Consumers Power Company

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • (517) 788-0550

February 25, 1981

Director, Nuclear Reactor Regulation
Att Mr Dennis M Crutchfield, Chief
Operating Reactors Branch No 5
US Nuclear Regulatory Commission
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 -
NUREG-0737 - UPDATE -
PALISADES PLANT

NRC letter dated October 31, 1980 incorporated into one document all TMI-related items approved for implementation by the Commission. That total package, known as NUREG-0737, provided items to be addressed by licensees to improve safety at power reactors in view of the Three Mile Island incident.

Consumers Power Company's letter dated December 19, 1980 provided our response to the items of NUREG-0737 for the Palisades Plant. Since that submittal, it has become necessary to update our response as follows:

Item I.A.1.1 Shift Technical Advisor (STA)

Add Page 3a (attached) - Our December 19, 1980 response stated that details for our long-range STA program were not complete and would be submitted in the future. Page 3a outlines our long-range plans and fulfills this commitment.

Item II.B.3 Post-Accident Sampling Capability

Figure 1, Page 70 of our December 19, 1980 response is no longer correct. The correct figure of the Post-Accident Sampling System is attached (Page 70, Rev 1).

Item II.F.1(1) Noble Gas Effluent Monitor

Replace Page 110 of the December 19, 1980 response with attached Page 110, Rev 1. This change reflects a change in the vendor's delivery schedule which we cannot control.

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Item II.F.1(2) Sampling Analysis of Plant Effluents

Replace Page 111 with Attached Page 111, Rev 1. This change reflects a change in the vendor's delivery schedule which we cannot control.

Item III.A.1.2 Upgrade Emergency Support Facilities

Replace Page 229 with attached Page 229, Rev 1. This change provides a more accurate statement of the Technical Support Center conditions.

All changes to these items are identified by a vertical mark in the right-hand margin.

It is our intent to keep you informed of any changes to our December 19, 1980 submittal; therefore, we will continue to supply any revisions as they become necessary.

for Brian D. Johnson

Steven R Frost
Palisades Licensing Engineer

CC Director, Region III, USNRC
NRC Resident Inspector-Palisades

Attachment (6 Pages)

PALISADES PLANT

Summary of the Shift Technical Advisor Long-Term Training Program - NUREG-0737, Item I.A.1.1

