the patient's clothing and respirator.

c. Survey the patient thoroughly and record the results on the "Skin and Clothing Decontamination" Form (Form 69-9392).

d. Decontaminate individual to as low as practical without causing further injury. If practical, save samples of the decontamination solutions, swabs, and other materials which may be of use in subsequent radiological evaluations.

e. Count the patient on the whole body counter. The results of this analysis will, in large measure, determine the necessity for further medical attention or surveillance.

f. Collect and save any urine, feces, or vomit which is passed from the patient. The long-term Site Emergency Radiological Advisor may request that special urine samples be collected for bioassay.

g. Subsequent actions will be based upon the results of the evaluation of the internal exposure.

h. If the patient is sent to the hospital, make arrangements to have all urine, feces or vomit samples retained for radiological analysis.

REFERENCES

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

APPENDICES

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

ATTACHMENTS

1. Form 69-9221, "Emergency Notification Record."
2. ~~Form 69-9316, "Radiation Dose Rate Survey Record."~~ FORM 69-11810 "RADIATION AND CONTAMINATION SURVEY FORM"
3. Form 69-9392, "Skin and Clothing Decontamination Report"
4. Form 62-4587, "Report of Industrial Injury to Employee."
5. Form 62-4586, "Employers' Report of Occupational Injury or Illness."
6. Form 62-6015, "Medical Referral."
7. Light Duty Program Letter.
8. Safety, Health and Claims Personnel to Be Contacted for Reporting of Injuries at Diablo Canyon (3/83).

69-11510 (2000) 1/84

DIABLO CANYON POWER PLANT
RADIATON AND CONTAMINATION SURVEY FORM

NAME

EVATION

AREA/EQUIP.

Type	Date	Time	Unit	Survey #

PURPOSE

. 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10 . 11 . 12 . 13 . 14 . 15 . 16 . 17 . 18 . 19 . 20 . 21 . 22 . 23 . 24 .

Z . Y . X . W . V . U . T . S . R . Q . P . O . N . M . L . K . J . I . H . G . F . E . D . C . B . A

CONTAM. RESULTS

DPM/100cm²

INSTRUMENT	RP #	CAL. DUE

A/S RESULTS

	MPC'S
Part	
Iod	
H_3	
TOTL	

REMARKS:

Reviewed by:

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

DEPARTMENT OF NUCLEAR PLANT OPERATIONS

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

NUMBER EP M-1
REVISION 12
DATE 5/2/84
PAGE 1 OF 5

TITLE EMERGENCY PROCEDURE
EMPLOYEE INJURY OR ILLNESS (NONRADIOLOGICAL)

IMPORTANT TO SAFETY

APPROVED R. C. Thornberry 6-25-84
PLANT MANAGER DATE

SCOPE

This procedure describes the actions which are to be taken in the event of an illness or injury to an employee which does not involve radioactive contamination or overexposure. Injuries in which radiological considerations are involved are discussed separately in the R series of Emergency Procedures. This procedure and changes thereto requires PSRC review.

APPLICABILITY

This procedure is to be followed for incidents involving Nuclear Plant Operations personnel, or other company employees at the plant site at the request of the Nuclear Plant Operations Department. In the event of an incident involving any other company employee (such as a General Construction Employee), perform only the asterisked (*) steps in this procedure.

IMMEDIATE ACTIONS

The employee(s) who are at the scene shall:

*1. Render all necessary first aid.
*2. Notify the control room (Shift Foreman) as soon as practical.

NOTE: The Shift Foreman may be notified by dialing Ext. 1234 or 779 + 61. Dialing 779 + 61 activates the fire alarm and medical emergency code call. The caller must remain on the phone to enable the Shift Foreman to dial into a conference call.

SUBSEQUENT ACTIONS

The Shift Foreman shall direct all subsequent actions until relieved by the long term Site Emergency Coordinator if the emergency warrants it. Such actions should include the following:

*1. Sound emergency signal, code override, or other general warning signal to clear the area if the situation warrants it.

*2. Dispatch additional first aid personnel such as the project construction EMT (Extension 1212 or 595-7273) to the scene of the injury or illness if required. Personnel who have not been instructed to provide assistance at the scene should remain on their jobs and stay clear of the affected area.

*3. Transport the injured person to a Company panel physician or hospital if the situation warrants it (refer to the attached list). If possible, the employee is to be accompanied by a supervisor. The practices which are to be followed if this step is necessary are given in the following section of this procedure.

4. Secure the names and addresses of all witnesses (both Company and non-Company).

*5. Perform the notifications required by Appendix Z.

6. Complete the appropriate accident report(s) and forward to the office supervisor for processing.

   a. Form 62-4587, "Report of Industrial Injury to Employee" in cases where no medical treatment was required other than minor first aid at the plant.

   b. Form 62-4586, "Employer's Report of Occupational Injury of Illness" in all cases requiring medical treatment (including doctor referral) other than first aid or results in lost time beyond the day of injury.

   c. Form 62-5542, "Report of Automobile Accident" if appropriate.

TRANSPORTATION OF INJURED PERSONNEL

1. The preferred mode of transportation for injured persons is by Company panel ambulance service. Company or private vehicles should only be used in cases where the delay associated with securing an ambulance might result in significant deterioration of the injured person's condition, or when the injury is of a minor nature where use of an ambulance is not warranted.

2. When requesting ambulance service (refer to the attached list), provide the following information to the ambulance service.

   a. Name of caller

   b. Company affiliation

   c. Phone number of caller (where he can be reached)

   d. Name of injured or ill person

   e. Where the patient is located

   f. Where the patient is to be transported

   g. Nature of injury or illness

   h. Any other medical information which might be pertinent to transporting the injured person

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

*3. If ambulance or medical personnel are to enter the site, contact the Security Department (3330 or 3363) and have them notify the security force at the Port San Luis entrance. It is necessary to have an escort accompany the ambulance personnel from the Security Building to the patient.

4. If possible, have a supervisor accompany the injured person to the hospital (or doctor's office). If this is not practical, call a supervisor and have him meet the patient at the hospital (or doctor's office). The supervisor should inform the doctor about the Company's light duty program.

5. If possible, call ahead to the hospital (or doctor) and provide the following information:

   a. Name of caller

   b. Company affiliation

c. Phone number of caller (where he can be reached)

d. Name of injured or ill person

e. Age of injured or ill person (approximate if not known)

f. Extent of injury, illness or symptoms

g. Medical history (if known)

h. Radiological conditions.[1]

Record this information on Form 18-9221, "Emergency Notification Record", or other log.

6. A medical referral, Form 62-6015, shall be completed and sent to the hospital (or doctor) with the injured person along with a copy of the Light Duty Program Letter (copy attached). These forms should be taken by the accompanying supervisor, the patient, or the ambulance driver, as appropriate. Do not delay transport of seriously ill or injured persons while obtaining these forms.

REFERENCES

1. Rule 16, PGandE Accident Prevention Rules.
2. PGandE Standard Practice 250.
3. NRC Information Notice 80-06, "Notification of Significant Events."

ATTACHMENTS

1. Form 62-4587, "Report of Industrial Injury to Employee"
2. Form 62-4586, "Employer's Report of Occupational Injury or Illness"

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[1] If the injury or illness is involved with radiation, see "R" Emergency Procedures. However, the hospital should also be informed when radiation is not involved, because in the absence of such knowledge, they will assume that radiation is involved.

3. Form 62-6015, "Medical Referral"
4. Form 62-4542, "Report of Automobile Accident"
5. Form 69-9221, "Emergency Notification Record"
6. Light Duty Program Letter
7. Company Panel of Physicians, Ambulance, and Hospitals serving the immediate area around Diablo Canyon.
8. Panel of Physicians, Ambulances and Hospitals, Coast Valley Division, SP 251.1-1.
9. Safety, Health and Claims Personnel to be contacted for Reporting of Injuries at Diablo Canyon.
10. Appendix Z, Emergency Procedure Notification Instructions

C

62-4587 Rev. 1/79

PACIFIC GAS AND ELECTRIC COMPANY

Report of Industrial Injury to Employee

1. Name _____ 6. Division _____

2. Address _____ ZIP _____

3. Telephone No. _____ 7. Department _____

4. Social Security No. _____ 8. Date of Accident _____

5. Occupation _____ 9. Time of Accident _____

10. Location of Accident _____ 11. Nature of Injury _____

12. What were you doing and how did accident occur? _____

_____

_____

13. Describe First Aid rendered: _____

14. Witnesses to accident:

1. _____

2. _____

3. _____ 15. _____
Signature of Employee

16. Date injury reported: _____

17. Date 30 days elapses: _____ 18. _____
* See Over Signature of Supervisor

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

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

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

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

INFORMATION FOR THE INJURED EMPLOYEE

This notice complies with the
California Labor Code

I. **General Information:** The Company has an extensive safety program to help its employees avoid injury. In the event of a work-related injury requiring medical care, special provision has been made for the best medical services available. The Company is very much concerned with its injured employees, and is proud to extend the medical program developed over years of experience for your benefit. Every reasonable effort will be devoted in minimizing the extent and duration of your industrial injury.

The Company is entirely self-insured for industrial injuries to its employees which arise out of and occur in the course of employment. All compensation benefits, including medical treatment, rehabilitation programs, and disability payments are administered by the Company. If questions arise, please contact your supervisor.

II. **Medical Benefits:** Through continuing efforts, the Company has utilized the talents of highly qualified physicians and specialists throughout PG&E system. A panel of doctors familiar with the various Company programs and benefits, including the light duty work program, has been established to provide a greater service to the injured employee.

You are entitled to receive medical, surgical, and hospital services and supplies reasonably required to cure or relieve you from the effects of your injury, including nursing care and such things as crutches and artifical limbs. Reasonable transportation expense incidental to treatment will also be provided.

III. **Selection of Treating Physician:** Treatment of industrial-injured employees is provided by the employer at the employer's expense with the employee having the opportunity to change physicians if desired. California law permits employees who sustained an industrial injury to be treated by a physician or at a facility of their choice within a reasonable geographic area *commencing 30 days after the date injury is reported*, or immediately by your personal physician, provided you notified the Company prior to your injury.

If you wish to continue your present treatment, you may do so. It is recommended that you continue with the physician that has been provided, but if you wish to change doctors, notify your supervisor. The Company's experience in this area is available to assist you in selecting the proper medical care. If you elect to change to another treating physician or facility after 30 days, you must notify your supervisor of the name and address of the physician or facility you have selected to continue treatment. You should show this document to the physician or facility so they will be notified of the immediate duty to report to the Company as required by *Section 4603.2* of the Labor Code. If the facility or physician requests, you are required to sign a medical information release to permit reports of treatment to be rendered to the Company.

IV. **Amount of Indemnity Payable:** If your weekly wage exceeds $231.00, you are entitled to the maximum Temporary Disability indemnity of $154.00 per week, commencing on the 4th full day after injury. If the work-related injury results in hospitalization or more than 21 days of disability, payments will commence the 1st full day of disability. If your disability results in lost time for over two years or you lose time after two years, you will be paid temporary disability at the rate currently in effect. This applies only to injuries on or after 1-1-75. Permanent disability is paid at the rate of $70.00 per week.

V. **Rehabilitation:** Effective January 1, 1975, the employer must provide a rehabilitation program for any employee where the treating physician advises the Company that the employee will be unable to return to his usual and customary occupation at the time of injury, on a permanent basis.

This program provides services such as vocational evaluation, counseling, retraining, including on-the-job training and placement necessary to restore the injured employee to suitable employment, which is not confined to reemployment with PG&E. The Company works in conjunction with the California Rehabilitation Bureau.

VI. **Death Benefits:** If your injury results in death and you have a totally dependent spouse, the sum of $50,000.00 is the maximum benefit, except in cases involving a spouse and one or more dependent minor children, the maximum is $55,000.00. There is also a maximum burial allowance of $1,500.00. In cases of partial dependency, the death benefit will be a sum equal to four times the amount annually devoted to the support of the dependents not to exceed $50,000.00.

VII. **Further Information:** If you wish further information on your particular case, in addition to what your supervisor has provided, contact the Workers' Compensation Claims Section (415) 781-4211 Extension 3171.

Information and Assistance Officers located in the offices of the Division of Industrial Accidents, Workers' Compensation Appeals Board are a further source of information and services. The Workers' Compensation Appeals Board is the final arbiter of claims in workers' compensation.

If you wish to exercise your rights under Item III of the information section, please separate this page and present it to your selected physician.

§ 9785. Duties of the Employee-Selected Physician. The physician or facility chosen by the employee who undertakes to provide treatment pursuant to Labor Code Section 4600 shall:

(a) Within 3 working days after undertaking to provide such treatment notify the employer of the name and address of such treating physician or facility, and

(b) Within 5 working days following initial examination shall submit a written report to the employer to include:

(1) The name and address of injured employee;

(2) The employee's medical history as obtained by the physician;

(3) Findings on examination;

(4) The subjective complaints reported by the employee;

(5) The planned course, scope and duration of treatment;

(6) If appropriate, the estimated return-to-work date;

(7) An opinion as to whether residual permanent disability is to be anticipated and, if possible, an estimate of its extent;

(8) An opinion as to whether the employee will eventually be able to engage in the occupation being performed at the time of injury.

(c) At reasonable intervals during active treatment submit progress reports to the employer and, particularly, report promptly to the employer when:

(1) The employee's condition permits return to work;

(2) The employee's condition requires him or her to leave work;

(3) Hospitalization or surgery is indicated or recommended;

(4) The employee's condition becomes permanent and stationary;

(5) The employee's condition undergoes a previously unexpected significant change; (this report shall contain a statement of the proposed course of treatment required, if any, by this change);

(6) The employee is referred to another physician for consultation;

(7) The employee reasonably requests additional appropriate information.

62-4966 (Rev 7/79)

PACIFIC GAS and ELECTRIC COMPANY

Employer's Report of Occupational Injury or Illness

CONFIDENTIAL—*For Use by Company Attorneys*

DIVISION
GENERAL OFFICE OR
GENERAL CONSTRUCTION

DEPARTMENT	DISTRICT TOWN OR LOCAL OFFICE	R. C. NUMBER
LOCATION OR ITEM NUMBER	ACCOUNT NUMBER	JOB NUMBER

ACCIDENT REPORT NUMBER

ALPHA	YEAR	NUMBER	O.S.H.A. ESTB. CODE
1-2	3-4		9

California law requires an employer to report within five days every industrial injury or occupational disease which (a) results in lost time beyond the day of injury, or (b) requires medical treatment other than first aid. These must be reported to the Safety, Health and Claims Department, General Office, within three days so that the Company can comply with the law. In addition, cases which result in death or (a) require hospitalization of more than 24 hrs. for other than observation, (b) result in loss of any member of the body, or (c) produce any serious degree of permanent disfigurement, require an immediate telephone report to the Department so that the appropriate government agencies can be notified as required by law.

EMPLOYER

1. Firm Name: PACIFIC GAS AND ELECTRIC COMPANY
2. Mailing Address: 77 BEALE STREET, SAN FRANCISCO, CA 94106 — Phone 781-4211, Ext. 3171
3. Address and Phone Number of Reporting O.S.H.A. Establishment
4. Nature of Business: PUBLIC UTILITY—Gas & Electric
5. Unemployment Insurance Account Number: 002-2199

EMPLOYEE

6. Name
7. Social Security Number
8. Home Address
8a. Home Phone Number
9. Sex ☐MALE ☐FEMALE
10. Occupation / Job Title
11. Age
12. Department
13. Wages $ ☐PER WEEK ☐PER MONTH
13a. Length of Service with P.G. & E. Co. ____ YEARS
13b. How long has employee been employed in his present occupation? A ☐ Less than Six Months B ☐ From Six Months to Two Years C ☐ Over Two Years
13c. Years of Experience

INJURY OR ILLNESS

14. Where did accident occur? Number and Street / City or Town / County
15. On Employer's Premises ☐YES ☐NO
16. What was employee doing when injured? (Be specific)
17. How did accident or illness occur? (Use separate sheet if necessary)
18. Tool, object or substance that directly injured employee
19. Nature of injury or illness and part of body affected
20. Name and address of physician
21. Name and address of hospital, if hospitalized
22. Date of injury or illness Mo./Day/Yr.
23. Time of Day ____ HOURS
24. Has employee unable to work on any day after injury? ☐YES—Date last worked: ☐NO
25. Has employee returned to work? ☐YES—Date returned: ☐NO Still Off Work
If answer to #24 is "Yes" has supplemental benefit form been signed? ☐YES
26. Did employee die? ☐YES—Date: ☐NO
Under whose direction does employee work?
Date accident first reported
Date of this report
Report completed by (print or type name and title)

Dept.	PLEASE DO NOT USE THIS COLUMN
9	CASE No.
Town 10	EMPLOYEE No.
Social Security Number 11-19	
Age 34-35	INDUSTRY
Date 36-41	SEX
Time 42-45	AGE
Occupation 46-48	OCCUPATION
Service 49	WEEKLY WAGE
Co. Service 50-51	COUNTY
52-54	ACCIDENT TYPE
55-57	AGENCY
58-60	AGENCY PART
61-63	SUPPLEMENTAL AGENCY
64-66	NATURE OF INJURY
66-67	PART OF BODY
Nat. Inj. 68-69	INJURY DATE
Pt. Body 70-71	EXTENT OF INJURY
Type Inj. 72	INSURANCE CARRIER
73	REPORT LAG
74	CODED BY
N.I. 75-76	
Case Code J 80	

Filing of this report is not an admission of liability. "... No report of injury required to be filed by an employer or insurer by this chapter shall be admissable as evidence in any adversary proceeding before the Workmen's Compensation Appeals Board."

Labor Code, Section 6412

FIRM: PACIFIC GAS & ELECTRIC COMPANY

OFFICIAL POSITION: Mgr., Safety, Health & Claims Dept.

TELEPHONE: 781-4211 EXTENSION: 3171

Report #_____ Date _____, 19___

Dr. _____

Kindly give to bearer,

Mr./Ms. _____

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

PACIFIC GAS AND ELECTRIC COMPANY

By _____ RC # _____

62-4015 (REV. 5/80) Mgr. – Foreman – Supt.

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

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

Mr./Ms. _____

Occupation _____ Report # _____

Employed By _____ RC # _____ Division.

Injured at _____ a.m. p.m. on _____, 19_____

☐ Return to full work immediately _____

☐ Modified work until _____

☐ Unable to work until _____

☐ Restrictions or limitations _____

☐ Return Appt. Date: _____ Time: _____

☐ Discharged from treatment _____

Signed _____ MD.

PG AND E 62-4542 REV. 4/80

Confidential

FORWARD REPORT TO:

For Use by Company Attorneys Only
REPORT OF AUTOMOBILE ACCIDENT

(1) OTHER DRIVER

Name ______

Address ______ (Street, City, State)

Phone No. ______ ☐ Male ☐ Female

Date of Birth ______ Operator's Lic. No. ______ State ______

Insurance Company ______

(2) OTHER VEHICLE OR PROPERTY OWNER

Name ______

Address ______ Phone No. ______

Vehicle: Make ______ Type ______ Year ______ Lic. No. ______ Color ______

ACCIDENT REPORT NUMBER

Alpha	Year	Seq. Number	Div. Use

(3) PASSENGERS IN OTHER VEHICLES, WITNESSES, OR INJURED PERSONS

	NAME	ADDRESS	PHONE No.	PASSENGER	WITNESS	INJURED OR FATAL
1.				☐	☐	☐
2.				☐	☐	☐
3.				☐	☐	☐
4.				☐	☐	☐
5.				☐	☐	☐
6.				☐	☐	☐

(4) PASSENGERS IN COMPANY VEHICLE

	NAME	ADDRESS	PHONE No.	EMPLOYEE YES	EMPLOYEE NO	INJURED OR FATAL
1.				☐	☐	☐
2.				☐	☐	☐
3.				☐	☐	☐
4.				☐	☐	☐

(5) DATE, TIME AND LOCATION OF ACCIDENT

On ______ (Date) at ______ (Time) Hours, On ______ (Street or rural highway)

at/near ______ (Intersecting street, house number or highway location) In ______ (City or County, State)

(6) DESCRIPTION OF ACCIDENT

Complete details of how accident occurred

Other vehicle was ☐ stopped ☐ moving ______ (Direction) on ______ (Street) at ______ (Speed) MPH

Company vehicle was ☐ stopped ☐ moving ______ (Direction) on ______ (Street) at ______ (Speed) MPH

______

______

______

______

(If necessary, use additional sheet to complete story)

Describe weather, road and light conditions ______

Number of seat belts in Company vehicle ______ Number of seat belts in use at time of accident ______

Indicate which investigating agency will prepare a report: ☐ CHP ☐ Sheriff ☐ City Police ☐ None ☐ Other ______

(7) VEHICLE & PROPERTY DAMAGE

DESCRIBE DAMAGE TO:
Other Vehicle(s) or Property ______ Cost if known $ ______ or estimate: ☐ Under $500 ☐ Over $500 ☐ Over $1000

DESCRIBE DAMAGE TO: ☐ Company Vehicle ☐ Lease/Rental Vehicle ☐ Personal Vehicle ______ Cost if known $ ______ or estimate: ☐ Under $1000 ☐ Over $1000 ☐ Over $5000

Were photos taken of accident scene and damage? ☐ Yes ☐ No

(8) COMPANY DRIVER & VEHICLE INFORMATION

Company Driver ______ Home Address ______ Company Phone No. ______

Age ______ Occupation ______ Reporting to Local Office at ______

Cal. Driver's Lic. No. ______ Class ______ Expiration Date ______

Division or G.O. Dept. ______ District ______ Department ______

Vehicle No. ______ Lic. No. ______ Lic. No. ______ Type ______ Year ______ Odometer Reading ______

Driver's Signature ______

Date of this report ______ 19 ______ Countersigned ______ (Mgr., Supt., Gen. Foreman, etc.) Company Phone No. ______

LOCATION OR ITEM No.	ACCOUNT No.	JOB IN PROGRESS AT TIME OF ACCIDENT (G.M., W.O., D. & C.)	JOB No. ISSUED TO COVER REPAIRS (W.O., M. O. & C.)	R.C. No.

INSTRUCTIONS

All accidents arising out of the operation of Company-owned, leased or rented vehicles, as well as employee-owned, leased or rented vehicles used on Company business, must be reported to the Supervisor in charge immediately. All injuries to persons or serious damage to property of others involving above vehicles must be reported to the Safety, Health and Claims Department Field Investigator or, if he is unavailable, the General Office Safety, Health and Claims Department. Such notification shall be by the fastest means of communication and this report prepared the same day. Answer each question fully. When blank spaces are not sufficient for full statements, answer each on separate sheets and attach hereto.

PREPARE A SKETCH OF ACCIDENT BELOW: Sketch should show:

1) POSITION OF VEHICLES, BUILDINGS, STRUCTURES, ETC.

2) STREET NAMES, DIRECTIONS OF TRAVEL, STOP OR WARNING SIGNS, ETC.

3) LANE WIDTHS, SKID MARKS, POINT OF IMPACT, INCLUDING MEASUREMENTS AS APPROPRIATE!

4/84

DEPARTMENT OF NUCLEAR PLANT OPERATIONS
DIABLO CANYON POWER PLANT

Company Panel of Physicians, Ambulances, and Hospitals
Serving the Immediate Area Around Diablo Canyon[1]

Ambulance[2]

Name	Address	Phone	Remarks
San Luis Ambulance Service	358 Santa Rosa - San Luis Obispo	543-2626	Radiation Exposure Patients
Five Cities Ambulance Service	135 South Halcyon Rd. Arroyo Grande	489-4241	
South Bay Fire/Ambulance	2315 South Halcyon Rd. Arroyo Grande	528-1414	
Bay Ambulance	510 Bonita Morro Bay	772-2626	

CENTRAL DISPATCH FOR ALL OF THE ABOVE AMBULANCE SERVICES 543-7911

Hospitals

French Hospital	1911 Johnson Avenue San Luis Obispo	543-5353	Radiation Exposure Patients-External Defib. Equip.
**Sierra Vista Hospital (20 minutes to clear for helicopter)	1010 Murray Avenue San Luis Obispo	543-6550	External Defibrillation Equipped
Arroyo Grande Community Hospital and Medical Center	345 South Halcyon Rd Arroyo Grande	489-4261	External Defibrillation Equipment

Physicans

San Luis Medical Clinic	1235 Osos Street San Luis Obispo	543-5600	
*Richard E. Fleming	1235 Osos Street San Luis Obispo		Industrial Injury Treatment and Eye Injuries
T. A. Beresky	100 Casa Street San Luis Obispo		Eye Injuries
*David W. Ralston	1941 Johnson Ave. Suite 203 San Luis Obispo		Industrial Injury and Preemployment Physical Exams
Laurence H. Lotz	1941 Johnson Ave Suite #T San Luis Obispo		Industrial Injury and Preemployment Physical Exams

1. This list extracted from Standard Practice No. 251.1-1, Panel of Physicians, Ambulances, and Hospitals, Coast Valleys Division, dated 9/29/83.

2. See also EP OR-1 "Offsite Support and Assistance" for Air Ambulance and Medical Support.

*Willing to fly
**Helicopter landing facility available

PACIFIC GAS AND ELECTRIC COMPANY
SAFETY, HEALTH, AND CLAIMS DEPARTMENT

PANEL OF PHYSICIANS, AMBULANCES, AND HOSPITALS

COAST VALLEYS DIVISION

SP 251.1-1

Issued: 9/29/83

TOWN	ADDRESS	TELEPHONE	SERVICE
ARROYO GRANDE			
Five Cities Ambulance Service	135 South Halcyon Road	(805)489-4241	Ambul.
CENTRAL DISPATCH		(805)543-7911	Ambul.
A.G. Community Hospital and Medical Center	345 South Halcyon Road	(805)489-4261	Hosp. DEF
ATASCADERO			
Doctors	See PASO ROBLES		
North County Medical Services (Emergency Medical Technician)	3886 El Camino Real	(805)466-1011	Ambul.
CENTRAL DISPATCH		(805)543-7911	Ambul.
Twin Cities Community Hospital	1500 Las Tablas, Templeton	(805)434-2813	Hosp DEF
BAYWOOD PARK - LOS OSOS			
South Bay Fire/Ambulance	2315 Bayview Heights	(805)528-1414	Ambul
CENTRAL DISPATCH		(805)543-7911	Ambul

I - Industrial Injury Treatment
E - Preemployment Physical Examinations
EYE - Eye Injuries
PM - Paramedic Services
"DEF" - Hospital Equipped with External Defibrillators
* - Willing to Fly
** - Helicopter Landing Facility Available
RAD - Radiation Exposure Incidents

TOWN	ADDRESS	TELEPHONE	SERVICE
CAMBRIA			
Cambria Ambulance Service	1460 Main Street	(805)927-4221	Ambul
CENTRAL DISPATCH		(805)543-7911	Ambul
CARMEL			
Red Cross Ambulance	Carmel Fire House, 6th & Delores Streets	(408)624-3838	Ambul
Community Hospital of the Monterey Peninsula	Carmel & Pacific Grove Highway	(408)624-5311	Hosp DEF
CARMEL VALLEY			
C. Winter Van Horn	Village Medical Center		I-E
Paulino E. Tocchet	10 Del Fino Place		I-E
CASTROVILLE			
Joseph L. Kirch	11272 Merrit Street		I-E
Bert Clair Eliason	10349 Merrit Street		I-E
HOLLISTER			
N.L. Currie	390 Seventh Street		I-E
Martin M. Bress	931 Sunset Drive		I-E
Stephens & Poletti Ambulance	328 Fourth Street	(408)637-7474	Ambul
Hazel Hawkins Hospital	911 Sunset Drive	(408)637-5711	Hosp DEF
KING CITY			
Duane F. Hyde	210 Canal Street		-E
South County Ambulance	124 North Second Street	(408)385-4841	Ambul
George L. Mee Memorial Hospital	300 Canal Street	(408)385-5491	Hosp DEF

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

TITLE: EMPLOYEE INJURY OR ILLNESS (NON-RADIOLOGICAL)

ATTACHMENT 10

EP M-1

APPENDIX Z

1. When this Emergency Procedure has been implemented for injuries or illnesses occurring within th plant gate, and upon direction from the Shift Foreman, proceed as follows:

*a. Notify the Plant Manager or his designated alternate.

b. Notify the Compensation Claims Representative, Department of Safety Health and Claims, per the attached list of personnel.

