

An Assessment of PWR Steam Generator Condensation at the Oregon State University APEX Facility



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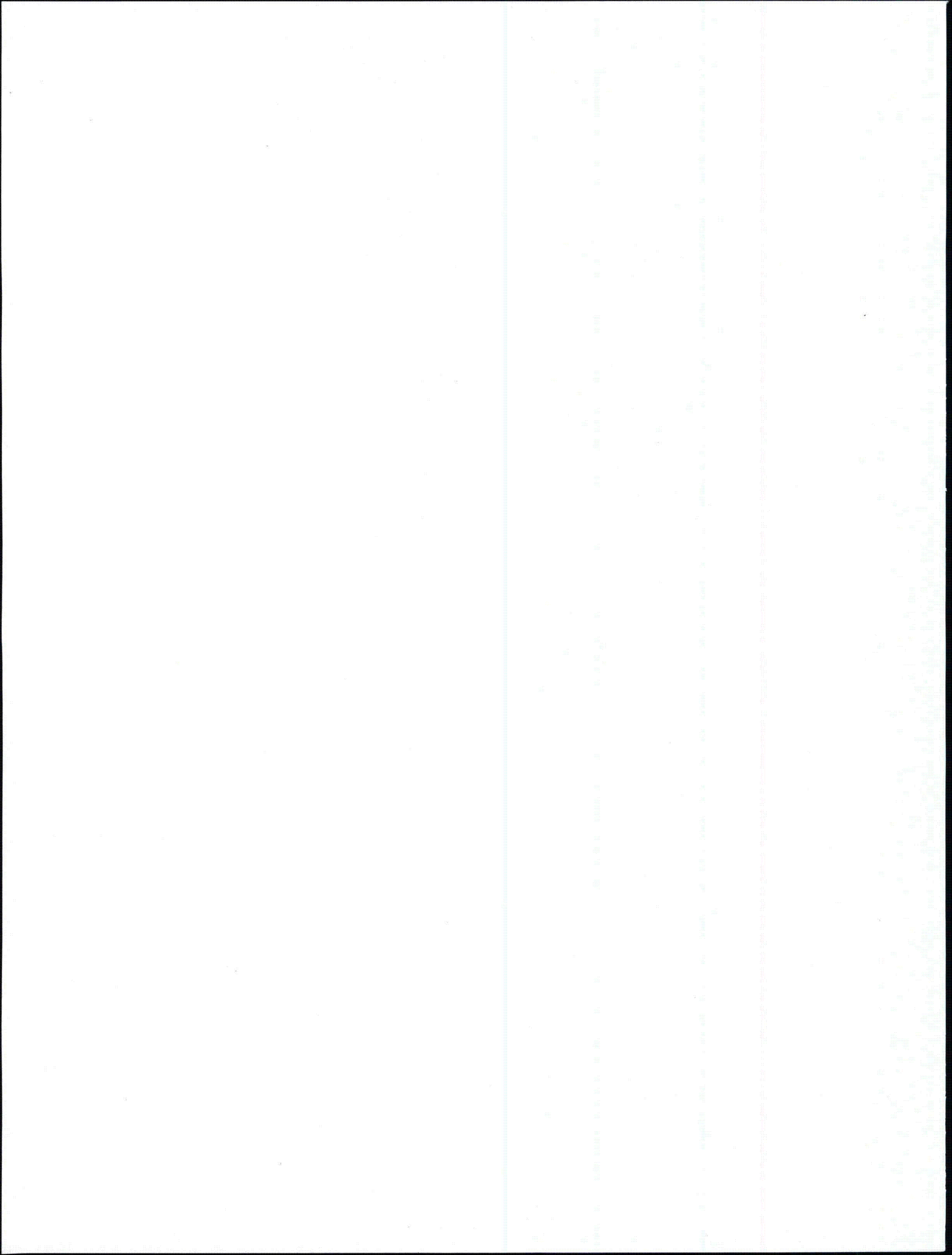
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ABSTRACT

This report describes the testing to assess steam generator U-tube steam condensation conducted at the Oregon State University Advanced Plant Experiment Test Facility from 2005 through 2007. Eight separate steam generator condensation tests were sponsored by the Nuclear Regulatory Commission and completed at the APEX test facility. These tests were designed to evaluate steam condensation rates in a scaled Pressurized Water Reactor steam generator at various primary and secondary side pressures and inlet steam mass flow rates. Two of the tests included the presence of non-condensable gases. The experimental data will provide a basis to assess TRACE steam generator modeling techniques and to assist in development of improved models for condensation and steam generator thermal-hydraulics.

FOREWORD

Many pressurized water reactor (PWR) nuclear power plants use U-tube steam generators. When a significant amount of the coolant inventory is lost from the primary system of these plants during a small break loss-of-coolant accident (SBLOCA), natural circulation between the reactor vessel and steam generators via hot legs becomes one of the primary means of removing decay heat. Steam produced by the core condenses in the steam generator tubes, and drains back to the reactor vessel. Drainage back to the vessel can be impeded by the steam and, for high enough flow rates, held up within the steam generator tubes. Reactor safety analysis codes must be able to predict this phenomenon, referred to as reflux condensation, in order to accurately determine the vessel inventory and the possibility of core heat-up.

The U.S. Nuclear Regulatory Commission (NRC) has consolidated its thermal hydraulic computer codes into TRACE. The TRACE code is intended to analyze a broad range of postulated accidents and operational transients in different types of nuclear power plants. TRACE is the abbreviation of TRAC (Transient Reactor Analysis Code) and RELAP (Reactor Excursion and Leak Analysis Program) Advanced Computational Engine and is a best-estimate code designed to predict realistic plant behavior during an accident. In order to determine if TRACE is capable of predicting reflux condensation, it must be assessed against prototypic experimental data.

Only limited reflux condensation test data are available to the NRC for low pressure conditions. These conditions are of interest for some scenarios important in new reactor designs. To help overcome the shortcoming in the experimental database, the NRC sponsored a series of eight tests in the Advanced Plant Experiment (APEX) Facility at the Oregon State University. The assessment against these additional data from the APEX facility will strengthen the technical basis of applying the TRACE code for analyzing the reflux condensation phase of SBLOCAs in PWRs.

The APEX facility steam generator models the Westinghouse Delta-75 steam generator and contains 133 U-tubes of the prototypical diameter but a quarter length of full size steam generator tubes. The eight APEX tests provide data in the range of primary side pressures between 0.37 MPa (54 psia) and 2.19 MPa (318 psia) with the inlet steam flow Reynolds numbers between 2000 and 12,000.

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EXECUTIVE SUMMARY

This report describes the results of Oregon State University (OSU) research conducted from 2005 through 2007 at the OSU Advanced Plant Experiment (APEX) test facility. The objective of this proposed work is to conduct a series of reflux condensation tests using the steam generators (SG) at the OSU APEX facility. The experimental data will provide a basis to assess the TRAC (Transient Reactor Analysis Code) RELAP (Reactor Excursion and Leak Analysis Program) Advanced Computational Engine (TRACE) steam generator modeling techniques and to assist in development of improved models for condensation and steam generator thermal-hydraulics.

Steam generator thermal-hydraulics plays an important role in small break LOCAs, and codes such as TRACE must be able to simulate those physical processes accurately. Reflux condensation, which refers to the processes of condensation within the steam generator tubes and the rate at which the condensate can flow back to the reactor vessel, is particularly difficult to model. Greater reliance on reflux condensation has been proposed as part of accident management in new and advanced reactors, by intentionally depressurizing the secondary side of the steam generator during a suspected small break LOCA. This test program was conducted to provide additional data at the lower range of pressures where this intentional secondary side depressurization will drive the primary side pressure.

Eight separate SG condensation tests were conducted as part of this test program. For tests -01 through -06, the nominal test pressure was varied between each test. These tests were conducted without the presence of a non-condensable gas. Tests -07 and -08 were conducted at the same test pressure as one another; however the percentage of non-condensable gas was varied between the two tests. For the test program, tube side inlet steam pressure varied between 0.37 MPa to 2.19 MPa.

Based on the SG condensation experiments completed at the APEX test facility, the following conclusions can be made:

1. During these tests, with the exception on test 6-5, the condensation rates experienced in the CL and HL sides of the SG tubes are approximately equal with no distinctive pattern emerging.
2. The condensate flow for the test steps above a Re_{film} of approximately 60, exhibited characteristics indicative of turbulent flow in the condensate film. This represented the majority of the test steps performed. The condensate flow for the test steps below a Re_{film} of approximately 60, exhibited characteristics indicative of the transition between laminar-wavy and turbulent flow. Purely laminar or laminar-wavy condensate film flow was not indicated in any of the test steps.
3. The film Prandtl number may directly impact the U-tube SG condensation heat transfer independent of the film Reynolds number. It appears that tests with the smallest film Prandtl number may have a flatter slope when investigating the correlation between Nu_{mod} and Re_{film} than tests with larger film Prandtl numbers. However, to make general conclusion on this point a wider range of film Reynolds numbers should be tested for both small and large film Prandtl number tests.
4. A carryover ratio, quantifying the difference in film condensation between the up and down side of the U-tubes, has been defined. The condensation heat transfer appears to be independent of the carryover ratio. The carryover ratio remained constant at one (indicating equal condensation on up and down sides) for all test steps herein except for one. The test step showing the largest carryover ratio exhibited the greatest non-dimensional interfacial shear stress of all the test steps. Further testing is needed to make more general conclusions concerning the influence of interfacial shear stress on the carryover ratio.
5. The carryover ratio and condensation heat transfer appear to be independent of the inlet steam Reynolds number within the range of steam Reynolds numbers (2000-12000) investigated.

6. Two tests were completed that compared condensation in a steam only environment to condensation with the presence of nitrogen. Test -07 used a nitrogen mass fraction of 2.5 % while test -08 used a nitrogen mass fraction of 10.0%. Both non-condensable gas tests exhibited a small degradation in condensate heat transfer over their steam only counterparts. Of note is the fact that the presence of non-condensable gas induced more condensation on the up side of the U-tubes and less condensation on the down side of the U-tubes. This tendency became greater as the non-condensable concentration increased.

ABBREVIATIONS

| | |
|--------|---|
| ACC | accumulator |
| ADS | automatic depressurization system |
| AP1000 | Westinghouse Advanced Passive 1000 MWe Plant |
| APEX | Advanced Plant Experiment |
| BAMS | break and ADS measurement system |
| CFR | Code of Federal Regulation |
| CL | cold leg |
| CMT | core makeup tank |
| CVS | chemical volume system |
| DAS | data acquisition system |
| DP | differential pressure |
| DVI | direct vessel injection |
| FVM | vortex flow meter |
| HL | hot leg |
| Hx | heat exchanger |
| IRWST | in-containment refueling water storage tank |
| LDP | differential pressure level |
| LOCA | loss of coolant accident |
| NRC | US Nuclear Regulatory Commission |
| NSSS | nuclear steam supply system |
| OSU | Oregon State University |
| PC | process controller |
| PLC | programmable logic controller |
| PRHR | passive residual heat removal system |
| PT | pressure transducer |
| PWR | pressurized water reactor |
| PZR | pressurizer |
| RCS | reactor coolant system |
| RCP | reactor coolant pump |
| RELAP | Reactor Excursion and Leak Analysis Program |
| RPV | reactor pressure vessel |
| SCR | silicon controlled rectifiers |
| SCXI | signal conditioning extension for instrumentation |
| SG | steam generator |
| TF | fluid temperature |
| TRAC | Transient Reactor Analysis Code |
| TRACE | TRAC-RELAP Advanced Computational Engine |
| T/C | thermocouple |

NOMENCLATURE

| | |
|-----------------------------|--|
| A | steam generator surface area [m ²] |
| c _{p,f} | fluid specific heat [J/kg-K] |
| d | degradation factor |
| D | inside tube diameter [m] |
| E | energy [J] |
| f _i | interfacial friction factor |
| G _g | mean gas mass flux [kg/m ² -s] |
| G _i | inlet gas mass flux [kg/m ² -s] |
| G _o | outlet gas mass flux [kg/m ² -s] |
| g | acceleration of gravity [m/s ²] |
| h | mean heat transfer coefficient [W/m ² -K] |
| h _i | heat transfer coefficient inside of tubes [W/m ² -K] |
| h _o | heat transfer coefficient outside of tubes [W/m ² -K] |
| j _{g,critical} | complete flooding gas superficial velocity [m/s] |
| k _f | fluid thermal conductivity [W/m-K] |
| k _w | wall thermal conductivity [W/m-K] |
| m | mass [kg] |
| M | molecular weight [kg/kmol] |
| P _r | critical pressure ratio |
| q'' | heat flux [W/m ²] |
| r _i | inside tube radius [m] |
| r _o | outside tube radius [m] |
| R _p | surface roughness [μm] |
| T _m | mean temperature difference [K] |
| ΔT _{in} | temperature difference between heat exchanger inlets [K] |
| ΔT _{out} | temperature difference between heat exchanger outlets [K] |
| U | overall heat transfer coefficient [W/m ² -K] |
| C | carryover ratio |
| c | Wallis flooding correlation coefficient |
| Nu _{mod} | modified Nusselt number |
| Pr _{film} | film Prandtl number |
| Re _{film} | film Reynolds number (total) |
| Re _{film,nc} | film Reynolds number with non-condensable gas present (total) |
| Re _{film,up} | film Reynolds number (up side) |
| Re _{film,down} | film Reynolds number (down side) |
| Re _{stm,inlet} | steam Reynolds number (inlet) |
| Re _{stm} | steam Reynolds number (average) |
| τ _i [*] | non-dimensional interfacial shear stress |
| Γ | film mass flow rate per unit width [kg/m-s] |
| μ _f | fluid absolute viscosity [N-s/m ²] |
| μ _g | gas absolute viscosity [N-s/m ²] |
| ρ _f | fluid density [kg/m ³] |
| ρ _g | gas density [kg/m ³] |

1 INTRODUCTION

This report describes the results of Oregon State University (OSU) research conducted from 2005 through 2007 at the OSU Advanced Plant Experiment (APEX) test facility. The objective of this proposed work is to conduct a series of reflux condensation tests using the steam generators (SG) at the OSU APEX facility. The experimental data will provide a basis to assess TRACE steam generator modeling techniques and to assist in development of improved models for condensation and steam generator thermal-hydraulics. Figure 1.1 describes the tasks performed by OSU as part of this research program.

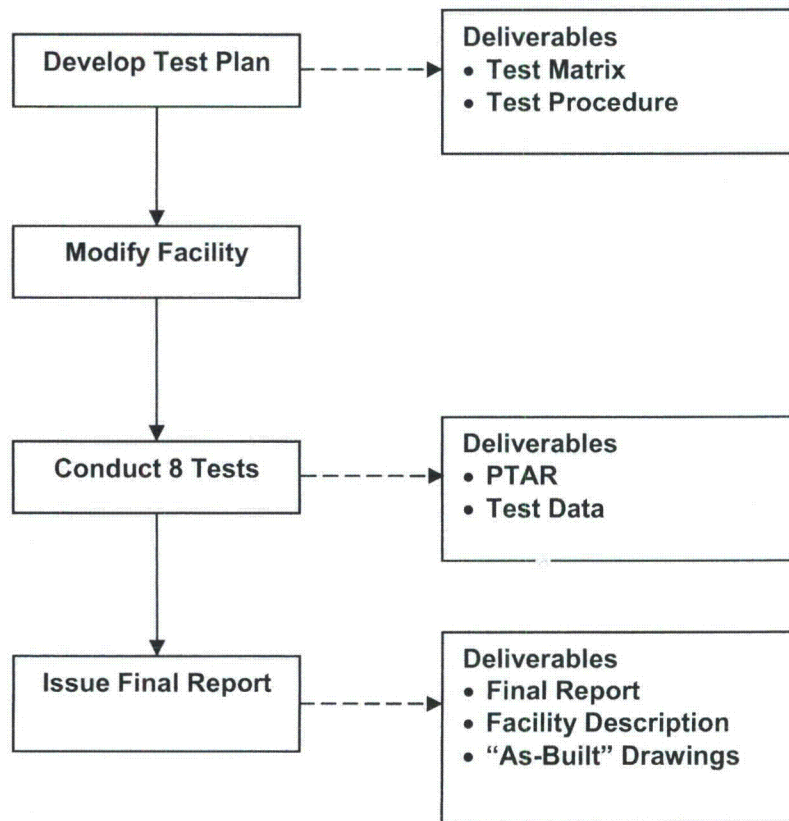


Figure 1.1 Research Plan for APEX SG Condensation Testing Program at OSU

Steam generator thermal-hydraulics plays an important role in small break LOCAs, and codes such as TRACE must be able to simulate those physical processes accurately. Reflux condensation, which refers to the processes of condensation within the steam generator tubes and the rate at which the condensate can flow back to the reactor vessel, is particularly difficult to model. Greater reliance on reflux condensation has been proposed as part of accident management in new and advanced reactors, by intentionally depressurizing the secondary side of the steam generator during a suspected small break LOCA. This test program was conducted to provide additional data at the lower range of pressures where this intentional secondary side depressurization will drive the primary side pressure.

2 FACILITY DESCRIPTION

The APEX test facility at OSU, shown in Figure 2.1, has been specifically designed and constructed to provide high quality data for use in computer code benchmark calculations. APEX presently simulates the reactor coolant system, the core makeup tanks (CMT), the automatic depressurization system (ADS), the in-containment refueling water storage tank (IRWST), and the lower containment structures of a Westinghouse Advanced Passive 1000 MWe plant (AP1000). The test facility is a one fourth height, one half time scale, reduced pressure and temperature integral systems test facility. All of the reactor coolant system components are constructed of stainless steel 304 and can be operated up to its design temperature and pressure limits of 505 K (450 °F) and 3.2 MPa (400 psig). All primary system components are insulated to minimize heat loss. In order to conduct the subject test program, the APEX test facility (described in this section) was modified to isolate SG #1 from the primary loop piping. These modifications are described in Section 3.

The APEX test facility is housed in a three story bay having 900 square feet of floor space and an additional two story control room area having 400 square feet of floor space. This provides adequate space for all test components and supporting systems such that tests can be performed efficiently and safely.

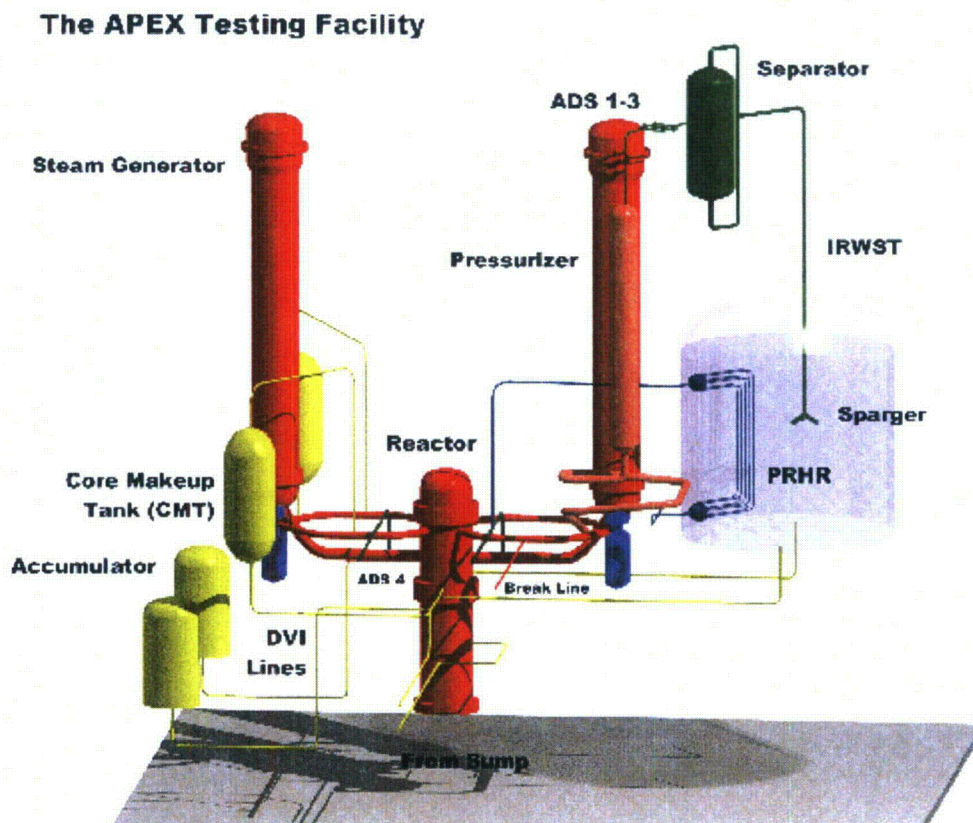


Figure 2.1 APEX Test Facility

2.1 Reactor Coolant System

The APEX facility reactor coolant system (RCS) is a complete model of the AP1000 nuclear steam supply system (NSSS). The RCS includes:

- An electrically heated 48-rod bundle,
- A reactor pressure vessel (RPV) with upper core internals,
- A pressurizer (PZR),
- Two U-tube steam generators (SGs),
- Four reactor coolant pumps (RCPs), and
- associated primary loop piping.

See Figures 2.2 and 2.3 for elevation view and plan view of the RCS respectively.

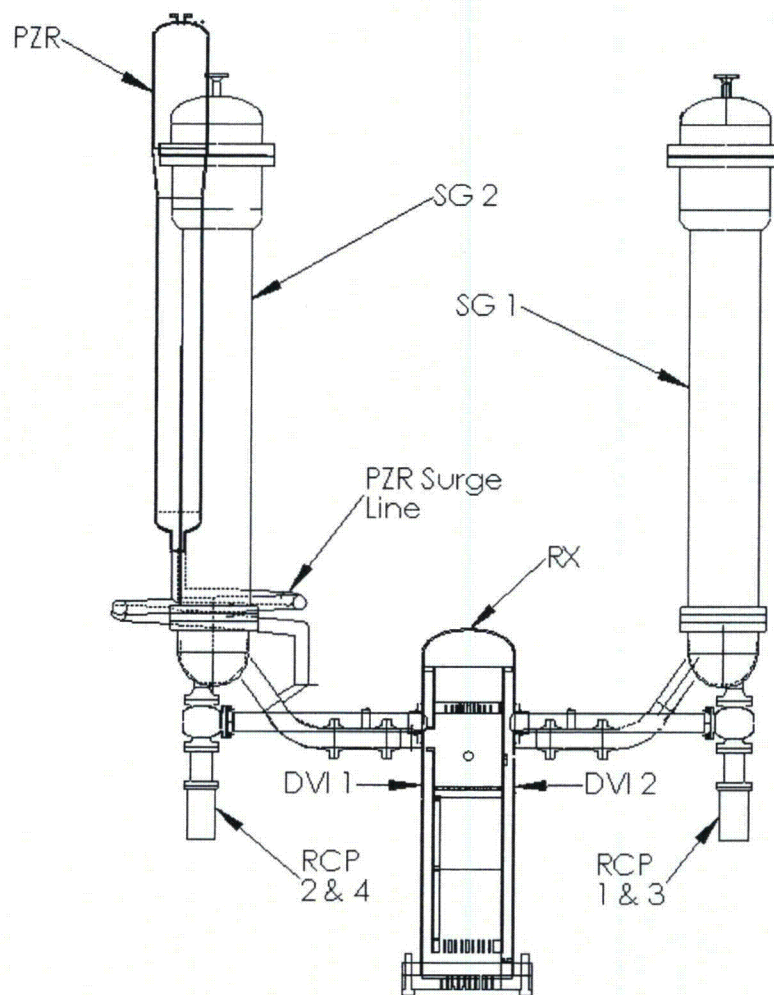


Figure 2.2 Elevation View of the APEX Reactor Coolant System

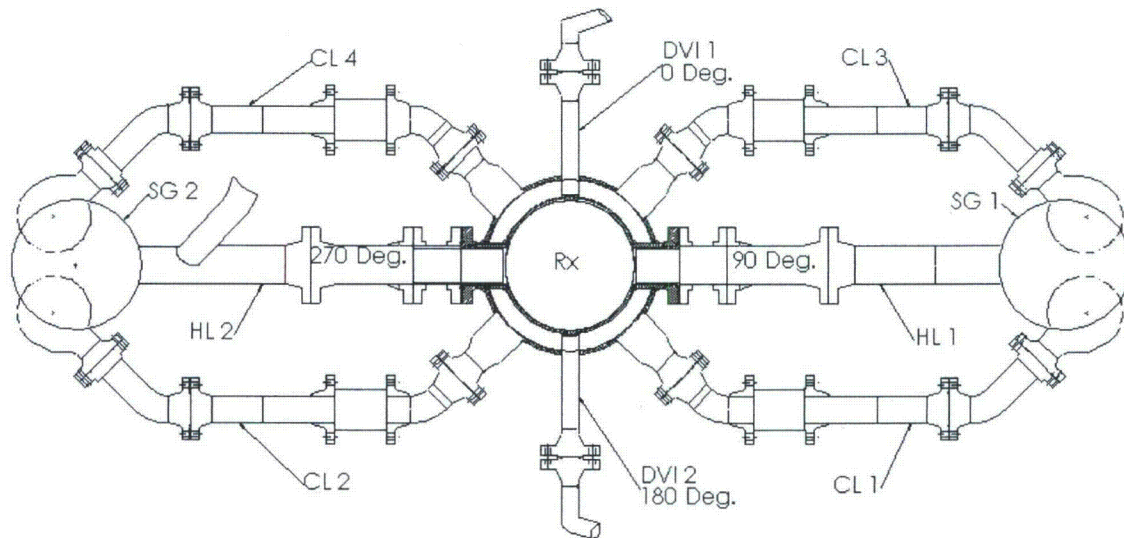


Figure 2.3 Plan View of the APEX Reactor Coolant System

2.2 Reactor Pressure Vessel

The RPV models the upper and lower internals of the AP1000 reactor vessel, core barrel, downcomer, and core. The maximum core power is approximately 1000 kW, can be distributed in two radial power zones and can be programmed to simulate time-dependent decay power. The RPV includes connections for the two hot legs (HLs), four cold legs (CLs), and two direct vessel injection (DVI) lines.

During normal operation, cold water enters through four 3.5 in schedule 40 cold legs into an annular downcomer region that is bounded by the inside surface of the reactor vessel shell and the outside surface of the core barrel. The cold water in the downcomer flows into the lower plenum where it changes direction and travels upward through the lower core plate and into the core.

The heated zone of the core extends 91.44 cm (36 in) from the top of the lower core plate and consists of 48 heater rods, each having a 2.22 cm (0.875 in) diameter. Five fluid thermocouple (T/C) rods provide an axial and radial temperature distribution in the core region. Two spacer grids are provided for support of the heaters, one at the mid-plane of the heaters and the other near the core exit. The heater bundle is surrounded by a reflector/baffle that directs the fluid through the core. Figure 2.4 shows a cross sectional view of the RPV.

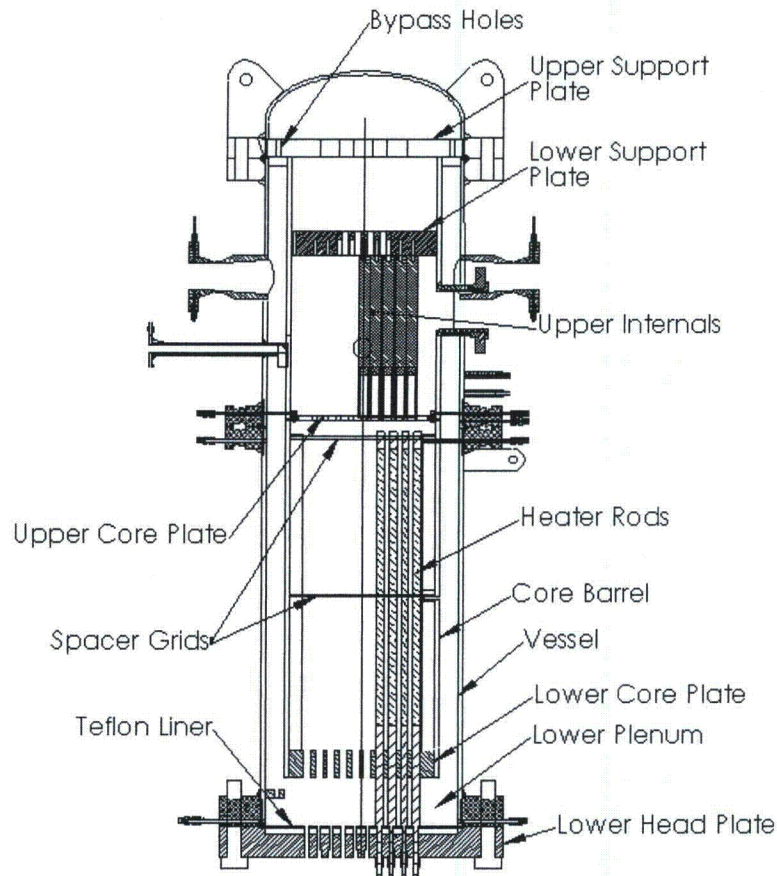


Figure 2.4 Reactor Pressure Vessel Cross-Sectional View

2.3 Pressurizer

A fully functional pressurizer with 20 kW internal heaters and a relief valve system capable of controlling the RCS pressure has been included. The pressurizer is connected to HL-2 through the PZR surge line. The pressurizer's diameter is not constant along its entire length, the lower cylindrical portion is constructed from 12 in schedule 40 pipe, and the upper cylindrical portion is constructed from 16 in schedule 30 pipe. See Figure 2.5 for an elevation view of the pressurizer.

The larger diameter top on the pressurizer was required for the APEX facility since there was not enough vertical space in the lab to accommodate the height of the pressurizer if the diameter remained constant. The larger upper portion of the pressurizer is above the normal pressurizer water level, so only steam is present in the upper portion. The pressurizer in the APEX facility does not use a condensing spray for reduction of pressure; instead a vent is used to exhaust steam. A line from the first three stages of the ADS is connected to the top of the pressurizer for modeling the ADS system depressurization of the primary system.

The pressurizer surge line connects the bottom of the PZR to the top of HL-2. The surge line enables continuous pressure adjustments between the RCS and the PZR. The PZR surge line geometry of the AP1000 has been preserved in APEX as shown in Figure 2.6.

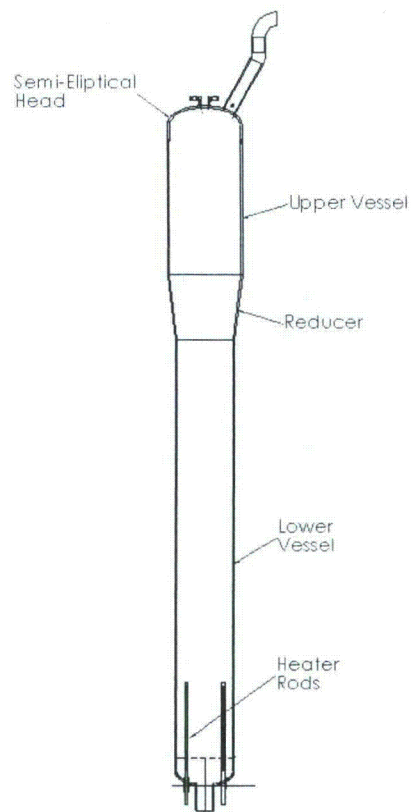


Figure 2.5 Pressurizer

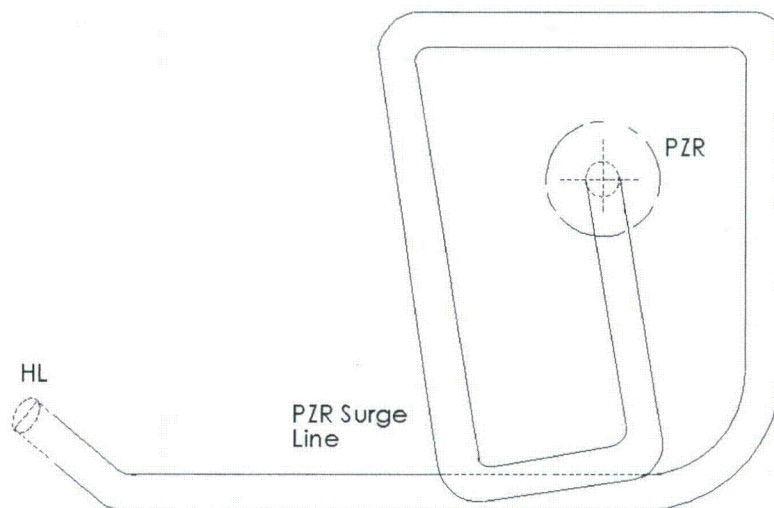


Figure 2.6 Pressurizer Surge Line

2.4 Steam Generators

Two steam generators, one on each loop, have been included in the APEX facility. Each SG is instrumented and is a shell and tube heat exchanger that models the Westinghouse Delta-75 Steam Generator (see Figure 2.7). The SG lower channel head includes connections for two RCPs and a single HL. SG #2 contains connections for the passive residual heat removal system (PRHR) heat exchanger (Hx) return flow and the chemical volume system (CVS) pump discharge.

As shown in Figure 2.8, each SG contains 133 U-tubes with 1.745 cm (0.687 in) outside diameter and 1.542 cm (0.607 in) inside diameter. A single chevron type moisture separator is located at the steam outlet nozzle to ensure dry steam. Moisture removed by the separator is directed to the downcomer to aid in heating the incoming feed water. Feed water is distributed inside the steam generator by a feed water nozzle which includes 8 "J" hook type nozzles to direct flow downward. See Table 2.1 for a list of important SG dimensions.

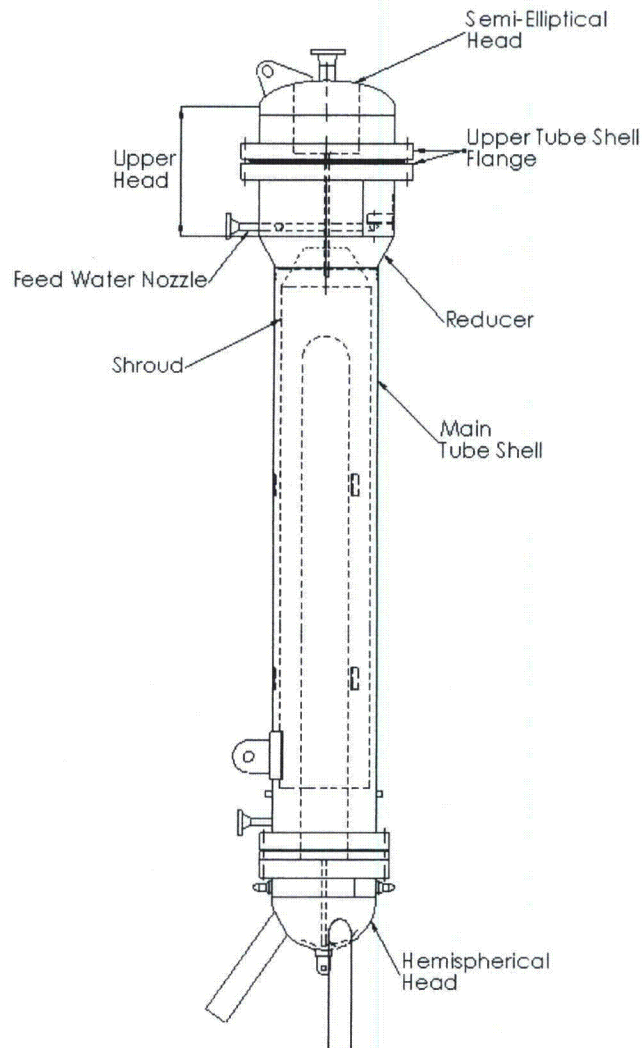


Figure 2.7 Steam Generator

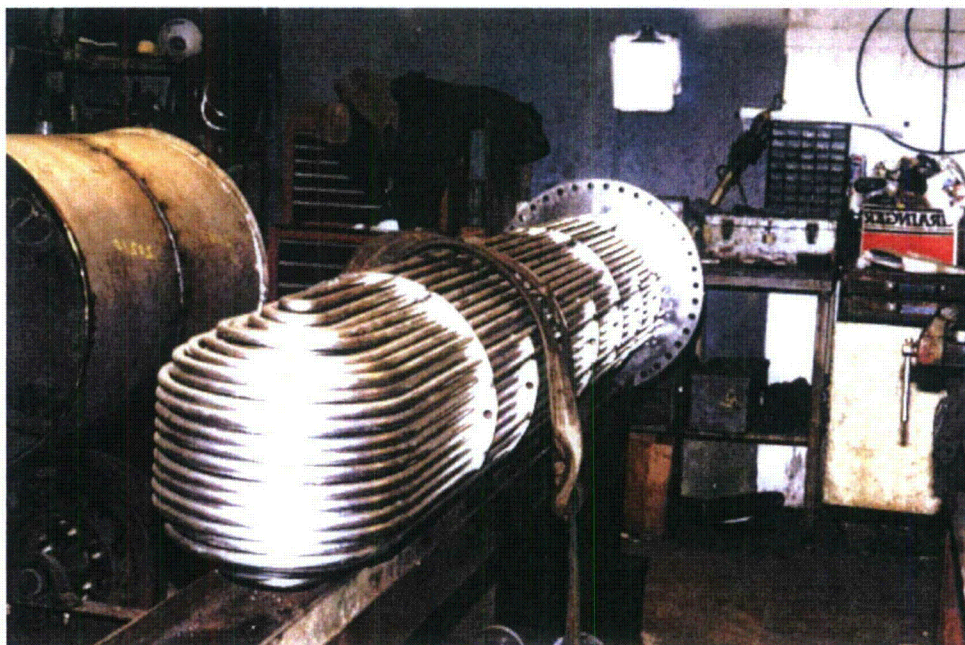


Figure 2.8 Steam Generator U-tube Bundle

| Table 2.1 Steam Generator Dimensions | | | | | |
|--|--------------|--|--------|--|-----------------|
| Parameter | | SG #1 | | SG #2 | |
| Upper Shell Volume | | 0.233 m ³ (8.242 ft ³) | | 0.257 m ³ (9.084 ft ³) | |
| Cylindrical Section Volume | | 0.314 m ³ (11.081 ft ³) | | 0.317 m ³ (11.182 ft ³) | |
| Total Volume ft ³ (m ³) | | 0.547 m ³ (19.323 ft ³) | | 0.574 m ³ (20.266 ft ³) | |
| U-Tube Inside Diameter | | 1.542 cm (0.607 in) | | | |
| U-Tube Outside Diameter | | 1.745 cm (0.687 in) | | | |
| U-Tube Flow Area | | 248.4 cm ² (38.50 in ²) | | | |
| Row | Number Tubes | Length | | Outside Surface Area | |
| | | cm | in | m ² | ft ² |
| 1 | 19 | 495.14 | 194.94 | 5.16 | 55.51 |
| 2 | 18 | 501.65 | 197.50 | 4.95 | 53.28 |
| 3 | 17 | 508.00 | 200.00 | 4.73 | 50.96 |
| 4 | 16 | 514.35 | 202.50 | 4.51 | 48.56 |
| 5 | 15 | 520.70 | 205.00 | 4.28 | 46.09 |
| 6 | 14 | 527.05 | 207.50 | 4.05 | 43.54 |
| 7 | 13 | 533.40 | 210.00 | 3.80 | 40.92 |
| 8 | 12 | 539.75 | 212.50 | 3.55 | 38.22 |
| 9 | 9 | 546.10 | 215.00 | 2.69 | 29.00 |
| Total | 133 | | | 37.73 | 406.08 |

2.5 Primary Loop Piping

The primary loop piping models two primary loops, each consisting of a single hot leg and two cold legs. Break spool pieces are installed on primary loop and passive safety system piping to model various LOCA scenarios. The following LOCA breaks can be modeled in APEX:

- Top of CL #3 break
- Bottom of CL #3 break
- Bottom of CL #4 break
- Bottom of HL #2 break
- Single ended DVI break
- Double ended DVI break
- Single ended CMT balance line break
- Double ended CMT balance line break

Each of the primary loop breaks is initiated by pneumatic operated valves connected to the associated break spool piece. A flow nozzle is used to model the size of the break. The flow from the break is discharged to the break and ADS measurement system (BAMS) where a separator is used to separate and measure the liquid and vapor components of the break flow.

2.6 Passive Safety Systems

The passive safety system relies on gravity and natural circulation to prevent core damage in the event of a LOCA or loss of heat sink. The safety system provides three sources of makeup water with direct vessel injection to the core and includes a four-stage ADS, a PRHR heat exchanger, and a sump recirculation path for long-term cooling.

2.6.1 Automatic Depressurization System

The automatic depressurization system provides a four stage depressurization of the RCS to allow gravity/pressurized injection of makeup water to the core. Stages 1-3 vent from the top of the pressurizer and discharge to the ADS 1-3 separator where the two phase flow is separated and measured. All portions of the ADS 1-3 flow are re-combined before discharging to a submerged sparger located inside the IRWST. See Figure 2.9 for details of the sparger.

Each stage of ADS 1-3 in APEX models two trains in the AP1000. A flow nozzle is used to model the scaled choked flow area for each stage of ADS 1-3. To model a single valve failure, the desired flow nozzle is replaced with one having a corresponding decrease in flow area.

Two ADS 4 valves, modeling 4 valves in AP1000, are connected to the top of each Hot Leg. Both ADS 4 lines are similar with the exception that ADS 4-2 (PZR side) provides a connection to the PRHR Hx system. The flow from each stage of ADS 4 is discharged to a venturi. The venturi is used to model both the choke flow area and the scaled pressure drop. The flow is directed to a moisture separator where the steam and liquid flows are separated and measured individually. The liquid flow is then directed through a loop seal and into the primary sump, while steam flow is vented to atmosphere.

2.6.2 In-containment Refueling Water Storage Tank

The IRWST is modeled by a cylindrical vessel and provides connections for the ADS 1-3 sparger, to two injection trains, and to the PRHR Hx. Thermocouple rakes are employed to provide a radial and axial temperature distribution of the IRWST pool. A standpipe is used to set the initial water level and a curb overflow is provided to match the scaled AP1000 curb overflow to the sump. The IRWST is capable of being pressurized to 65 psig (4.5 bar).

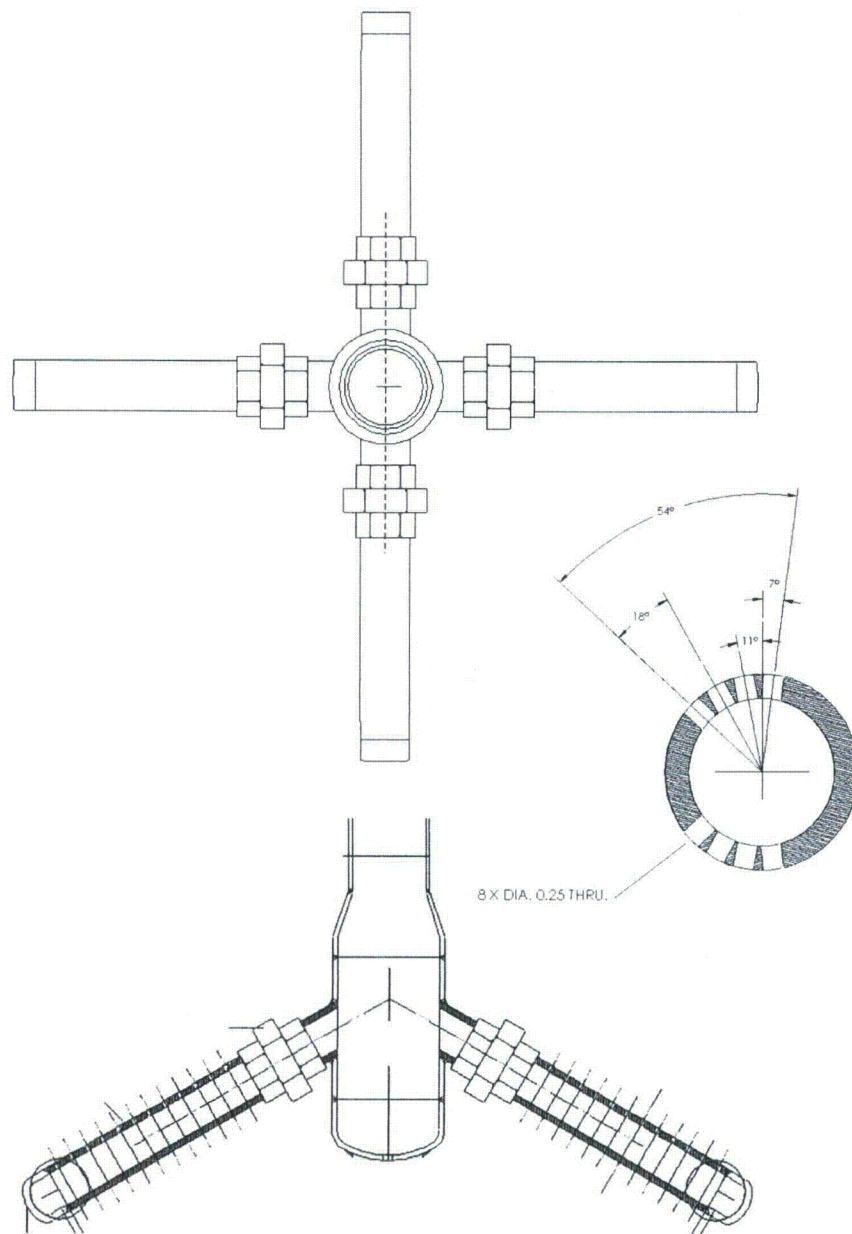


Figure 2.9 ADS 1-3 sparger

2.6.3 Core Makeup Tanks

Two Core Makeup Tanks are included in APEX. AP1000 piping geometry is preserved in APEX with each CMT connected to a cold leg (for pressure balance) and to the associated injection train. A differential pressure level detector is used to provide ADS actuation signals based on level.

