

\*notes are in  
the back.

PLANNING MEETING

0900 5/1/79

1. Agenda, 0900, 5/1/79, Task Management/Schedule Meeting
2. Review Top Priorities List
3. Review Action Items from "1800", 4/30/79, Technical Review Meeting
4. Review Tasks Lists

A G E N D A

## Task Management/Schedule Meeting

0900 5/1/79

1. Radioactive releases
  - a) Vacuum draw on Auxiliary Building ventheader and drain system
2. Plant Status - RCS profile
3. RCS Sample #6 at 0500 5/1/79
4. Analytical:
  - a) Feed flow necessary to maintain RCS temperatures while flashing
  - b) Minimum secondary water flow necessary to maintain natural circulation while in solid secondary circulation
5. Containment Sump Level Indication
6. Construction Status:
  - a) EPICOR (CAP-GUN II)
  - b) Tank farm in Unit 2 spent fuel pool
  - c) Reactor coolant pressure/volume control
  - d) Alternate system for solid circulation of OTSG's
  - e) Auxiliary Building roof ventilation system
  - f) DHR upgrade
  - g) Alternate decay heat removal system
7. Identify options for decay heat removal. Recommendation for continuing installation of alternate system for solid circulation of the OTSG.

5/1/79

TOP PRIORITIES

Development of plan for management of radioactivity in Auxiliary and Containment Buildings.	A-1
Identify and isolate sources of iodine leakage.	A-1
Complete tank farm in Unit 2 spent fuel pool.	A-1
Complete roof-top Stack Filtration System.	A-2
Complete contingency plan for emergency cross-tie between the Auxiliary Building and Reactor Building Filtration System.	A-2
Completion of EPICOR (CAP-GUN II) System	A-2
Development of plan for treatment of Auxiliary Building liquid waste.	B-1
Complete "B" OTSG cooling and modification (long-term).	C-1
Upgrade Decay Heat Removal System.	C-1
Develop and calibrate alternate pressurizer level transmitter.	C-1
Development of alternate system for pressure/volume control system.	C-1
Complete "A" OTSG cooling modification (long-term).	C-2
Complete external valve pit for ADHR System.	C-2

CATEGORY

- A        Control (i.e., containment) of radioactivity in Auxiliary and Containment Buildings.
  
- B        Recovery of Auxiliary Building to near normal operations.
  
- C        Place the plant in a cold condition suitable for depressurization with long-term pressure/volume control.



ACTION ITEMS

## TECHNICAL MEETING

1800 4/30/79

	<u>ACTION</u>
1. Provide curves detailing minimum flow necessary to sustain Natural Circulation at 0900 5/1/79	Wilson
2. The only critical containment valves which must be meggered on a weekly basis are DHV1, DHV2, and DHV171	Herbein
3. If administrative problems hold up construction work contact R. Arnold	All
4. Reflood 'B' feed line as soon as it is completely sealed	Herbein
5. Field run small bore piping for long term OTSG cooldown system	Hirst
6. Determine if it is necessary to install a low capacity demineralizer as part of the 'B' OTSG long term cooling system	Wilson
7. Resolve whether filters for auxiliary roof ventilation system will be chemically treated	Busche/ NRC
8. Cut entry into auxiliary building vent stack. If the detectors are not then calibrated install blank.	Hirst
9. Be prepared at 0900 5/1 to discuss whether to proceed with installation of system for long term solid cooling of 'A' OTSG	Wilson/ Levenson
10. Pull a strong enough vacuum on the vent header to get inflow from any leaks. Check pressure upstream of the pump suction	Herbein
11. Secure the Hydrogen Recombiner. Leave the valve line up inside containment as is.	Herbein
12. Maintain RCS pressure at 900 psia $\pm$ 100 pounds.	Herbein

NATURAL CIRCULATION ADVISORY

TASK FORCE MEETING

1700 4/30/79

The discussion centered on three proposed methods of measuring pressurizer level to be used when the remaining level transmitter fails.