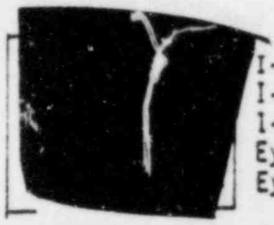
*c. Review the circumstances causing the injury or illness against the criteria for reports to NRC contained in Administrative Procedure C-11, Supplement 1, "Supplement 1 to Non-Routine Notification and Reporting to the NRC and Other Governmental Agencies", Appendix I.19, "Reporting of Significant Operation Events". If circumstances warrant, designate the event in accordance with the criteria contained in Procedure C-11.

*d. Also notify the following if NRC is notified - Supervising Nuclear Generation Engineer (Personnel and Environmental Safety) or his alternate in the Department of Nuclear Plant Operation:

Mr. W. H. Fujimoto	
PGandE	222-4004
Plant Extension	3277
Home	(415) 799-5080

NOTE: If the above General Office person cannot be promptly reached, request the Systems Dispatcher to contact alternate personnel.

TOWN	ADDRESS	TELEPHONE	SERVICE
LOMPOC			
Community Ambulance Service	410 East Locust	(805)736-7547 736-8550	Ambul
Lompoc Hospital District	508 East Hickory Avenue	(805)735-3351 736-1201	Hosp DEF
LOS OSOS			
South Bay Fire Department/Ambulance CENTRAL DISPATCH	Bayview Heights	(805)528-1414 (805)543-7911	Ambul
MONTEREY			
W.A. Carnazzo	464 Pacific Street		I-E
Nello P. Torri	1010 Cass Street		I-E
Howard Press	172 El Dorado		I-E
John J. D'Attilio	880 Cass Street		Eye
George S. Campion	1010 Cass Street		Eye
Eskaton Health Care Center (24-hour Emergency Service)	576 Hartnell Street	(408)375-2621	Hosp DEF
Peninsula Community	Carmel & Pacific Grove Highway, Carmel	(408)624-5311	Hosp DEF
MORRO BAY			
Bay Ambulance	510 Bonita	(805)772-2626	Ambul



TOWN	ADDRESS	TELEPHONE	SERVICE
PASO ROBLES			
*Stanley J. Kirk Physicians' Exchange	1305 Vine Street	[redacted]	E
Professional Ambulance Service	1035 Vine Street	(805)238-2545	Ambul
CENTRAL DISPATCH		(805)543-7911	Ambul
Twin Cities Hospital	1500 Las Tablas Road Templeton	(805)434-2813	Hosp DEF
SALINAS			
W.H. Lawler, Jr.	110 John Street	[redacted]	E
Howard C. Miles	535 East Romie Lane	[redacted]	-E
Glenn H. Smith	230 San Jose Street	[redacted]	Eye
E.O. Dong	535 East Romie Lane	[redacted]	Eye
Robert Avila	102 San Miguel Ave.	[redacted]	I-E
A-1 Ambulance Service	241 East Market Street	(408)422-2020 EMERGENCY 911	Ambul
Salinas Valley Memorial Hospital	450 East Romie Lane	(408)757-4333	Hosp DEF
Robert G. Van Horne	236 San Jose Street	[redacted]	E
SAN LUIS OBISPO			
*Richard E. Fleming	1235 Osos Street	[redacted]	I-E
T.A. Beresky	100 Casa Street	[redacted]	Eye
Laurence H. Lotz	1941 Johnson Avenue Suite T	[redacted]	I-E
SLO Medical Clinic	1235 Osos Street	(805)543-5600	
San Luis Ambulance Service	385 Santa Rosa	(805)543-2626	Ambul RAD
CENTRAL DISPATCH		(805)543-7911	Ambul
French Hospital	1911 Johnson Avenue	(805)543-5353	Hosp DEF RAD
**Sierra Vista Hospital (20 minutes to clear for chopper)	1010 Murray Avenue	(805)543-6550	Hosp DEF
David W. Ralston	1941 Johnson Avenue Suite 203	[redacted]541-1177	I-E

TOWN	ADDRESS	TELEPHONE	SERVICE
SANTA BARBARA			
St. Francis Hospital	601 East Micheltorena	(805)962-7661 (805)966-1531	Hosp DEF
SANTA MARIA			
Brian J. Kiniry	915 E. Stowell, Suite A	[redacted]	-E
Jules Bertero	201 West Cook Street		I-E
*Harry K. Lienke	217 East Fesler		I
*Donald E. Reiner	1414-D South Miller St.		Eye
D.D. Shepard	1414 South Miller St.		
Industrial Medical Group of Santa Maria Valley			
Dr. Betty Suits Tibbs	3130 Skyway Drive, Suite 702	[redacted]	-E
Dr. William J. Tibbs	3130 Skyway Drive, Suite 702		I-E
Ambulance Service		(911)	Ambul PM
Santa Maria Ambulance Service	602 East Cook Street	(805)925-9555	Ambul
Police Department (For Emergency Only)	Santa Maria	(805)925-2631 Emergency 911	Ambul
Marian Hospital	1400 East Church St.	(805)922-5811	Hosp DEF
Valley Community Hospital	505 East Plaza	(805)925-0935	Hosp
SOLEDAD			
Soledad Ambulance Service	Soledad	(408)678-2611	Ambul
(County Emergency Services)		911	

TOWN	ADDRESS	TELEPHONE	SERVICE
SOLVANG			
F.A. Pedersen	2030 Viborg Road	[redacted]	I-E
W.B. Van Valin	2030 Viborg Road	[redacted]	I-E
Coast Ambulance Service	361 Alisal Road	(805)688-8911 EMERGENCY 911	Ambul
Santa Ynez Valley Hospital	700 Alamo Pintado Rd.	(805)688-6431	Hosp DEF
TEMPLETON			
Peter S. Davis	1400 Las Tablas, Suite 2	[redacted]	I-E
Willard Osibin	1400 Las Tablas		I-E
*R.A. Greenman	1400 Las Tablas		E
CENTRAL DISPATCH		(805)543-7911	Ambul
Twin Cities Hospital	1500 Las Tablas	(805)434-2813	Hosp DEF
WATSONVILLE			
*E.H. Eiskamp	850 Freedom Boulevard	[redacted]	-E
P.K. Gilman	850 Freedom Boulevard		-E
David E. Bushman	30 Brennan Street		I-E
Douglas A. Liddicoat	274 Green Valley Road		Eye
W. Webb Wilson	272 Green Valley Road		Eye
A-1 Watsonville Ambulance	1046A Freedom Boulevard	(408)724-2455	Ambul
**Watsonville Community Hospital	Green Valley Road at Holohan Road	(408)724-4741	Hosp DEF

PACIFIC GAS AND ELECTRIC COMPANY

PG&E

DIABLO CANYON POWER PLANT
P.O. Box 56 · Avila Beach, California 93424 · (805) 595-7311

R. C. THORNBERRY
PLANT MANAGER

Dear Dr.

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

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

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

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

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

Sincerely,

R. C. THORNBERRY

RCT:kgs

69-9221 3/82 (100)

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

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

DEPARTMENT OF NUCLEAR PLANT OPERATIONS

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

NUMBER EP M-10
REVISION 0
DATE 6/11/84
PAGE 1 OF 3

TITLE: EMERGENCY PROCEDURE
FIRE PROTECTION OF SAFE SHUTDOWN EQUIPMENT

IMPORTANT TO SAFETY

APPROVED R. C. Thornberry 6-22-84
PLANT MANAGER DATE

SCOPE

This procedure provides analyzed corrective actions to take following a fire(s) in any plant area(s) containing safe shutdown equipment. Fire areas not containing safe shutdown equipment are not addressed by this procedure. Safe shutdown equipment are those defined in Appendix 2 of this procedure. This procedure and changes thereto requires PSRC review.

DISCUSSION

The equipment required to place the plant in a safe shutdown condition is contained in various fire areas (zones) within the plant. A fire area is defined as that portion of the plant that is separated from other areas by boundary fire barriers (walls, floor, ceiling) with any openings or penetrations protected with seals or closures having a fire resistance rating equal to that of the barrier. The barrier rating is commensurate with the free fire hazard in the area. Fire zones are subdivisions of fire areas and are not necessarily bounded by a continuous fire barrier. Should a fire break out in one of the fire areas (zones), safe shutdown and free fire hazard analysis has demonstrated that the safe shutdown of the unit will not be jeopardized. However, the manual operation of certain safety shutdown equipment may be required depending on the location and severity of the fire.

Safe shutdown equipment are defined on the stipulation that a complete loss of off-site power has occurred, and only diesel power is available. Therefore, this procedure may be conservative at various places. If a fire does occur in an area containing safe shutdown equipment but off-site power or in-house (non-vital) power continues to be available, the operator should continue to attempt to operate the plant with "normal" equipment, using the instructions provided in this procedure as back-up.

There are more fire zones in the plant than is addressed in this procedure. The reason why certain fire zones are not included in this procedure is because those zones do not contain safe shtudown circuits in them.

PROCEDURE

1. If a fire occurs in the plant the following additional procedures should be used immediately:

   a. Non-radiological Fires - Volume 3 in the Plant Manual, Emergency Procedure M-6

   b. Radiological Fire - Volume 3 in the Plant Manual, Emergency Procedure R-6

   c. All Fires - Volume 11 in the Plant Manual, Fire Plan Section

   d. All Fires - Volume 2 in the Plant Manual, Fire Fighting Tactics, K-2C

2. The DETECTOR ZONES (listed in the Fire Plan) do not coincide with the FIRE AREAS (ZONES) defined in this procedure. Once the location of the fire is known, determine which area (zone) it is in by referring to Appendix 1 of this procedure.

   NOTE: Not all fire zones are equipped with fire/smoke detectors.

3. After identifying the affected fire area (zone), follow the guidelines in Appendix 3 of this procedure to maintain the operability of the safe shutdown equipment.

4. In Appendix 3 of this procedure, whenever the instructions call out for manually closing pump breakers for CCW or charging pumps, be aware that there are dedicated wrenches available in the 4KV switchgear rooms that can be used to open the switchgear doors. The instructions to manually close the pump breaker are posted inside the door.

5. Whenever manual valving is performed on a motor operated valve, the power supply for the valve should be tripped off at the 480 volts load center.

6. The smoke and fire detectors located throughout the plant are not seismic qualified. Therefore, following any earthquake that registers greater than .02g at the plant, it must be assumed that the detectors fail. Within two hours all fire area (zones) must be inspected for possible undetected earthquake induced fires.

REFERENCES

1. Fire Protection Review, USNRC Docket Nos. 50-275 and 50-323.

2. Technical Specification 3.3.3.8.

3. Report on 10 CFR 50 Appendix R Review Unit 1, USNRC Docket No. 50-275, July 15, 1983

ATTACHMENTS

Specific information concerning safe shutdown equipment affected by fire is included in this procedure as follows:

APPENDIX 1 - This section contains an index to allow the operator to quickly locate the fire zones, and the page number for the corrective instructions corresponding to the fire zones, when a smoke/fire detector alarm is activated in the Control Room.

APPENDIX 2 - This section contains a list of the various systems and equipment required for safety shutdown and also lists the redundant equipment available.

APPENDIX 3 - This section contains a list of each fire area (zone) that contains safe shutdown equipment and states where the equipment is. It includes guidelines for maintaining the operability of safe shutdown equipment.

Plant Layout Drawings of Fire Area (Zone) Locations and Boundaries.

APPENDIX 1 - USER'S GUIDE
FIRE PROTECTION OF SAFE SHUTDOWN EQUIPMENT

PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	1	1	128' ELEV NR AUX RELAY RACKS/ CABLE SPREAD RM.	7-A	32	
		2	128' ELEV UNDER MAIN CONT BD LVB4/ " " "	7-A	"	
		3	128' ELEV UNDER MAIN CONT BD IV82/ " " "	7-A	"	
		4	128' ELEV UNDER MAIN CONT BD IVB5/ " " "	7-A	"	
		5	128' ELEV NR ANNUNCIATOR RACKS/ " " "	7-A	"	
		6	128' ELEV NR UNDER OPERATORS CONSOLE/" " "	7-A	"	
		7	128' ELEV NR UNDER MAIN CONT BD IVB1/" " "	7-A	"	
		8	128' ELEV NR UNDER SAFEGUARDS RACKS/ " " "	7-A	"	
		9	128' ELEV NR CONT I & PROT II RACKS/ " " "	7-A	"	
		10	128' ELEV NR PORT III RACKS/ " " "	7-A	"	
A	1	11	128' ELEV UNDER RAD MONITOR RACKS/" " "	7-A	32	
		12	128' ELEV UNDER PROT I RACKS/LOCAL ALARM LIGHT	7-A	"	
		13	128' ELEV UNDER PROT II RACKS/ " " "	7-A	"	
		14	128' ELEV UNDER PROT III RACKS/" " "	7-A	"	
		15	128' ELEV UNDER PROT IV RACKS/ " " "	7-A	"	

LEGEND:
- PNL = PANEL NUMBER
- DET ZONE = DETECTOR ZONE, NOT SAME AS FIRE ZONE
- DET = FIRE OR SMOKE DETECTOR NUMBER
- FIRE ZONE = AS DEFINED BY APPENDIX "R", FIRE PROTECTION OF SAFE SHUTDOWN EQUIPMENT ENGINEERING REPORT, REV. 0, JULY 15, 1983
- PAGE = GO TO THIS PAGE(S) OF THE PROCEDURE FOR THE CORRECTIVE OPERATOR ACTIONS THAT MAY BE REQUIRED FOLLOWING A FIRE IN THE ZONE IN QUESTION
- N/A = NOT APPLICABLE, BECAUSE THERE IS NOT SAFE SHUTDOWN CIRCUITRY/EQUIPMENT IN THIS FIRE ZONE.

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	2	1	119' ELEV OVER 480V. MCC 15E	14-C	N/A	
		2	119' ELEV OVER 480V. MCC 15D	14-C	N/A	
		3	119' ELEV OVER 480V. MCC 15J/CND POLISHING AREA	NOTE 1		
A	3	1	119' ELEV. 4KV SUPPLY FAN ROOM	13-E	35	
		2	119' ELEV. 4KV SUPPLY FAN ROOM	13-E	"	
		3	119' ELEV. 4KV SUPPLY FAN ROOM	13-E	"	
		4	119' ELEV. OVER EXCITATION SWGR	13-D	"	
		5	119' ELEV. OVER 4KV SWGR BUS F	13-A	34	
		6	119' ELEV. OVER 4KV SWGR BUS G	13-B	"	
		7	119' ELEV. OVER 4KV SWGR BUS H	13-C	"	

NOTE 1: NOT ASSIGNED

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FIRE PROTECTION OF SAFE SHUTDOWN EQUIPMENT

PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	4	1	104' ELEV. UNDER 4KV SWGR BUS F/CABLE SPREAD ROOM	12-A	34	
		2	104' ELEV. UNDER 4KV SWGR BUS G/ " " "	12-B	"	
		3	104' ELEV. UNDER 4KV SWGR BUS H/ " " "	12-C	"	
A	5	1	85' ELEV. OVER 480V MCC 11D & 11E	10	33	
		2	85' ELEV. OVER 4 & 12 KV RELAY BD	10	"	
		3	85' ELEV. OVER 4KV SWGR BUS E	10	"	
		4	85' ELEV. OVER 4KV SWGR BUS E	10	"	
		5	85' ELEV. OVER 4KV SWGR BUS D	10	"	
		6	85' ELEV. OVER 12KV SWGR BUS E	10	"	
		7	85' ELEV. OVER 12KV SWGR BUS D	10	"	
		8	85' ELEV. OVER 12KV START-UP SWGR	10	"	
A	6	1	75' ELEV. UNDER 4 & 12KV RELAY BD/CABLE SPREAD ROOM	10	33	
		2	75' ELEV. UNDER 4KV SWGR BUS E/ " " "	10	"	
		3	75' ELEV. UNDER 12KV SWGR BUS D/ " " "	10	"	
		4	75' ELEV. UNDER 12KV START-UP SWGR/ " " "	10	"	

APPENDIX 1 - USER'S GUIDE
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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	7	1	100' ELEV. CONTM'T PENETRATION AREA/ELECTRIC PENETRATION AREA ABOVE CABLE TRAY	3-BB	12	
		2	100' ELEV. CONTM'T PENETRATION AREA/ELECTRIC PENETRATION AREA ABOVE CABLE TRAY	3-BB	"	
		3	100' ELEV. CONTM'T PENETRATION AREA/ELECTRIC PENETRATION AREA ABOVE CABLE TRAY	3-BB	"	
		4	100' ELEV. CONTM'T PENETRATION AREA/ELECTRIC PENETRATION AREA ABOVE CABLE TRAY	3-BB	"	
		5	100' ELEV. CONTM'T PENETRATION AREA/ELECTRIC PENETRATION AREA ABOVE CABLE TRAY	3-BB	"	
		6	85' ELEV. POST-ACCIDENT SAMPLE AREA	3-BB	"	
		7	85' ELEV. POST-ACCIDENT SAMPLE AREA	3-BB	"	
		8	95' ELEV. HVAC RM OVERHEAD/POST ACCIDENT SAMPLING AREA	14-A	36	
		9	95' ELEV. HVAC RM FLTRS/CHARCOAL FILTER TEMP SENSOR	14-A	"	
		10	95' ELEV. HVAC RM FLTRS/CHARCOAL FILTER TEMP SENSOR	14-A	"	
		11	95' ELEV. HVAC RM FLTRS/CHARCOAL FILTER TEMP SENSOR	14-A	"	
		12	95' ELEV. HVAC RM FLTRS/CHARCOAL FITLER TEMP SEONSOR	14-A	"	

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	8	1	115' ELEV. CONTM'T PENETRATION AREA/ABOVE CABLE TRAY	3-BB	12	
		2	115' ELEV. CONTM'T PENETRATION AREA/ABOVE CABLE TRAY	3-BB	"	
		3	115' ELEV. CONTM'T PENETRATION AREA/ABOVE CABLE TRAY	3-BB	"	
		4	115' ELEV. CONTM'T PENETRATION AREA/ABOVE CABLE TRAY	3-BB	"	
A	9	1	115' ELEV. COMPUTER INVERTER	6-A-5	31	
		2	115' ELEV. BATTERY CHARGER 11 ROOM	6-A-1	28	
		3	115' ELEV. BATTERY CHARGER 12 ROOM	6-A-2	"	
		4	115' ELEV. BATTERY CHARGER 13 ROOM	6-A-3	"	
		5	115' ELEV. ROD CONTROL CABLE TRAYS	6-A-4	30	
		6	115' ELEV. ROD DRIVE MG SET 1-1	6-A-4	"	
		7	115' ELEV. ROD CONT. CABINETS	6-A-4	"	
		8	115' ELEV. ROD DRIVE MG SET 1-2	6-A-4	"	
		9	115' ELEV. ROD CONT. CABINETS	6-A-4	"	
		10→18	(NUMBER 10 THRU 18 SHOWN ON UNIT 2 SMOKE DETECTOR LOCATIONS TABLE)	---		

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	10	1	100' ELEV. HOT SHUTDOWN PANEL	5-A-4	27	
		2	100' ELEV. 480V BUS 1F ROOM	5-A-1	26	
		3	100' ELEV. 480V BUS 1G ROOM	5-A-2	"	
		4	100' ELEV. 480V BUS 1H ROOM	5-A-3	"	
		5	100' ELEV. UNDER PART LENGTH ROD CONT. CAB.	5-A-4	27	
		6	100' ELEV. UNDER 480V. L. C. 13D	5-A-4	"	
		7	100' ELEV. UNDER 480V. L. C. 13E	5-A-4	"	
		8	100' ELEV. UNDER ROD DRIVE PROGRAMMER	5-A-4	"	
		9	100' ELEV. UNDER 480V. MCC 12J	5-A-4	"	
		10	100' ELEV. UNDER 480V. MCC 12I	5-A-4	"	
		11	100' ELEV. HOT SHUTDOWN PANEL	5-A-4	"	
		12	100' ELEV. HOT SHUTDOWN PANEL	5-A-4	"	
		13+20	SHOWN ON UNIT 2 SMOKE DETECTOR LOCATIONS TABLE			
A	11	1	73' ELEV. 480 V MCC 12M AND 12N	3-F	6	
		2	73' ELEV. 480 V MCC 12M AND 12N	3-F	"	
		3	SHOWN ON UNIT 2 SMOKE DET LOCATIONS	---		
		4	SHOWN ON UNIT 2 SMOKE DET LOCATIONS	---		

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	12	1	INSIDE CONTM'T NR COL 7 BET INST TRAYS	1-A	1	
		2	INSIDE CONTM'T BET SG 14 & RCP 14	1-B	3	
		3	INSIDE CONTM'T BET SG 13 & RCP 13	1-B	3	
		4	INSIDE CONTM'T BRG 64° ELEV. 150	1-C	5	FLAME TYPE DETECTOR
		5	INSIDE CONTM'T OVERLOAD CNTR 13J	1-A	1	
		6	INSIDE CONTM'T BET SG 12 & RCP 12	1-B	3	
		7	INSIDE CONTM'T BET SG 11 & RCP 11	1-B	3	
		8	INSIDE CONTM'T NR COL 12 & TRAY EJB	1-A	1	
		9	INSIDE CONTM'T NR COL 10 & TRAY PJBA	1-A	1	
		10	INSIDE CONTM'T BRG 265° ELEV. 150'	1-C	5	FLAME TYPE DETECTOR
		11	INSIDE CONTM'T NR LOAD CNTR 13I	1-A	1	
		12+14	INSIDE CONTM'T BELOW 140' PENETRATION AREA	1-A	1	FLAME TYPE DETECTOR
		15+22	INSIDE CONTM'T BELOW 117' ANNULUS AREA	1-A	1	
		23+29	INSIDE CONTM'T BELOW 117' ANNULUS AREA	1-A	1	
A	13	1	155' EL CONTROL RM VENT INLET DUCT	8-B-3	N/A	
A	14	1	155' EL CONTROL RM VENT OUTLET DUCT	8-B-3	N/A	

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
A	15	1	INTAKE STRUCTURE BETWEEN 480V MCC 14D & 14E	30-B	N/A	
		2	INTAKE STRUCTURE OUTSIDE U-1 ASW PUMP VAULTS	3-A-5	38	
B	1	1	64' ELEV. WSTE GAS COMP 01 ROOM	3-C	6	
		2	64' ELEV. WSTE GAS COMP 11 ROOM	3-C	"	
		3	64' ELEV. CABLE TRAYS NORTH WALL/AREA H	3-C	"	
		4	64' ELEV. CABLE TRAYS NORTH WALL/AREA H	3-C	"	
		5	64' ELEV. CABLE TRAYS NORTH WALL/AREA H	3-C	"	
		6	64' ELEV. RHR PP 1-1 ROOM	3-B-1	5	
		7	64' ELEV. RHR PP 1-2 ROOM/AREA K	3-B-2	"	
		8	64' ELEV. CABLE TRAYS NORTH WALL/AREA K	3-C	6	
		9	64' ELEV. CABLE TRAYS NORTH WALL/AREA K	3-C	"	
		10	64' ELEV. DRAIN PPS			

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
B	2	1	73' ELEV. ABOVE CORRIDOR DUCTS/AREA H	3-C	6	
		2	73' ELEV. ABOVE CORRIDOR DUCTS/AREA H	3-C	"	
		3	73' ELEV. ABOVE CORRIDOR DUCTS/AREA H	3-C	"	
		4	73' ELEV. ABOVE CORRIDOR DUCTS/AREA K	3-C	"	
		5	73' ELEV. ABOVE CORRIDOR DUCTS/AREA K	3-C	"	
		6	73' ELEV. ABOVE CORRIDOR DUCTS/AREA K	3-C	"	
		7	73' ELEV. ABOVE CORRIDOR DUCTS/AREA K	3-C	"	
		8	73' ELEV. ABOVE CONTM'T SPRAY PP 1-2 ROOM	3-F	"	
		9	73' ELEV. CONTM'T SPRAY PP 1-2 ROOM	3-F	"	
		10	73' ELEV. CHG PP 1-3 ROOM	3-H-2	7	
		11	73' ELEV. CHG PP 1-2 ROOM	3-H-1	"	
		12	73' ELEV. CHG RHR HX 1-2 ROOM	3-B-2	5	
		13	73' ELEV. CHG RHR HX 1-1 ROOM	3-B-1	"	
		14	73' ELEV. CHG PP 1-1 ROOM	3-H-1	7	
		15	73' ELEV. CCW PP 1-3 ROOM	3-J-3	9	
		16	73' ELEV. CCW PP 1-2 ROOM	3-J-2	8	
		17	73' ELEV. CCW PP 1-1 ROOM	3-J-1	7	

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
B	3	1	85' ELEV. SI PP 1-1 ROOM	3-M	N/A	
		2	85' ELEV. SI PP 1-2 ROOM	3-M	N/A	
		3	85' ELEV. BA EVAP PKG 1-1 ROOM	3-L	9	
B	4	1	100' ELEV. HOT SHUTDOWN PANEL	5-A-4	27	
		2	100' ELEV. HOT SHUTDOWN PANEL	5-A-4	"	
		3	85' ELEV. CHEMICAL LAB	4-A	21	
		4	85' ELEV. CHEMICAL LAB	4-A	"	
		5	85' ELEV. CHEMICAL LAB	4-A	"	
		6	85' ELEV. CCW HX ROOM	14-E	36	
		7	85' ELEV. CCW HX ROOM	14-E	"	
B	5	1	100' ELEV. AFW PPs 1-2 & 1-3	3-Q-2	10	
		2	100' ELEV. SPENT FUEL PPS	3-O	N/A	
		3	100' ELEV. AFW PP 1-1	3-Q-1	10	
		4	100' ELEV. ABOVE CABLE TRAYS	3-X	11	
		5	100' ELEV. BA XFR PPS/AREA K	3-X	11	

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
B	6	1	115' ELEV. FIRE PPs ROOM	3-M	N/A	
B	7	1→9	115' ELEV. FILTER BANK ROOMS	3-P-4	N/A	AIR SHIELD TYPE
		10→14	115' ELEV. FILTER BANK ROOMS	3-P-4	N/A	FLAME DET TYPE
B	8	1→9	115' ELEV. FILTER BANK ROOMS	3-P-4	N/A	AIR SHIELD TYPE
		10→13	115' ELEV. FILTER BANK ROOMS	3-P-4	N/A	FLAME DET TYPE
		14	115' ELEV. EXH FAN 1 ROOM	3-P-4	N/A	
		15	100' ELEV./AREA L	3-P-1	N/A	
		16	85' ELEV. (FUEL HAND) SUPPLY FAN ROOM	3-P-1	N/A	
B	9	1	125' ELEV. FUEL STORAGE	3-R	N/A	
B	10	1	140' ELEV. SPENT FUEL STORAGE	3-R	N/A	FLAME DET TYPE
		2	140' ELEV. NEW FUEL STORAGE	3-R	N/A	FLAME DET TYPE
		3	140' ELEV. HOT SHOP AREA	3-S	N/A	
B	11	1→8	140' ELEV. NORTH FILTER ROOM & EXH FAN E-5 ROOM	3-P-7	N/A	
		9→12	140' ELEV. FAN E-5 ROOM	3-P-7	N/A	

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
B	12	1→8	140' ELEV. SOUTH FILTER ROOM	3-P-8	N/A	AIR SHIELD TYPE
		9→12	140' ELEV. FAN E-6 ROOM	3-P-8	N/A	FLAME DET TYPE
B	13	1→13	140' ELEV. MN CONTROL BOARDS	8-C	32	INDICATING LIGHTS
		14→16	140' ELEV. CONTROL CONSOLE	8-C	32	INDICATING LIGHTS
B	14	1	140' ELEV. COMPUTER ROOM	8-A	N/A	
		2	140' ELEV. SSPS ROOM	8-G	32	
		3	140' ELEV. REC & STORAGE ROOM	8-E	N/A	
		4	140' ELEV. SFM OFFICE	8-E	N/A	
B	15	1	140' ELEV. 500 KV CONT BOARD	8-C	32	INDICATING LIGHTS
		2→5	140' ELEV. NIS RACKS	8-C	"	INDICATING LIGHTS
		6	140' ELEV. INCORE INST RACKS	8-C	"	INDICATING LIGHTS
		7	140' ELEV. G.F. FUEL DET RACK	8-C	"	INDICATING LIGHTS
		8→12	140' ELEV. RAD MONITOR RACKS	8-C	"	INDICATING LIGHTS
B	16	1→2	140' ELEV. S-31 & 32 FAN ROOM	8-B-1	N/A	
		3→5	155' ELEV. CONTROL ROOM VENT ROOM	8-B-3	N/A	

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PNL	DET ZONE	DET	LOCATION/DESCRIPTION	FIRE ZONE	PAGE	REMARKS
D	1	1	INSIDE CONTM'T BET SG 11 & RCP 11	1-B	3	
	2	1	INSIDE CONTM'T BET SG 12 & RCP 12	1-B	"	
	3	1	INSIDE CONTM'T BET SG 13 & RCP 13	1-B	"	
	4	1	INSIDE CONTM'T BET SG 14 & RCP 14	1-B	"	

APPENDIX 2

DIABLO CANYON UNIT 1

EQUIPMENT REQUIRED FOR SAFE SHUTDOWN

The following list represents the minimum equipment required to bring the plant to a cold shutdown as defined by 10CFR50, Appendix R, Section III.G.1.a. and b.