2.6.4 Accumulators

Two accumulators (ACC) that are capable of being pressurized to full system pressure are included in APEX. Each ACC employs a standpipe used to set the water level and is pressurized with nitrogen gas. Check valves isolate the ACCs from RCS pressure and open automatically as the RCS system depressurizes during a LOCA.

2.6.5 Passive Residual Heat Removal Heat Exchanger

The passive residual heat removal heat exchanger is a C-Shape heat exchanger submerged inside the IRWST. Both the heat exchanger geometry and inlet and outlet piping geometry are preserved in APEX. The PRHR inlet is connected to ADS 4-2 (HL #2), while the return is connected to the cold leg plenum of SG #2. The PRHR has a total surface area of 6.26 m^2 (67.38 ft^2), and is constructed from 88 0.9525 cm (0.375 in) diameter tubes (see Figure 2.10).

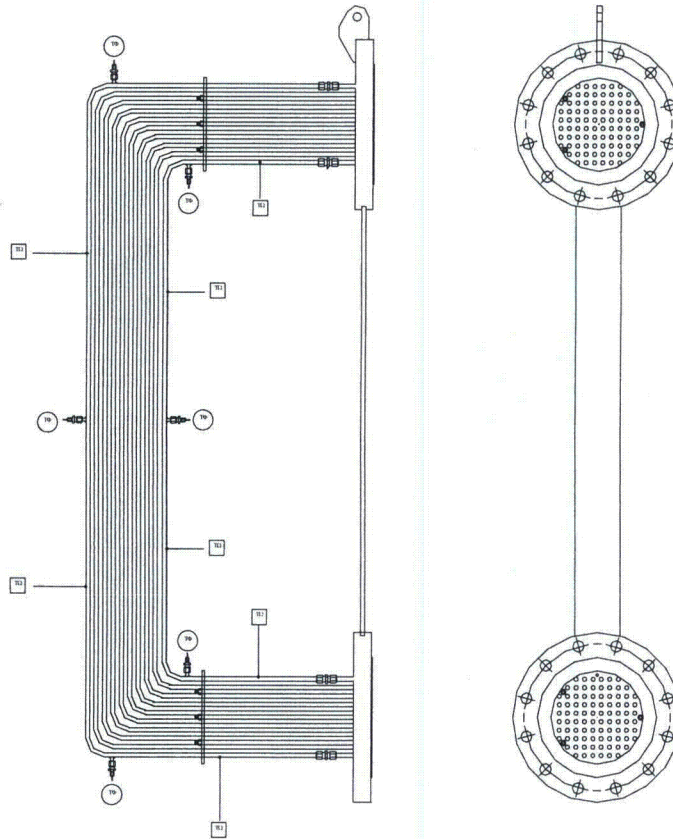


Figure 2.10 PRHR Heat Exchanger

2.7 Break and ADS Measurement System

The break and ADS measurement system is used to separate and measure two-phase volumetric flow rates from the break(s) and four stages of ADS. For the break and ADS 4 separators, the water/steam mixture enters the separator where gravity and a cyclone separator are used to separate the two phases. The separated steam exits the top of the separator, while the liquid is collected and allowed to drain out of the bottom of the separator through a loop seal and into the primary sump. For the ADS 1-3 separator the liquid and steam are first recombined before being discharged to the sparger located inside of the IRWST.

The break separator and the ADS 4 separators have a maximum working pressure of 618 kPa (75 psig) at 505 K (450 °F), while the ADS 1-3 separator has a maximum working pressure of 2.86 MPa (400 psig) at 505 K (450 °F). The steam lines and moisture separators utilize strip heaters to minimize condensation and to maintain a constant boundary condition. See Figure 2.11 for a schematic of the BAMS.

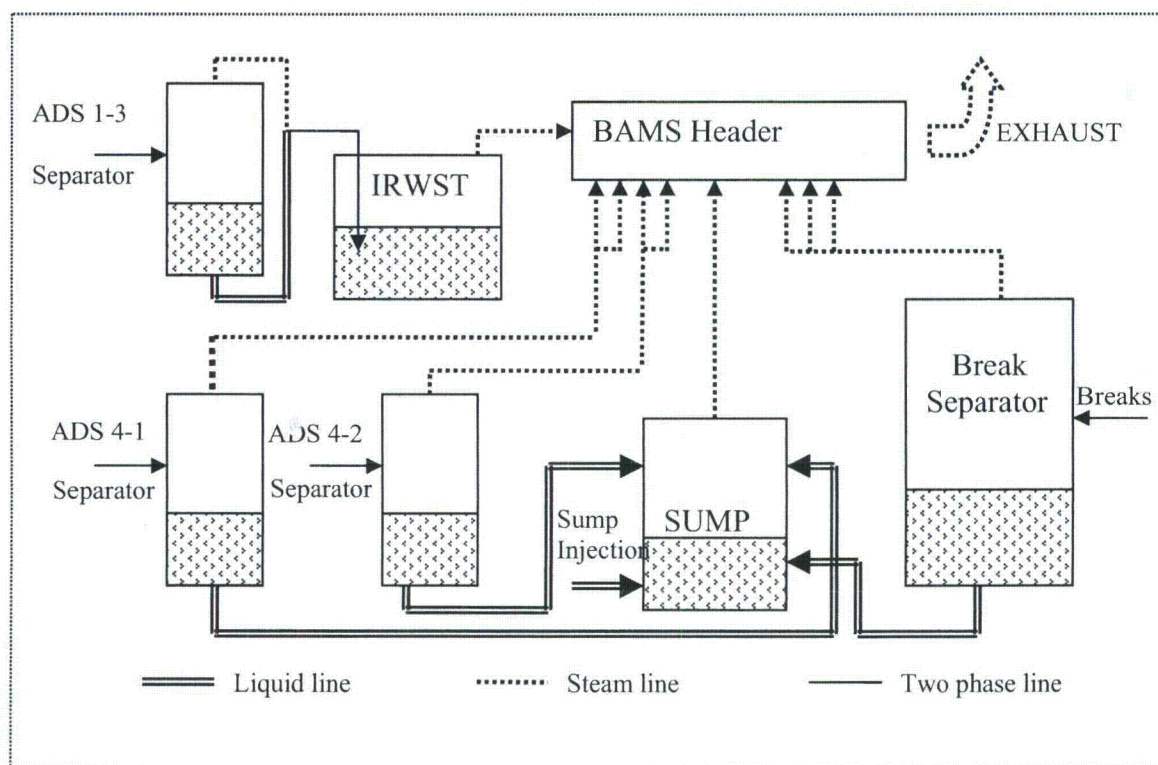


Figure 2.11 BAMS Schematic

2.8 Data Acquisition System

There are approximately 622 instrumented channels in the APEX test facility. The data acquisition system (DAS) writes the data into a single large database. The advantages of using a single database over individual test files are:

- Better management and maintenance.
- Ability of retrieval to be independent of storage (i.e., the data is stored every one second, but the database can be queried at another resolution, say every 5 seconds). This provides a very powerful and flexible retrieval capability.

The single database also allows for easy comparisons between multiple tests since the data is stored together in a large database. The DAS is manufactured by National Instruments and uses signal conditioning extension for instrumentation (SCXI) hardware and off the shelf software. The signal type depend on the specific instrument and include 4-20 mA current, 1-5 VDC, 0-10 VDC, or millivolt (thermocouples) signals. The instruments are connected to terminal boards which can accept any combination of signal types up to 32 channels and include cold junction compensation for use with thermocouple signals. Each terminal board is connected to an analog input module that is housed in a SCXI chassis. The SCXI chassis architecture acts as the communication conduit between modules and routes the analog and digital signals to the data acquisition I/O board. SCXI chassis control circuitry manages the data acquisition bus, synchronizing the timing between each module and the I/O board. The system can scan input channels from several modules in several chassis at rates up to 333 kS/s.

The DAS use three chassis to acquire data. The signals from the chassis are then transferred to a computer that is equipped with a two multifunction I/O boards. The multifunction I/O boards switch the analog input modules between 622 channels at high speed to sample all channels. The data for APEX is typically sampled at a rate of one Hertz per channel.

All the data from input channels are acquired by National Instruments NI-DAQ hardware/software and is then converted into engineering units. The real-time data are sampled and stored in National Instruments Citadel database at one time per second per channel. The Citadel is a proprietary database used for process data. OSU developed an export program to query the Citadel database and format the data file in ASCII text and NRC Data Bank binary file formats.

The following types of instrumentation are used in the APEX Test Facility:

1. **Thermocouples (T/Cs)** are used to measure the temperature of the coolant in the primary and RHR systems and the supply and component cooling water. They are used to measure fluid, component wall, and insulation temperatures to complete a mass/energy balance on components. They are also be used to measure the temperature distribution in the core heaters. Premium grade thermocouples with special limits along with controlled purity extension wire are used to minimize thermocouple errors.
2. **Magnetic flowmeters** are used to measure all single phase water mass flow rates.
3. **Pressure transducers** are used to measure the absolute pressures within the various tanks and at selected locations in the test loops.
4. **Differential pressure transducers** are used to measure the liquid levels in the various primary and secondary side tanks, to determine the liquid inventory in the primary system components and to determine the pressure drop across system components.
5. **Vortex flowmeters** are used to measure all steam flows.
6. **Power meters** are use to measure AC voltage and current for the pressurizer and reactor electric heaters and are configured to output RMS power in kW.

Digitizing errors for the various channels from sensor to DAS are presented in the Table 2.2. The uncertainties of individual components that comprise a measurement ensemble are assumed to be independent. The combined uncertainty for each measurement type is calculated by taking the square root of the sum of the squares of each individual variance. The combined uncertainty represents a worst case uncertainty and is typically much better than the values reported in Table 2.2. The combined uncertainty reported includes system errors which are reduced in practice by performing an end to end calibration of the instrument loop.

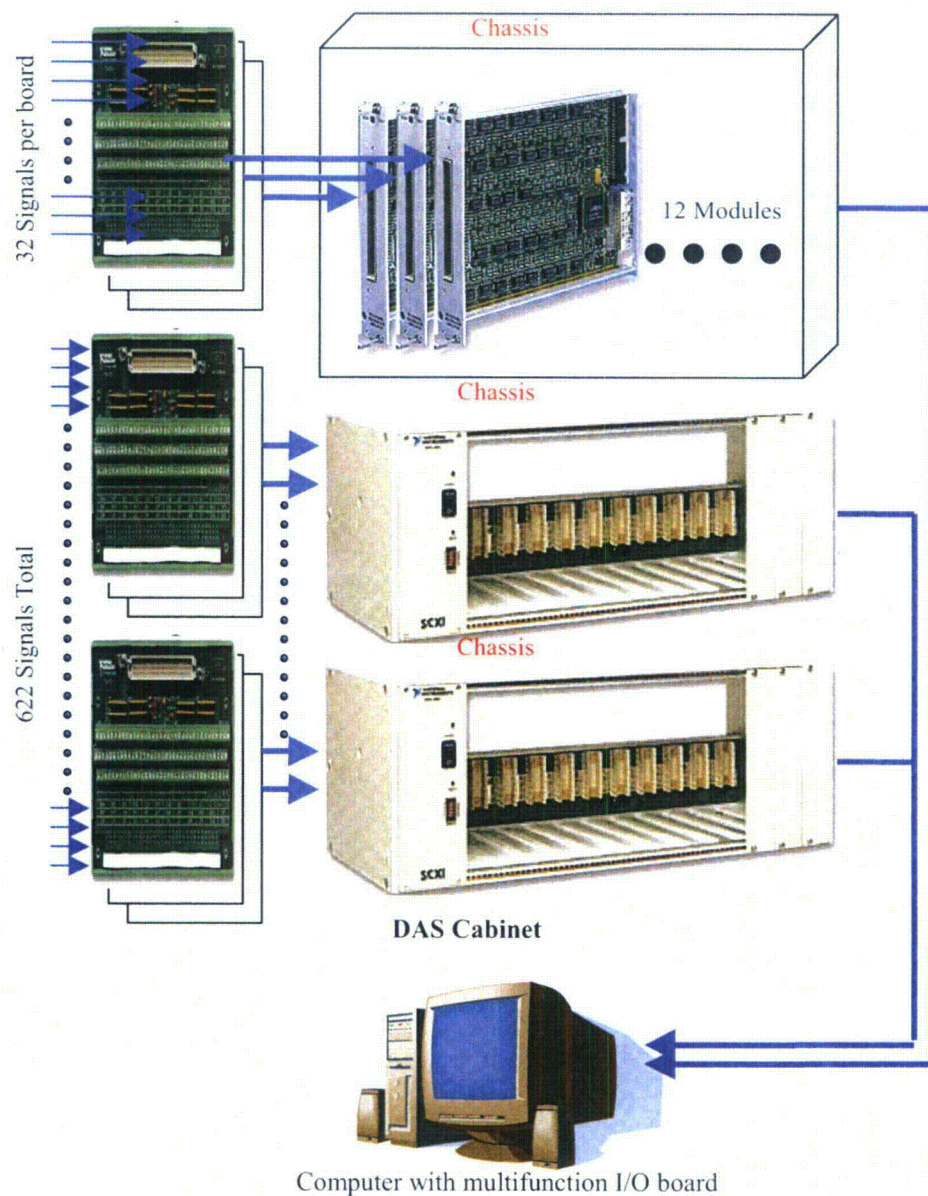


Figure 2.12 Data Acquisition System Hardware Overview

| Table 2.2 Accuracy and Signal Input Levels | | |
|--|----------------------------------|--|
| Instrument | Signal Input Level | Accuracy |
| Thermocouples | 0 - 12 millivolts DC | The greater of ± 1.3 K or 0.4% of reading |
| Vortex flowmeters | 0 - 20 milliamps DC (1-5 VDC) | $\pm 1\%$ of rate for Re numbers greater than 20,000 |
| Magnetic flowmeters | 0 - 20 milliamps DC (1-5 VDC) | $\pm 1\%$ of rate for flows greater than 1.5% of Upper Range Value |
| Pressure transducers | 0 - 20 milliamps DC (1-5 VDC) | $\pm 0.4 \%$ of Upper Range Value |
| All other instrumentation | 0 - 20 milliamps DC (1-5 VDC) | $\pm 0.4 \%$ of Upper Range Value |

2.9 Control System

The APEX test facility control logic system includes various field process transmitters, operator switches, an OMRON programmable logic controller (PLC), a set of Fischer & Porter process controllers (PCs), and a supervisory host computer. An overview of the system interface is shown in Figure 2.13.

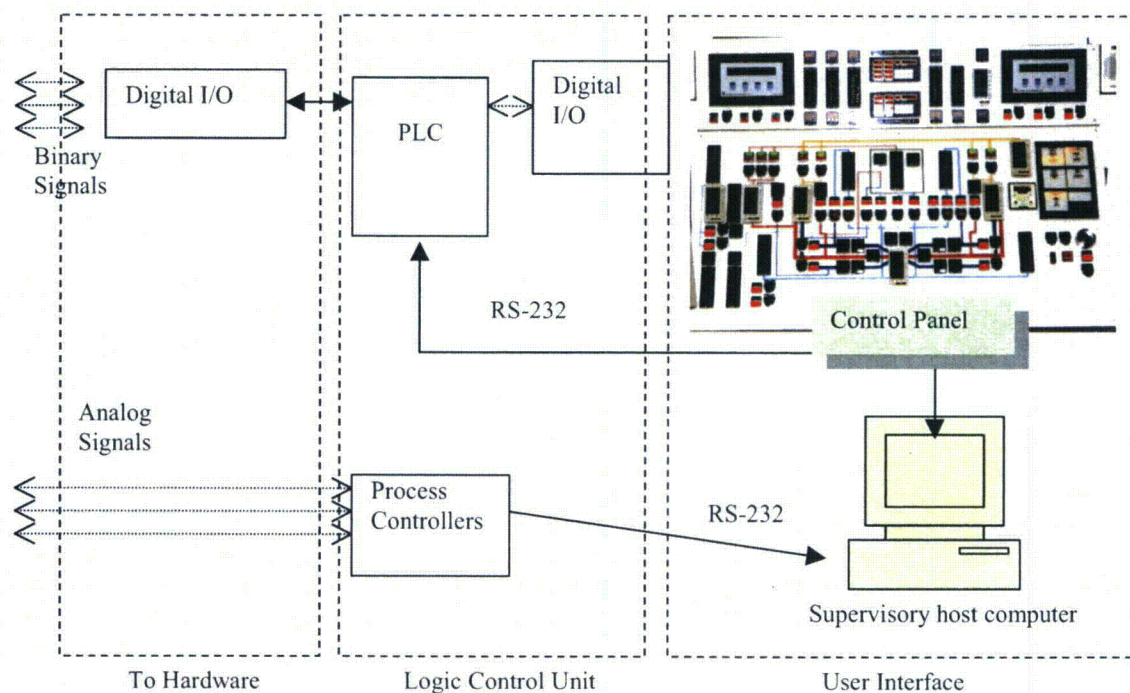


Figure 2.13 Control System Interface

The control system functions in three basic parts:

1. The PLC performs all binary logic functions for safety, sequencing, and operational control.
2. The PCs perform all dynamic (analog) process controls for smooth operation of variable control devices.
3. The supervisory system provides a graphical computer interface between the operator and the facility.

The PLC consists of a central processor for program execution, power supply, two local racks of digital I/O and several remote I/O racks located throughout the facility. All inputs are sensed as 24 VDC signals. All outputs are driven by a 24 VDC supply to energize pneumatic valves, pump motor starters, control panel lights and alarms, etc. The process control system consists of seven dedicated PCs with a total of 40 analog inputs and 20 analog outputs. Analog inputs are used to monitor the process, either directly or as a calculated variable. They include tank level, system pressure, pump flow rate, and applied heater power. The controller performs a series of calculations to determine the likely state of the process and adjusts the analog output of the controlling device to maintain the process within defined parameters. The controlling devices include valves, power silicon controlled rectifiers (SCR), and variable speed pump controllers. The data acquisition system and the control computer are connected by a high speed local area network.

The APEX test facility uses PLCs, control throttle valves and on/off valves to simulate actuation of AP1000 safety systems, to provide automatic control of pressurizer pressure and liquid level, and to provide important safety trips to prevent injury to personnel and damage to the facility. For purposes of test facility safety, the power to the core heaters have been interlocked to shut off at high heater temperature, high primary or PRHR pressure or low water level in the core.

3 TEST MATRIX AND DESCRIPTION

Eight separate steam generator condensation tests were sponsored by the Nuclear Regulatory Commission (NRC) and completed at the APEX test facility from 2005 through 2007. These tests were designed to evaluate steam condensation rates in a Pressurized Water Reactor (PWR) SG at various primary and secondary side pressures. Two of the tests (-07 and -08) included the presence of non-condensable gases. The complete test matrix is shown in Table 3.1.

| Table 3.1 APEX SG Condensation Test Matrix | | |
|--|--|----------------|
| Test Number | Description | Date Completed |
| NRC-COND-01 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 1.48 MPa (215 psia).• Inlet steam Re=1900—5500. | 11/3/05 |
| NRC-COND-02 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 2.03 MPa (295 psia).• Inlet steam Re=2300—6000. | 12/14/05 |
| NRC-COND-03 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 0.79 MPa (115 psia).• Inlet steam Re=2000—5000. | 12/16/05 |
| NRC-COND-04 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 2.17 MPa (315 psia).• Inlet steam Re=7600—12700. | 01/18/07 |
| NRC-COND-05 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 2.38 MPa (345 psia).• Inlet steam Re=7900—12500. | 02/19/07 |
| NRC-COND-06 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 0.45 MPa (65 psia).• Inlet steam Re=3100—8600. | 03/07/07 |
| NRC-COND-07 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 2.07 MPa (300 psia).• Inlet gas Re=12100—12500.• Nominal non-condensable inlet mass fraction: 2.5%. | 05/05/07 |
| NRC-COND-08 | SG condensation with various steam inlet/outlet flow rates. <ul style="list-style-type: none">• Nominal steam inlet pressure: 2.07 MPa (300 psia).• Inlet gas Re=11900—12300.• Nominal non-condensable inlet mass fraction: 10.0%. | 05/17/07 |

3.1 Facility Modification

In order to conduct the subject test program, the APEX test facility (as described in section 2) was modified to isolate SG #1 from the primary loop piping. A steam line was installed from the secondary side of the non-isolated SG (SG #2) to the primary side of the isolated SG (SG #1). During each of the tests, dry steam was created in SG #2 and directed to the hot leg plenum of SG #1.

One of the primary objectives of these experiments was to determine the condensation rate inside the tubes of a PWR SG. In order to measure the condensation inside the tubes of SG #1 a condensation collection system was constructed and installed on SG#1. This system consists of a catch tank and a cyclone separator. The catch tank is designed to collect the SG tube condensation via the hot plenum while the cyclone separator is designed to measure the SG tube condensation via the cold plenum of the SG. The separator and catch tank were fabricated from 12 inch schedule 40 stainless steel pipe and are rated at 400 psig. Each of the tanks is insulated to reduce the amount of heat transferred to the

surroundings. See Table 3.2 for a list of dimensions for the catch tank and the separator. As-built drawings of these modifications are shown in Appendix A.

Table 3.2 Catch Tank and Separator Dimensions

| Component | Diameter | Max Liquid Height | Max Volume |
|------------|-------------------|-------------------|---|
| Separator | 30.3 cm (11.9 in) | 55.9 cm (22.0 in) | 0.040 m ³ (1.413 ft ³) |
| Catch Tank | 30.3 cm (11.9 in) | 55.9 cm (22.0 in) | 0.040 m ³ (1.413 ft ³) |

Due to the pressure difference between the steam inlet of SG #1 and the atmospheric catch tank, a float valve was installed upstream of the catch tank to allow condensate to flow into the tank without releasing steam for tests -01 and -02. For tests -01 and -02 an isentropic expansion was assumed at the catch tank to account for the condensate mass lost due to flashing. The flow of the flashed condensate was not measured using a flow meter during these two tests due to flow rates below the range of FVM-004. For tests -03, -04, -05, -06, -07 and -08, a ball valve was used instead of the float valve. Use of a ball valve allowed some steam to flow through the catch tank along with the condensate. During these tests (-03, -04, -05, -06, -07 and -08), before being vented to atmosphere, the steam flowing through the catch tank was measured by a volumetric flow meter (FVM-004). The amount of steam due to flashing of the condensate was calculated using an isentropic expansion for these tests as well. Note that during test steps 3-2 and 6-4, the steam flow rate through FVM-004 was still below the range of FVM-004 and therefore these test steps were treated as tests -01 and -02.

Steam flow through the U-tubes is controlled by a valve on the outlet of the separator. See Figure 3.1 for an elevation view of SG condensation test modifications. See Appendix A for detailed as-built drawings and instrumentation schematics of the test facility modifications.

A general description of the APEX test facility instrumentation is provided in Section 2.8. Instrumentation has been added for the SG condensation test program in order to measure condensation rates (CL and HL side of SG tubes), steam inlet and outlet conditions, steam flow rates and steam production rates on the secondary side of SG #1. Table 3.3 shows a list of the instrumentation applicable to these tests along with the uncertainty of each instrument.

As mentioned, tests -07 and -08 included the presence of non-condensable gas in the SG tubes. During these tests nitrogen was injected into the steam space of SG #2 at a nominal rate consistent with 2.5 weight percent (-07) or 10.0 weight percent (-08). The nitrogen was allowed to inject into the steam space of SG #2 for a time sufficient for the steam-N₂ flow from SG #2 to reach equilibrium at the desired non-condensable mass percent. The nitrogen gas was injected from a bank of nitrogen bottles connected by a manifold and sitting on a scale to measure the change in weight of the nitrogen bottles as the nitrogen discharged. Figure 3.2 shows a schematic of the nitrogen injection system.

3.2 Test Description

Eight separate SG condensation tests have been conducted as part of this test program. For tests -01 through -06, the nominal test pressure was varied between each test. These tests were conducted without the presence of a non-condensable gas. Tests -07 and -08 were conducted at the same test pressure as each other; however the percentage of non-condensable gas was varied between the two tests. See Table 3.1 for an overview of the conducted tests.

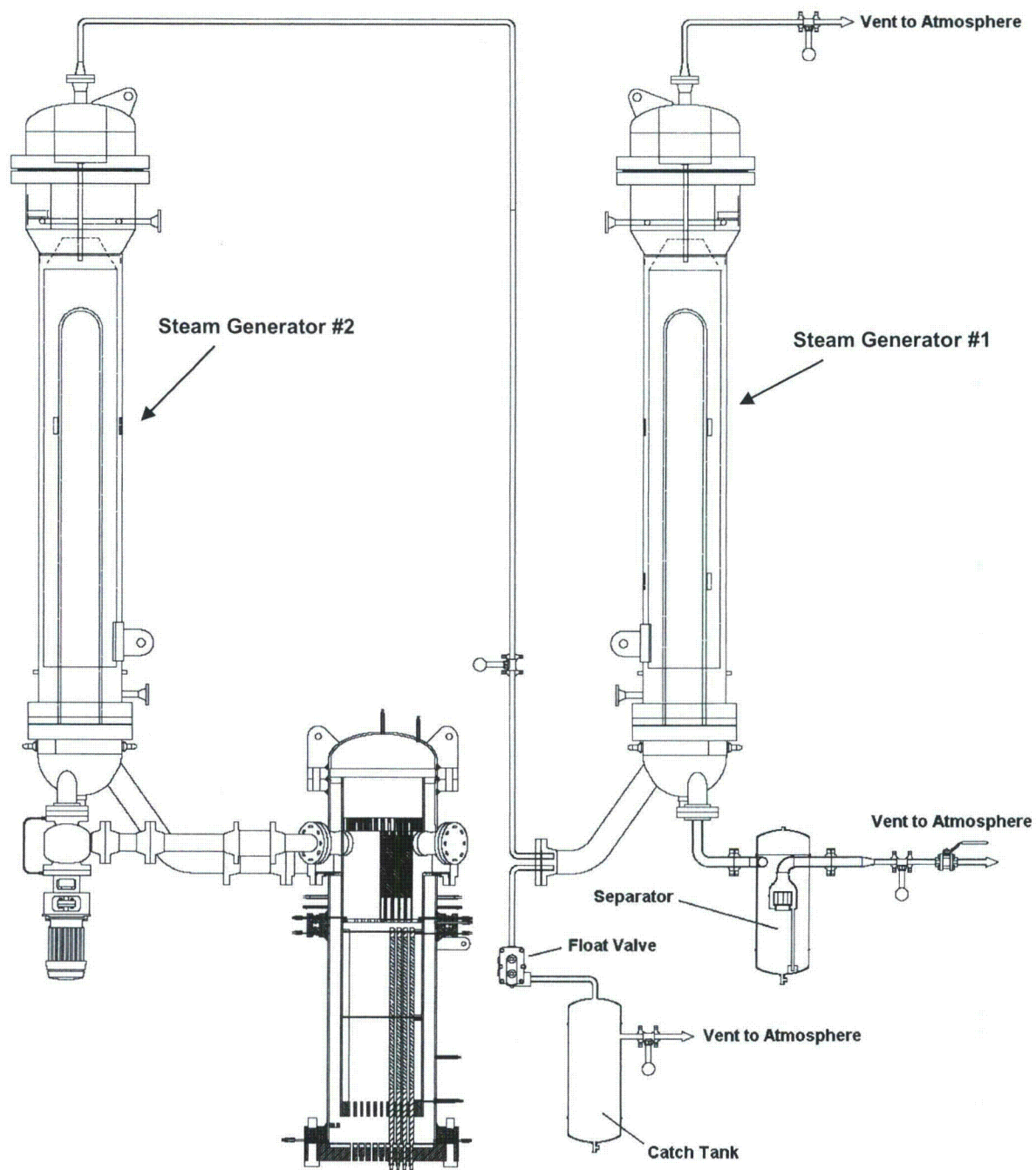


Figure 3.1 SG Condensation Test Elevation View

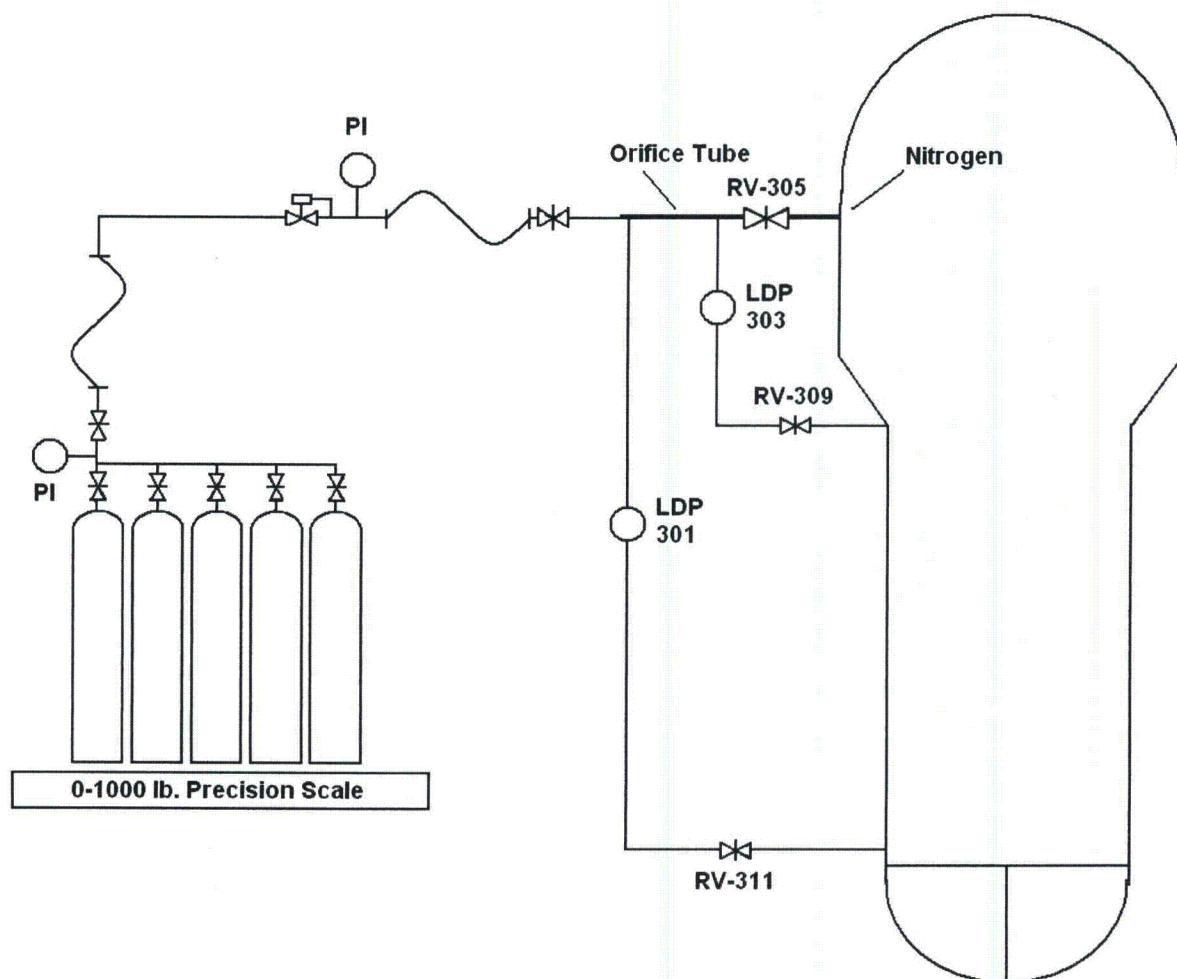


Figure 3.2 Nitrogen Injection System

Table 3.3 SG Condensation Test Instrumentation

| Tag Name | Description | Uncertainty |
|-----------------|--|--------------------|
| DP-211 | SG #1 short tube entrance losses (cm water) | ±0.185 cm |
| DP-213 | SG #1 long tube exit losses (cm water) | ±0.127 cm |
| DP-217 | Separator level (cm water) | ±0.203 cm |
| DP-219 | Catch tank level (cm water) | ±0.137 cm |
| FVM-001 | SG #1 tube steam outlet flow (m ³ /s) | ±1% of Rate |
| FVM-002 | SG #1 tube steam inlet flow (m ³ /s) | ±1% of Rate |
| FVM-003 | SG #1 shell outlet flow (m ³ /s) | ±1.35% of Rate |
| FVM-004 | Catch tank steam outlet flow (m ³ /s) | ±1% of Rate |
| KW-101 | Core power (kW) | ±1.90 kW |
| KW-102 | Core power (kW) | ±1.96kW |
| LDP-205 | SG #1 HL uncompensated water level (cm) | ±0.094 cm |
| LDP-207 | SG #1 HL elbow uncompensated water level (cm) | ±0.183 cm |
| LDP-209 | SG #1 HL plenum uncompensated water level (cm) | ±0.102 cm |
| LDP-215 | SG #1 long tube HL uncompensated water level (cm) | ±0.79 cm |
| LDP-217 | SG #1 short tube HL uncompensated water level (cm) | ±0.76 cm |
| LDP-219 | SG #1 long tube CL uncompensated water level (cm) | ±0.79 cm |
| LDP-221 | SG #1 short tube CL uncompensated water level (cm) | ±0.76 cm |
| LDP-301 | SG #1 shell WR uncompensated water level (cm) | ±0.64 cm |
| LDP-302 | SG #2 shell WR uncompensated water level (cm) | ±0.64 cm |
| LDP-303 | SG #1 shell NR uncompensated water level (cm) | ±0.226 cm |
| LDP-304 | SG #2 shell NR uncompensated water level (cm) | ±0.249 cm |
| PT-002 | SG #1 shell outlet pressure (kPa) | ±8.3 kPa |
| PT-004 | SG #1 tube inlet pressure (kPa) | ±6.6 kPa |
| PT-107 | Reactor upper head pressure (kPa) | ±7.6 kPa |
| PT-301 | SG #1 shell pressure (kPa) | ±8.3 kPa |
| PT-501 | SG #1 tube outlet pressure (kPa) | ±7.6 kPa |
| PT-604 | PZR pressure (kPa) | ±7.6 kPa |
| TF-201 | CL #1 temperature (°C) | ± 1.3 °C |
| TF-203 | SG #1 tube outlet temperature (°C) | ± 1.3 °C |
| TF-207 | SG #1 short tube @ middle inlet temperature (°C) | ± 1.3 °C |
| TF-209 | SG #1 short tube @ middle outlet temperature (°C) | ± 1.3 °C |
| TF-211 | SG #1 long tube @ middle inlet temperature (°C) | ± 1.3 °C |
| TF-213 | SG #1 long tube @ middle outlet temperature (°C) | ± 1.3 °C |
| TF-215 | SG #1 short tube @ top temperature (°C) | ± 1.3 °C |
| TF-217 | SG #1 long tube @ top temperature (°C) | ± 1.3 °C |
| TF-301 | SG #1 shell steam temperature (°C) | ± 1.3 °C |
| TF-305 | SG #1 downcomer HL side temperature (°C) | ± 1.3 °C |
| TF-307 | SG #1 downcomer CL side temperature (°C) | ± 1.3 °C |
| TF-310 | SG #2 steam temperature (°C) | ± 1.3 °C |
| | Nitrogen bottle scale (kg) | ± 0.023 kg |

Within each test, several steps were performed in which the rate of steam flow to the SG #1 U-tubes was varied. For each test, the first step was performed with the U-tube steam outlet valve and the shell side steam outlet valve closed on the test SG. Condensation was collected and measured to determine ambient heat losses for the SG. Ambient heat loss is discussed under the section for each individual test below. During the period between test steps the catch tank and separator tank were drained dry while SG#2 was refilled for the next test step. For tests -04 through -08, the U-tube steam outlet steam valve was closed during this period between test steps which caused a large reduction in steam flow rate through the tubes to minimize the probability of condensate accumulation in the system between steps.

For the steps after the first within each test, two boundary conditions were controlled:

1. Steady-state SG #1 secondary side steam flow was initiated to establish heat transfer, and
2. SG #1 U-tube steam outlet energy flow was varied in several steps.

Comprehensive data for the channels described in Table 3.3 for each test are located in Appendix B. Individual test step data can be found from the Appendix B data using the test step start and stop times as shown in Table 3.4.

The energy flow rates shown in the following sections are calculated by multiplying the volumetric flow rate, density and enthalpy at the respective locations. Density and enthalpy at a location are determined for saturated steam using the local pressure data. The energy flow rates for tube inlet flow and tube outlet flow are calculated using FVM-002/PT-004 and FVM-001/PT-501 respectively.

As discussed in the Notice of Discrepancy in Test Data dated May 18, 2006 (Ref. 24), a post test examination of SG #1 shell outlet flowmeter (FVM-003) revealed that the outlet gasket was compressed and partially blocked the flow thus rendering the data from this instrument unreliable. This discrepancy was discovered following test -03 and thus is applicable to tests -01 through -03. For tests -01 through -03, the energy flow rate for shell side steam flow has been estimated by performing an energy balance across the SG #1 U-tubes which is discussed in detail in Section 3.3. For tests -04 through -08, the energy flow rate for shell side steam flow is calculated using FVM-003/PT-002.

Table 3.4 Test Step Start and Stop Times

| Test Step | Start Time (s) | Stop Time (s) | Test Step | Start Time (s) | Stop Time (s) |
|-----------|----------------|---------------|-----------|----------------|---------------|
| 1-1 | 30 | 630 | 4-3 | 3537 | 4137 |
| 1-2 | 1890 | 2490 | 4-4 | 5697 | 6297 |
| 1-3 | 3450 | 4050 | 5-1 | 93 | 693 |
| 1-4 | 5070 | 5670 | 5-2 | 1473 | 2073 |
| 1-5 | 6810 | 7410 | 5-3 | 3513 | 4113 |
| 2-1 | 39 | 639 | 5-4 | 5193 | 5793 |
| 2-2 | 1299 | 1899 | 6-1 | 60 | 660 |
| 2-3 | 3399 | 3999 | 6-2 | 1380 | 1980 |
| 2-4 | 7419 | 8019 | 6-3 | 2820 | 3420 |
| 2-5 | 8919 | 9519 | 6-4 | 4260 | 4860 |
| 3-1 | 0 | 600 | 6-5 | 6120 | 6720 |
| 3-2 | 1980 | 2580 | 7-1 | 121 | 721 |
| 3-3 | 3840 | 4440 | 7-2 | 3481 | 4081 |
| 3-4 | 5640 | 6240 | 7-3 | 5701 | 6301 |
| 3-5 | 7380 | 7980 | 8-1 | 60 | 660 |
| 4-1 | 57 | 657 | 8-2 | 1380 | 1980 |
| 4-2 | 1617 | 2217 | 8-3 | 3570 | 4170 |

The uncertainty of the SG #1 tube inlet pressure (PT-004) is given by the uncertainty in the pressure instrument as shown in Table 3.3. Tube inlet energy flow, tube outlet energy flow and shell side steam energy flow are calculated parameters. The major uncertainty contributors to the measurement of the tube inlet energy flow, tube outlet energy flow and shell side steam energy flow are the measurement of the volumetric flow rate (using a flow meter) and the measurement of enthalpy and density (using pressure transducers). The uncertainty of the individual instruments is shown in Table 3.3. As stated in section 2.8, the uncertainty in each individual instrument is assumed to be independent. Therefore, the effect of the individual instrument uncertainty on the calculation of the three energy flow rates can be determined using Equations 3.1 and 3.2.

$$K = f(k_1, k_2, \dots, k_n) \quad (3.1)$$

$$\omega_K = \sqrt{\sum_{n=1}^N \left(\omega_{k_n} \frac{\partial K}{\partial k_n} \right)^2} \quad (3.2)$$

In Equations 3.1 and 3.2, ω is the uncertainty, K is an arbitrary function and k_n are the components upon which the function K is calculated.

