

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8607300122 DOC. DATE: 86/07/24 NOTARIZED: YES DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moho 05000410
 AUTH. NAME AUTHDR AFFILIATION
 MANGAN, C. V. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 BERNERD, R. Division of Boiling Water Reactor (BWR) Licensing

SUBJECT: Forwards Amend 27 to FSAR for Nine Mile Point Nuclear Station Unit 2, including proprietary Section 6A. Amend submitted per 10CFR50.30(c)(1) & NRC 830329 ltr. Section 6A withheld (ref 10CFR2.790).

DISTRIBUTION CODE: B001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 27+857
 TITLE: Licensing Submittal: PSAR/FSAR Amnds & Related Correspondence

NOTES: Revised 8/14/86 E.J.W.

60 Prop Prop
 60 Prop Prop
 27+857

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME		LTR	ENCL		ID CODE/NAME		LTR	ENCL
	BWR EB	#16	1	1		BWR EICSB	#14,15	2	2
	BWR FOB	#17	1	1		BWR PD3 LA	#13	1	1
	BWR PD3 PD	#18	1	1		HAUGHEY, M	#11,12	2	2
	BWR PSB	#19	1	1		BWR RSB	#10	1	1
INTERNAL:	ACRS	#20, 21, 22, 23, 24, 25	5	6		ADM/LFMB		1	0
	ELD/HDS3		1	0		IE FILE	#9	1	1
	IE/DEPER/EPB	#3	1	1		IE/DQAVT/QAB	#8	1	1
	NRR BWR ADTS		1	0		NRR PWR-B ADTS		1	0
	NRR ROE, M. L	#2	1	1		NRR/DHFT/MTB	#7	1	1
	REG FILE	#1	1	1		RGN1	#4,5,6	3	3
	RM/DDANI/MIB		1	0					
EXTERNAL:	BNL (AMDTS ONLY)		1	NP		DMB/DSS (AMDTS)		1	NP
	LPDR	03	1	NP		NRC PDR	02	1	NP
	NSIC	05	1	NP		PNL GRUEL, R		1	NP

Chg: BNL
 DMB
 NSIC
 PNL
 PDR
 LPDR

To NOW PROP ONLY

July 24, 1986
(NMP2L 0793)

Mr. Robert Bernero, Director
Division of BWR Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Bernero:

Re: Amendment 27 to Application to Operating License
Nine Mile Point Unit 2
Docket No. 50-410

In accordance with 10 CFR 50.30(c)(1) and your March 29, 1983 letter, enclosed are three originals and 60 copies of Amendment 27 to the Final Safety Analysis Report. These changes incorporate certain responses into the text of the Final Safety Analysis Report. Also included are changes that have resulted from our continuing review of these documents.

In the original submittal of the Final Safety Analysis Report on January 25, 1983, we requested proprietary status for certain figures in Section 6A in accordance with 10CFR2.790. The September 21, 1983 letter from A. Schwencer to G. K. Rhode approved this proprietary status. Amendment 27 contains updates to a figure in Section 6A.

Also enclosed is the Summary of Incorporated Changes. This list is to assist the Nuclear Regulatory Commission in reviewing Amendment 27.

Very truly yours,

C. V. Mangan

C. V. Mangan
Senior Vice President

JM:ja
1853G

Enclosures

xc: W. A. Cook, NRC Resident Inspector
Project File (2)

8607300122 860724
PDR ADDCK 05000410
K PDR

clg: BNL
DMB
NSIC
PUL
PDR
LPDR

TO NON PROP ONLY

3001
1/60 PROP
1/60 NON PROP

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
Niagara Mohawk Power Corporation) Docket No. 50-410
(Nine Mile Point Unit 2))

AFFIDAVIT

C. V. Mangan, being duly sworn, states that he is Senior Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C. V. Mangan

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 24th day of July, 1986.

Christine Austin
Notary Public in and for
Onondaga County, New York

My Commission expires:

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4787687
My Commission Expires March 30, 1987

RECEIVED
FEB 10 1964
U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

Nine Mile Point Unit 2 FSAR
SUMMARY OF INCORPORATED CHANGES

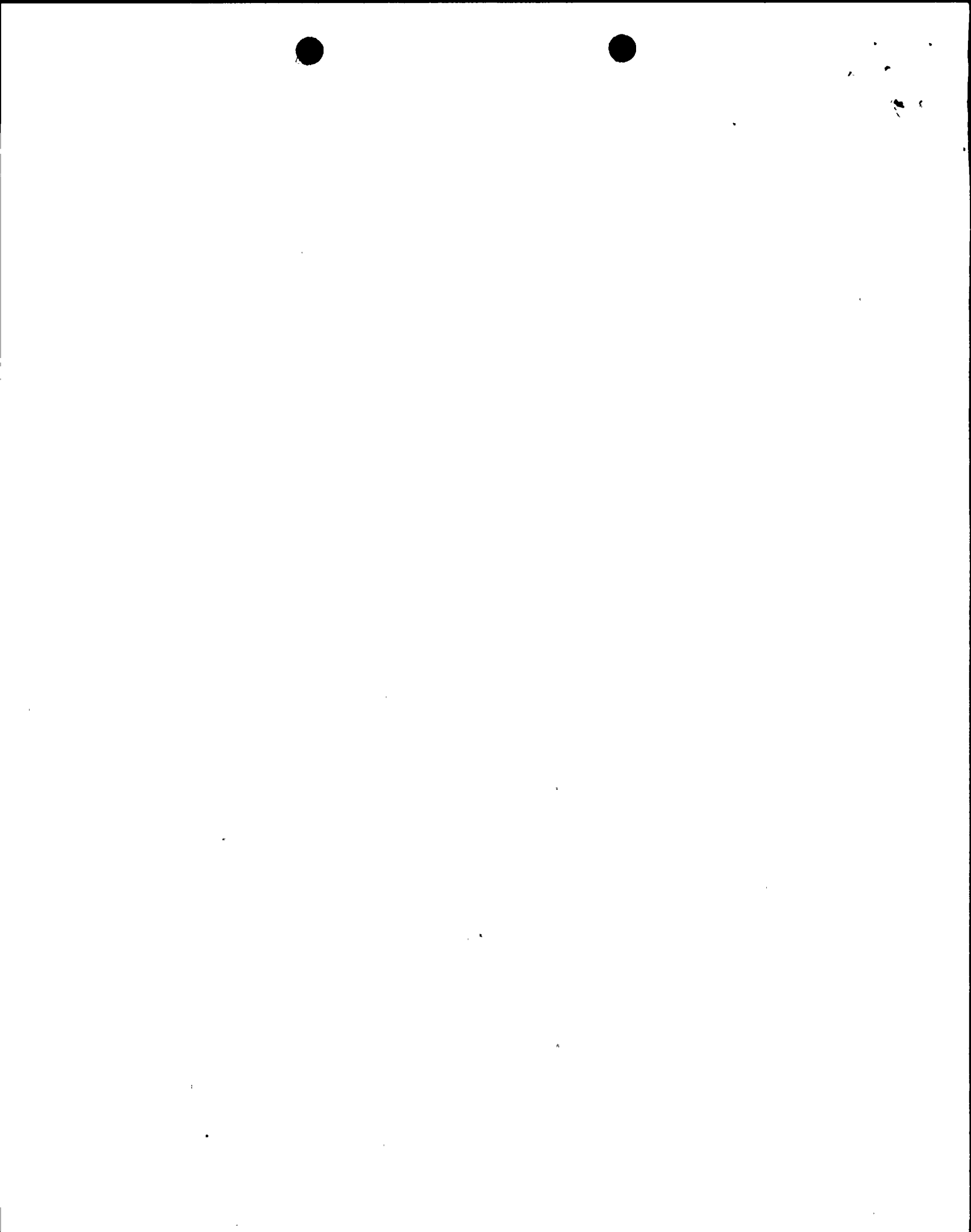
Legend

- R = Response to NRC Question or request, or SER Item.
- E = Editorial or typographical change that has not affected basis of FSAR.
- N = Nonsafety-related change in design, schedule, and/or procedure.
- SN = Change to a safety-related item that has no effect on SER.
- SS = Change to safety-related item that could affect the SER.
- TS = Change that affects the Technical Specification.



Handwritten marks and symbols in the top right corner, including a small 'v' and some illegible characters.

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Attachment 1.9-61	R	Incorporate description of testing of fire boot type penetration seals that deviates from SRP 9.5-1 (Letter No. NMP2L 0740 dated June 10, 1986).
Page 2.4-28	R	Correct number from 16 to 15 public water supplies, consistent with Table 2.4-9. Though there are a total of 16 supplies listed in the table, one is an industrial use only.
Pages 5.3-6, 5.3-7, 5.3-21 Page Q&R F251.1-2	R, TS	Revise the FSAR to be consistent with the technical specifications relative to the material surveillance program and change wording referring to lead factors (Letter No. NMP2L 0745 dated June 11, 1986).
Pages 6.2-85, 6.2-86	R	Replace "exemption" with "exception" in accordance with NRC request.
Table 6.2-56, Sht. 7	R, TS	Provide mark numbers for the TIP system ball and shear valves in accordance with NRC staff request.
Page 8.3-24b Table 8.3-3A	R	Clarify locations of HPCS diesel generator annunciators (i.e., main control room or diesel generator control room) as requested by the NRC staff.
Table 9.5-3, Sht. 9a	R	Incorporate deviation to NFPA 80 relative to nonlisted fire door hardware (Letter No. NMP2L 0740 dated June 10, 1986).
Page 9A.3-16	R	Clarify that manual local application CO ₂ systems are provided for turbine lube oil piping located above the turbine deck (Letter No. NMP2L 0512 dated October 11, 1985).
Page 9A.3-18	R	Clarify that the fire pumps are not safety related (Letter No. NMP2L 0512 dated October 11, 1985).



<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Page 9A.3-31	R	Delete the requirement that fire brigade members have knowledge in safety related systems. This requirement is discussed in another paragraph. Correct procedure number from APN-10P to NTP-5 (Letter No. NMP2L 0512 dated October 11, 1985).
Table 9.B.8-1, Shts. 66, 75	R	Add additional description of the concrete wall separating unit coolers 2HVR*UC413A and 2HVR*UC413B (Letter No. NMP2L 0740 dated June 10, 1986).
Page 10.2-3a	R	Revise main steam system valve testing frequency to be consistent with the technical specifications by deleting statements on testing and inserting reference to the technical specifications.
Page 11.4-4	R	Correct radwaste backup system line sizes (Letter No. NMP2L 0719 dated May 19, 1986).
Page Q&R F210.38-2	R	Update response to Question F210.38 to reflect inclusion of the subject snubber examinations in the PSI inspection plan and the initial test program.
Page Q&R F280.23-1	R	Response revised to reflect completion of evaluations regarding effects of water damage due to fire fighting activities on the ability to safely shutdown.
Table 421.36-1, Shts. 1, 2, 14	R	Add two additional instruments for reactor vessel level (wide range) measurement (Sht. 1), correct the mark numbers for AAS containment isolation valves (change N to H) (Sht. 2), correct mark number for instrument measuring cooling water flow to the Div. 2 diesel generator (Sht. 14).



Small, illegible marks or characters in the top right corner.

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Pages Q&R F430.71-1 Q&R F430.36-2	R	Revise responses to Questions F430.36, F430.71 to reflect completion of installation of the heavy-duty turbocharger on the Division III diesel generator.
Pages Q&R F430.44-1, Q&R F430.49-1	R	Revise responses to Questions F430.44 and F430.49 to reflect that eight-hour battery pack lighting has been provided.
Pages Q&R F492.7-1, 2 Pages Q&R F421.23-2, 3	R	Update response to Questions F492.7 and F421.23 based on completion of the subject evaluations of water level sensing instrumentation.
Page Q&R F620.1	R	Update response to Question F620.1 to delete the commitment for future updates. Change "will submit" to "has submitted."
Page Q&R F620.01-1	R	Update response to question F620.01, Item a to reflect submittal of the document under separate cover.
Page Q&R F620.05-1	R	Update response to Question F620.05 to delete commitment on updating FSAR Section 1.10, Items I.D.1 and I.D.2 that has now been completed.
Page Q&R F640.34-4	R	Revise response to Question F640.34, item 1.1 (10). Containment and suppression pool vacuum breakers will be tested as part of the containment purge (not isolation) system preop testing.
Page SSC-6	R	Revise response to Item 13 to reflect that system design drawings were provided and reviewed as required during the Appendix R audit.
Attachment 1.9-15	E	Typographical error. Change 3.05m to 3.0 Sm.



2
2
2

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Attachment 1.9-37, Sht. 1	E	Correct table reference from 5.2-3 to 5.2-5. Replace "as" with "and code cases." Change notes to noted. Change code case N-207 to N-1588.
Attachment 1.9-78	E	Delete last sentence concerning nonapplicability of other tasks to Unit 2. All referenced tasks have been addressed.
Page 1.10-101	E	Correct spelling of "studies."
Page 1.12-11	E	Revise discussion of water leg pump operation for clarity by clearly stating that a static column of water cannot induce air into the fluid system.
Page 2.5-167	E	Add "The locations and" at the beginning of the sentence referencing Figures 2.5-94 through 2.5-96.
Page 2.5-167b, Figures 2.5-96E, 2.6-96F	E	Add clarification to dowel length description (p 2.5-167b). Delete dowel length dimensions from the figures.
Page 2.5-194b	E	Add subscript t that was inadvertently omitted.
Pages 3.1-34, 3.1-47	E	Editorial clarification (p 3.1-34). Delete reference to GE valve number that is not necessary. Add the word "inspection" (p 3.1-47).
Pages 3.6A-5, 3.6A-37, Tables/Figures Reference Page	E	Revise figure number from 3.6A-51 to 3.6A-49 consistent with the actual figures to be provided.
Table 3.6B-2	E	Correct number from 4.62 to 4.206 for break RC4LL.
Page 3.7A-7	E	Rearrange the paragraph describing the portions of the diesel generator building floor slabs beneath which granular fill was placed, for clarity.