1. Slowly bring the pressurizer solid. The slope of the pressure rise will increase sharply as the pressurizer goes solid. It was agreed that this method will be used as needed to give a base point for the present scheme of calculating level by measuring RCS makeup and estimating leakage. An updated procedure will be prepared.
2. Apply a current to one of the two pressurizer RTD's, heating the element. The dynamic temperature response and final temperature will vary if the element is uncovered (at 75"). The limitation of this method is that it cannot be used continuously because the element will burn out. This test also disables all pressurizer temperature measurement because the heated element effects the other RTD.

It was agreed that this method would be used periodically and when other indications show falling pressurizer level.

3. Operate one of the upper pressurizer heater elements at a low voltage and measure the resistance. The resistance will increase if the element is uncovered. This method would provide a continuous low pressurizer level alarm, but may not be sufficiently sensitive.

It was agreed that an effort would be made to verify the use of the pressurizer heaters and RTD's as level indicators on some B&W plant other than TMI-2 before implementing these methods.

PLANT OPERATION STAFF

Task	Description	Priority	Expected Completion	Status	Task Coord.
1.	Obtain RCS sample.	C-1	#6 0500, 5/01	Ship to B&W.	Thorpe/ Hetrick
2.	PZR Heise and diff. pressure gage.	C-1		Recalibrating	Wilson/ Broughton
3.	Obtain MEC approval.	C-1		Need ECM's 035, 133, 172, 179, 180, 191, 195, 197, 204, 206, 214.	Porter/ Faulkner
4.	SSRW pumps.	C-1	"A"-In Service "B"-Available "C"-Under Repair	Parts 5/07/79	
5.	Make calculation of RAD levels that will occur in cond. Demins- if we circulate and clean "B" OTSG.	C-1		Tom Crimmins to define shielding requirements.	Cobean/ Gunn
6.	Prepare instructions for loss of gland steam to turbine.	C-1	Procedure d.u 4/30.	In progress.	Floyd/ Kunder
7.	Be prepared to run Existing B Decay Heat Pump on Recirc.	C-1	Expect to run 5/1/79.		Toole
8.	Review tie-in to stack for AB H&V. No cap on stack; verify flow monitor capability. Modify filters, install damper.	A-1	Tie-In 4/30.		Gunn/ Toole/ Thorpe
9.	Repair 4 secondary plant leaks and clean up water around cond. pumps.	B-1	In progress.	CO-V-53C FW-V4B CO-V-6A CO-V-6B	Showlin/ Kunder
10.	Get sec. plant sump levels down.				Kunder
11.	Drain OTSG "B" and process water through CAP-GUN I.	A-1	Start 4/30.	Require IAC go ahead.	Kunder



## PLANT MODIFICATIONS

Task	Description	Priority	Expected Completion	Status	Task Coord.
WG-2 (L-1)	Decon. water in AB using EPICOR ion exchange process.	A-1	Turn over for test 5/5. Operational 5/7.		Cobean
WG-11	Water Chemistry Lab for use with CAP-GUN (WG-2).	A-1	Operational 5/3.	Scheduled completion 5/2.	Cobean
WG-6 (L-2)	Install storage vessels in Fuel Pool "A".	A-1	Operational by 5/7.		Cobean/ Gunn
WG-1	Install AB/FHB Filter system. MEC install high noise level signs.	A-2	Units 1 and 2 (tested) Units 3 and 4-5/3.	Building complete by 5/4.	Gunn/ Thorpe/ Bachofer
TS-3C	Develop complete package for long-term cooling of OTSG "B". Use Unit #2 Demins for long-term system.	C-1	Instal. comp. 5/9.	Split in FW - 2.5 days. B Team tie-in - 2.5 days.	Wilson/ Cobean
TS-10	Install 2/2500 kw diesel generators - vendor. Run diesel, fill fuel system.	C-1	Run on 5/2.	Instal. complete 4/20.	Cobean/ Gunn/ Toole
TS-11	Develop electrical distribution system - 13.2 KV line.	C-1	Turn over for test 5/5. Run on 5/8.	Inst. comp. 5/4.	Cobean
TS-6B	RCS pressure control system.	C-1	Turn over for test 5/11.		Miller/ Lilly
TS-6C	Evaluate letdown capabilities for mod. to RCS.	C-1		To be scheduled.	
TS-13	Install elec. heaters on Aux. Bldg. intake ducts.	A-2	Follows decon.	Complete two (2) days after Aux. Bldg. decon.	
TS-14	Shield for decay heat pump.	C-2		Installation to be scheduled by 4/30.	Wilson