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
1. Emergency Power Supply	
a. Diesel generators, 1-1, 1-2, 1-3	2 of 3 required
b. Diesel fuel oil transfer pumps, 0-1, 0-2	1 of 2 pumps required
c. Day tank level control valves LCV-85, LCV-88 LCV-86, LCV-89 LCV-87, LCV-90	1 of 2 LCV's per day tank required
d. 125V dc batteries	2 of 3 required
e. Battery chargers	2 of 5 required
f. Inverters	2 of 4 required
g. 4KV power supplies to 480 volt load centers and load center transformers	2 of 3 required
h. 125V dc supplies to 4KV switchgear	2 of 3 required
i. 125V power supplies to main switchgear board	2 of 3 required
j. Instrument ac power channels	2 of 4 channels required

APPENDIX 2 (CONTINUED)

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
2. Auxiliary Feedwater System	
a. Auxiliary feedwater (AFW) pumps (turbine-driven AFW pump 1-1 and motor-driven AFW pumps 1-2 and 1-3)	1 of 3 pumps required
b. Associated steam supply valves for AFW pump 1-1:	Applicable only to AFW pump 1-1
FCV-95, FCV-152, FCV-15,	Required for AFW pump 1-1
FCV-37, FCV-38	1 of 2 valves required for AFW pump 1-1
c. Associated level control valves:	
Pump 1-1: LCV-107, LCV-108	1 of 2 valves required for Pump 1-1
Pump 1-2: LCV-110, LCV-111	1 of 2 valves required for Pump 1-2
Pump 1-3: LCV-113, LCV-115	1 of 2 valves required for Pump 1-3
d. Water supply and associated valves:	
1) Condensate storage tank, or	No valves required
2) Fire water storage tank FCV-436, FCV-437	1 of 2 valves required for fire water storage tank. Can be manually operated if required.
3. Residual Heat Removal System*	
a. Residual Heat Removal (RHR) pumps 1-1 and 1-2	1 of 2 pumps required
b. RHR heat exchangers, 1-1 and 1-2	1 of 2 Hx required
c. RHR valves:	
HCV-637, HCV-638 (RHR Flowpath)	1 of 2 valves required
8809-A, 8809-B (RHR Flowpath)	1 of 2 valves required
8700A, 8700B (RHR Suction)	1 of 2 valves required
8716A, 8716B (RHR Flowpath)	1 of 2 valves required

* Components of RHR system are required for COLD SHUTDOWN

APPENDIX 2 (CONTINUED)

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
d. RHR heat sink:	
Component Cooling Water (CCW) System	See Item 5
Auxiliary Saltwater (ASW) System	See Item 6
e. RHR valves 8701 and 8702 (hot leg RHR suction)	1 of 2 required to maintain reactor coolant pressure boundary during HOT SHUTDOWN. Can be manually opened for COLD SHUTDOWN. Valve power circuits are normally racked out at the motor control center.
4. Charging and Boration	
a. Centrifugal charging pumps 1-1, 1-2 reciprocating pump 1-3 (used as backup to 2 centrifugal pumps)	1 of 3 pumps required
b. Charging pump cooling:	
CCW system	See Item 5
ASW system	See Item 6
c. Centrifugal charging pump 1-1 and 1-2 auxiliary lube oil pumps. Can be bypassed.	Only utilized to start charging pumps.
d. Charging and boration flow path	
1) Using boric acid tanks:	
Boric acid tanks	1 of 2 tanks required
Boric acid transfer pumps	1 of 2 pumps required
Boric acid filter	Only flow path required
Valve 8104	Required for boric acid tank flowpath
Charging pumps	1 of 3 pumps required
Valve FCV-128	Required for centrifugal charging pumps. Two manual bypass flowpaths.

APPENDIX 2 (CONTINUED)

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
and a) Charging through reactor coolant pump seal via RCP seal injection	No additional components required
b) Charging through regenerative HX and valves HCV-142, 8108, 8107 and:	All of these valves required for this flow path
(1) Valve 8145 and 8148, charging to auxiliary pressurizer spray,	1 of 2 valves required for pressurizer auxiliary spray
or (2) Valve 8146, charging to loop 3 cold leg	Valve required
or (3) Valve 8147, charging to loop 4 cold leg	Valve required
or 2) Using boron injection tanks:	
Refueling water storage tank	Required for this flowpath
Valves 8805A, 8805B	1 of 2 valves required
Charging Pumps	1 of 3 valves required
Valve FCV-128	Required for reciprocating charging pump
Valves 8803A, 8803B	1 of 2 valves required
Boron Injection Tank (BIT)	Required
Valves 8801A, 8801B	1 of 2 valves required
5. Component Cooling Water System	
a. CCW pumps 1-1, 1-2 and 1-3	1 of 3 pumps required
b. CCW heat exchanger 1-1, 1-2	1 of 2 Hx required

APPENDIX 2 (CONTINUED)

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
c. CCW Valves:	
FCV-355 (CCW Misc. Service Header)	Required for reciprocating charging pump 1-3 cooling. Can be opened manually if required.
FCV-430, FCV-431 (CCW vital service headers)	1 of 2 valves required
FCV-364, FCV-365 (CCW to RHR Hx)	1 of 2 valves required for RHR system cooling. Valves required for COLD SHUTDOWN. Manual operation assumed in event of failure of remote control.
d. CCW pump 1-1, 1-2, 1-3 auxiliary lube oil pumps	Only required to start CCW pump
e. CCW heat sink:	
ASW system	See Item 6
6. Auxiliary Saltwater System	
a. Auxiliary saltwater (ASW) pump, 1-1, 1-2	1 of 2 pumps required
b. ASW valves:	
FCV-602, FCV-603 (ASW to CCW Hx)	1 of 2 valves required
7. Main Steam System	
a. 10% steam relief valves: PCV-19, PCV-20, PCV-21, PCV-22	1 of 4 valves required Backup to 10% steam relief valves provided by main steam code safety valves
b. Steam generator blowdown isolation valves: FCV-760, FCV-761, FCV-762, FCV-763	Required to close to maintain water inventory for safe shutdown

APPENDIX 2 (CONTINUED)

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
8. Instrumentation	
a. Steam generator level	1 steam generator required for cooldown
SG 1-1: LT-516, LT-517, LT-518, LT-519	
SG 1-2: LT-526, LT-527, LT-528, LT-529	
SG 1-3: LT-536, LT-537, LT-538, LT-539	
SG 1-4: LT-546, LT-547, LT-548, LT-549	
b. Steam generator pressure:	1 steam generator required for cooldown
Loop 1: PT-514, PT-515, PT-516	1 of 3 PT's required for that loop
Loop 2: PT-524, PT-525, PT-526	
Loop 3: PT-534, PT-535, PT-536	
Loop 4: PT-544, PT-545, PT-546	
c. Reactor coolant system temperature:	1 of 2 required per loop 1 loop required for cooldown
Loop 1: TE-413A, TE-413B	
Loop 2: TE-423A, TE-423B	
Loop 3: TE-433A, TE-433B	
Loop 4: TE-443A, TE-443B	
d. Reactor coolant system or pressurizer system:	1 of 3 wide range PTs required
PT-403, PT-405, PT-406,	Wide range
PT-455, PT-456, PT-457,	Narrow range
PT-474	
e. Pressurizer Level LT-459, LT-460, LT-461, LT-406	1 of 4 required
f. Source range flux monitors NE-31, NE-32	1 of 2 required

APPENDIX 2 (CONTINUED)

SYSTEM AND ACTIVE COMPONENTS	REDUNDANCY AND/OR COMPONENTS
9. Ventilation for Safe Shutdown Equipment	
a. *480 switchgear room and inverter room supply and exhaust fans	
S-43, S-44	1 of 2 required
E-43, E-44	1 of 2 required
Dampers: HD43, HD44	1 of 2 required
b. *4.16KV switchgear room supply fans S-67, S-68, S-69	2 of 3 required
c. ASW pump room exhaust fans E-101, E-103	1 of 2 required
10. Reactor Coolant System	
a. Pressurizer power operated relief valves PCV-455C, 474, 456 and block valves 8000A, B and C.	Required to prevent LOCA due to stuck open valve

* Portable fans are available in the event these fans are unavailable due to a fire.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
1.0 Fire Area 1 (Fire Zone 1-A)	
Containment Annulus Area, Elevation 91'	
1.A) Residual Heat Removal System	
1) MOV 8701 MOV 8702	1) Verify MOV 8701 and 8702 breakers are racked out to prevent inadvertant opening. When needed for cooldown, manually (handle) open valves, or open from Control Room. [The pressure and temperature interlock on these valves may need to be jumpered in order to open valve from Control Room.]
1.B) Charging and Boration	
1) 8146 Normal Charging 8147 Alternate Charging	1) Charge and borate via a) RCP seals b) BIT bypass c) BIT
2) 8145 PZR auxiliary spray 8148 PZR auxiliary spray bypass	2) Continue to use PZR normal spray from loop 1 or loop 2 if offsite-power is available. If not, use PZR PORV's.
1.C) Steam Generator Blowdown Inside Containment Valves	
1) FCV-760 S.G. #1 FCV-761 S.G. #2 FCV-762 S.G. #3 FCV-763 S.G. #4	1) If these valves spuriously open due to hot short, manually close their corresponding outside containment isolation valves, which are FCV 151, 154, 157 and 160 and FCV 250, 248, 246 and 244.

[ ] Statement enclosed is not part of Appendix R review.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
1.D) PZR Level Transmitters 1) LT 459 LT 460 LT 461	1) If all three level indications are lost, use LT 406 at the dedicated shutdown panel. LT 406 is cold calibrated, therefore adjust for temperature errors accordingly.
1.E) Steam Generator Level Transmitters S.G. #1 / S.G. #2 / S.G. #3 / S.G. #4 LT 516 / LT 526 / LT 536 / LT 546 LT 517 / LT 527 / LT 537 / LT 547 LT 518 / LT 528 / LT 538 / LT 548 LT 519 / LT 529 / LT 539 / LT 549	Fire Protection Review indicated that at least 2 out of 4 level transmitters should still be available.
1.F) RCS Temperature Elements Hot Leg / Cold Leg Loop 1: TE 413A / TE 413B 2: TE 423A / TE 423B 3: TE 433A / TE 433B 4: TE 443A / TE 443B	Loop 1 and 2 temperature elements or Loop 3 and 4 temperature may be damaged by fire, but not all four loops. Use TE's from the two loops still available.
1.G) RCS Wide Range Pressure Transmitters PT 403 - loop 4 hot leg PT 406* - loop 4 hot leg PT 405 - loop 3 hot leg *At dedicated shutdown panel	PT 406 may have been fire damaged. If so, use PT 403 and 405 indications in the Control Room.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
1.H) Pressurizer PORV's and block valves	
PORV 474, 8000A PORV 455C, 8000B PORV 456, 8000C	Fire Protection analysis of the circuits for these valves indicated at least one PORV will be available following a postulated fire in this area. The worst that could happen is the PORV's will fail as is, closed.
1.I) Source Range Neutron Flux Monitor	
NE - 31 NE - 32	One source, range should still be available.

2.0 Fire Area 1 (Fire Zone 1-B)

Reactor Coolant Pump Area, Elevation 91'

2.A) Steam Generator Blowdown Inside Containment Isolation Valves	
FCV 760 - S.G. #1 FCV 761 - S.G. #2 FCV 762 - S.G. #3 FCV 763 - S.G. #4	If fire damage cause valve(s) to open spuriously, close their corresponding outside containment isolation valves, which are FCV 151, 154, 157 and 160 and FCV 250, 248, 246 and 244.
2.B) Pressurizer Level Transmitters	
LT 459 LT 460 LT 461 LT 406	Not affected by fire in this zone.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
2.C) RCS Temperature Elements Loop 1 413A (hot leg) 413B (cold leg) Loop 2 423A 423B Loop 3 433A 433B Loop 4 443A 443B	Either loops 1 and 2 or loops 3 and 4 should still be available.
2.D) Pressurizer Pressure Channels PT 455 (N.R.) PT 456 (N.R.) PT 457 (N.R.) PT 474 (N.R.) PT 406 (W.R.)	Not affected by fire in this area.
2.E) Pressurizer PORV's and Block Valves PORV 474, 8000A PORV 455C, 8000B PORV 456, 8000C	Fire Protection analysis of the circuits for these valves indicate at least one PORV, either 474 or 456, will be available following a postulated fire in this area. The worst that could happen is that the PORV's fail as is, closed.
2.F) Source Range Neutron Flux Monitors NE 31 NE 32	One source range should still be available.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
3.0 Fire Area 1 (Fire Zone 1-C)	
Control Rod Drive Area, Containment Building, 100' Elevation	
3.A) Pressurizer PORV's and Block Valves	
PORV 474, 8000A PORV 455C, 8000B PORV 456, 8000C	Fire Protection analysis of the circuits for these valves indicated at least one PORV, either 474 or 456 will be available following a postulated fire in this area. The worst that could happen is that the PORV's fail as is, closed.
3.B) Source Range Neutron Flux Monitors NE-31 NE-32	One source range should still be available.
4.0 Fire Area 3-B-1	
RHR Pump 1-1 and Heat Exchanger Room, Elevation 58 thru 113	
RHR Pump 1-1	If RHR Pp 1-1 is fire damaged, use RHR Pp 1-2
5.0 Fire Area 3-B-2	
RHR Pump 1-2 and Heat Exchanger Room, Elevation 58 thru 113	
RHR Pump 1-2	If RHR Pp 1-2 is fire damaged, use RHR p_p 1-1

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
6.0 Fire Area AB-1 (Fire Zone 3-B-3)	
BIT Room, Elevation 62 thru 75	
8803A BIT inlet valves 8803B	If both of these valves are fire damaged, borate via normal CVCS boration path.
7.0 Fire Area AB-1 (Fire Zone 3-C)	
Drain Receiving Tanks and Gas Decay Tanks Area, Aux Bldg, 75' Elevation	
7.A) Diesel Fuel Transfer Pump 0-1 power	If damaged by fire, use Diesel Fuel Oil Transfer Pump 0-2.
7.B) Aux Feedwater Pump 1-2 Control	If damaged by fire, use Aux Feedwater Pp 1-1 or 1-3
8.0 Fire Area AB-1 (Fire Zone 3-F)	
Containment Spray Pump Room	
Reciprocating Charging Pump 1-3	If damaged by fire, use centrifugal charging pump 1-1 or 1-2.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
9.0 Fire Area 3-H-1	
Charging Pump 1-1 and 1-2 Room, 73' Elevation	
9.A) 8803A BIT inlet valve 8803B BIT inlet valve	Use normal CVCS charging path for boration.
9.B) Reciprocating Charging Pump 1-3 control	All three pumps can be fire damaged. But it is possible to bypass the control circuitry for pump 1-3 in the 4KV switchgear room, and manually close the 4KV breaker to start the reciprocating pump. Refer to Step 4 of main procedure.
9.C) Charging pump 1-1 and 1-2 power and control	Same as item 9.B above.
10.0 Fire Area 3-H-2	
Reciprocating Charging Pump 1-3 Room, Aux Bldg, 73' Elevation	
10.A) Reciprocating charging Pp 1-3	Use centrifugal charging Pp 1-1 or 1-2
11.0 Fire Area AB-1 (Fire Zone 3-J-1)	
Component Cooling Water Pp 1-1 Room, 75' Elevation	
11.A) Control circuit to Diesel 1-2 and 1-3	Diesel 1-3 normal control circuit, and Diesel 1-2 backup control circuit may be fire damaged. If so, switch to alternate control circuit locally at the diesel generator rooms.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
11.B) Diesel Fuel Oil Transfer Pump 0-2	Circuit for pump 0-2 is protected by a 2-hour fire barrier and should not be affected by a fire. Circuit for pump 0-1 is not protected.
11.C) Aux Feedwater Pump 1-3	Use AFW p_p 1-1 if p_p 1-3 is fire damaged.
11.D) AWS Pump 1-2 Exhaust Fan E-101	Use ASW Pump 1-2 and its exhaust fan E103 as alternate safe shutdown equipment.
11.E) CCW Pp 1-1	Use CCW Pp 1-2 and 1-3

12.0 Fire Area AB-1 (Fire Zone 3-J-2)

Component Cooling Water Pump 1-2 Room, Elevation 75

12.A) Boration Path 8803A BIT inlet valve 8803B BIT inlet valve	Continue to use normal CVCS charging path for boration.
12.B) Component Cooling Water Pump 1-1 and 1-2 aux lube oil pumps.	The auxiliary lube oil pump control for CCW Pp 1-1 and 1-2 may be fire damaged. Use CCW Pp 1-3, or locally start CCW Pp 1-1 and 1-2 at 4KV breakers. Refer to Step 4 of main procedure.
12.C) Charging Pumps 1-1, 1-2 and their aux lube oil pumps, reciprocating charging Pp 1-3 control.	The circuitry for auxiliary lube oil pumps for charging pumps 1-1 and 1-2 may be fire damaged. Without the auxiliary lube oil pumps, these pumps cannot be started from the Control Room or Hot Shutdown Panel. Therefore, if they are needed, start them locally at 4 KV switchgear rooms. Refer to Step 4 of main procedure. If reciprocating charging pump is lost, use centrifugal charging pump 1-1 and 1-2.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
12.D) Diesel 1-2 backup control Diesel 1-3 output breaker trip	Verify and continue to use normal control power to Diesel 1-2 selected at diesel generator room. If diesel 1-3 trips, verify diesel 1-1 and 1-2 available.

13.0 Fire Area AB-1 (Fire Zone 3-J-3)

Component Cooling Water Pump 1-3, Aux Bldg, 75' Elevation

13.A) Boration Path 8803A - BIT inlet valve 8803B - BIT inlet valve	Use normal CVCS charging path for boration.
13.B) CCW Pp 1-3	Use CCW Pp 1-1 and 1-2.
13.C) Charging pumps 1-1, 1-2 and their aux lube oil pumps, reciprocating charging pump 1-3 control.	The circuitry for the auxiliary lube oil pumps for charging pumps 1-1 and 1-2 may be fire damaged. Without the auxiliary lube oil pumps, these pumps cannot be started from the Control Room or Hot Shutdown Panel. Therefore, if they are needed, start them locally at 4 KV switchgear rooms. Refer to Step 4 of main procedure. If the reciprocating charging pump is lost, use centrifugal charging pump 1-1 and 1-2.

14.0 Fire Area AB-1 (Fire Zone 3-L)

Boric Acid and Waste Evaporator Area, 85' Elevation

14.A) Charging and boration flow path and equipment.	

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
1. Valve 8805A RWST suction 8805B RWST suction 8104 Emerg. borate	If 8805A and B cannot be opened electrically, use manual handles provided for the valves. If 8104 is damaged, continue to use normal boration path, or the manual bypass valve 8471 around 8104, if FCV 110A is open.
2. Boric Acid Transfer Pp 1-1 and 1-2	If both boric acid transfer pumps are fire damaged, borate via 8805A and B, or inject the BIT.
3. Charging Pp 1-2 aux lube oil Pp	Use charging Pp 1-1, 1-3, or locally start pump 1-2 at 4 KV switchgear room. Refer to Step 4 of main procedure.
14.B) Aux Feedwater Pp 1-3 Aux Feedwater Pp 1-2	Use Turbine Driven Aux Feedwater Pp 1-1, if MD AFW Pp 1-2 and 1-3 are unavailable. (Note the circuits for pump 1-2 and 1-3 are provided with a 2-hour fire barrier in this fire zone).

15.0 Fire Area V-1 (Fire Zone 3-P-3)

Aux Bldg Main Exh Fan Room #2, 115' Elevation
Aux Bldg Normal Exh Filter Room, 100' Elevation
Aux Bldg Normal Concrete Exh Duct, 93' Elevation, and Plenum, 85' Elevation

Aux Feedwater Pp 1-3 Aux Feedwater Pp 1-2	Use Turbine Driven Aux Feedwater Pp 1-1.

16.0 Fire Area 3-Q-1

Aux Feedwater Turbine Driven Pump 1-1

Turb driven AFW Pp 1-1	Use motor driven AFW Pp 1-2 and 1-3

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
17.0 Fire Area AB-1 (Fire Zone 3-Q-2)	
Aux Feedwater Motor Driven Pumps	
AFW Pp 1-2 and 1-3	Use turbine driven AFW Pp 1-1
18. Fire Area AB-1 (Fire Zone 3-X)	
Boric Acid Transfer Pumps and CVCS Demins, 100' Elevation	
Boration Flow Path	
1. Valve 8805A - RWST suction 8805B - RWST suction 8104 - Emerg borate	If 8805A and B cannot be opened electrically, use manual handles provided for the valves. If 8104 is damaged, continue to use normal boration path, or the manual bypass valve 8471 around 8104, if FCV 110A is open.
2. Boric Acid Transfer Pp 1-1 and 1-2	If both boric acid transfer pumps are fire damaged, borate via 8805A and B (use manual handles if necessary), or inject the BIT.
19.0 Fire Area AB-1 (Fire Zone 3-AA)	
Boric Acid Tanks, Aux Bldg, 115' Elevation	
Boration Flow Path	
1. Valve 8805A - RWST suction 8805B - RWST suction 8104 - Emerg borate	If 8805A & B cannot be opened electrically, use manual handles provided for the valves. If 8104 is damaged, continue to use normal boration path, or the manual bypass valve 8471 around 8104, if FCV 110A is open.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
2. Borate Acid Tank 1-1 and 1-2 level indication Li 102 and 106.	Use boric acid flow integrator and control operator log to determine boric acid tank level. Notify I&C to set up temporary level indication for the tanks.

20.0 Fire Area 3-BB

(A. Penetration Area 115'; B. Penetration Area 100'; C. Penetration Area, 85')

20.A) Penetration Area, 115' Elevation, Aux Bldg

1. Diesel 1-1	Normal control power for Diesel 1-1 may be fire damaged. If so, select backup control power at diesel generator room. In addition, diesel 1-2 and 1-3 are available.
2. Aux Feedwater Level Control Valves	
LCV 113 LCV 115 LCV 108 FCV 37 FCV 38 FCV 95	LCV 110 and LCV 111 from AFW Pp 1-2 supply is available. They are not affected by fire at this elevation. Fire in this area could fail these three valves (LCV 113, 115 and 108) only in the OPEN position. The capability to modulate these valves may be lost. If so, modulate auxiliary feedwater flow locally using handwheels provided at the valves. However, valve modulation may not be needed since it's associated AFW Pump(s) may not be running. In addition, there are check valves downstream which will prevent reverse water flow.)
3. Charging and Boration	
8104 - Emerg boration valve	Use manual bypass valve 8471 around 8104 if FCV 110A is open. Or use supply from RWST via 8805 A and B

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
HCV - 142	If fire damaged the capability to modulate this valve, use the duplicate control at the hot S/D panel, (using backup nitrogen supply)
8801B - BIT outlet	Use 8801A
8145 - PZR Aux Spray 8148 - PZR Aux Spray Bypass	For depressurization of RCS, use PZR PORV 474 (which is sufficiently separated from these valves) [if RCPs are not running. If RCPs are running, try the normal PZR spray valves, or the manual PZR spray valves bypass inside containment.] If 8145 or 8148 fail open due to hot short, terminate premature RCS depressurization using 8107 or 8108. These valves are not affected by fire at this elevation.
8146 - Normal Charging 8147 - Alternate Charging	Fire at this elevation could cause both these valves to fail close. If so, use charging via 1) Manual bypass valve 8969 around the BIT 2) or charge through the BIT
4. CCW to the RHR HX	
FCV 364 FCV 365	If the control circuits for these valves are fire damaged, they can be opened or closed using handwheels provided for the valves.
5.a 10% Steam Dump Valves	If fire damaged the capability to operate these valves from VB-3, go to the hot shutdown panel to operate them. Otherwise, manually operate these valves using handwheels provided. Analysis indicates that these valves cannot fail open due to hot short or short to ground resulting from a fire in this area.

[ ] Statements enclosed are not part of Appendix R Review

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
5.b Steam Generator Blowdown Valves Inside Containment FCV 760 FCV 761 FCV 762 FCV 763	If these valves failed open due to a fire in this area, isolate the corresponding outside containment blowdown isolation valve.
5.c Steam Generator Level Transmitter	Fire in this elevation may have damaged the steam generator LT's. At least the level transmitter ending in 7's or 9's (LT 517, 527, 537, 547 and LT 519, 529, 539, 549) should still be available, due to their physical seperation one another.
5.d Steam Generator Pressure Transmitters	At least one of the following groups of steam generator pressure transmitters should still be available after a fire in this area: Group A: PT 514 (S.G. #1) PT 524 (S.G. #2) Group B: PT 515 (S.G. #1) PT 525 (S.G. #2) Group C: PT 536 (S.G. #3) PT 546 (S.G. #4)
6.a Pressurizer PORV's and block valves PCV 474, 8000A PCV 456, 8000B PCV 455C, 8000C	A fire at this elevation can cause at most two PORV's to fail close, and the block valves to fail as is, normally open. In addition aux spray valve 8145 will be available. Therefore, either 8145 or the available PORV (474 or 455c and 456) can be used to depressurize the RCS. [When using aux spray, secure normal and alternate charging.]

[ ] Statement enclosed not part of Appendix R Review

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
	However, following a fire, a hot short could occur when the operator operates (opens) the PZR aux spray valve 8148 resulting in the spurious opening of PORV 455C. [Therefore the operator may want to attempt closing block valve 8000C before opening 8148, or not use it at all]
6.b Pressurizer Level Transmitters LT 459 LT 461	At least one of these pressurizer transmitters should still be available following a fire at this elevation.
6.c RCS Wide Range Temperature Loop 1 413A (hot leg) 413B (cold leg) Loop 2 423A 423B Loop 3 433A 433B Loop 4 443A 443B	Either loop 1 and 2 or loop 3 and 4 temperature element should still be available following a fire in this area.
7. RHR hot leg injection isolation valve 8703.	The fire could cause a hot short in the control circuit resulting in premature opening of this valve. However, there are two series check valves downstream which will prevent the RHR piping from being pressurized.
8. Source Range Monitors NE 31 NE 32	At least one source range monitor should still be available.

