

BOP/FP/HVAC System Health Reports

System Health Reports Document what is currently significant and what will be significantly challenging in the next 5 to 10 years.

Doug Tamplin
4th quarter 2005



- ASSISTANCE: Request help when moving heavy loads.



U1 04/17/2006 MANUAL TRIP AFTER MFRV #3 WOULD NOT CONTROL.
U2 02/01/2006 EHC LEAK REPAIR.
U1 10/17/2005 MANUAL TRIP AFTER MFRV # 2 SPURIOUSLY CLOSED
U2 05/23/2005 EXTRACTION STEAM PIPING; BELLOWS RUPTURE TO 3C FWH
U1 01/11/2005 UNPLANNED SHUTDOWN GENERATOR PT CONNECTION
U2 11/22/2004 POWER ASCENSION STOPPED 65% DUE TO MFP TURB 2A
U2 07/30/2004 HEATER DRAIN PUMPS; PLANNED DERATE FOR HDP 2A
U1 03/26/2004 OUTAGE TO REPAIR GEN VOLT CONTL INVERTOR.
U2 01/31/2004 OUTAGW TO REPAIR H2 LEAK DUE TO FAULTY

1404 TPCCW

WHITE

GREEN

- Resolve the microbiological infestation for unit 1

1402 River Water WHITE

- Complete packing rework on knife gate valves.
- Refurbished traveling screen # 2 & 3 one per year per current plan.
- Pin hole leaks discovered in the river intake to blowdown sump 12 inch piping.
- RER A054393001 Corporate Engineering to develop a contingency plan to limit plant susceptibility to the buried river water make-up lines that run from the river intake to the NSCW towers, the Natural Draft Cooling Towers, and cooling tower blowdown sump.



ALVIN W. VOGTLE PLANT
Units 1&2 Sept. 8, 1982
Blowdown Piping and
Electrical Duct Run#1165

1305 Condensate / Feedwater

RED

WHITE

- Unit 1 RX trip and LER on MFRV's
10/17/05
- Unit 2 2B condensate pump motor trip on
12/14/05
- MFIV leaks and alarms
- Problematic BFIV air pump.
- Unit 2 loop 4 MFRV cycling and resulting
SG #4 level swings of 4%

1304 Feedwater Heater and MSR Drain WHITE

- 1B HDP developed a leak at the stuffing box extension
- 6A vent line to condenser has a leak at the 90 degree elbow due flow accelerate corrosion.
- The U2 6A/6B Feedwater heater shells have been experiencing thinning at the extraction steam inlet nozzle.
- The RHDT valves have a history of sticking due to the build up of magnetite between the plug and the cage.

1615 EHC control system

WHITE

RED

- Unit 2 RED due to forced outage EHC leak
- WHITE due to the age and obsolescence of the EHC electronic control system components on both units. DCP scheduled
- Electrostatic filtration equipment has been out of service since November 2004 due to a leak and was removed and stored on the mezzanine in the maintenance shop.

1301 Main Steam WHITE

- DCP's for MSIV and Steam Dump actuators to be installed
- Main Steam Safety Valves seats are approaching end of life.
- ARV reliability Implement MDC to improve oil quality.

1303 Extraction Steam WHITE

- White due to cycling of extraction steam valves cycling. MDC to replace instrumentation and GE is reviewing turbine for explanation of excessive moisture.
- Unit 1 bellows require replacement.

1317 Steam Seals WHITE

- Steam steal pressure control solution is being investigated.
- Problems swapping steam packing exhauster cause is still unknown.

1326 Stator Cooling WHITE

- Main Generator Rewind is projected for 2010 and is subject to change based upon the number of stator bar leaks found .
- Resin has to be replaced mid-cycle challenging unit operation.

1414 Condensate Demin WHITE

- Flange leaks due to operating 2 condensate pumps at low power. Operations has action to revise procedures.
- Control system problems. DCP to upgrade to a digital system.

1306 Feedpump Turbine Drive

GREEN

- 1A MFPT Trip Mechanism Test MDC to install a new hand switch.
- The feedpump turbines have a long history of oil leakage from the outboard bearing housing. RER to corporate to resolve.