TECHNICAL SUPPORT

Task	Description	Priority	Expected Completion	Status	Task Coord.
LS-2	Tech Spec. deletions, changes, and additions for long-term cooling.	C-1	No status.	NRC interactions under negotiation.	Harding (Stair)
TM-35	Establish long-term plant instrumentation requirements.	C-1	No status. Due 4/27.		Capadanno/ Langenbach
AA-64	A. Report for cooldown on OSTG "B".	C-1	5/1		Crimmins
	B. Report for solid on OSTG "A".	C-1	5/5		Crimmins
AA-78	Evaluate options for mid-term continued operation.	C-1	4/30		G. Bond
AA-79	Define "alert levels" for various parameters.	C-1		Inactive.	J. A. Dani



WESTINGHOUSE

Task	Description	Priority	Expected Completion	Status	Task Coord.	Notes
I.B.2	Install Aux. Building TV Monitor Aystem.	1	4/28	In progress	Siano	
I.B.4	Install DHR remote ops. equip.	1	4/30	Ongoing	Siano	
I.B.5	DHR flow/pressure tests	1	5/1	Ongoing	Siano	
II.A.1	ADHR (new) sys. design and approval.	1	4/30	Ongoing	Siano	
II.A.1	Find ADHR test procedure.	1	5/3	Ongoing	Siano	
II.A.1	Find ADHR installation procedure.	1	5/10	Ongoing	Siano	
II.B	ADHR Installation.	1	5/18	Ongoing	Siano	
	Licensing Report.	1	4/26	Formal submittal to GPU.	Siano	

## WASTE MANAGEMENT GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
L-10	Pursue activities on processing Unit 1 water through CAP-GUN to both provide support to insure available freeboard for Unit 2 and to develop resin formulations for Unit 2 water.	A-1		In progress.	Garman/ *Waller
L-14	Evaluate waste gas vent header leakage problems and recommend fixes depending on results.	A-1		Working per J. Seelinger's waste gas plan of 4/17/79.	McConnell/ Arthur/ *Barrett
L-36	Investigate the effects which the operations associated with reactor plant long-term cool down will have on discharge to the waste systems. Related to L-6.	C-1		In progress.	McGoey/ Ross *Collins
L-42	Development recommendations and procedure for draining and disposition of RCBT water to support plant needs to make up with degassed demin. water.	C-1			McGoey/ Ross
L-44	Evaluate system designs with Technical functions and W to assess possible interference problems from standpoint of locations, operations, maintenance, etc.	B-1		Report being prepared; delayed by higher priority tasks.	Kraft
G-1	Install AB/FHB off-gas filter system to back-up plant system.	A-1		Phase I design complete. System description is complete, start-up procedure in drafting. Preop procedure in drafting by Met-ed. UE&C supporting construction. Plan is Phase I, 2 or 4 trains running.	Montgomery/ Itschner/

\* NRC contact

(Cont.)

WASTE MANAGEMENT GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
G-1	Install AB/FHB off-gas filter system to back-up plant system.	A-1		(Cont.) Phase I schedule developed, shows 4/28 completion. Phase II & III lead to permanent system, schedule shows 5/1 operation. Noise problem requires evaluation.	Montgomery Itchner/ *Collins
G-5	Change out AB/FHB HVAC vent filter train charcoal bed.	A-1		Long-term storage plan under study. 35 permanent storage/shipping containers in fabrication, delivery starts 4/25. "A" and "B" trains of the AB filters and "A" train of FHB filters removed and replaced, units back in service. High radiation level in "B" train dictates delay "B" train change out.	McConnell/ Edwards
G-31	Determine air flow paths in AB/FHB.	A-1		Operating matrix being developed- available 4/22. Update scheduled 4/28.	Nawaz/ Itchner/ Robison/ *Barrett
G-32	Determine that there are no unidentified air flow paths.	A-1		Examination of plant status/ configuration underway. First cust. review complete.	Nawaz/ Itchner/ Robison/ *Barrett
	* NRC contact				