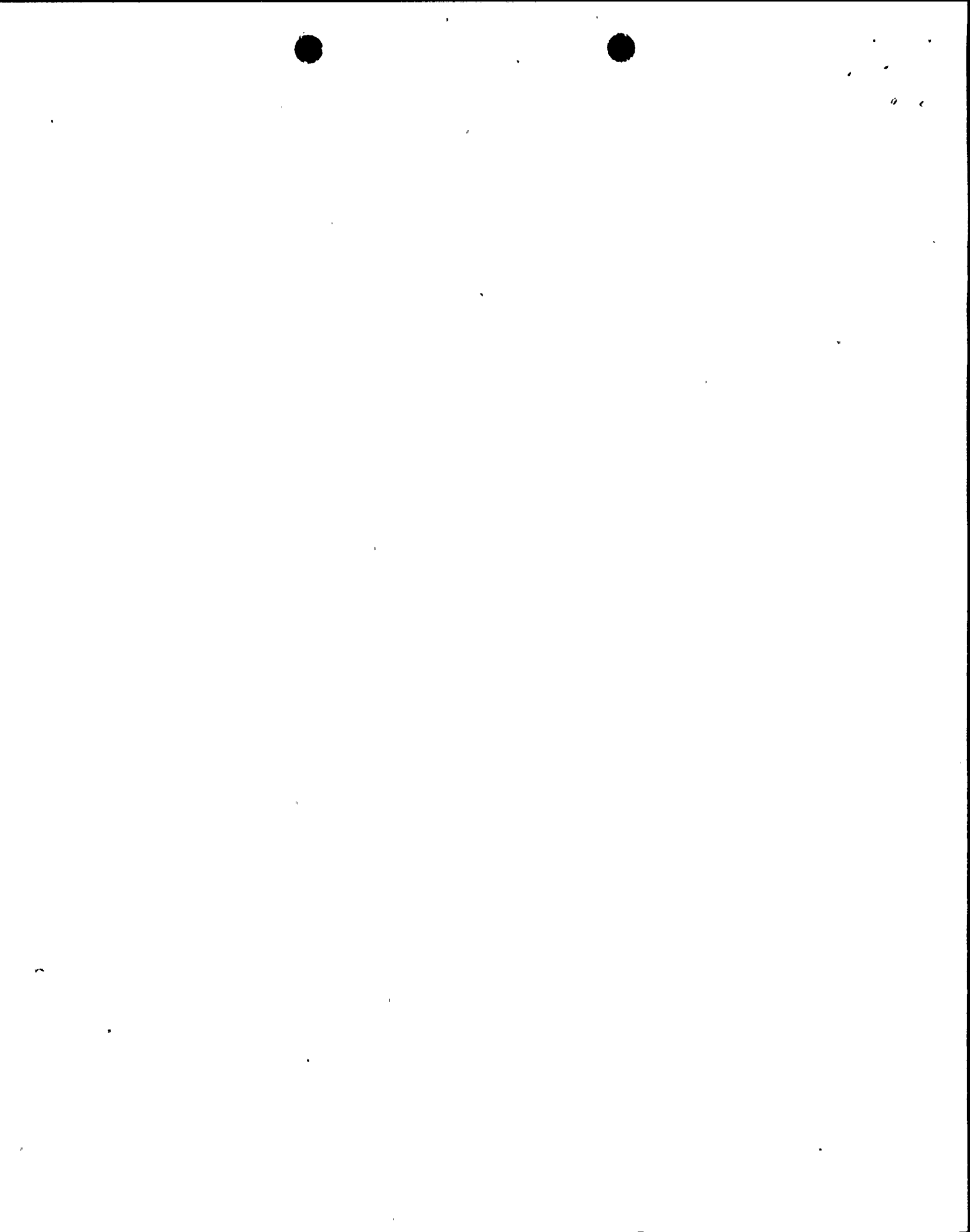
1
2
3
4

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 3.8-5	E	Add missing Δ symbol, change S_m to S_n in several places.
Table 3.8-6	E	Correct alignment of several stress limit equations with the corresponding load combinations (Sht. 1). Clarify load RT to include jet impingement effects, if applicable (Sht. 2).
Table 3.8-7	E	Change OBE to OBEI and SSE to SSEI (Sht. 1). Correct S_n to $\overline{\sigma}_n$ (Sht. 2).
Page 3.8-37	E	Change \geq to \leq . This was inadvertently changed in Amendment 26.
Pages 3.9A-9, 3.9A-15, 3.9A-21	E	Add the words "criteria and" in first paragraph (3.9A-9). Delete "safety" in references to the ASME code (3.9A-15). Revise "generically" to "generally" (3.9A-21).
Figure 3A.22-1	E	The figure is deleted. It is not referenced in Section 3A.22 and is not needed to describe the PITRUST program.
Page 4.1-5	E	Correct section cross reference from 4.2.2.1 to 4.6.1.1.
Page 4.6-3	E	Editorial. Change low to local.
Figure 5.1-2, Shts. 1, 2, 3	E	Renumber the sheet numbers to put the figures in the proper order.
Page 5.4-41	E	Delete "drawoff" from system name.
Page 6.2-74	E	Editorial. Item 11 is redundant to Item 3 on page 6.2-73.
Table 6.2-3, Sht. 2	E	Make "chambers" singular and add comma in Item 2 under Vacuum Breakers heading.
Table 6.2-9	E	Change recirculation loop to loops.



1
2
3
4

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 6.2-15, Sht. 1	E	Correct type in number for Item 2c, 23.40 column.
Table 6.2-56, Sht. 6	E	Reinsert closure time for valve 2ICS*MOV121 that was inadvertently omitted in Amendment 26.
Figure 6.2-50	E	Correct y axis title. Should be GPM.
Figures 6.2-68A, 6.2-69	E	Feedwater line break node model numbers reversed in titles.
Page 6.3-16	E	Replace "wall" with "penetration."
Page 6.3-31	E	Correct figure reference from 5.4-15 to 5.4-14.
Page 7.3-20	E	Correct figure reference from 6.5-2 to 6.5-1.
Pages 7.6-4, 7.6-22	E	Correct figure reference from 7.6-5 to 7.6-4 (p 7.6-4). Correct section reference from 7.1.2.4 to 7.1.2.3 (p 7.6-22).
Figures 7.6-7, 7.6-8	E	Correct dimension from 12 to 2 in. (F 7.6-7). Place K10 and K12 relays note in the legend box.
Page 7.7-23	E	Correct figure reference from 7.7-7 to 7.7-6.
Pages Q&R F421.13-1, 5	E	Correct spelling of Validyne.
Page Q&R F421.20-2	E	Correct mark numbers of condensing chambers by changing B21 to B22.
Page 8.1-2	N	Revise total NMPC grid system capability from 6924 to 7056 MW, and firm purchase commitment from 1963 to 2039 MW.
Pages 9.3-23, 9.3-25 Figures 9.3-13, Sht. 1; 9.3-14, Shts. 1, 3; 9.3-15, 9.3-16, Sht. 6	N	Alternating of sump pump operation in sumps provided with duplex sump pumps will be accomplished with a manual selector switch rather than an electrical switching system.

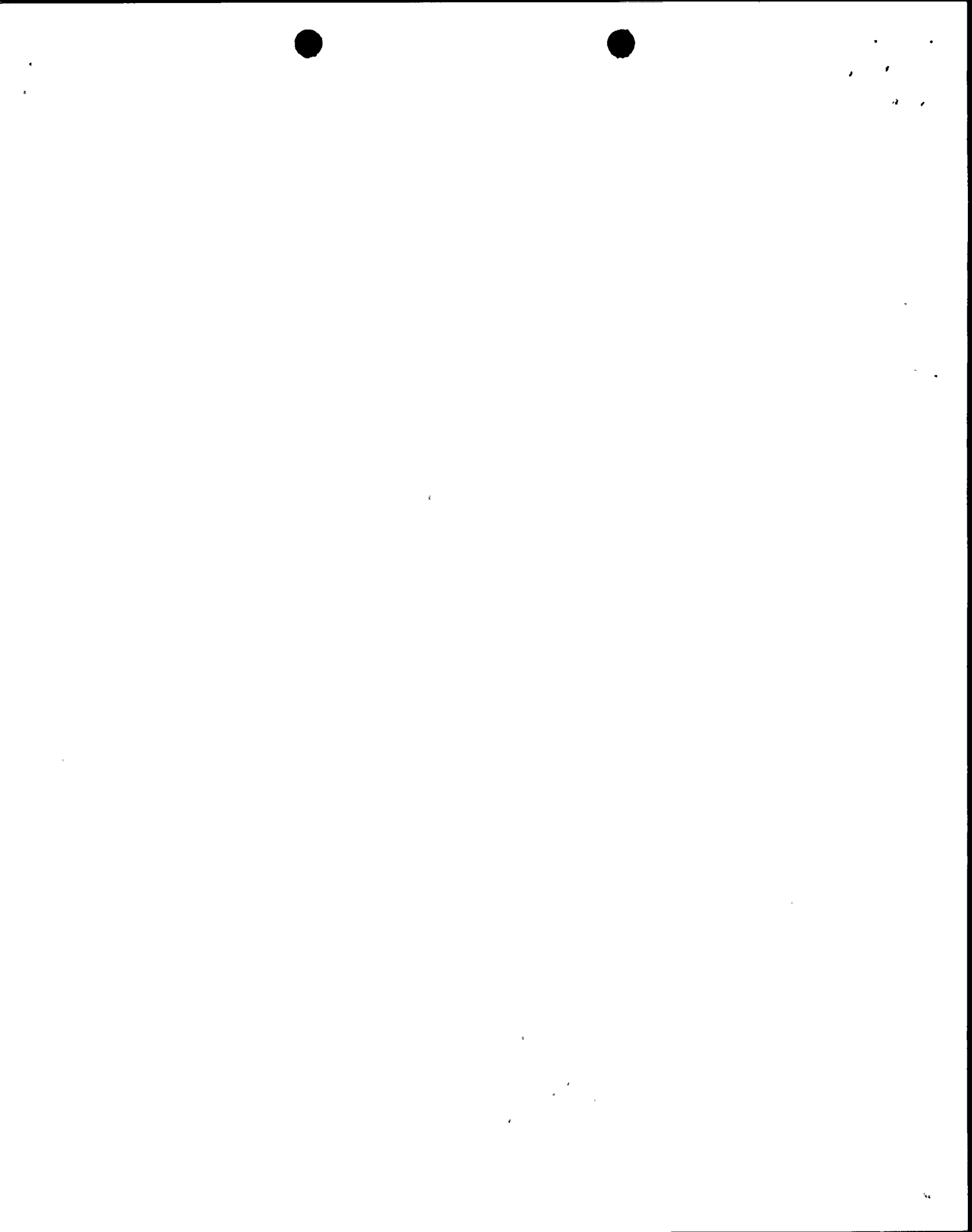


<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Pages 9.3-26a, 9.3-27	N	Add Item 21 indicating local control for the diesel generator floor and equipment drain sump pumps (9.3-26a). Clarify that the sump pumps (not the sumps) discharge to the storm sewer (9.3-27).
Page 9.5-65	N	Auxiliary boiler system safety valves discharge to contact condensers, not condensate storage tanks. Correct safety valve mark number (change 5 to 2).
Figures 10.1-4a through 10.1-4d	N	Update moisture separators and reheaters P&ID. Editorial corrections. Incorporate various as-built conditions. Add a check valve downstream of the moisture separator drain receiver tank as added protection against backflow.
Figures 10.1-7a through 10.1-7w	N	Update feedwater heater systems and extraction steam systems P&ID. Editorial and drafting corrections. Incorporate various as-built conditions.
Pages 10.3-2, 10.4-9	N	Revise to reflect that turbine gland sealing steam cannot be supplied by the auxiliary boilers.
Page 10.4-17	N	Clarify that circulating water constituent concentrations are maintained as a result of constant makeup and a controlled blowdown flow.
Page 10.4-27	N	Clarify interlocks description for starting the chemical waste sump pumps by deleting the word "not" in two places and replacing and with or
Table 10.4-2	N	Delete entry for alkalinity as CaCO and clarify the * footnote such that all table values are two times the concentration of the normal lake water.



1
2
3
4

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 11.2-1, Sht. 2	N	Include identification for the third waste collector pump, 1C.
Figures 11.4-1a through 11.4-1h	N	Update radioactive solid waste system P&ID. Editorial/drafting corrections and incorporation of minor as-built changes.
Table 1.8-1, Sht. 44	SN	Revise compliance statement for Regulatory Guide 1.43 to be consistent with the discussion provided in FSAR Section 5.2.3.3.2.
Table 1.8-1, Sht. 119	SN	Update the compliance statement for Regulatory Guide 1.105 to reference Revision 2 of the guide.
Page 1.10-64h	SN	Provide previously missing value for design basis activity of the reactor coolant sample.
Page 1.12-37	SN	Delete paragraphs discussing bolts, which is not the subject of Licensing Issue 54. FSAR Section 3.9B discusses design of bolts.
Figure 2.5-188	SN	Update the west berm subsurface profile based on the actual berm configuration.
Table 3.2-1, Sht. 3	SN	Revise quality group for SLCS explosive values from A to B, and clarify piping description as being upstream or downstream of the containment valves rather than the explosive valves, consistent with the actual plant design.
Table 3.2-1, Sht. 9	SN	Correct RWCU system heat exchanger cooling water side quality group classification from D to C.
Table 3.2-1, Sht. 14 Table 6.1-1, Sht. 1 Page 6.2-77	SN	Incorporate description of strainers provided for the H ₂ recombiner cooling water.



<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 3.2-1, Shts. 15, 15a, 16	SN	Update location and tornado protection column entries for auxiliary ac power system items based on actual equipment locations. Update location for 125V DC power system. Revise seismic category to NA for emergency cables.
Table 3.2-2	SN	Clarify Note 6 regarding design standards utilized for NSSS-supplied versus BOP-supplied quality Group D pumps.
Tables 3.4-2, Shts. 1, 3; 3.4-5, Shts. 1, 2	SN	Replace EB-15 designation with HVR in system column, and define HVR (T3.4-2). Replace TBCLCW designation with CCS in system column, and replace "spare" with "abandoned" for sleeves W1243C and W1244C (T3.4-5).
Figures 3.6A-50 through 3.6A-60	SN	Miscellaneous corrections to elevations and piping ID numbers based on as-built conditions. Also, corrections to figure cross-references.
Page 3.6B-9a	SN	Clarify the use of $C_T = 2.0$, which is generally used unless otherwise justified.
Page 3.7A-32	SN	Clarify that activation of the containment mat response spectrum annunciator occurs when preset g-levels at corresponding frequencies are exceeded.
Page 3.8-76	SN	Include hand calculations as a method of analysis for foundations of Category I structures.
Table 3.8-15, Sht. 1	SN	Delete 326.8 ft entry and add vertical displacement value for the 322.5 ft entry, to be consistent with the actual test results.
Page 3.9A-26b	SN	Delete reference to SA-449 high strength bolts, which have not been used.