3.2.1 Test NRC-COND-01

Test NRC-COND-01 was conducted at a nominal tube inlet steam pressure of 1.48 MPa (215 psia). The tube inlet pressure is measured in these tests using PT-004. The test step conditions for this test are listed in Table 3.5. Figures 3.3 and 3.4 show the normalized catch tank level (DP-219) and normalized separator level (DP-217) for each of the five steps in NRC-COND-01. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Note that the uncertainty in the catch tank and separator levels for all tests is less than ± 0.25 cm of water (see Table 3.3). Step 1 ambient heat losses are estimated at 15.6 kW.

| Table 3.5 NRC-COND-01 Nominal Test Conditions | | | | |
|---|---|---------------------------|----------------------------|---------------------------------|
| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
| 1 | 1.548 \pm 0.0066 (224.5 \pm 0.957) | 0 | 0 | 0 |
| 2 | 1.274 \pm 0.0066 (184.8 \pm 0.957) | 377.0 \pm 4.2 | 273.4 \pm 3.2 | 78.4 \pm 1.3 |
| 3 | 1.328 \pm 0.0066 (192.6 \pm 0.957) | 331.0 \pm 3.7 | 216.3 \pm 2.5 | 100.1 \pm 1.3 |
| 4 | 1.421 \pm 0.0066 (206.1 \pm 0.957) | 233.0 \pm 2.6 | 104.5 \pm 1.2 | 104.4 \pm 1.3 |
| 5 | 1.493 \pm 0.0066 (216.6 \pm 0.957) | 135.8 \pm 1.5 | 0 | 114.1 \pm 1.3 |

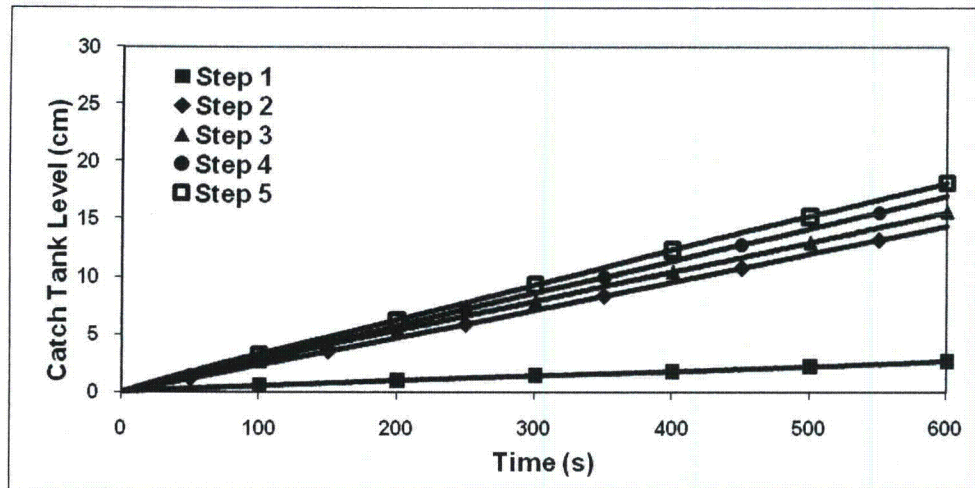


Figure 3.3 Catch Tank Level for Test NRC-COND-01

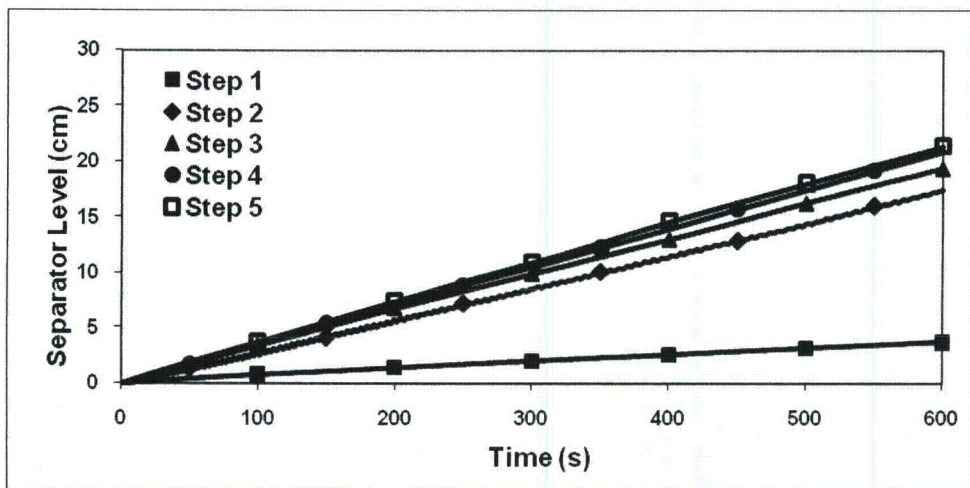


Figure 3.4 Separator Level for Test NRC-COND-01

3.2.2 Test NRC-COND-02

Test NRC-COND-02 was conducted at a nominal tube inlet steam pressure of 2.03 MPa (295 psia). The test step conditions for this test are listed in Table 3.6. Figure 3.5 shows the normalized catch tank level for each of the five steps in NRC-COND-02. Figure 3.6 shows the normalized separator level for each of the five steps in NRC-COND-02. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 21.5 kW.

| Table 3.6 NRC-COND-02 Nominal Test Conditions | | | | |
|---|---|------------------------------|-------------------------------|------------------------------------|
| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
| 1 | 2.053 ± 0.0066 (297.8 ± 0.957) | 0 | 0 | 0 |
| 2 | 1.744 ± 0.0066 (252.9 ± 0.957) | 427.4 ± 4.6 | 286.4 ± 3.1 | 124.6 ± 1.3 |
| 3 | 1.826 ± 0.0066 (264.8 ± 0.957) | 349.9 ± 3.7 | 197.8 ± 2.1 | 126.8 ± 1.3 |
| 4 | 1.889 ± 0.0066 (274.0 ± 0.957) | 284.8 ± 3.0 | 120.4 ± 1.3 | 135.2 ± 1.3 |
| 5 | 1.974 ± 0.0066 (286.3 ± 0.957) | 168.5 ± 1.8 | 0 | 145.6 ± 1.3 |

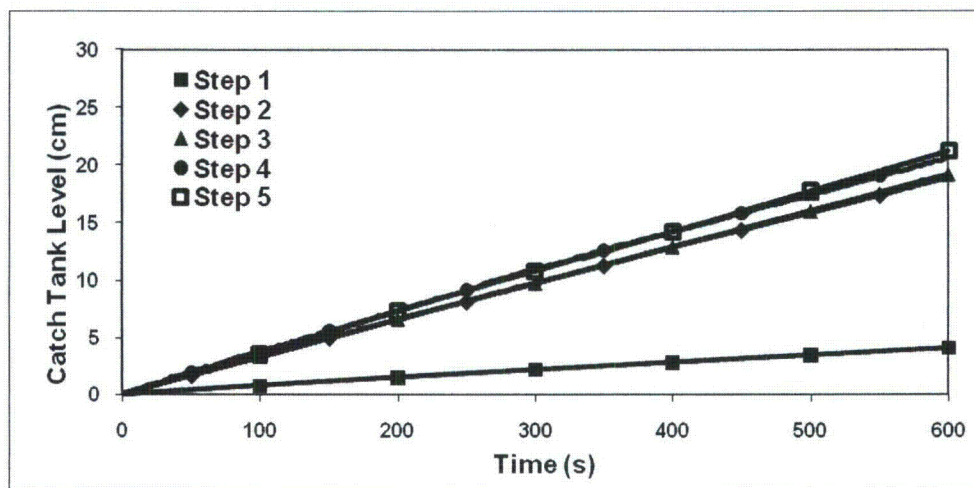


Figure 3.5 Catch Tank Level for Test NRC-COND-02

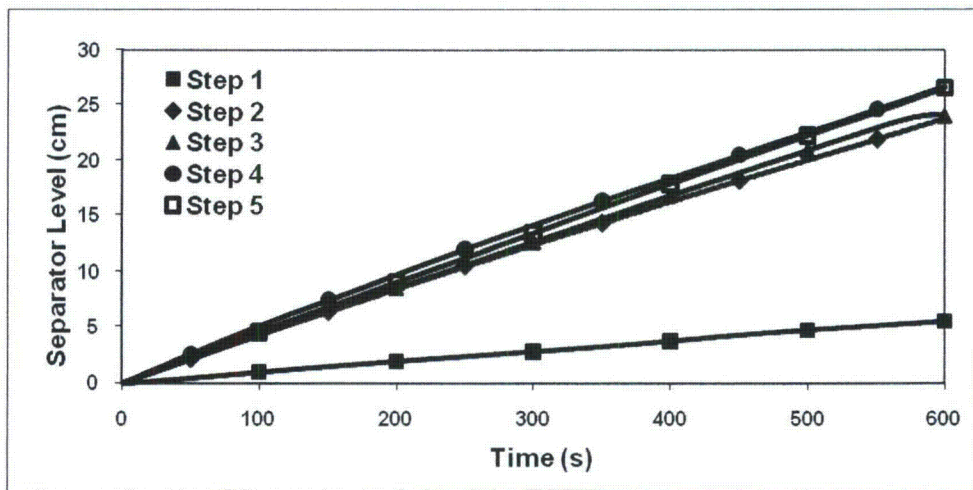


Figure 3.6 Separator Level for Test NRC-COND-02

3.2.3 Test NRC-COND-03

Test NRC-COND-03 was conducted at a nominal tube inlet steam pressure of 0.79 MPa (115 psia). The test step conditions for this test are listed in Table 3.7. Figure 3.7 shows the normalized catch tank level for each of the five steps in NRC-COND-03. Figure 3.8 shows the normalized separator level for each of the five steps in NRC-COND-03. The curve for step 3 in Figure 3.8 flattens out after approximately 500s due to the separator liquid level exceeding the measuring range of the instrumentation during this step. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 14.9 kW.

| Table 3.7 NRC-COND-03 Nominal Test Conditions | | | | |
|---|---|---------------------------|----------------------------|---------------------------------|
| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
| 1 | 0.824 ± 0.0066 (119.5 ± 0.957) | 0 | 0 | 0 |
| 2 | 0.553 ± 0.0066 (80.2 ± 0.957) | 311.1 ± 4.7 | 218.5 ± 3.9 | 71.8 ± 1.3 |
| 3 | 0.604 ± 0.0066 (87.6 ± 0.957) | 283.9 ± 4.1 | 159 ± 2.6 | 82.6 ± 1.3 |
| 4 | 0.654 ± 0.0066 (94.9 ± 0.957) | 248.8 ± 3.4 | 114.5 ± 1.7 | 106.7 ± 1.3 |
| 5 | 0.770 ± 0.0066 (111.7 ± 0.957) | 136.6 ± 1.8 | 0 | 92.8 ± 1.3 |

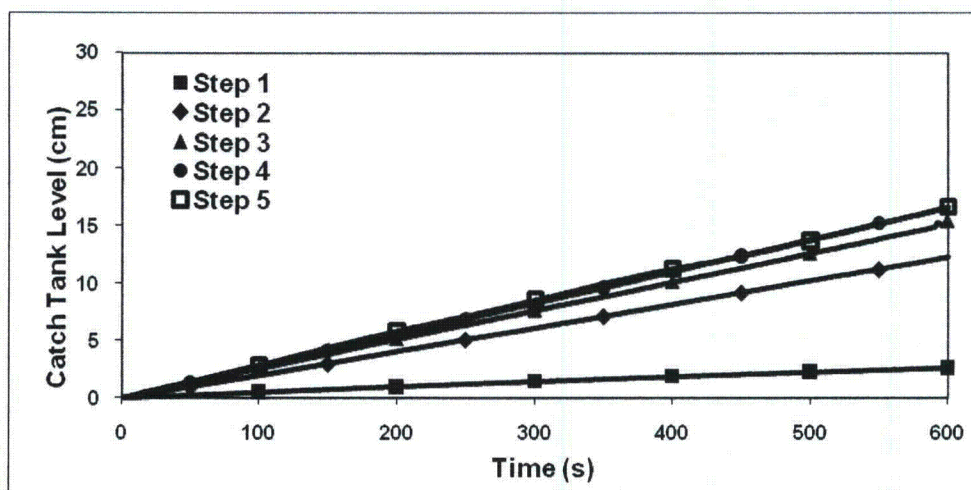


Figure 3.7 Catch Tank Level for Test NRC-COND-03

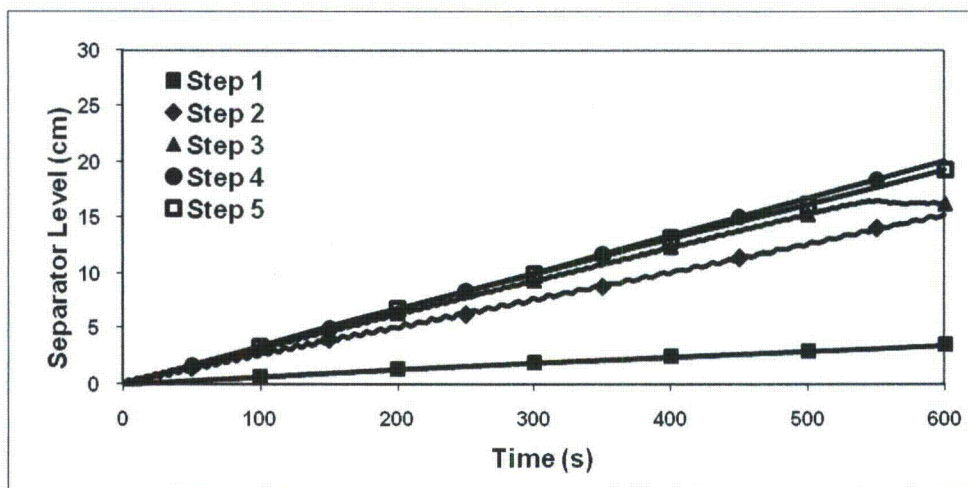


Figure 3.8 Separator Level for Test NRC-COND-03

3.2.4 Test NRC-COND-04

Test NRC-COND-04 was conducted at a nominal tube inlet steam pressure of 2.17 MPa (315 psia). The test step conditions for this test are listed in Table 3.8. Figure 3.9 shows the normalized catch tank level for each of the five steps in NRC-COND-04. Figure 3.10 shows the normalized separator level for each of the five steps in NRC-COND-04. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 21.0 kW.

| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
|------|-----------------------------------|---------------------------|----------------------------|---------------------------------|
| 1 | 2.164 ± 0.0066 (313.8 ± 0.957) | 0 | 0 | 0 |
| 2 | 1.967 ± 0.0066 (285.3 ± 0.957) | 552.9 ± 5.8 | 376.0 ± 4.0 | 140.2 ± 2.0 |
| 3 | 1.911 ± 0.0066 (277.2 ± 0.957) | 696.2 ± 7.3 | 523.2 ± 5.6 | 135.8 ± 1.9 |
| 4 | 1.832 ± 0.0066 (265.6 ± 0.957) | 914.3 ± 9.7 | 739.0 ± 8.0 | 130.2 ± 1.9 |

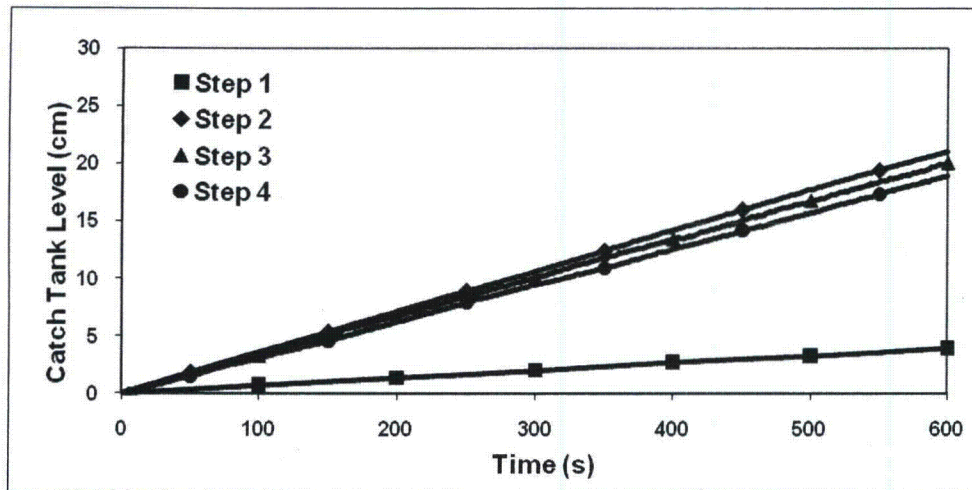


Figure 3.9 Catch Tank Level for Test NRC-COND-04

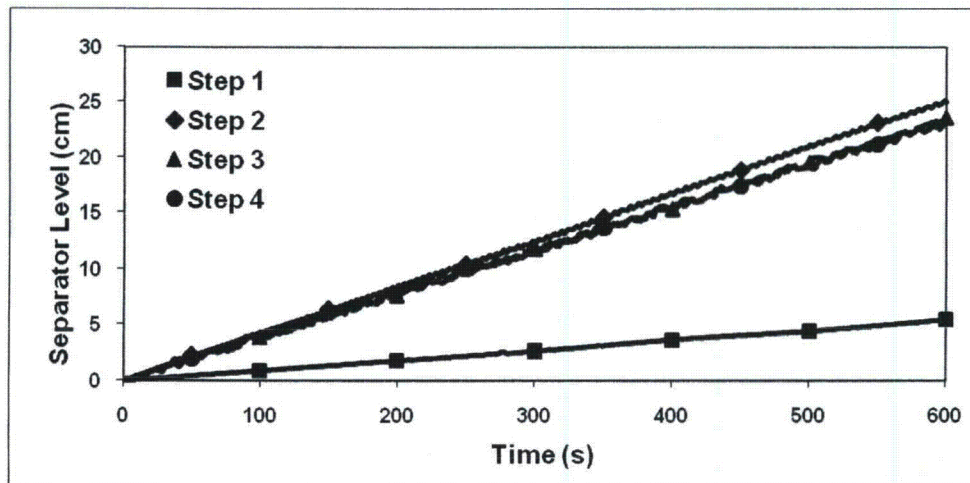


Figure 3.10 Separator Level for Test NRC-COND-04

3.2.5 Test NRC-COND-05

Test NRC-COND-05 was conducted at a nominal tube inlet steam pressure of 2.38 MPa (345 psia). The test step conditions for this test are listed in Table 3.9. Figure 3.11 shows the normalized catch tank level for each of the five steps in NRC-COND-05. Figure 3.12 shows the normalized separator level for each of the five steps in NRC-COND-05. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 16.6 kW.

| Table 3.9 NRC-COND-05 Nominal Test Conditions | | | | |
|---|-----------------------------------|---------------------------|----------------------------|---------------------------------|
| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
| 1 | 2.407 ± 0.0066 (349.1 ± 0.957) | 0 | 0 | 0 |
| 2 | 2.187 ± 0.0066 (317.2 ± 0.957) | 587.0 ± 6.1 | 396.9 ± 4.2 | 160.9 ± 2.3 |
| 3 | 2.142 ± 0.0066 (310.7 ± 0.957) | 703.4 ± 7.3 | 517.0 ± 5.5 | 156.1 ± 2.2 |
| 4 | 2.068 ± 0.0066 (300.0 ± 0.957) | 909.0 ± 9.5 | 723.0 ± 7.7 | 150.3 ± 2.1 |

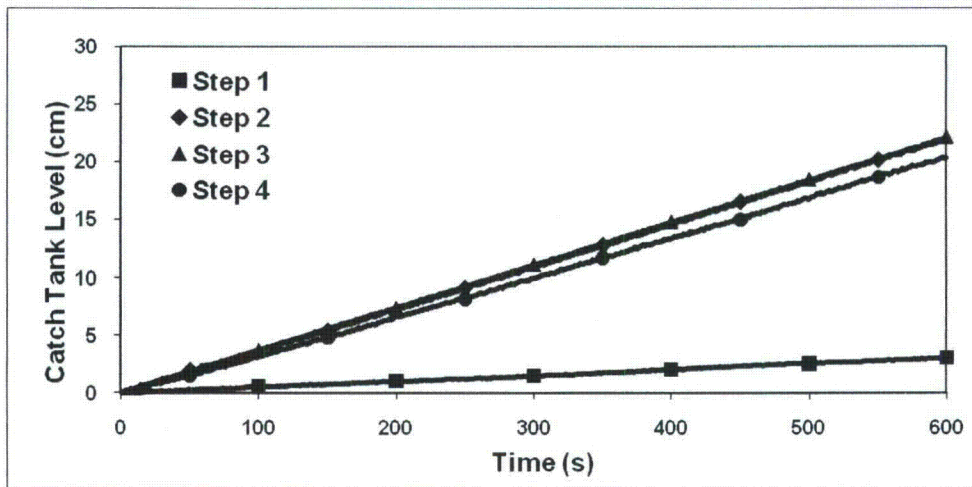


Figure 3.11 Catch Tank Level for Test NRC-COND-05

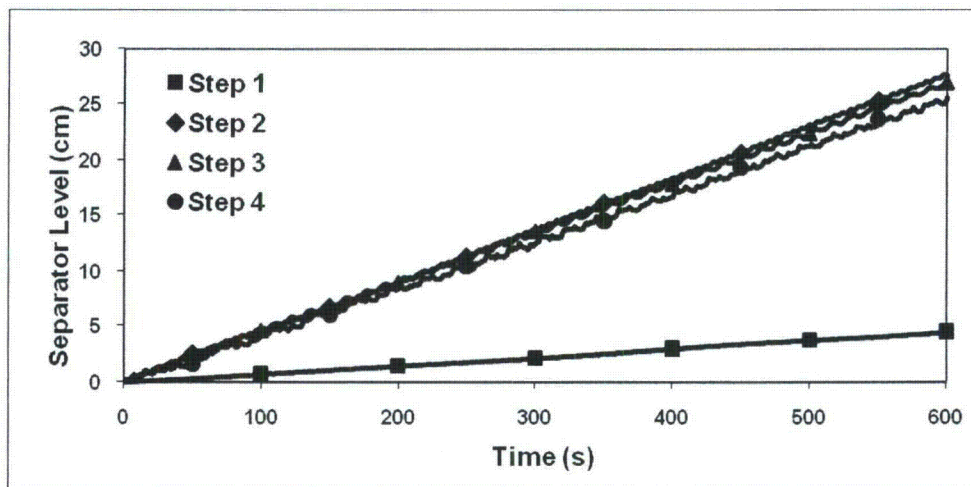


Figure 3.12 Separator Level for Test NRC-COND-05

3.2.6 Test NRC-COND-06

Test NRC-COND-06 was conducted at a nominal tube inlet steam pressure of 0.45 MPa (65 psia). The test step conditions for this test are listed in Table 3.10. Figure 3.13 shows the normalized catch tank level for each of the five steps in NRC-COND-06. Figure 3.14 shows the normalized separator level for each of the five steps in NRC-COND-06. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 8.1 kW.

| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
|------|----------------------------------|---------------------------|----------------------------|---------------------------------|
| 1 | 0.464 ± 0.0066 (67.4 ± 0.957) | 0 | 0 | 0 |
| 2 | 0.439 ± 0.0066 (63.6 ± 0.957) | 193.0 ± 3.3 | 102.8 ± 2.0 | 81.5 ± 2.0 |
| 3 | 0.424 ± 0.0066 (61.5 ± 0.957) | 279.9 ± 5.0 | 193.2 ± 3.8 | 78.4 ± 2.0 |
| 4 | 0.406 ± 0.0066 (58.8 ± 0.957) | 376.7 ± 6.9 | 283.6 ± 5.9 | 83.1 ± 2.2 |
| 5 | 0.373 ± 0.0066 (54.1 ± 0.957) | 513.2 ± 10.0 | 358.4 ± 8.6 | 80.2 ± 2.4 |

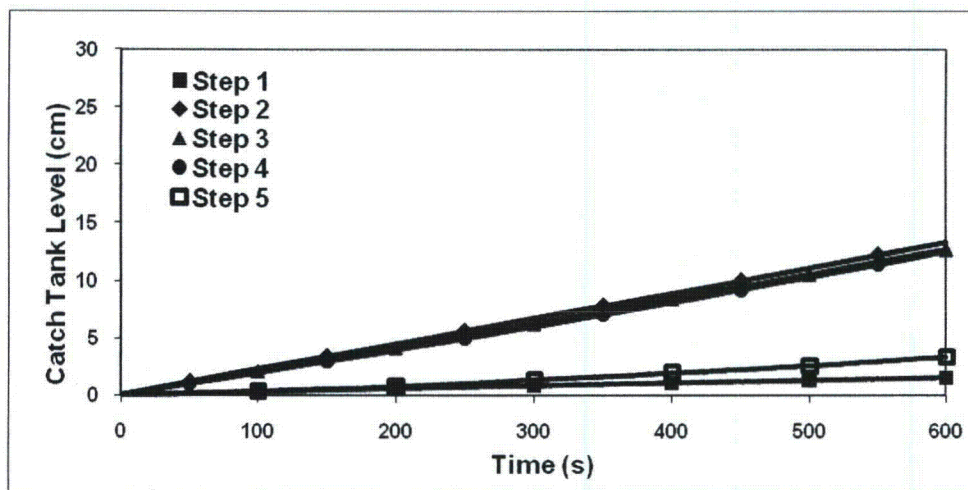


Figure 3.13 Catch Tank Level for Test NRC-COND-06

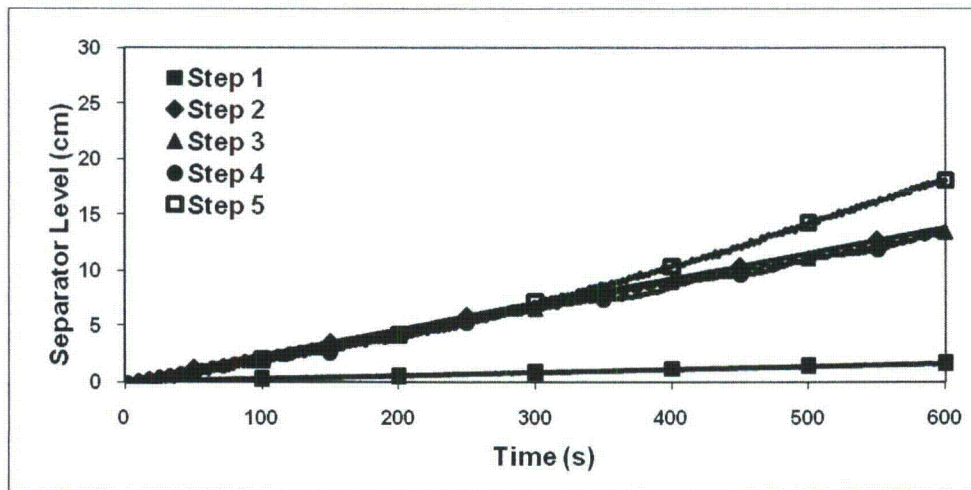


Figure 3.14 Separator Level for Test NRC-COND-06

3.2.7 Test NRC-COND-07

Test NRC-COND-07 was conducted at a nominal tube inlet steam pressure of 2.07 MPa (300 psia). Nitrogen was injected into the steam inlet stream at a nominal rate of 2.5% of total mass flow rate. The test step conditions for this test are listed in Table 3.11. Figure 3.15 shows the normalized catch tank level for each of the five steps in NRC-COND-07. Figure 3.16 shows the normalized separator level for each of the five steps in NRC-COND-07. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 22.7 kW.

| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
|------|-----------------------------------|---------------------------|----------------------------|---------------------------------|
| 1 | 2.174 ± 0.0066 (315.3 ± 0.957) | 0 | 0 | 0 |
| 2 | 1.844 ± 0.0066 (267.4 ± 0.957) | 894.3 ± 9.5 | 729.4 ± 7.9 | 128.6 ± 1.8 |
| 3 | 1.856 ± 0.0066 (269.2 ± 0.957) | 878.1 ± 9.3 | 718.9 ± 7.7 | 128.9 ± 1.8 |

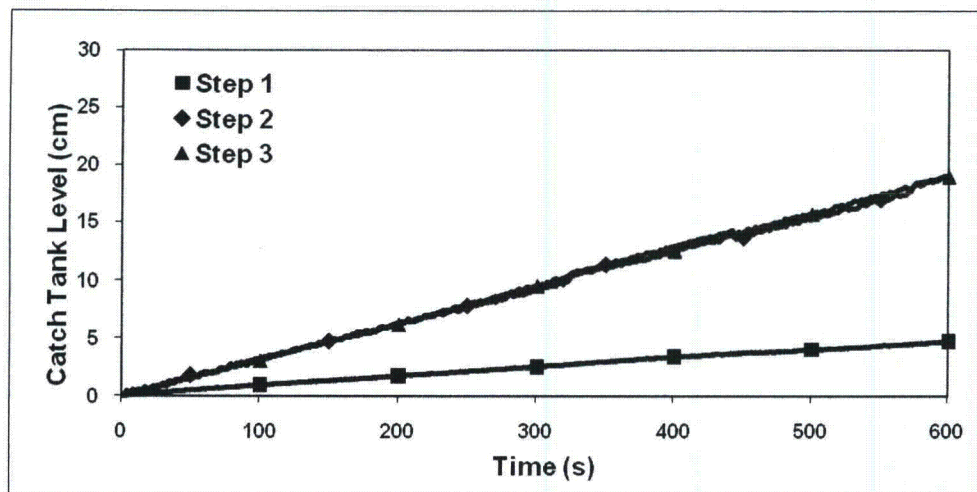


Figure 3.15 Catch Tank Level for Test NRC-COND-07

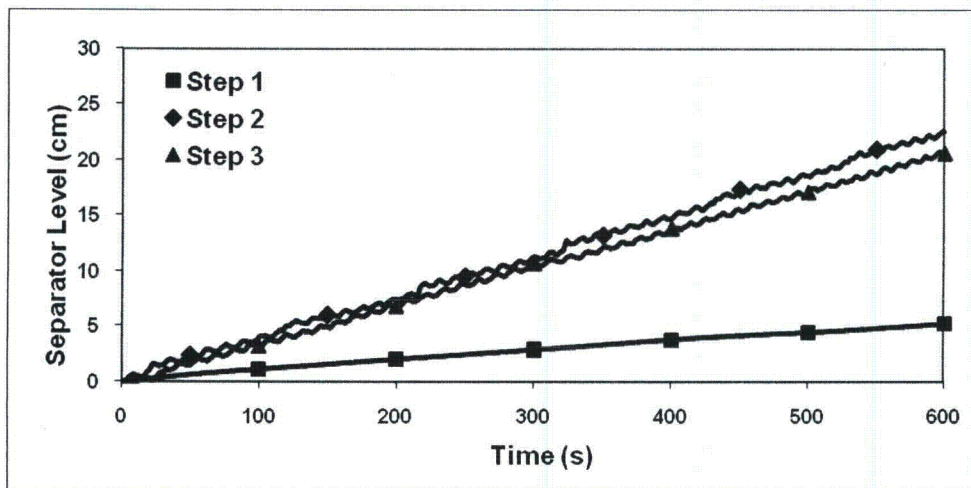


Figure 3.16 Separator Level for Test NRC-COND-07

3.2.8 Test NRC-COND-08

Test NRC-COND-08 was conducted at a nominal tube inlet steam pressure of 2.07 MPa (300 psia). Nitrogen was injected into the steam inlet stream at a nominal rate of 10.0% of total mass flow rate. The test step conditions for this test are listed in Table 3.12. Figure 3.17 shows the normalized catch tank level for each of the five steps in NRC-COND-08. Figure 3.18 shows the normalized separator level for each of the five steps in NRC-COND-08. In each of these figures the tank levels are normalized to the tank level at the beginning of the step. Step 1 ambient heat losses are estimated at 23.4 kW.

| Table 3.12 NRC-COND-08 Nominal Test Conditions | | | | |
|--|---|------------------------------|-------------------------------|------------------------------------|
| Step | SG #1 tube pressure, MPa (psia) | SG #1 tube inlet flow, kW | SG #1 Tube outlet flow, kW | SG #1 shell side steam flow, kW |
| 1 | 2.183 ± 0.0066 (316.6 ± 0.957) | 0 | 0 | 0 |
| 2 | 1.868 ± 0.0066 (271.0 ± 0.957) | 887.5 ± 9.4 | 717.5 ± 7.7 | 133.0 ± 1.9 |
| 3 | 1.897 ± 0.0066 (275.2 ± 0.957) | 866.1 ± 9.1 | 711.7 ± 7.6 | 122.6 ± 1.8 |

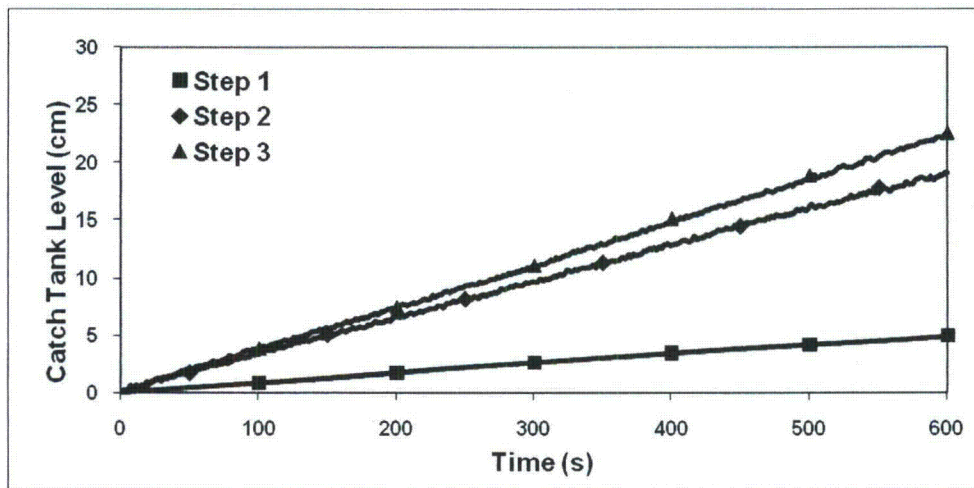


Figure 3.17 Catch Tank Level for test NRC-COND-08

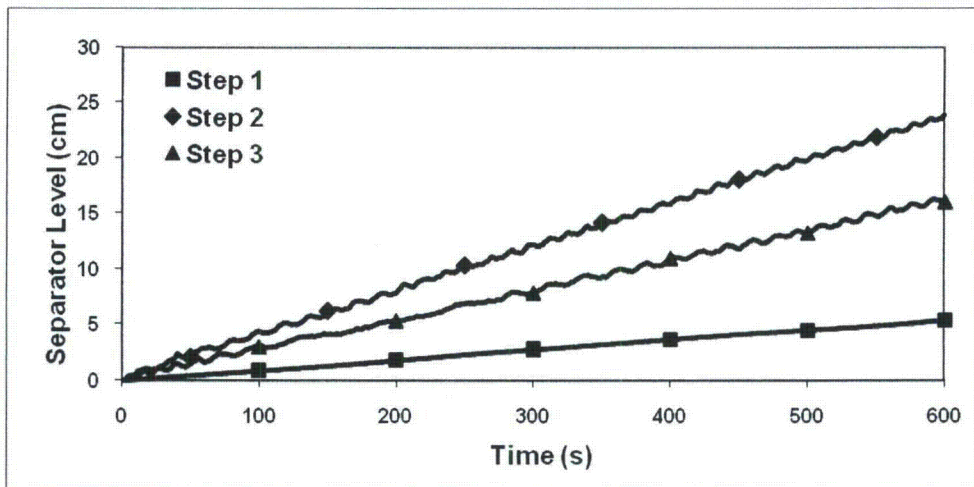


Figure 3.18 Separator Level for Test NRC-COND-08

3.3 Test Mass and Energy Balances

For each test step, a mass and energy balance was performed for the step using Equations 3.3 and 3.4.

$$\Delta \dot{m} = \dot{m}_{\text{steam in}} - \dot{m}_{\text{catch tank liquid out}} - \dot{m}_{\text{separator liquid out}} - \dot{m}_{\text{separator steam out}} - \dot{m}_{\text{catch tank steam out}} \quad (3.3)$$

$$\Delta \dot{E} = \dot{E}_{\text{steam in}} - \dot{E}_{\text{catch tank liquid out}} - \dot{E}_{\text{separator liquid out}} - \dot{E}_{\text{separator steam out}} - \dot{E}_{\text{catch tank steam out}} - \dot{E}_{\text{SG steam Out}} - \dot{E}_{\text{loss}} - \dot{E}_{\text{SG}} \quad (3.4)$$

In Equations 3.3 and 3.4, $\Delta \dot{m}$ and $\Delta \dot{E}$ are the mass and energy deficits respectively. \dot{E}_{loss} is the ambient heat loss for each test determined in step 1 of the test. \dot{E}_{SG} is the rate of change in the steam/water stored energy on the shell side of SG #1. The percentages shown in Figures 3.19 and 3.20 are the percentages of mass and energy deficits to the mass and energy entering the system as steam.

Mass flow rates are determined using the volumetric flow rates measured by the flow meters, tank level changes measured by the DP cells and the density as determined using pressure information. The mass flow rates are then summed over each test step to determine the mass balance for each test step. Energy flow rates are determined using the volumetric flow rates measured by the flow meters, tank level changes measured by the DP cells and the enthalpy and density as determined using pressure information. Table 3.13 lists the instrumentation used in the determination of each term in the mass and energy balances. The uncertainty in the mass and energy balances are calculated using Equations 3.1 and 3.2 in conjunction with the instrument uncertainty outlined in Table 3.3.

In test steps 7-3 and 8-3, nitrogen gas is injected into the inlet steam flow so that the inlet gas flow is a mixture of steam and nitrogen. When calculating the mass and energy flow into and out of the system for these test steps, the saturated steam density for the measured pressure is used. The inlet and outlet densities are not adjusted to account for mixture due to the lack of molar flow data and thus partial pressure data for the nitrogen or steam. Since the mass fraction of nitrogen is small in tests -07 and -08, only a small impact is anticipated.

Figures 3.19 and 3.20 show the calculated mass and energy balance for each test. The instrument uncertainty of the mass and energy balances are shown as error bars. In general, there appears to be a positive bias in the mass and energy balances. Test step 6-5 has the largest mass/energy bias at nearly 15%. Physically, this positive bias would correspond to a situation where more mass is entering the system than is leaving, thus the positive bias acts as if some mass (and thus energy) is being stored in the system. One possible explanation is that some of the condensed liquid on the hot leg side is held up in the hot leg inlet piping by virtue of the countercurrent flow of the incoming steam. However, the current instrumentation package for these tests does not allow for reliable indication of liquid accumulation in the SG tubes and thus the holdup of liquid in the tubes is not measured in these tests.

| Table 3.13 Mass and Energy Balance Instrumentation | | |
|--|--|--|
| Location | Mass Balance | Energy Balance |
| Steam in | <ul style="list-style-type: none"> FVM-002: volumetric flow rate. PT-004: Saturated steam density. | <ul style="list-style-type: none"> Mass rate. PT-004: Saturated steam enthalpy. |
| Catch tank liquid out | <ul style="list-style-type: none"> DP-219: condensate height. Table 3.2: tank geometry. Saturated water density at atmospheric conditions. | <ul style="list-style-type: none"> Mass rate. Saturated water enthalpy at atmospheric conditions. |
| Catch tank steam out (-01 through -02) | <ul style="list-style-type: none"> Catch tank liquid out mass rate. PT-004: Saturated water entropy. Saturated steam and water entropy at atmospheric conditions. | <ul style="list-style-type: none"> Mass rate. Saturated steam enthalpy at atmospheric conditions. |
| Catch tank steam out (-03 through -08) | <ul style="list-style-type: none"> FVM-004: volumetric flow rate. Saturated steam density at atmospheric conditions. | <ul style="list-style-type: none"> Mass rate. Saturated steam enthalpy at atmospheric conditions. |
| Separator liquid out | <ul style="list-style-type: none"> DP-217: condensate height. Table 3.2: tank geometry. PT-501: Saturated water density. | <ul style="list-style-type: none"> Mass rate. PT-501: Saturated water enthalpy. |
| Separator steam out | <ul style="list-style-type: none"> FVM-001: volumetric flow rate. PT-501: Saturated steam density. | <ul style="list-style-type: none"> Mass rate. PT-501: Saturated steam enthalpy. |
| SG steam out (-01 through -03) | | <ul style="list-style-type: none"> $=\dot{E}_{\text{transfer}} - \dot{E}_{\text{SG}} - \dot{E}_{\text{loss}}$ $\dot{E}_{\text{transfer}}$ defined as energy transferred through the tubes by virtue of condensation. (See Section 4.4) |
| SG steam out (-04 through -08) | | <ul style="list-style-type: none"> FVM-003: volumetric flow rate. PT-002: Saturated steam density and enthalpy. |
| Loss | | <ul style="list-style-type: none"> Determined in step 1 of each test. (Sections 3.2.1-3.2.8) Equal to $\dot{E}_{\text{transfer}}$ in step 1 of each test. |
| SG | | <ul style="list-style-type: none"> LDP-303: Change in shell water level. 0.1878m^2: SG shell area. PT-301: Density and enthalpy of saturated water and steam. |

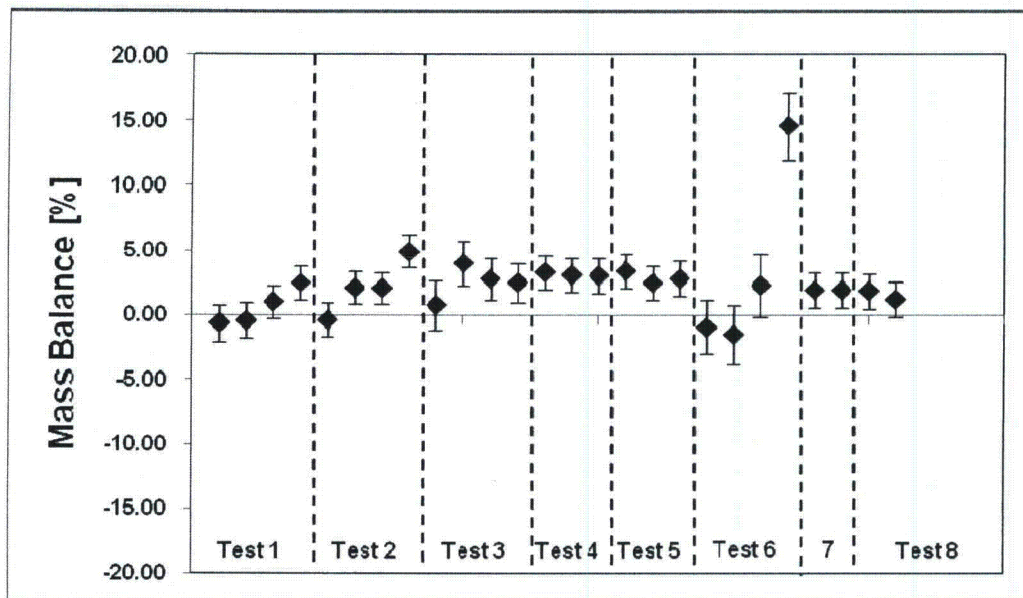


Figure 3.19 Mass Balances

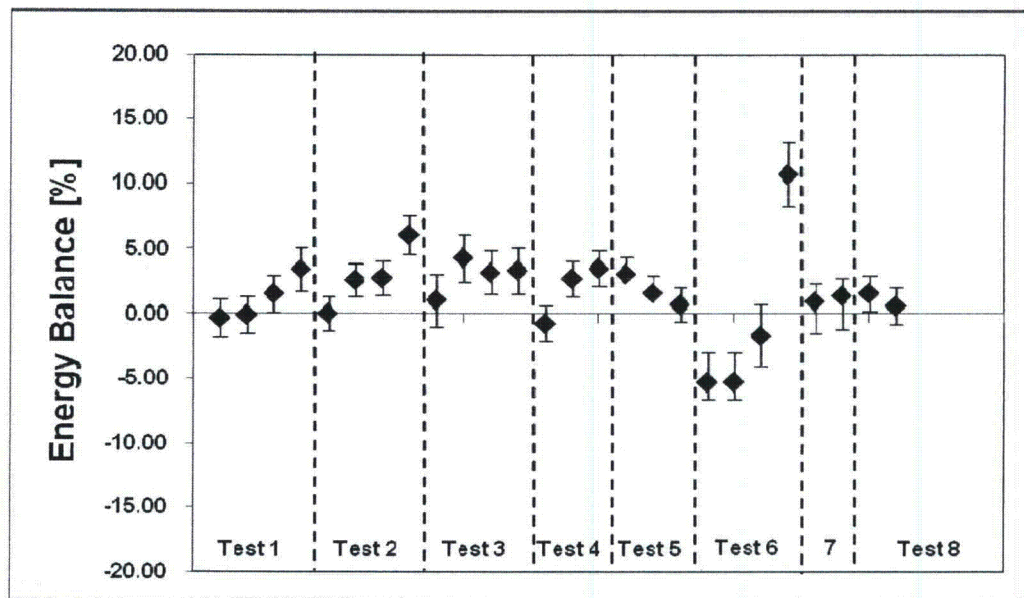


Figure 3.20 Energy Balances

4 TEST ANALYSES

The objective of these experiments was primarily to provide experimental data to assess TRACE steam generator modeling techniques and to assist in development of improved models for condensation and steam generator thermal-hydraulics. In this section, dimensionless numbers of importance to the steam condensation process are introduced, condensation heat transfer coefficients inside the SG tubes are estimated, and experimental test data is used to examine functional relationships important to the condensation process in the PWR SG.

4.1 Assumptions

The following assumptions have been made in the course of the analyses of the test data:

1. It has been assumed that the steam/water mixture on the shell side in SG#1 is saturated. The reason for this assumption is based on the procedures used in the test series. Before each test step is conducted, subcooled water is added to the shell side of SG#1. This water is heated up using the steam flowing through the tubes in SG#1. Only after the temperature in the SG#1 inventory has reached saturation temperature and the shell side of SG#1 is producing steam is the data recorded for the subject test step. No liquid is added to the SG during the test step and the inventory is allowed to boil off without replacement. Enough liquid is added at the start of the test step so that the U-tubes remained covered for the duration of the test step.
2. It is assumed that saturated nucleate pool boiling is the dominant heat transfer regime occurring on the shell side of SG#1. When the heat transfer coefficient is calculated for the shell side of the SG the Cooper correlation has been used which is applicable to saturated nucleate pool boiling. The surface roughness on the outside of the U-tubes is required for the Cooper relation. The tubes are assumed to be made of new stainless steel ($R_p = 2\mu\text{m}$) when determining the surface roughness for use with the Cooper relation. This is justified since the tubes are indeed made of stainless steel. However, no effort has been made to quantify how the years of operation have changed the surface roughness.
3. An isentropic expansion was assumed at the catch tank to account for condensate mass lost due to the flashing of steam. The condensate that is formed on the uphill side of the SG is at the tube pressure which ranges between 0.37MPa and 2.19MPa. The condensate then passes through either a float valve or a ball valve (depending on the test) to the catch tank which is at atmospheric pressure. Due to the pressure drop across the valve a certain mass of the condensate will flash to steam. This is where the isentropic expansion is assumed. This assumption is particularly important for tests -01 and -02 since there is no direct measurement of steam flow through the catch tank in these tests. Only the condensate flow is measured. For the remaining tests, a steam flow meter is installed at the catch tank to measure the flow of steam.