## WASTE MANAGEMENT GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
G-34	Review overall Unit 1 and 2 AB and FHB ventilation requirements with a view towards minimum flow from Unit 2 to Unit 1.	B-1		Review underway; documentation completed.	Itchner/ Robison/ *Barrett/ *Collins
G-40	Criteria for and control tasks resulting in the evolution of contaminants that could poison charcoal filters.	A-1		20 "Red Devil" type local filtration systems on order to control welding fumes.	
L-3	Determination of leakage paths and flow rates in Unit 2 Aux. Bldg. and FHB and repair of leaks where possible. Plant has leakage ID and Status Board in Unit 2 Control Room. Pursue Plant activities associated with this.	2		Plant staff following.	Kraft/ Arthur/ *Cwalina
L-12	High level solid waste disposal investigation.	B-2		In progress.	Edwards/ *Weller/ *Collins
L-26	Perform assessment of the value and need for a closed circuit TV Monitor to provide remote indicator of radwaste panel data.	A-2		Price proposal being assessed versus decon. schedule of Aux. Bldg.	Kraft/ Lutz/ *Stoddart
L-29	Investigate reported water collection in the "B" fuel pool, obtain samples and make plans for disposition. Also investigate the preoperational condition of the fuel pool from a leakage standpoint.	B-2		Water from Unit 2 const. Sample needed.	Williams/ *Barrett
L-33	Develop a plan for tying in the tank farm to EPICOR 2.	B-2		In progress - investigating secondary tie-in.	Snider/ *Weller/ *Collins
	* NRC contact				

## WASTE MANAGEMENT GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
L-35	Investigate the need for a design and construction task to erect a barrier between the Unit 1 and Unit 2 Fuel Handling Bldg. to enable Unit 1 operations with Unit 2 in processing Mode.	B-2		Alternate design Unit 1 side to be submitted 4/27/79.	Williams/ *Barrett
L-37	Develop a plan for removing all radioactive gases from the systems in the AB and FHB.	B-2		Requires completion of L-14.	Ross
G-7	Condenser vacuum pump discharge filter system.	A-2		Filter operational. Investigating operating criteria. Will evaluate DF.	Robison/ Montgomer/ *Collins
G-30	Reactor Purge System Charcoal Filter Sample.	A-2		Radiation survey requested.	McConnell/ *Collins
G-33	Desensitize AB and FHB Filter Monitors.	A-2		Preliminary investigation - desensitization infeasible.	Sieg/ *Stoddart
G-36	Develop "standard" contaminated work area radiological protection system(s), including air supply, clothing, communications systems, etc., which permit best possible working conditions.	B-2		Suggest tasking a Mat-Ed HP, Mat-Ed Maintenance, ALARA on WMG team to develop standard work package.	*Stoddart
	* NRC contact				



## WASTE MANAGEMENT GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
G-39	Develop and assess back-up gas filtration scheme to cross-connect the Auxiliary Building filters to the RB purge filters.	B-2		B&R has developed a concept. Second estimate scheduled shows 14 day + schedule. Heisman Co. has developed drawings. Exposure/schedule cost appears too high. Contingency plan is to open roughly filter manway if emergency ventilation of Auxiliary Building is needed.	McConnell
G-41	Develop filter management strategy.	B-2			
L-11	Investigate/develop process for eliminating Unit 2 water in RCBT's. Process planning for Unit 1 and 2. Design (conceptually) a waste processing system for Unit 2 High Level Liquid Wastes.	B-3		Detail design scheduled to start 4/25/79.	Snider/ *Weller
L-16	Low level waste (paper, rags, wood, etc.) disposal.	B-3		In progress; second compactor ordered.	Edwards/ *Weller/ *Collins
L-17	Develop CAP-GUN 3 System.	B-3		Initial planning only. Detail design scheduled to start 4/25/79.	Snider/ *Weller/ *Collins
L-20	Obtain a level measurement and a sample of water from the RB sump and basement.	B-3		Measurement using Heise gage being explored.	Ross/ *Cwalina
	* NRC contact				