[ ] Statements enclosed are not part of Appendix R Review

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
2. Aux Feedwater System	The steam supply valve FCV-95 to turbine driven AFW pump may be fire damaged. However, motor driven AFW Pp 1-2 and 1-3 should still be available, although the ability to modulate LCV 110 (AFW Pp 1-2 to S.G. #1)) and LCV 111 (AFW Pp 1-2 to S.G. #2) may be lost. In that case, handwheel modulation will be required for LCV 110 and 111. At any rate, LCV 110 and 111 can fail only in the OPEN position. This is up to the operator's option since LCV 115 and 113 are unaffected and would be available with AFW Pp 1-3.
3. Diesel 1-1	Normal DC control power may have been damaged by fire. If so, select backup control power at local diesel control panel. In addition, Diesel 1-2 & 1-3 are available.
4. CCW to RHR HX FCV 364 FCV 365	If the control circuits for these valves are damaged by fire, the valves can be operated using handwheels provided.
5. Steam Generator Pressure Transmitter	Steam Generator 1-1 pressure transmitter PT 514 may have been damaged by fire. All other steam generator pressure transmitters are not affected by a fire in this area.
6. RCS Wide Range Pressure Transmitters	RCS wide range pressure transmitters PT 403 and PT 405 may be fire damaged. However, PT 406 should still be available.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
3. Charging and Boration	
8104 - Emerg boration	Use manual bypass valve 8471, if FCV 110A is open; or 8805 A and B - supply from RWST.
8107 - Charging line iso valve 8108 - Charging line iso valve	They are fail as-is valve, that is, when damaged by fire during at power condition, they will remain open.
8145 - PZR Aux Spray	If this valve hot shorts open, isolate using HCV 142 or 8108. These two valves (circuits) are sufficiently separated from each other to preclude concurrent damage by a single fire in this area. When RCS depressurization is required, use 8148, (aux spray valve bypass). [When aux spray is used, secure normal and alternate charging valves.]
8146 - Normal Charging (loop 4) 8147 - Alternate Charging (loop 3) 8801A - BIT outlet 8801B - BIT outlet	When damaged by fire, 8146 and 8147 can fail either open or closed. [The fail open position is not of concern since charging flow would not be affected.] If they fail close, RCS boration can be accomplished via the BIT bypass manual valve 8969. The same fire would also likely damage circuits for valves 8801A and B. Therefore, in order to borate using the BIT, the handwheels provided for the valves must be used.
HCV - 142	If damaged by fire, this valve is designed to fail closed. Attempt to operate this valve from Hot S/D panel. In the event of a premature RCS depressurization due to spurious aux spray valve operation, at least one of the three valves HCV 142, 8107 or 8108 should be available to isolate aux spray. Sufficient fire seperation exists between HCV 142 & 8108.
4. CCW to RHR HX FCV - 364 FCV - 365	If the control circuits for these valves are fire damaged, they can be opened or closed using handwheels provided for the valves.

[ ] Statements enclosed are not part of Appendix R Review

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
3. Charging and Boration	
8104 - Emerg boration	Use manual bypass valve 8471, if FCV 110A is open; or 8805 A and B - supply from RWST.
8107 - Charging line iso valve 8108 - Charging line iso valve	They are fail as-is valve, that is, when damaged by fire during at power condition, they will remain open.
8145 - PZR Aux Spray	If this valve hot shorts open, isolate using HCV 142 or 8108. These two valves (circuits) are sufficiently separated from each other to preclude concurrent damage by a single fire in this area. When RCS depressurization is required, use 8148, (aux spray valve bypass). [When aux spray is used, secure normal and alternate charging valves.]
8146 - Normal Charging (loop 4) 8147 - Alternate Charging (loop 3) 8801A - BIT outlet 8801B - BIT outlet	When damaged by fire, 8146 and 8147 can fail either open or closed. [The fail open position is not of concern since charging flow would not be affected.] If they fail close, RCS boration can be accomplished via the BIT bypass manual valve 8969. The same fire would also likely damage circuits for valves 8801A and B. Therefore, in order to borate using the BIT, the handwheels provided for the valves must be used.
HCV - 142	If damaged by fire, this valve is designed to fail closed. Attempt to operate this valve from Hot S/D panel. In the event of a premature RCS depressurization due to spurious aux spray valve operation, at least one of the three valves HCV 142, 8107 or 8108 should be available to isolate aux spray. Sufficient fire seperation exists between HCV 142 & 8108.
4. CCW to RHR HX	If the control circuits for these valves are fire damaged, they can be opened or closed using handwheels provided for the valves.
FCV - 364 FCV - 365	

[ ] Statements enclosed are not part of Appendix R Review

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
6.a Pressurizer PORV's and Block Valves PCV 474, 8000A PCV 456, 8000B PCV 455C, 8000C	A fire at this elevation can cause the PORV's to fail close, and block valves to fail as is. Therefore, PORV's failure should not cause a RCS pre-mature depressurization. However, the same fire at this elevation could hot short pressurizer aux spray valve 8145 causing it to spuriously open thus prematurely depressurizing the RCS. If that occurs, use one of the three valves 8107, 8108 or HCV 142 (at the hot S/D panel if needed) to isolate aux spray. When RCS depressurization is required to bring unit to cold shutdown, open the above valve that was closed to provide the needed spray via the fail open aux spray valve 8145.
6.b Pressurizer Level Transmitters	LT 459 and LT 461 should still be available. They are not affected by a fire in this area.
6.c RCS Pressure Transmitters	PT 403 should still be available. The others (PT 405 and PT 406) may have been damaged by the fire.
6.d RCS Wide Range Temperature Elements	Loop 2 hot and cold leg wide range temperature elements (TE-423A & B) should still be available. TE's from other loops may have been fire damaged.
20.C) Penetration Area, 85' Elevation	
1. Charging and Boration HCV - 142 8108 - Charging line iso-valve 8805A and B - RWST supply	The charging line and isolation valve 8108 if damaged by fire will fail as is, which does not pose a problem. HCV-142 can fail closed. If so, control should still be available from the hot S/D panel. If 8805A and B are fire damaged, use the handwheels provided for the valves. Also, valve 8104 is still available. It is not affected by a fire at this elevation.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
20.B) Penetration Area, 100' Elevation	
1. Diesel 1-1	Normal control power for Diesel 1-1 may be fire damaged. If so, select backup control power at diesel generator room. In addition, Diesel 1-2 and 1-3 are not affected by this fire.
2. Steam Supply to AFW Pp 1-1 Turbine, and AFW Level Control Valves	
FCV-37 S.G. #2 to AFW Pp Turb FCV-38 S.G. #3 to AFW Pp Turb FCV-95 Steam supply to AFW Pp Turb	Use motor driven pumps 1-2 and 1-3. Depends on the location of the fire, AFW TD pump train may be available.
LCV - 107 TD AFW Pp to S.G. #2 LCV - 108 TD AFW Pp to S.G. #3 LCV - 110 MD AFW Pp 1-2 to S.G. #1 LCV - 111 MD AFW Pp 1-2 to S.G. #2 LCV - 113 MD AFW Pp 1-3 to S.G. #4 LCV - 115 MD AFW Pp 1-3 to S.G. #3	LCV 107 and LCV 108 if damaged by fire will fail only in the OPEN position. The same fire may also cause FCV 37, 38 and 95 to fail as-is (closed). Therefore, no flow is expected from the turbine driven AFW Train. LCV 110, 111, 113 and 115 when damaged by a fire in this area, can fail only in the OPEN position. Since the motor driven AFW pumps are not affected, AFW flow is assured through these LCV's. However, in order to modulate flow, the operator must resort to the handwheels provided for at the valves. Local valve modulations is at the options of the operator since the engineering analysis demonstrated that there is adequate seperation between the redundant trains of the LCV's, depending on the location of the fire. Either AFW TD train (LCV 107, FCV 38 and FCV 95) or AFW MD Train 1-2 (LCV 110, 111, AFW Pp 1-2) or AFW MD Train 1-3 (LCV 113, 115, AFW Pp 1-3) would be available and controllable from the Control Room.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS

21.0 Fire Area 4-A

Counting and Chemical Laboratory, Aux Building, Elev 85

This entire fire area can be grouped under six "sub-areas' or "sub-spaces" as follows:

21.A) The north wall

21.B) The south end of the west wall

21.C) The space above the drop ceiling of the counting room.

21.D) The space above the drop ceiling of the chemistry engineer office.

21.E) The space above the drop ceiling for the balance room.

21.F) The space above the drop ceiling of the laboratory and storage room.

21.A) Shutdown Functions along the North Wall

1) 480 volts, Bus F

2) Diesel 1-2 and 1-3

3) Centrifugal charging pump 1-1 and its aux lube oil pump

4) CCW pump 1-1 and its aux lube oil pump

Fire Protection Review concluded that sufficient fire protection has been provided to these equipment such that a postulated fire in this area will not adversely affect their functions. Nevertheless, the equipment are listed here to alert the operators of the possibility.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
5) Motor driven AFW pump 1-1 and its LCV 113 and 115	
6) Aux Saltwater Pump 1-1	
7) BIT inlet valve 8803A	
21.B) Shutdown Functions at the South End of of the West Wall	
1) CCW HX 1-1 outlet valve FCV 430 CCW HX 1-2 outlet valve FCV 431	See comments for item 21.A above.
2) ASW valve FCV 602 to CCW HX 1-1 ASW valve FCV 603 to CW HX 1-2	
3) AFW control valves LCV 110 and 111	
21.C) Shutdown Functions above the Drop Ceiling of the Counting Room	
1) CCW HX 1-2 outlet valve FCV 431	See comments for item 21.A above.
2) Diesel fuel oil transfer pump O-2	
3) AFW level control valves LCV 110 and 111	
4) 480 volts vital load center, 1F	

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
21.D) Shutdown Functions above the Drop Ceiling of Chemical Engineer Office	
1) CCW HX 1-1 outlet valve FCV 430 CCW HX 1-2 outlet valve FCV 431	See comments for item 21.A above.
2) Diesel Fuel oil transfer pumps O-1 and O-2	
3) Boric acid transfer pump 1-1 and RWST supply valve 8805A	
21.E) Shutdown functions above the Drop Ceiling of Balance Room	
1) 480 volts vital load center, 1F 480 volts vital load center, 1G	See comments for item 21.A above.
21.F) Shutdown Functions above the Drop Ceiling of the Laboratory and Storage Room	
1) CCW HX 1-2 outlet valve FCV 431	See comments for item 21.A above
2) Boric acid transfer Pp 1-1 and 1-2 8805A (RWST) 8805B (RWST) 8104 Emerg boration valve	
3) Diesel fuel oil transfer Pp O-1 and O-2	
4) 480 volts vital load center, 1G 480 volts vital load center, 1H	

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
5) AFW level control valves LCV 110 and 111	
6) Power (Bus F) to Unit 1 Control Room ventilation, and power (Bus H) to Unit 2 Control Room ventilation	

22.0 Fire Area 4-A-1

G. Bus Compartment Next to Chem Lab and Counting Room, Aux Bldg, 85' Elevation

22.A) 480 V Vital Load Center, 1G	A fire in this area could damage the Bus G safeguard equipment listed to the left. Bus F and H are not affected, and should still be available. For diesel 1-2, if backup control power is lost, continue to use the normal control power.
22.B) Diesel 1-1 Diesel 1-2 (backup control power only)	
22.C) Centrifugal Charging pump 1-2 and its aux lube oil pump	
22.D) CCW Pp 1-2 and its aux lube oil pump	
22.E) ASW Pp 1-2	
22.F) BIT inlet valve, 8803B	
22.G) Diesel fuel oil transfer p_p 0-2	
22.H) RHR pump 1-1	

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
23.0 Fire Area 4-A-2	
H. Bus Compartment Next to the Laboratory, Aux Bldg, 85' Elevation	
23.A) 480 V vital load center, 1 H 23.B) Diesel 1-1 Diesel 1-3 (Backup control power only) 23.C) CCW Pp 1-3 and its aux lube oil pump 23.D) MD AFW Pp 1-2 and its LCVs 110 and 111 23.E) Diesel fuel oil transfer pump O-1 23.F) RHR pump 1-2	A fire in this area could damage the Bus H safeguard equipment listed to the left. However, redundant trains Bus F and G are not affected, and should still be available. For diesel 1-3, continue to use normal DC control power.
24.0 Fire Area 4-B	
Showers, Lockers and Access Control, Aux Bldg, 85' Elevation	
24.A) FCV 430 (CCW from CCW HX 1-1) FCV 431 (CCW from CCW HX 1-2)	One of these two valves are normally open at power. Since they are fail as-is valves, at least one valve will be in the open position following a fire in this area.
24.B) FCV 602 (ASW to CCW HX 1-1) FCV 603 (ASW to CCW HX 1-2)	There is a possibility that a fire in this area could cause a hot short to the control circuits of these valves causing them to fail closed. If that is the case, manually open the valve(s) by removing the air supply locally.
24.C) Diesel fuel oil transfer pump O-1 and O-2	Circuitry for Pump O-2 is provided with a 1-hour fire barrier and should be available for service.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
24.D) Diesel 1-2 (control) Diesel 1-3 (control)	Verify and continue to use normal dc control for diesel generator 1-2. In addition, diesel generator 1-1 is available.
24.E) Ventilation Exhaust fan E101 for ASW pump 1-2.	Circuit for this fan is provided with a 1-hour fire barrier and should be available for service.

25.0 Fire Area 5-A-1, 5-A-2 and 5-A-3

480V Vital Switchgear Rooms (F, G & H Buses), Area H, 100' Elevation

25.A) Emergency power supply	Verify redundant equipment from the alternate buses are available. Also, a fire in any one of these areas could have damaged the control power to the diesel corresponding with the bus, and in addition, the backup control power, and power to the lube oil heater to one of the remaining diesels.
25.B) Steam generator blowdown inside containment isolation valves FCV 760 and 761 (Fire Area 5-A-2) FCV 762 and 763 (Fire Area 5-A-3)	If these valves spuriously open due to fire damage, close its corresponding outside containment steam generator blowdown isolation valves.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS

26.0 Fire Area 5-A-4

Hot Shutdown Panel Area and Non-Vital 480V Switchgear Room Area H, 100' Elevation

26.A)	Aux Feedwater System	
	1) LCV 113 and 115, MD AFW Pp 1-3 2) LCV 110 and 111, MD AFW Pp 1-2 3) LCV 107 and 108 and FCV 95 (TD AFW Pp 1-1)	The motor driven pumps may have been damaged by the fire. The LCVs for the motor driven trains may have been damaged by the fire in their open position. If the motor driven pumps are damaged, use the turbine driven pump. If the motor driven pumps are operable, but their LCVs have lost their modulation ability, modulate AFW flow using handwheels provided for the valves. If the TD AFW Pp 1-1 is the only means to feed the steam generators, and AFW flow modulation is required, manual modulation is available using handwheels provided for the valves.
26.B)	FCV 602 (ASW to CCW HX 1-1) FCV 603 (ASW to CCW HX 1-2)	There is a possibility that a fire in this area could cause a hot short to the control circuits of these valves causing them to fail close. If that is the case, manually open the valve(s) by removing the air supply locally.
26.C)	Boric acid transfer pump 1-1 Boric acid transfer pump 1-2 Centrifugal charging pump 1-1 Centrifugal charging pump 1-2 Emerg boration valve 8104	Engineering review indicates centrifugal charging pump 1-2, boric acid transfer pump 1-2, and emergency boration valve should still be available following a fire in this area as the circuits for this equipment is associated with their operation from the hot shutdown panel only.
26.D)	CCW pump 1-1 CCW pump 1-2 CCW pump 1-3 FCV 430 (CCW to CCW HX 1-1) FCV 431 (CCW to CCW HX 1-2)	Engineering reviews indicates fire in this area could damage CCW Pp 1-1 and 1-3, FCV 430 and 431. However, CCW Pp 1-2 should still be available. Also, since one of the FCV's are normally open, sufficient flow path exists for the CCW system to provide adequate shutdown capability. The FCV's are motor operated valves and they fail in the as-is position.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
26.E) Diesel 1-2 backup control circuiting	Verify and continue to use diesel 1-2 control power from the normal DC supply.
26.F) Instrumentation System	
1) Steam generator pressure transmitter PT 514, 524, 534 and 544.	Use redundant pressure transmitters for affected steam generators.
2) RCS wide range temperature, loop 3 and 4.	Use loop 1 and 2 RCS wide range temperature indications.
3) PZR level LT 459 and 460	Use pressurizer LT 461 and LT 406 (cold calibrated).
26.G) Ventilation System	
Exhaust E101 for Aux Salt Water Pp 1-2	The exhaust fan for ASW Pp 1-2 room may have been damaged by fire. If so, use ASW Pp 1-1 and exhaust fan E-103 for plant shutdown.
26.H) 10% Steam Dump Valves nitrogen and control air (no electric circuit involved)	If these valves cannot be opened pneumatically, use handwheels provided for the valves.

27.0 Fire Area 6-A-1, 6-A-2, 6-A-3

Battery Inverter and DC Switchgear Rooms, 115' Elevation

27.A) Emergency Power	A postulated fire in any one of the DC switchgear rooms can damage all the vital equipment connected to that DC bus, and all the equipment receiving power from the instrument AC panels located in the room. Verify redundant equipment from alternate buses are available. In addition, a fire in any one DC switchgear room will likely damage the backup DC control power for one of two remaining diesel generators.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
27.B) Main Steam System	
10% atmospheric steam dump (power and control) PCV 19, 20, 21, and 22	A fire in this area may damage the control circuits for these valves from the control room. However, control from Hot Shutdown Panel should still be available.
Steam generator blowdown inside containment isolation valves FCV 760, 761, 762 and 763.	If fire damage causes these valves to spuriously open, close their corresponding outside containment blowdown isolation valves.
27.C) PZR PORVs and block valves	
PORV 474, valve 8000A PORV 455C, valve 8000B PORV 456, valve 8000C	One of these three sets of valves may be affected by a fire in any one DC Switchgear room. The remaining two flow paths should still be available. No adverse hot short could cause the PORV's to prematurely open.
27.D) 480V Switchgear and Inverter Room Ventilation System	
Supply fan S43 Supply fan S44	Following a fire in a DC Switchgear room, verify continued ventilation is being supplied to non-affected DC Switchgear room. If necessary, open door(s) and provide portable fan(s) to ventilate the remaining DC Switchgear rooms.
27.E) AFW System	Verify the availability of redundant train if a fire took away the vitality of the room. However, for fire area 6-A-1, motor driven AFW Pp 1-3 and LCV 113 and 115 which feed S.G. 1-3 and 1-4 may be lost due to a fire in this area. Local action may be required to handwheel the FCV open. MD AFW Pp 1-2 and TD AFW Pp 1-1 should still be available. FCV-38 to TD AFW Pp 1-1 may have hot short failed in the closed position. Local action may be required to handwheel the FCV open.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
27.F) RCS wide range temperature	Verify the availability of redundant instrument train if a fire took away the vitality of the room. In addition, for fire area 6-A-1, loop 1 and 2 hot and cold leg temperature indication may be lost. However, Loop 3 and 4 should still be available.

28.0 Fire Area 6-A-4

Reactor Trip Switchgear and Rod Control Programmer Area, Elevation 115'

28.A) PZR Aux Spray valve 8145	If fire damage causes this valve to fail closed, use its bypass 8143 which is not affected by a fire in this area. If a hot short occurs and cause the valve to prematurely open, use charging line isolation valve 8107, 8108 or HCV 142 to stop RCS depressurization. Should charging line become isolated, boration via BIT bypass or the BIT itself should still be available. [Whenever aux spray is (intentionally) used to depressurize the RCS, verify that normal and alternate charging valves are closed.]
28.B) FCV 364 CCW to RHR HX 1-1	Use RHR Train 1-2, FCV 365 (CCW to RHR HX 1-2) is not affected by fire in this area.
28.C) PZR PORV 456	If fire damage causes this valve to fail open, use its block valve 8000C to isolate the flowpath.
28.D) 10% Steam Dump for S.G. #1 and 4	The 10% atmospheric dump for S.G. #2 (PCV-20) and 3 (PCV-21) should still be available.

[ ] Statement enclosed is not part of Appendix R review.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
29.0 Fire Area 6-A-5	
Electrical Area West of Battery Room, 115' Elevation	
29.A) Feedwater System	
Motor driven AFW Pp 1-3, LCV 113 and 115	Turbine driven AFW Pp 1-1 is not affected by a fire in this area, and should be available for use.
Motor driven AFW Pp 1-2, LCV 110 and 111	
29.B) FCV 602 (ASW to CCW HX 1-1) FCV 603 (ASW to CCW HX 1-2)	There is a possibility that a fire in this area could cause a hot short to the control circuits of these valves causing them to fail close. If that is the case, manually open the valve(s) by removing the air supply locally.
29.C) FCV 430 (CCW from CCW HX 1-1) FCV 431 (CCW from CCW HX 1-1)	These are fail as-is valves. One of them is normally open, therefore at least one CCW HX will always be available.
29.D) 8146 - Normal Charging, Loop 3 8147 - Alternate Charging, Loop 4	The DC control power to these valves may be lost to a fire in this area. If boration is required, use the BIT bypass, or the BIT itself.
29.E) Diesel 1-2	The backup DC control power to Diesel 1-2 may be lost due to a fire in this area. Verify and continue to use normal DC control power for starting diesel.
29.F) RCS Loop 3 and 4 Wide Range Temperature TE 433 A&B TE 443 A&B	RCS Loop 1 and 2 wide range T-hot and T-cold are not affected by a fire in this area.
29.G) 10% atmospheric steam dump PCV-19 PCV-20 PCV-21 PCV-22	Fire in this area could damage the control circuits for these steam dump valves from the control room. Use the control at the Hot Shutdown Panel; that circuit is not affected by a fire in this area.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
30.0 Fire Area 7-A	
Cable Spreading Room, Elev. 128'	
Refer to EP OP-8 CONTROL ROOM INACCESSIBLITY for guidance to shutdown the plant.	
31.0 Fire Area CR-1 (Fire Zone 8-C)	
Control Room, Elevation 140'	
Refer to EP OP-8 CONTROL ROOM INACCESSIBILITY for guidance to shutdown the plant.	
32.0 Fire Area 8-G	
Safeguards (SSPS) Room	
SSPS Train A and B	When a fire occurs in the SSPS room, manually trip the reactor. Go to EP OP-0 REACTOR TRIP WITH SAFETY INJECTION for guidance (even if no auto SIS has occured), and/or follow the procedure for fire area 7A/CR-1.
33.0 Fire Area 10	
12 KV Cable Spreading Room. 76' Elevation and 12 KV Switchgear Room, 85' Elevation	
33.A) ASW Pp 1-1 and 1-2 and their associated exhaust fan E101 and E103.	At least one of these two ASW trains should still be available following a fire in this area.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
33.B) CCW Pp 1-1 and its aux lube oil Pp CCW Pp 1-2 and its aux lube oil Pp CCW Pp 1-3 and its aux lube oil Pp	At least two of these three pump sets should still be available.
33.C) Ventilation System	
4KV Swgr Rm, (Bus H) Supply fan, S-67	At least two of three supply fans should still be available. Open doors, and use portable fans for ventilation if needed.
4KV Swgr Rm (Bus F) Supply fan, S-69	
33.D) RHR Pp 1-1 and 1-2	At least one train should still be available.
33 .E) Emergency Power	
Diesel 1-1, 1-2 and 1-3 Diesel FO Transfer Pp 0-1 and 0-2 480V vital load center F, G & H	At least two diesels, one fuel oil transfer pump and two 480V vital load centers should still be available.

34.0 Fire Area TB-1, TB-2, TB-3 (Fire Zone 11-A-1, 11-B-1, 11-C-1 Respectively)

Diesel Generator Rooms (F, G & H), 85' Elevation

Diesel 1-3 Diesel 1-2 Diesel 1-1 Fuel Transfer Pp 0-2 Fuel Transfer Pp 0-1	Verify the affected diesel generator is tripped, rolldown fire door all the way closed, carbon dioxide flooding to the diesel generator room activated. In addition, the following equipment may be lost:

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
	(1) Lube oil heaters for one of two remaining diesels (2) Backup DC control power to one of two remaining diesels (3) Diesel Fuel Oil Transfer pump associated with the affected diesel

35.0 Fire Area 11-D

Corridor Outside Diesel Generator Rooms

Diesel 1-1, 1-2 and 1-3 Diesel Fuel Oil Transfer Pp O-1, LCV 88, 89 and 90 Diesel Fuel Oil Transfer Pp O-2, LCV 85, 86 and 87 Diesel emergency stop pushbuttons	All three vital buses F, G and H power and control circuitry, and diesel generator auxiliary and support systems circuitry run through this fire area. Due to the fire barriers provided for the conduits, and due to the low combustible loading in this area, engineering review concludes that all of the equipment should still be available following a postulated fire in this area. Diesel emergency stop pushbutton is not need for safe shutdown.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
36.0 Fire Area TB-4, TB-5 and TB-6 (12-A, 13A; 12-B, 13-B; and 12-C, 13C Respectively)	
4 KV Switchgear Rooms, F, G and H Buses	
4KV Switchgear Bus F, G and H	Each of the three fire zones houses the 4KV Switchgear for a single vitality. In no case is the switchgear for one vitality housed in the same zone as that for a redundant vitality. Based on that, one train of safe shutdown equipment should still be available following a fire in any one switchgear room.
37.0 Fire Area 13-D	
Excitation Switchgear Room	
37.A) Ventilation ducts to 4KV Switchgear rooms	A fire in this area could fail closed the ventilation dampers to the 4KV Switchgear rooms. Following a fire, verify dampers position if possible, and verify cooling air being supplied from the 4KV cable spreading room(s) below through the floor grating.
37.B) 4KV Bus F, H, and G Auto Transfer	A fire in this area can damage the circuits which provide auto transfer to Startup power upon loss of auxiliary power. Engineering review indicates that a spurious transfer to startup due to hot short is not possible. Even though transfer to startup power may have been impaired, auto transfer to diesel should still be available. That feature is not affected by a fire in this area.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
38.0 Fire Area 13-E	
4KV Switchgear Ventilation Fan Room (119' Elevation) and Air Intake Plenum (107' Elevation)	
Supply fan S-69 to 4KV Bus F Supply fan S-68 to 4KV Bus G Supply fan S-67 to 4KV Bus H	If the fan(s) are damaged, open doors (post fire watch), use portable fan(s) to provide switchgear cooling.
39.0 Fire Area TB-7 (Fire Zone 14-A)	
Turbine Building - Main Condenser, Feedwater and Condensate Equipment Area	
Motor driven AFW Pp 1-3, LCV 113 and LCV 115 Motor driven AFW Pp 1-2	Try MD AFW pumps. If they are damaged, use turbine driven AFW Pp 1-1. It is not affected by a fire in this area.
40.0 Fire Area 14-E	
Component Cooling Water Heat Exchangers, Turb Bldg, 85' Elevation	
40.A) FCV 602 (ASW to CCW HX1-1) FCV 603 (ASW to CCW HX1-2)	There is a possibility that a fire in this area could cause a hot short to the control circuits of these valves causing them to fail close. If that is the case, manually open the valves by removing their air supply locally.
40.B) FCV 430 (CCW from CCW HX 1-1) FCV 431 (CCW from CCW HX 1-2)	These are fail as-is valves. Analysis indicates that hot short will not result in valve closure if open. Since one valve is always open at power, at least one CCW train would still be available.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
41.0 Fire Area 28	
Area Outside the Plant North of Unit 1 Containment and North East of Unit 1 Turbine Building	
41.A) 10% steam dump PCV 19 (S.G. #1-1) PCV 20 (S.G. #1-2)	A fire in this area could result in valve closure, but would not cause spurious opening of valves. Regardless of the damage to these valves, PCV 21 (S.G. #1-3) and PCV 22 (S.G. #1-4) should still be available.
41.B) AFW System LCV 110, LCV 111, LCV 107, FCV 37	Use motor driven AFW Pp 1-3 to feed S.G. #1-1 and S.G. #1-4. This AFW train is not affected. A fire in this area could damage the control circuitry for LCV 110, LCV 111, and LCV 107. However, these valves could fail only in their OPEN positions (per engineering analysis). Since motor driven AFW Pp 1-2 which provides flow through LCV 110 and LCV 111 is not affected by the fire, this AFW train is still useable although valve modulation for LCV 110 and 111 may be lost. If modulation is desired, use the handwheels provided for the valves. FCV 37 and LCV 107 are associated with the turbine driven AFW pump. FCV 37 is normally open and is a fail as-is valve. Assuming the turbine driven AFW pump is running, it can still feed all four steam generators because LCV 107 can fail only in the OPEN position. However, manual (handwheel) operator action will be required to close it (LCV 107) when plant conditions require.
41.C) Steam Generator 1-1 and 1-2 pressure transmitters PT 514, 515, 516 PT 524, 525, 526	Use steam generator 1-3 and 1-4 they are not affected by a fire in this area.

