Consumers Power
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February 23, 1990

Nuclear Regulatory Commission
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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
STATUS REPORT - PASM UPGRADE ACTION LIST

On August 15, 1989 Consumers Power Company submitted an update to our Action Plan for improving Post Accident Sample Monitor System (PASM) reliability. The purpose of this correspondence is to provide you with the most recent Action Plan update and to brief you on the progress made in completing the Plan.

As of this date, 18 of the 27 upgrade items have been completed including 10 completed items since our August submittal.

Please note that two items previously scheduled for 1990 have been deferred to 1991 due to parts availability and budget constraints.

During 1989, PASM panel availability stood at 97.2 percent. PASM continues to receive strong management attention.

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

Attachment

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ATTACHMENT

Consumers Power Company
Palisades Plant
Docket 50-255

PASM UPGRADE ACTION LIST

February 23, 1990

15 Pages

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
MODIFY UNRELIABLE COMPONENTS					
o Replace TE-1901, TE-1902 & TE-1903	Replace entire instrument loop with ANSI type K components. ANSI type K thermocouple elements have increased corrosion resistance to sample flow and will thus have a longer life.	Detailed Engineering completed. Parts are being procured.	SC-89-044 NRC Commitment/ PW08/15/89A 03	TCSaarela	1990 Maint Out
o Replace PI-1907, PI-1908 & PI-1909	Replace mechanical pressure indicators and their diaphragms with electrical transducers and digital indicators. Mechanical PIs have frequently gone out of calibration due to rupture of the diaphragm.	Detailed Engineering completed. Parts are being procurred.	FC-841 WBS 43090 NRC Commitment/ PW08/15/89A 04	RJCorbett	1990 Maint Outage
o Reduce number of Swagelok connections	Swagelok connections are susceptible to developing leakage, especially in presence of high system pressures. Swagelok connections also, however, provide greater ease in performing maintenance. Need to determine locations where it would be beneficial to replace some of the Swagelok connections with welded components.	Completed evaluation of those Swagelok fittings most susceptible to developing leakage. This was done by reviewing w.o. history from Jan. 1986 to present. Swagelok fittings upstream of PCS sample cooler were noted as source of fitting leakage on 15 of those total 17 total W.O.'s related to fitting leakage.	FC-868 NRC Commitment PW08/15/89A 05	TCSaarela	1990 Maint Out

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
MODIFY UNRELIABLE COMPONENTS (cont'd)					
		Detailed Engineering is complete except for Technical reviews from Project Group. Parts are on site.			

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
COMPLETE INLINE MONITORING PROJECT					
o Implement changes to Dissolved Oxygen (DO_2) Analyzer and Gas Chromatograph (GC).	Instruments have not performed in an acceptable manner.	After initial revised design, DO_2 analyzer continued to have problems. Implemented design change (barrier) membrane added) to DO_2 analyzer. Design change was previously implemented for Gas Chromotograph (GC). Both DO_2 analyzer and Gas Chromatograph (GC) are now functioning properly.	FC-676	GGPalmisano	Completed
o Install longer piece of tubing between MV-1907 and MV-1925 to provide proper volume for undiluted sample.	System was modified due to previous erratic sample volumes. System now provides consistent sample volumes of 3½ ml. Sample volumes need to be 4 ml.	Design has been revised to incorporage a 1/8" coiled sample loop. New sample loop has been installed.	W.O. 24902506 EDC-FC-676-1 (Item was added scope to inline monitoring project).	GGPalmisano	Completed
o Complete project acceptance test T-FC-676-1.	Test is needed to verify satisfactory completion of project.	Punch list items have been completed and project acceptance Test has been signed off.	FC-676	GGPalmisano	Completed

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
COMPLETE INLINE MONITORING PROJECT	(cont'd)				
o Provide seal-in relays for LPSI and PCS sample valves SV-1914 and SV-1916.	Change corrects previous modifications.	Implemented design change to provide seal-in for switches.	FC-676 EDC-FC-676-16	GGPalmisano	Completed
Complete Chemistry Dept. Training for mod.	Need to complete training for Chemistry technicians.	Training needs to be performed after modification is completed to allow use of panel for training. Chemistry Sampling Procedure (EI-7.1) has been revised. Training for Chemistry Technicians is complete.	FC-676	JPaver/ TChartrand	Completed

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
EVALUATE PASM DESIGN AND IMPLEMENT CHANGES AS NECESSARY					
o Compare and evaluate alternate systems and designs.	Action is needed to learn more about common industry problems and solutions. Need to interact with other utilities to learn optimum design.	Palisades Plant is a member of CE Owners Group for PASM Design/ Regulatory Basis Review and also member of Sentry Owners Group. Also have issued questions over NOMIS concerning reliability and upgrades of Post Accident Sampling Systems by other utilities. So far have received several responses because of NOMIS questioner. Have also held telephone discussions with other utilities concerning PASM. Will continue to carry on dialogue with other utilities in this area.	PW08/15/89A 11	TCSaarela/ TAChartrand	Completed
o Verify PASM samples are consistent with NSSS samples.	Action is needed to reverify Chemistry's ability to take accurate post accident samples. This action is based on conservative approach to PASM evaluation (i.e. reason for verification is not due to suspect design).	Completed May 4, 1989. PASM/NSSS samples are consistent with each other.		TChartrand	Completed