WASTE MANAGEMENT GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
L-22	Develop a plan for long-term cleanup to provide access to Auxiliary Bldg. for restoration activities.	B-3			Open/ *Collins
L-30	Develop plan for radiation survey in Auxiliary and Fuel Handling Bldg.	B-3			Open/ *Stoddart
G-15	Emergency RB Gas Purge Cleanup System.	A-3		On hold; no plan to implement.	Open/ *Collins
G-29	FHB Airlock.	B-3		Airlock unnecessary at this time.	Inactive/ *Barrett

\* NRC contact

INDUSTRIAL ADVISORY GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
2.	Provide recommendation for alternate methods of P/V control.	1		In progress	Ackerman
11.	Instrument diagnostics.	1		Continuous	Ackerman
25.	Instrument				
	a. 12 selected TC's on recorder or computer	1		In progress	Stroupe
	b. TH & ST on recorder	1		In progress	Stroupe
20.	Evaluate various alternatives to decontaminate plant; long-term.	1		Not started	Lawborski
31.	Alternate pressurized level procedure for comment.	1	Comp. 4/29	IA 33	Stroupe
33.	Evaluate pressurizer volume control option w/o level instr. using make-up tank. Trigger point or method for loss of liquid indication and strat. on 30-hour criteria to go solid.	1	Comp. 4/29	IA 33	Kelly
34.	Evaluate core significance of ex-cure upper-lower ratio.	1	In progress		Zebroski/ Ackerman
35.	Modification of EP-32 for loss of natural circulation in "A" loop.	1	Comp. 4/29	IA 35	Stroupe
36.	Understanding of present natural circulation - Review what happened? "B" loop on natural circulation.	1	Comp. 4/30	IA 36: A&B	Kelly
37.	Switching mode and analyzing of "B" solid state with present equipment.	1		In progress	Buhl
40.	Participate in EP-32 changes.	1		In progress.	Stroupe
41.	Examine in-core thermocouple: rise and reasons for.	1		In progress	Buhl.
12.	Specifications for Reflux Boiler Test				
	a. Feasibility	2		In typing	Fornandoz
	b. Specific parameter	2		In typing	Fornandoz

INDUSTRIAL ADVISORY GROUP

Task	Description	Priority	Expected Completion	Status	Task Coord.
13.	Water Level/Reactor P/V				
	a. Short-term	2		In progress	Ackerman
	b. Long-term	2		In progress	Ackerman
14.	Model for boron/gas in primary system.	2		Being written	Koler
19.	Time to core melt with no external cooling and removal through flooding of containment.	2		Not started	Fornandoz
22.	Plan Mod - piping and equipment.	2		In progress	Lawborski



## CORE COOLING RECOMMENDATION

### Short Term (2-4 Months)

Core Cooling - Natural Circulation

Primary System Temp. - Floating - set by decay heat level and secondary conditions

Primary Pressure - 500  $\pm$  50 psi initially.

Pressurizer - Level  $\approx$  250 inches

Level determined by DR + periodically going solid to benchmark

Optional - solid operation

### Steam Generators

A - Steaming, Level at 400" - 430"