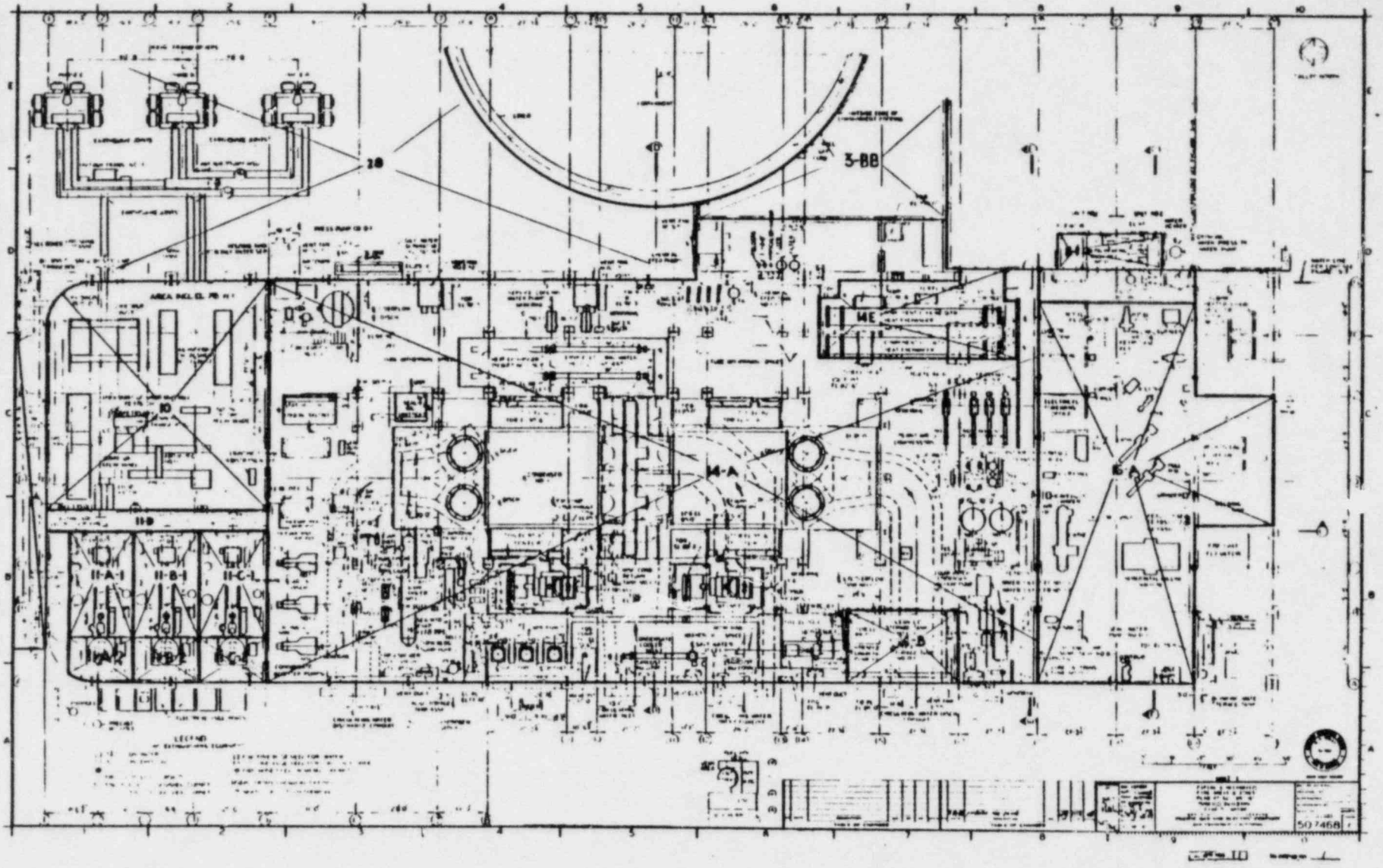
AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
42.0 Fire Area 30-A-1 and 30-A-2 Aux Salt Water Pump Vaults	
42.A) Fire Area 30-A-1 ASW Pp 1-1, Exhaust fan E-103 Discharge pressure switch PS-185	Engineering reviews indicates one of the two ASW Pump trains should be available. A fire in any one pump room should in no way affect the redundant train.
42.B) Fire Area 30-A-2 ASW Pp 1-2 Exhaust fan E-101 Discharge pressure switch PS-186	
43.0 Fire Area IS-1 (Fire Zone 30-A-5) Circulating Water Pumps Area	
43.A) Exhaust Fan E-103 Discharge press switch PS-185 ASW Inlet Gate SW-1-9 Starter	Engineering reviews indicates one of these two ASW trains should be available following a fire in this area.
43.B) ASW Pp 1-2 Exhaust fan E-101 Discharge press switch PS-186 ASW Inlet Gate SW-1-8 Starter	

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
44.0 Fire Area 34	
Roof Area at Elevation 140' above Aux Bldg and Penetration Area GE and GW Unit 1 and 2	
10% Atmospheric Dump	
PCV 21 (S.G. #1-3) PCV 22 (S.G. #1-4)	Use PCV 19 (S.G. #1-1) and PCV 20 (S.G. #1-2). They are not affected by a fire in this area.
45.0 Fire Area 35-A and 35-B	
Diesel Fuel Oil Transfer Pump Vaults No. 0-1 and No. 0-2	
Diesel Fuel Oil Transfer Pump 0-1 and 0-2	A fire if started in one pump vault will not effect the remaining pump in the other vault. Hence, one diesel fuel oil transfer train should still be available.
46.0 Fire Area AB-1 (Fire Zone S-3)	
Stairwell in the Aux Bldg	
Motor driven AFW Pp 1-2 Motor driven AFW Pp 1-3	Attempt to use these motor driven pumps for safe shutdown. If they do not work due to fire damage, use turbine driven AFW Pp 1-1. It is not affected by fire in this area.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
47.0 Fire Area TB-4 (Fire Zone 12-A)	
4KV F Bus Cable Spreading Room	
47.A) 4KV Bus F	A fire in this area will likely damage 4KV Bus F and disable all the safeguard equipment powered from the bus.
47.B) Motor driven AFW Pp 1-2 (Bus H)	A fire in this area could damage the ability of motor driven AFW Pp 1-2 to auto start on loss of both main feedwater pumps. Manual operator action may be required to compensate for this loss. Regardless, turbine driven AFW Pp 1-1 should still be available. It is not affected by a fire in this area.
47.C) ASW Pump 1-2 (Bus G)	This pump may not auto start at the loss of ASW Pp 1-1 on Bus F. Manual operator action in the Control Room may be required to start the pump.
48.0 Fire Area TB-5 (Fire Zone 12-B)	
4KV G Bus Cable Spreading Room	
48.A) 4KV Bus G	Loss of this bus is likely if a fire occurs in this area. However, Bus F and H should still be available.
48.B) ASW Pump 1-1 (Bus F)	This pump may not auto start at the loss of ASW Pp 1-2 (Bus G). Manual operator action in the Control Room may be required to start the pump.
48.C) Diesel 1-3	The fire may have damaged the backup DC control power to this diesel. Verify diesel on normal DC control power.

AFFECTED EQUIPMENT	ALTERNATIVE EQUIPMENT/OPERATOR ACTIONS
	49.0 Fire Area TB-6 (Fire Zone 12-C)
	4KV H Bus Cable Spreading Room
4KV Bus H	Loss of this bus is likely if a fire occurs in this area. However, Bus F and G should still be available.
	50.0 Fire Area TB-7 (Fire Zone 12-E)
	Iso Phase Bus Duct Area
4KV Auto Transfer Bus F, G & H	A fire in this area could damage circuits that provide for auto transfer of the 4KV vital buses to startup power following the loss of auxiliary power. However, the transfer to diesels should still be still available. Those circuits are not affected by this fire.

FIRE PROTECTION OF SAFE SHUTDOWN EQUIPMENT



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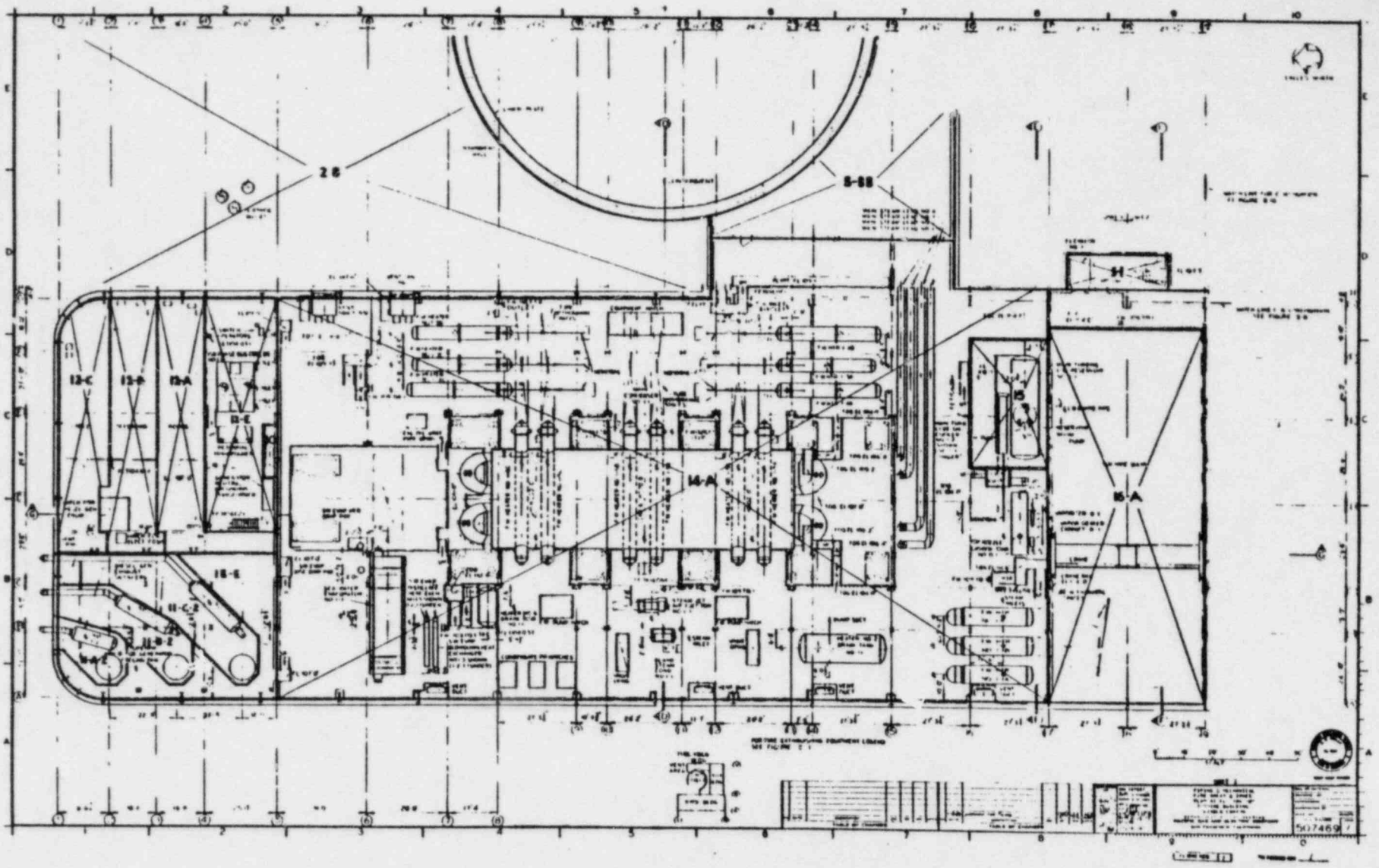

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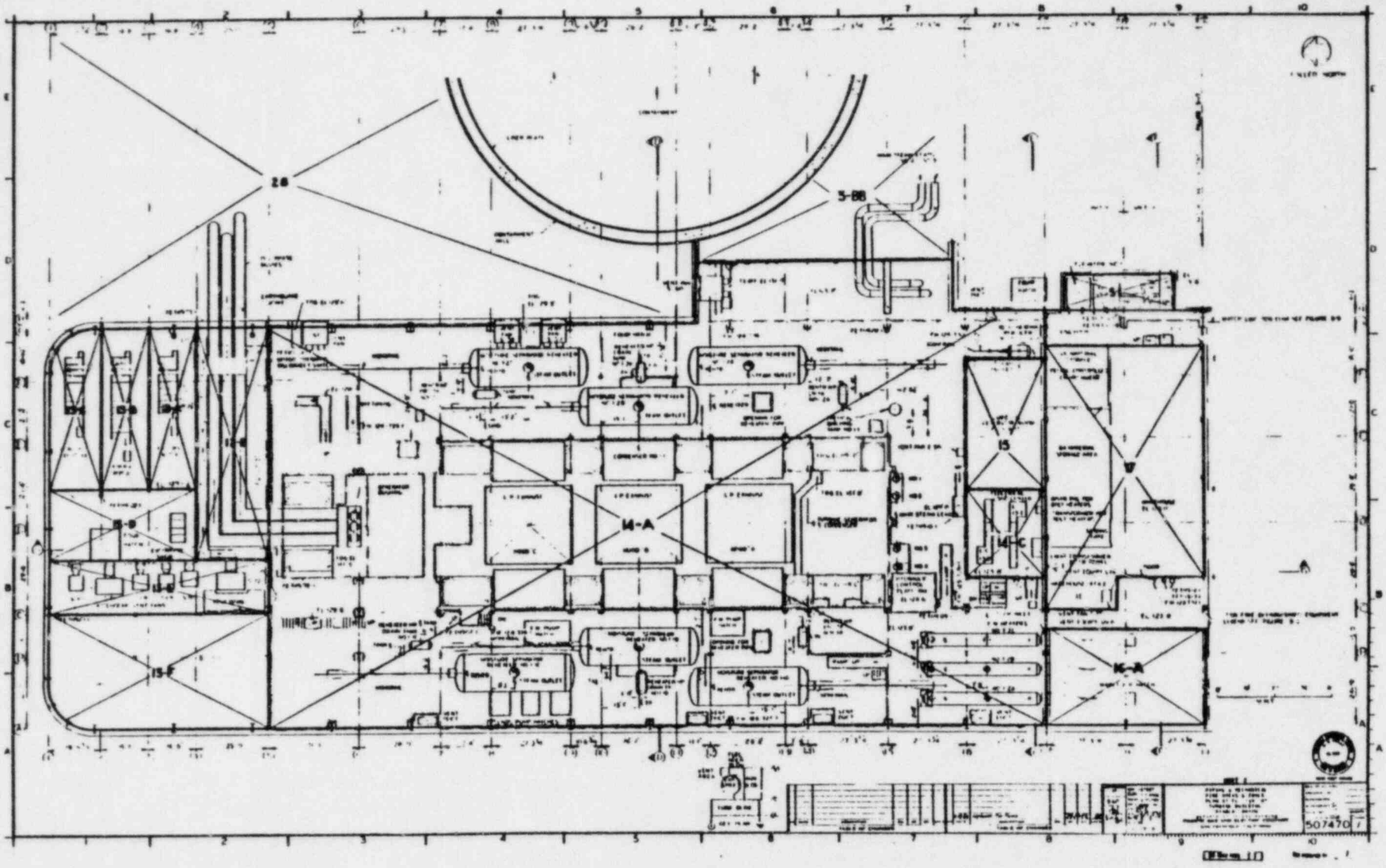

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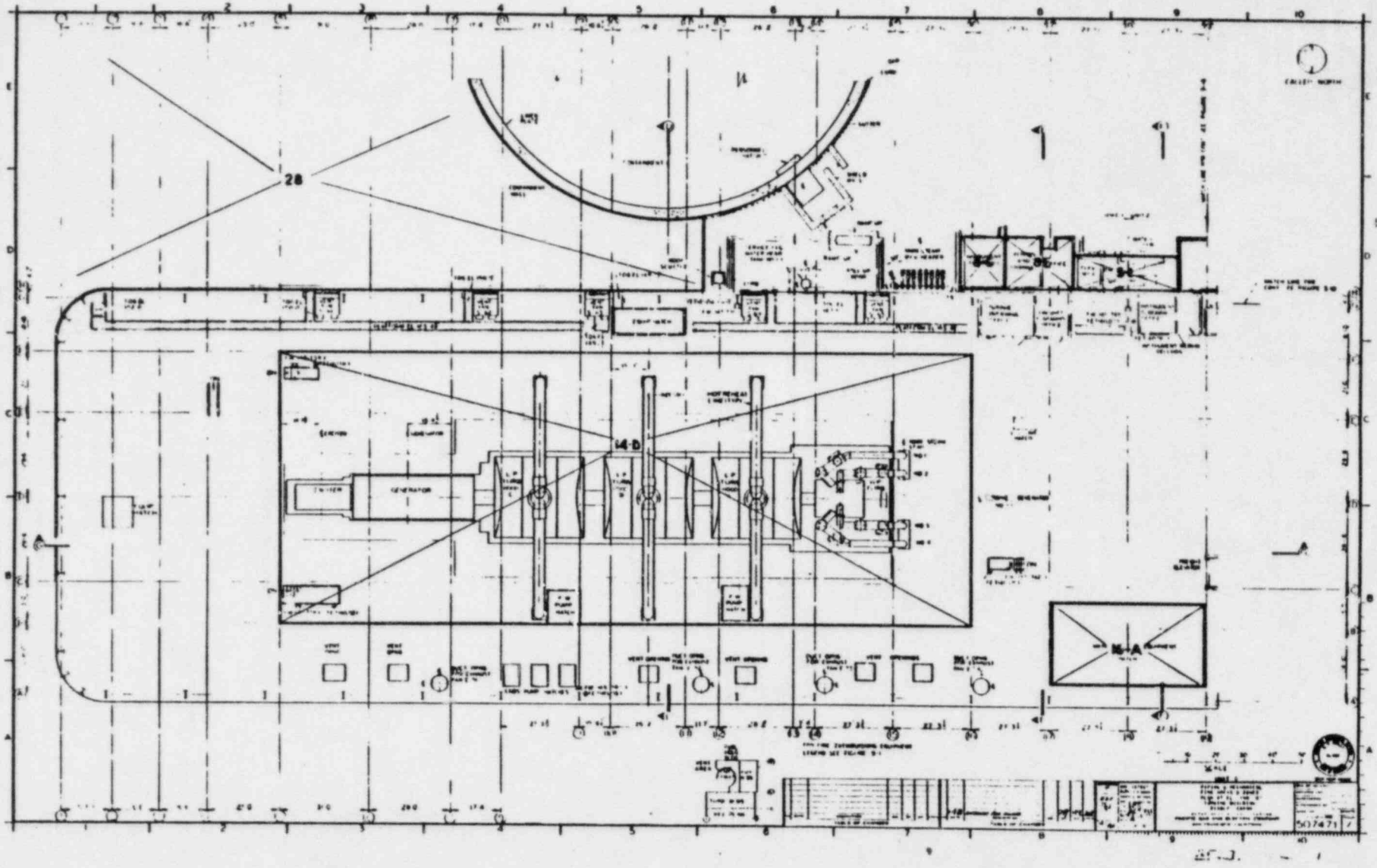

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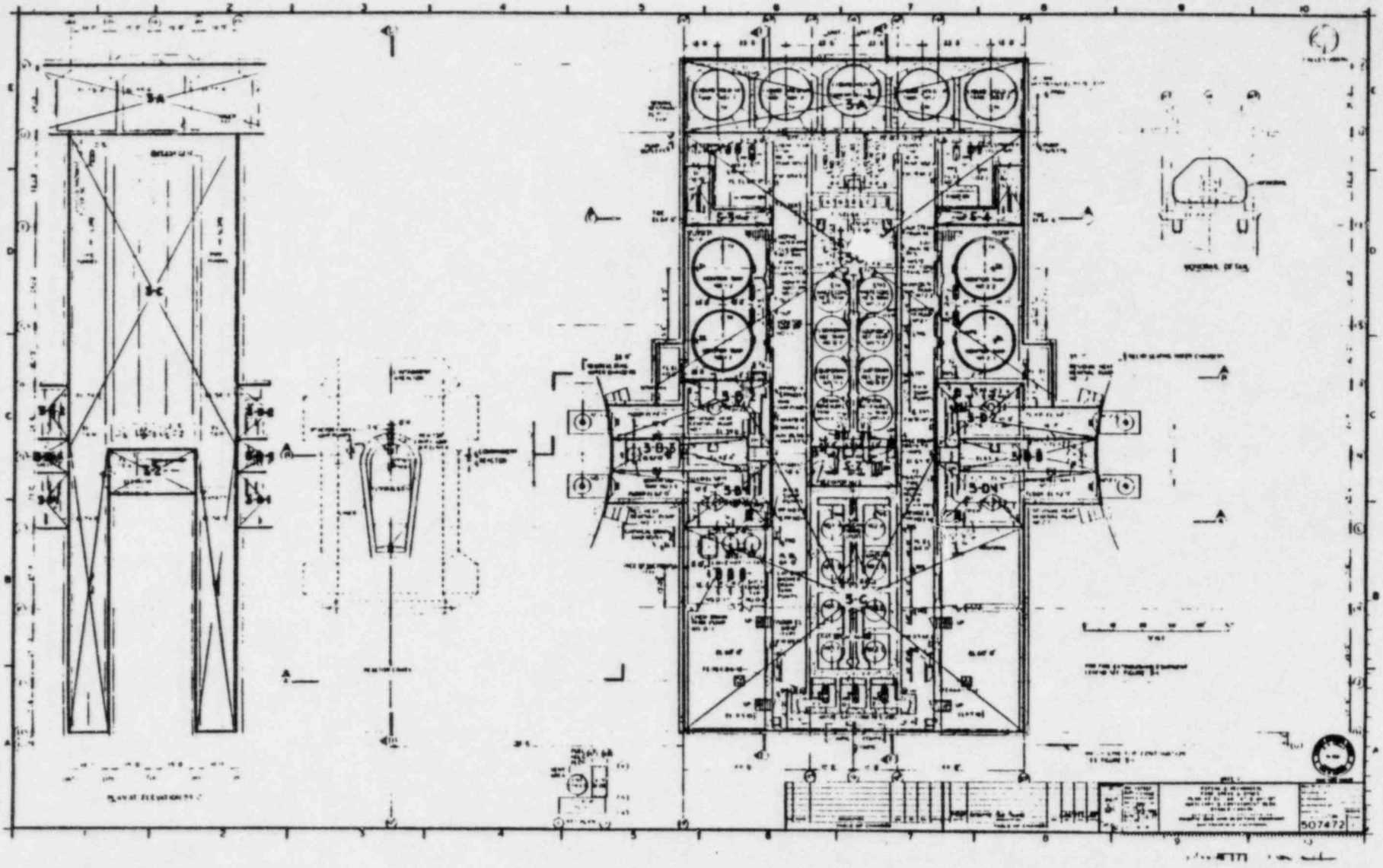

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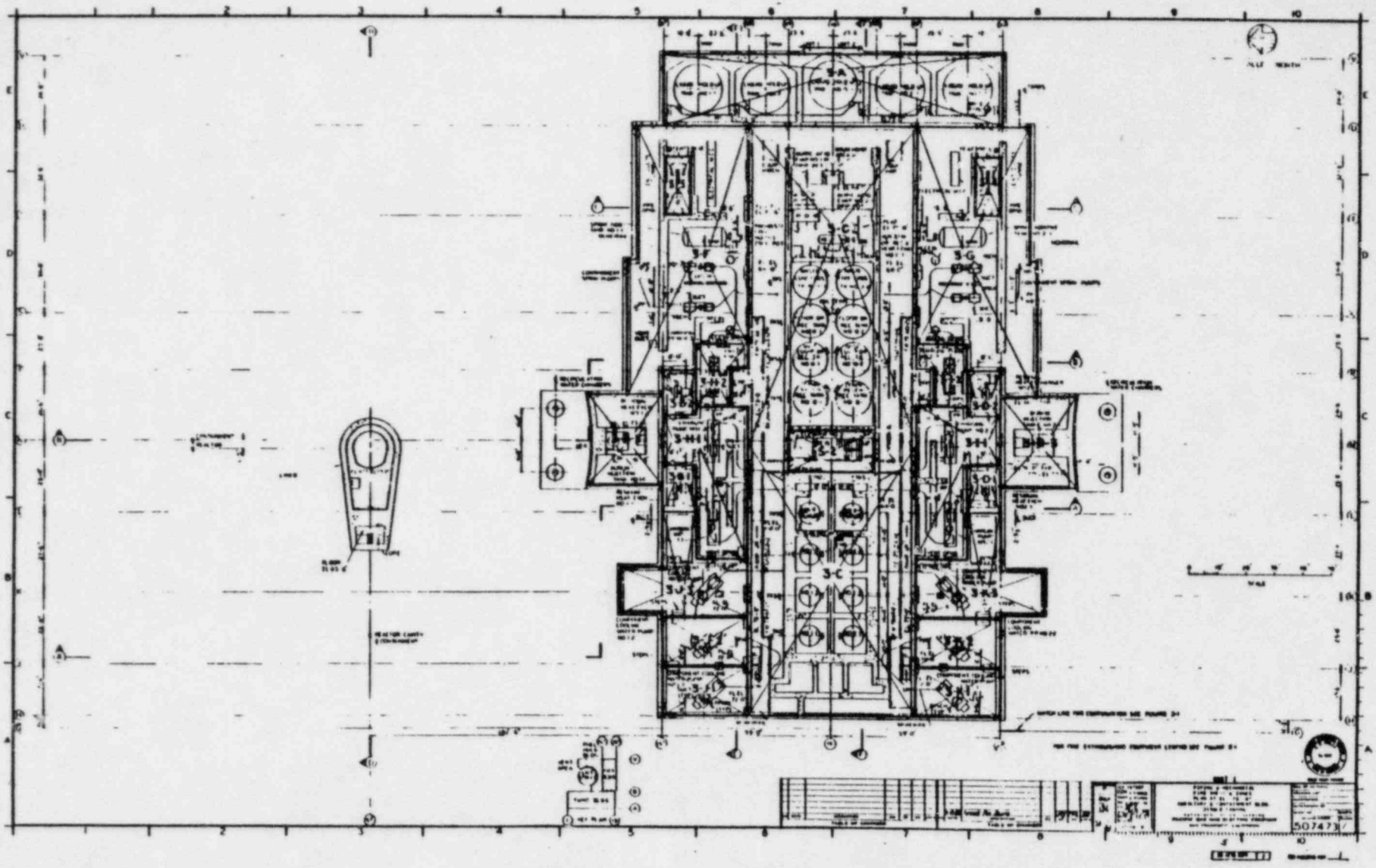