4.2 Condensation Rates

During each test step the steam condensation rates were approximately constant. This can be seen by observing the constant slope of the normalized tank level curves in Figures 3.3 through 3.18. The tank levels were normalized to zero cm at the beginning of each test step. The slopes of the tank level curves are proportional to the steam condensation rate inside the SG tubes. Table 4.1 shows the mean condensation rates for each of the test steps.

As discussed in Section 3.1, a float valve was installed upstream of the catch tank to allow condensate to flow into the tank without releasing steam for tests -01 and -02. For tests -01 and -02 a constant entropy expansion was assumed at the catch tank to account for the condensate mass lost due to flashing. The flow of the flashed condensate was not measured using a flow meter. For tests -03, -04, -05, -06, -07 and -08, a ball valve was used instead of the float valve. Use of a ball valve allowed some steam to flow through the catch tank along with the condensate. During these tests (-03, -04, -05, -06, -07 and -08),

before being vented to atmosphere, the steam flowing through the catch tank was measured by a volumetric flow meter (FVM-004) with the exception of test steps 3-2 and 6-4. For all tests in Table 4.1 the HL condensation rate includes the catch tank flashing flow rate calculated assuming an isentropic expansion. For tests -03 through -08, the catch tank steam flow out rate has been included as well as the calculated steam flashing rate. The information in Table 4.1 can be compared with the mass balance information from Section 3.3 using the following:

- $\dot{m}_{\text{steam in}} \rightarrow$ steam inlet flow
- $\dot{m}_{\text{separator steam out}} \rightarrow$ steam outlet flow
- $\dot{m}_{\text{catch tank liquid out}} \rightarrow$ HL U-tube condensation rate minus catch tank flashing rate
- $\dot{m}_{\text{separator liquid out}} \rightarrow$ CL U-tube condensation rate
- $\dot{m}_{\text{catch tank steam out}} \rightarrow$ catch tank steam flow out or catch tank flashing rate (tests -01 and -02)

The cross sectional area of the catch tank and the separator are identical and thus the normalized tank level curves for the catch tank and the separator can be compared directly to investigate relative condensation rates between the two. Figure 4.1 shows the normalized tank levels for the catch tank and the separator for Test NRC-COND-01 step 2. In this figure the normalized tank level increases at a faster rate in the separator than in the catch tank. This pattern holds for most test steps.

The pattern shown in Figure 4.1 does not indicate a greater condensation rate on the CL side of the SG tubes than the HL side of the tube. The collapsed liquid level in the catch tank (as shown in Figure 4.1) under predicts the condensation rate on the HL side since it does not take into account the expansion of the liquid as it enters the catch tank and the subsequent flashing of some of the condensate into steam. The mean condensation rate information found in Table 4.1 takes catch tank flashing into consideration. It can be noted from Table 4.1 that when catch tank flashing is taken into account a distinctive relationship between CL and HL condensation rates does not emerge except for the highest inlet steam velocity test (test 6, step 5).

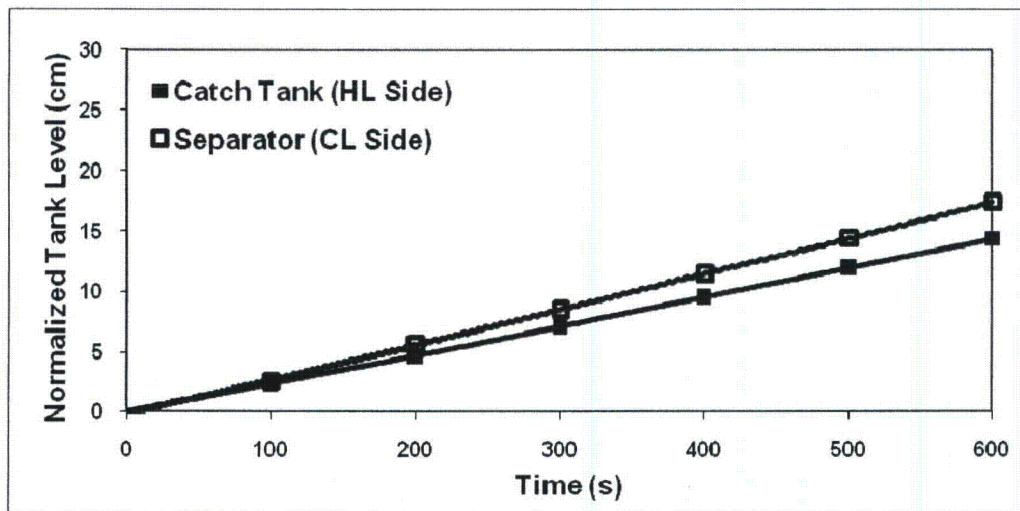


Figure 4.1 Normalized Tank Levels for Test NRC-COND-01 Step 2

Table 4.1 Mean condensation and flow rates

| Test NRC-COND-01 | Step 2 | Step 3 | Step 4 | Step 5 |
|--------------------------------------|---------------|---------------|---------------|---------------|
| Steam inlet flow (kg/hr) | 487.23 | 427.49 | 300.70 | 175.15 |
| U-tube steam inlet velocity (m/s) | 0.84 | 0.71 | 0.47 | 0.26 |
| Steam outlet flow (kg/hr) | 353.42 | 279.49 | 134.84 | 0.35 |
| U-tube steam outlet velocity (m/s) | 0.63 | 0.47 | 0.21 | 0.00 |
| HL U-tube condensation rate (kg /hr) | 70.54 | 76.66 | 84.08 | 90.13 |
| CL U-tube condensation rate (kg /hr) | 66.23 | 73.15 | 78.70 | 80.30 |
| Catch tank flashing rate (kg/hr) | 10.91 | 12.08 | 13.67 | 14.98 |
| Test NRC-COND-02 | Step 2 | Step 3 | Step 4 | Step 5 |
| Steam inlet flow (kg /hr) | 550.47 | 450.41 | 366.55 | 216.84 |
| U-tube steam inlet velocity (m/s) | 0.70 | 0.55 | 0.43 | 0.24 |
| Steam outlet flow (kg /hr) | 368.97 | 254.72 | 155.01 | 0.47 |
| U-tube steam outlet velocity (m/s) | 0.48 | 0.31 | 0.18 | 0.00 |
| HL U-tube condensation rate (kg /hr) | 95.19 | 97.23 | 105.26 | 108.27 |
| CL U-tube condensation rate (kg /hr) | 88.36 | 88.97 | 98.67 | 97.49 |
| Catch tank flashing rate (kg/hr) | 16.94 | 17.64 | 19.37 | 20.30 |
| Test NRC-COND-03 | Step 2 | Step 3 | Step 4 | Step 5 |
| Steam inlet flow (kg /hr) | 406.93 | 370.82 | 324.51 | 177.69 |
| U-tube steam inlet velocity (m/s) | 1.55 | 1.30 | 1.05 | 0.50 |
| Steam outlet flow (kg /hr) | 286.32 | 207.83 | 149.39 | 0.11 |
| U-tube steam outlet velocity (m/s) | 1.22 | 0.78 | 0.50 | 0.00 |
| HL U-tube condensation rate (kg /hr) | 56.62 | 71.49 | 76.82 | 78.31 |
| CL U-tube condensation rate (kg /hr) | 60.86 | 72.65 | 78.86 | 75.10 |
| Catch tank flashing rate (kg/hr) | 5.54 | 7.40 | 8.36 | 9.36 |
| Catch tank steam flow out (kg/hr) | NA | 11.37 | 18.65 | 29.05 |
| Test NRC-COND-04 | Step 2 | Step 3 | Step 4 | |
| Steam inlet flow (kg /hr) | 711.45 | 895.94 | 1177.03 | |
| U-tube steam inlet velocity (m/s) | 0.81 | 1.04 | 1.43 | |
| Steam outlet flow (kg /hr) | 483.75 | 673.35 | 951.51 | |
| U-tube steam outlet velocity (m/s) | 0.55 | 0.79 | 1.17 | |
| HL U-tube condensation rate (kg /hr) | 107.60 | 102.44 | 96.13 | |
| CL U-tube condensation rate (kg /hr) | 92.29 | 87.20 | 86.01 | |
| Catch tank flashing rate (kg/hr) | 20.14 | 18.94 | 17.46 | |
| Catch tank steam flow out (kg/hr) | 24.31 | 24.06 | 24.88 | |
| Test NRC-COND-05 | Step 2 | Step 3 | Step 4 | |
| Steam inlet flow (kg /hr) | 754.77 | 904.48 | 1169.12 | |
| U-tube steam inlet velocity (m/s) | 0.77 | 0.94 | 1.26 | |
| Steam outlet flow (kg /hr) | 510.35 | 664.86 | 929.89 | |
| U-tube steam outlet velocity (m/s) | 0.52 | 0.69 | 1.01 | |
| HL U-tube condensation rate (kg /hr) | 113.95 | 114.26 | 104.45 | |
| CL U-tube condensation rate (kg /hr) | 101.09 | 98.74 | 94.15 | |
| Catch tank flashing rate (kg/hr) | 22.28 | 22.15 | 19.96 | |
| Catch tank steam flow out (kg/hr) | 25.92 | 26.29 | 27.56 | |
| Test NRC-COND-06 | Step 2 | Step 3 | Step 4 | Step 5 |
| Steam inlet flow (kg /hr) | 253.35 | 367.62 | 495.16 | 675.54 |
| U-tube steam inlet velocity (m/s) | 1.20 | 1.80 | 2.53 | 3.73 |
| Steam outlet flow (kg /hr) | 135.01 | 253.83 | 373.07 | 472.90 |
| U-tube steam outlet velocity (m/s) | 0.64 | 1.27 | 1.99 | 2.97 |
| HL U-tube condensation rate (kg /hr) | 60.63 | 57.43 | 56.45 | 15.08 |
| CL U-tube condensation rate (kg /hr) | 55.28 | 53.65 | 54.20 | 72.94 |
| Catch tank flashing rate (kg/hr) | 5.05 | 4.66 | 4.43 | 1.11 |
| Catch tank steam flow out (kg/hr) | 9.90 | 12.94 | NA | 17.23 |

| Table 4.1 Mean condensation and flow rates (continued) | | | |
|--|---------|---------|--|
| Test NRC-COND-07 | Step 2 | Step 3 | |
| Steam inlet flow (kg /hr) | 1151.25 | 1104.36 | |
| N ₂ inlet flow (kg/hr) | NA | 25.99 | |
| U-tube gas inlet velocity (m/s) | 1.39 | 1.35 | |
| Steam outlet flow (kg /hr) | 938.99 | 899.70 | |
| N ₂ outlet flow (kg/hr) | NA | 25.75 | |
| U-tube gas outlet velocity (m/s) | 1.14 | 1.12 | |
| HL U-tube condensation rate (kg /hr) | 96.53 | 96.18 | |
| CL U-tube condensation rate (kg /hr) | 83.84 | 76.45 | |
| Catch tank flashing rate (kg/hr) | 17.58 | 17.57 | |
| Catch tank steam flow out (kg/hr) | 27.21 | 27.86 | |
| N ₂ catch tank outlet flow (kg/hr) | NA | 0.24 | |
| Test NRC-COND-08 | Step 2 | Step 3 | |
| Steam inlet flow (kg /hr) | 1142.44 | 987.76 | |
| N ₂ inlet flow (kg/hr) | NA | 126.96 | |
| U-tube steam inlet velocity (m/s) | 1.36 | 1.31 | |
| Steam outlet flow (kg /hr) | 923.65 | 790.37 | |
| N ₂ outlet flow (kg/hr) | NA | 125.73 | |
| U-tube steam outlet velocity (m/s) | 1.11 | 1.08 | |
| HL U-tube condensation rate (kg /hr) | 97.21 | 114.86 | |
| CL U-tube condensation rate (kg /hr) | 88.53 | 59.48 | |
| Catch tank flashing rate (kg/hr) | 17.81 | 21.18 | |
| Catch tank steam flow out (kg/hr) | 29.61 | 30.80 | |
| N ₂ catch tank outlet flow (kg/hr) | NA | 1.24 | |

4.3 Steam Condensation Non-Dimensional Analysis

Condensation is a phenomena that has been studied extensively. Nusselt made the first attempt in 1916 for laminar condensation on a flat plate. This analytical solution relied on several assumptions and reduced the description of the condensation process to two important non-dimensional variables, the modified Nusselt number (Equation 4.1) and the film Reynolds number (Equation 4.2). (Ref. 1)

$$Nu_{mod} = \frac{\bar{h}}{k_f} \left[\frac{\mu_f^2}{\rho_f (\rho_f - \rho_g) g} \right]^{\frac{1}{3}} = 1.47 Re_{film}^{-\frac{1}{3}} \quad (4.1)$$

$$Re_{film} = \frac{4\Gamma}{\mu_f} \quad (4.2)$$

Further development of the condensation problem led to the elimination of many of Nusselt's original assumptions, most notably the assumption of neglected film subcooling, linear temperature profile across the film and negligible advection effects in the film. The inclusion of these effects points to Prandtl number (Equation 4.3) as an additional variable of possible importance. (Refs. 2, 3, 4, 5, 6)

$$Pr = \frac{c_{p,f} \mu_f}{k_f} \quad (4.3)$$

For turbulent flow along a flat plate the variables of interest are the same as for laminar flow (Nu_{mod} , Re_{film} , Pr_{film}), however, the functional dependencies may change. (Refs. 7, 8, 9)

The application of condensation theory to cases of condensation within tubes with a non-negligible vapor velocity yields the non-dimensional interfacial shear stress (Equations 4.4, 4.5 and 4.6) as a variable of interest. (Refs. 10, 11, 12)

$$\tau_i^* = f_i \left[\frac{G_g^2}{2\rho_g} \right] \left[\frac{\rho_f}{(\rho_f - \rho_g)^2 \mu_f^2 g^2} \right]^{\frac{1}{3}} \quad (4.4)$$

$$G_g = \sqrt{\frac{G_i^2 + G_i G_o + G_o^2}{3}} \quad (4.5)$$

$$f_i = 0.316 Re_{stm}^{-0.25} \quad (4.6)$$

4.4 Estimation of Heat Transfer Coefficients

The overall heat transfer coefficient (U) can be estimated from the experimental data using Equation 4.7.

$$E_{transfer} = U \cdot A \cdot \Delta T_m \Rightarrow U = \frac{E_{transfer}}{A \cdot \Delta T_m} \quad (4.7)$$

$E_{transfer}$ is the energy transferred across the SG tubes to the secondary side of the SG. $E_{transfer}$ is determined using the amount of energy required to condense the steam in the tubes. It is calculated from the HL and CL condensation rates in Table 4.1 and the heat of vaporization at the inlet (PT-004) and outlet (PT-501) tube pressures respectively. A is the inside surface area of the SG U-tubes. ΔT_m is the mean temperature difference between tube and shell side of the SG. The mean temperature difference is calculated using Equation 4.8.

$$\Delta T_m = \frac{\Delta T_{in} + \Delta T_{out}}{2} \quad (4.8)$$

ΔT_{in} represents the difference between the average SG tube inlet temperature as listed in Table 4.2 (calculated by averaging the maximum temperature of TF-211/TF-217 and the maximum temperature of TF-207/TF-215) and the saturation temperature of the SG shell side also listed in table 4.2 (determined from PT-301). ΔT_{out} represents the difference between the average SG tube outlet temperature as listed in Table 4.2 (calculated by averaging the minimum temperature of TF-217/TF-213 and the minimum temperature of TF-215/TF-209) and the saturation temperature of the SG shell side.

Since the wall temperature is not measured in the current test series the condensation heat transfer coefficient inside the SG tubes can only be calculated indirectly from U . The thermal resistance across the SG U-tubes is comprised of three parts: resistance of convection due to boiling of the shell side, the resistance across the tube walls, and the resistance due to condensation heat transfer inside of the tube. The overall heat transfer coefficient can be calculated from its components using Equation 4.9. k_w is the thermal conductivity of stainless steel 304.

$$U = \frac{1}{\frac{1}{h_i} + \frac{r_i}{k_w} \ln \frac{r_o}{r_i} + \frac{r_i}{r_o} \frac{1}{h_o}} \quad (4.9)$$

The heat transfer coefficient on the shell side of the SG can be calculated as saturated nucleate pool boiling. The Cooper method (Equations 4.10 and 4.11) can be used to estimate the heat transfer coefficient for nucleate pool boiling. (Ref. 13) The critical pressure ratio is calculated using the SG#1 shell pressure from PT-301. The heat flux is calculated using $E_{transfer}$ and the outside surface area of the SG tubes. The surface roughness used is that of new stainless steel ($R_p = 2\mu m$) as discussed in Section 4.1.

$$h = 55P_r^n (-0.4343 \ln(P_r))^{-0.55} M^{-0.5} (q'')^{0.67} \quad (4.10)$$

$$n = 0.12 - 0.08686 \ln(R_p) \quad (4.11)$$

Table 4.2 lists pressures and temperatures for both the tube and the secondary side shell for the individual test steps. The overall heat transfer coefficients, shell side heat transfer coefficients and condensation heat transfer coefficients on the inside of the tube as calculated using Equations 4.7, 4.10 and 4.9 respectively are also presented in Table 4.2.

Table 4.2 Heat Transfer Coefficients

| Test-Step | Tube P (PT-004) [MPa] | Tube T _{in} [°C] | Tube T _{out} [°C] | Shell P (PT-301) [MPa] | Shell T [°C] | U [W/m ² -K] | h _o [W/m ² -K] | h _i [W/m ² -K] |
|-----------|-----------------------------|------------------------------|-------------------------------|------------------------------|-----------------|----------------------------|---|---|
| 1-2 | 1.27 | 190.7 | 190.3 | 1.21 | 188.2 | 967.6 | 1554.8 | 2440.8 |
| 1-3 | 1.33 | 192.9 | 192.3 | 1.27 | 190.4 | 1133.1 | 1668.1 | 3362.5 |
| 1-4 | 1.42 | 196.4 | 195.7 | 1.37 | 193.9 | 1229.4 | 1789.9 | 3784.3 |
| 1-5 | 1.49 | 198.9 | 198.1 | 1.44 | 196.4 | 1325.6 | 1865.7 | 4438.6 |
| 2-2 | 1.74 | 205.9 | 205.5 | 1.66 | 203.3 | 1211.1 | 2017.8 | 3008.9 |
| 2-3 | 1.83 | 208.4 | 207.6 | 1.75 | 205.8 | 1358.5 | 2059.4 | 3974.8 |
| 2-4 | 1.89 | 210.2 | 209.4 | 1.82 | 207.6 | 1479.9 | 2205.3 | 4554.0 |
| 2-5 | 1.97 | 212.6 | 211.7 | 1.91 | 210.0 | 1510.7 | 2241.1 | 4712.0 |
| 3-2 | 0.55 | 154.0 | 153.7 | 0.48 | 150.1 | 544.7 | 1188.8 | 964.4 |
| 3-3 | 0.60 | 158.3 | 158.0 | 0.54 | 154.6 | 709.4 | 1391.0 | 1391.0 |
| 3-4 | 0.65 | 162.1 | 161.5 | 0.60 | 158.7 | 856.9 | 1491.6 | 1926.2 |
| 3-5 | 0.77 | 169.6 | 168.7 | 0.73 | 166.4 | 946.9 | 1528.5 | 2366.8 |
| 4-2 | 1.97 | 212.3 | 211.7 | 1.89 | 209.6 | 1332.8 | 2194.8 | 3422.2 |
| 4-3 | 1.91 | 210.8 | 210.1 | 1.84 | 208.2 | 1339.3 | 2106.0 | 3681.9 |
| 4-4 | 1.83 | 208.6 | 208.0 | 1.76 | 206.0 | 1279.9 | 2031.7 | 3437.2 |
| 5-2 | 2.19 | 217.7 | 216.9 | 2.11 | 215.2 | 1599.1 | 2359.6 | 5117.2 |
| 5-3 | 2.14 | 216.6 | 215.8 | 2.07 | 214.1 | 1591.7 | 2334.1 | 5149.1 |
| 5-4 | 2.07 | 214.7 | 214.2 | 2.00 | 212.3 | 1448.6 | 2210.4 | 4253.6 |
| 6-2 | 0.44 | 147.9 | 147.7 | 0.40 | 144.0 | 545.4 | 1147.3 | 992.1 |
| 6-3 | 0.42 | 146.5 | 146.3 | 0.39 | 142.6 | 521.8 | 1108.0 | 940.5 |
| 6-4 | 0.41 | 144.6 | 144.4 | 0.37 | 140.7 | 507.9 | 1095.5 | 903.4 |
| 6-5 | 0.37 | 140.6 | 140.1 | 0.33 | 136.4 | 403.8 | 923.7 | 682.8 |
| 7-2 | 1.84 | 209.0 | 208.4 | 1.78 | 206.6 | 1369.6 | 2023.3 | 4202.7 |
| 7-3 | 1.86 | 208.3 | 207.6 | 1.76 | 206.0 | 1402.0 | 1957.3 | 4846.5 |
| 8-2 | 1.87 | 209.7 | 209.0 | 1.80 | 207.2 | 1378.6 | 2068.5 | 4119.3 |
| 8-3 | 1.90 | 205.7 | 204.7 | 1.66 | 203.1 | 1298.1 | 1935.3 | 3871.3 |

4.5 Nusselt Number Analysis

The modified Nusselt number (Equation 4.1) is analyzed as a function of the film Reynolds number (Equation 4.2), the Prandtl number (Equation 4.3) and the non-dimensional interfacial shear stress (Equation 4.4). Figure 4.2 shows the modified Nu plotted against the film Re for each of the test steps in this experimental program. Nu_{mod} and Re_{film} are calculated using the average condensation heat transfer coefficient (h_i), condensation rates listed in Table 4.1, tube geometric data (Section 2.4) and the thermodynamic conditions at the average tube pressure (PT-501 and PT-004). An increasing Nu_{mod} as a function of increasing Re_{film} is characteristic of turbulent flow in the condensate film. In the current U-tube tests this is generally seen for Re_{film} above approximately 60. The flat Nu_{mod} as a function of increasing Re_{film} is characteristic of the transition between laminar-wavy and turbulent flow. This is seen in the current test program for Re_{film} below 60. A decreasing Nu_{mod} vs Re_{film} which is characteristic of laminar and laminar-wavy flow in the condensate layer is not seen in the current test program. The smallest Re_{film} tested here is approximately 40.

For the test steps with a film Reynolds number greater than 60 (turbulent regime) a correlation can be developed for the data collected in this test program as noted in Equation 4.12.

$$Nu_{mod} = 2.68 \times 10^{-4} Re_{film}^{1.18} \quad (4.12)$$

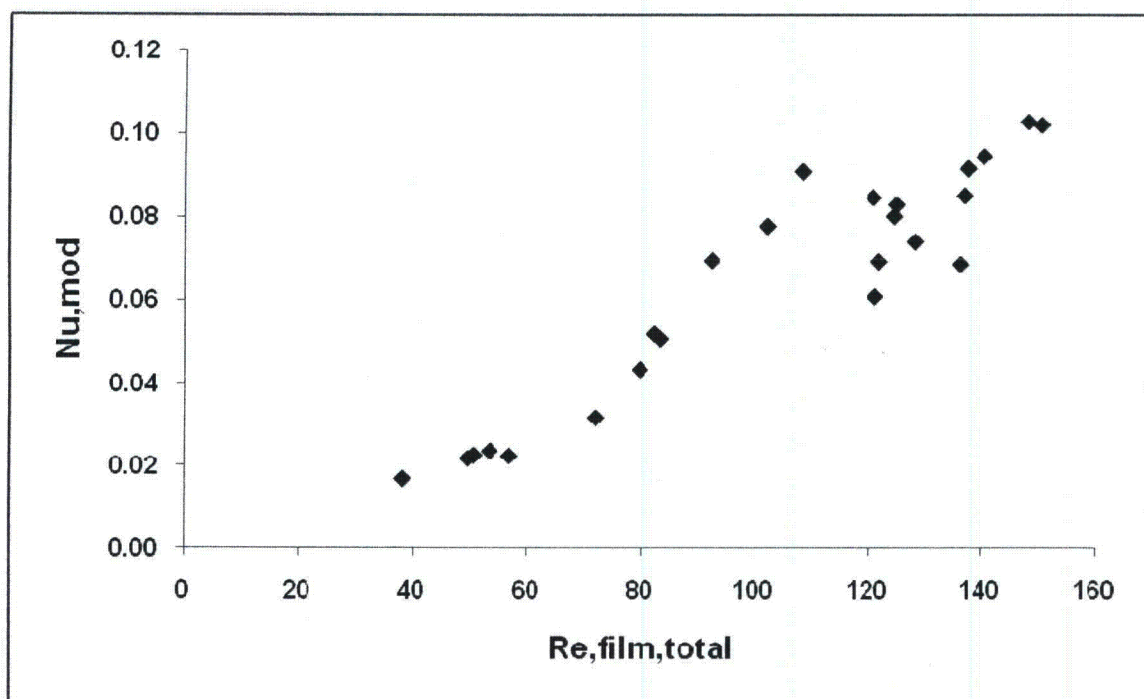


Figure 4.2 Modified Nusselt Number for U-tube Condensation (Re_{film})

As noted, for condensation through a vertical tube with significant vapor velocity, the Prandtl number and the dimensionless interfacial shear also play a role in influencing the modified Nusselt number. The Prandtl number is calculated using the thermodynamic conditions at the average tube pressure (PT-501 and PT-004). The dimensionless interfacial shear stress is determined using the thermodynamic conditions at the average tube pressure (PT-501 and PT-004) as well as G_g (evaluated using inlet and outlet steam mass flow rates from FVM-002 and FVM-001 respectively) and Re_{stm} (evaluated using the average steam mass flow rate from FVM-002/FVM-001 and the saturated thermodynamic conditions at the average tube pressure). For the series of tests analyzed here the Prandtl number ranges from 0.87 to 1.24 while the dimensionless interfacial shear stress ranges from 0.04 to 2.47. Figure 4.3 shows the modified Nusselt number as a function of the film Prandtl number. Figure 4.4 shows the modified Nusselt number as a function of film Reynolds number for various Prandtl numbers.

Figure 4.3 appears to show an inverse correlation between the modified Nusselt number and film Prandtl number. For tests with a Pr_{film} below one, there is a wide range of modified Nusselt numbers within a very narrow band of Pr_{film} . For tests with a Pr_{film} above one (tests -03 and -06), there is a slightly smaller range of modified Nusselt numbers within a wider band of Pr_{film} . Pr_{film} also varies inversely with pressure, thus the higher Pr_{film} tests correspond to the lower pressure tests. At lower pressures, the latent heat of vaporization is higher and would lead to less condensation on a unit energy transferred basis resulting in lower film Reynolds numbers. Therefore, the inverse relationship between Re_{film} and Pr_{film} can be explained through the impact of pressure on both parameters. This relationship between Re_{film} and Pr_{film} for these tests can be seen in Figure 4.4—higher Re_{film} tests correspond to lower Pr_{film} . A noticeable effect from Pr_{film} independent of Re_{film} theoretically could be seen by different slopes in Figure 4.4 for tests with different Pr_{film} . It appears that the tests with smallest Pr_{film} (<0.9) may have a different slope than tests with higher Pr_{film} and thus the film Prandtl number may have an effect on condensation in the U-tube steam generator independent of the film Reynolds number. However, before any general conclusions can be made on this point a wider range of Re_{film} should be tested for both small and large Pr_{film} tests.

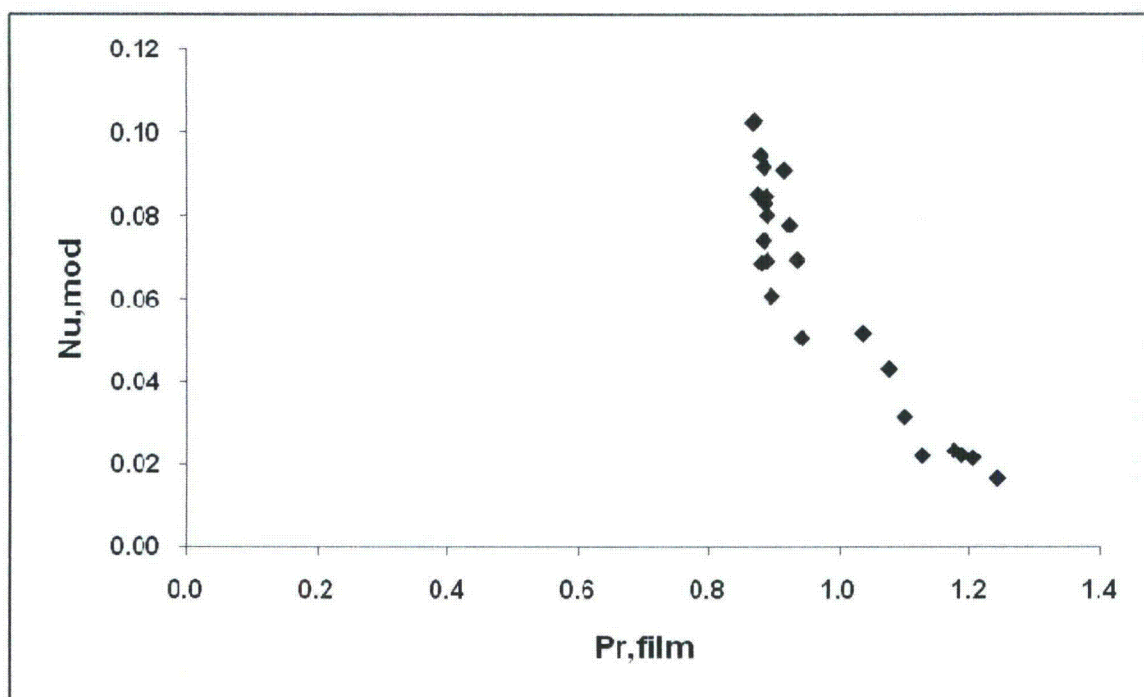


Figure 4.3 Modified Nusselt Number for U-tube Condensation (Pr_{film})

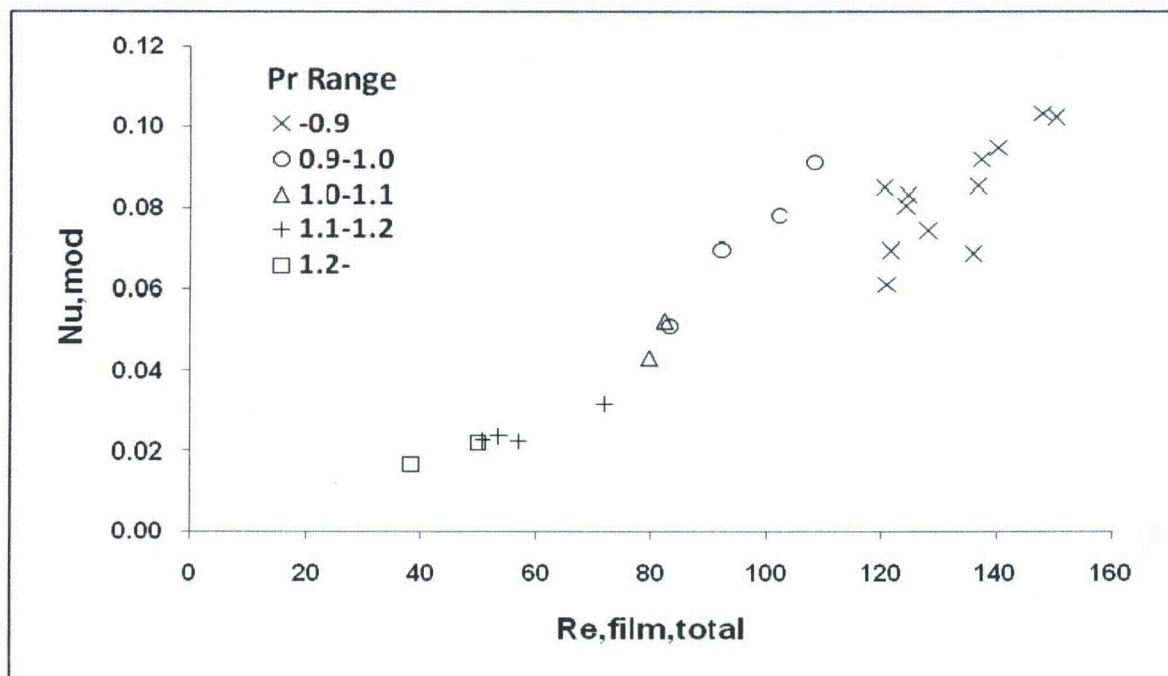


Figure 4.4 Modified Nusselt Number for U-tube Condensation (Re_{film} and Pr_{film})

Figures 4.5 and 4.6 show the modified Nusselt number as a function of the interfacial shear stress and the Reynolds number of the inlet steam respectively. $Re_{stm,inlet}$ is calculated using the inlet steam mass flow rate from FVM-002 and the saturated steam thermodynamic conditions at inlet pressure from PT-004. From these figures, it does not appear that the modified Nusselt number is a direct function of either parameter.

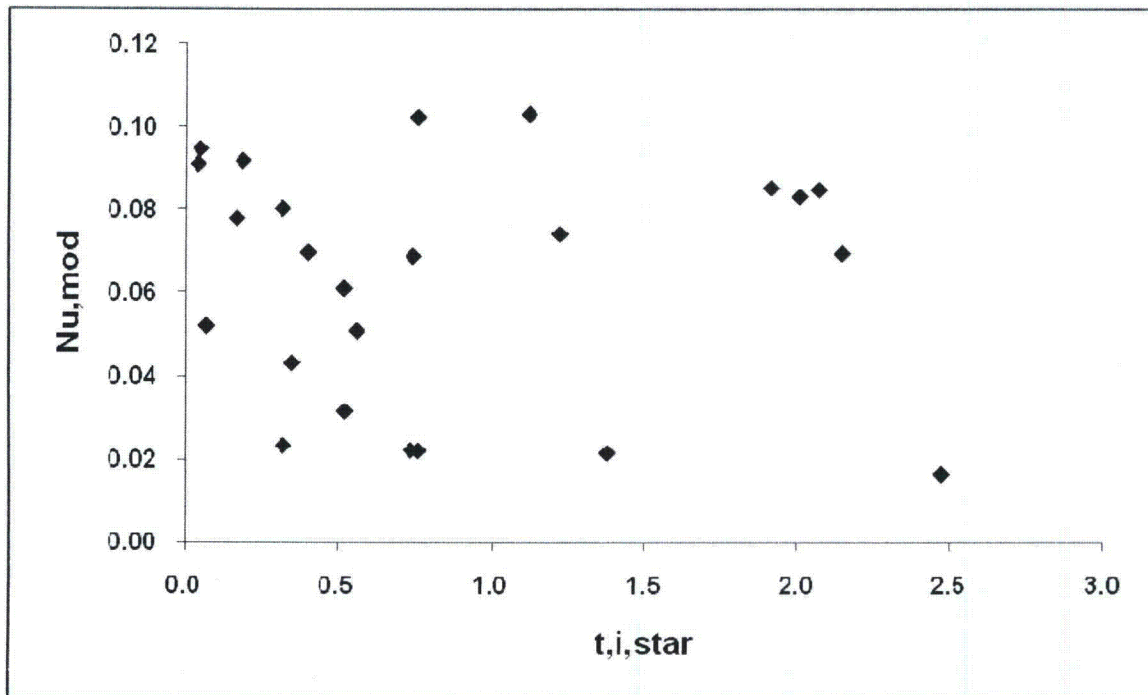


Figure 4.5 Modified Nusselt Number for U-tube Condensation (Interfacial Shear Stress)

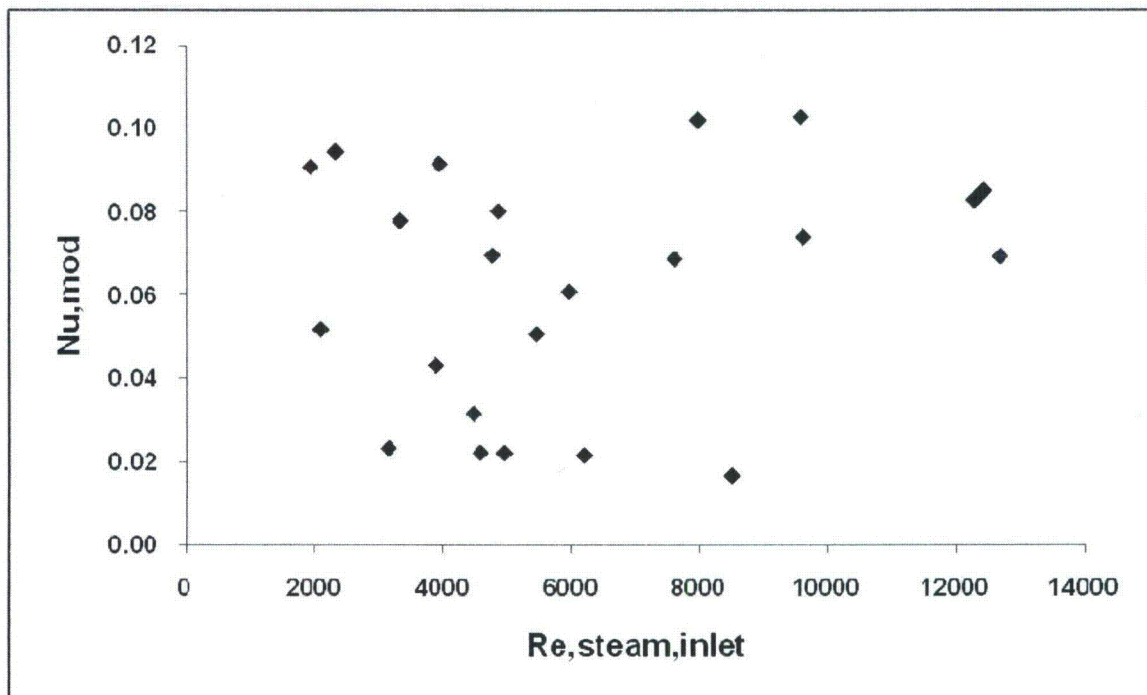


Figure 4.6 Modified Nusselt Number for U-tube Condensation as Function of Inlet Steam Re

4.6 Condensate Carryover Analysis

Also of interest in the current test program are the relative rates of condensation between the hot leg (up) side and the cold leg (down) side of the U-tube. For most of the test steps as noted in Section 4.1, the rates on both sides are very similar. A carryover ratio can be defined to quantify this relative difference between rates as shown in Equation 4.13.

$$C = \frac{Re_{film,down}}{Re_{film,up}} \quad (4.13)$$

Figure 4.7 shows the modified Nusselt number as a function of the carryover ratio. All test steps except for one have a C very close to 1. The modified Nusselt number appears to be independent of the carryover ratio for these test steps. One test step was conducted which showed significantly more condensate on the down side of the steam generator when compared to the condensate on the up side. The carryover ratio for this step is approximately 5 and is shown on Figure 4.7 as well.

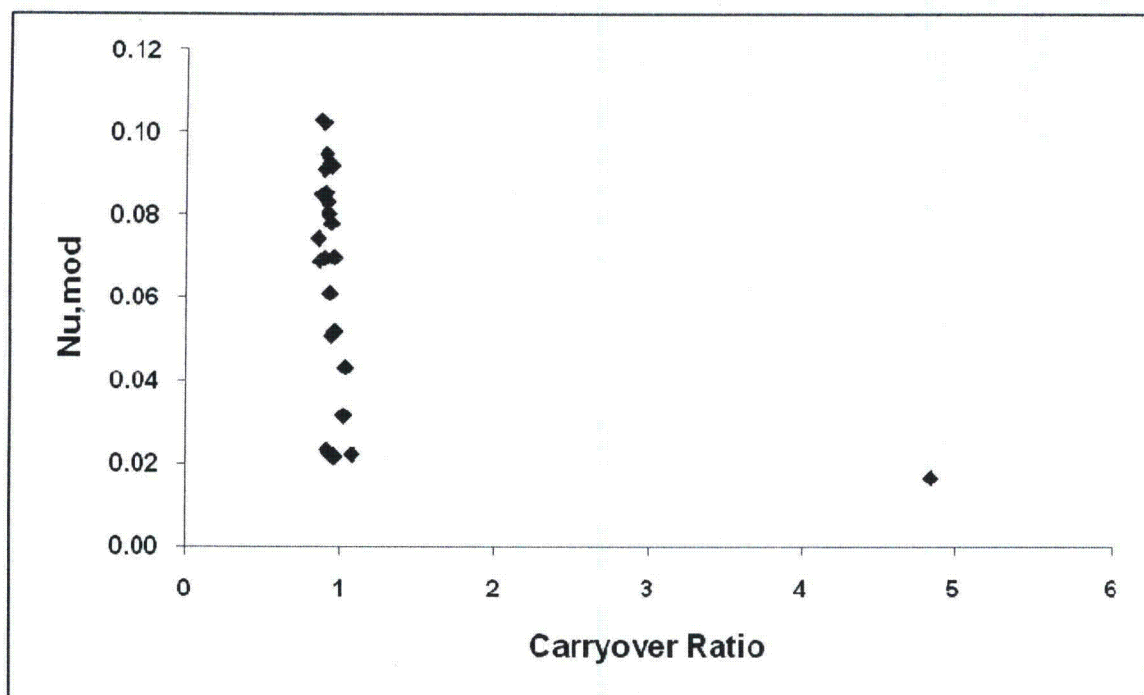


Figure 4.7 Modified Nusselt Number for U-tube Condensation as Function of C

The carryover ratio is shown as a function of the interfacial shear stress in Figure 4.8. It can be seen that the carryover ratio is constant for all dimensionless interfacial shear stress values of less than 2.2. The one test step with a significant deviation in the carryover ratio was completed with the highest interfacial shear stress in the series at approximately 2.5. Although this was the step with the highest interfacial shear stress, complete flooding is not predicted at the steam velocities encountered in this step by the Wallis Flooding Model. Equation 4.14 shows an equation for flooding steam velocity based on a $c=0.725$ (suggested by Wallis for a sharp edged tube entrance) (Ref. 14). Using this equation the complete flooding steam velocity is approximately 4.4 m/s while the steam velocities encountered in this test step are approximately 3.7 m/s.

$$j_{g,critical} = c^2 \left(\frac{gD(\rho_f - \rho_g)}{\rho_g} \right)^{0.5} \quad (4.14)$$

This test step is also the test step displaying the greatest mass balance bias (~15%) as discussed in Section 3.3. This corresponds to approximately 16 kg of mass that is unaccounted for in the system. Therefore, no general conclusion can be made based on the results of this test step. It is postulated that the greater condensate collected on the cold leg side when compared to the condensate collected on the hot leg side is caused by the interfacial shear stress acting on the condensate layer on the up side of the tubes. However, more data is needed in order to determine if this is caused by a hold up of the condensate in the hot leg side of the tubes which prevents the condensate from being collected or this is indeed caused by a carryover of condensate from the hot leg to cold leg side of the tubes. Also of note is the fact that the carryover ratio does not appear to be a function of the Reynolds number of the inlet steam as is shown in Figure 4.9.