•
•
•

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 3.9A-5, Sht. 2	SN	Correct subscripts in the definitions of loads SRVALL, SRVONE, and SRVADS.
Table 3.9B-2s, Sht. 2	SN	Revise RCIC turbine nozzle calculated loads, F_R and M_R , based on completion of stress reconciliation.
Page 3.10A-5	SN	Clarify that cable tray supports may use pinned connections to the structural members.
Pages 3A.9-1 through 3A.9-4, 3A.9-6, 3A.10-1, 3A.10-2, 3A.10-3 Table 3A.10-1 Figure 3A.10-4	SN	Update descriptions of the LIMITA2 and LIMITA3 programs based on the programs currently in use.
Figure 3A.12-1	SN	Revise the target, sources, and angles to be consistent with the data in Table 3A.12-1.
Pages 3C-6, 3C-12, 3C-11a	SN	Correct pipe elevations from 250 ft to 253 ft 4 3/4 in (3C-6) and from 343 ft 2 in to 342 ft 8 11/16 in (3C-12) and 342 ft 10 5/8 in to 338 ft 9 1/16 in (3C-11a) based on as-built conditions.
Pages 3C-24 through 3C-28 3C-30, 3C-32, 3C-33, 3C-34 Tables 3C.4-1 through 3C.4-4, 3C.5-1	SN	Update HELB and MELC spray and flooding evaluation discussions. Junction and terminal boxes subjected to spray to have NEMA 12, drip proof enclosures, rather than NEMA 4 (3C-24). Revise single failure evaluation guidelines in Item 10 consistent with actual analysis methodology (3C-25). Change tense from "will be" to "are" regarding protection of components from spray, and include statements regarding junction boxes (3C-26). Clarify that no targets required for safe shutdown are in piping tunnels, change tense from "will be" to "are," include junction boxes as potential targets, and incorporate previously missing discussion for the standby



11
12
13
14

Pages

Change
Code

Description

gas treatment building (3C-27). Delete the exception regarding a scram discharge volume crack (3C-28). Incorporate Item 10 describing assumed visual leak detection and leak detection provided for specific areas, and revise orifice coefficient from 0.82 to 0.6 or higher (3C-30). Change "will be" to "have been," revise the reactor building general floor area discussion based on identification of a MELC in an 18 in. RHR line as the limiting case for flooding, and include visual inspection as a means of leak detection (3C-32). Delete mention of water level sensing devices and replace with visual detection within 8 hrs. for the control building, and revise piping tunnel discussion of flooding effects on service water system equipment in the piping tunnels (3C-33). Delete the phrase regarding 1/4 in. of water for detection plus 30 min. operator action, revise discussion of flooding of one screenwell building pump bay based on physical separation and visual detection at 8 hr., and provide previously missing discussion for the standby gas treatment building (3C-34). Revise system design pressure and maximum flooding leakage rate for RDS and SFC systems (T3C.4-1). Revise system design pressure for the HVK system, system design temperature for the DWS system and all maximum flooding leakage rates (T3C.4-2). Revise system design pressure for the SWP system, temperature for the EGF system, and maximum flooding leakage rate for both the SWP and EGF systems (T3C.4-3). Revise maximum flooding



11
12
13

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
		leakage rates for all systems except OFG, and line wall thickness and circular area for the CWS system (T3C.4-4). Delete the scram discharge volume break entry from Table 3C.5-1.
Page 4.5-5	SN	Add nuts to listing for core plate studs and correct material type from ASME SA-276 to A-276.
Page 4.5-8	SN	Clarify that the reactor internals purchase orders were placed prior to issuance of Revision 2 to Regulatory Guide 1.31.
Page 5.4-27	SN	Clarify that isolation conditions are those isolations of the primary system requiring RCIC operation.
Page 6.1-1	SN	Clarify the last sentence. Periodic testing of the valve requires parts replacement, not replacement of the valve.
Table 6.1-3	SN	Delete listing for Devcon plastic steel A and revise quantity for shimming material from 475 to 300 lb.
Pages 6.2-49, 6.2-50, 6.2-51, 6.2-52, 6.2-53, 6.2-57, 6.2-57a	SN	Clarify that the secondary containment is maintained at a negative pressure of 0.25 in. W.G. (6.2-49, 6.2-57a). Delete statement regarding Regulatory Guide 1.52. Compliance with this guide is addressed in Section 6.5.1. Change valves to dampers (6.2-50). Revise Item 3 on page 6.2-50 and Item 8 on page 6.2-51 to eliminate duplication and to clarify the reactor building structural design. Delete discussion of the reactor building ventilation system (HVRs). A complete description is provided in Section 9.4.2 (6.2-52). Clarify operation of the HVRs during accident conditions.



1
2
3
4

1
2

1

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
		Delete "butterfly" from description of ventilation system dampers (6.2-53). Delete discussion of SGTS lines penetrating the reactor building. The SGTS is fully discussed in Section 6.5 (6.2-53). Delete phrase "which is at uniform pressure" (6.2-57).
Page 6.2-75a	SN	Clarify that the recombiner draws air from both the drywell and the suppression chamber.
Page 6.2-83	SN	Revise the description of interlocks provided for the H ₂ recombiner skid cooling water block valves. They are now interlocked with the recombiner discharge line containment isolation valves instead of the gas blower. Add discussion of the strainer blowdown drain valve interlocks. Clarify controls for the recombiner air inlet and cooling water inlet valves. Only the cooling water inlet valves are controlled automatically. The air inlet valves are manually closed.
Page 6.2-84	SN	Delete Item 14. Recombiner cooling water or air inlet valves motor overload alarm has been deleted from the design.
Page 6.2-88 Tables 6.2-60, 6.2-61 Figures 6.2-89, 6.2-90	SN, TS	Incorporate description of the low pressure drywell bypass leakage test. High and low pressure tests will be conducted by monitoring pressure decay rather than actual leakage. Also, drywell to suppression chamber P revised from 25 to 25 + 0.5, -0.0 psi (6.2-88, T6.2-61). Change Pt to Pa to be consistent with technical specification terminology (T6.2-60).
Table 6.2-3, Sht. 1	SN	Correct 200°F to 293°F, which is the saturation temperature corresponding to a pressure of 45 psig.



11
12
13

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 6.2-37	SN	Correct two values in total effective break area column from 1.736 to 1.030 consistent with current analysis.
Table 6.2-57	SN	Correct maximum containment pressure for recombiner operation from 13.3 to 21.3 psig. Under Monitoring Systems, change "systems" to "loops," change operation from continuous to manual.
Table 6.2-56, Sht. 22	SN	Clarify Note (22). Flow indication is provided only for flow entering the hydrogen recombiner. The recombiner will shut down automatically if gas flow drops below 50 percent of normal flow.
Figure 6.2-10	SN	Correct scale numbers on y axis.
Figure 6.2-70, Shts. 10, 16, 17, 22	SN	Delete test connection not currently in the design (Sht. 10); move test connection location to the valve body (Sht. 16), correct mark number for valve 2RHS*V143 (Sht. 17), correct location of hose connection (Sht. 22).
Figures 6.2-71a, 6.2-71b	SN	Update containment atmosphere monitoring system P&ID. Editorial corrections and incorporation of minor as-built changes: Add implementation of NUREG-0737, Item II.B.3 requirement for taking grab samples. Incorporate flexible hoses in various instrument lines to accommodate differential movement between the primary and secondary containment structures, group hydrogen and oxygen analysis into a single unit to facilitate operations.
Table 6A.10-2, Sht. 1	SN, TS	Correct the maximum service water temperature from 77 to 76°F consistent with the technical specifications.



•
•
•
•

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 7.1-2, Shts. 1, 3	SN	Revise note references, including addition of Note 10, clarifying the comparison between Unit 2 and Zimmer-1 for the containment and reactor vessel isolation control system. Unit 2 uses ball type MSIVs. Zimmer does not.
Page 7.2-21	SN	Reference Ch. 15 for discussion of failures.
Page 7.3-5	SN	Clarify discussion of ADS permissive signal. Replace "logic channel" with "trip system" and "system" with "pump."
Page 7.3-34	SN	Delete the word "all" in regard to simulation of actions resulting from actuation of the system level manual initiation switches.
Pages 7.4-3, 7.4-4	SN	Reference Ch. 3 for environmental qualification of RCIC and SLC, system components.
Table 7.4-1	SN	Correct instrument ranges based on actual supplied instruments. Change RCIC system pump low suction pressure from 0-300 psig to 30 in Hg vacuum - 0 psig, RCIC system steam supply low pressure from 0-300 psig to 0-1500 psig, and RCIC system pump discharge pressure high from 0-3000 to 0-1500 psig. Add listing from RCIC system pump high suction pressure.
Pages 7.5-1, 7.5-2, 7.5-5	SN	Correct references to NUREG 0737 task item numbers.
Table 7.5-1, Sht. 1	SN	Correct reactor vessel water level range from "-150-0-60 in" to "-5 to 205 in" per latest design information.
Page 7.6-7	SN	Change "less" to "greater" regarding turbine first-stage pressure setpoint.



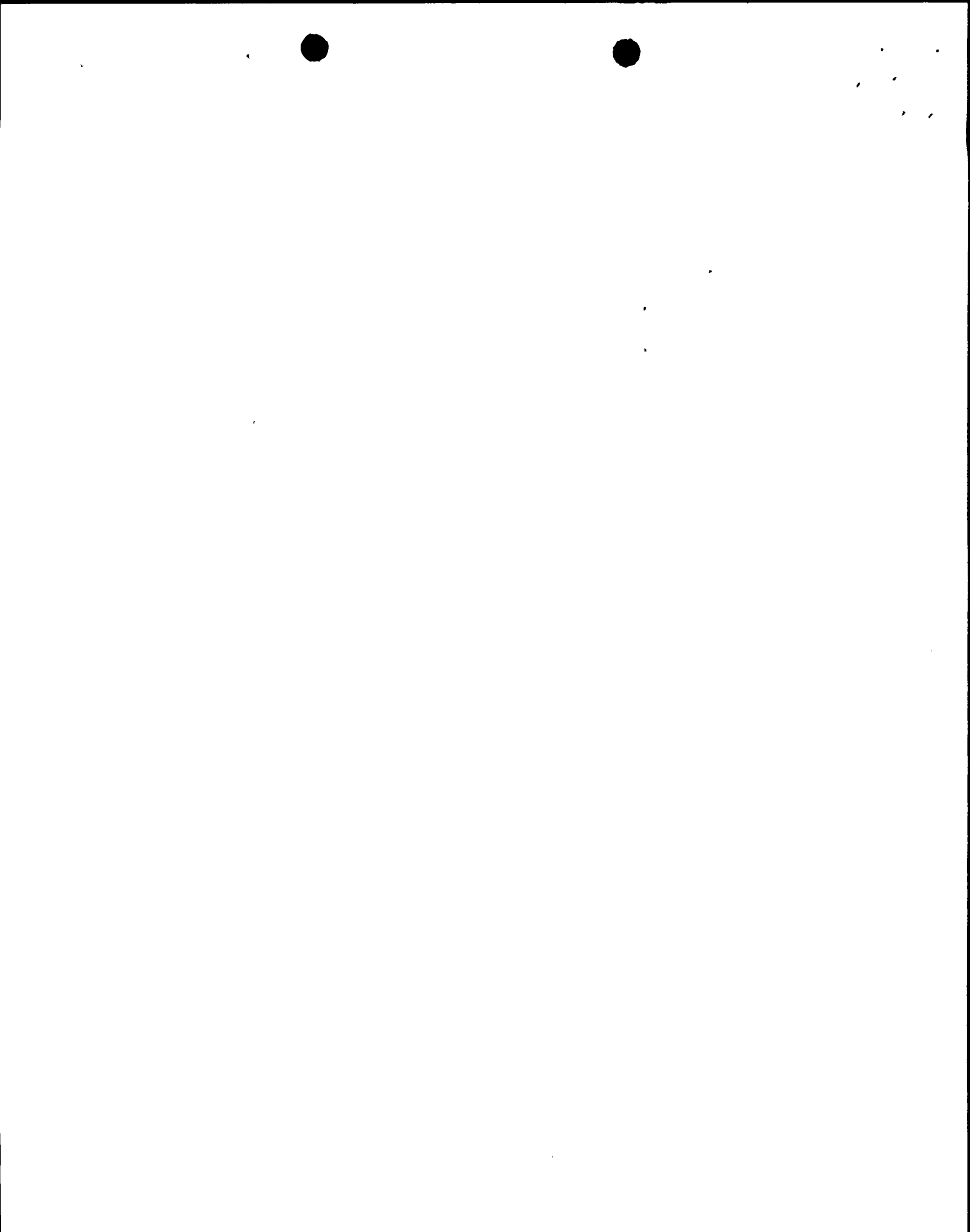
•
•
•
•

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Page 7.6-17	SN	Clarify the environment qualification of NMS equipment, consistent with letter NMP2L 0589 dated January 20, 1986.
Page 7.6-18	SN	Delete "relays" in description of isolation devices.
Page 7.6-20	SN	Replace "channel" with "APRM or IRM" to clarify operation of the bypass switch.
Table 7.6-1	SN	Correct instrument ranges. Change RHR shutdown cooling isolation pressure from 0-3000 to 0-1200 psig and RHR steam condensing mode steam line pressure high from 0-1000 to 0-500 psig.
Table 7.6-3, Sht. 2	SN	Change RCIC steam supply line flow high range from 0-600 to 0-750 in. H ₂ O based on actual supplied instrument.
Table 7.6-5	SN	Correct instrument ranges. Change LPRM downscale and LPRM upscale from "2 percent to 0" to "0 to 125 percent full scale."
Table 7.6-6	SN	Update APRM system instrument data. Clarify trip versus alarm functions. Revise APRM downscale alarm range to 0 to 125 percent full scale (4 percent nominal) and APRM upscale (neutron trip) to 0 to 125 percent full scale (118 percent nominal). Change red to white light display for APRM inoperative.
Page 7.7-8	SN	Clarify the effect of the IRM range switch on initiation of a rod block, items 4a, 4b, 4c.
Page 7.7-13	SN	Change main control room "lights" to "indicators."
Page 7.7-22a	SN	Change "fully" to "greater than 90 percent" consistent with the actual system design.