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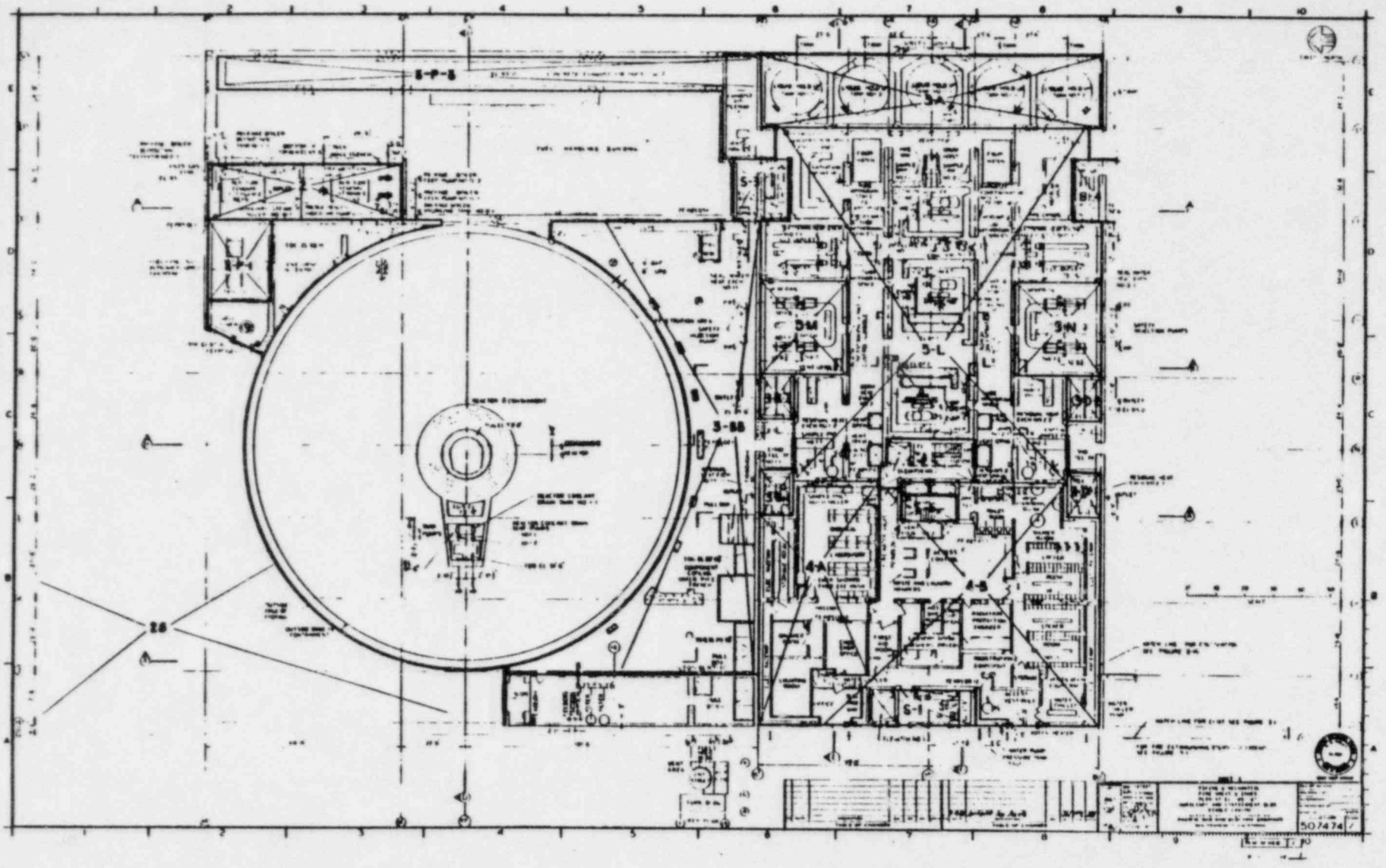

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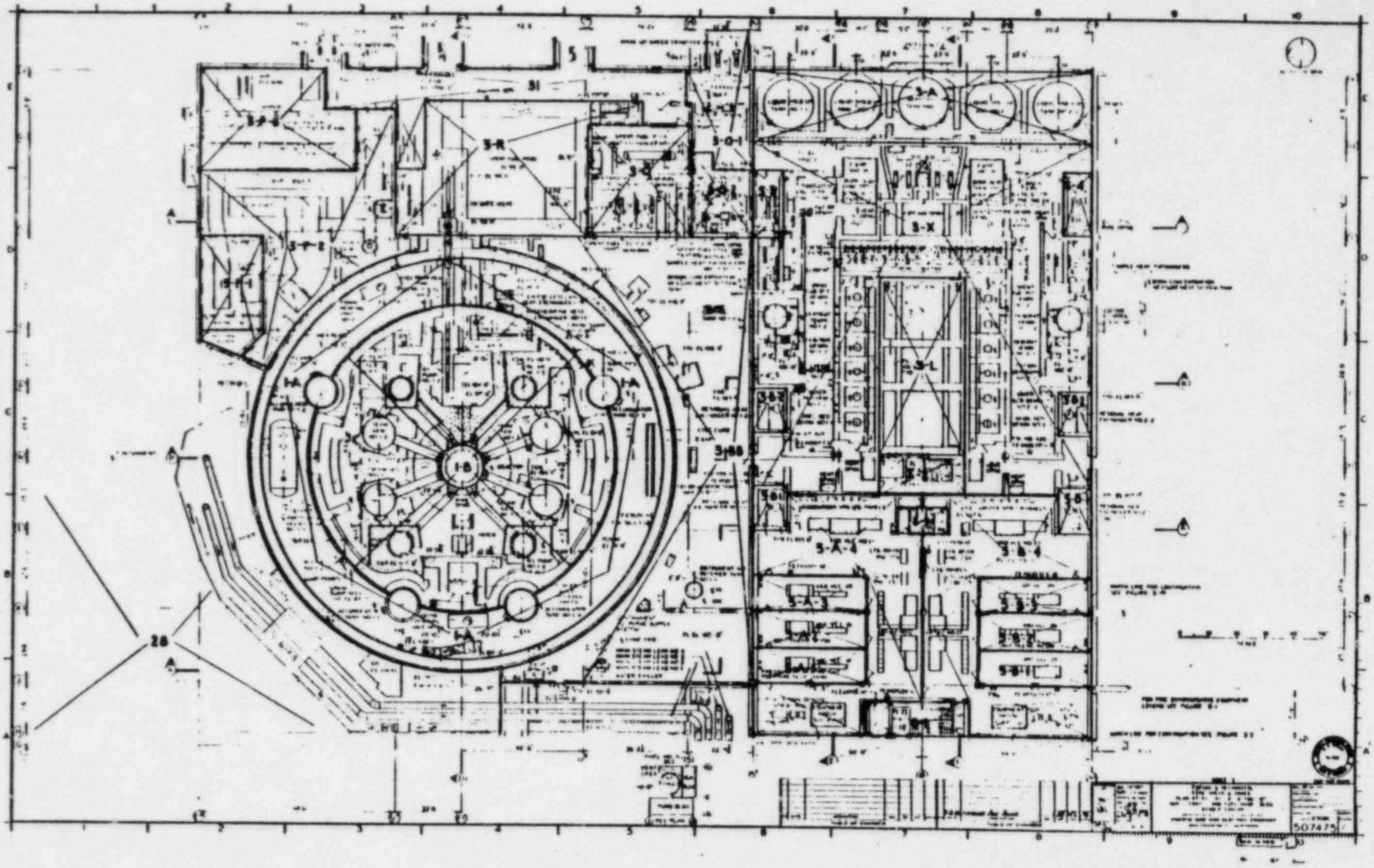

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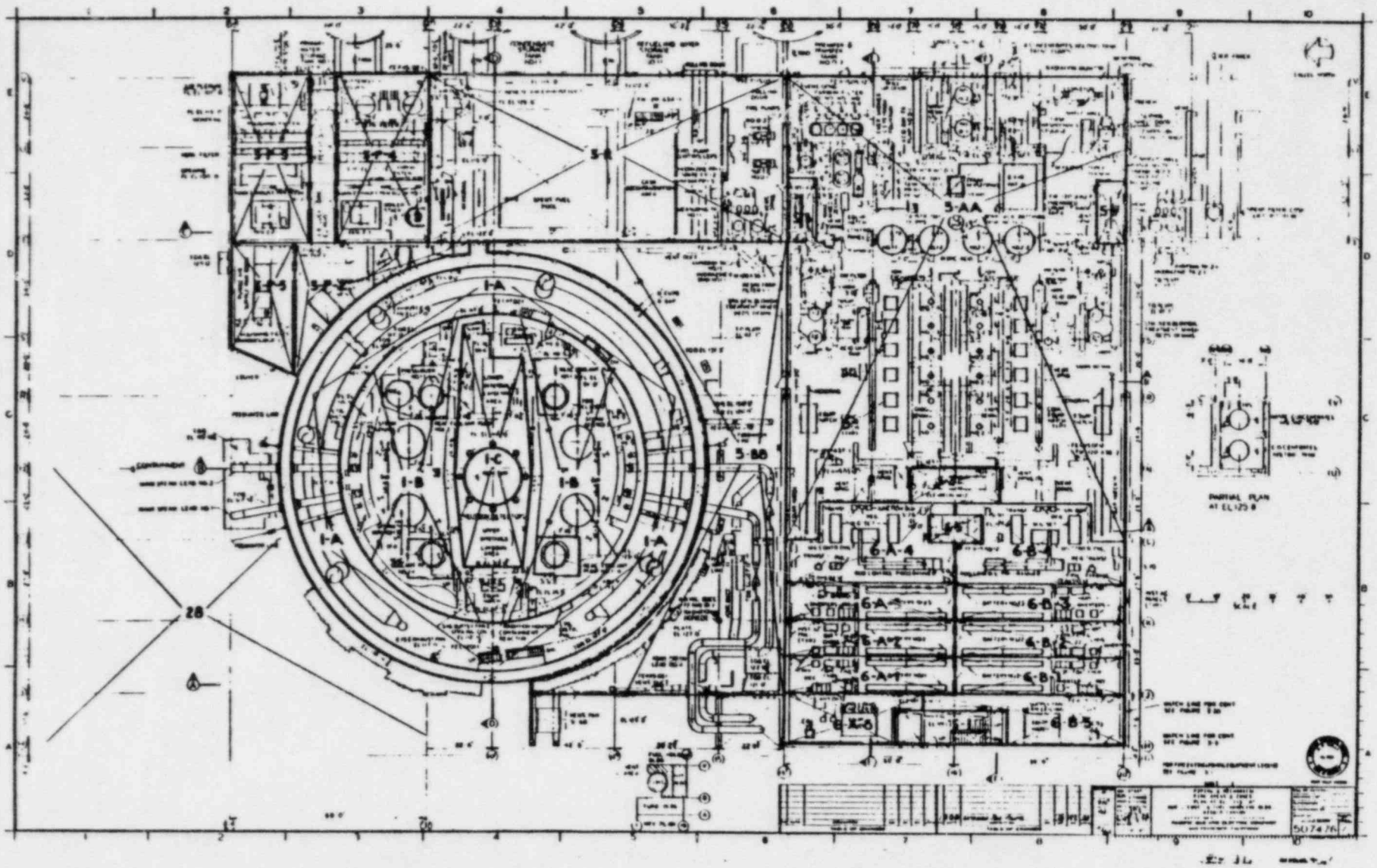

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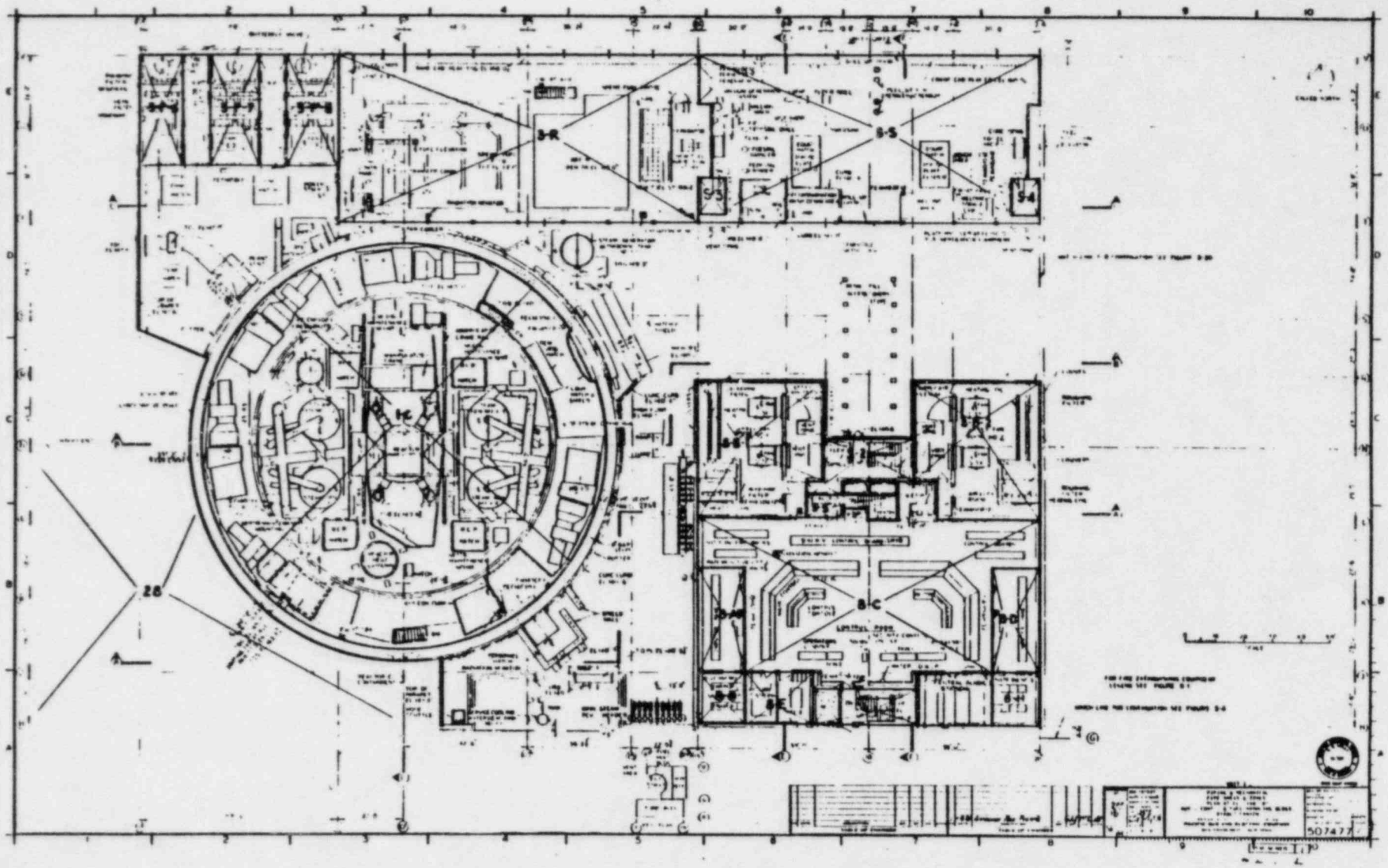

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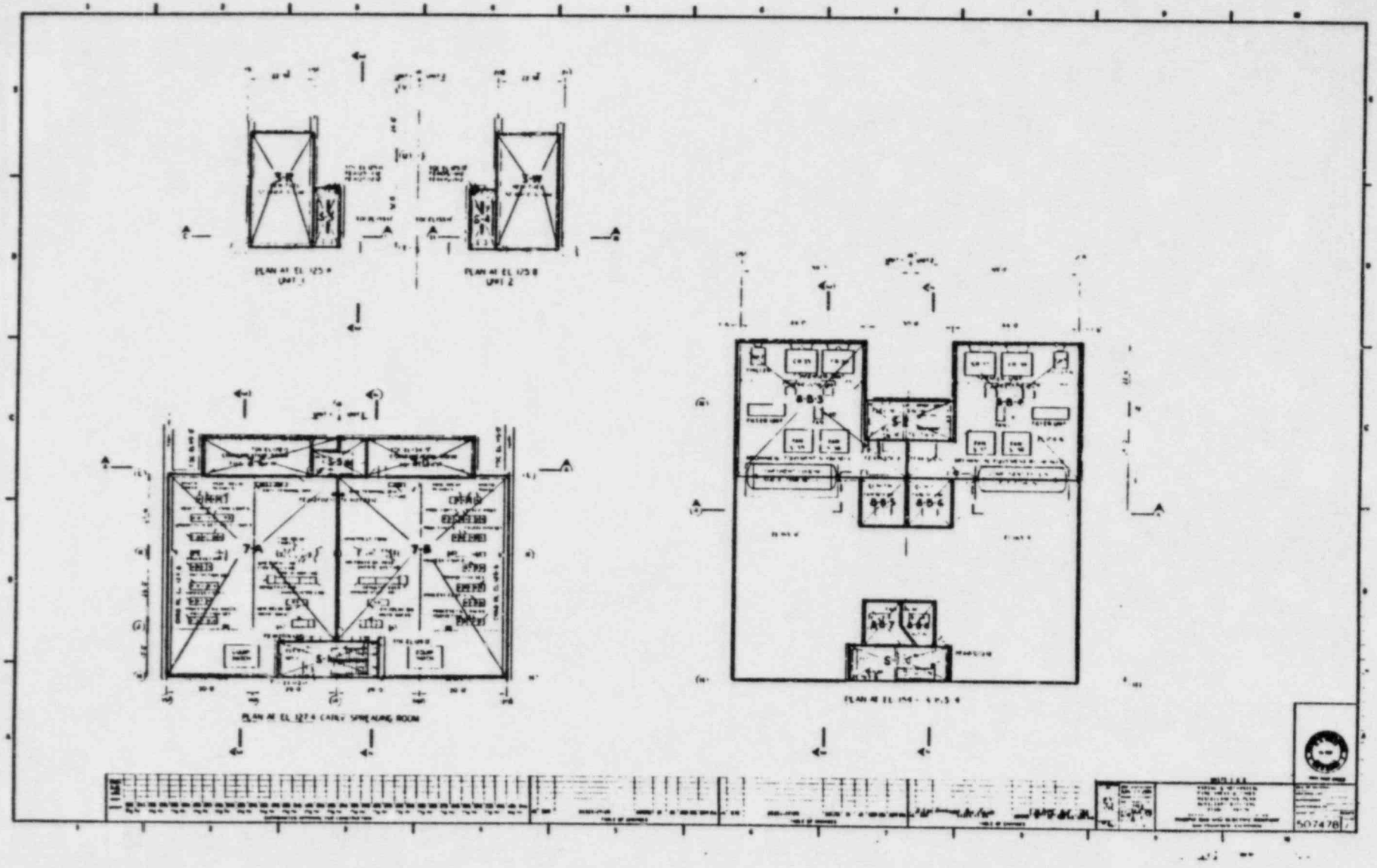

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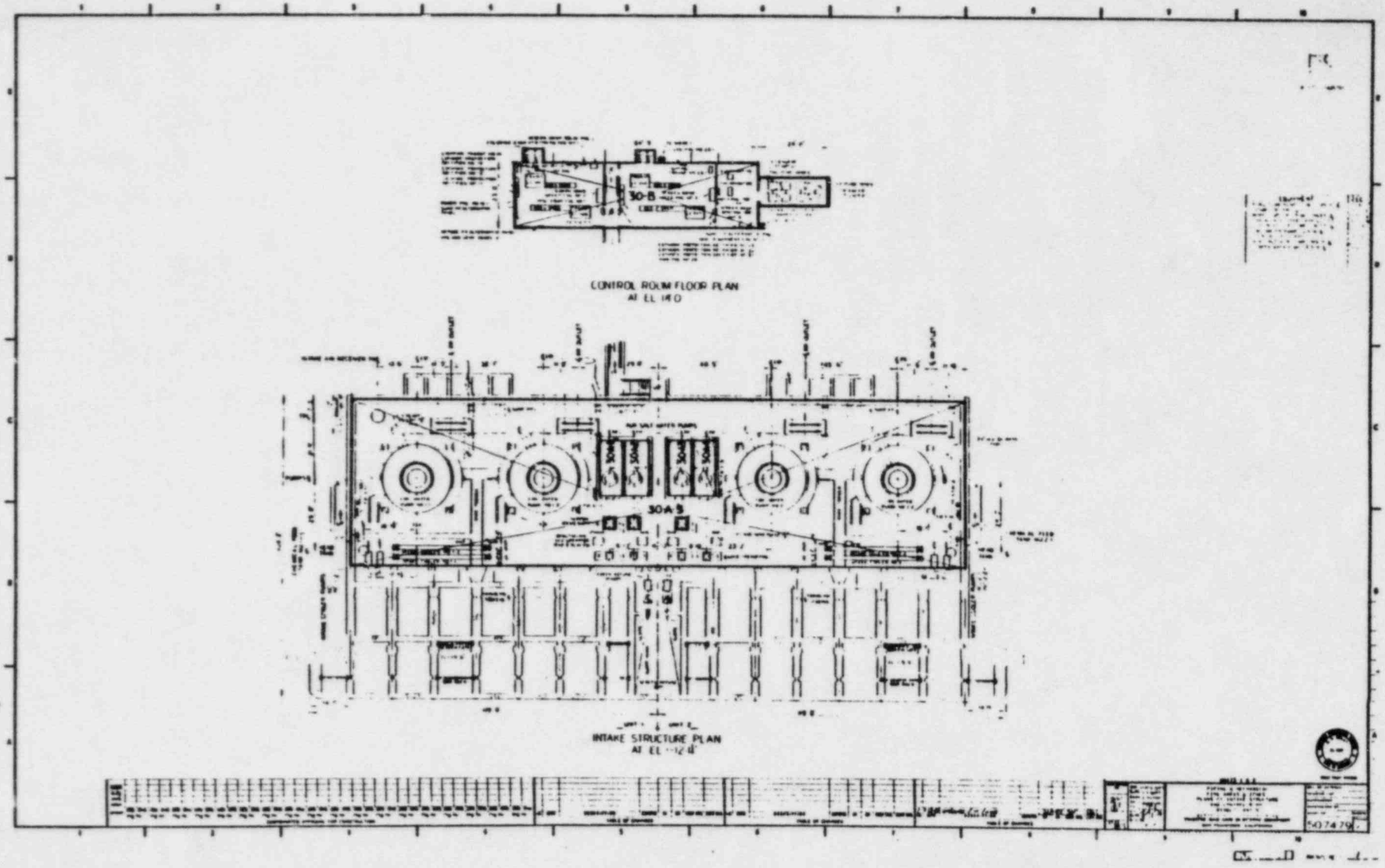

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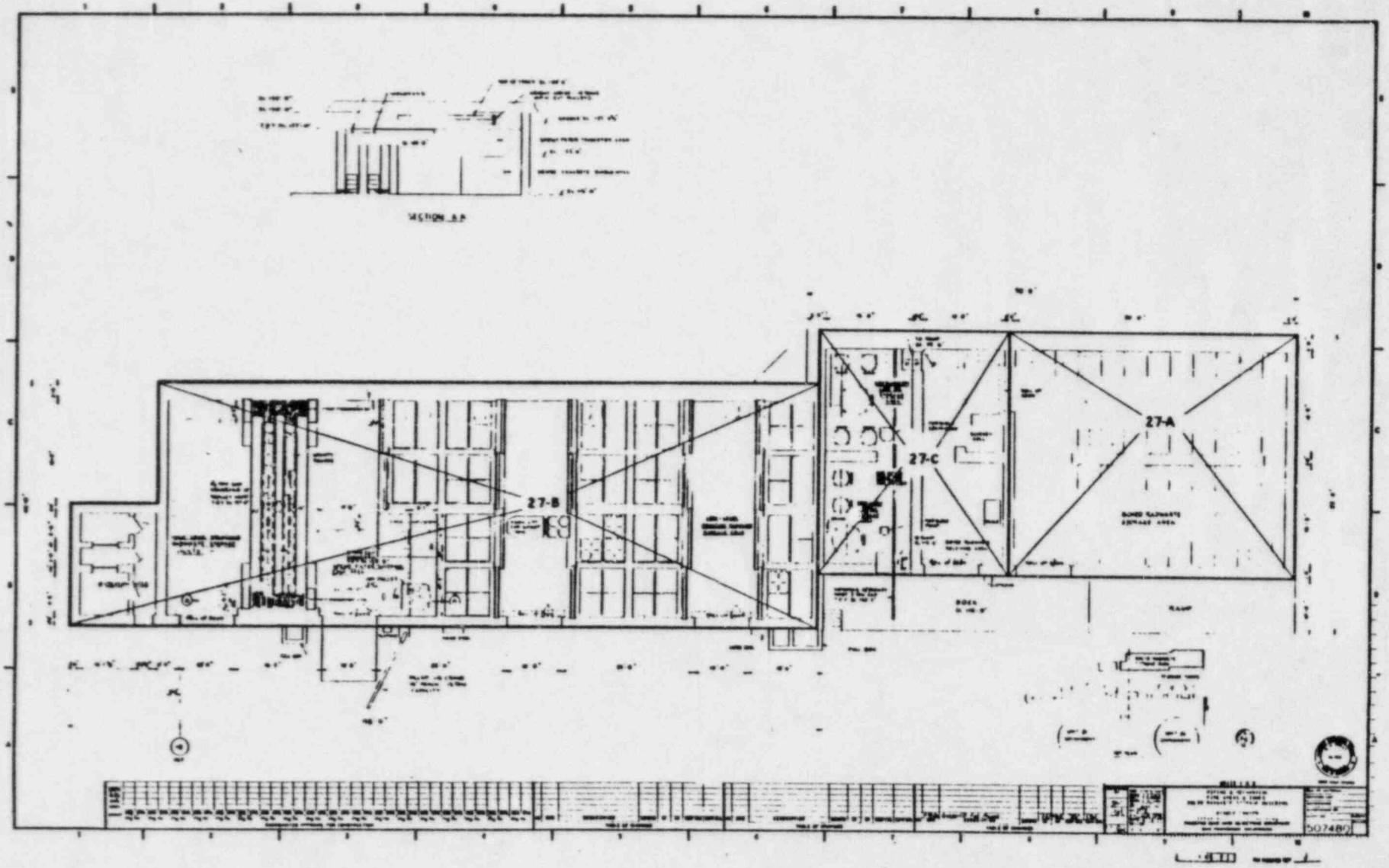