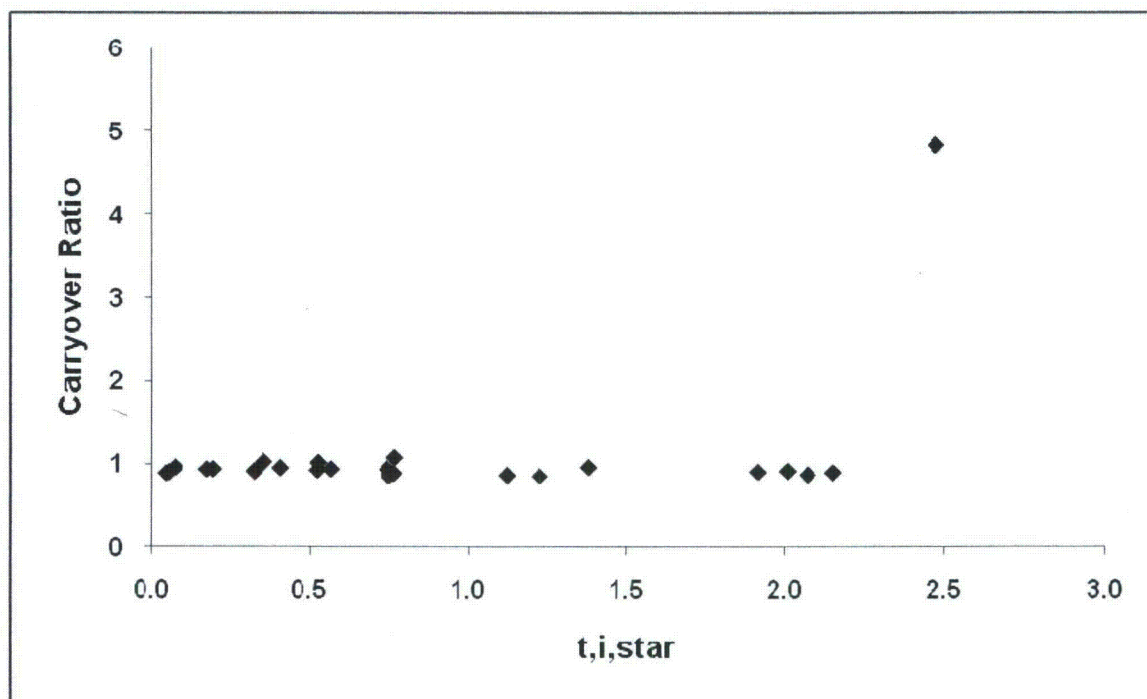


Figure 4.8 Carryover Ratio as a Function of Interfacial Shear Stress.

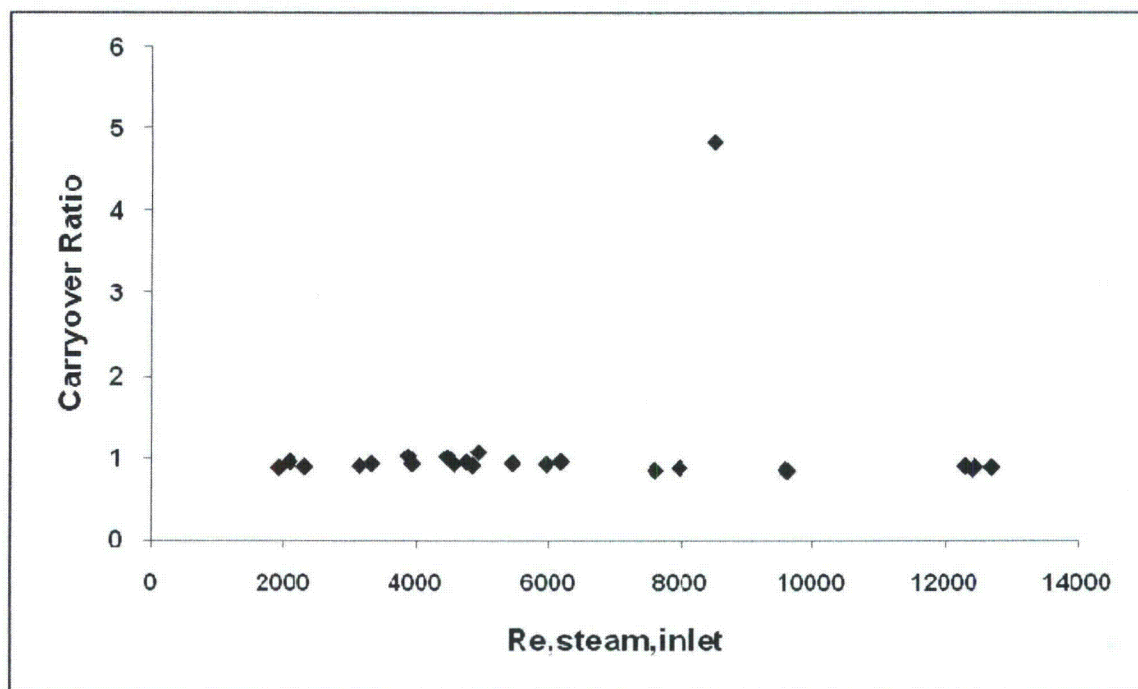


Figure 4.9 Carryover Ratio as a Function of Inlet Re .

4.7 Uncertainty in Nusselt Number Analysis and Comparison with Previous Studies

During the small break loss of coolant accident (LOCA) the liquid inventory in a pressurized water reactor (PWR) can fall to a point where the water level in the system is below the steam generator. Heat generated in the core during the event can lead to steam production which can accumulate and ultimately condense inside the SG tubes. This process of reflux condensation has been examined previously due to its importance in the progression of the small break LOCA transient. Experimental investigations of reflux condensation have included a variety of single/multiple tube arrangement tests (Refs. 15, 16, 17 and 18) as well as integral system tests (Refs. 19 and 20).

The modified Nusselt numbers and heat transfer coefficients calculated in this analysis are determined from flow, pressure and temperature measurements taken during the course of this test program as discussed in Sections 4.4 and 4.5. Table 3.3 shows the uncertainty associated with each of the instruments used in this test facility. The methodology discussed in Section 3.2 (Equations 3.1 and 3.2) has been used to examine the propagation of these instrument uncertainties through the calculation of the heat transfer coefficients and modified Nusselt numbers. There is an additional uncertainty of $\pm 40\%$ associated with the use of the Cooper correlation (Equations 4.10 and 4.11) (Ref. 13). The uncertainty in the Cooper correlation has been combined with the instrument uncertainty as a root mean square. The uncertainty for APEX Nusselt numbers is shown by the uncertainty bands in Figures 4.10 and 4.11. As seen in these figures the uncertainty in the calculation of Nu_{mod} and Nu is substantial. This is primarily a result of the Cooper correlation uncertainty and the individual thermocouple uncertainties, where small temperature differences can result in large differences in calculated heat transfer coefficients. Reduction in uncertainty is limited with the currently installed instrumentation package.

Figures 4.10 and 4.11 show the APEX Nusselt numbers compared against two Nusselt number correlations for condensation with steam flow. The Carpenter and Colburn correlation (Ref. 10) is shown in Equation 4.15 and is plotted against the APEX data in Figure 4.10. In this correlation, Nu_{mod} is a function of film Prandtl number and the non-dimensional interfacial shear stress. In Figure 4.10 the Nu_{mod} for a given Re_{film} is calculated using Equation 4.15 for the respective Pr_{film} and non-dimensional interfacial shear stress. The APEX data is of the same magnitude as the Carpenter—Colburn correlation; however, it must be noted that the APEX data is outside of the range of applicability for the Carpenter—Colburn correlation which is valid for non-dimensional interfacial shear stresses between 5 and 150.

$$Nu_{mod} = 0.065 Pr^{0.5} (\tau_i^*)^{0.5} \quad (4.15)$$

The Akers and Rosson correlation (Ref. 21) is shown in Equation 4.16 and is also plotted against the APEX data in Figure 4.11. In this correlation, Nu is a function of film Prandtl number, steam Reynolds number, film Reynolds number, viscosity ratio, and density ratio. Nu uses the tube diameter as the characteristic dimension as opposed to the condensation characteristic length used in Equation 4.1 for Nu_{mod} . In Figure 4.11 the Nu for a given Re_{film} is calculated using Equation 4.16 using the respective non-dimensional numbers for the subject test step. Again the APEX data is of the same magnitude as the Akers—Rosson correlation.

$$Nu = 0.026 Pr_{film}^{0.33} \left[Re_{stm} \left(\frac{\mu_g}{\mu_f} \right) \left(\frac{\rho_f}{\rho_g} \right)^{0.5} + Re_{film} \right]^{0.8} \quad (4.16)$$

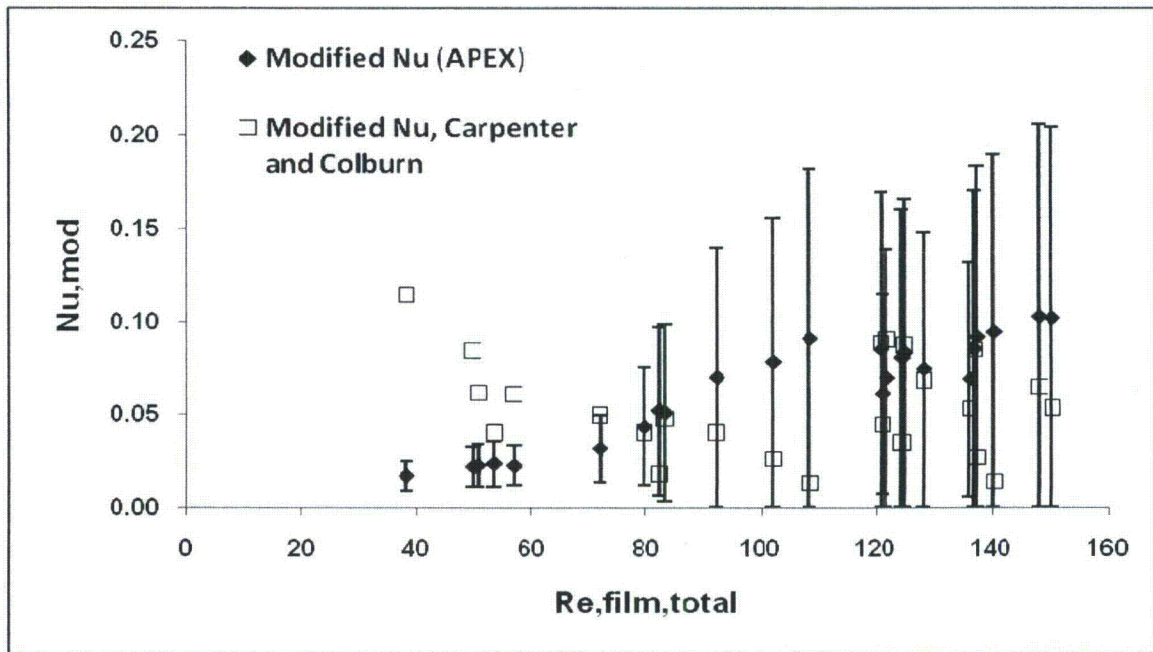


Figure 4.10 Modified Nusselt Number (APEX vs. Carpenter and Colburn Correlation)

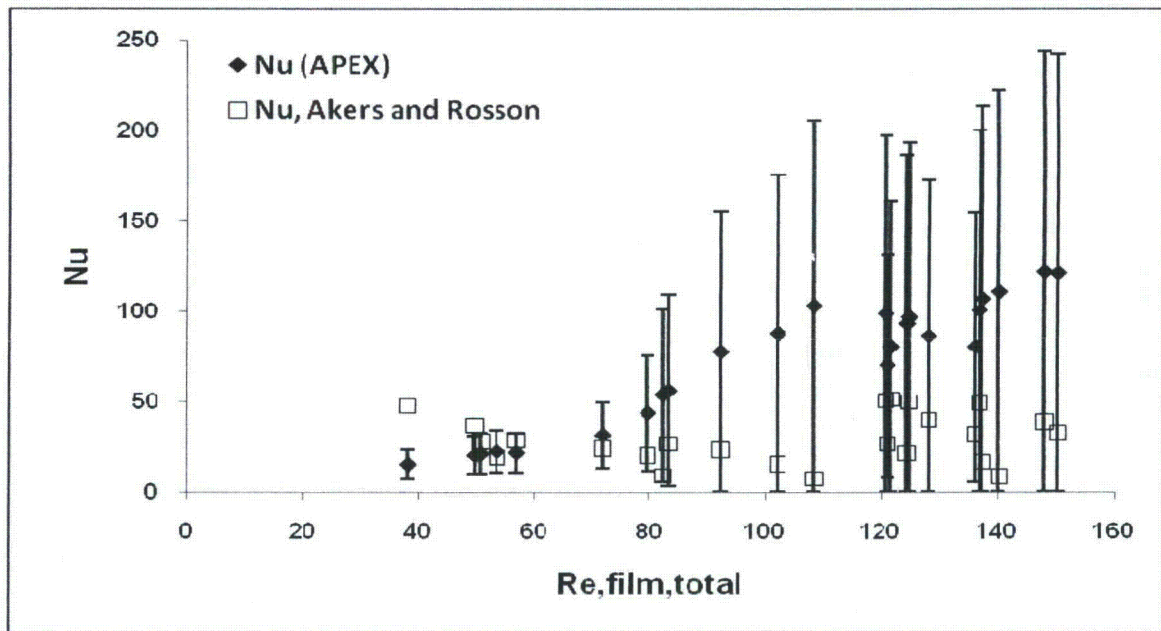


Figure 4.11 Nusselt Number (APEX vs. Akers and Rosson Correlation)

Of the studies mentioned in the beginning of this section the work by Lee et al. (Ref. 15) was conducted in a geometry similar to the one presented here. Although conducted in an integral test facility, the modifications that were completed allowed the APEX facility SG#1 to be used as a separate effects test facility—a multi-tube U-tube steam condensation experiment. Lee's experiment was conducted in a single U-tube with a similar geometry and inlet mass flow rate per tube basis. The major differences between this work and the work of Lee et al. is that Lee's experiments were conducted at a significantly lower pressure (0.1 MPa) and the shell side of the tube was subcooled. Lee's condensation experiments resulted in condensation heat transfer coefficients that were generally higher than those experienced during the APEX test program—approximately $7500 \text{ W/m}^2\text{-K}$ for Re_{film} above 75 versus the APEX data listed in Table 4.2. Also of note is that the heat transfer coefficients versus Re_{film} transitioned from falling to flat at around a Re_{film} of 75 as opposed to a transition in heat transfer coefficient versus Re_{film} from flat to increasing at around $Re_{film}=60$ in these APEX tests. As discussed in Section 4.5 there may be some effect of the Prandtl number and/or pressure on the condensation heat transfer coefficients which may account for the differences between this APEX work and Lee's work.

4.8 Effect of Non-Condensable Gas on Condensation

Two tests (-07 and -08) were completed to examine the effect of non-condensable gas on the condensation in the SG U-tubes. One test step was completed without non-condensable gas and the next test step was completed with non-condensable gas present. For test -07 the non-condensable mass fraction was $2.3\% \pm 0.3\%$ and for test -08 the non-condensable mass fraction was $11.4\% \pm 0.3\%$. Both tests were conducted at the same conditions with the exception of the presence of non-condensable gas.

Table 4.3 summarizes the comparison between the test with non-condensable gas and parallel tests without the gas present. The condensation rate degradation (d) is characterized as the ratio of film Reynolds numbers for the steam only and the steam-nitrogen tests as shown in Equation 4.17.

$$d = \frac{Re_{film,nc}}{Re_{film}} \quad (4.17)$$

There is approximately a 4% degradation in the condensation rate for the nominal 2.5% nitrogen test and a 6% degradation for the nominal 10% nitrogen test. The greatest effect between the steam and the steam-nitrogen tests is seen in the area of the U-tubes where the condensation occurs. For the nominal 2.5% nitrogen tests the condensation rate is shifted somewhat to the up side of the SG tubes. For the nominal 10% nitrogen tests this shift is significant in which the condensation rate on the up side of the tubes is nearly twice the rate seen in the down side of the SG tubes. As the steam—nitrogen gas mixture flows through the U-tubes, the condensation process will remove steam from the vapor/gas flow. As the vapor/gas mixture exits the U-tubes the mass fraction of nitrogen will thus be increased on the order of 2-3%. The larger average non-condensable mass fraction on the down side of the U-tubes when compared to the up side of the tubes results in a decrease in the steam partial pressure and thus a decrease in the steam saturation temperature which in turn hinders the condensation process. This results in a more pronounced degradation in condensation rate in the down side of the U-tubes when compared to the up side of the tubes.

Condensation rate degradation shown in Equation 4.17 is used in lieu of a comparison of calculated heat transfer coefficients inside the tubes due to uncertainty considerations. Overall and tube heat transfer coefficients are shown in Table 4.2 for tests -07 and -08 for both steps with and without non-condensable gas present. Due to instrument and correlation uncertainty, the heat transfer coefficient uncertainty for tests -07 and -08 in Table 4.2 is greater than 70% and thus these are unreliable as indicators for heat transfer degradation.

| Table 4.3: Effects of non-condensable gas | | | |
|---|-------------|-----------------|----------------|
| Test Step | Re_{film} | $d [\pm 0.010]$ | $C [\pm 0.02]$ |
| 7-2 | 120.7 | 0.958 | 0.87 |
| 7-3 | 115.7 | | 0.79 |
| 8-2 | 124.7 | 0.942 | 0.91 |
| 8-3 | 117.5 | | 0.52 |

Many of the correlations developed for condensation in the presence of non-condensable gas have been developed for geometries and conditions very different from that experienced in the APEX facility SG tubes. One such general framework for condensation in the presence of non-condensable gas has been developed by Minkowycz and Sparrow (Refs. 22 and 23). Under this framework for air the respective condensation rate degradation due to a 0.025 and 0.10 mass fraction of non-condensable gas would be approximately 0.9 and 0.7 respectively. This is very different from the condensation rate degradation experienced during tests -07 and -08. However these APEX tests have been conducted at higher pressures, higher temperatures and smaller temperature differences across the tubes than assumed in the Minkowycz and Sparrow framework. These could account for the differences between the condensation rate degradation in APEX and Minkowycz—Sparrow.

5 SUMMARY AND CONCLUSIONS

From 2005 through 2007, the OSU APEX test facility was used to conduct a series of reflux condensation tests in its steam generators. The high fidelity experimental data will provide a basis to assess TRACE steam generator modeling techniques and to assist in development of improved models for condensation and steam generator thermal-hydraulics.

Significant modifications to the test facility were completed in order to conduct the subject test program. The principal modification was the isolation of SG #1 from the primary loop piping. In this manner, SG #2 could be used to produce dry steam at pressure to feed into SG #1 in order to examine the condensation of the steam in the SG tubes.

Eight separate SG condensation tests were conducted as part of this test program. For tests -01 through -06, the nominal test pressure was varied between each test. These tests were conducted without the presence of non-condensable gas. Tests -07 and -08 were conducted at the same test pressure as one another; however the percentage of non-condensable gas was varied between the two tests. For the test program, tube side inlet steam pressure varied between 0.37 MPa to 2.19 MPa.

Based on the SG condensation experiments completed at the APEX test facility, the following conclusions can be made:

1. During these tests, with the exception on test 6-5, the condensation rates experienced in the CL and HL sides of the SG tubes are approximately equal with no distinctive pattern emerging.
2. The condensate flow for the test steps above a Re_{film} of approximately 60, exhibited a relationship between the modified Nusselt number and the film Reynolds number that is indicative of turbulent flow in the condensate film. This represented the majority of the test steps performed. The condensate flow for the test steps below a Re_{film} of approximately 60, exhibited a relationship indicative of the transition between laminar-wavy and turbulent flow. Purely laminar or laminar-wavy condensate film flow was not indicated in any of the test steps.
3. The film Prandtl number may directly impact the U-tube SG condensation heat transfer independent of the film Reynolds number. It appears that tests with the smallest film Prandtl number may have a flatter slope when investigating the correlation between Nu_{mod} and Re_{film} than tests with larger film Prandtl numbers. However, to make general conclusion on this point a wider range of film Reynolds numbers should be tested for both small and large film Prandtl number tests.
4. A carryover ratio, quantifying the difference in film condensation between the up and down side of the U-tubes, has been defined. The condensation heat transfer appears to be independent of the carryover ratio. The carryover ratio remained constant at one (indicating equal condensation on up and down sides) for all test steps herein except for one. The test step showing the largest carryover ratio exhibited the greatest non-dimensional interfacial shear stress of all the test steps. Further testing is needed to make more general conclusions concerning the influence of interfacial shear stress on the carryover ratio.
5. The carryover ratio and condensation heat transfer appear to be independent of the inlet steam Reynolds number within the range of steam Reynolds numbers (2000-12000) investigated.

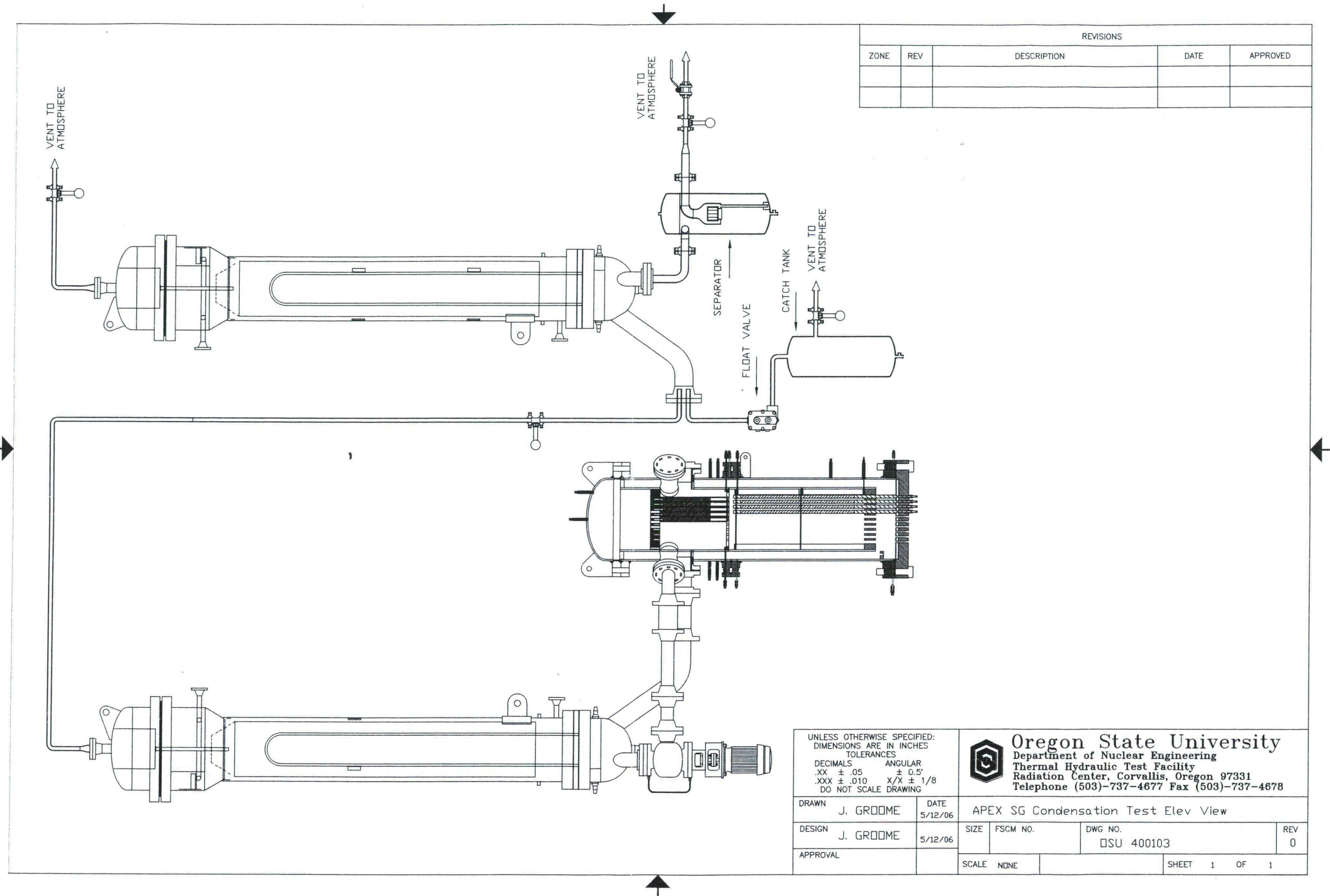
6. Two tests were completed that compared condensation in a steam only environment to condensation with the presence of nitrogen. Test -07 used a nominal nitrogen mass fraction of 2.5 % while test -08 used a nominal nitrogen mass fraction of 10.0%. Both non-condensable gas tests exhibited a small degradation in condensate heat transfer over their steam only counterparts. Of note is the fact that the presence of non-condensable gas induced more condensation on the up side of the U-tubes and less condensation on the down side of the U-tubes. This tendency became greater as the non-condensable concentration increased.

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Appendix A: As Built Drawings

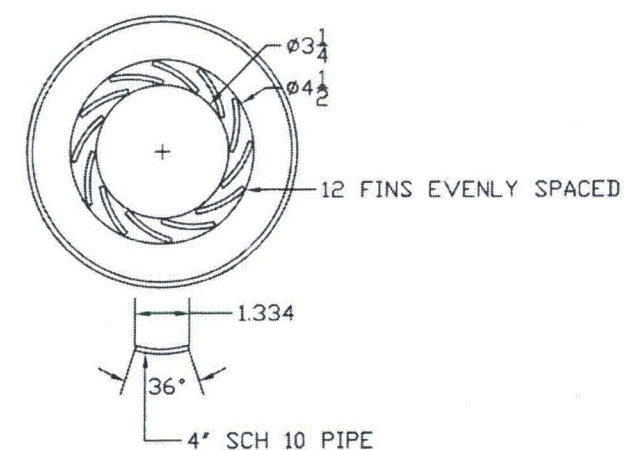
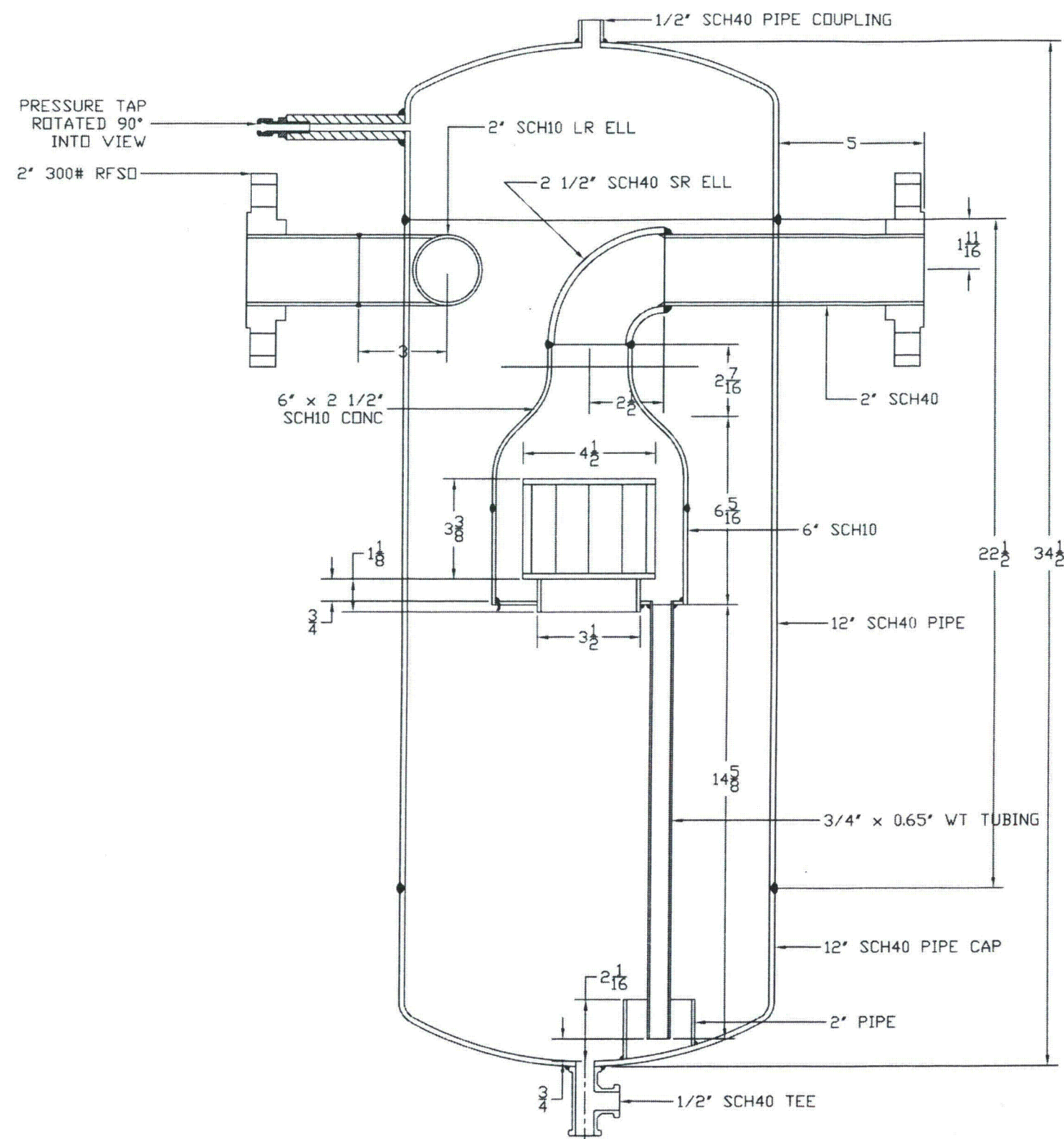



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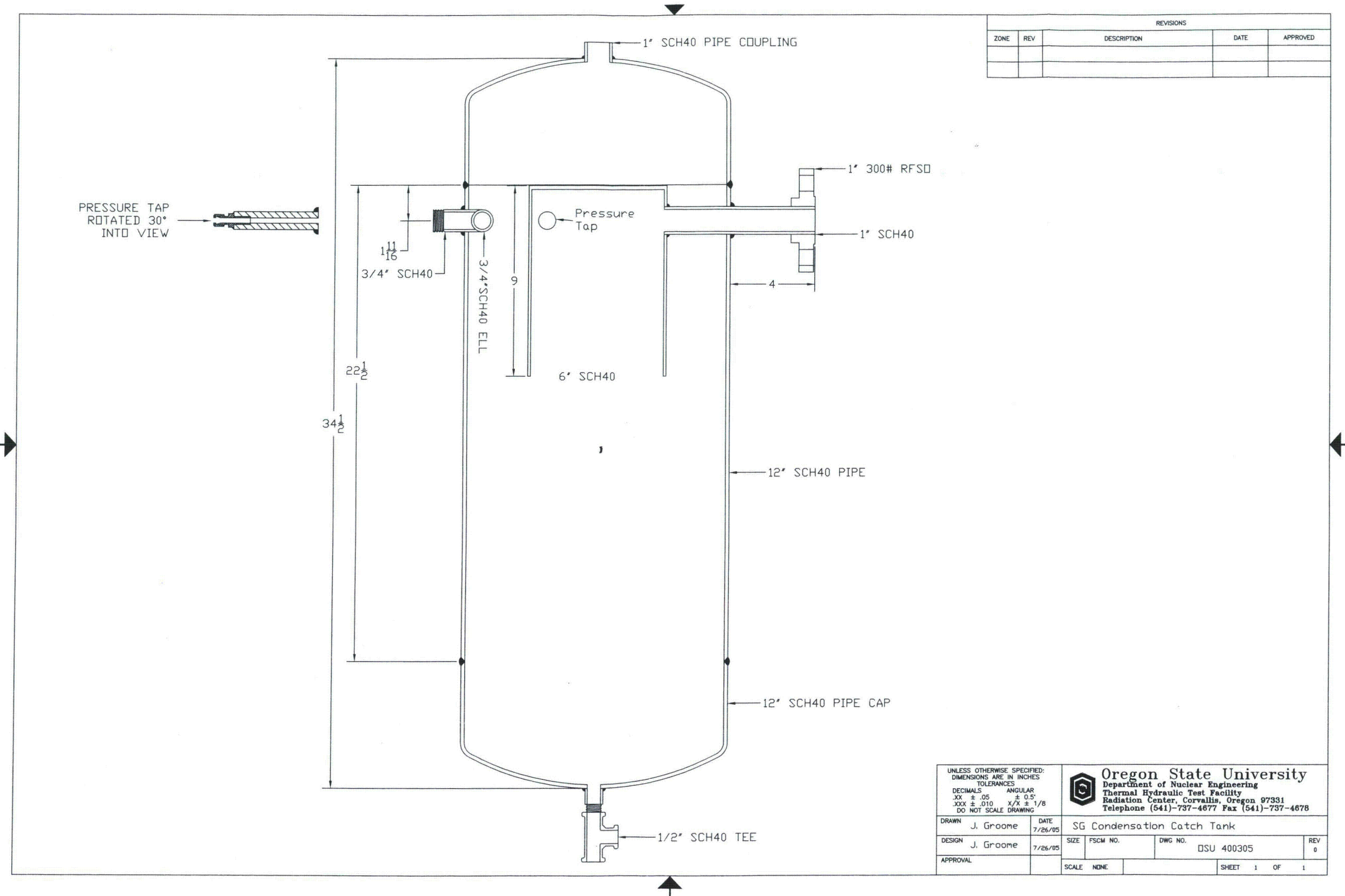
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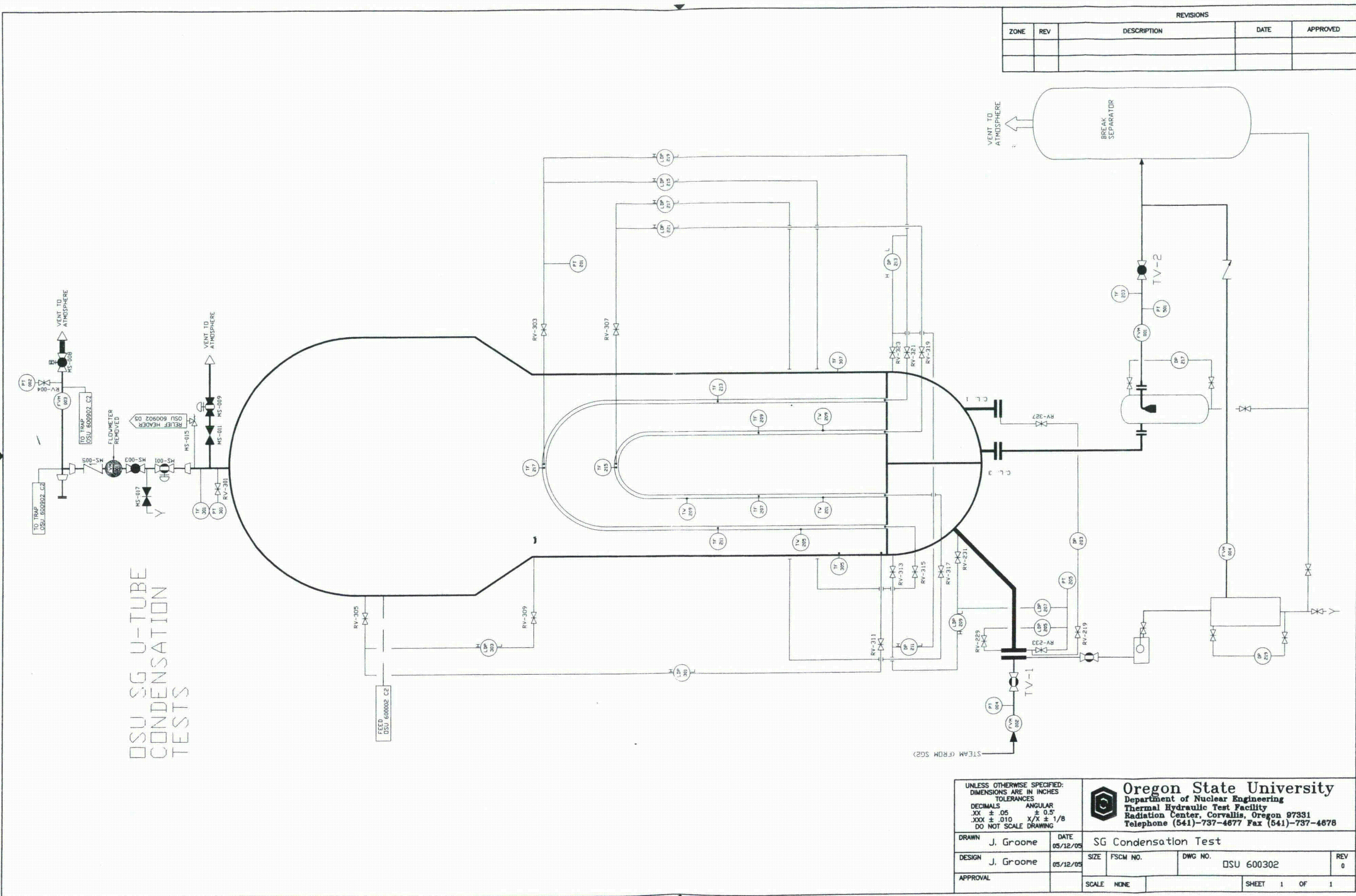
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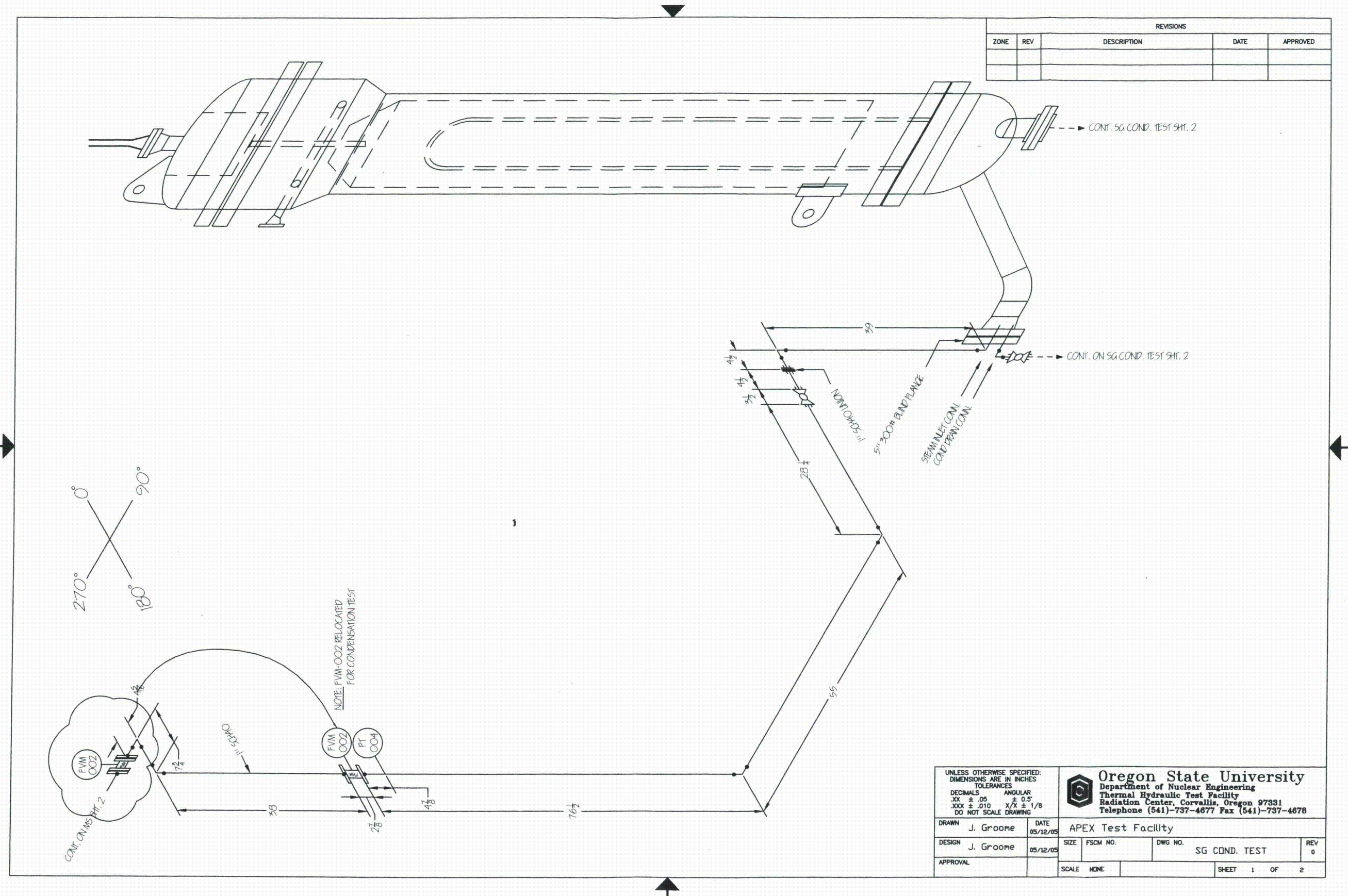


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Appendix B: Test Reports

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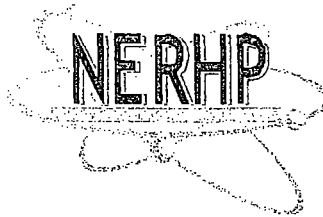
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RESEARCH LABORATORY**

**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 200 PSIG**

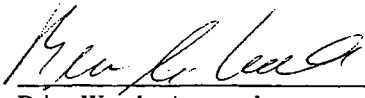
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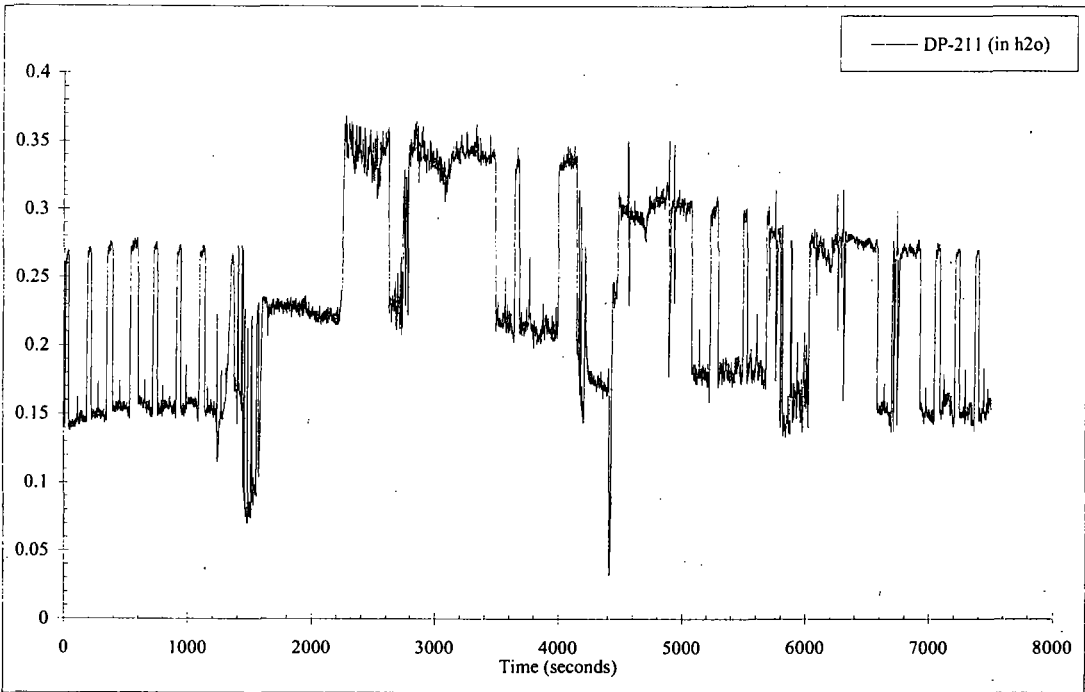