•
•
•
•

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Page 8.3-13 Figure 8.3-3, Sht. 2	SN	Panel designations changed from 2VBS*PNLA101 and 2VBS*PNLB101 to 2VBS*PNLA100 and 2VBS*PNLB100.
Page 8.3-40	SN	Include control circuits for dual protection in discussion of instrumentation circuit penetration current carrying capabilities. Include control feeders in discussion of electrical penetrations provided with primary and backup protective devices.
Table 8.3-3, Sht. 2	SN	Include the two hr. rating for the HPCS diesel generator.
Table 8.3-4, Sht. 3 Page 9.3-31	SN	Revise the listing for the Div. III (HPCS) diesel generator. Change rating from 2600 to 2850 kw (the 2000 hr rating), volts from 4000 to 4160, and full load amps from 376.8 to 378.
Pages 9.3-3, 9.3-4, 9.3-7	SN	Correct dewpoint lower range from 39 to 35°F (p. 9.3-3). Correct low pressure setpoint for lag compressor start from 100 to 90 psig and the selected backup unit automatically starts when the header pressure further decays below 85 psig, not 100 psig (p. 9.3-4). Revise description for service air system block valve operation. Valve can be opened locally if low-low pressure condition does not exist. Valve closes automatically on low-low pressure (p. 9.3-7).
Page 9.3-24	SN	Clarify that equipment and floor drain piping is evaluated as to the need for seismic design/support, not just the supports.
Page 9A.3-52	SN, TS	Revise fire hose testing requirements to be consistent with the technical specifications.



<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Table 12.3-4	SN	Update certain dose rate values consistent with currently calculated values.
Page 15.1-4	SN	Delete incorrect phrase regarding peak fuel center temperature of 588°F.
Page 15.1-8	SN	Correct 1020 to 1010 psig as the pressure corresponding to 155 percent NBR feedwater flow.
Page 15.1-12	SN	Delete incorrect phrase, "just slightly below the set point of the first pressure relief group."
Table 15.2-12	SN	Revise time for initiation of controlled depressurization from 33.2 to 33 min. consistent with current analysis.
Page 15.3-8	SN	Delete incorrect statement regarding performance of the analysis with a single or two loop pump seizure.
Page 15.4-15b	SN	Revise results to indicate that the MCPR remains above the safety limit, and delete the phrase concerning the MLHGR, consistent with current analysis.
Table 15.4-8	SN	Revise fuel loading error analysis results to be consistent with analysis. MCPR with misplaced bundle revised from 1.14 to 1.13. CPR for event revised from 0.10 to 0.11.
Pages 1.10-86, 1.10-91	SS	Update to reflect completion of the indicated modifications to the ADS and RCIC initiation logic.
Pages 1.10-95, 1.10-96	SS	Delete reference to the intertie between the service water and RBCLCW systems, which has been

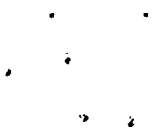


1
2
3

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
		deleted. However, during a loss of offsite power, cooling water flow to the idle RCS pump seals can be established via the CRD pumps.
Table 3.2-1, Shts. 14, 15, 26f, 26g	SS	Include penetrations Z328-3 and Z-45 to the list of items not certified on the N-5 Code Data Report. These are extensions of primary containment for nonsafety related systems. Add Note 41 reference on Sht. 15 that was inadvertently omitted in Amendment 26.
Page 3.4-3	SS	Delete statement concerning sump pumps and/or drains. The intake and discharge building, el. 224 ft., is not provided with sump pumps or drains.
Pages 3.5-4, 3.5-4a, 3.5-4b, 3.5-4c, 3.5-5, 3.5-5a, 3.5-5b	SS	Incorporate discussion of hydrogen, oxygen, and nitrogen compressed gas cylinders as potential missiles, including justification for why they are not credible missiles.
Page 3.9A-11	SS	Include pneumatic and hydraulic valve actuators that are qualified by dynamic testing (Item 4). Incorporate statement regarding qualification of valves by analysis only. Clarify acceptance criteria 1 for cases where the TRS does not envelop the RRS.
Table 3.9A-4	SS	Update the BOP seismic/dynamic qualification results summary for mechanical equipment based on completion of the qualification program. The self-cleaning strainers, guideline IEEE 334-1975, should go to 334-1974.
Page 3.9B-16	SS	Revise Section 3.9.1.2.3B to describe use of the ANSYS code in analyzing the recirculation pump casing.



<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Page 4.5-3	SS	Delete statement concerning dye penetrant examinations, which have not been performed.
Page 5.3-6	SS	Include references to 10CFR50 Appendix G requirements concerning pressure/temperature limitations.
Page 6.1-2	SS	Revise to indicate that painting of stainless steel may be permitted provided that the paints do not contain contaminants that would be harmful to the stainless steel.
Pages 6.2-46a, 6.2-46b Tables 6.2-51, 6.2-52 Figures 6.2-40, 6.2-41, 6.2-42, 6.2-43	SS	Update containment spray system description. Revise spray flows from 7450 to 6880 gpm/loop (drywell) and 450 to 420 gpm/loop (suppression chamber); revise figure references showing spray patterns (6.2-46a). Revise spray system flow percentages from 95 to 94 percent (drywell header) and 5 to 6 percent (wetwell header) (6.2-46b). Revise number of spray nozzles per loop and correct SPRACO nozzle number (T6.2-51). Add note regarding spray rates (T6.2-52). Revise spray patterns (F6.2-41 through 6.2-43) to show current approximate patterns.
Pages 6.2-54, 6.2-54a, 6.2-54b, 6.2-55a, 6.2-55b Tables 6.2-55a, Sht. 2; 6.2-55b, Sht. 2; 6.2-56, Shts. 2, 6, 7, 8, 9, 10, 11, 14, 24a Figure 6.2-88	SS, TS	Add the yard as a termination point for bypass leakage paths (p. 6.2-54). Add additional bypass leakage paths consisting of instrument air and nitrogen supply lines (6.2-54a, T6.2-55a, T6.2-55b). Delete discussion regarding process lines that have nitrogen seals that prevent bypass leakage, including the discussion for the instrument air system IAS (6.2-54b, 6.2-55a, 6.2-55b, T6.2-56, Sht. 24a, F6.2-88). Clarify that no credit is taken for a water seal in the feedwater system piping (6.2-54b). Delete Note 30 from penetrations 4B, 23, 39, 40, 43, 45, 53A, 53B,



<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
		53C, 91A, and 91B since these lines are considered as bypass leakage paths, and change "NO" to "YES" for penetration 32 (T6.2-56, Shts. 2, 6, 7, 8, 9, 10, 11, 14).
Pages 6.3-10a, 6.3-11 Figure 6.3-1	SS	The restricting orifice in the HPCS discharge line from the pump to the injection valve has been deleted. The orifice has been determined to be not necessary to limit flow below the pump runout limit.
Figure 6A.1-3 Pages 6A.2-7, 6A.2-14 Table 6A.2-1a Figure 6A.2-13 Page 6A.3-21 Pages 5A.4-22, 6A.4-23 Table 6A.4-10, Sh. 2 Figure 6A.4-48 Pages 6A.9-4, 6A.9-5, 6A.9-6 Tables 6A.9-2a, 6A.9-2b	SS	Updated to reflect recent analyses performed for the downcomers, and to incorporate editorial corrections. Add pedestal to Fig. 6A.1-3. Revise table number (6A.2-7). Add references 9 and 10 (6A.2-14). Delete redundant load combination (T6A.2-1a, Sht. 1). Add clarifying note (1) (Table 6A.2-1a, Sht. 2). Revise note 1 regarding time duration and correct figure title (F6A.2-13). Add equivalent occurrence factor (EOF) of 3.0 for the downcomer evaluation and change 0.20 to 0.25 (6A.3-21, 6A.4-22, 6A.4-23). Add footnote * indicator to downcomer index numbers 65 and 117 (T6A.4-10, Sht. 2). Figure 6A.4-48 revised to incorporate current analysis results. Revise 123 to 121 downcomers (6A.9-4). Revise 115 to 113 downcomers and delete mention of four truncated vacuum breaker downcomers not submerged in the pool (6A.9-5). Add reference to Table 6A.9-2a and 6A.9-2b (6A.9-6). Provide updated downcomer ASME Code Class 2 stress summary results (T6A.9-2a). Add table showing downcomer functional capability stress summary results (T6A.9-2b).



•
•
•
•

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Pages 7.6-2a, 7.7-5	SS	Delete statement regarding IEEE 279 applicability to high/low pressure interlocks. Conformance with this standard is discussed in Section 7.6.2.2. Delete reference to Section 7.2.1.2.2 for main steam line leak detection (p. 7.6-2a). Clarify determination of APRM and RBM rod block settings.
Pages 8.1-2, 8.1-3 Figure 8.1-1	SS	Update description of the NMPC utility grid including the total circuit mileage, number of 115-kV and 345-kV lines, and interconnections to reflect the current grid system.
Page 8.3-24a	SS	Clarify that for the HPCS diesel generator, a LOCA signal would override the test start signal during the auto mode.
Page 8.3-59 Page Q&R F430.24-2	SS, TS	Correct equalizing charge value from 139.8 to 137.5 volts for Division III consistent with the response to Question F430.24 (8.3-59). 139.8 volts is correct for Divisions I and II. Revise 137.4 to 137.5 volts dc in the response to Question F430.24.
Pages 9.1-31, 9.1-41, 9.1-42 Figure 9.1-7 Pages 12.5-7a, 12.5-9	SS, TS	Revise water shielding for active fuel in transit based on final fuel bundle dimensions and fuel grapple elevation. Change 8 ft-6 in to 8 ft-1/2 in (pp 9.1-31, 12.5-7a, 12.5-9). Change 7 ft to 6 ft-7 1/2 in (pp. 9.1-41, 9.1-42, F9.1-7). Clarify that the double blade guide, though lifted 5 in higher than a fuel assembly, still will not exceed the energy of a dropped fuel assembly (p. 9.1-42).
Pages 9.2-10, 9.2-11, 9.2-12, 9.2-13, 9.2-16	SS	Delete recirculation pump seal coolers from a list of components provided backup coding by the RBCLCW system (pp. 9.2-10, 9.2-12, 9.2-16). Clarify that a combination of any two main pumps,

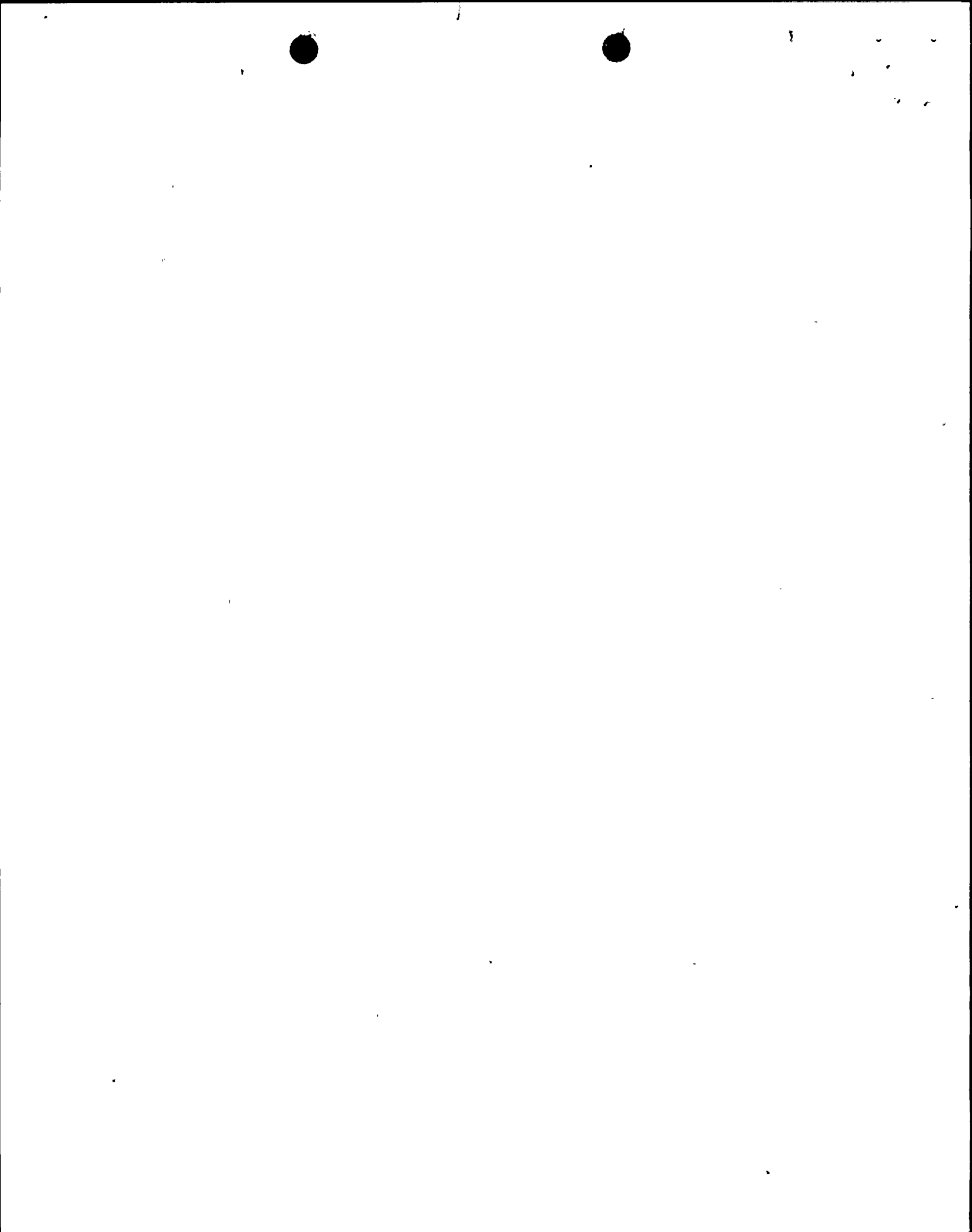


11
12
13

<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
		two booster pumps, and two heat exchangers will provide maximum heat removal capacity, while maintaining a cooling water temperature of 89°F (instead of 95°). Delete "when service water temp. is 77°F." (p. 9.2-12) Change locked to normally closed isolation valves (p. 9.2-13).
Page 9.5-6	SS	Clarify actuation of Halon 1301 systems by adding that the main control room PGCC systems are actuated by thermal detection and the radwaste systems are actuated by smoke detection. (Letter No. NMP2L 0512 dated October 11, 1985.)
Pages 9.5-25, 9.5-25a	SS	Include discussion of fuel oil day tank vent capability in the event of a tornado. Discuss the absence of flame arrestors on the vent lines, which is acceptable per API Standard No. 2000.
Pages 9.5-42, 9.5-43a, 9.5-43b, 9.5-51b	SS	Revise Division III diesel generator auxiliary system descriptions. Change maximum starting air operating pressure from 250 to 240 psig. An automatic separator, rather than a drain, removes condensate from the starting air (9.5-42). Clarify that air start system controls are located on a panel near the compressor, and on the air dryer (9.5-43a). Delete statement that air dryer is seismically qualified (9.5-43b). Delete statement concerning maintaining diesel generator room temperature above 65°F (9.5-51b).
Tables 11.2-3, 11.2-5, 11.2-6	SS	Revise material and concentration balance for liquid waste system based on latest estimates (T11.2-3). Revise design and expected annual liquid releases due to revised balance and change in release due to anticipated operational occurrences from 0.15 to 0.1 Ci/yr.