1301 Main Turbine WHITE

- Replacement of High Pressure Turbine:
- A noise was discovered coming from the Unit 2 LP Turbine "C" hood. Remove Gen end, awaiting recommendation from GE.
- Expansion Joints on LP turbine inlet piping: 6 per unit \$100,000 per joint. GE Business Team meeting on 01/2002 recommended no action at this time.

1302 Auxiliary Feedwater

GREEN

- The TDAFW monitoring computer failed on both units during 2004
- The spare MDAFW pump rotating element is not suitable for use in its present condition. (Fall 2000)
- Failures of the starter auxiliary contacts, which has occurred on motor operated valves
- The 1" pipe that drains condensate from the low points on the TDAFW turbine's steam supply lines to the main condenser experiences periodic through-wall leaks.
- U1 CST degassifier O2 in-leakage.
- TPCW is the seal water source on unit 2

1401 Circulating Water WHITE

- Need to obtain spare Circ water pump motor.
- Discharge expansion joints at all circulating water pumps have degraded and require replacement during next outage.
- Remove the old Cooling Tower Lighting system and upgrade per DCP. A rescue plan is required for this work.
- Corporate RER 1060182901 was generated to establish a long range plan to assess the current performance of both cooling towers and provide recommendations to improve performance.
- System engineer reviewing reliability of pump discharge MOV's to determine if valves need to be reoriented.

1813 Fire Detection System

YELLOW

- The fire detection system remains yellow due to continued nuisance alarms on the fire alarm system. This condition has resulted in reduced operator sensitivity to actual alarms.
- Equipment obsolescence remains an issue.
- Admin Support Building unsat.
- North Main Steam Valve Room smoke detectors.
- DAW Facility detection system

2301 Fire Protection System

YELLOW

- Underground leaks, model A-4 Multimatic valve obsolescence, north and south fire water tanks level inconsistency.
- #13 on the Major Issues List.
- Two jockey pumps are being run.
- Excessive pressures have been noted on wet pipe sprinkler systems (MDC 02-VAM041)

1501 Contain Building Cooling WHITE

- Containment Building Air Cooling System is currently classified as WHITE. The system will not be returned to GREEN until all degraded cooling coils are replaced.
- SNC Component Engineering is developing the Long Range Plan to replace all of the coils on the Containment ESF and AUX coolers.

1535 Fume Hood Exhaust Fan WHITE

- The system continues to meet the white classification due to vibration issues noted since the 4th Quarter of 2002 associated with A-1535-N7-001-000. Recently obtained cost estimate preparing DCR to replace fan.

1551 Aux Building Supply WHITE

- The Auxiliary Building Supply and Normal HVAC for both units are white due to the material condition. The classification is largely based on the need to perform a complete overhaul on the U1 #2 and U2 #2 supply units.

1591 Normal Chilled Water

YELLOW

- Due to repeat failures of obsolete Telemecanique Class J control relays in the Normal Chiller control panels. RER received for a cost estimate to replace the control system preparing a DCR
- Material condition.

1553 Aux Building Normal Exhaust.

GREEN

- All three of the unit 2 carbon beds will require replacement in the next 5 years. This is intensive manpower and large quantity of charcoal to purchase (~30,000 lbs/bed), the Unit 2 carbon beds are likely to be the biggest system health issue in the next 5 years.

1531 Control Room HVAC GREEN

- Initial tracer gas testing to measure unfiltered in-leakage for the Main Control Room was completed in December 2003. Corporate Licensing currently has the action to update UFSAR and Tech Specifications. Corporate is waiting for NRC guidance.

1532 Control Building ESF HVAC
1539 Control Building Cable
Spreading Room HVAC
GREEN

- The material condition is average. Engineering continues monitor degradation of aging air handler cooling units.

1561 Piping Penetration System

White GREEN

- Unit 1 white due to relay failure and TS entry. This has been corrected and should return to green next quarter.
- Complete flow balance activities for Unit 1. The current schedule is to complete activities by 6/1/06.

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