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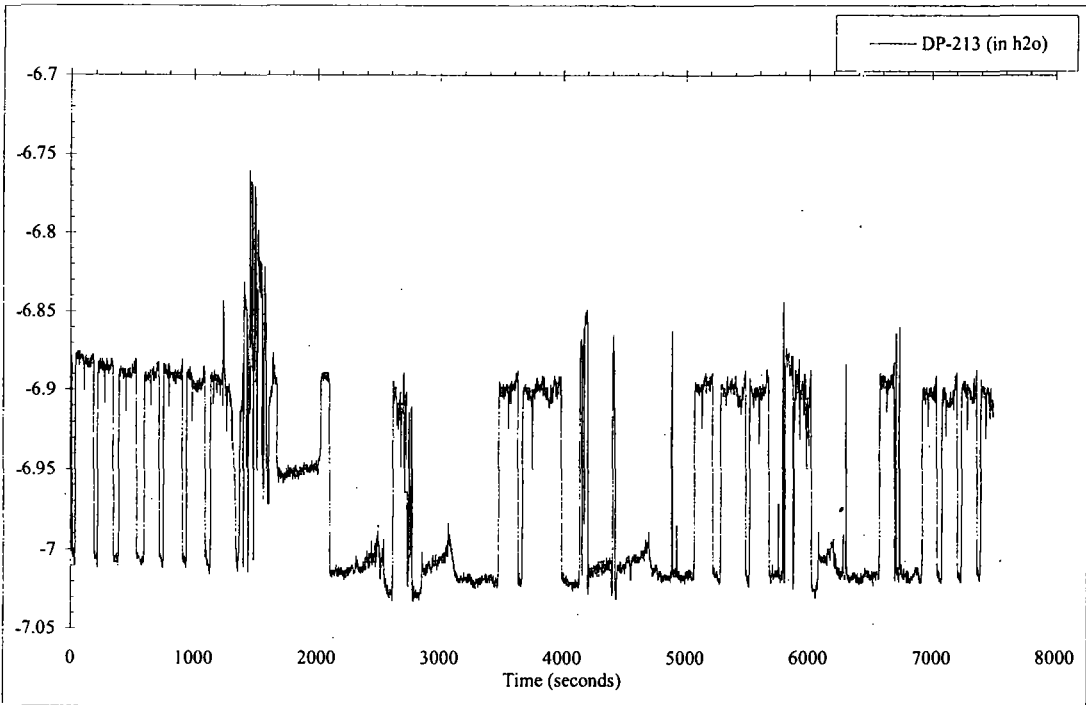
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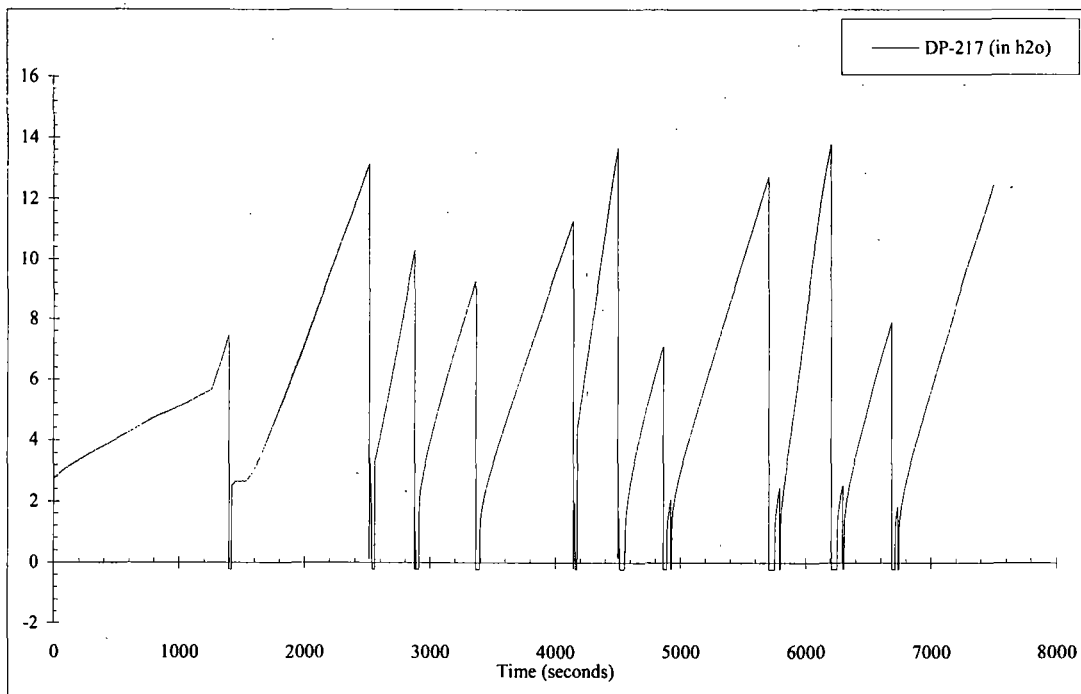
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Program Manager
Assistant Professor



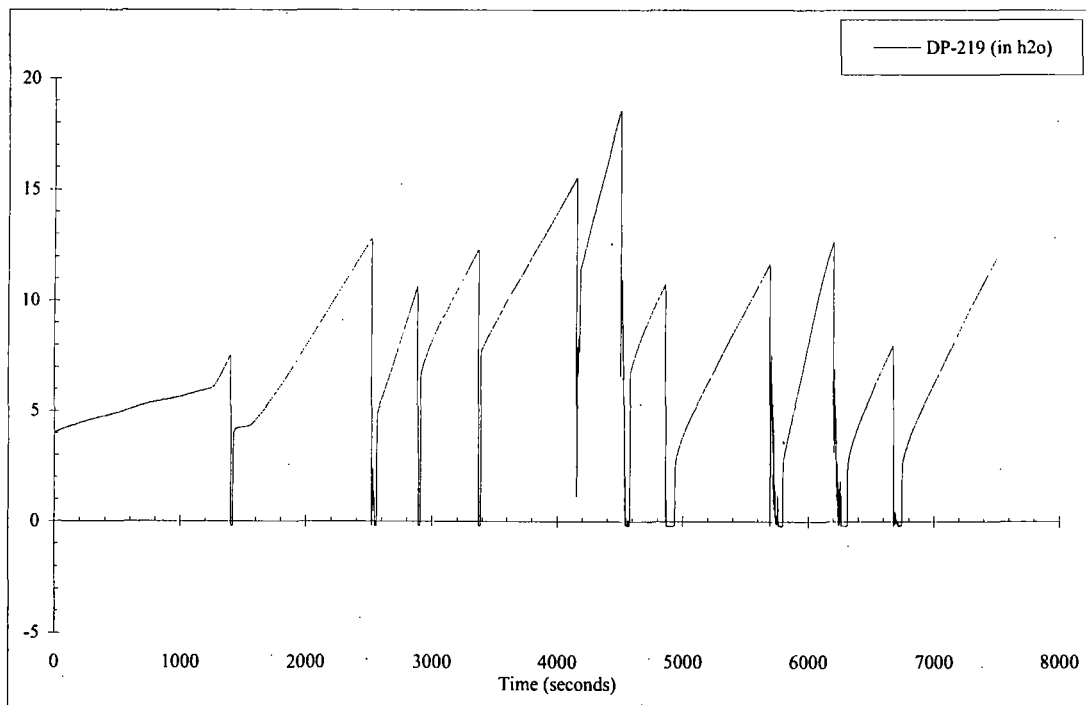
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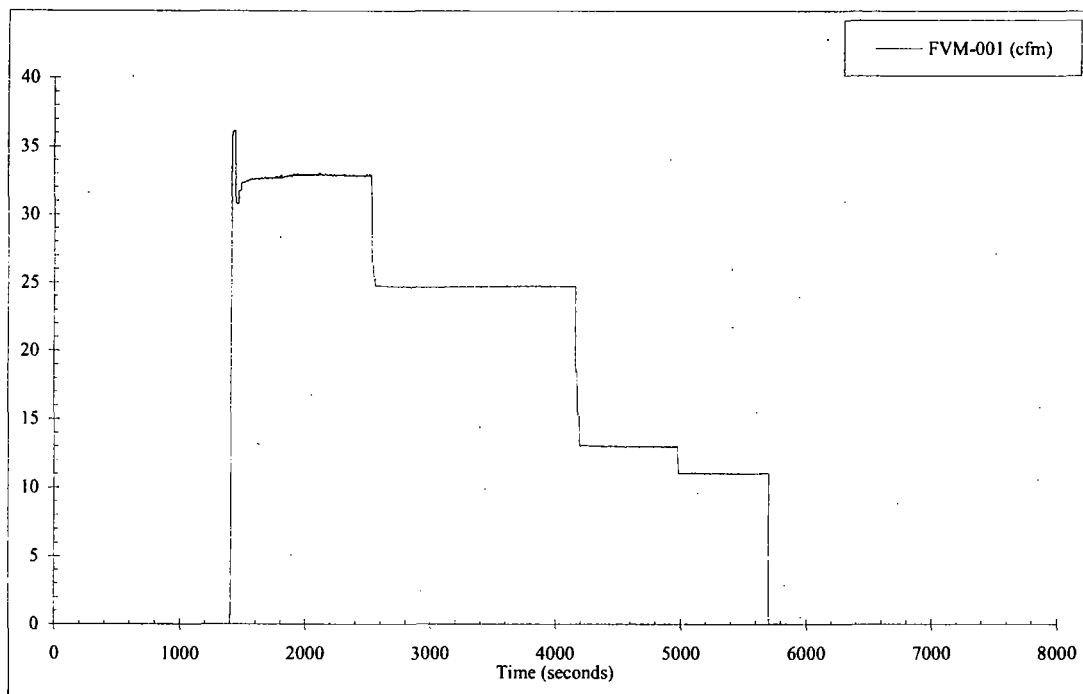
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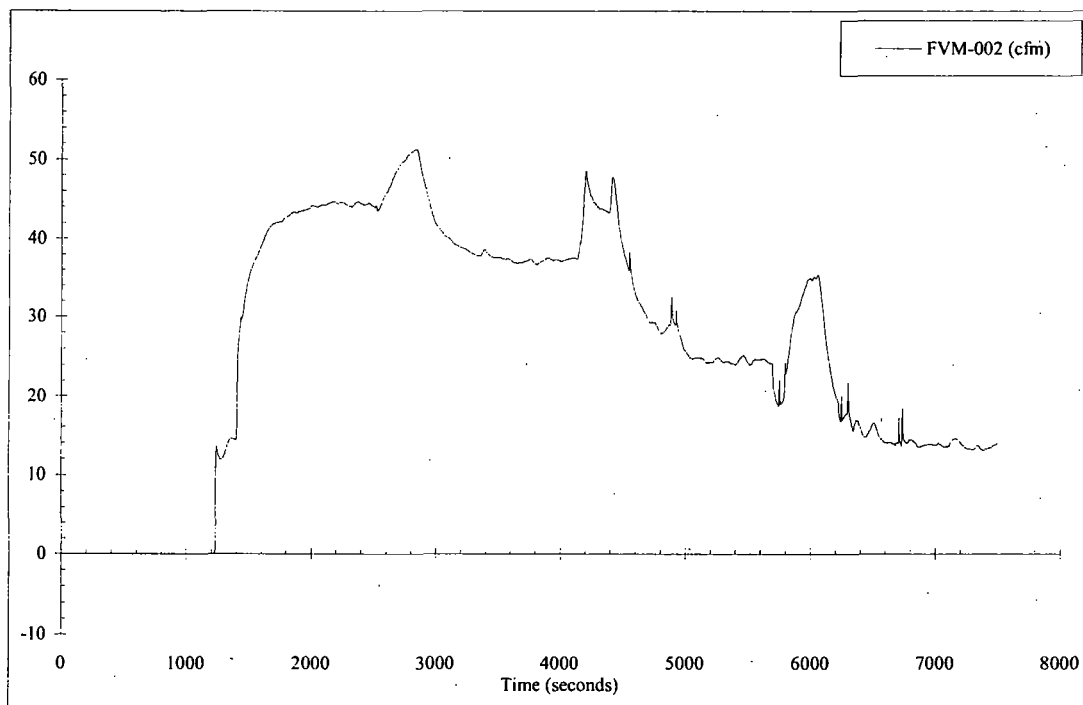
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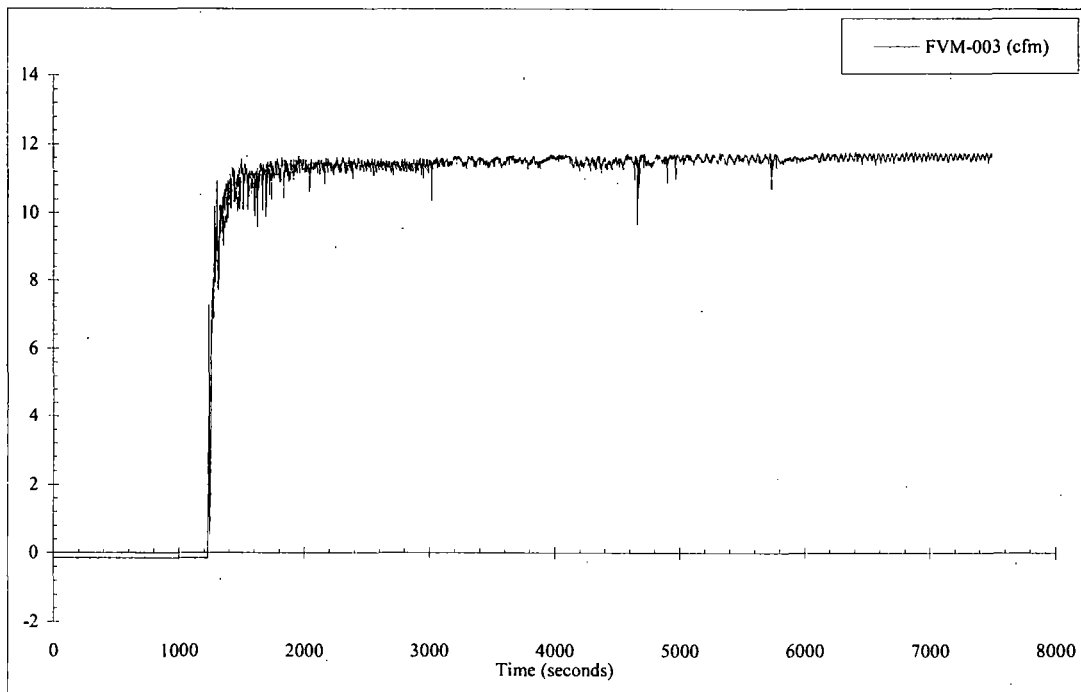
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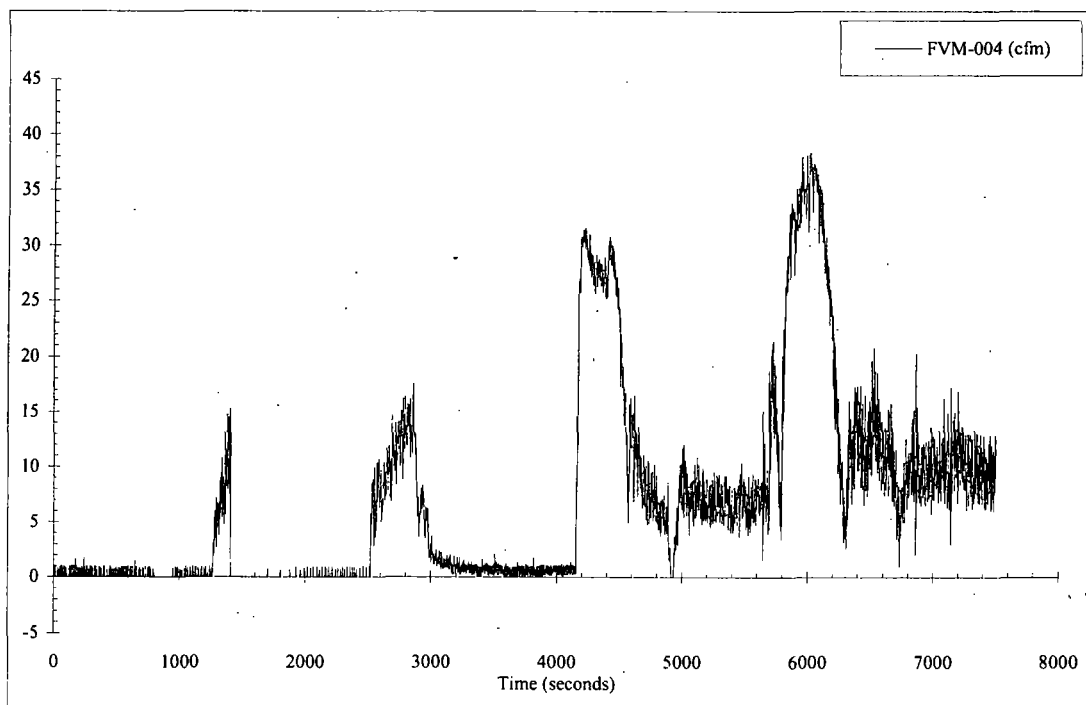
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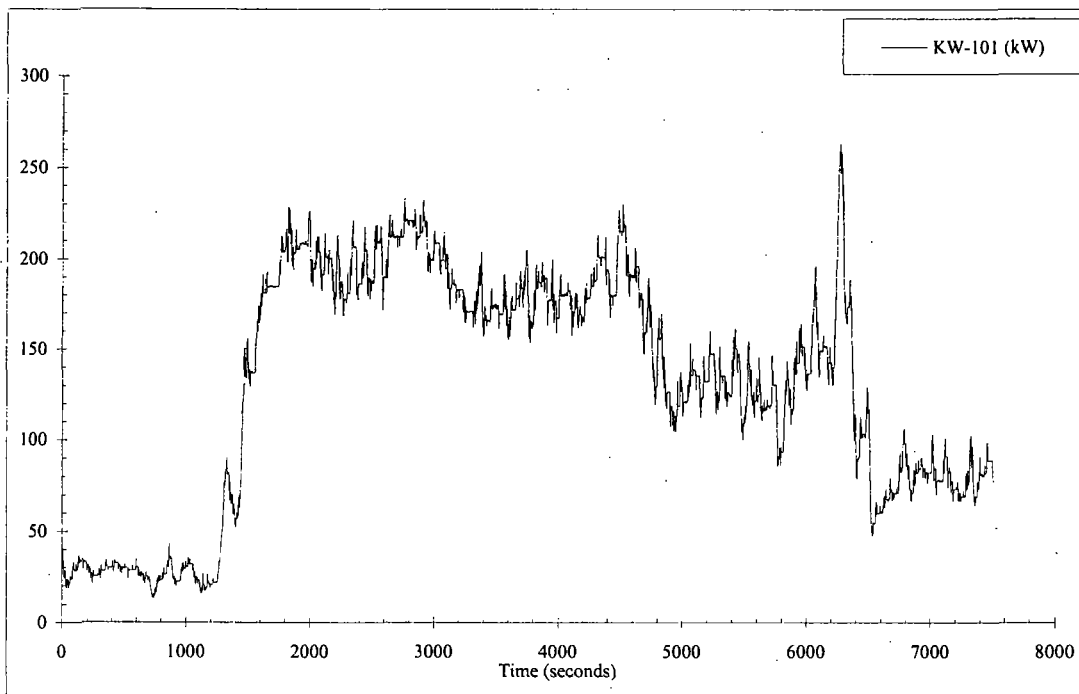
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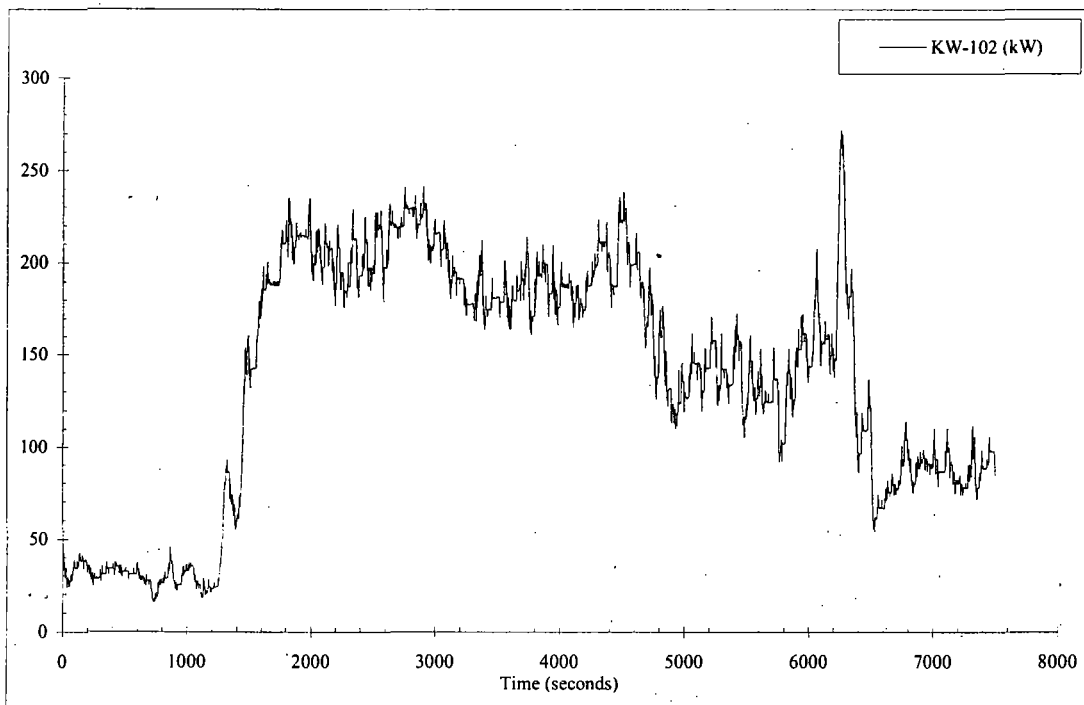
Main Steam Total Flow



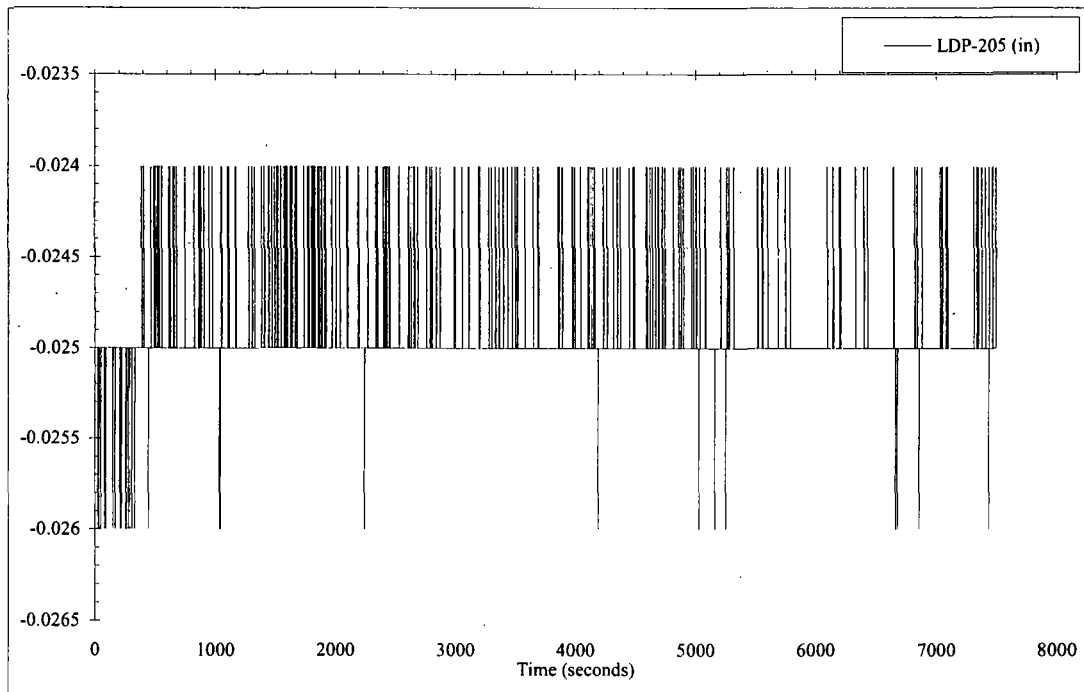
Catch Tank Steam Flow Rate



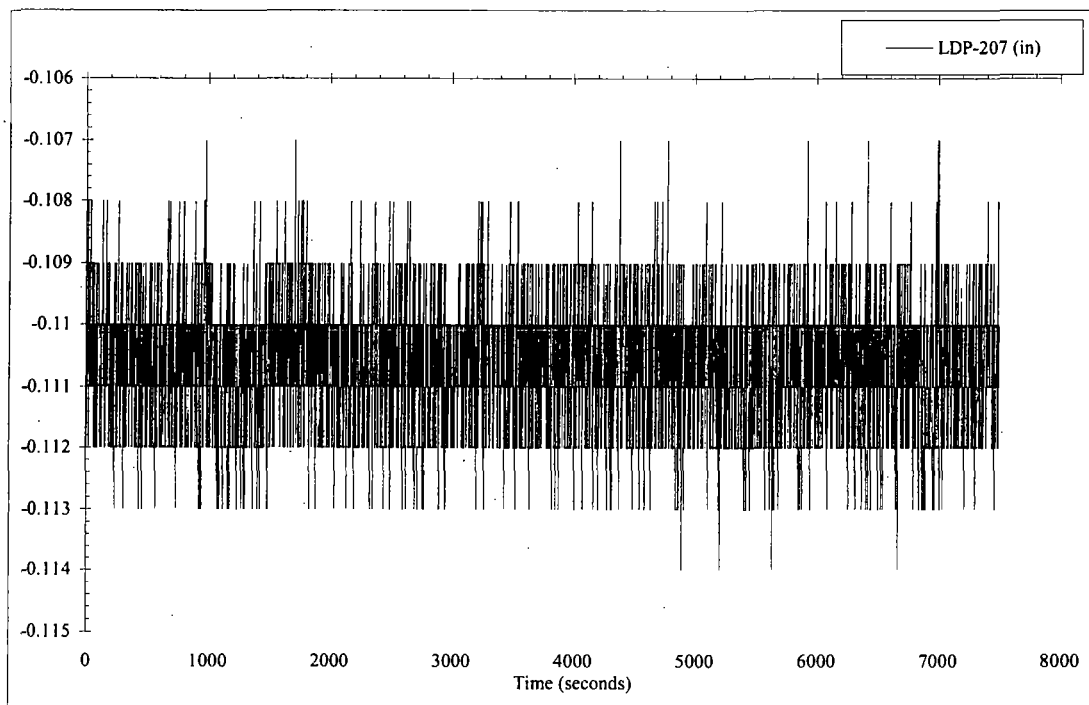
Rx Heater Group 1 Power



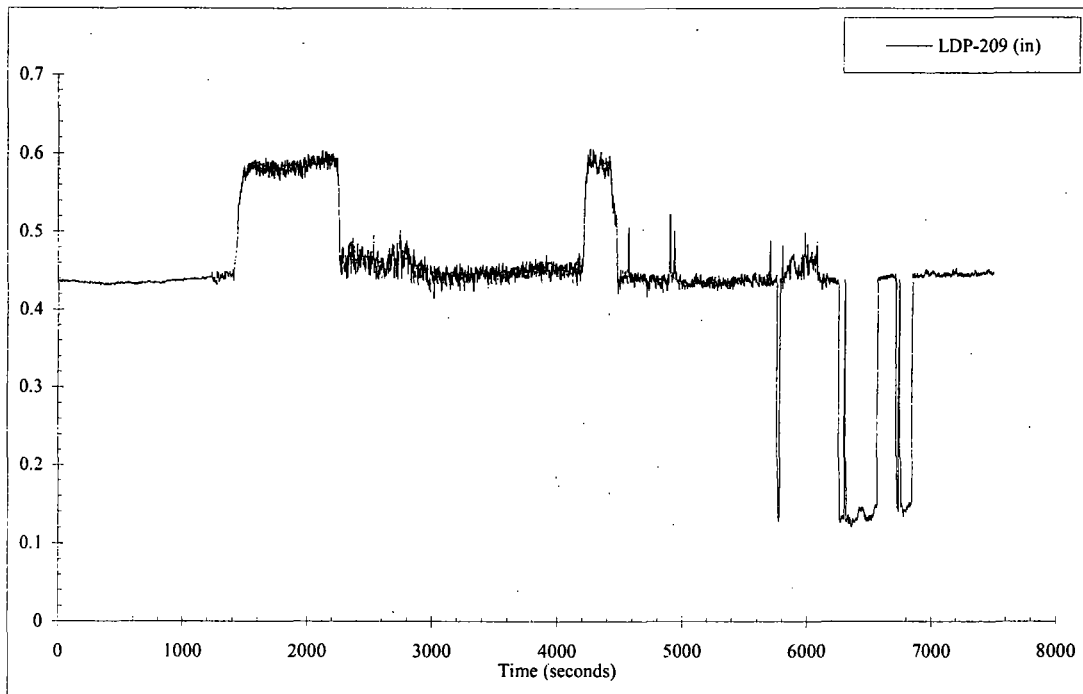
Rx Heater Group 2 Power



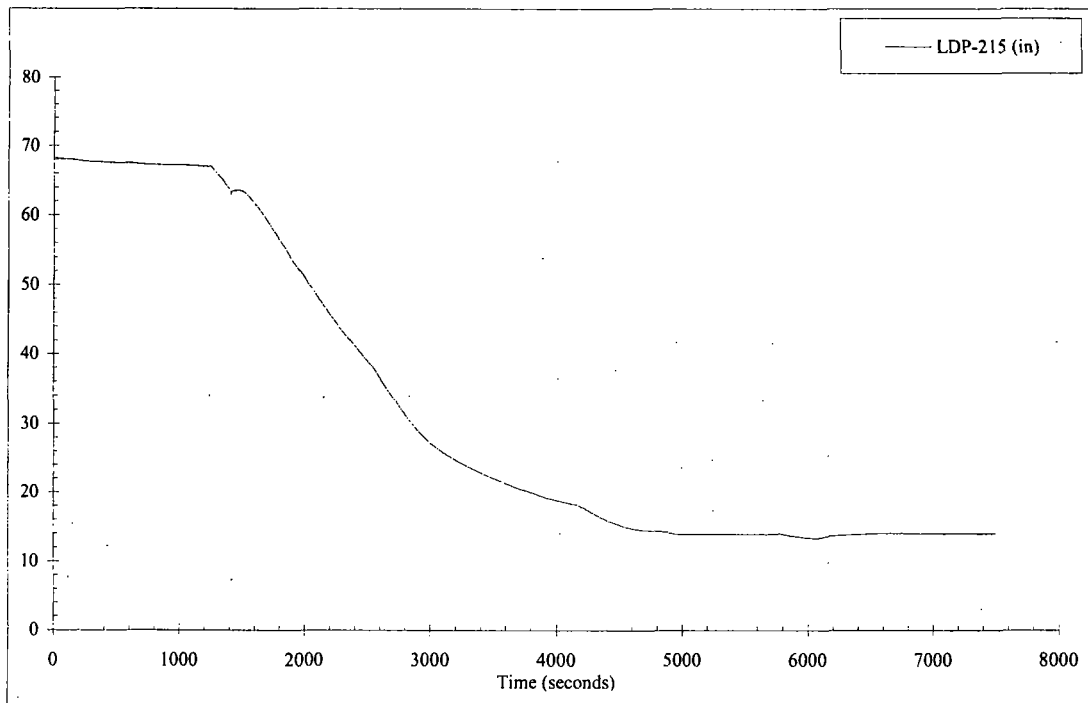
HL-1 Uncompensated Water Level



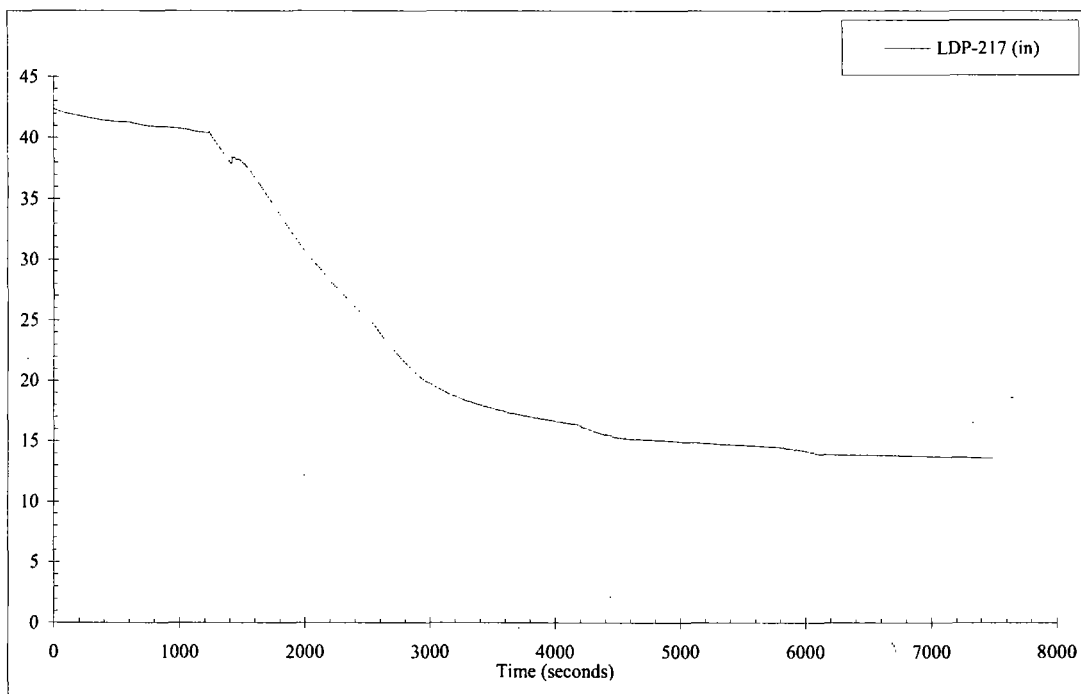
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



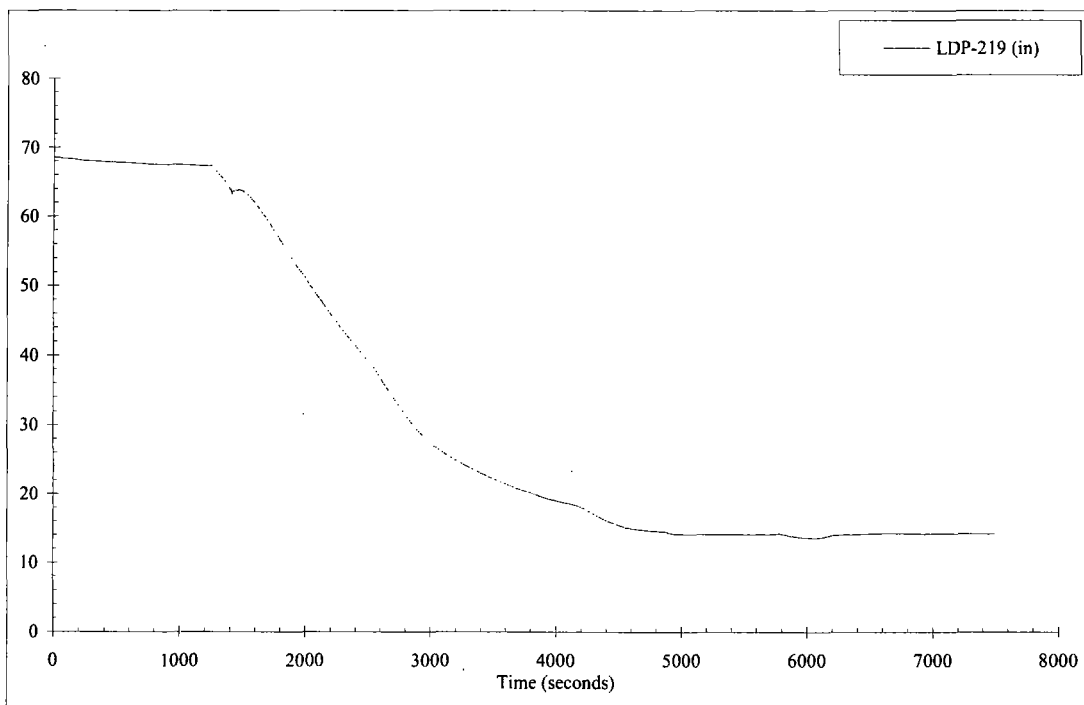
SG-1 to HL-1 Plenum Uncompensated Water Level



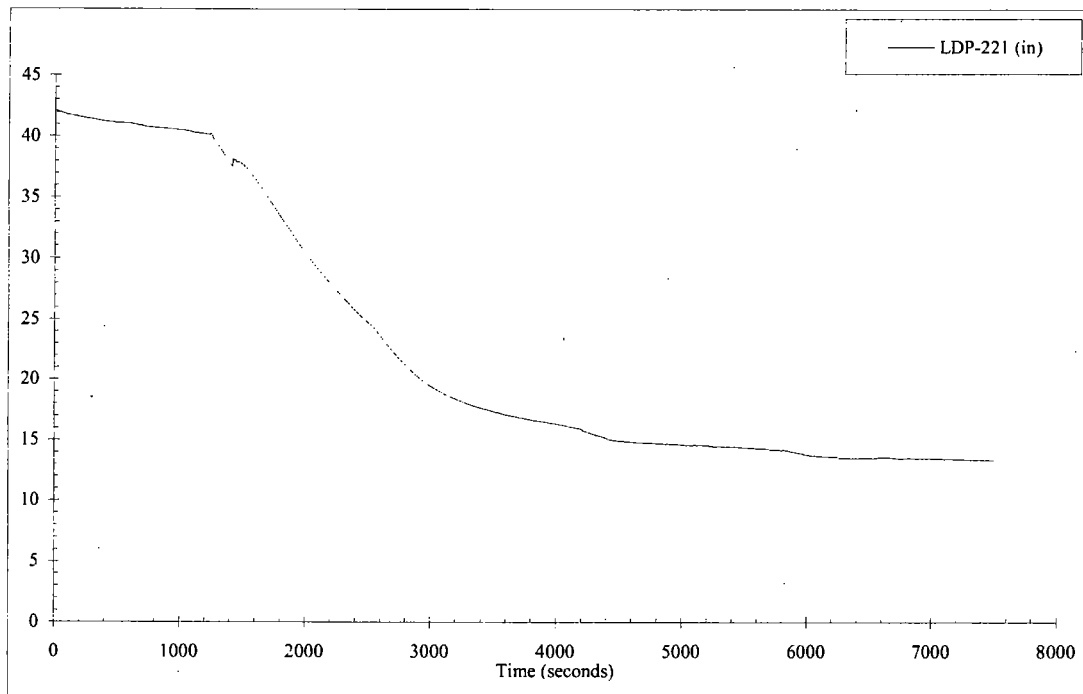
SG-1 Long Tube to HL Uncompensated Water Level



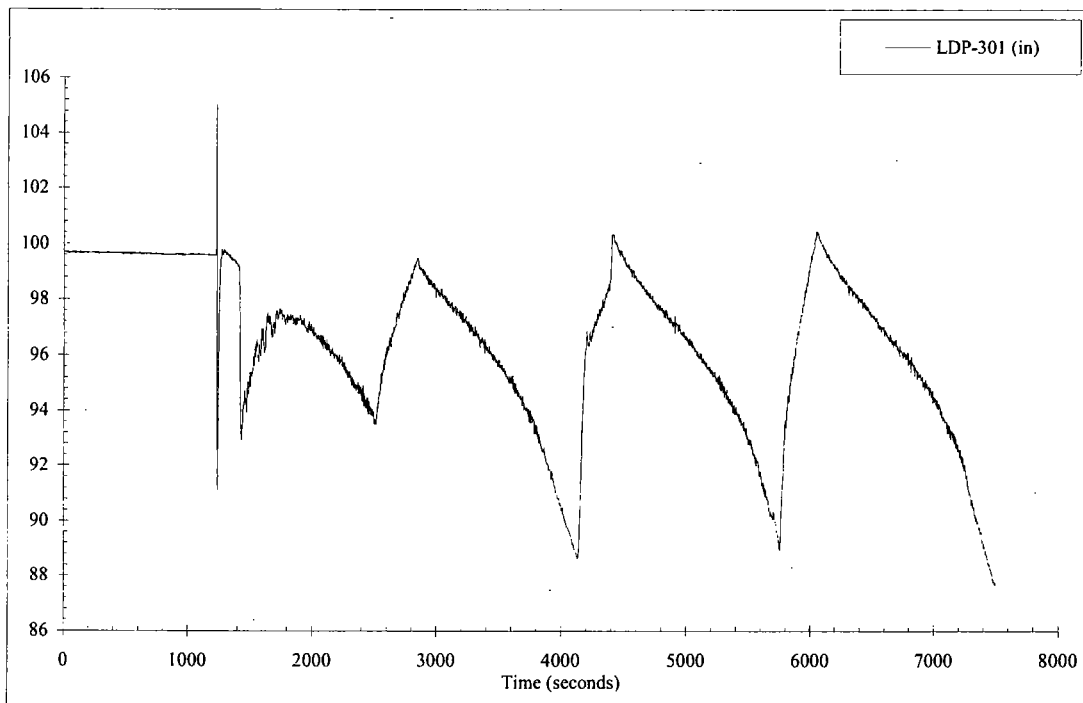
SG-1 Short Tube to HL Uncompensated Water Level



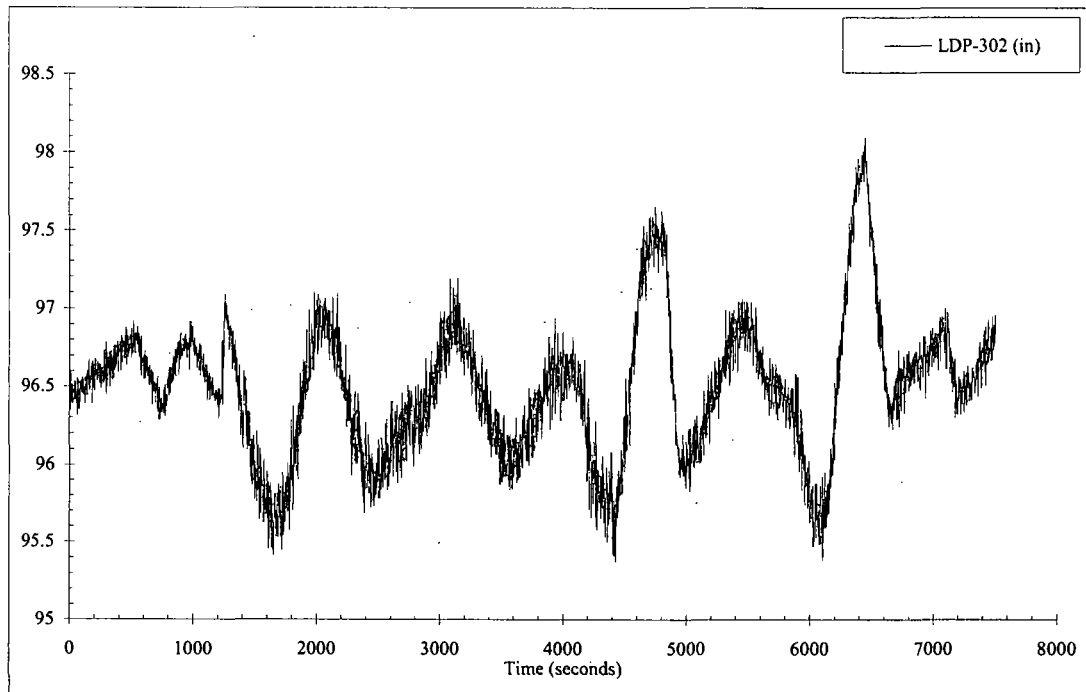
SG-1 Long Tube to CL Uncompensated Water Level



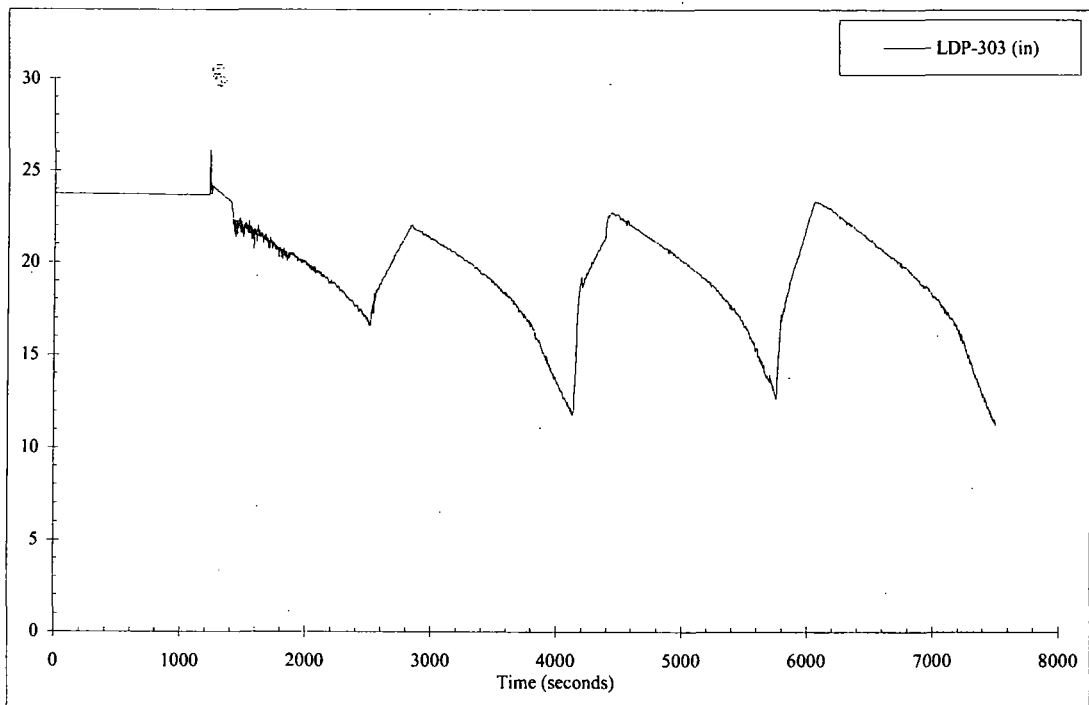
SG-1 Short Tube to CL Uncompensated Water Level