VWO thru bypass to condenser

B - Isolated, Level at 373" - 388", ready for use

Condenser - Vacuum maintained as practical - controlled if S/G vacuum too high

RC Pump Seal Flow - 2 gpm each

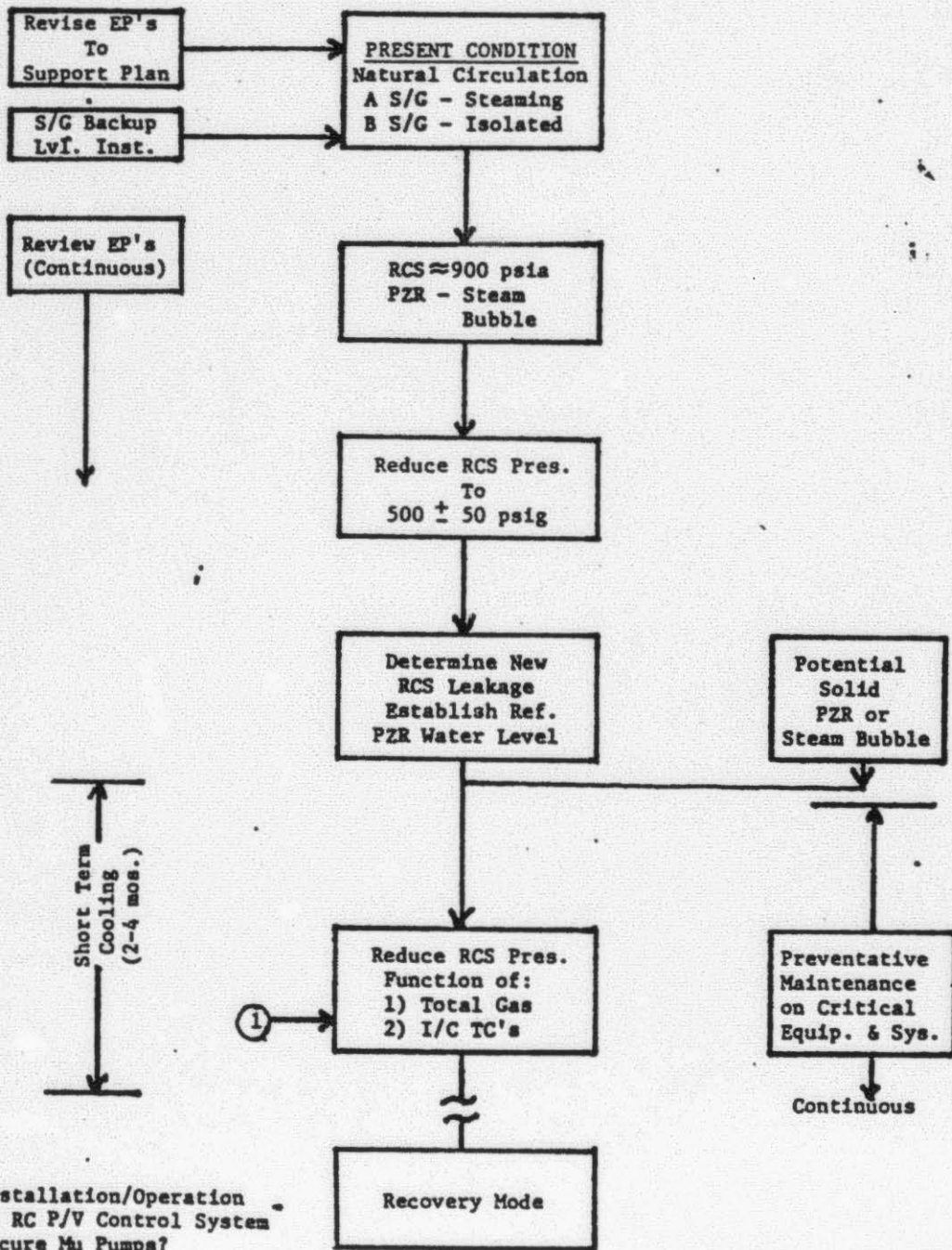
RC Pump Breakers - Open

Intermediate Closed Cooling System - Secured

MU Tank Temperature - As high as possible below 150° F.

MU Water - Degassed.

CORE COOLING PLAN  
(Short Term - 2-4 Months)



① Installation/Operation of RC P/V Control System Secure M1 Pumps?

**CRITICAL EQUIPMENT**  
**SHORT TERM - (2 - 4 Months)**

**Components - Letdown & Makeup Valves**

Makeup Pumps

Pressurizer Heaters (Solid Optional)

Condensate Pumps

Startup FW Control Valves

Circ. Water Pumps & Support Systems

Condenser Vacuum Pumps

Aux. Steam Boiler

Emergency Power for Pumps, Valves, Heaters

Turbine Bypass Valve

Turbine on Turning Gear (Lube oil and cooling)

Primary Coolant Sampling Equipment

**Instrumentation - Primary HL & CL RTDs**

Core T/Cs

Core Flux Monitor

Steam RDTs

Primary Pressure

Pressurizer RTD

MU Tank Level

MU Tank Temp.

S/G Level



RECOVERY MODE