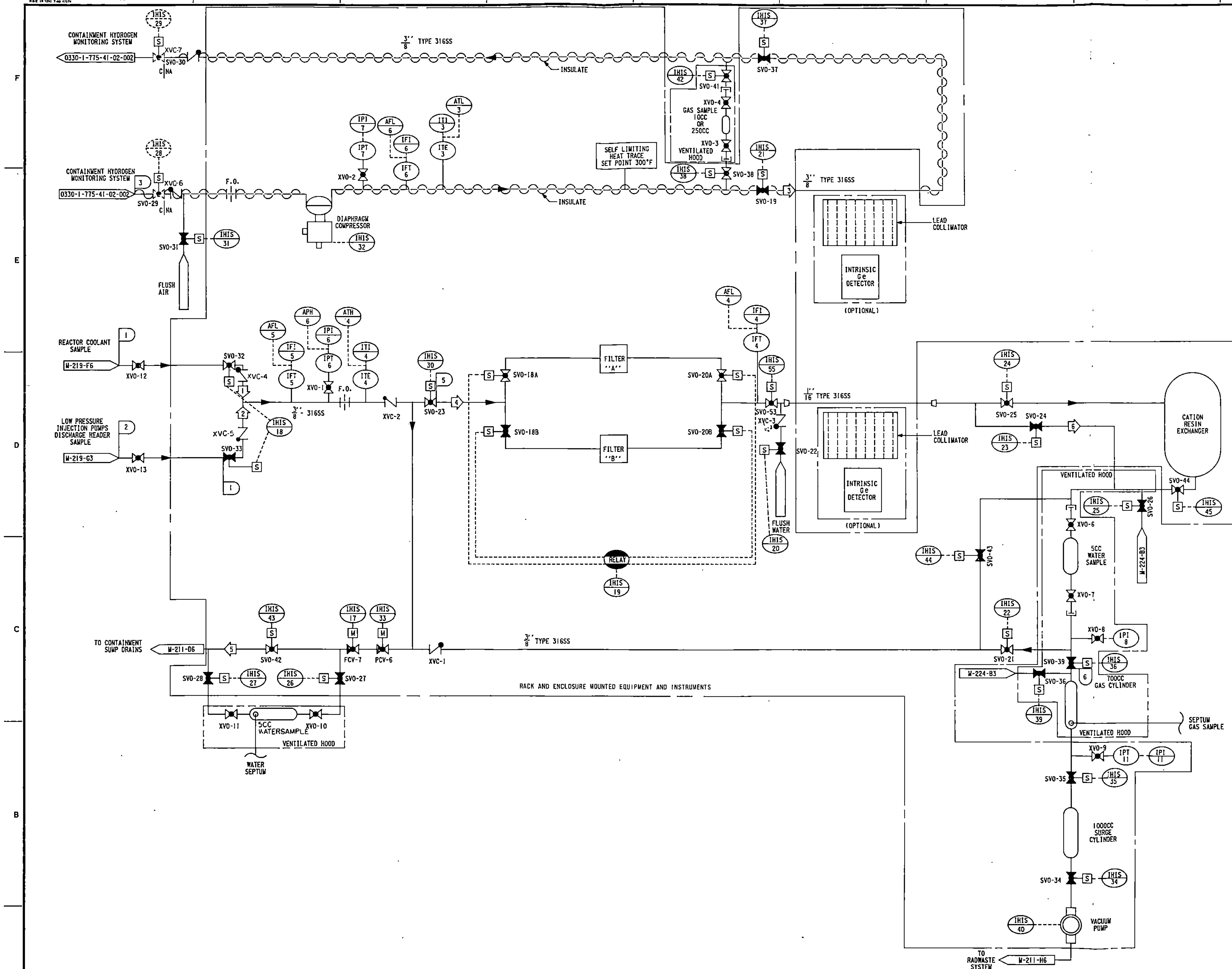
The long-term STA training program for Palisades will consist of five segments covering the Operational Training Phase described in INPO's Recommendation for Plant Shift Technical Advisor training, Sections 6.2 through 6.8:

*Nuclear Technology	240 Hours
*Systems and Procedures	160 Hours
*Transient and Accident Analysis	80 Hours
*Management and Supervisory Skills	40 Hours
*Simulator Training	80 Hours

Personnel entering this program will already have completed as prerequisites a study of fundamental subjects such as Mathematics, Reactor Theory, Reactor Chemistry, Nuclear Materials, Thermal Science, Electrical Science, Nuclear Instrumentation and Control, and Nuclear Radiation Protection and Health Physics. (If an individual is missing one or more of these subjects, he may be allowed to complete a study of it in coincidence with parts of this program.) These prerequisite subjects coincide with the Section 6.1.2 INPO recommendations for Shift Technical Advisor training.

Due to the varied backgrounds of the current group of STAs, individuals who have completed comparable studies in a given subject may be excused from classes on that subject.

While personnel selection for the long-term STA program for the Palisades Plant is incomplete at this time, program development is proceeding. In the interim, until long-term STA personnel are selected, the STA function is provided by experienced STA and senior plant staff who have been provided additional training in the STA duties/responsibilities. Senior plant staff fulfilling this function include Senior Engineers, and the Technical Engineer.