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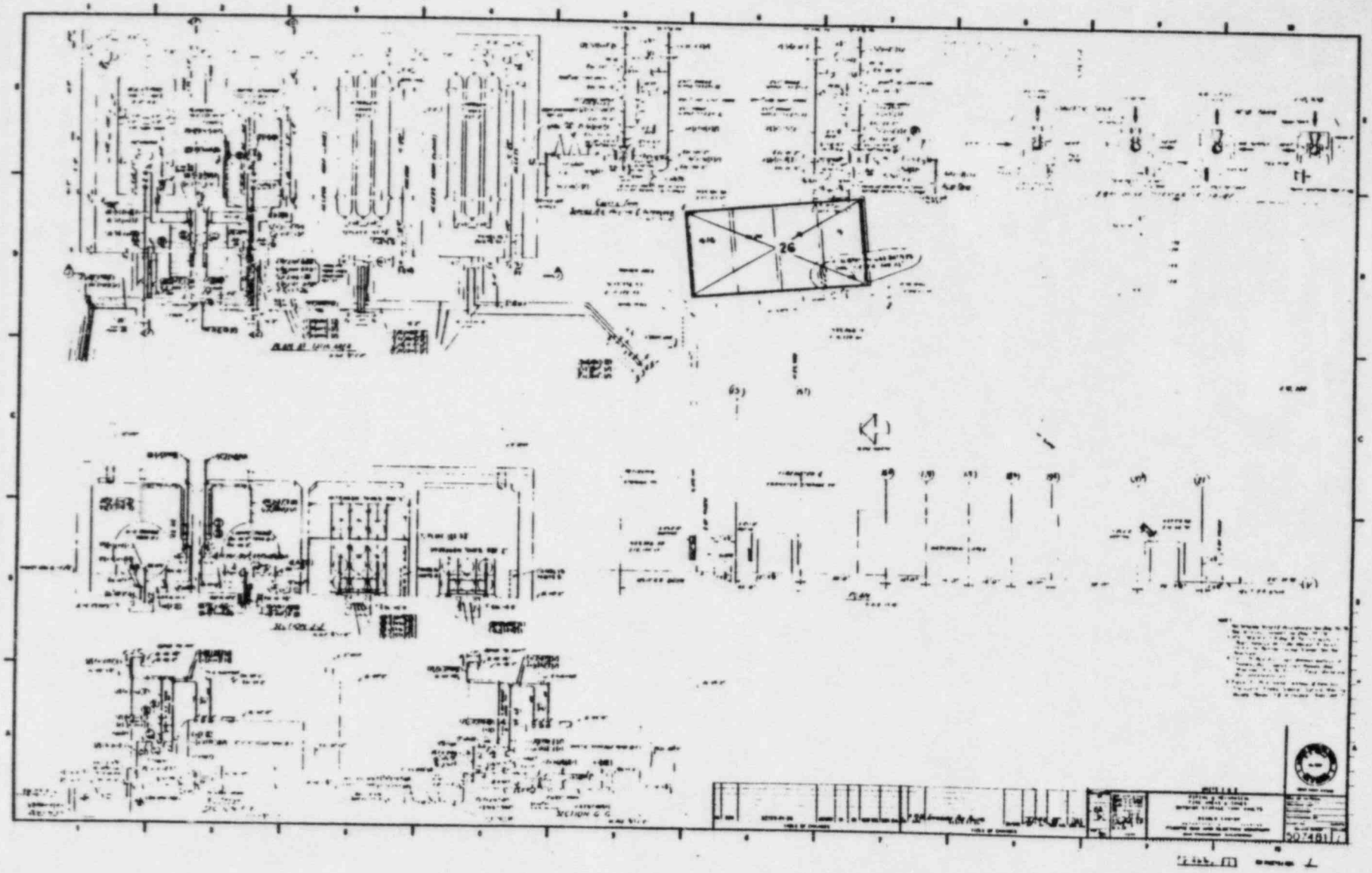

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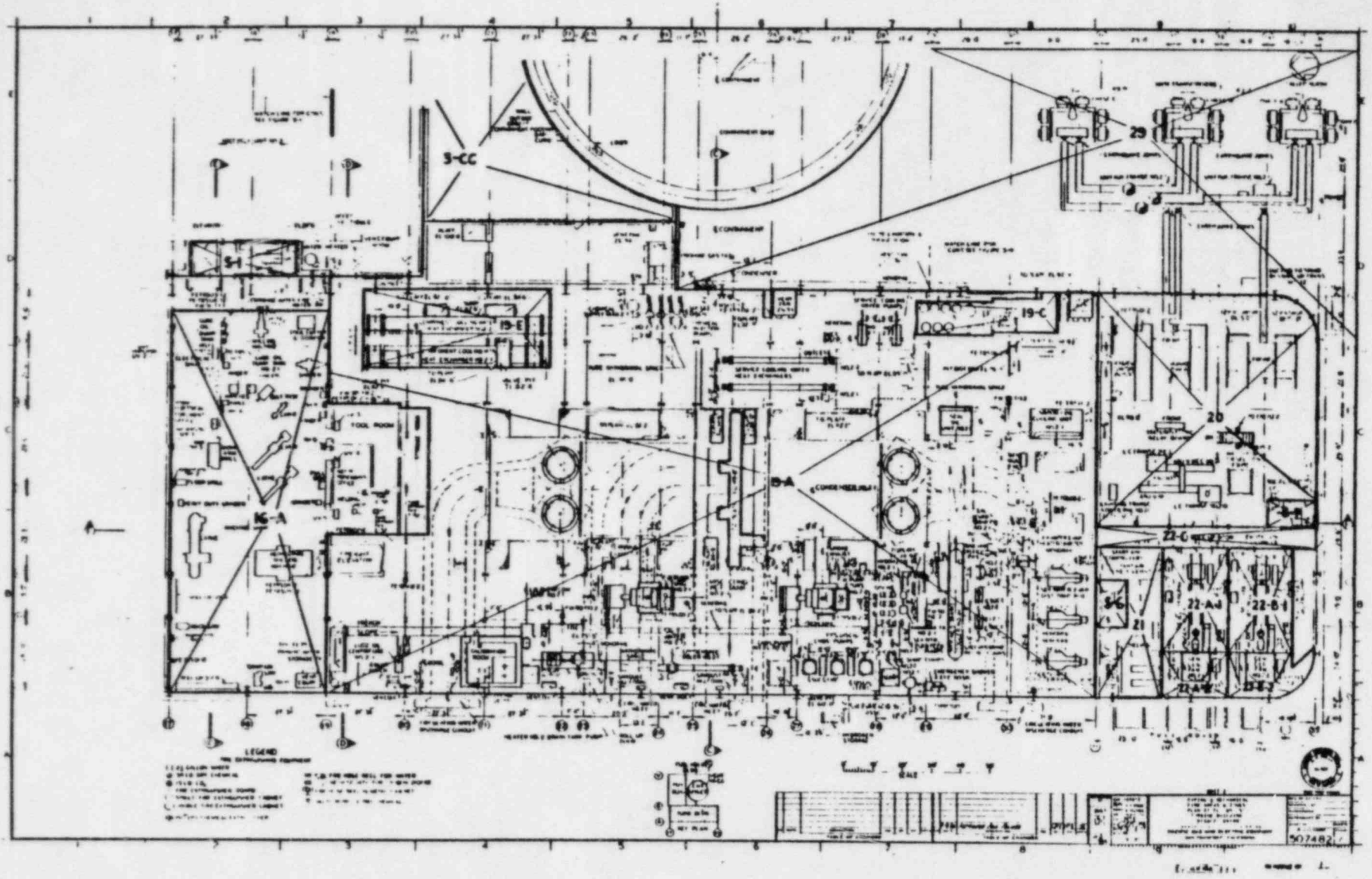

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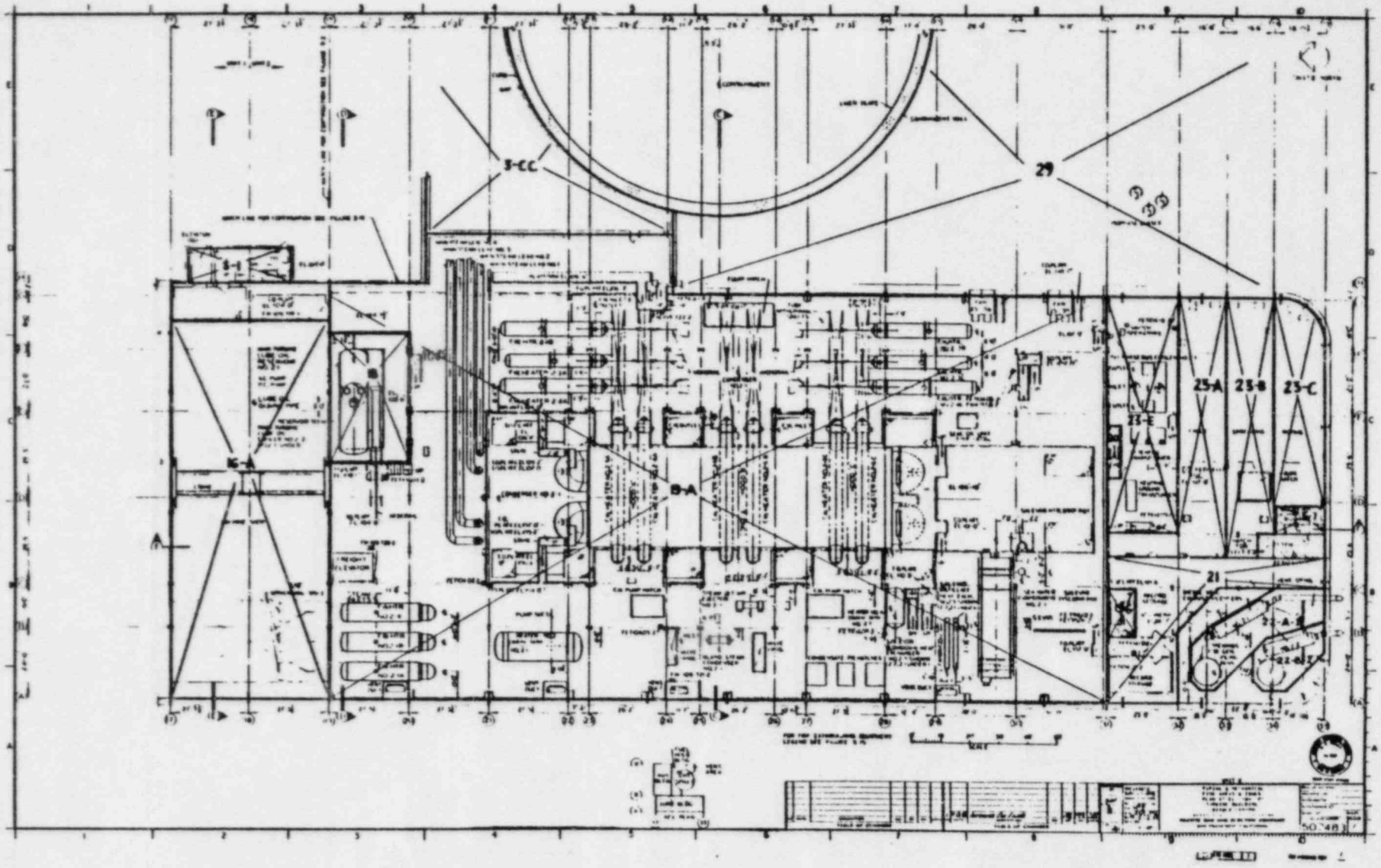

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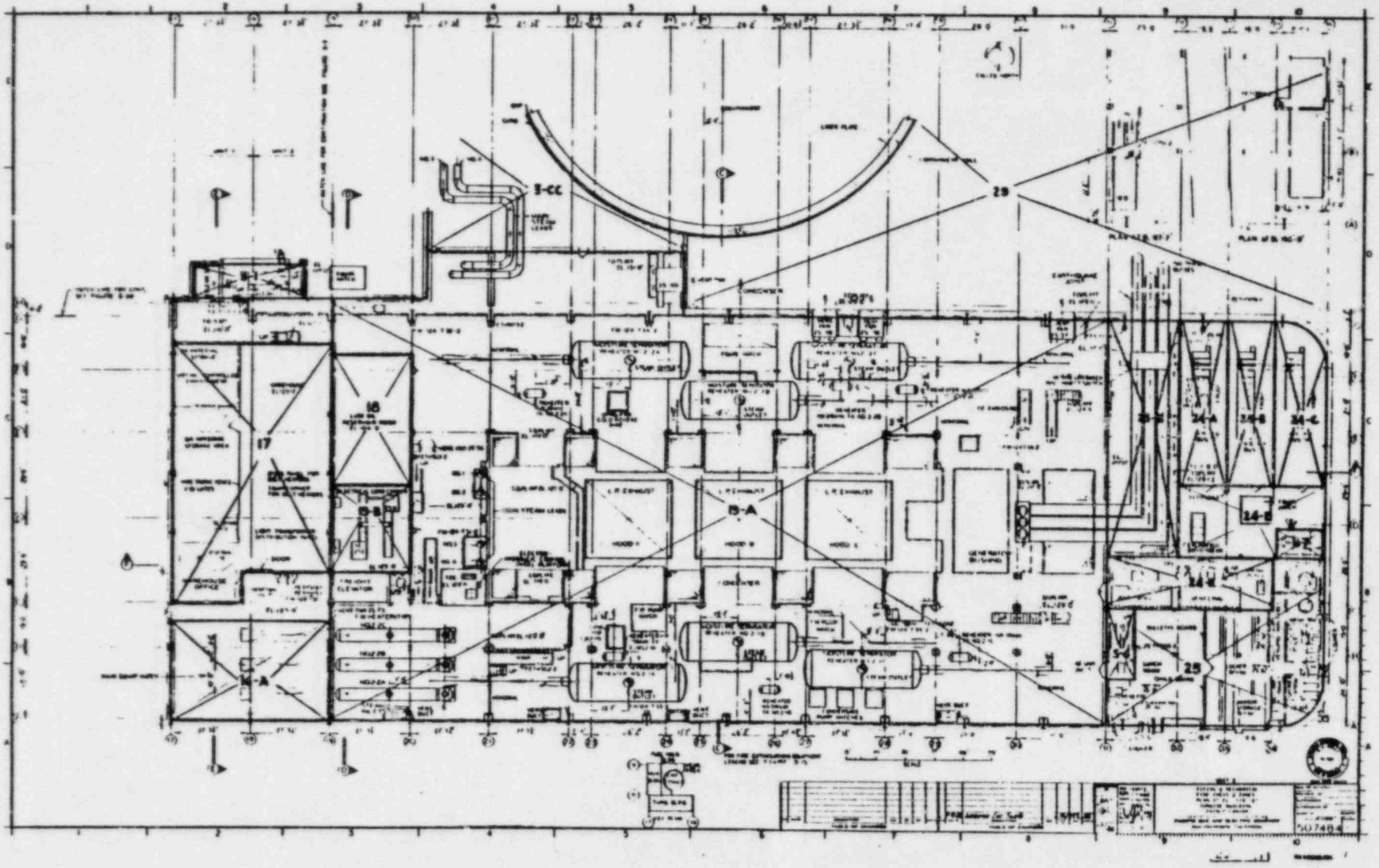

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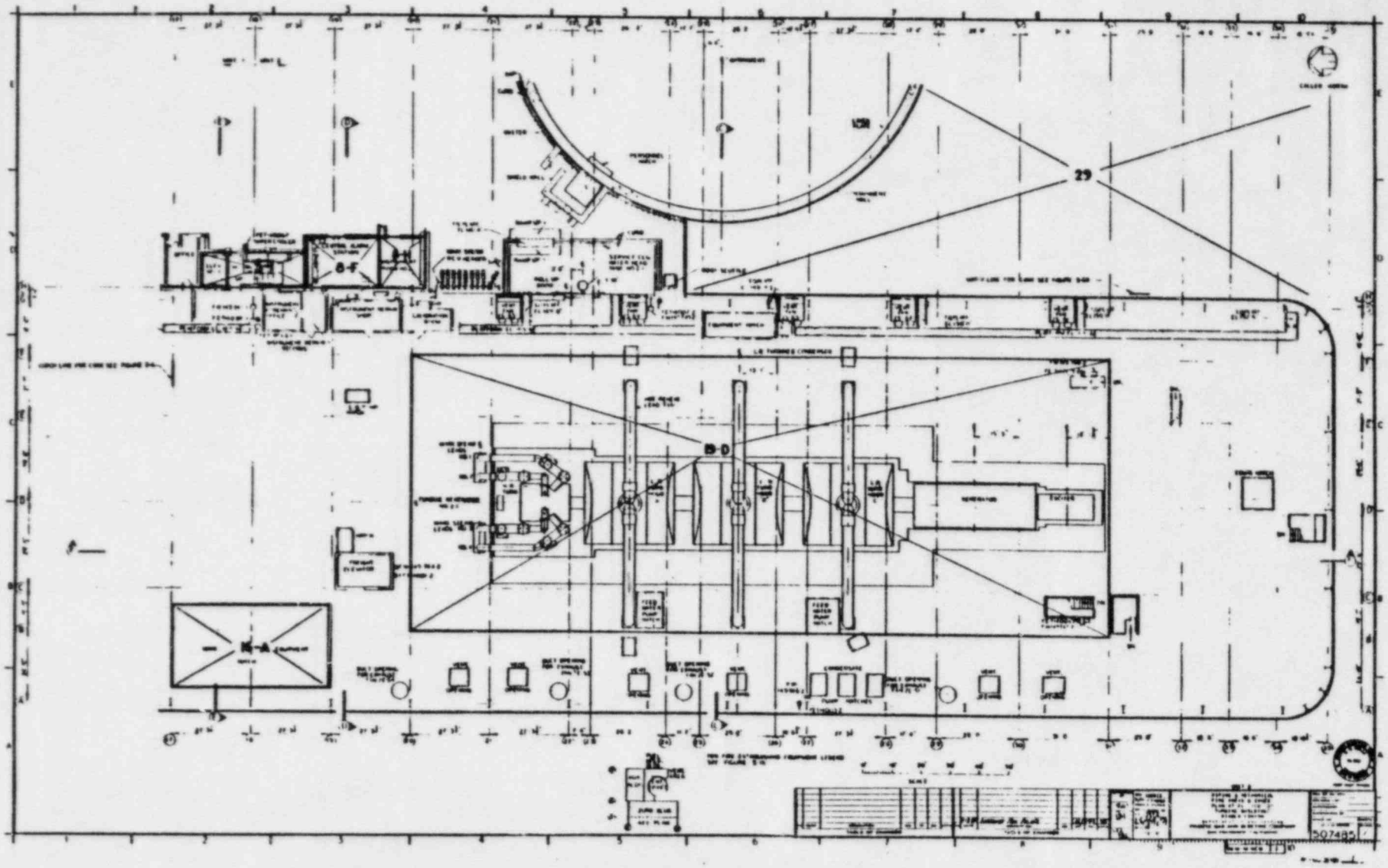

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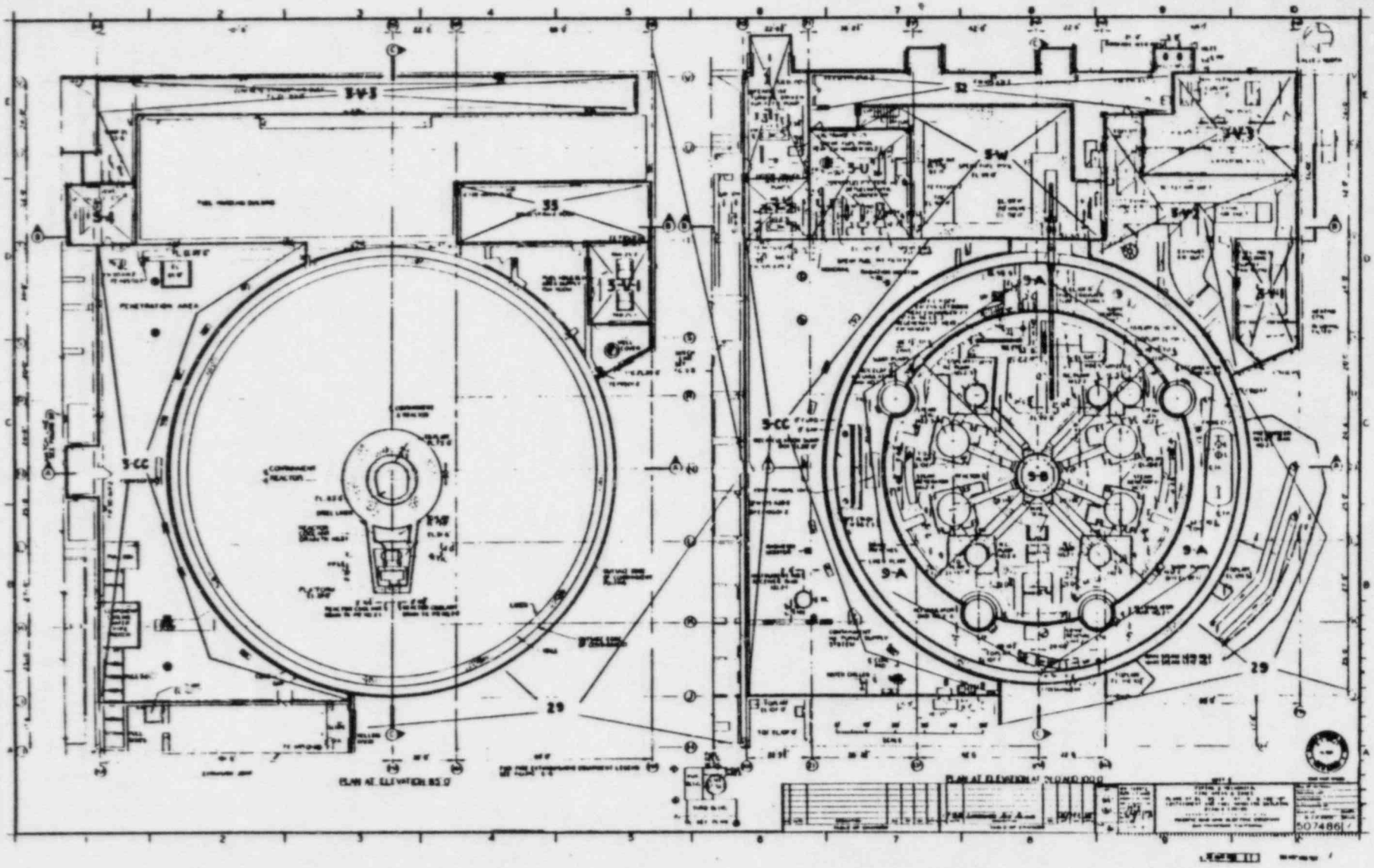

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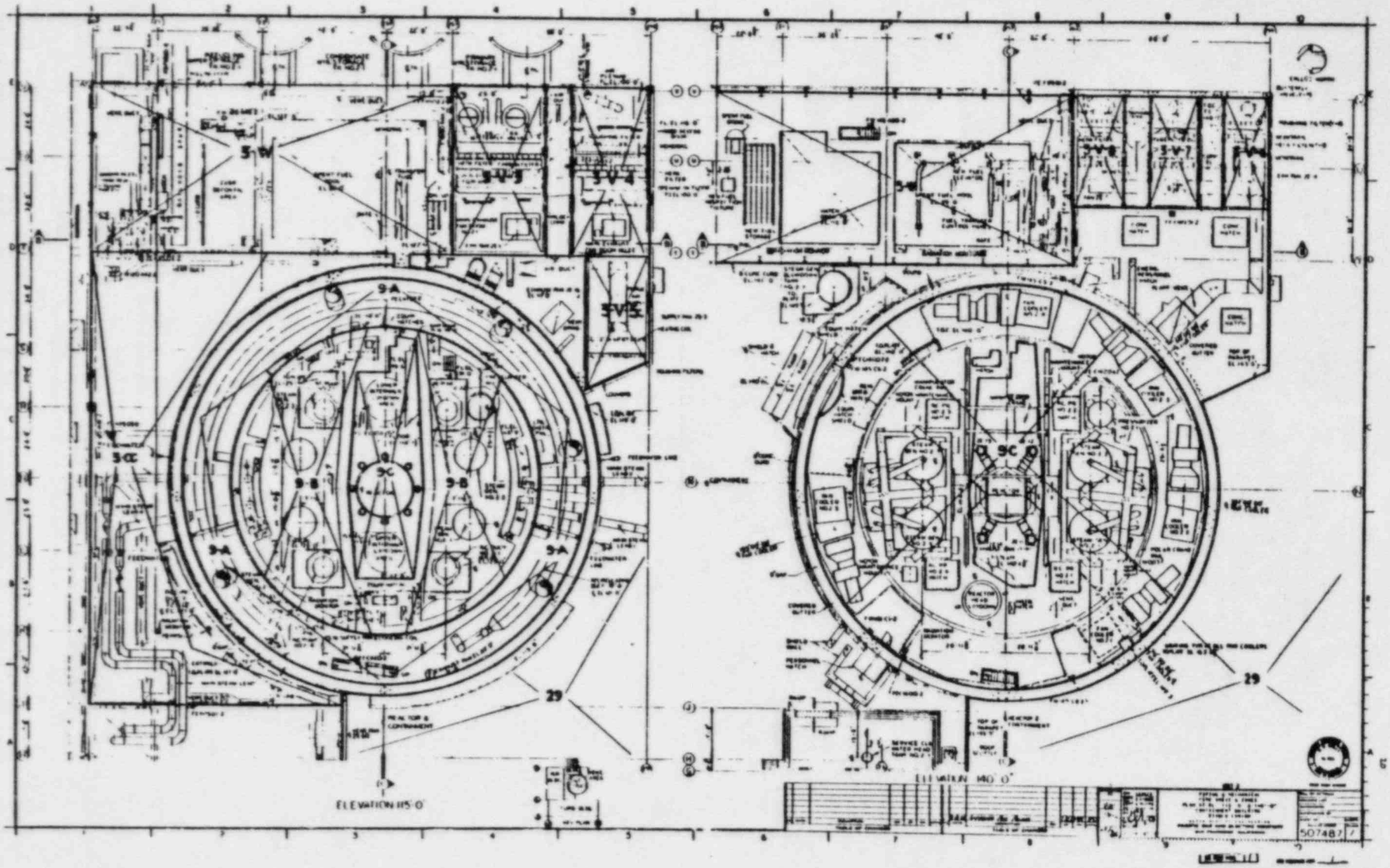


PG&E
Nuclear Plant Operations
88-10709 6/84

DIABLO CANYON POWER PLANT
PROCEDURE ON-THE-SPOT CHANGE

ORIGINATOR

Procedure No. EP M-10 Rev. 0 Unit No. 1 ☐ 2 ☐ 1 & 2 ☒

Title FIRE PROTECTION OF SAFE SHUTDOWN EQUIPMENT

Type of Change: ☒ PERMANENT (green) ☐ TEMPORARY (yellow); Expiration Date _____

Requesting Department OPERATING Originator R L FISHER

INSTRUCTIONS: Complete Appropriate Columns

1.) PROCEDURE

PAGE CHANGED	ADD PAGE	DELETE PAGE	NEW PAGE NUMBER
2 of 3			

2.) ATTACHMENTS

Attachment Number (Include all pages with dates changed to date of this OTSC)

_____
_____
_____

Reason for Change:

1. Typo
2. procedures referenced in step 1. were deleted.

Authorizations: Nicholas F Liew (Plant Management Staff) Robert L Fisher (Plant Management Staff w/SRO License) 7/5/84 Date*

Is immediate distribution required? ☐ YES ☒ NO
If YES, originator must distribute to Control Room, Shift Foreman and QC.

Initial Distribution Made By: _____

List other initial distribution to Controlled Copy Holders of this procedure _____

DOCUMENT CONTROL

Date Received by Document Control 7-6-84

PSRC Review and Plant Manager's approval no later than 7-19-84 Date above *plus 14 days

PSRC POST CHANGE REVIEW

Review Date _____

PSRC recommends approval ☐ Yes ☐ No

Meeting Number ☐☐ - ☐☐☐

_____ Plant Manager's Approval ☐ N/A

TYPING

Follow-up To Rejected On-the-Spot Change ☐ Additional Information ☐

Action Taken/Remarks:

DISTRIBUTION: ☐ Same as Original Procedure Distribution ☐ Others _____ Please see additional sheets ☐

There are more fire zones in the plant than is addressed in this procedure. The reason why certain fire zones are not included in this procedure is because those zones do not contain safe shutdown circuits in them. 075C

PROCEDURE

1. If a fire occurs in the plant the following additional procedures should be used immediately:

   a. Non-radiological Fires - Volume 3 in the Plant Manual, Emergency Procedure M-6

   b. Radiological Fire - Volume 3 in the Plant Manual, Emergency Procedure R-6

   ~~c. All Fires — Volume 11 in the Plant Manual, Fire Plan Section~~ 075C

   ~~d. All Fires — Volume 2 in the Plant Manual, Fire Fighting Tactics, K-26~~

2. The DETECTOR ZONES (listed in the Fire Plan) do not coincide with the FIRE AREAS (ZONES) defined in this procedure. Once the location of the fire is known, determine which area (zone) it is in by referring to Appendix 1 of this procedure.