<u>Pages</u>	<u>Change Code</u>	<u>Description</u>
Pages 11.4-3a, 11.4-5	SS	The solid radwaste backup facility will use containers sized up to 200 cu. ft.
Page 15.6-12a.1 Table 15.6-13, Sh. 2, 9, 9a, 10 Tables 15.6-15b, 15.6-16b	SS	Incorporate revised radiological effects analysis results to incorporate additional bypass leakage path contributions. Control room free air volume and intake rate values revised also. (Letter No. NMP2L 0761 dated June 30, 1986.)



NINE MILE POINT NUCLEAR STATION UNIT 2
NIAGARA MOHAWK POWER CORPORATION

FSAR AMENDMENT RECEIPT ACKNOWLEDGEMENT

I acknowledge receipt of:

Amendment 27

My copy has been updated, and superseded pages have been removed and destroyed.

Set Reassignment and/or Set Holder Change of Address
(if necessary)

Please reassign this manual to, and/or change my address as follows:

Please furnish all requested information and return to:

A. L. Monahan
Stone & Webster Engineering Corporation
3 Executive Campus
P.O. Box 5200
Cherry Hill, NJ 08034

Name of set holder _____ Set No. _____

Company _____

Signature _____ Date _____



12 198 2



INSERTION INSTRUCTIONS

The following instructions are for the insertion of the current amendment into the Nine Mile Point Unit 2 FSAR.

Remove pages, tables, and/or figures listed in the REMOVE column and replace them with the pages, tables, and/or figures listed in the INSERT column. Dashes (---) in either column indicate no action required.

Vertical bars have been placed in the margins of inserted pages and tables to indicate revision locations.



INSERTION INSTRUCTIONS

VOLUME 2

Remove

T 1.8-1 (44 of 169)
 T 1.8-1 (119 of 169)

A 1.9-15 (1 of 1)
 A 1.9-37 (1/2 of 2)
 A 1.9-42 (1/2 of 2)
 A 1.9-42 (2 of 2)
 A 1.9-61 (1 of 4)
 A 1.9-61 (2 of 4)
 A 1.9-61 (3 of 4)
 A 1.9-61 (4 of 4)
 A 1.9-78 (1 of 1)

1.10-64gb/64h
 1.10-85h/86
 1.10-91/92
 1.10-95/96
 1.10-101/102

1.12-11/12
 1.12-37/38

Insert

T 1.8-1 (44 of 169)
 T 1.8-1 (119 of 169)

A 1.9-15 (1 of 1)
 A 1.9-37 (1/2 of 2)

 A 1.9-42 (1/2 of 2)
 A 1.9-61 (1/1a of 4)
 A 1.9-61 (1b/2 of 4)
 A 1.9-61 (3/4 of 4)

 A 1.9-78 (1 of 1)

1.10-64gb/64h
 1.10-85h/86
 1.10-91/92
 1.10-95/96
 1.10-101/102

1.12-11/12
 1.12-37/38



INSERTION INSTRUCTIONS

VOLUME 3

Remove

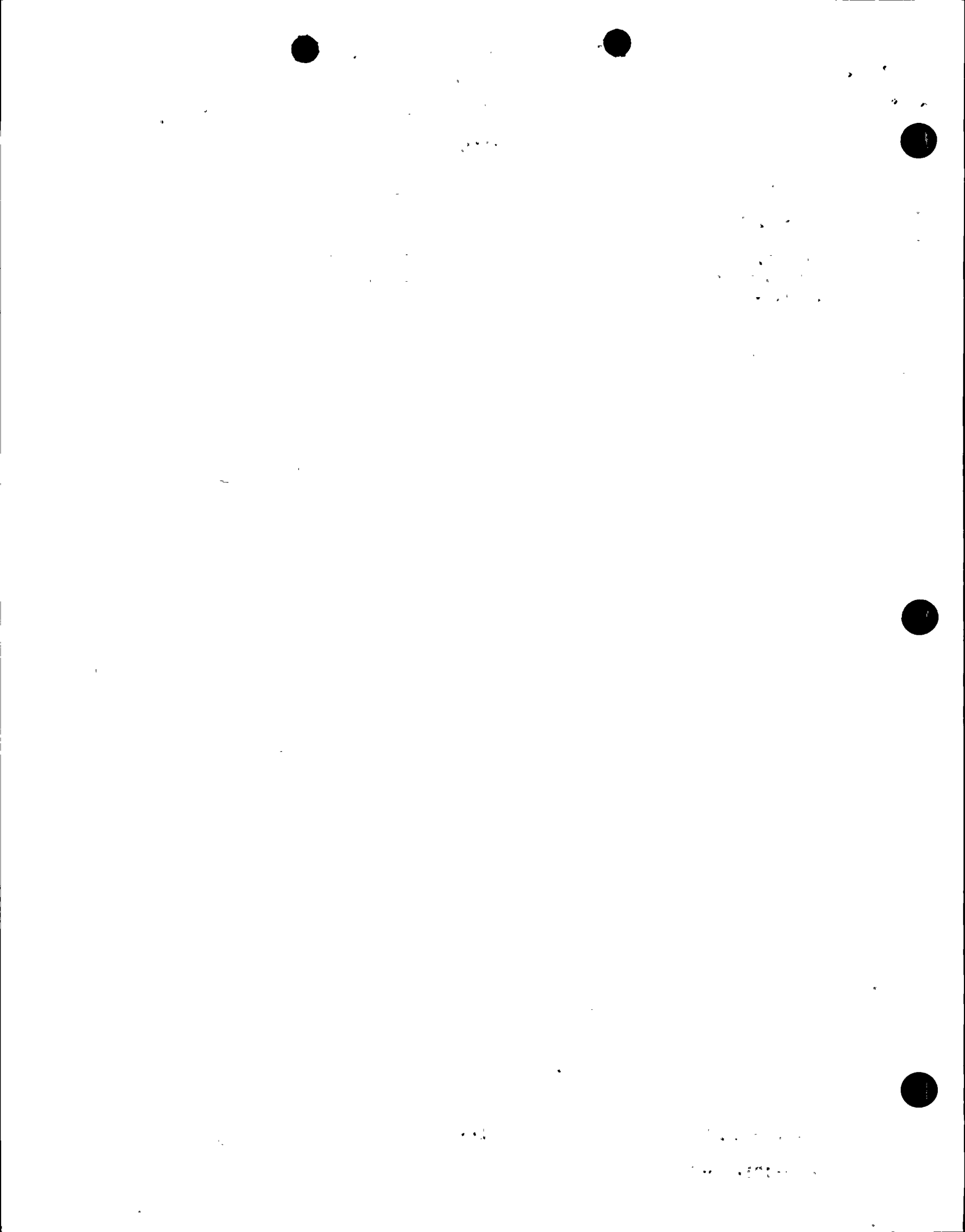
2.4-27/28 .

2.5-167/167a
2.5-167b/167c
2.5-194a/194b

Insert

2.4-27/28

2.5-167/167a
2.5-167b/167c
2.5-194a/194b



INSERTION INSTRUCTIONS

VOLUME 4

Remove

F 2.5-96E
F 2.5-96F
F 2.5-188

Insert

F 2.5-96E
F 2.5-96F
F 2.5-188



INSERTION INSTRUCTIONS

VOLUME 8

Remove

3-xli/xlil

3.1-33/34

3.1-47/48

T 3.2-1 (3 of 26)

T 3.2-1 (9 of 26)

T 3.2-1 (14 of 26)

T 3.2-1 (15 of 26)

T 3.2-1 (15a of 26)

T 3.2-1 (16 of 26)

T 3.2-1 (26f of 26)

T 3.2-2 (1 of 1)

3.4-3/3a

T 3.4-2 (1 of 3)

T 3.4-2 (3 of 3)

T 3.4-5 (1 and 2 of 2)

Insert

3-xli/xlil

3.1-33/34

3.1-47/48

T 3.2-1 (3 of 26)

T 3.2-1 (9 of 26)

T 3.2-1 (14 of 26)

T 3.2-1 (15 of 26)

T 3.2-1 (15a of 26)

T 3.2-1 (16 of 26)

T 3.2-1 (26f of 26)

T 3.2-1 (26g of 26)

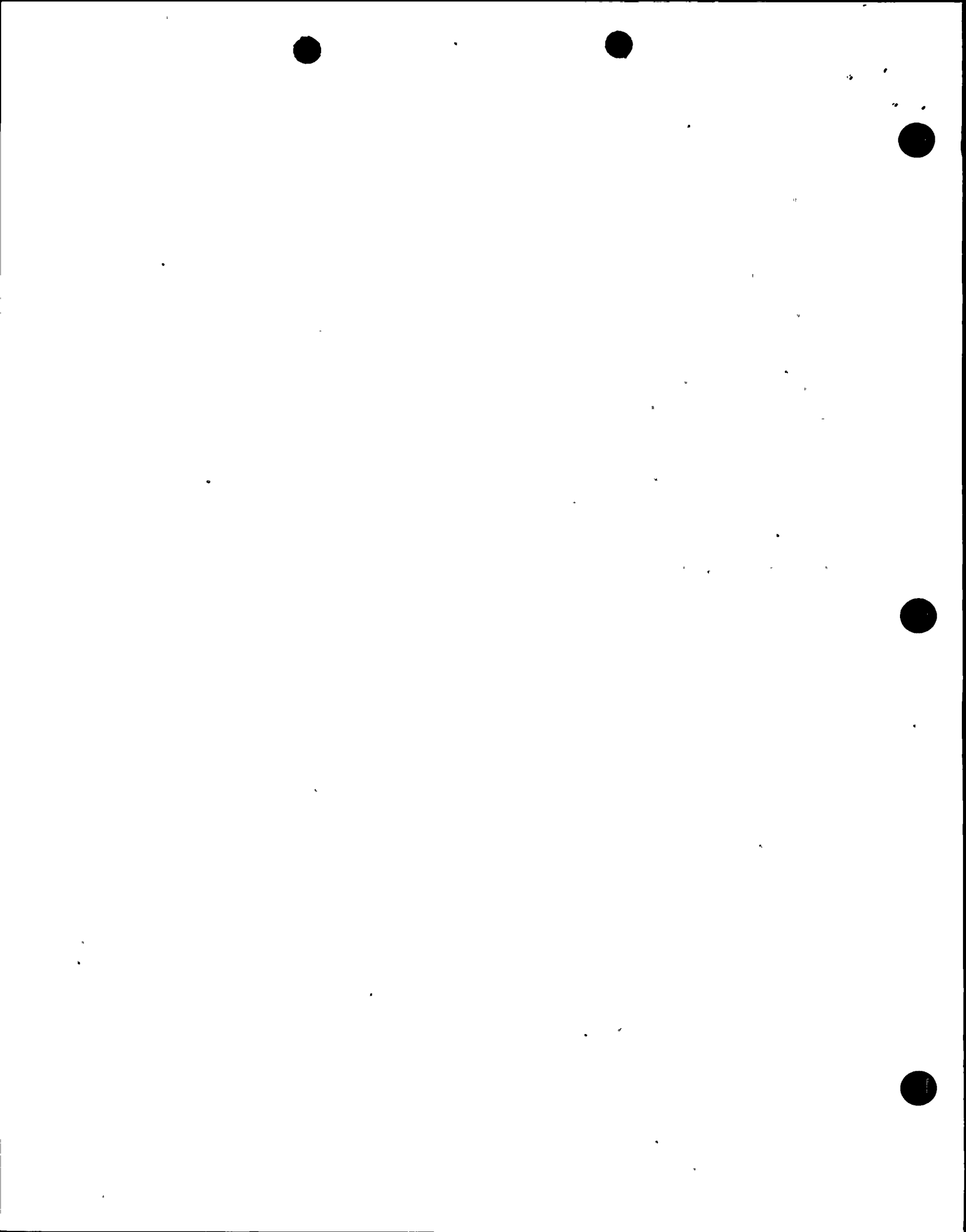
T 3.2-2 (1 and 2 of 2)

3.4-3/3a

T 3.4-2 (1 of 3)

T 3.4-2 (3 of 3)

T 3.4-5 (1 and 2 of 2)