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
EVALUATE PASM DESIGN AND IMPLEMENT (cont'd) CHANGES AS NECESSARY					
o Evaluate and implement recommendations for optimizing design of PASM Components.	As a result of walkdown and review of Panel, vendor is recommending some minor design changes to enhance operation of several components.	Reviewed vendor recommendations from Sentry letter dated 5/15/89. Couple of items on list were previously completed. In addition, a couple of the recommendations are included as separate items on this action list. Following other changes were determined to be appropriate to implement. o Replace sample needles: Needles have been replaced. SC-89-317 P.O-2003-9504 o Replace septums: Septums have been replaced as normal maint item by Chemistry. Existing design of septums is adequate. N/A o Revise range of conductivity cell (CE-1902): SC-89-375 Evaluation for Spec Change now in process.	NRC Commitment/ PW08/15/89A 13	TCSaarela	6/31/90

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
EVALUATE PASM DESIGN AND IMPLEMENT (cont'd) CHANGES AS NECESSARY		o Revise setpoint for PCV-1902: Detailed Engr for Spec Change is Complete. SC will increase N_2 pres at discharge of PCV-1902 to 90 psig Part procurement has been initiated.	SC-89-344		
o Evaluate concern about loss of control air (N_2) to PASM panel valves CV-1912, CV-1913 & CV-1917.	CV-1912 and CV-1913 fail closed upon loss of control air. Valves need to be open for sampling. Need to determine what happens to CV-1917 on loss of air. CV-1917 is new 5-way control valve. PASM system control air is Q-Listed.	Air evaluation completed. Design for control air to PASM Panel vlvs is adequate as is.	A-PAL-89-052	TCSaarela	Completed
o Consider replacing various PASM system globe valves with ball or plug valves.	Globe valves are susceptible to developing seat leakage. Ball or plug valves are less apt to develop seat leakage. Nine valves should be replaced. Also on various PASM Panel valves design for connection of stem extension and handle is inadequate.	It has been determined that no ball or plug valve is available on the market that would fulfill design rating of PASM System. Since a better valve is not available valves will not be replaced.	NRC Commitment/ PW08/15/89A 15	TCSaarela	1990 Maint Outage (Deferred to 1992 Refout)

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
EVALUATE PASM DESIGN AND IMPLEMENT (cont'd) CHANGES AS NECESSARY		Modified designs are being considered for connection of stem and handle on various PASM Panel valves. Modified connection for valve PCV-1916 has been completed. Modification of connections for MV-1907 and MV-1913 will be implemented by the 1990 Maintenance Outage. Evaluation and implementation of modified connections for other valves will be completed prior to or by the 1992 Refueling Outage			

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
UPGRADE TIMELINESS OF MAINTENANCE					
o Provide higher priorities for Work Orders	Assign higher priorities for W.O.s of PASM and associated sampling components. Include those W.O.s on Ops Concerns List. When assigning priorities Ops needs to also identify if PASM system is inoperable or not due to maintenance.	W.O.s related to inoperability of PASM are assigned as Priority 1 and put on the Ops Concerns List. Other W.O.s in PASM system are assigned a lower priority. This has been in effect since 5/1/89.		DWKaupa	Completed
o Upgrade spare parts for PASM system	Review spare parts program for PASM and upgrade as required.	Energy Supply Services Request (ESSR) was initiated on 5/19/89 to effect upgrade of PASM system spare parts program. Due to 1990 budget review, the comprehensive evaluation of the PASM spare parts program has been deferred to 1991. Review of PASM spare parts, however, is ongoing and spares for individual components will be upgraded as the need is identified.	NRC Commitment PW08/15/89A 17	TCSaarela	8/1/90 (Deferred to 8/1/91)

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
UPGRADE TIMELINESS OF MAINTENANCE (cont'd)					
o Upgrade PM program for PASM Maint.	Currently 4 PMs exist for either calibration of PASM instruments or maintenance of valves, tubing and gaskets. Vendor has informally proposed a service contract for periodic inspection and maintenance of the panel.	Vendor provided letter on 5/8/89 with scope of activities which could be included in service contract.	NRC Commitment/ PW08/15/89A 18	TCSaarela	Completed
	Use of vendor personnel to perform PM type inspections as well as completing maintenance appears to be beneficial.	Contract and Purchase Order have been issued for Sentry Equip Corp Services.	Contract No. 39-034-3280 P.O.# CP11-7896		
		PPAC has been approved for quarterly PM by the vendor.	PCS058		
		Vendor has completed his first PM of the PASM Panel. PMs will generally include exercise (and review) of system, calibration of inline monitoring type eqpt, preventative maintenance of various components and verification/testing for proper operations of other components.			