   NOTE: Not all fire zones are equipped with fire/smoke detectors.

3. After identifying the affected fire area (zone), follow the guidelines in Appendix 3 of this procedure to maintain the operability of the safe shutdown equipment.

4. In Appendix 3 of this procedure, whenever the instructions call out for manually closing pump breakers for CCW or charging pumps, be aware that there are dedicated wrenches available in the 4KV switchgear rooms that can be used to open the switchgear doors. The instructions to manually close the pump breaker are posted inside the door.

5. Whenever manual valving is performed on a motor operated valve, the power supply for the valve should be tripped off at the 480 volts load center.

CURRENT

EMERGENCY PLAN

IMPLEMENTING PROCEDURES

TABLE OF CONTENTS

Volume 3B

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

DEPARTMENT OF NUCLEAR PLANT OPERATIONS

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

NUMBER EP EF-4
REVISION 5
DATE 5/23/84
PAGE 1 OF 8

TITLE EMERGENCY PROCEDURE
ACTIVATION OF THE MOBILE ENVIRONMENTAL MONITORING LABORATORY

APPROVED R. C. Thornberry 6-22-84
PLANT MANAGER DATE

IMPORTANT TO SAFETY

SCOPE

This procedure delineates the requirements and actions to be taken to activate the Mobile Environmental Monitoring Lab (MEML).

This procedure and changes thereto requires PSRC review.

GENERAL

The MEML will be used to measure radiation levels in the environment at various offsite locations for use in offsite assessment activities. The unit is equipped with an intrinsic germanium (IGe) detector; a sodium iodide (NaI) detector; a multichannel analyzer; a Hewlett-Packard 9845C computer with mass storage discs; a high volume air sampler; one pressurized ion chamber; emergency instrumentation and equipment kits; thermoluminescent dosimeter (TLD) reader and TLD's; communications equipment for contacting the onsite Technical Support Center (TSC) and the Emergency Operations Facility (EOF); and its own electric generators. Figure 1 shows the MEML's floor plan.

The MEML is located and maintained at the PGandE San Luis Obispo Service Center, 4315 South Higuera Street, San Luis Obispo, California. The MEML is housed in its own garage across from the service center garage. The keys to the MEML are located in the ignition. A second set of keys is available from the Service Center Garage Key Rack.

The MEML garage also serves as the storage area for offsite monitoring team equipment and as a staging area for field monitoring activities. It also serves as the office, shop, and staging area for the Normal offsite radiological monitoring program.

It is locked and protected with a burglar alarm system when unoccupied. Defeat keys for the burglar alarm are available from the Department of Engineering Research (DER) personnel normally assigned to the MEML Garage, Operational Security, the Shift Foreman or the Chemistry and Radiation Protection Key Box at Diablo Canyon Power Plant.

Access to a PGandE telephone system can be found in the division office area across from the MEML garage (see Figure 2). The doors into the division lunch room are keyed to accept the corporate "3A90909" key. Telephones are located in offices across from the kitchen.

INITIATING CONDITIONS

1. Emergency Conditions

   a. The Site Emergency Coordinator declares that the plant is in an Alert, Site Emergency, or General Emergency status as defined in Emergency Procedure G-1 "Accident Classification and Emergency Plan Activation," and initiates the emergency organization in accordance with Emergency Procedure G-2 "Establishment Of The Onsite Emergency Organization."

SUBSEQUENT ACTIONS

1. The staging point for the field monitoring teams and storage area for the radiological emergency kits is the MEML garage located in the San Luis Obispo Service Center, the personnel dispatched to the MEML garage will generally consist of Chemistry and Radiation Protection Technicians (C&RP), the MEML Operators from PGandE Department of Engineering Research, and San Luis Obispo County Environmental Health Department Personnel.

   NOTE: If the MEML garage is locked, personnel should not open the door without a burglar alarm defeat key available. The front door is the only access that has a 45 second time delay to permit use of the defeat key (see Figure 2). The defeat key is available from the plant if the DER personnel are not available. The DER personnel will be called out as part of the call-out list in Emergency Procedure EP G-2.

2. a. When PGandE personnel have reached the MEML garage, establish telephone contact with the Radiological Emergency Recovery Manager (RERM) at the Emergency Operations Facility (EOF) (see Attachment 1). If the MEML garage is locked and access cannot be obtained from the DER personnel assigned to the van, then use the telephone in the division office building (see Figure 2).

   NOTE: If the RERM cannot be reached at the EOF, then contact the Emergency Radiological Advisor (ERA) at the onsite Technical Support Center (see Attachment 1).

   b. If the RERM or the ERA require immediate deployment of the MEML and/or the field monitoring teams, and access to the garage is still not available, inform the RERM/ERA that access is not available and request the Cypher Pad Code that will open the door. Also request the ERA to dispatch an individual from the plant to reset the alarm.

   c. Call DCPP security (see Attachment 1) to inform them the MEML garage will be entered, and that the alarm will be actuated.

   NOTE: When the alarm is actuated a loud electronic warbler will sound locally.

3. Activation of the MEML:

   a. Switch the radiological monitoring equipment over from house power to the Onan electric power source by disconnecting the umbilical cord for the house power. For delineation of steps required for this operation, refer to the MEML Equipment Operations Manual. Disconnect all other shore leads (as per placard on steering wheel).

   b. Start the van and immediately drive van outside garage - Close & Lock Garage Door.

   NOTE: If van is kept in garage with engine or generators running the fire alarm system will be actuated in a very short period of time.

c. Check the operability of the portable high pressure ion chambers (PIC), including their response to check source and battery levels.

d. Start the two (2) Onan electric generators.

e. Verify the operation and calibration of the multichannel analyzer (MCA) following the calibration procedure in the MEML Equipment Operations Manual.

f. Establish verbal contact with the TSC and the EOF via the van's radio and the radio telephone systems.

RADIOLOGICAL MONITORING EQUIPMENT OPERATING INSTRUCTIONS

Detailed operating instructions for the radiological monitoring equipment is provided in the van as the MEML Equipment Operations Manual.

COMMUNICATIONS

Radio communications includes two-way voice transmission via radio to the TSC, the EOF and field monitoring teams, and radio telephone to any location served by Pacific Telephone. The radio telephone is the preferred communication means for the van.

FIGURE

1. Floor Plan of the Mobile Environmental Monitoring Laboratory

1.a. Left Side View of the Mobile Environmental Monitoring Laboratory

1.b. Right Side View of the Mobile Environmental Monitoring Laboratory

2. Garage Layout and Phone Access

ATTACHMENTS

1. Phone Numbers

2. Contamination Control for the Mobile Environmental Monitoring Laboratory

3. Mobile Environmental Monitoring Laboratory Sample Log-in Sheet Form #69-11533 5/84 (25)

SUPPORTING PROCEDURES

RB-8 Emergency Offsite Radiological Environmental Monitoring Program

DC0070 4VIII

TITLE: ACTIVATION OF THE MOBILE ENVIRONMENTAL MONITORING LABORATORY

FIGURE 1
FLOOR PLAN OF THE MOBILE ENVIRONMENTAL MONITORING LABORATORY

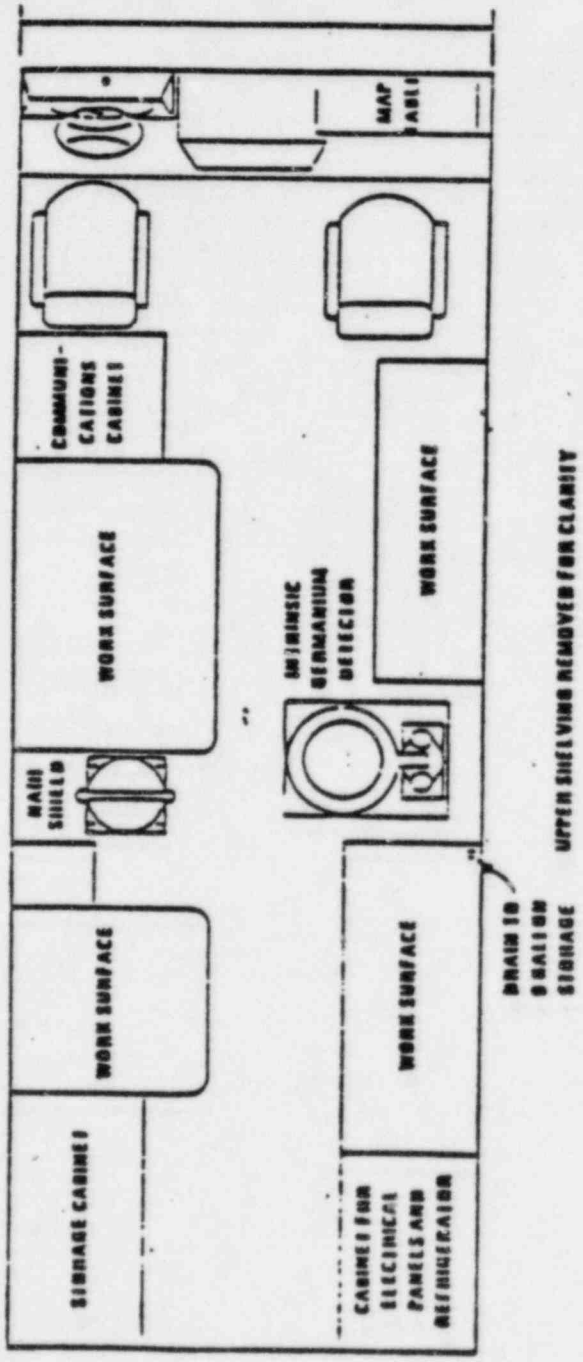
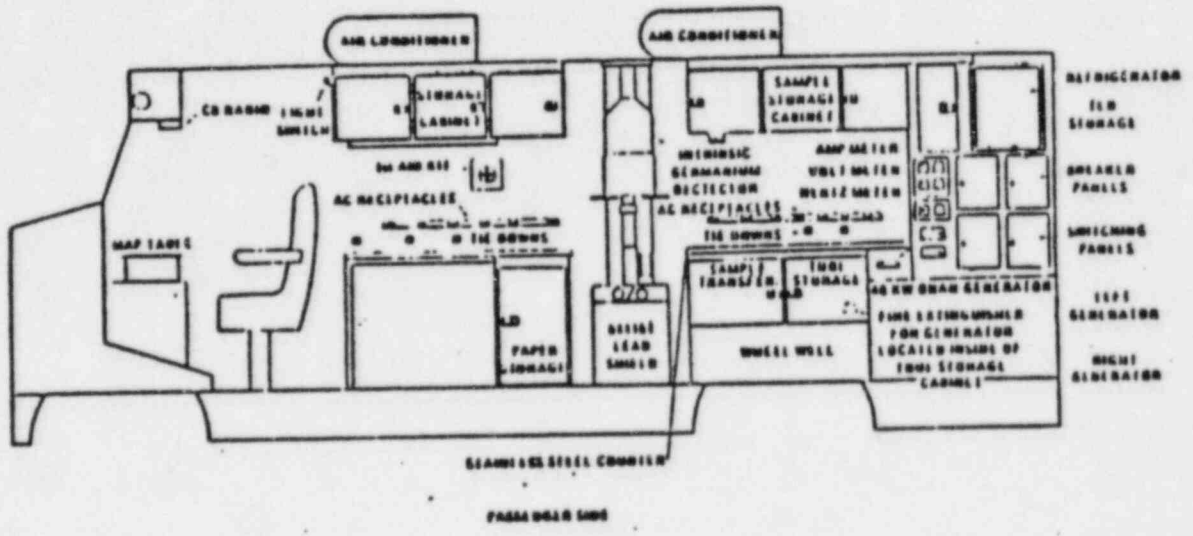


FIGURE 1.a.
LEFT SIDE VIEW OF THE MOBILE ENVIRONMENTAL MONITORING LABORATORY



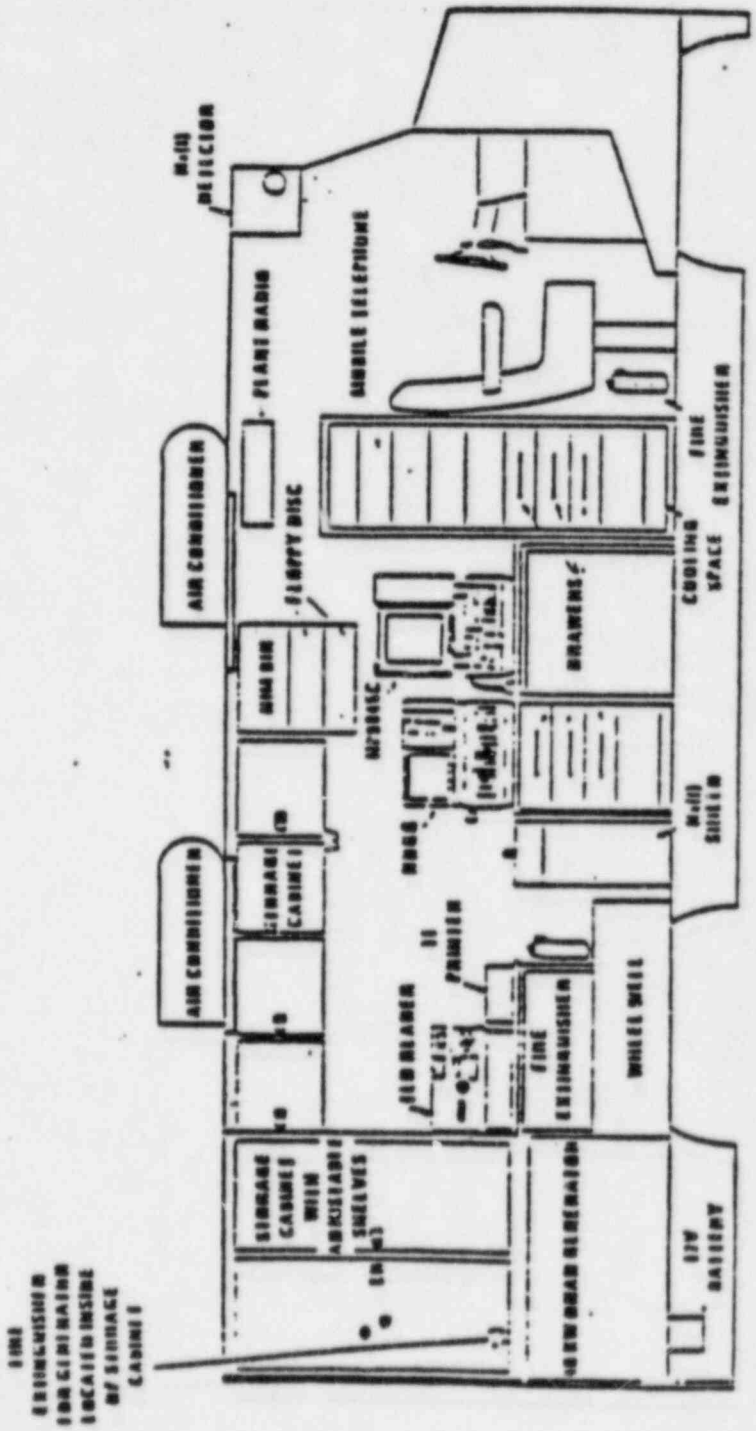
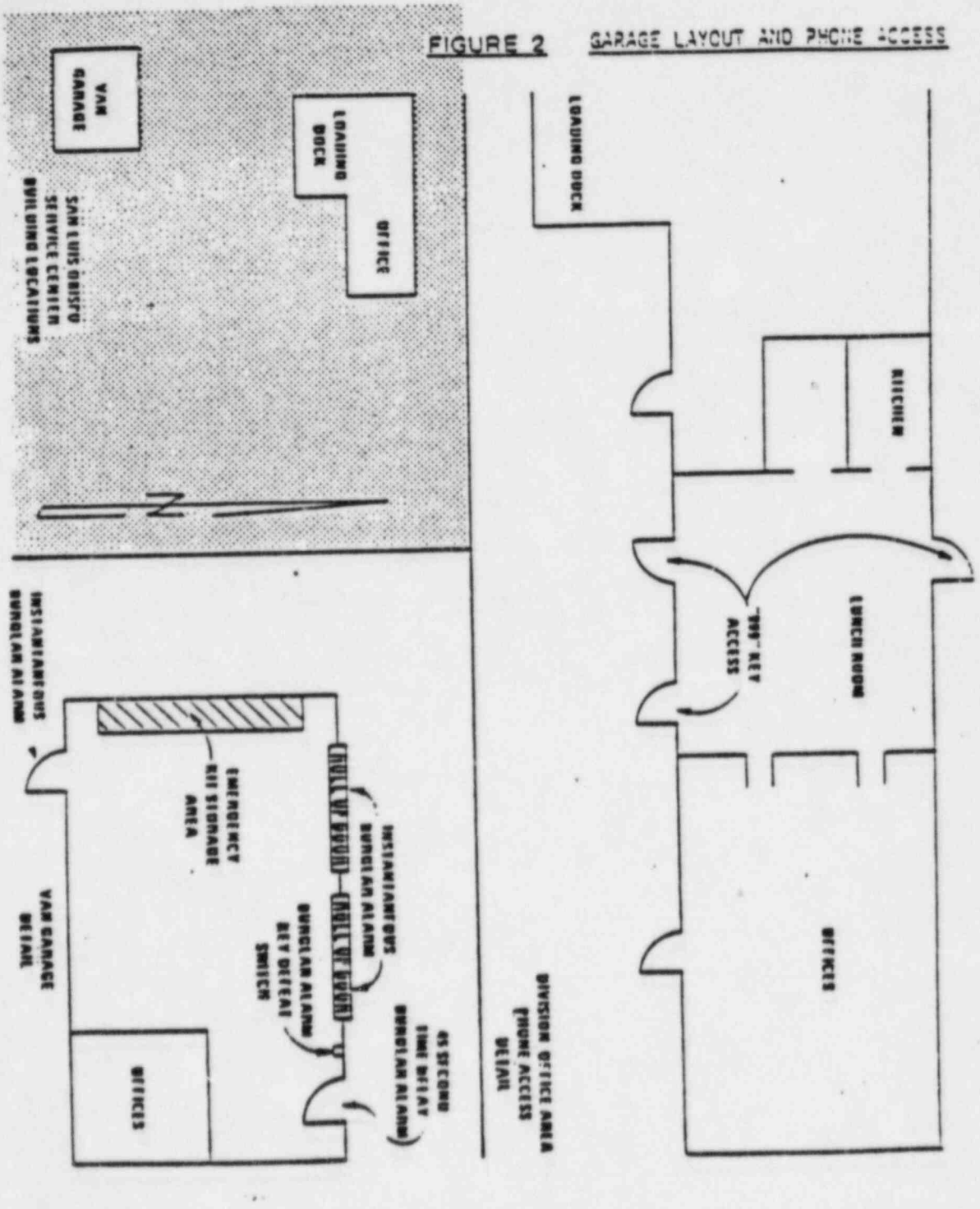


FIGURE 1.b.
RIGHT SIDE VIEW OF THE MOBILE ENVIRONMENTAL MONITORING LABORATORY

TITLE: ACTIVATION OF THE MOBILE ENVIRONMENTAL MONITORING LABORATORY

FIGURE 2 GARAGE LAYOUT AND PHONE ACCESS



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

TITLE: EMERGENCY FACILITY PHONE NUMBER

1. EMERGENCY OPERATIONS FACILITY:

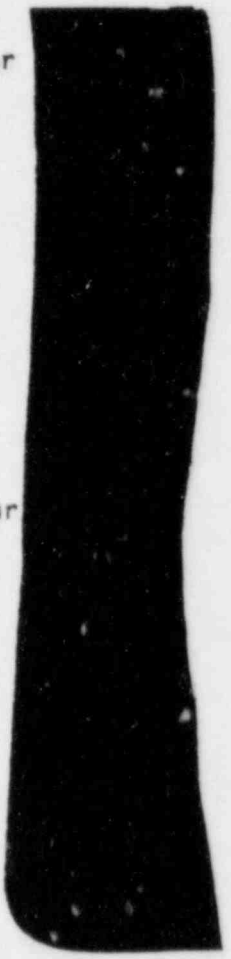
Radiological Emergency Recovery Manager	Call Operator ask for or PT&T
Radiological Monitoring Director	or PT&T
UDAC	or PT&T

2. TECHNICAL SUPPORT CENTER

Emergency Radiological Advisor	Call Operator ask for or PT&T

3. DCPP SECURITY

Security Shift Supervisor	or PT&T
Central Alarm System	
Secondary Alarm System	



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

TITLE: CONTAMINATION CONTROL FOR THE MOBILE ENVIRONMENTAL MONITORING LABORATORY (MEML)

I. Sample Handling - MEML Personnel

A. Securely affix a double layer cover on all appropriate work surfaces (i.e., work surfaces used to prepare potentially contaminated samples for analysis).

B. Gloves should be worn when handling potentially contaminated samples (e.g., air sampler filter heads and vegetation and soil samples).

C. Perform smear surveys on the sample bags to determine if the outsides of the sample bags are contaminated.

1. If a sample bag is contaminated, place it in another non-contaminated sample bag, stored in the van.

2. Use good contamination control and ALARA techniques throughout the sample analysis.

D. When purging iodine cartridges, avoid contamination by venting the effluent directly to the outside of the lab. A purge vent is located over the sample handling bench and is so marked.

E. Upon completion of sample analysis, store the samples in a large plastic bag. Label the bag.

II. Sample Delivery and Transfer - Offsite Monitoring Teams Personnel

A. Field monitoring team personnel should pass samples into the van through the sample transfer door located towards the rear of the van, on the passengers' side.

B. If the sample transfer door is inoperable, the samples may be passed through the backdoor.

1. If possible, field monitoring personnel should remain outside so as not to track contamination into the van.

2. If field personnel must enter the van, a step-off area should be established just inside the van entrance.

TITLE: CONTAMINATION CONTROL FOR THE MOBILE ENVIRONMENTAL MONITORING LABORATORY (MEML)

3. Field monitoring personnel should frisk their hands, feet,and any other potentially contaminated area, before entering the clean step-off area.

4. Shoe covers and gloves should be available so that personnel may leave the van and enter contaminated areas, if necessary.

NOTE: Contaminated personnel should not enter the MEML under any circumstances.

III. A. When analysis is complete, and samples stored, carefully remove the covering from the work surface(s). Rubber gloves should be worn and care should be taken to ensure the containment of any contaminants present. Dispose of the covering, gloves, etc. in a labeled plastic bag.

B. Upon completion of all MEML activities, perform smear surveys on the inside of the van to ensure that no contamination exists. If contamination is found to exist, decontaminate as appropriate.

C. If the van was near the plume and the potential for contamination exists, perform smear surveys on the outside of the van. If contamination is found to exist, decontaminate as appropriate.

D. When van is determined to be free of contamination, return to garage.

69-11533 5/84 (25)

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

MOBILE ENVIRONMENTAL MONITORING LABORATORY
SAMPLE LOG-IN SHEET

SAMPLE TYPE	SAMPLE LOCATION	SAMPLE DATE	TIME SAMPLE TAKEN	TIME SAMPLE LOGGED IN	LOGGED IN BY	COMMENTS

DC0070 121

PG&E
Nuclear Plant Operations
69-10709 6/84

DIABLO CANYON POWER PLANT
PROCEDURE ON-THE-SPOT CHANGE

ORIGINATOR

Procedure No. EP RB-5 Rev. 0 Unit No. 1 ☐ 2 ☐ 1 & 2 ☒

Title PERSONNEL DECONTAMINATION

Type of Change: ☒ PERMANENT (green) ☐ TEMPORARY (yellow); Expiration Date ____

Requesting Department CHEM AND RAD. PROTECTION Originator V. Morales

INSTRUCTIONS: Complete Appropriate Columns

1.) PROCEDURE

PAGE CHANGED	ADD PAGE	DELETE PAGE	NEW PAGE NUMBER
8 of 11			

2.) ATTACHMENTS

Attachment Number (Include all pages with dates changed to date of this OTSC)

#2 page 8 FORM 69-11510

Reason for Change:

Incoporate use of new survey form.

Authorizations: * [signature] (Plant Management Staff) R Patterson (Plant Management Staff w/SRO License) 6/20/84 Date*

Is immediate distribution required? ☐ YES ☒ NO
If YES, orignator must distribute to Control Room, Shift Foreman and QC.

Initial Distribution Made By:

List other initial distribution to Controlled Copy Holders of this procedure ____

DOCUMENT CONTROL

Date Received by Document Control 6-21-84

PSRC Review and Plant Manager's approval no later than 7-4-84 Date above *plus 14 days

PSRC POST CHANGE REVIEW

Review Date 6/21/84

PSRC recommends approval ☒ Yes ☐ No

Meeting Number 8 4 - 0 3 1

[signature] 6/21/84
Plant Manager's Approval ☐ N/A

REQUESTING DEPARTMENT

Follow-up To Rejected On-the-Spot Change ☐ Additional Information ☐

Action Taken/Remarks:

DISTRIBUTION: ☐ Same as Original Procedure Distribution ☐ Others ____ Please see additional sheets ☐

a. Shoes

1) If it is suspected that the contaminant is particulate matter, masking tape may remove it. Press the gummy side of the tape to the area of the shoe that is contaminated. Remove and repeat until no substantial reduction in radiation level is observed or until the shoe is free of contamination.

2) If the contamination cannot be removed with tape, leather soles should be scraped with a wire brush or emery paper until clean. Keep dust and filings from flying into the air. DO NOT USE WATER OR LIQUIDS ON LEATHER because the leather will swell up and stiffen.

3) If contamination cannot be removed with tape, rubber soles may be scrubbed with decontamination soap. (DO NOT USE ON LEATHER SOLES OR UPPERS.) A wire or stiff bristle brush should be used. Wipe off, rinse, dry and resurvey. Repeat if necessary.

4) Wire brushes should be washed with clean soapy water to prevent the spread of contamination.

5) Shoes that cannot be decontaminated by these methods should be confiscated, placed in a plastic bag, and labeled. Disposition of contaminated shoes is to be left to the discretion of the Emergency Radiological Advisor.

b. Personal Clothing

1) Contaminated clothing will be confiscated, placed in a plastic bag and labeled. Disposition of all clothing will be left to the discretion of the Emergency Radiological Advisor.

2) A body survey for skin contamination will be made.

3) Temporary clothing will be issued.

SUPPORTING PROCEDURES

EP R-1, "Personnel Injury (Radiological Related) and/or Overexposure"

EP RB-2, "Emergency Exposure Guides"

TABLES

1. Decontamination Supplies to be Obtained from the Supply Room.
2. Acceptable Surface Contamination Levels.

ATTACHMENTS

1. Form ~~18~~ 69-9392, "Skin and Clothing Decontamination ~~Report~~" FORM 69-11510 "RADIATION AND CONTAMINATION SURVEY FORM"
2. ~~Form 10-9315, "Contamination Survey Record."~~

69-11510 (2000) 1/84

DIABLO CANYON POWER PLANT
RADIATON AND CONTAMINATION SURVEY FORM

NAME	Type	Date	Time	Unit	Survey #
ELEVATION					
AREA/EQUIP.	PERPOSE				

. 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10 . 11 . 12 . 13 . 14 . 15 . 16 . 17 . 18 . 19 . 20 . 21 . 22 . 23 . 24 .

Z . Y . X . W . V . U . T . S . R . Q . P . O . N . M . L . K . J . I . H . G . F . E . D . C . B . A .

CONTAM. RESULTS

DPM/100cm

INSTRUMENT	RP #	CAL. DUE

A/S RESULTS

	MPC'S
Part	
Iod	
H_3	
TOTL	

REMARKS:

Reviewed by:

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

August 8, 1984

50-275/323 Diablo Canyon

MEMORANDUM FOR: Chief, Document Management Branch, TIDC

FROM: Director, Division of Rules and Records, ADM

SUBJECT: REVIEW OF UTILITY EMERGENCY PLAN DOCUMENTATION

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

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

Attachment: As stated