OPERATING DATA						
⇨	FLOW (CC/MIN)	PRESS (PSIG)	TEMP (°F)	BY	REMARKS	REV
1	1100	2085	105			
2	1100	160	105			
3	25	0	300			
4	40	2085	105			
5	1060	5	105			
6	40	2085	105			

DESIGN DATA	NORMAL		TRANSIENT					
#	PRESS PSIG	TEMP °F	PRESS PSIG	TEMP °F	BY	CHG.	REMARKS	REV
1	2485	650	-	-				
2	500	350	-	-				
3	55	300	-	-				
4	150	175	-	-				
5	2485	175	-	-				
6	-14	175	-	-				

REFERENCES

CONSUMERS POWER COMPANY
PALISADES PLANT

1. PIPING & INSTRUMENT DIAGRAM PROCESS SAMPLING SYSTEM-M219
2. PIPING & INSTRUMENT DIAGRAM RADIO-WASTE TREATMENT SYSTEM DIRTY WASTE & GASEOUS WASTE-M-211
3. PIPING & INSTRUMENT DIAGRAM GAS ANALYZING SYSTEM-M-224

NOTE

1. ALL SOLENOID VALVES ARE DESIGNED TO FAIL CLOSED
2. ADDITIONAL INFORMATION CONCERNING COMPONENTS IN THE SYSTEM CAN BE OBTAINED FROM.
   - A. SYSTEM DESIGN DESCRIPTION 0330-1-775-51-01
   - B. EQUIPMENT LIST
   - C. INSTRUMENT LIST
   - D. VALVE LIST
   - E. PIPING DESIGN AND CLASS STANDARD
   - F. PROJECT MANAGEMENT MANUAL
3. DIAGRAM SYMBOLS AND INSTRUMENT LEGENDS ARE SHOWN ON DRAWING. 0330-1-009-41-02-001
4. ALL INSTRUMENTS AND EQUIPMENT TAG NUMBERS AND PIPE LINE NUMBERS ARE PREFIXED WITH 0330-1-775 UNLESS OTHERWISE NOTED

JAN 9 1981

DATE	REV.	RELEASED	RESP. ENG'R
		PRELIMINARY NOT FOR CONSTRUCTION	
[illegible]	A	FOR INFORMATION ONLY	H C GARG
10/24/80		FOR COMMENTS	W. LADNIAK
		FOR BIDS ONLY	[illegible]
		APPROVED FOR ORDERING MATERIAL	
		APPROVED FOR DETAILING	
		APPROVED FOR FABRICATION	
		APPROVED FOR CONSTRUCTION	
		AS-BUILT	

CAI DRAWING NO. 0330-1-775-41-02-001 REV. A

MECH.	ELECT.	STRUCT.	I & C
[illegible]	[illegible]	N/A	—
DRAWN BY	CHECKED BY	ENGINEER	SUPERVISING ENGINEER
RKA 2.21.80	[illegible]	[illegible]	[illegible]

PREPARED UNDER THE RESPONSIBLE SUPERVISION OF H. C. GARG, P.E.
MICHIGAN PROFESSIONAL REGISTRATION NO. 22389
PROFESSIONAL REGISTRATION NO.
AT THE OFFICES OF
COMMONWEALTH ASSOCIATES INC.
209 E. WASHINGTON AVE. JACKSON, MICH.

Gilbert Commonwealth Companies

REVISIONS: A — RELOCATED FLOW CONTROL, WATER SAMPLE ADDED SVO-53

SEAL

OWNER
PALISADES POWER PLANT
CONSUMERS POWER COMPANY
JACKSON, MICHIGAN

TITLE
FLUID SYSTEM DIAGRAM
POST-ACCIDENT SAMPLE MONITORING SYS

SCALE	JOB NO.	DRAWING NO.	SHEET NO.	REV.
NONE	GWD-7545	9M-219	1	A

FSD POST ACC SAMP MON SYS

2/25/81

DEVIATIONS FROM AND BASIS FOR

Recommendations

None

Schedule

Vendor lead time has been increased from ten to twelve months. The purchase order for this system has been delayed also, however, it should be issued within the next two weeks. Every effort will be made to expedite the delivery and installation date to meet the January 1, 1982 requirement. If delivery cannot be expedited, March 31, 1982 would be more realistic for full operation.

REFERENCES

1. NUREG-0578, Recommendation 2.1.8.b

2. American National Standard ANSI N13.1-1969, February 1969

3. Letter From D G Eisenhut, NRC, to All Operating Nuclear Power Plants, Dated September 13, 1979

4. Letter From H R Denton, NRC, to All Operating Nuclear Power Plants, Dated October 30, 1979

5. Letter From D G Eisenhut, NRC, to All Licenses of Operating Plants and Applicants for Operating Licenses and Holders of Construction Permits, Dated September 5, 1980.