INSERTION INSTRUCTIONS

VOLUME 9

Remove

3.5-3/4
3.5-4a/4b
3.5-4c/4d
3.5-5/6

3.6A-5/6
3.6A-37/38
3.6A slip sheet

Insert

3.5-3/4
3.5-4a/4b
3.5-4c/4d
3.5-5/5a
3.5-5b/6

3.6A-5/6
3.6A-37/38
3.6A slip sheet



INSERTION INSTRUCTIONS

VOLUME 10

Remove

3.6A slip sheet

F 3.6A-52

F 3.6A-53

F 3.6A-54

F 3.6A-55

F 3.6A-56

F 3.6A-57

F 3.6A-58

F 3.6A-59

F 3.6A-60

3.6B-9/9a

T 3.6B-2

3.7A-7/7a

3.7A-31/32

3.8-37/38

3.8-75/76

T 3.8-5 (1 and 2 of 2)

T 3.8-6 (1 and 2 of 2)

T 3.8-7 (1 and 2 of 2)

T 3.8-15 (1 of 2)

Insert

3.6A slip sheet

F 3.6A-50

F 3.6A-51

F 3.6A-52

F 3.6A-53

F 3.6A-54

F 3.6A-55

F 3.6A-56

F 3.6A-57

F 3.6A-58

F 3.6A-59

F 3.6A-60

3.6B-9/9a

T 3.6B-2

3.7A-7/7a

3.7A-31/32

3.8-37/38

3.8-75/76

T 3.8-5 (1 and 2 of 2)

T 3.8-6 (1 and 2 of 2)

T 3.8-7 (1 and 2 of 2)

T 3.8-15 (1 of 2)



INSERTION INSTRUCTIONS

VOLUME 11

Remove

3.9A-9/9a
 3.9A-11/12

 3.9A-15/16
 3.9A-21/21a
 3.9A-26a/26b
 T 3.9A-4 (1 of 6)
 T 3.9A-4 (2 of 6)
 T 3.9A-4 (3 of 6)
 T 3.9A-4 (5 of 6)
 T 3.9A-4 (6 of 6)

 T 3.9A-5 (2 of 3)

 3.9B-15/16

 T 3.9B-2s (2 of 2)

Insert

3.9A-9/9a
 3.9A-11/11a
 3.9A-11b/12
 3.9A-15/16
 3.9A-21/21a
 3.9A-26a/26b
 T 3.9A-4 (1 of 6)
 T 3.9A-4 (2 of 6)
 T 3.9A-4 (3 of 6)
 T 3.9A-4 (5 of 6)
 T 3.9A-4 (6 of 6)
 T 3.9A-4 (6a of 6)
 T 3.9A-4 (6b of 6)
 T 3.9A-5 (2 of 3)

 3.9B-15/16
 3.9B-16a/16b
 T 3.9B-2s (2 of 2)



INSERTION INSTRUCTIONS

VOLUME 12

<u>Remove</u>	<u>Insert</u>
3.10A-5/-	3.10A-5/-
3A-i/ii	3A-i/ii
3A-v/vi	3A-v/vi
3A-vii/viii	3A-vii/viii
3A-ix/x	3A-ix/x
3A.9-1/2	3A.9-1/2
3A.9-3/4	3A.9-3/4
3A.9-5/6	3A.9-5/6
3A.10-1/2	3A.10-1/2
3A.10-3/-	3A.10-3/-
---	T 3A.10-1
---	F 3A.10-4
F 3A.12-1	F 3A.12-1
F 3A.22-1	F 3A.22-1
3C-5/6	3C-5/6
3C-11/11a	3C-11/11a
3C-11b/12	3C-11b/12
3C-23/24	3C-23/24
3C-25/26	3C-25/26
---	3C-26a/26b
3C-27/28	3C-27/27a
---	3C-27b/28
3C-29/30	3C-29/30
---	3C-30a/30b
3C-31/32	3C-31/32
3C-33/34	3C-33/34
T 3C.4-1	T 3C.4-1
T 3C.4-2	T 3C.4-2
T 3C.4-3	T 3C.4-3
T 3C.4-4	T 3C.4-4
T 3C.5-1	T 3C.5-1
4.1-5/6	4.1-5/6
4.5-3/4	4.5-3/4
4.5-5/6	4.5-5/6
4.5-7/8	4.5-7/8
4.6-3/4	4.6-3/4



INSERTION INSTRUCTIONS

VOLUME 13

Remove

F 5.1-2 (1 through 3 of 3)

5.3-5/6
5.3-7/7a
5.3-21/22

5.4-27/28
5.4-41/42

6-xa/xb
6-xv/xvi
6-xvii/xviii
6-xix/xixa
6-xixb/xx

6.1-1/2
T 6.1-1 (1 of 2)
T 6.1-3

Insert

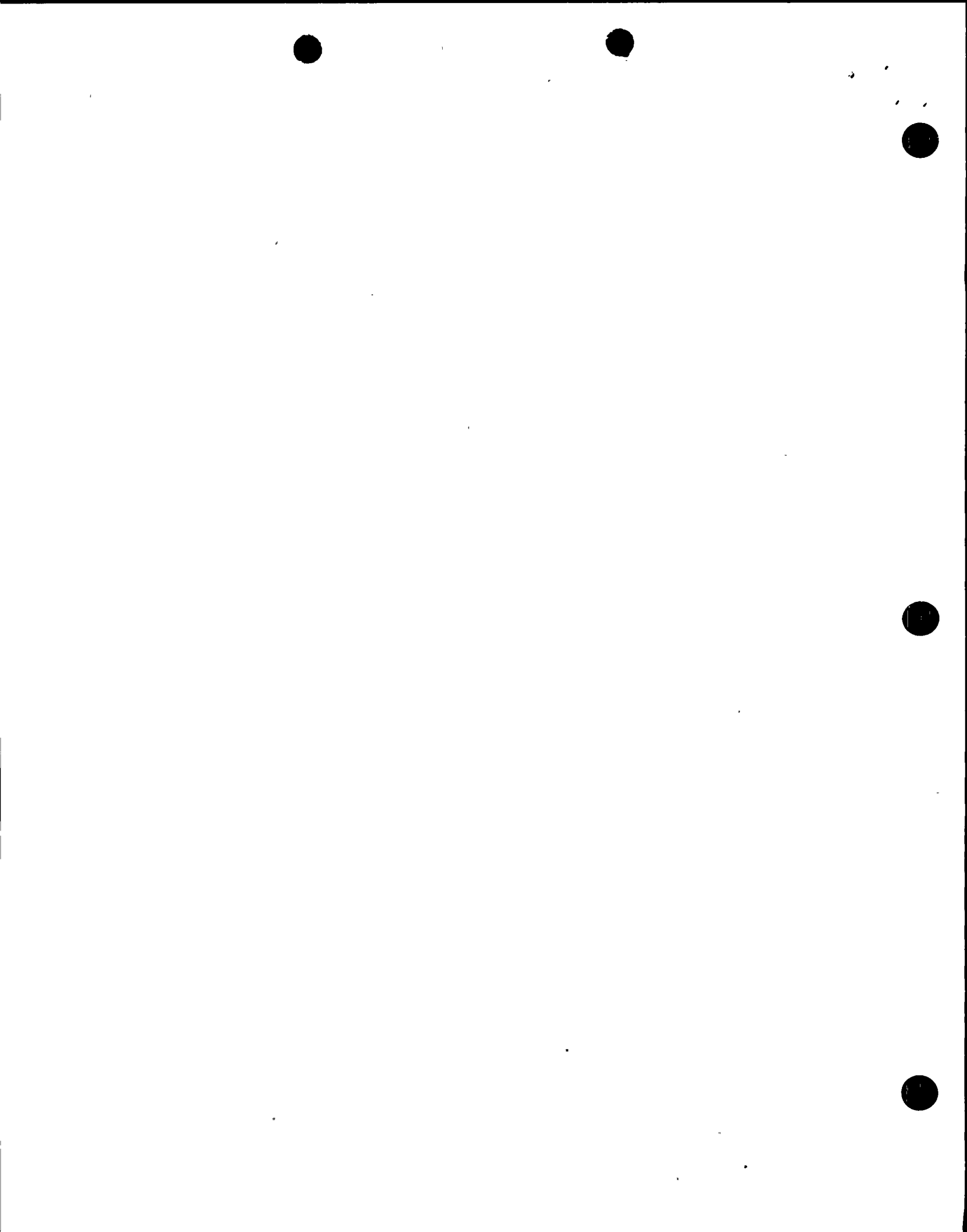
F 5.1-2 (1 through 3 of 3)

5.3-5/6
5.3-7/7a
5.3-21/22

5.4-27/28
5.4-41/42

6-xa/xb
6-xv/xvi
6-xvii/xviii
6-xix/xixa
6-xixb/xx

6.1-1/2
T 6.1-1 (1 of 2)
T 6.1-3



INSERTION INSTRUCTIONS

VOLUME 14

Remove

6.2-46a/46b
 6.2-49/50
 6.2-51/51a
 6.2-51b/52
 6.2-53/53a
 6.2-53b/54
 6.2-54a/54b
 6.2-55/55a
 6.2-55b/55c
 6.2-57/57a
 6.2-73/74
 6.2-75/75a
 6.2-77/77a
 6.2-83/83a
 6.2-83b/84
 6.2-85/85a
 6.2-85b/86
 6.2-87b/88
 T 6.2-3 (1 and 2 of 2)
 T 6.2-37
 T 6.2-51
 T 6.2-52
 T 6.2-55a (2 of 2)
 T 6.2-55b (2 of 2)
 T 6.2-56 (2 of 24)
 T 6.2-56 (6 of 24)
 T 6.2-56 (7 of 24)
 T 6.2-56 (8 of 24)
 T 6.2-56 (9 of 24)
 T 6.2-56 (10 of 24)
 T 6.2-56 (11 of 24)
 T 6.2-56 (14 of 24)
 T 6.2-56 (22 of 24)
 T 6.2-56 (24a of 24)
 T 6.2-57
 T 6.2-60
 T 6.2-61
 F 6.2-10
 F 6.2-40
 F 6.2-41
 F 6.2-42
 F 6.2-43
 F 6.2-50
 F 6.2-68a
 F 6.2-69

Insert

6.2-46a/46b
 6.2-49/50
 6.2-51/51a
 6.2-51b/52
 6.2-53/53a
 6.2-53b/54
 6.2-54a/54b
 6.2-55/55a
 6.2-55b/55c
 6.2-57/57a
 6.2-73/74
 6.2-75/75a
 6.2-77/77a
 6.2-83/83a
 6.2-83b/84
 6.2-85/85a
 6.2-85b/86
 6.2-87b/88
 T 6.2-3 (1 and 2 of 2)
 T 6.2-37
 T 6.2-51
 T 6.2-52
 T 6.2-55a (2 and 2a of 2)
 T 6.2-55b (2 and 2a of 2)
 T 6.2-56 (2 of 24)
 T 6.2-56 (6 of 24)
 T 6.2-56 (7 of 24)
 T 6.2-56 (8 of 24)
 T 6.2-56 (9 of 24)
 T 6.2-56 (10 of 24)
 T 6.2-56 (11 of 24)
 T 6.2-56 (14 of 24)
 T 6.2-56 (22 of 24)
 T 6.2-56 (24a of 24)
 T 6.2-57
 T 6.2-60
 T 6.2-61
 F 6.2-10
 F 6.2-40
 F 6.2-41
 F 6.2-42
 F 6.2-43
 F 6.2-50
 F 6.2-68a
 F 6.2-69



INSERTION INSTRUCTIONS

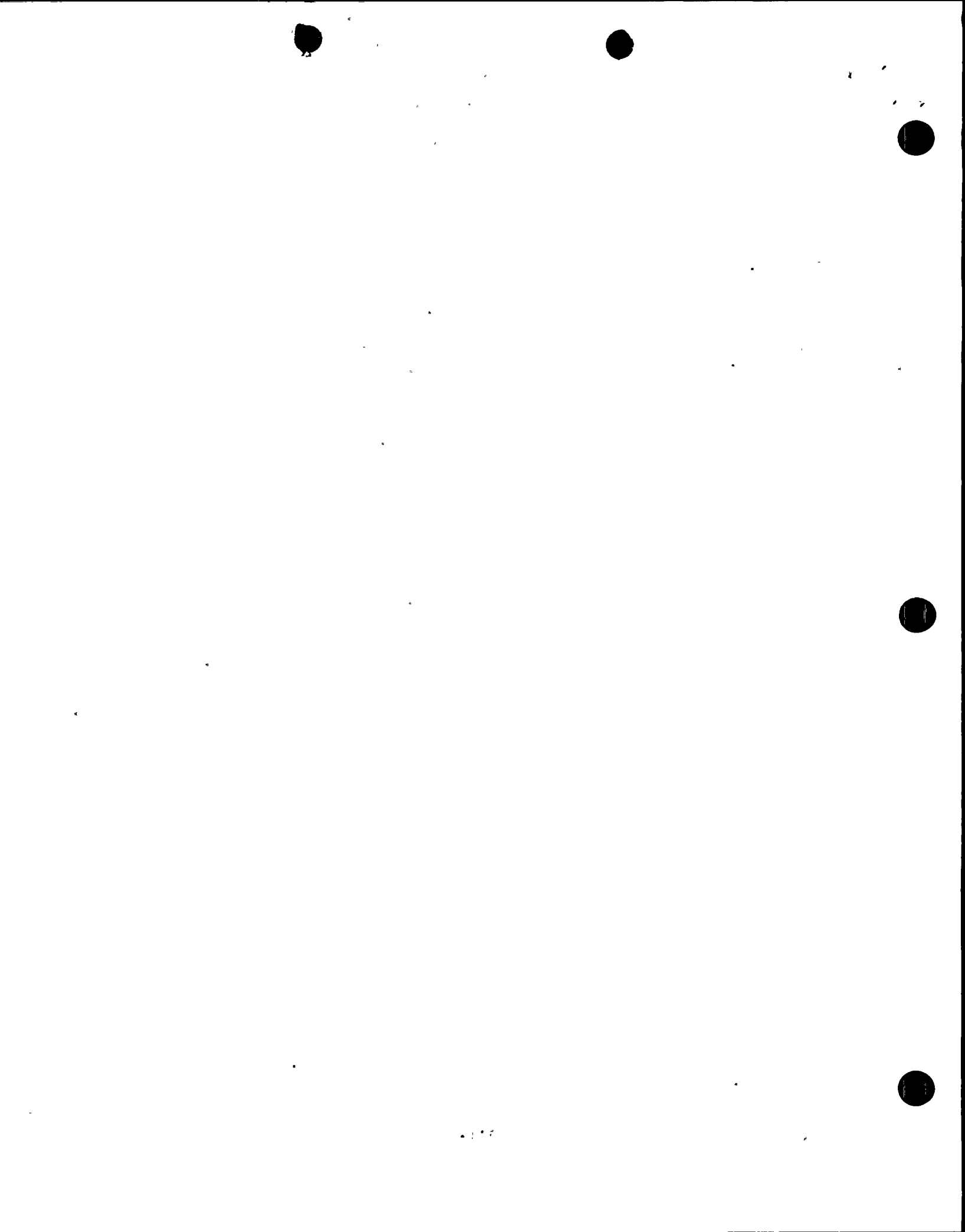
VOLUME 14 (Cont)