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
EVALUATE AND UPGRADE ADMINISTRATIVE RESOURCES ASSOCIATED WITH SYSTEM					
o Revise Chemistry Sampling Procedures	Chemistry Procedures need to be updated and technicians trained regarding procedure changes.	Procedure revision was completed 5/19/89. Procedures will also be revised upon completion of inline monitoring project. Technicians will be trained on inline monitoring mod at that time. See action under "Complete Inline Monitoring Project" for followup.		Tom Chartrand	Completed
o Evaluate and upgrade drawings	New P&ID M219 Sh 2A has discrepancies. Various electrical drawings in vendor file are awkward. During recent walkdown of a PASM W.O. one electrical drawing was found to be incorrect. Drawings should be reviewed and upgraded.	Procedure revision for M219 Sh 2A was initiated on 5/18/89. Walkdown has been completed by Configuration Control Group for PASM Panel electrical drwgs. Drawing updates are completed.	NRC Commitment PW08/15/89A-20	TCSaarela JAHanks	Completed
o Upgrade Equipment Data Base and Q-List	Not all PASM components are in EDB, some components are not appropriately identified (eg V-18) and others do not have Q-List Interpretations. EDB and Q-List need to be updated.		NRC Commitment/ PW08/15/89A 21	TCSaarela	9/31/90

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
EVALUATE AND UPGRADE ADMINISTRATIVE (Cont'd) RESOURCES ASSOCIATED WITH SYSTEM	Numerous system designations are used for PASM components (eg PCS, ESS, MGS, WGS). To help define PASM system boundaries, it is highly recommended that a new system designation (eg PAS) be provided to all PASM components.	Project assigned to Configuration Control Group. Action is planned for 1990.			

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
IMPLEMENT MISCELLANEOUS IMPROVEMENTS TO PASM SYSTEM					
o Change Sample Cask Wheels	Metal wheels of sample cask marks up aux bldg floor when transporting samples to hot or grey labs. Need to evaluate alternate design (eg rubber wheels).	Wheels on sample cask have been replaced with wheels that have polyurethane type tread.	SC-89-316 NRC Commitment/ PW08/15/89A 22	TCSaarela	Complete
o Delete PI-1914	Need to initiate SC to remove PI and replace with plug. PI'S inside of panel and not accessible during normal operation and or post accident conditions. PI is used only for maintenance. I&C would prefer to use temporary test gauge when performing maintenance.	Spec Change No. Assigned.	NRC Commitment/ PW08/15/89A 23 SC-89-376	TCSaarela	1990 Maint Outage
o Change tubing configuration to PI-1900	Reduce length of tubing line to PI-1900 to reduce vibration on fittings. Add tee in line to PI-1900 to provide test connection for system hydro (RC-78). Currently test connection for system hydro is provided by removing PI-1900. Changes would reduce wear on Swagelok fittings associated with PI-1900.	Modification to be completed as part of project for reducing number of Swagelok connections in PASM system. Detailed engr is complete except for Tech Review from Project Group. Parts are being procurred.	FC-868 NRC Commitment/ PW08/15/89A 24	TCSaarela	1990 Maint Outage

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
PASM MAINTENANCE ITEMS					
o PI-1903	PI-1903 not responding properly. PT-1904 needs to be replaced and calibrated. PT is stock item, however current balance on hand is zero.	New transmitter was installed on 6/22/89.	WO 24902329	TCSaarela	Completed
o PCV-1916	Valve is unable to throttle sample flow to value required by Chem Proc. Need to install new PCV.	New valve was installed on 6/21/89.	PO 1009-3258 WO 24903286	TCSaarela	Completed
o MV-1932	Handle rotates more than 90° (ie, handle appears to be slipping on shaft)	Work Completed on 9/7/89	WO 24902918	TCSaarela	Completed
o EC-103-1	Complete PM for inspection and maintenance of septums and filters. Also check and tighten any loose valve handles.	Chemistry Technician completed PM type activity to replace septums and O-rings on undiluted needle assembly. Other panel septums appear to be o.k. Chemistry has also tightened all loose valve handles. Filters are not plugging and have been determined to be acceptable.		TCSaarela	Completed

ITEM	DESCRIPTION	STATUS/RESOLUTION	REFERENCE	ASSIGNMENT	TARGET DATE
PASM MAINTENANCE ITEMS	(cont'd)				
o EC-168	Replace relay module in annunciator panel for high sample temperature alarm. Needs a replacement relay module.	Replacement relay was installed on 6/22/89.	WO 24802876	TCSaarela	Completed