6. Letter From D P Hoffman, CP Co, to D L Ziemann, NRC, Dated October 17, 1979

7. Letter From D P Hoffman, CP Co, to D L Ziemann, NRC, Dated December 27, 1979

8. Letter From D P Hoffman, CP Co, to D L Ziemann, NRC, Dated March 4, 1980

9. Letter From D L Ziemann, NRC, to D P Hoffman, CP Co, Dated April 6, 1980

II.F.1(2) SAMPLING AND ANALYSIS OF PLANT EFFLUENTS

NRC POSITION

Because iodine gaseous effluent monitors for the accident condition are not considered to be practical at this time, capability for effluent monitoring of radioiodines for the accident condition shall be provided with sampling conducted by adsorption on charcoal or other media, followed by on-site laboratory analysis.

LICENSEE ACTION

Continuous sampling of plant gaseous effluent for post-accident releases of radioactive iodines and particulates will be installed at the Palisades Plant by January 1, 1982. There will be on-site laboratory capabilities to analyze or measure these samples (C-1).

The Sampling System will be designed to such that plant personnel can remove samples, replace sampling media and transport the samples to the on-site analysis facility with radiation exposures not exceeding 5 Rem whole body or 75 Rem to extremities (GDC-19) during the duration of the accident (C-2).

The design of the system for sampling of particulates and iodines will provide for nozzle entry velocities which are approximately the same velocities with expected induct or instack air velocities within ± 20%. We will comply with this clarification unless such equipment cannot be procured (C-3).

Provisions will be made to ensure that the absorber is not degraded while providing a sample of an effluent stream that may contain air with entrained water (C-4).

This system is an integral part of the noble gas effluent monitor and will be supplied by the same vendor.

Design details will be available for review by January 1, 1981 as requested by your October 31, 1980 letter (D).

Technical Specifications will be proposed as required.

DEVIATIONS FROM AND BASIS FOR

Recommendations

None

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III.A.1.2 UPGRADE EMERGENCY SUPPORT FACILITIES

NRC POSITION

Additional clarification will be provided in the near future.

LICENSEE ACTION

The upgrading of the Emergency Support Facilities will be addressed in NUREG-0696, "Functional Criteria for Emergency Response Facilities," when it is published in its final form. All decisions on future upgrading actions to our facilities await final issuance of NUREG-0696.

All implementation dates and licensee submittal dates are yet to be determined per Enclosure 1 of your October 31, 1980 letter (NUREG-0737).

Safety Parameter Display System

The response to this item was addressed in NUREG-0737, Section I.D.2.

Technical Support Center

The on-site Technical Support Center (TSC) is located in the present Shift Supervisor's office and control room viewing areas just outside of the control room. This total area is 1,000 ft^2 including the Shift Supervisor's office. One half of the center is habitable to the same degree (shielding and air supply) as the control room for postulated accidents. The other half will not have radiation levels above those required for continuous occupancy and it has a different air supply. Designs are presently being formulated to make the entire Technical Support Center habitable. Key TSC personnel will be provided with a means for gaining entry to the control room.

Dedicated communications between the TSC, the control room, Emergency Operations Center, the NRC and the EOF are provided.

Radiation monitoring is provided for both direct radiation and airborne radiation contaminants in the TSC and provides warning if the radiation levels in the support center are reaching potentially dangerous levels. Action levels are designated to define when protective measures should be taken.

To ensure access to technical data, Palisades TSC is provided with a card reader and aperture cards, system descriptions, containment photographs and plant drawings which are necessary for assessment of an accident in the TSC. These drawings are controlled and kept up to date by the Plant Document Control Section. The plans and procedures for engineering/management support and staffing of the TSC are part of the Palisades Emergency Plan.

Emergency Operations Facility

The Emergency Operations Facility has been established at Consumers Power Company's South Haven Conference Center.