Remove

F 6.2-70 (10 of 43)
F 6.2-70 (16 of 43)
F 6.2-70 (17 of 43)
F 6.2-70 (22 of 43)
F 6.2-71A
F 6.2-71B
F 6.2-88

Insert

F 6.2-70 (10 of 43)
F 6.2-70 (16 of 43)
F 6.2-70 (17 of 43)
F 6.2-70 (22 of 43)
F 6.2-71A
F 6.2-71B
F 6.2-88
F 6.2-89
F 6.2-90



INSERTION INSTRUCTIONS

VOLUME 15

Remove

6.3-10a/10b
6.3-11/12
6.3-15/16
6.3-31/32
F 6.3-1 (1 of 2)

T 7.1-2 (1 of 3)
T 7.1-2 (3 of 3)

7.2-21/-

7.3-5/6
7.3-19b/20
7.3-33/34

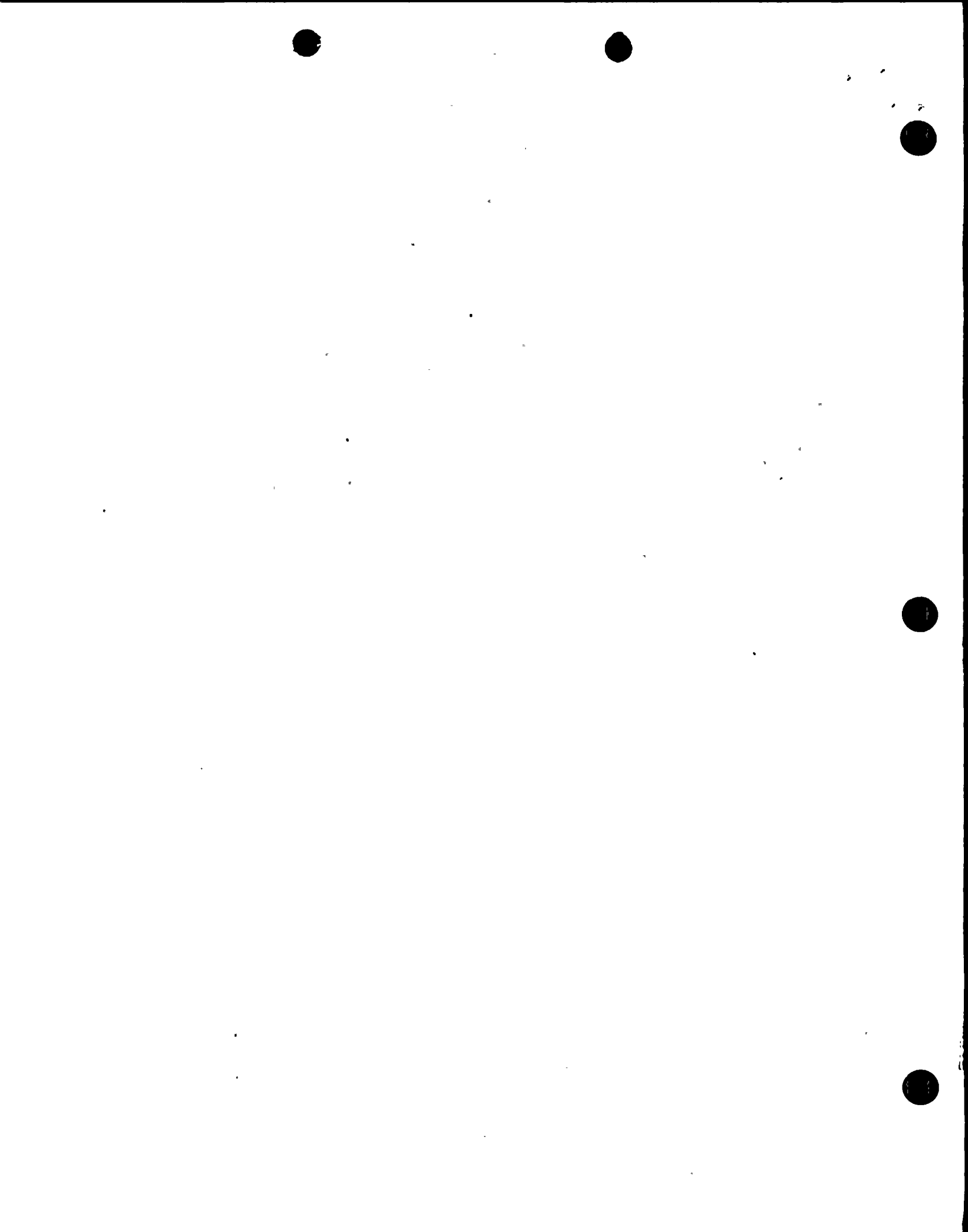
Insert

6.3-10a/10b
6.3-11/12
6.3-15/16
6.3-31/32
F 6.3-1 (1 of 2)

T 7.1-2 (1 of 3)
T 7.1-2 (3 of 3)

7.2-21/-

7.3-5/6
7.3-19b/20
7.3-33/34



INSERTION INSTRUCTIONS

VOLUME 16

Remove

Insert

7.4-3/4
T 7.4-1

7.4-3/4
T 7.4-1

7.5-1/2
7.5-5/6
T 7.5-1 (1 of 14)

7.5-1/2
7.5-5/6
T 7.5-1 (1 of 14)

7.6-2a/2b
7.6-3b/4
7.6-7/8
7.6-17/18
7.6-19/20
7.6-21/22
T 7.6-1
T 7.6-3 (2 of 2)
T 7.6-5
T 7.6-6
F 7.6-7
F 7.6-8

7.6-2a/2b
7.6-3b/4
7.6-7/8
7.6-17/18
7.6-19/20
7.6-21/22
T 7.6-1
T 7.6-3 (2 of 2)
T 7.6-5
T 7.6-6
F 7.6-7
F 7.6-8

7.7-5/6
7.7-7/8
7.7-13/14
7.7-22a/22b
7.7-23/24

7.7-5/6
7.7-7/8
7.7-13/14
7.7-22a/22b
7.7-23/24

8.1-1/2
8.1-3/4

F 8.1-1

8.1-1/2
8.1-3/3a
8.1-3b/4
F 8.1-1

8.3-13/14
8.3-24a/24b
8.3-39/40
8.3-59/60

8.3-13/14
8.3-24a/24b
8.3-39/40
8.3-59/60



INSERTION INSTRUCTIONS

VOLUME 17

Remove

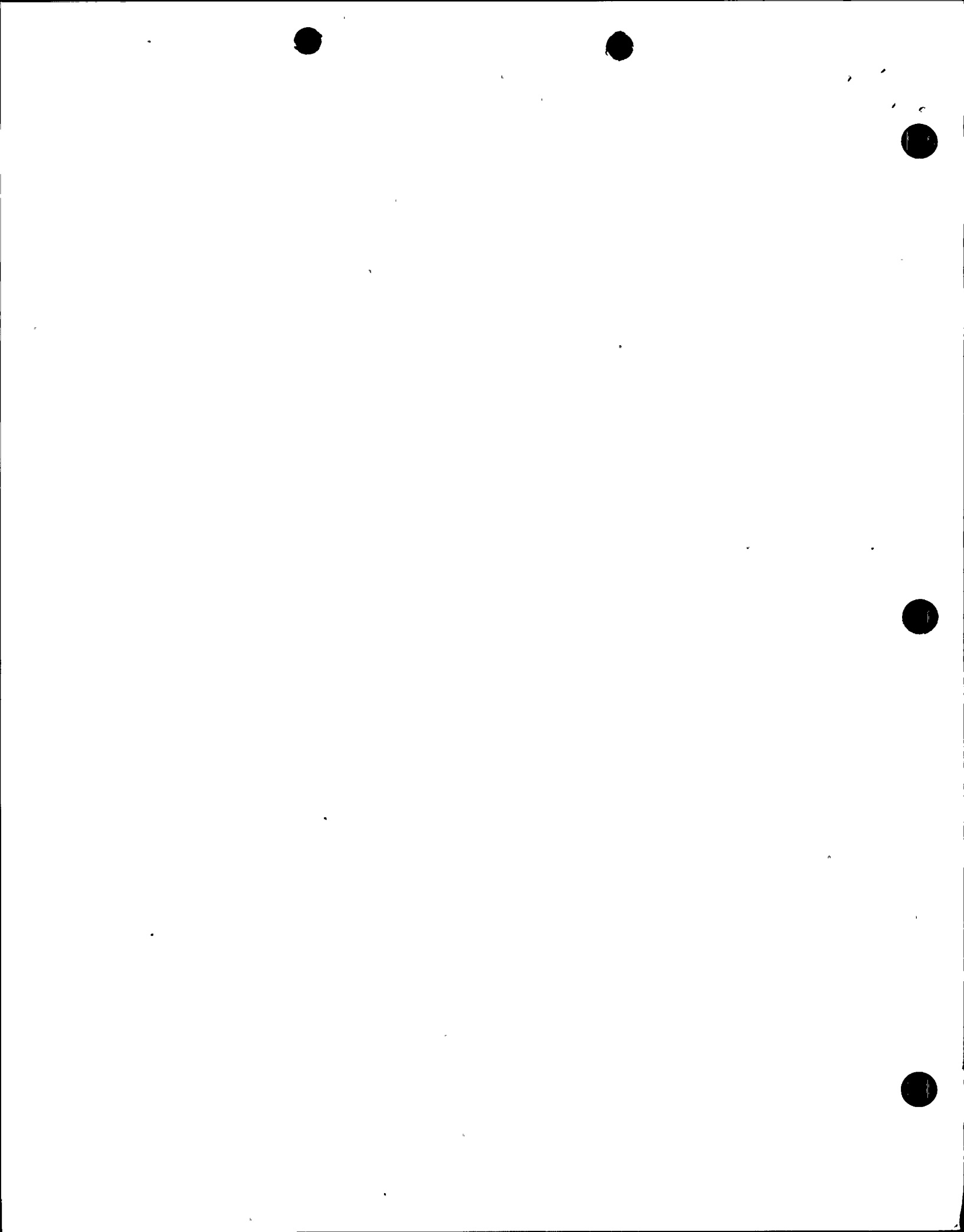
T 8.3-3 (2 of 2)
T 8.3-3A
T 8.3-4 (3 of 60)
F 8.3-3 (2 of 2)

9.1-31/32
9.1-41/42
F 9.1-7

Insert

T 8.3-3 (2 of 2)
T 8.3-3A
T 8.3-4 (3 of 60)
F 8.3-3 (2 of 2)

9.1-31/32
9.1-41/42
F 9.1-7



INSERTION INSTRUCTIONS

VOLUME 18

Remove

9.2-9/10
9.2-11/11a
9.2-11b/12
9.2-13/14
9.2-15/16

Insert

9.2-9/10
9.2-11/11a
9.2-11b/12
9.2-13/14
9.2-15/16



INSERTION INSTRUCTIONS

VOLUME 19

Remove

9.3-3/4
9.3-7/8
9.3-23/23a
9.3-23b/24
9.3-25/26
9.3-26a/26b
9.3-27/28
9.3-31/32
F 9.3-13 (1 of 10)
F 9.3-14 (1 of 3)
F 9.3-14 (3 of 3)
F 9.3-15
F 9.3-16 (6 of 7)

Insert

9.3-3/4
9.3-7/8
9.3-23/23a
9.3-23b/24
9.3-25/26
9.3-26a/26b
9.3-27/28
9.3-31/32
F 9.3-13 (1 of 10)
F 9.3-14 (1 of 3)
F 9.3-14 (3 of 3)
F 9.3-15
F 9.3-16 (6 of 7)



INSERTION INSTRUCTIONS

VOLUME 21

Remove

9.5-5/6
9.5-6a/6b
9.5-25/25a
9.5-25b/26
9.5-41b/42
9.5-43/43a
9.5-43b/44
9.5-51b/52
9.5-65/66

Insert

9.5-5/6
9.5-6a/6b
9.5-25/25a
9.5-25b/26
9.5-41b/42
9.5-43/43a
9.5-43b/44
9.5-51b/52
9.5-65/66
T 9.5-3 (9a of 11)



INSERTION INSTRUCTIONS

VOLUME 23

Remove

9A.3-15/16
9A.3-17b/18
9A.3-31/31a
9A.3-51b/52

F 10.1-4a through 4d
F 10.1-7a through 7w

10.2-3/3a

Insert

9A.3-15/16
9A.3-17b/18
9A.3-31/31a
9A.3-51b/52

F 10.1-4a through 4d
F 10.1-7a through 7w

10.2-3/3a



INSERTION INSTRUCTIONS

VOLUME 24

Remove

Insert

10.3-1b/2

10.3-1b/2

10.4-9/10

10.4-9/10

10.4-17/18

10.4-17/18

10.4-27/28

10.4-27/28

T 10.4-2

T 10.4-2

T 11.2-1 (2 of 5)

T 11.2-1 (2 of 5)

T 11.2-3

T 11.2-3

T 11.2-5 (1 and 2 of 2)

T 11.2-5 (1 and 2 of 2)

T 11.2-6 (1 and 2 of 2)

T 11.2-6 (1 and 2 of 2)



INSERTION INSTRUCTIONS

VOLUME 25

Remove

11.4-3/3a
11.4-3b/4
11.4-5/6
F 11.4-1a through 1h

T 12.3-4 (1 through 4 of 4)

Insert

11.4-3/3a
11.4-3b/4
11.4-5/6
F 11.4-1a through 1h

T 12.3-4 (1 through 4 of 4)



INSERTION INSTRUCTIONS

VOLUME 26

Remove

12.5-7/7a
12.5-9/10

Insert

12.5-7/7a
12.5-9/10



INSERTION INSTRUCTIONS

VOLUME 27

Remove

15.1-3/4
15.1-7/8
15.1-11/12

T 15.2-12

15.3-7/8

15.4-15b/16
T 15.4-8

15.6-12a/12a.1
T 15.6-13 (2 of 11)
T 15.6-13 (9 of 11)

T 15.6-13 (10 of 11)
T 15.6-15b
T 15.6-16b

Insert

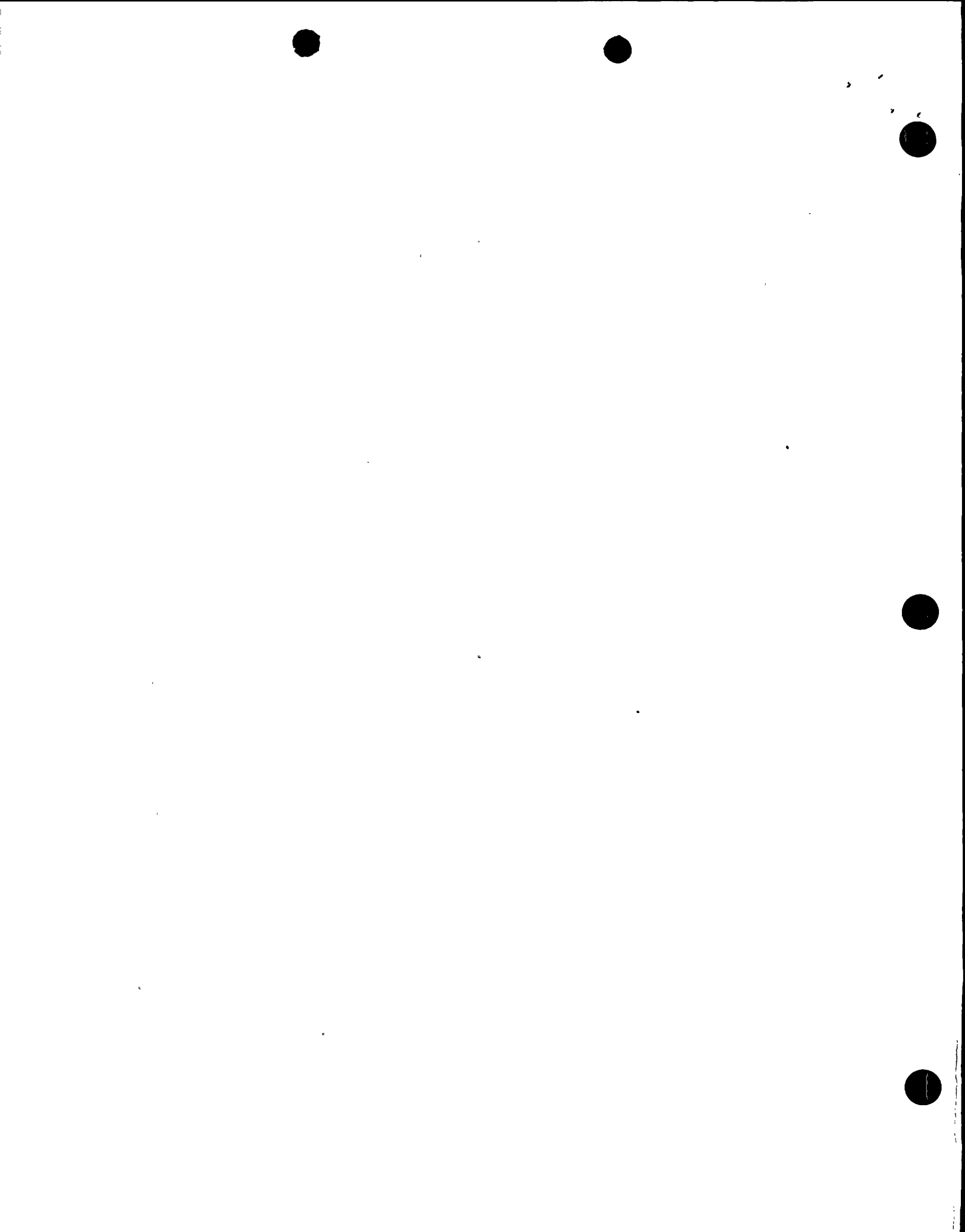
15.1-3/4
15.1-7/8
15.1-11/12

T 15.2-12

15.3-7/8

15.4-15b/16
T 15.4-8

15.6-12a/12a.1
T 15.6-13 (2 of 11)
T 15.6-13 (9 of 11)
T 15.6-13 (9a of 11)
T 15.6-13 (10 of 11)
T 15.6-15b
T 15.6-16b



INSERTION INSTRUCTIONS
QUESTIONS AND RESPONSES

VOLUME 1

Remove

Q&R F210.38-1/2

Q&R F251.1-1/2

Insert

Q&R F210.38-1/2

Q&R F251.1-1/2



INSERTION INSTRUCTIONS

QUESTIONS AND RESPONSES

VOLUME 2

Remove

Q&R F280.23-1/-
SSC-5/6

Q&R F421.13-1/2
Q&R F421.13-5/6
Q&R F421.20-1/2
Q&R F421.23-1/2
Q&R F421.23-3/-
T 421.36-1 (1 of 18)
T 421.36-1 (2 of 18)
T 421.36-1 (14 of 18)

Q&R F430.24-1/2
Q&R F430.36-1/2
Q&R F430.44-1/-
Q&R F430.49-1/-
Q&R F430.71-1/-

Insert

Q&R F280.23-1/-
SSC-5/6

Q&R F421.13-1/2
Q&R F421.13-5/6
Q&R F421.20-1/2
Q&R F421.23-1/2
Q&R F421.23-3/-
T 421.36-1 (1 of 18)
T 421.36-1 (2 of 18)
T 421.36-1 (14 of 18)

Q&R F430.24-1/2
Q&R F430.36-1/2
Q&R F430.44-1/-
Q&R F430.49-1/-
Q&R F430.71-1/-



INSERTION INSTRUCTIONS
QUESTIONS AND RESPONSES

VOLUME 3

Remove

Q&R F492.7-1/2

Q&R F620.1-1/-
Q&R F620.01-1/2
Q&R F620.05-1/-

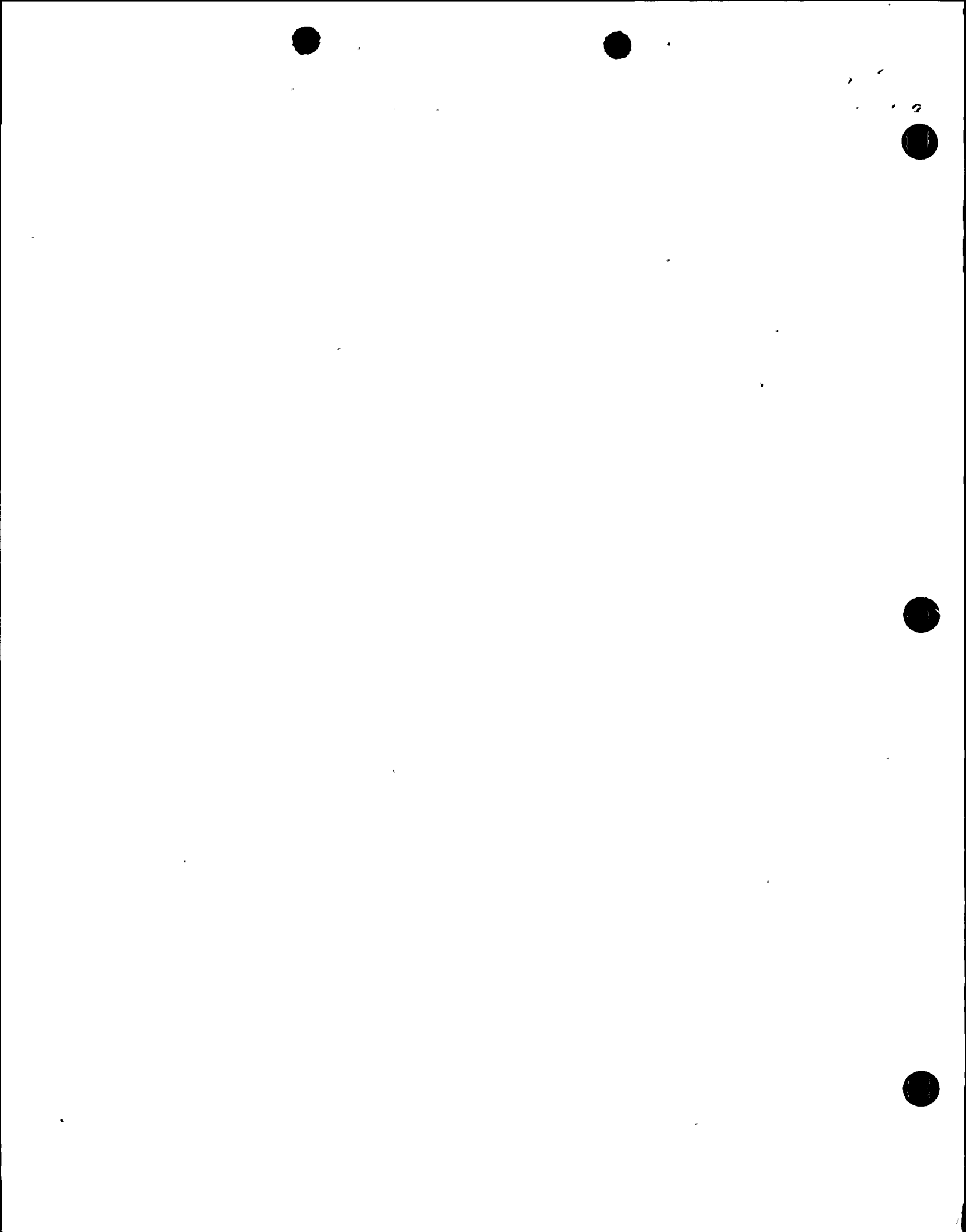
Q&R F640.34-3/4

Insert

Q&R F492.7-1/2

Q&R F620.1-1/-
Q&R F620.01-1/2
Q&R F620.05-1/-

Q&R F640.34-3/4



INSERTION INSTRUCTIONS
DESIGN ASSESSMENT REPORT
APPENDIX 6A

Remove

6A-viib/viii
6A-ixb/x
6A-xiii/xiv

F 6A.1-3

6A.2-7/8
6A.2-13/14
T 6A.2-1a (1 and 2 of 2)
F 6A.2-13

6A.4-21/22
6A.4-23/24
T 6A.4-10 (2 of 3)
F 6A.4-48

6A.9-3/4
6A.9-5/6

T 6A.10-2 (1 of 2)

Insert

6A-viib/viii
6A-ixb/x
6A-xiii/xiv

F 6A.1-3

6A.2-7/8
6A.2-13/14
T 6A.2-1a (1 and 2 of 2)
F 6A.2-13

6A.4-21/22
6A.4-23/24
T 6A.4-10 (2 of 3)
F 6A.4-48

6A.9-3/4
6A.9-5/6
T 6A.9-2a
T 6A.9-2b

T 6A.10-2 (1 of 2)



INSERTION INSTRUCTIONS

SAFE SHUTDOWN ANALYSIS

APPENDIX 9B

Remove

T 9B.8-1 (66 of 75)

T 9B.8-1 (75 of 75)

Insert

T 9B.8-1 (66 of 75)

T 9B.8-1 (75 of 75)

T 9B.8-1 (75a of 75)



INSERTION INSTRUCTIONS

LIST OF EFFECTIVE PAGES

Remove

EP-i
EP 1-1 through 1-8
EP 2-1 through 2-20
EP 3-1 through 3-12
EP 4-1 and 4-2
EP 5-1 through 5-3
EP 6-1 through 6-6
EP 7-1 through 7-4
EP 8-1 through 8-3
EP 9-1 through 9-11
EP 10-1 and 10-2
EP 11-1 and 11-2
EP 12-1 through 12-3
EP 15-1 through 15-5
Q&R-1 through Q&R-14
DAR-1 through DAR-8
SSA-1 and SSA-2

Insert

EP-i
EP 1-1 through 1-8
EP 2-1 through 2-20
EP 3-1 through 3-12
EP 4-1 and 4-2
EP 5-1 through 5-3
EP 6-1 through 6-6
EP 7-1 through 7-4
EP 8-1 through 8-3
EP 9-1 through 9-11
EP 10-1 and 10-2
EP 11-1 and 11-2
EP 12-1 through 12-3
EP 15-1 through 15-5
Q&R-1 through Q&R-14
DAR-1 through DAR-8
SSA-1 and SSA-2

10-1-52

July 24, 1986
(NMP2L 0793)

Mr. Robert Bernero, Director
Division of BWR Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Bernero:

Re: Amendment 27 to Application to Operating License
Nine Mile Point Unit 2
Docket No. 50-410

In accordance with 10 CFR 50.30(c)(1) and your March 29, 1983 letter, enclosed are three originals and 60 copies of Amendment 27 to the Final Safety Analysis Report. These changes incorporate certain responses into the text of the Final Safety Analysis Report. Also included are changes that have resulted from our continuing review of these documents.

In the original submittal of the Final Safety Analysis Report on January 25, 1983, we requested proprietary status for certain figures in Section 6A in accordance with 10CFR2.790. The September 21, 1983 letter from A. Schwencer to G. K. Rhode approved this proprietary status. Amendment 27 contains updates to a figure in Section 6A.

Also enclosed is the Summary of Incorporated Changes. This list is to assist the Nuclear Regulatory Commission in reviewing Amendment 27.

Very truly yours,

C. V. Mangan
C. V. Mangan
Senior Vice President

JM:ja
1853G

Enclosures

xc: W. A. Cook, NRC Resident Inspector
Project File (2)

3001
1/60 PROP
1/60 NON PROP

Chg: BNL
DMB
NSIC
PNL
PDR
LPDR

TO NON PROP ONLY