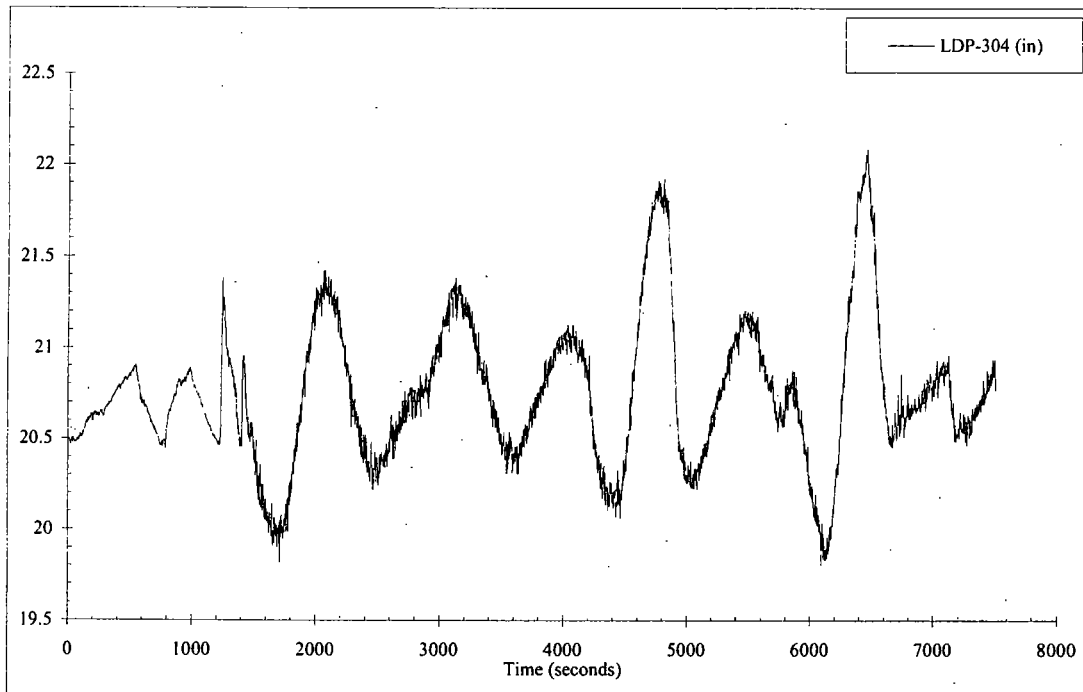
SG-1 WR Uncompensated Water Level



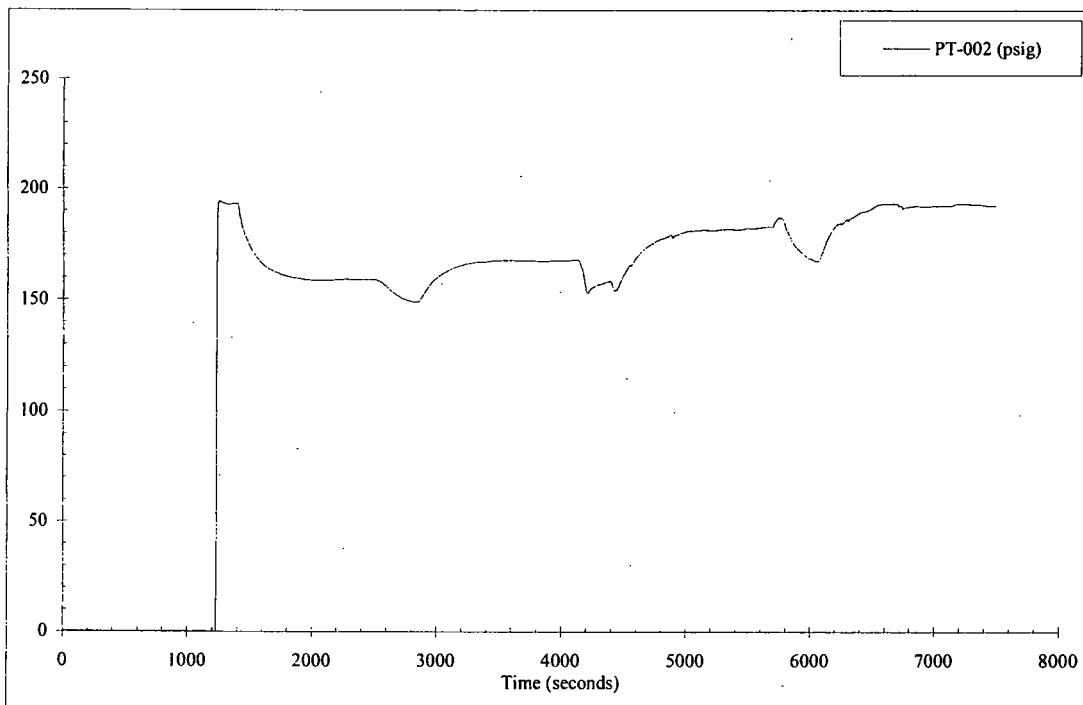
SG-2 WR Uncompensated Water Level



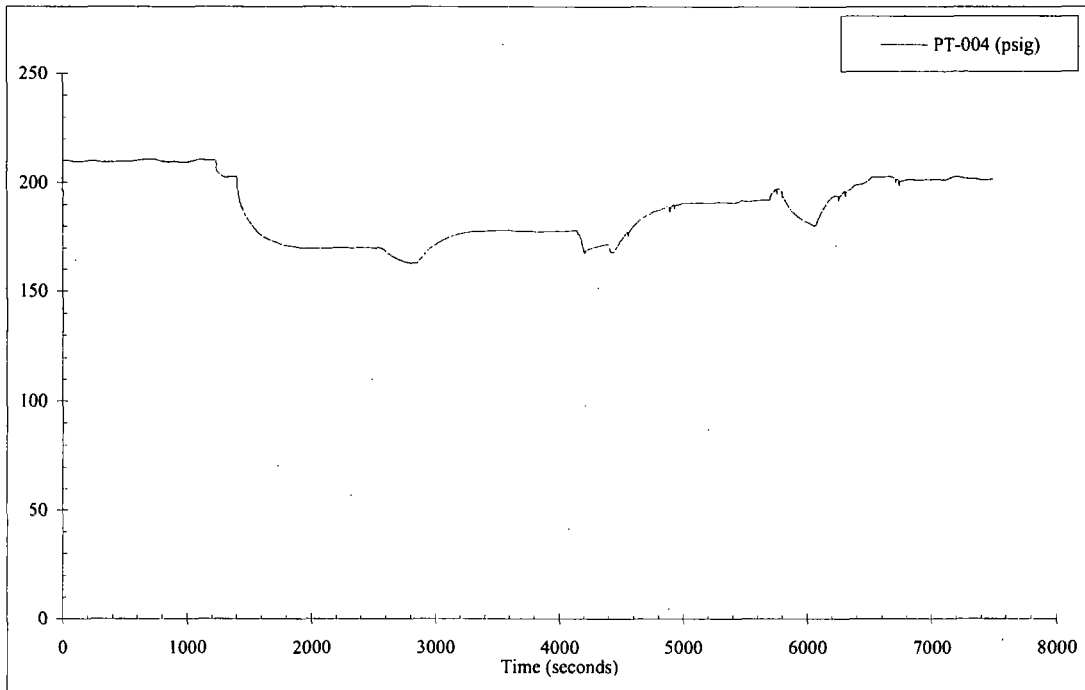
SG-1 NR Uncompensated Water Level



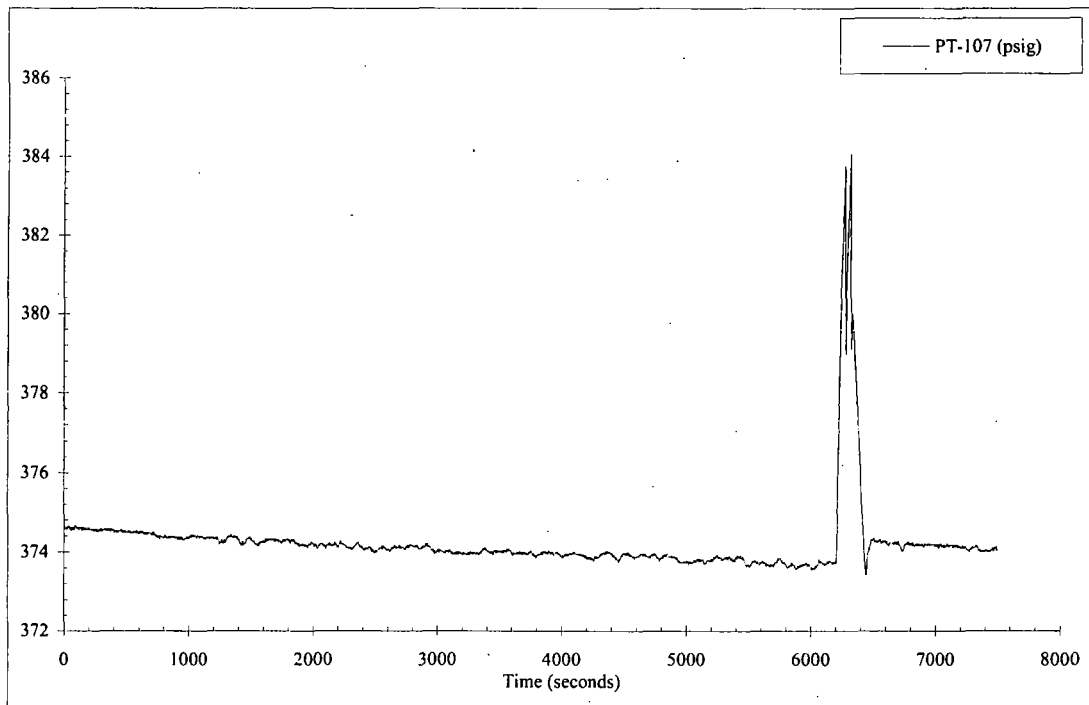
SG-2 NR Uncompensated Water Level



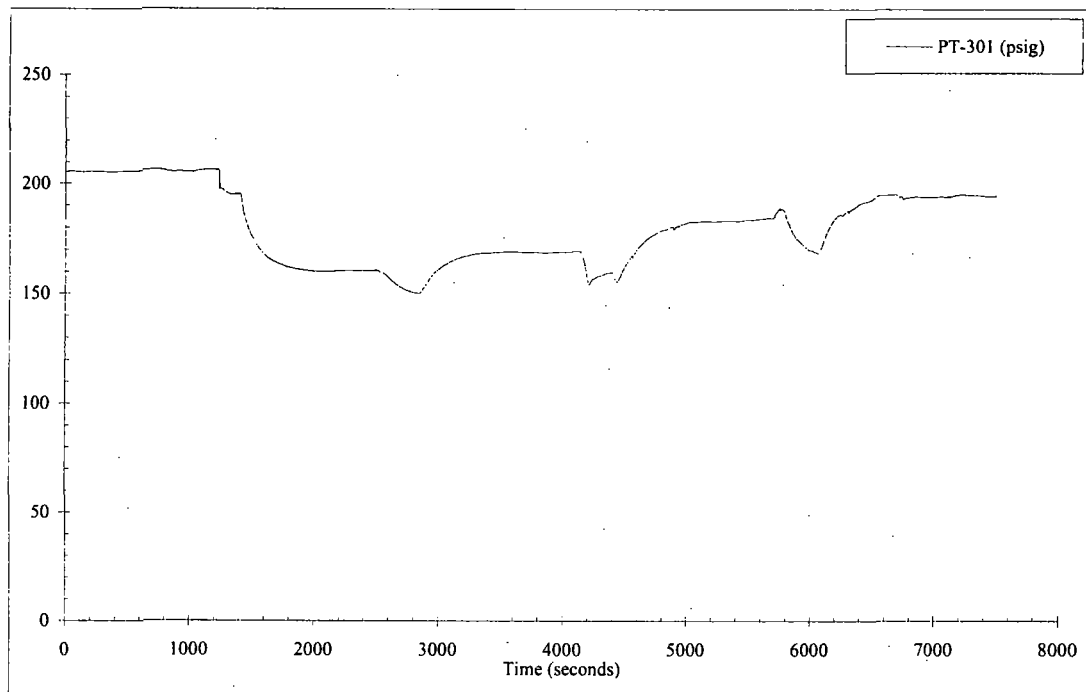
MS Header Pressure



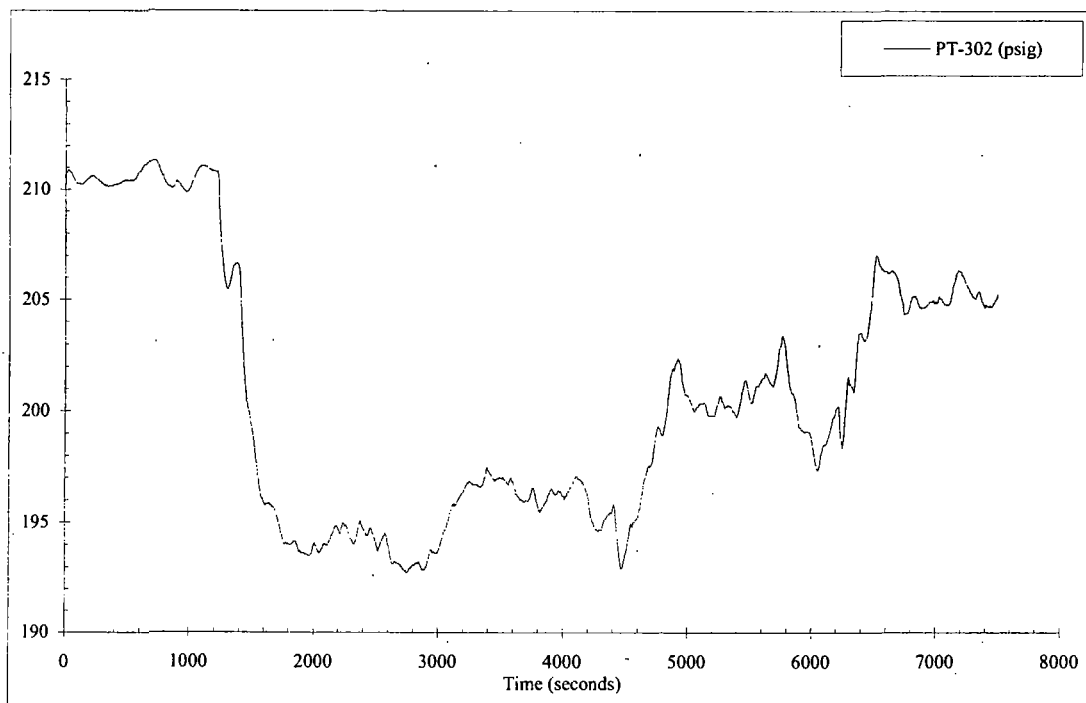
Temp Steam Pressure for FVM-002



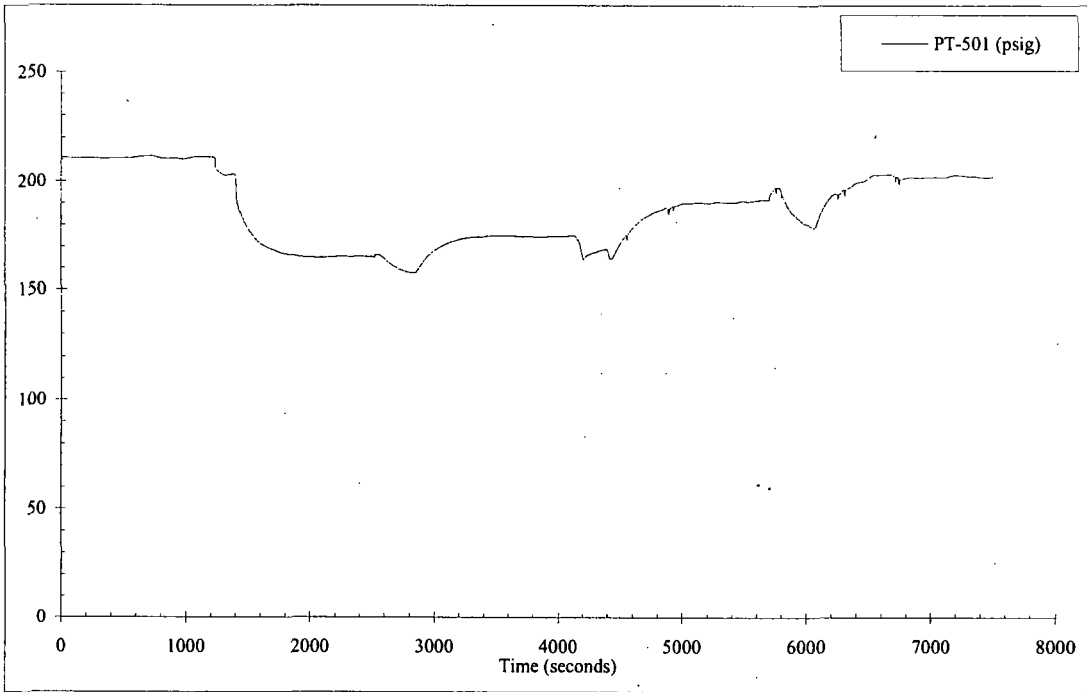
Rx Upper Head Pressure



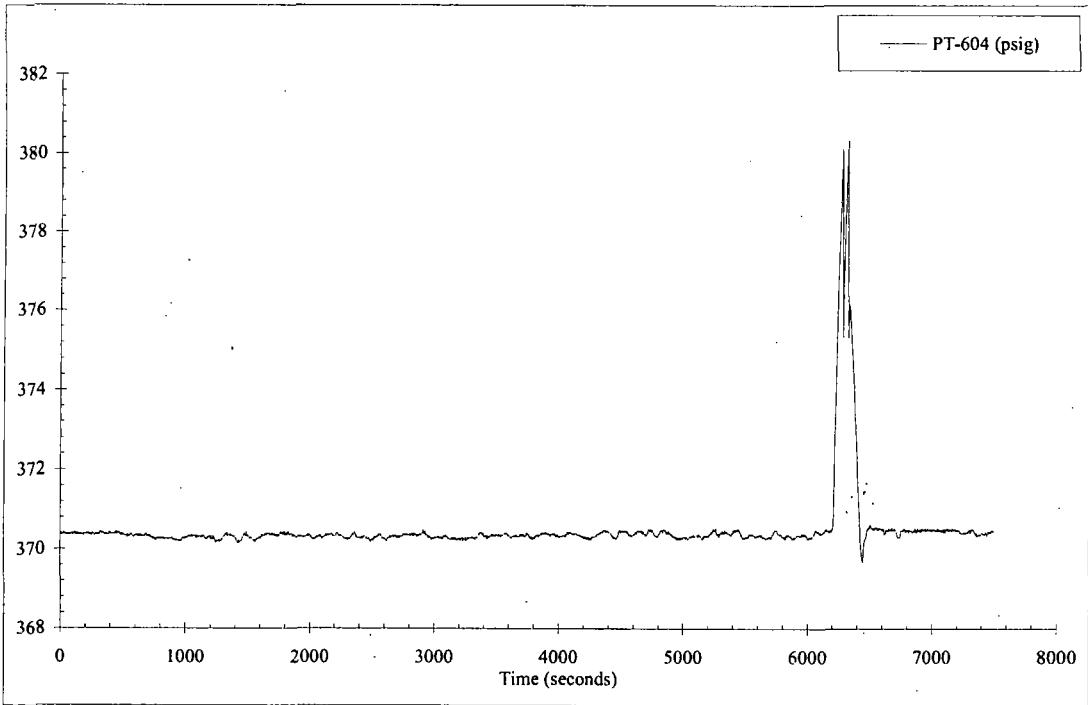
SG-1 Pressure



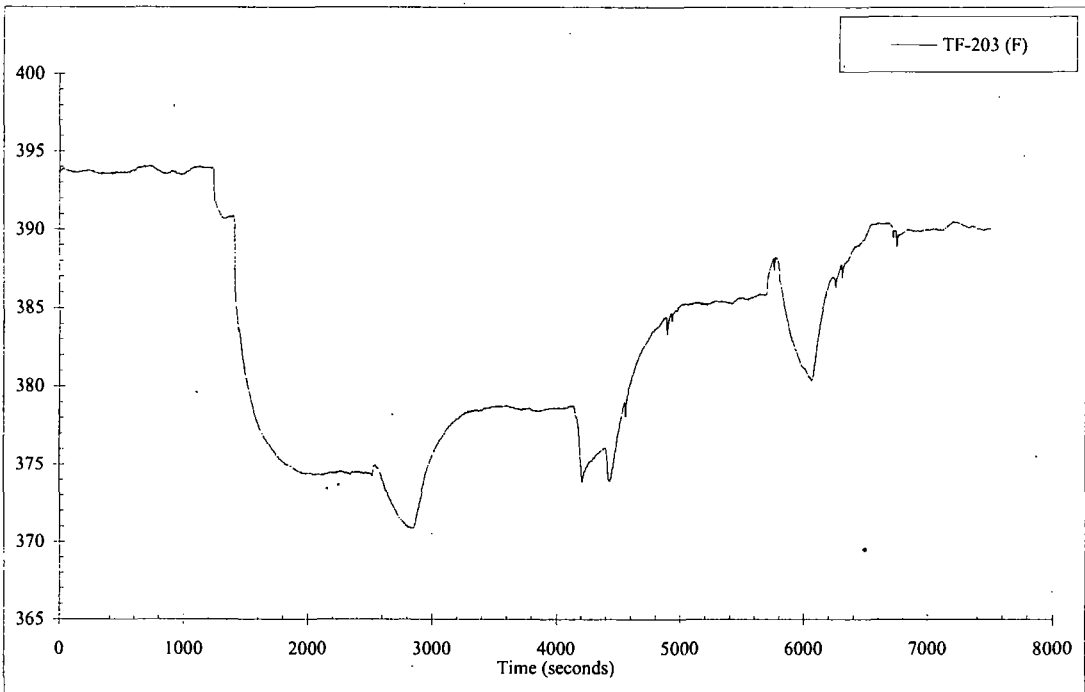
SG-2 Pressure



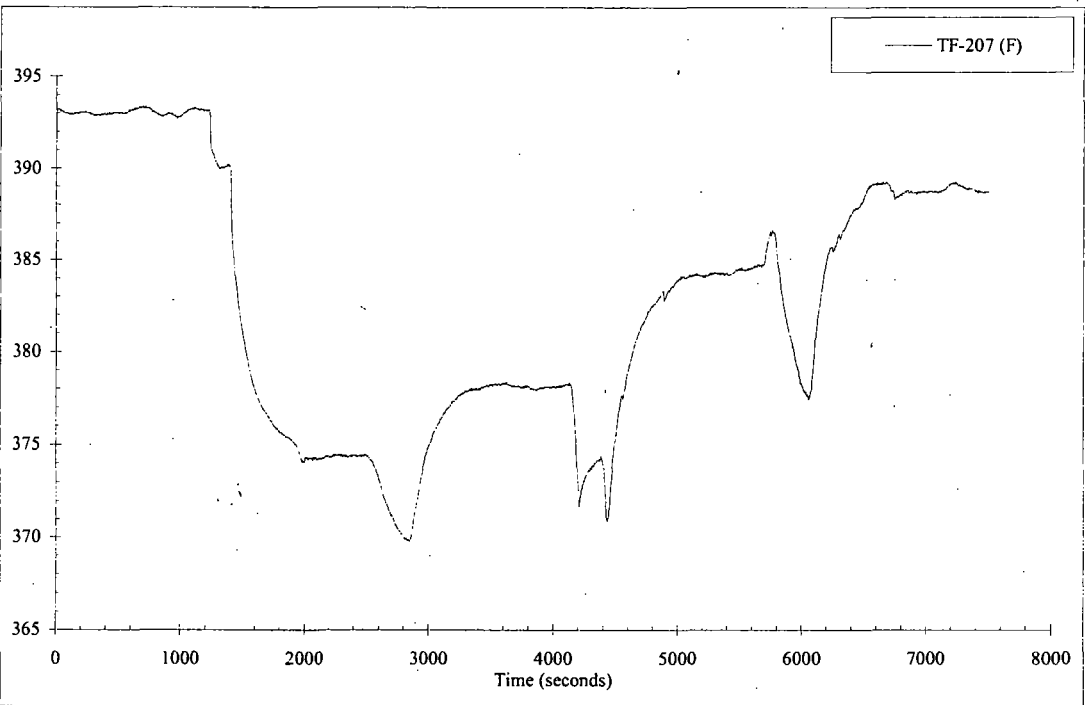
Separator Outlet Steam Pressure



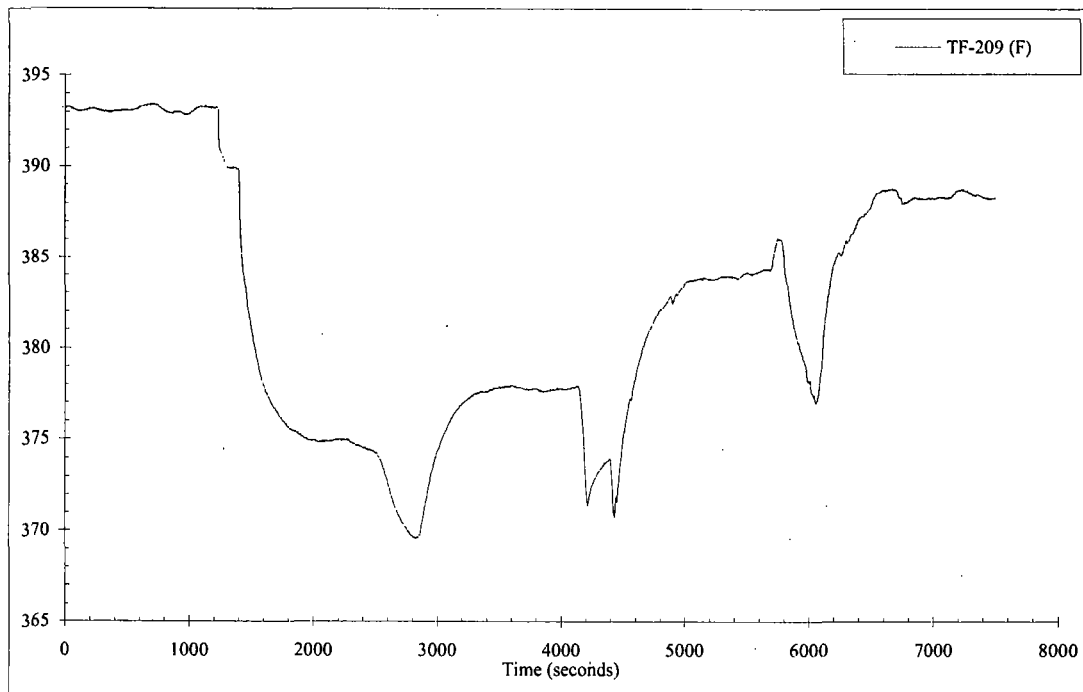
PZR WR Pressure



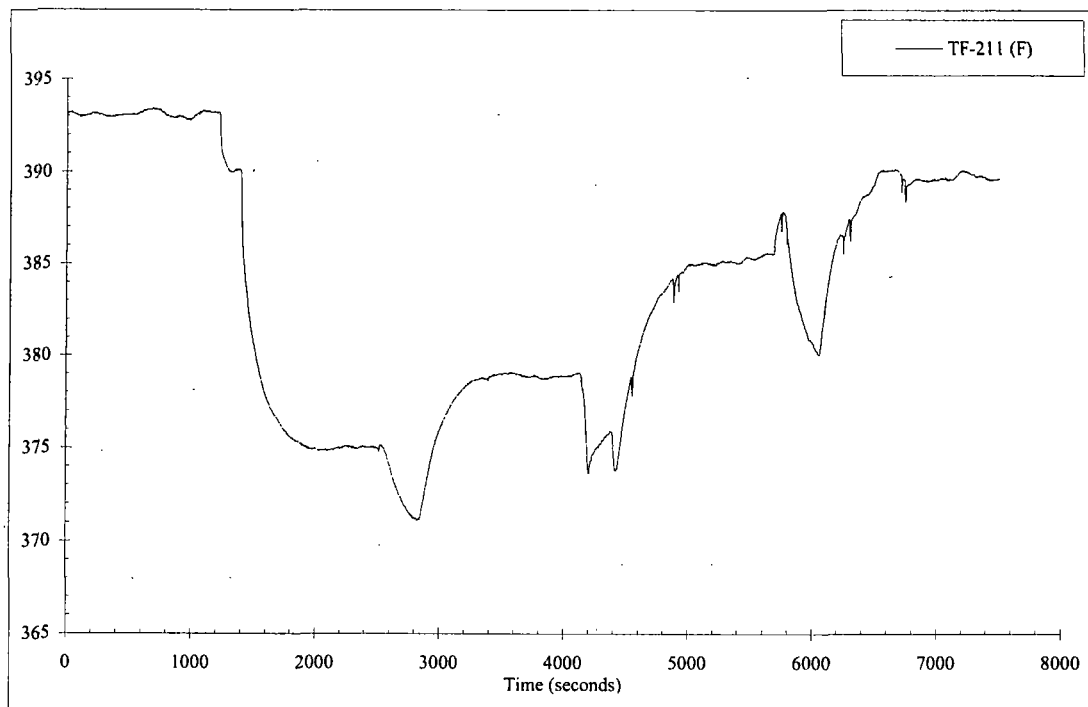
Separator Outlet Steam Temperature



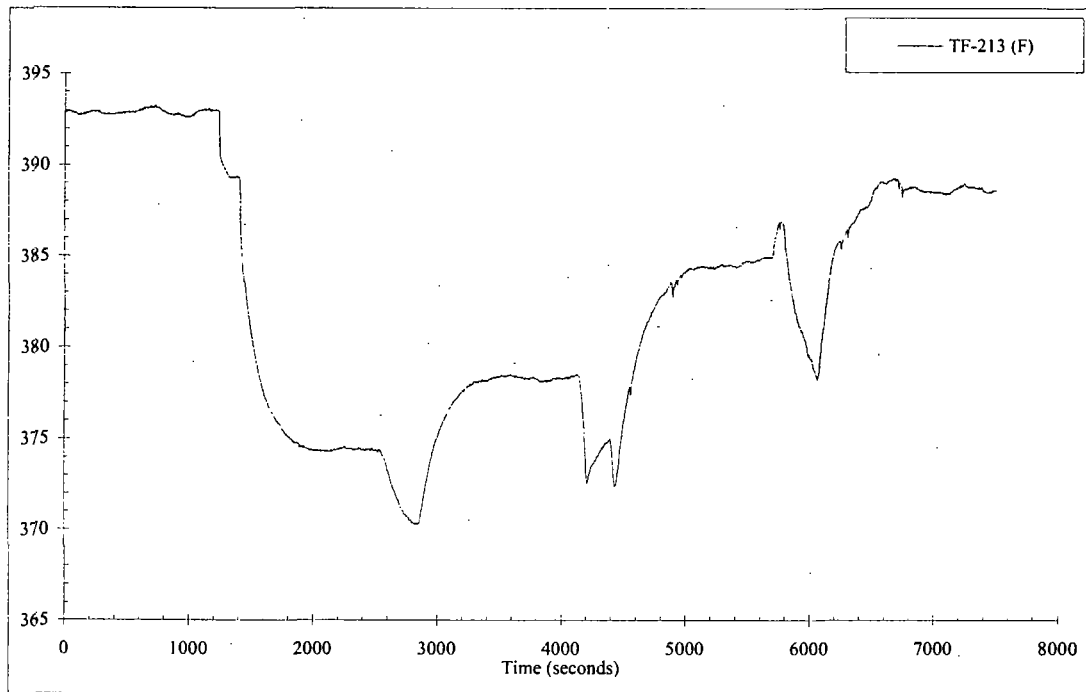
SG-1 Short Tube at Middle Outlet Side Temperature



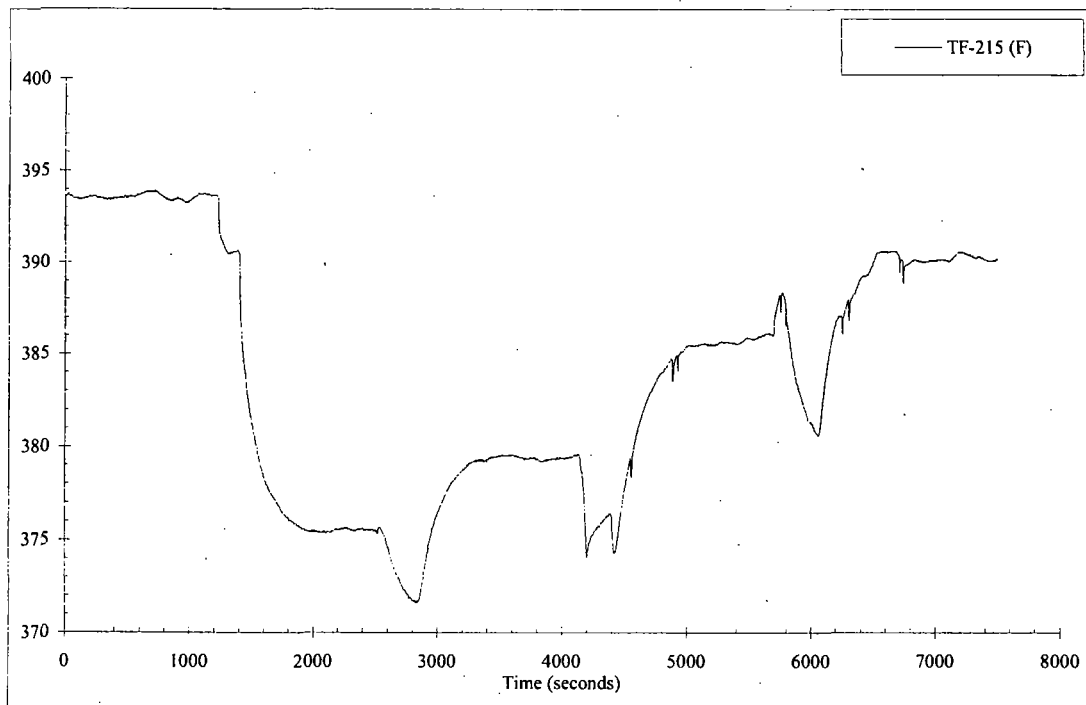
SG-1 Short Tube at Middle Inlet Side Temperature



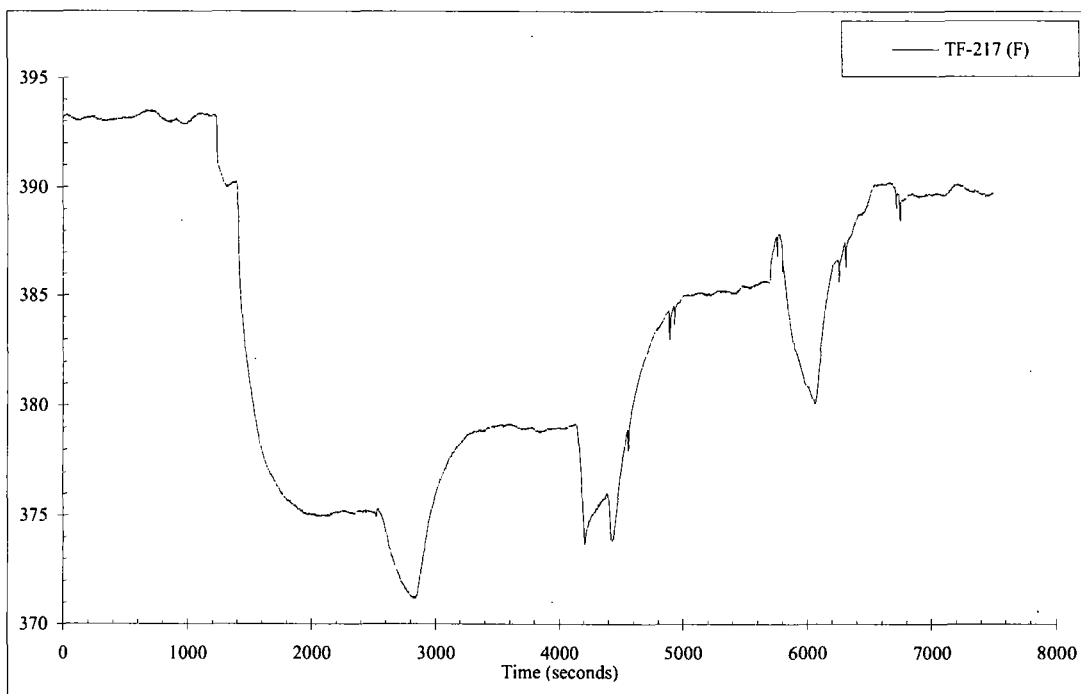
SG-1 Long Tube at Middle Outlet Temperature



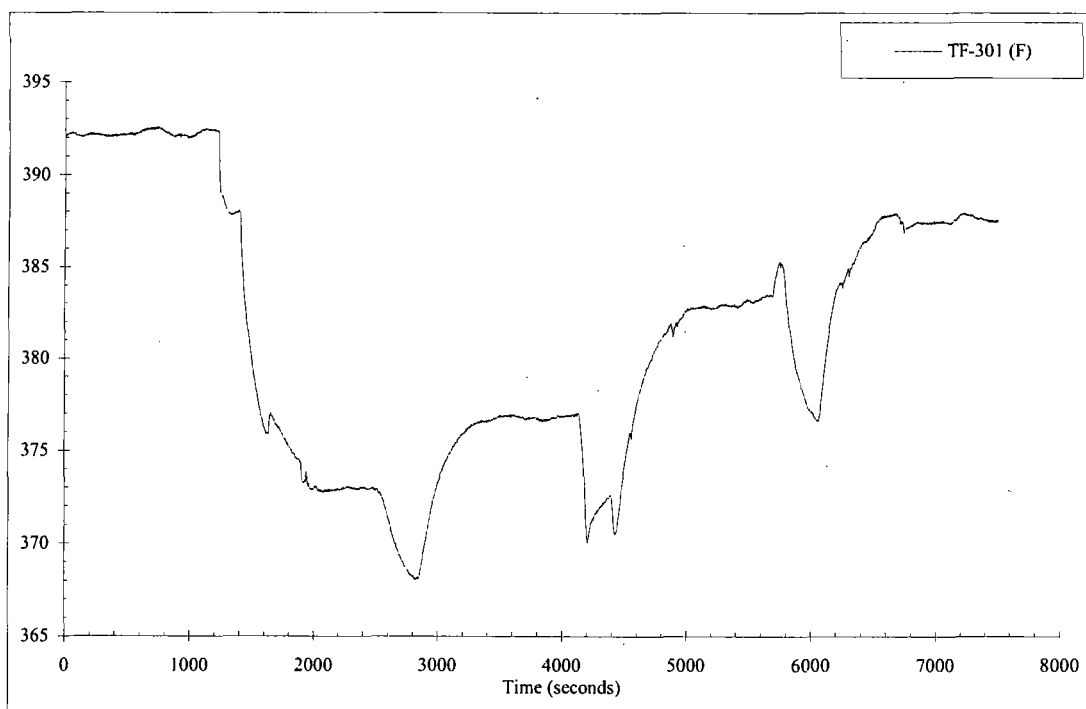
SG-1 Long Tube at Middle Inlet Temperature



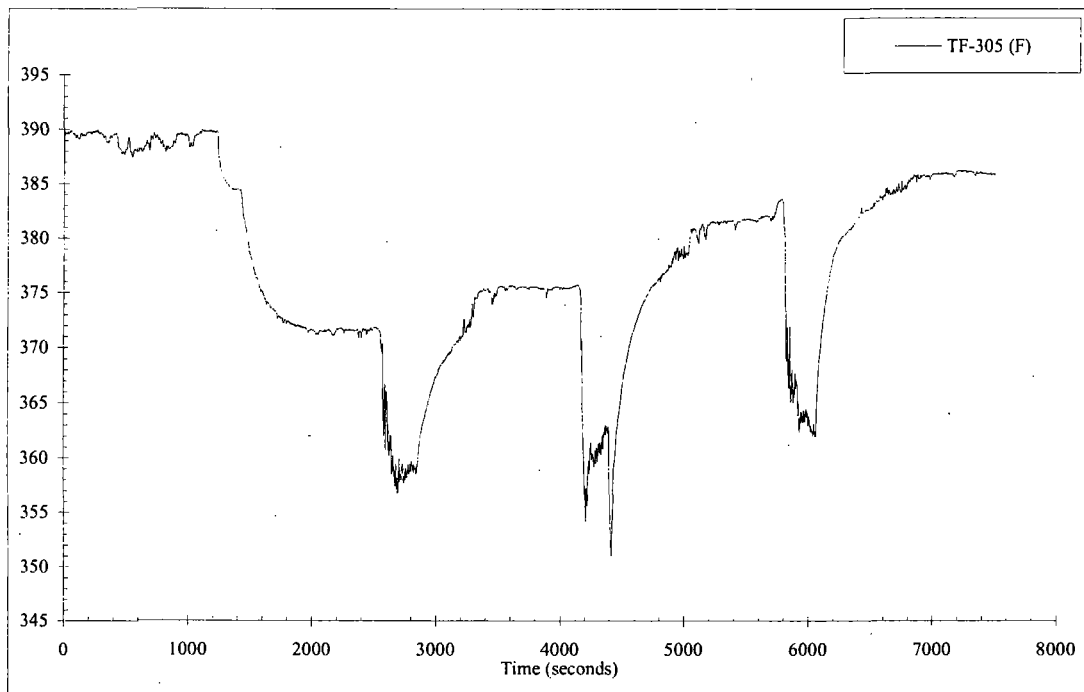
SG-1 Short Tube at Top Temperature



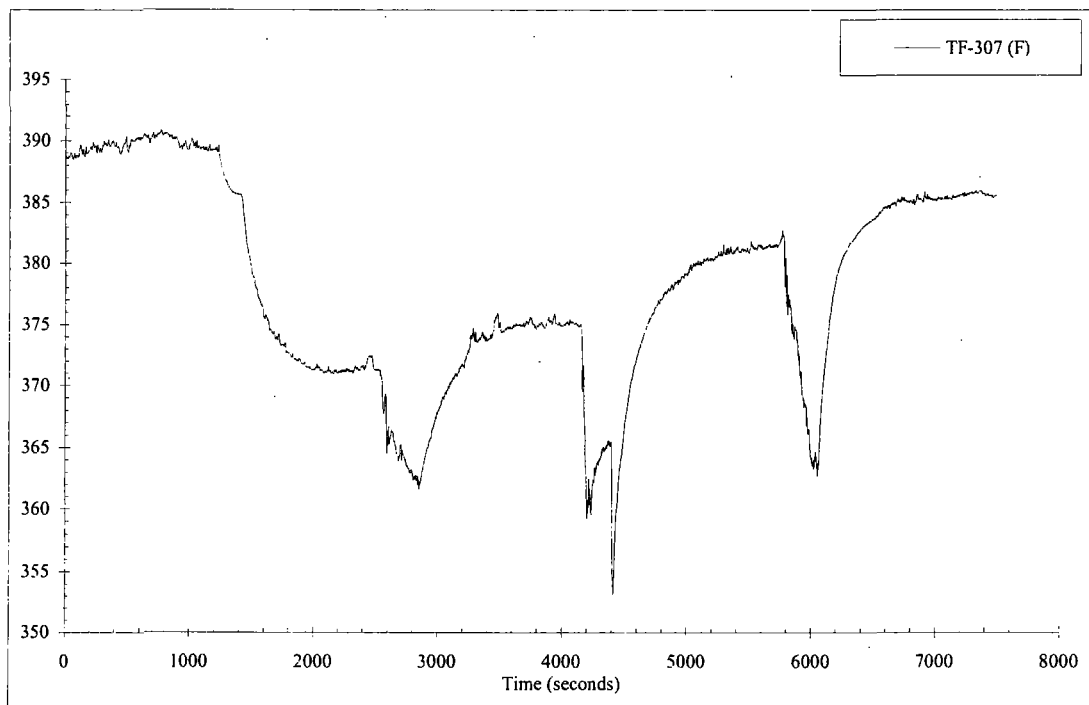
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)



SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

NRC-COND-01: Steam Generator U-Tube Condensation Test @ 200 psig
Oregon State University
Start time = 11/03/2005 12:35:30
End time = 11/03/2005 14:40:31
File created on 11/04/2005 09:36:41

| Timestamp | Interval (sec) | Tagname | Description | Value |
|-------------|----------------|----------------|-------------------------------|---------|
| 12:33:30 PM | -119 | TEST_SW | Facility Test Switch | In Test |
| 12:33:31 PM | -118 | dMuteSCR_Alarm | SCR Signal loss audible alarm | ON |
| 12:55:59 PM | 1229 | M001_HS_O | SG-1 Stm Stop HS | Open |
| 12:56:00 PM | 1230 | M001_STAT | SG-1 Steam Stop | Open |
| 1:10:47 PM | 2117 | MF_001 | FST Fill Valve | Open |
| 1:14:57 PM | 2367 | MF_001 | FST Fill Valve | Closed |
| 1:25:31 PM | 3001 | MF_001 | FST Fill Valve | Open |
| 1:29:52 PM | 3262 | MF_001 | FST Fill Valve | Closed |
| 1:45:58 PM | 4228 | MF_001 | FST Fill Valve | Open |
| 1:51:35 PM | 4565 | MF_001 | FST Fill Valve | Closed |
| 2:13:14 PM | 5864 | MF_001 | FST Fill Valve | Open |
| 2:18:34 PM | 6184 | MF_001 | FST Fill Valve | Closed |
| 2:18:53 PM | 6203 | CVSP_HS_R | CVS Pump HS | Run |
| 2:18:53 PM | 6203 | CVSP_X | CVS Pump | Running |
| 2:20:08 PM | 6278 | R610_STAT | PZR Vent | Open |
| 2:20:16 PM | 6286 | R610_STAT | PZR Vent | Closed |
| 2:20:50 PM | 6320 | R610_STAT | PZR Vent | Open |
| 2:21:00 PM | 6330 | R610_STAT | PZR Vent | Closed |
| 2:21:02 PM | 6332 | CVSP_HS_R | CVS Pump HS | Off |
| 2:21:02 PM | 6332 | CVSP_X | CVS Pump | Off |
| 2:40:30 PM | 7500 | TEST_SW | Facility Test Switch | Normal |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|------------|---|----------------|----------------|----------------|----------------|--------------------------------|
| DASLogging | DSC Engine is logging data to the Citadel database | N/A | N/A | N/A | N/A | N/A |
| DASRunning | DSC Engine is running, but not necessarily logging data | N/A | N/A | N/A | N/A | N/A |
| DP-111 | DP across Upper Core Plate | 4.9931 | 0.9963 | 30 | -30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 4.9796 | 0.9934 | 375 | -375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 4.9563 | 0.989 | 25 | -25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 4.9591 | 0.9931 | 25 | -25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 4.9743 | 0.9957 | 25 | -25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 4.9561 | 0.9924 | 25 | -25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 4.97 | 0.9951 | 30 | 0 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 4.9707 | 0.9949 | 30 | 0 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 4.9709 | 0.9959 | 25 | -25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 4.9736 | 0.9958 | 25 | -25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 4.9622 | 0.9941 | 50 | -50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 4.9689 | 0.9939 | 25 | -25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 4.9588 | 0.9916 | 200 | 0 | Differential Pressure (in h2o) |
| DP-203 | RCP-1 Differential Pressure | 4.9688 | 0.9941 | 200 | 0 | Differential Pressure (in h2o) |
| DP-204 | CL-2 Differential Pressure | 4.9814 | 0.9969 | 25 | -25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 4.978 | 0.995 | 200 | 0 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 4.984 | 0.9959 | 200 | 0 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 4.9817 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 4.9905 | 0.9984 | 25 | -25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 4.9858 | 0.998 | 25 | -25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 4.9649 | 0.9933 | 25 | -25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 4.9849 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 4.9838 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 4.9788 | 0.9965 | 15 | -15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 4.981 | 0.9973 | 15 | 0 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 4.9807 | 0.9981 | 500 | 0 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 4.9729 | 0.9964 | 500 | 0 | Differential Pressure (psid) |
| DP-217 | HL-1 to CL1 Differential Pressure at SG1 | 4.9818 | 0.9966 | 36.67 | 0 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 4.9889 | 0.9992 | 150 | 0 | Differential Pressure (in h2o) |
| DP-219 | HL-1 to CL3 Differential Pressure at SG1 | 4.9886 | 0.9949 | 30.95 | 0 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 4.9627 | 0.9936 | 150 | 0 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 4.9677 | 0.9951 | 150 | 0 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 4.983 | 0.9975 | 150 | 0 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 4.9915 | 0.9987 | 150 | 0 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 4.9665 | 0.9944 | 150 | 0 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 4.979 | 0.9975 | 400 | 0 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 4.9736 | 0.9958 | 400 | 0 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 4.9675 | 0.9948 | 150 | -150 | Differential Pressure (in h2o) |
| DP-502 | CMT-2 Injection Differential Pressure | 4.9645 | 0.9947 | 150 | -150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 4.9858 | 0.998 | 150 | -150 | Differential Pressure (in h2o) |
| DP-504 | CMT-2 Balance Line Differential Pressure | 4.9955 | 1.0007 | 100 | -100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 4.9969 | 1.0008 | 10 | 0 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 4.967 | 0.9948 | 10 | 0 | Differential Pressure (psid) |
| DP-603 | ADS4-1 Venturi | 4.9847 | 0.9985 | 100 | 0 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 4.964 | 0.9941 | 100 | 0 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 4.9881 | 0.9993 | 50 | 0 | Differential Pressure (in h2o) |
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 4.9857 | 0.9991 | 50 | 0 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 4.9773 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-701 | IRWST-1 Injection Differential Pressure | 4.9872 | 0.9982 | 30 | 0 | Differential Pressure (psid) |
| DP-702 | IRWST-2 Injection Differential Pressure | 4.9871 | 0.9981 | 30 | 0 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 4.9905 | 0.9994 | 100 | 0 | Differential Pressure (psid) |
| FDP-604 | ADS-2 Flow Differential Pressure | 4.9738 | 0.9961 | 100 | 0 | Differential Pressure (psid) |
| FDP-605 | ADS-1 Flow Differential Pressure | 4.9896 | 0.9993 | 250 | 0 | Differential Pressure (psid) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|-----------|---|----------------|----------------|----------------|----------------|------------------------------|
| FDP-606 | ADS-3 Flow Differential Pressure | 5.0051 | 1.0023 | 100 | 0 | Differential Pressure (psid) |
| FMM-001 | SG-1 Feed Flow | 4.9838 | 0.9961 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-002 | SG-2 Feed Flow | 4.9642 | 0.9925 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-201 | CL-1 Loop Flow | 4.9607 | 0.9921 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-202 | CL-2 Loop Flow | 4.9754 | 0.9943 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-203 | CL-3 Loop Flow | 4.9853 | 0.9974 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-204 | CL-4 Loop Flow | 4.9729 | 0.9936 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-205 | DVI-1 Flow | 4.9706 | 0.996 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-206 | DVI-2 Flow | 4.9767 | 0.9969 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-401 | ACC-1 Injection Flow | 4.9516 | 0.9932 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-402 | ACC-2 Injection Flow | 4.9772 | 0.9965 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-501 | CMT-1 Injection Flow | 4.9599 | 1.0006 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-502 | CMT-2 CL Balance Line Flow | 4.9742 | 0.9994 | 70 | 0 | Volumetric Flow Rate (gpm) |
| FMM-503 | CMT-1 CL Balance Line Flow | 4.9717 | 0.9985 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-504 | CMT-2 Injection Flow | 4.9523 | 0.9925 | 20 | 0 | Volumetric Flow Rate (gpm) |
| FMM-601 | ADS1-3 Loop Seal Flow | 5.0168 | 1.004 | 200 | 0 | Volumetric Flow Rate (gpm) |
| FMM-602 | ADS4-2 Loop Seal Flow | 5.0507 | 1.0117 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-603 | ADS4-1 Loop Seal Flow | 5.0571 | 1.0129 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-701 | IRWST/DVI-1 Injection Flow | 4.9738 | 0.9954 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-702 | IRWST/DVI-2 Injection Flow | 4.9724 | 0.9955 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-703 | IRWST Overflow | 4.9663 | 0.9966 | 10 | 0 | Volumetric Flow Rate (gpm) |
| FMM-801 | CVSP Discharge Flow | 4.9876 | 0.9998 | 8 | 0 | Volumetric Flow Rate (gpm) |
| FMM-802 | PRHR Inlet Flow | 4.9656 | 0.9966 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-803 | RNSP to DVI-2 Flow | 4.9629 | 0.9942 | 30 | 0 | Volumetric Flow Rate (gpm) |
| FMM-804 | PRHR Outlet Flow | 4.9612 | 0.9963 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-805 | RNSP Discharge Flow | 4.9711 | 0.9936 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-901 | Primary Sump-1 Recirculation Injection Flow | 4.9673 | 0.9936 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-902 | Primary Sump-2 Recirculation Injection Flow | 4.9726 | 0.9948 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Break Separator Loop Seal Flow | 5.1224 | 1.0902 | 90 | -90 | Volumetric Flow Rate (gpm) |
| FVM-001 | SG-1 Main Steam Flow | 5.0202 | 1.0036 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-002 | SG-2 Main Steam Flow | 4.9885 | 0.9986 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-003 | Main Steam Total Flow | 5.0101 | 0.9988 | 140 | 0 | Steam Flow Rate (cfm) |
| FVM-004 | Catch Tank Steam Flow Rate | 4.9885 | 1.001 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-009 | SG-1 PORV Blowdown Steam Flow | 4.9836 | 0.9967 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-010 | SG-2 PORV Blowdown Steam Flow | 4.9817 | 0.9971 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-601 | ADS1-3 Separator Steam Flow | 4.9995 | 1.0017 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 5.006 | 1.0018 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 5.0062 | 1.0024 | 1600 | 0 | Steam Flow Rate (cfm) |
| FVM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 5.0034 | 1.0026 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 5.0037 | 1.0028 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-901 | BAMS HDR 6-inch Line Steam Flow | 5.0021 | 1.0023 | 5000 | 0 | Steam Flow Rate (cfm) |
| FVM-902 | BAMS HDR 10-inch Line Steam Flow | 5.01 | 1.0027 | 12500 | 0 | Steam Flow Rate (cfm) |
| FVM-903 | Primary Sump Steam Exhaust Flow | 4.9879 | 0.9949 | 22 | 0 | Steam Flow Rate (cfm) |
| FVM-904 | Break Separator 3-inch Line Steam Flow | 4.9986 | 0.9979 | 400 | 0 | Steam Flow Rate (cfm) |
| FVM-905 | Break Separator 6-inch Line Steam Flow | 5.0036 | 1.004 | 6000 | 0 | Steam Flow Rate (cfm) |
| FVM-906 | Break Separator 8-inch Line Steam Flow | 5.0048 | 1.0025 | 4000 | 0 | Steam Flow Rate (cfm) |
| HPS-201-1 | CL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-2 | CL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-3 | CL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-1 | CL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-2 | CL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-3 | CL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-1 | CL-3 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-2 | CL-3 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-3 | CL-3 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|-----------|---|----------------|----------------|----------------|----------------|------------------|
| HPS-204-1 | CL-4 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-2 | CL-4 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-3 | CL-4 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-1 | HL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-2 | HL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-3 | HL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-1 | HL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-2 | HL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-3 | HL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-1 | CMT-1 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-2 | CMT-1 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-3 | CMT-1 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-1 | CMT-2 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-2 | CMT-2 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-3 | CMT-2 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-1 | Lower PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-2 | Lower PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-3 | Lower PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-1 | ADS1-3 Common Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-2 | ADS1-3 Common Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-3 | ADS1-3 Common Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-1 | Upper PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-2 | Upper PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-3 | Upper PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-1 | PRHR HX Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-2 | PRHR HX Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-3 | PRHR HX Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| KW-101 | Rx Heater Group 1 Power | 4.3222 | 1.1171 | 472 | 0 | Power (kW) |
| KW-102 | Rx Heater Group 2 Power | 4.1621 | 1.0045 | 486 | 0 | Power (kW) |
| KW-103 | Rx Heater Group 1 Power | 4.8931 | 0.9786 | 496 | 0 | Power (kW) |
| KW-104 | Rx Heater Group 2 Power | 4.912 | 0.9946 | 492 | 0 | Power (kW) |
| KW-601 | PZR Heater Power | 4.9435 | 0.982 | 24.3 | 0 | Power (kW) |
| LCT-701 | IRWST Weight | 4.9831 | 0.9976 | 40000 | 0 | Mass (lbm) |
| LCT-901 | Primary Sump Weight | 4.977 | 0.9969 | 28800 | 0 | Mass (lbm) |
| LCT-902 | Secondary Sump Weight | 4.9845 | 0.9983 | 16700 | 0 | Mass (lbm) |
| LDP-001 | FST Uncompensated Water Level | 5.0056 | 1.0017 | 91.88 | 0 | Water Level (in) |
| LDP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 4.9645 | 0.9945 | 5.561 | 0 | Water Level (in) |
| LDP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 4.9725 | 0.9963 | 5.938 | 0 | Water Level (in) |
| LDP-103 | DVI to CL Uncompensated Water Level (270) | 4.9807 | 0.9982 | 11.692 | 0 | Water Level (in) |
| LDP-104 | DVI to CL Uncompensated Water Level (180) | 4.9748 | 0.9992 | 12.376 | 0 | Water Level (in) |
| LDP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 5.0076 | 1.0058 | 11.929 | 0 | Water Level (in) |
| LDP-106 | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 4.9732 | 0.9985 | 8.198 | 0 | Water Level (in) |
| LDP-107 | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 4.9713 | 0.9958 | 8.223 | 0 | Water Level (in) |
| LDP-108 | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 4.9683 | 0.9953 | 8.562 | 0 | Water Level (in) |
| LDP-109 | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 4.984 | 0.9988 | 19.763 | 0 | Water Level (in) |
| LDP-110 | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 4.9909 | 0.9991 | 20.02 | 0 | Water Level (in) |
| LDP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 4.9755 | 0.9963 | 4.696 | 0 | Water Level (in) |
| LDP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 4.9849 | 0.9986 | 15.614 | 0 | Water Level (in) |
| LDP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 4.9896 | 0.9996 | 24.28 | 0 | Water Level (in) |
| LDP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 4.9638 | 0.9949 | 77.59 | 0 | Water Level (in) |
| LDP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 4.9838 | 0.9983 | 11.383 | 0 | Water Level (in) |
| LDP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 4.9848 | 0.9988 | 39.98 | 0 | Water Level (in) |
| LDP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 4.988 | 0.9996 | 40.26 | 0 | Water Level (in) |
| LDP-127 | Rx Wide Range Uncompensated Water Level | 4.999 | 1.0007 | 98.97 | 0 | Water Level (in) |
| LDP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 4.9639 | 0.9946 | 39.3 | 0 | Water Level (in) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|------------------|
| LDP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 4.9837 | 0.9982 | 24.166 | 0 | Water Level (in) |
| LDP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 4.9981 | 1.0014 | 78.02 | 0 | Water Level (in) |
| LDP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 4.9843 | 0.9994 | 20.135 | 0 | Water Level (in) |
| LDP-201 | CL-1 Uncompensated Water Level | 4.9961 | 1.0002 | 2.496 | 0 | Water Level (in) |
| LDP-202 | CL-2 Uncompensated Water Level | 4.9924 | 0.9994 | 2.223 | 0 | Water Level (in) |
| LDP-203 | CL-3 Uncompensated Water Level | 4.9923 | 0.9994 | 2.532 | 0 | Water Level (in) |
| LDP-204 | CL-4 Uncompensated Water Level | 4.9594 | 0.9927 | 2.47 | 0 | Water Level (in) |
| LDP-205 | HL-1 Uncompensated Water Level | 4.9663 | 0.9945 | 4.085 | 0 | Water Level (in) |
| LDP-206 | HL-2 Uncompensated Water Level | 4.9653 | 0.9944 | 4.013 | 0 | Water Level (in) |
| LDP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 4.9779 | 0.9972 | 17.91 | 0 | Water Level (in) |
| LDP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 4.9825 | 0.9969 | 19.247 | 0 | Water Level (in) |
| LDP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 4.9954 | 1.0002 | 10.939 | 0 | Water Level (in) |
| LDP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 4.9677 | 0.9943 | 16.988 | 0 | Water Level (in) |
| LDP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 4.9613 | 0.993 | 16.793 | 0 | Water Level (in) |
| LDP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 4.9836 | 0.9982 | 16.772 | 0 | Water Level (in) |
| LDP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 4.9864 | 0.9978 | 16.747 | 0 | Water Level (in) |
| LDP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 4.9953 | 1.0002 | 11.571 | 0 | Water Level (in) |
| LDP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 4.99 | 0.9992 | 102.06 | 0 | Water Level (in) |
| LDP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 4.9717 | 0.9955 | 95.55 | 0 | Water Level (in) |
| LDP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 4.9618 | 0.9932 | 96.25 | 0 | Water Level (in) |
| LDP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 4.9658 | 0.9943 | 103.14 | 0 | Water Level (in) |
| LDP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 4.9867 | 0.9992 | 102.45 | 0 | Water Level (in) |
| LDP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 4.9786 | 0.9971 | 96 | 0 | Water Level (in) |
| LDP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 4.985 | 0.9986 | 95.98 | 0 | Water Level (in) |
| LDP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 4.9628 | 0.9947 | 102.71 | 0 | Water Level (in) |
| LDP-301 | SG-1 WR Uncompensated Water Level | 5.0022 | 1.0006 | 119.25 | 0 | Water Level (in) |
| LDP-302 | SG-2 WR Uncompensated Water Level | 4.9995 | 1.0003 | 119.02 | 0 | Water Level (in) |
| LDP-303 | SG-1 NR Uncompensated Water Level | 4.9699 | 0.9934 | 31.81 | 0 | Water Level (in) |
| LDP-304 | SG-2 NR Uncompensated Water Level | 4.9748 | 0.995 | 31.52 | 0 | Water Level (in) |
| LDP-401 | ACC-1 Uncompensated Water Level | 4.987 | 0.9951 | 38.26 | 0 | Water Level (in) |
| LDP-402 | ACC-2 Uncompensated Water Level | 5.166 | 1.0332 | 38.34 | 0 | Water Level (in) |
| LDP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 4.9834 | 0.9986 | 5.31 | 0 | Water Level (in) |
| LDP-502 | CMT-2 WR Uncompensated Water Level | 5.1958 | 1.0396 | 57.5 | 0 | Water Level (in) |
| LDP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 4.984 | 0.9979 | 46.77 | 0 | Water Level (in) |
| LDP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 4.9793 | 0.9972 | 5.226 | 0 | Water Level (in) |
| LDP-505 | CMT-1 NR Uncompensated Water Level (Top) | 4.994 | 1 | 5.486 | 0 | Water Level (in) |
| LDP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 4.9823 | 0.9975 | 46.96 | 0 | Water Level (in) |
| LDP-507 | CMT-1 WR Uncompensated Water Level | 5.1887 | 1.0383 | 57.5 | 0 | Water Level (in) |
| LDP-508 | CMT-2 NR Uncompensated Water Level (Top) | 4.9913 | 0.9994 | 5.309 | 0 | Water Level (in) |
| LDP-509 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 4.9772 | 0.9968 | 78.84 | 0 | Water Level (in) |
| LDP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 4.9653 | 0.9942 | 78.28 | 0 | Water Level (in) |
| LDP-601 | PZR WR Uncompensated Water Level | 5.0006 | 0.9991 | 140.47 | 0 | Water Level (in) |
| LDP-602 | PZR Surge Line Uncompensated Water Level | 4.9777 | 0.997 | 47.5 | 0 | Water Level (in) |
| LDP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 4.9735 | 0.9963 | 3.533 | 0 | Water Level (in) |
| LDP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 4.9724 | 0.9958 | 18.696 | 0 | Water Level (in) |
| LDP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 4.9737 | 0.996 | 4.127 | 0 | Water Level (in) |
| LDP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 4.9731 | 0.9964 | 3.82 | 0 | Water Level (in) |
| LDP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 4.996 | 1.0011 | 14.717 | 0 | Water Level (in) |
| LDP-610 | ADS1-3 Separator Uncompensated Water Level | 5.193 | 1.0399 | 45.24 | 0 | Water Level (in) |
| LDP-611 | ADS4-1 Separator Uncompensated Water Level | 5.1628 | 1.0342 | 55.97 | 0 | Water Level (in) |
| LDP-612 | ADS4-2 Separator Uncompensated Water Level | 5.1859 | 1.0386 | 56.6 | 0 | Water Level (in) |
| LDP-701 | IRWST Uncompensated Water Level | 5.0202 | 1.0048 | 115.8 | 0 | Water Level (in) |
| LDP-801 | PRHR HX Inlet Head Uncompensated Water Level | 4.9945 | 1.0013 | 6.971 | 0 | Water Level (in) |
| LDP-802 | PRHR HX WR Uncompensated Water Level | 4.9871 | 0.9998 | 57.08 | 0 | Water Level (in) |
| LDP-901 | Primary Sump Uncompensated Water Level | 5.0016 | 1.0015 | 104.36 | 0 | Water Level (in) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|----------------|----------------|----------------|----------------|-----------------------|
| LDP-902 | Secondary Sump Uncompensated Water Level | 5.0018 | 1.0007 | 102.56 | 0 | Water Level (in) |
| LDP-903 | CRT Uncompensated Water Level | 5.1669 | 1.0346 | 32.358 | 0 | Water Level (in) |
| LDP-905 | Break Separator Uncompensated Water Level | 5.1788 | 1.0378 | 130.68 | 0 | Water Level (in) |
| LT-120 | Rx Vessel Capacitance Probe Water Level | 5.0053 | 1.0042 | 99 | 50 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 5.0658 | 1.0121 | 600 | 0 | Pressure (psig) |
| PT-002 | MS Header Pressure | 4.9759 | 0.9962 | 500 | 0 | Pressure (psig) |
| PT-003 | Lab Barometer | 4.9656 | 0.9944 | 20 | 10 | Pressure (psia) |
| PT-004 | Temp Steam Pressure for FVM-002 | 5.0031 | 1.002 | 400 | 0 | Pressure (psig) |
| PT-009 | SG-1 PORV Blowdown Pressure | 4.9816 | 0.9983 | 300 | 0 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 4.9924 | 1.0004 | 300 | 0 | Pressure (psig) |
| PT-101 | CL-1 Pressure at Rx Flange | 4.9877 | 0.9986 | 500 | 0 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 4.9706 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 4.9646 | 0.9946 | 10 | 0 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 4.9882 | 0.9988 | 500 | 0 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 5.0478 | 1.0096 | 500 | 0 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 4.9637 | 0.9938 | 500 | 0 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 4.9874 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 4.9825 | 0.9984 | 10 | 0 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 4.9886 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 4.977 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 4.9616 | 0.9921 | 500 | 0 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 4.9935 | 1.0008 | 500 | 0 | Pressure (psig) |
| PT-202 | HL-2 Pressure at SG-2 Flange | 4.9841 | 0.9978 | 500 | 0 | Pressure (psig) |
| PT-203 | CL Break Pressure at Break Valve | 4.988 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-204 | SG-2 Long Tube Pressure (Top) | 4.9974 | 1.0005 | 500 | 0 | Pressure (psig) |
| PT-205 | HL-1 Pressure at SG-1 Flange | 4.9842 | 0.9993 | 10 | 0 | Pressure (psig) |
| PT-206 | HL Break Pressure at Break Valve | 4.9869 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-301 | SG-1 Pressure | 5.0617 | 1.0123 | 500 | 0 | Pressure (psig) |
| PT-302 | SG-2 Pressure | 5.1023 | 1.0219 | 500 | 0 | Pressure (psig) |
| PT-401 | ACC-1 Pressure | 4.9908 | 0.9993 | 300 | 0 | Pressure (psig) |
| PT-402 | ACC-2 Pressure | 4.9802 | 0.9975 | 300 | 0 | Pressure (psig) |
| PT-501 | CMT-1 Pressure | 4.982 | 0.9979 | 300 | 0 | Pressure (psig) |
| PT-502 | CMT-2 Pressure | 4.9869 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-602 | PZR NR Pressure | 4.9747 | 0.9988 | 400 | 300 | Pressure (psig) |
| PT-603 | PZR NR Pressure | 4.9616 | 0.9944 | 10 | 0 | Pressure (psig) |
| PT-604 | PZR WR Pressure | 4.9794 | 0.9942 | 500 | 0 | Pressure (psig) |
| PT-605 | ADS1-3 Separator Pressure | 4.9725 | 0.9966 | 100 | 0 | Pressure (psig) |
| PT-606 | IRWST Sparger Line Pressure | 4.9653 | 0.995 | 100 | 0 | Pressure (psig) |
| PT-610 | ADS4-2 Separator Pressure | 4.9845 | 0.9983 | 10 | 0 | Pressure (psig) |
| PT-611 | ADS4-1 Separator Pressure | 4.9806 | 0.9977 | 10 | 0 | Pressure (psig) |
| PT-701 | IRWST Pressure | 5.0436 | 1.0087 | 15 | 0 | Pressure (psig) |
| PT-801 | CVSP Discharge Pressure | 4.9909 | 0.9993 | 500 | 0 | Pressure (psig) |
| PT-802 | RNSP Discharge Pressure | 4.9768 | 0.9962 | 250 | 0 | Pressure (psig) |
| PT-901 | Primary Sump Pressure | 4.9659 | 0.9947 | 10 | 0 | Pressure (psig) |
| PT-902 | BAMS Header Pressure | 4.9988 | 1.0013 | 16 | 0 | Pressure (psig) |
| PT-905 | Break Separator Pressure | 5.0265 | 1.0067 | 20 | 0 | Pressure (psig) |
| TF-005 | Lab Ambient Temperature at Ground Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-006 | Lab Ambient Temperature at Second Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-007 | Lab Ambient Temperature at Third Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-009 | SG-1 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-010 | SG-2 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101 | CL-3 Temperature (SC-101) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-101-1.3D-2 | CL-1 Downcomer Temperature at 1.3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-1 | CL-1 Downcomer Temperature at 2D, 120 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-2 | CL-1 Downcomer Temperature at 2D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-101-2D-3 | CL-1 Downcomer Temperature at 2D, 150 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-1 | CL-1 Downcomer Temperature at 3D, 104 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-2 | CL-1 Downcomer Temperature at 3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-3 | CL-1 Downcomer Temperature at 3D, 166 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-1 | CL-1 Downcomer Temperature at 4D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-2 | CL-1 Downcomer Temperature at 4D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-1 | CL-1 Downcomer Temperature at 8D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-2 | CL-1 Downcomer Temperature at 8D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102 | CL-4 Temperature (SC-102) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-102-1.3D-2 | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-1 | CL-2 Downcomer Temperature at 2D, 210 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-2 | CL-2 Downcomer Temperature at 2D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-3 | CL-2 Downcomer Temperature at 2D, 240 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-1 | CL-2 Downcomer Temperature at 3D, 194 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-2 | CL-2 Downcomer Temperature at 3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-105 | CL-1 Temperature (SC-105) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-106 | CL-2 Temperature (SC-106) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-108 | CL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-113 | DVI-1/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-114 | DVI-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-116 | DVI-2/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-125 | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-142 | HL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-143 | HL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-167 | Rx Heater Rod B2-319 at 40.13 inches | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-170 | Upper Rx Vessel Layer M-M at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-171 | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-172 | Lower Rx Vessel Layer AA-AA at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-201 | CL-1 at RCP-1 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-202 | CL-2 at RCP-2 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-203 | CL-3 at RCP-3 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-204 | CL-4 at RCP-4 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-211 | SG-1 Long Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-212 | SG-2 Long Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-221 | CL-3 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-311 | SG-1 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-312 | SG-2 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-502 | CMT-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-509 | CMT-1 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-512 | CMT-2 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-526 | CMT-2 SPARGER 213 TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-528 | CMT 213 HEAD TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-530 | CMT-2 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-545 | CMT-2 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-719 | IRWST Sparger Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|------------------------------|
| TF-903 | Primary Sump Temperature (SC-903) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-911 | CRP Discharge to IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 200 | 40 | 200 | 40 | Fluid Temperature (F) |
| TF-915 | Break Separator 6-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-602 | PZR Heater Rod #2 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-1 | Core Thermocouple Rod D-001 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|--|----------------|----------------|----------------|----------------|------------------------------|
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-201 | SG-1 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-202 | SG-2 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-203 | SG-1 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-204 | SG-2 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-205 | SG-1 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-206 | SG-2 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-208 | SG-2 Long Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-209 | SG-1 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-210 | SG-2 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-601 | ADS1-3 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-602 | ADS4-2 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-603 | ADS4-1 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-801 | PRHR HX Long Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-802 | PRHR HX Short Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-803 | PRHR HX Long Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-804 | PRHR HX Short Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-805 | PRHR HX Short Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-806 | PRHR HX Long Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-807 | PRHR HX Short Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-808 | PRHR HX Long Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-905 | Break Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |



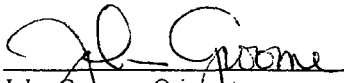
DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS

**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**

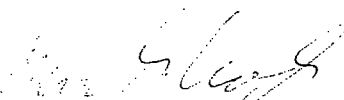
**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 285 PSIG**

NRC-COND-02

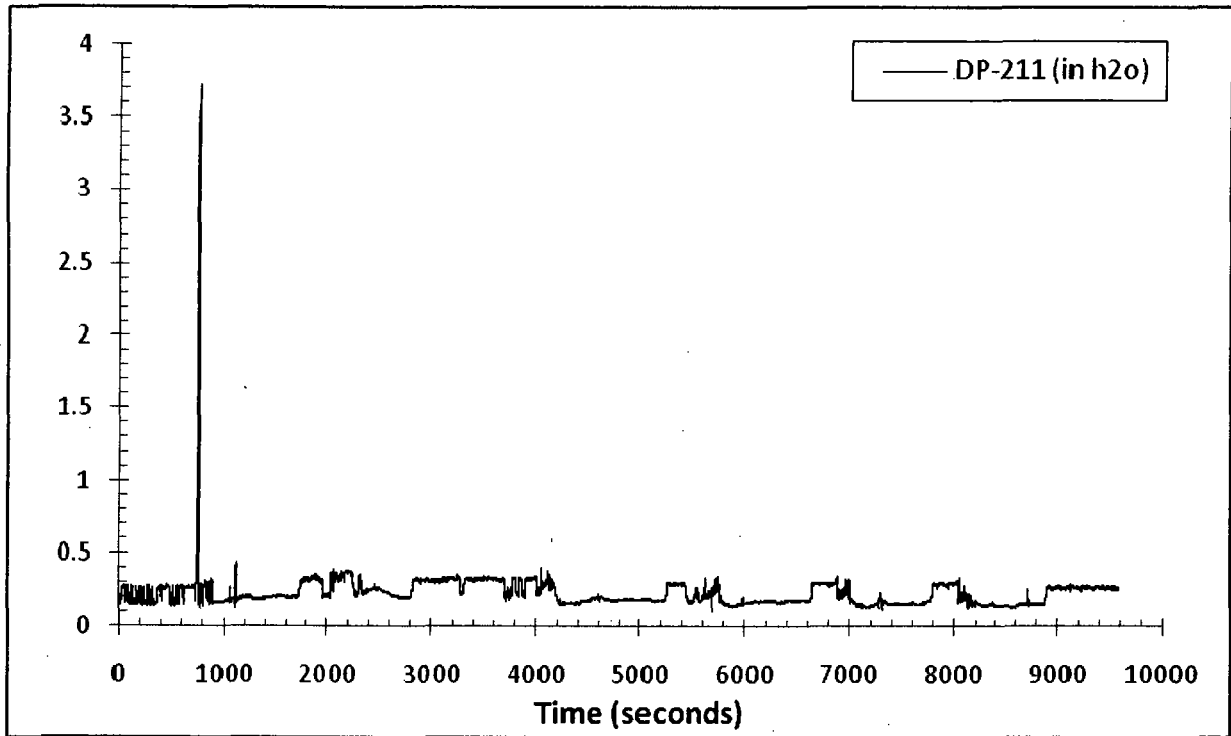
Revision 0

 12/14/05

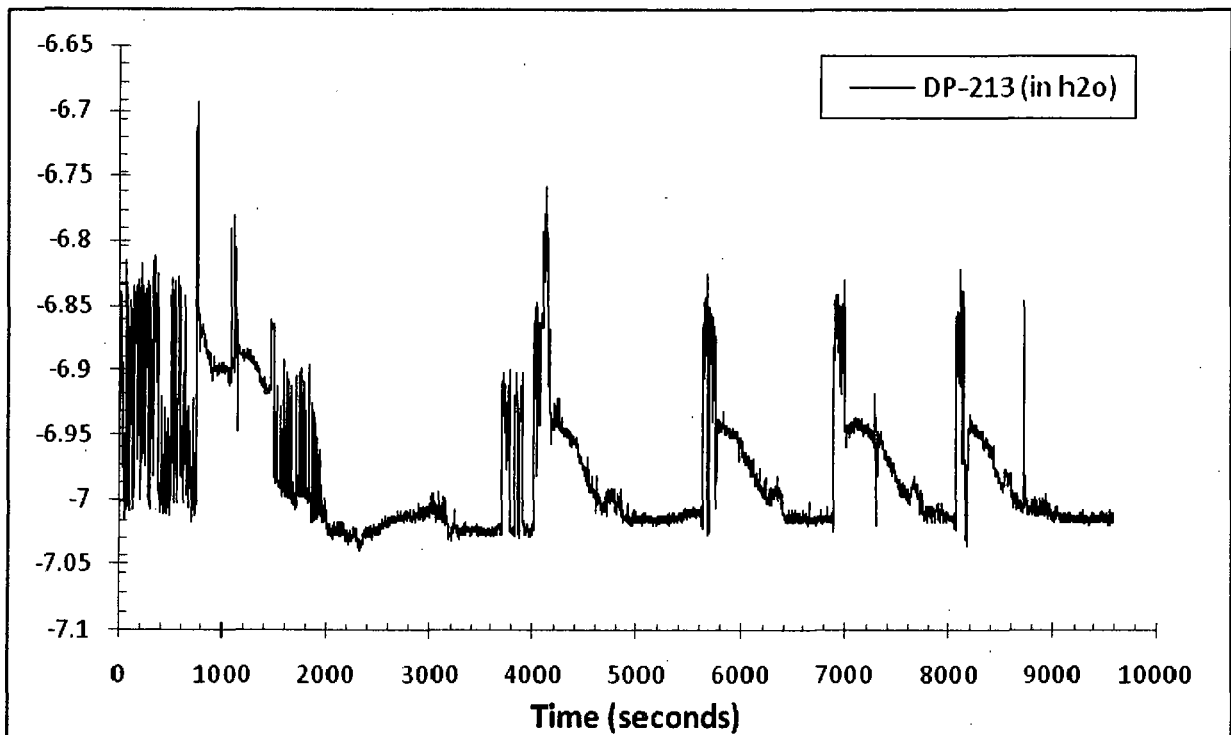
John Groome, Originator Date
Facility Operations Manager
Research Assistant

 12/14/05

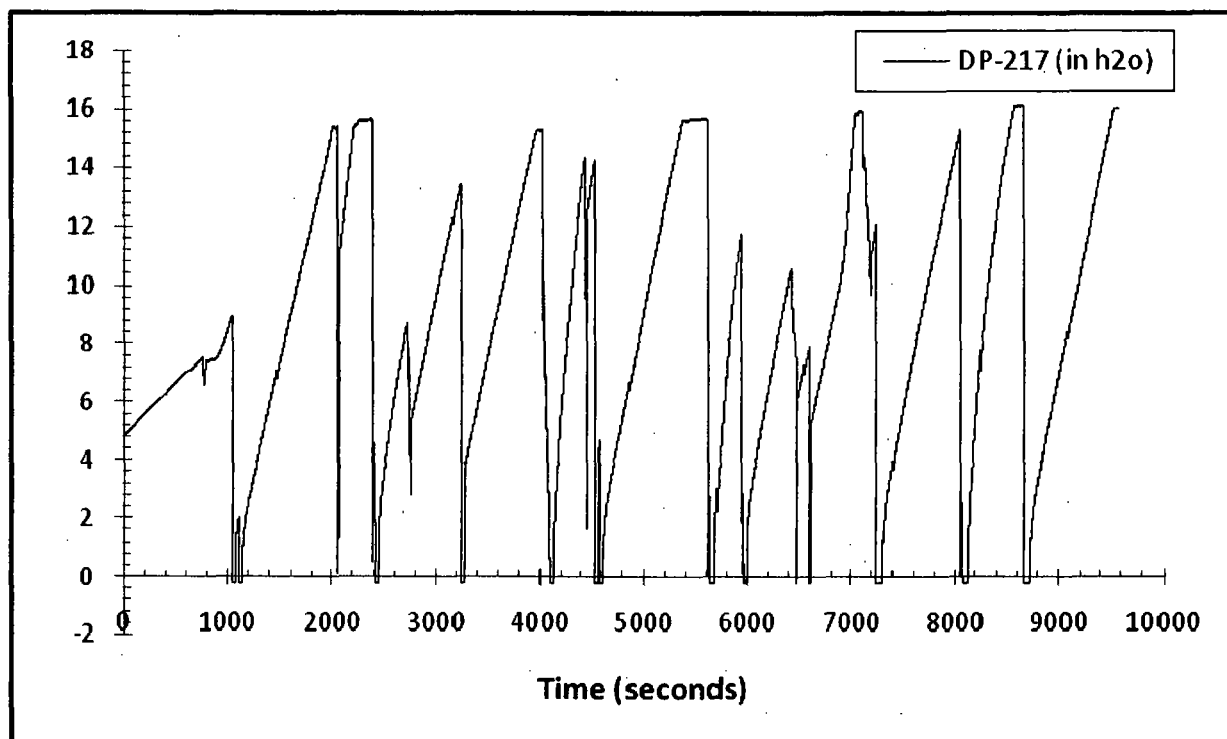
Brian Woods, Approval Date
Program Manager
Assistant Professor



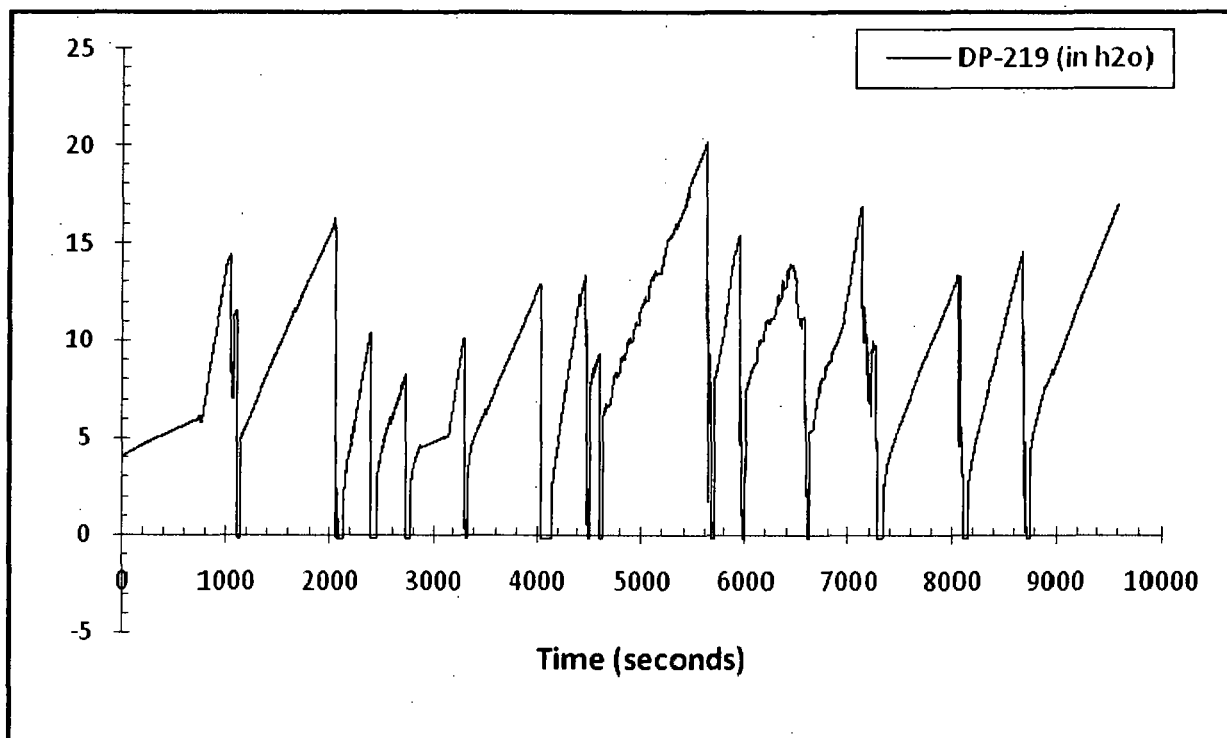
SG-1 Short Tube Entrance Losses



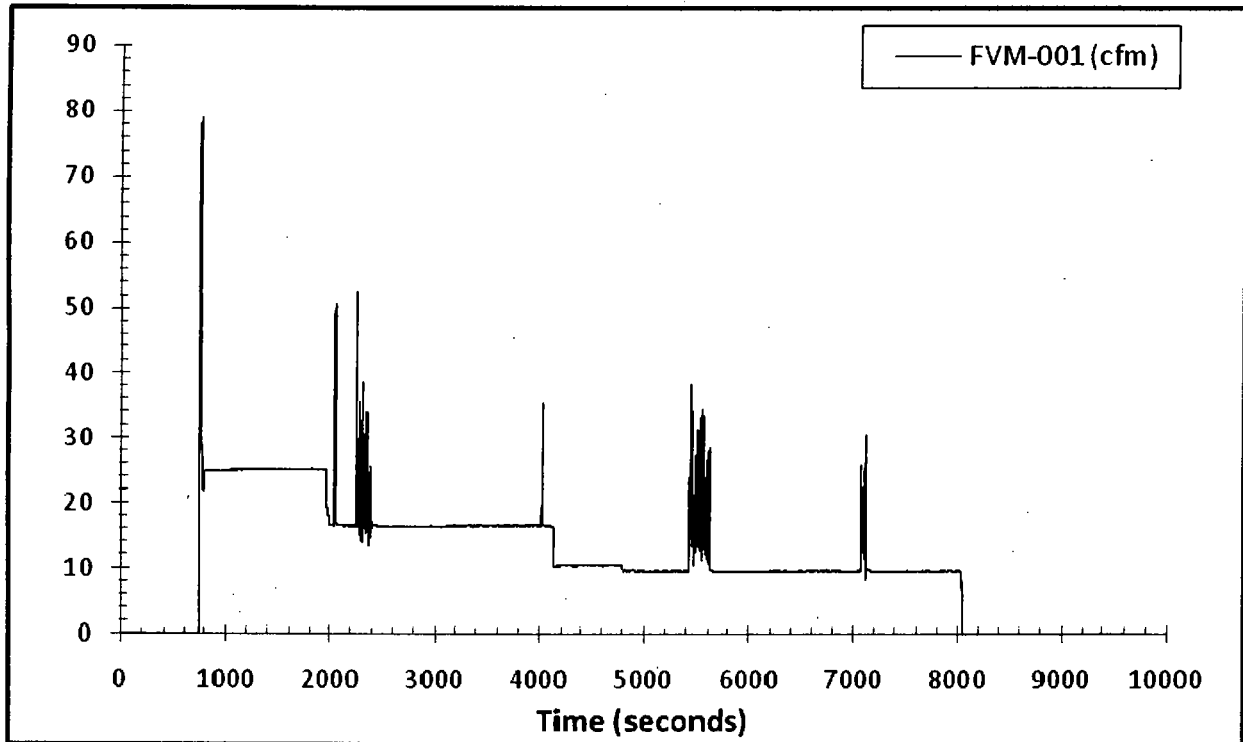
SG-1 Long Tube Exit Losses



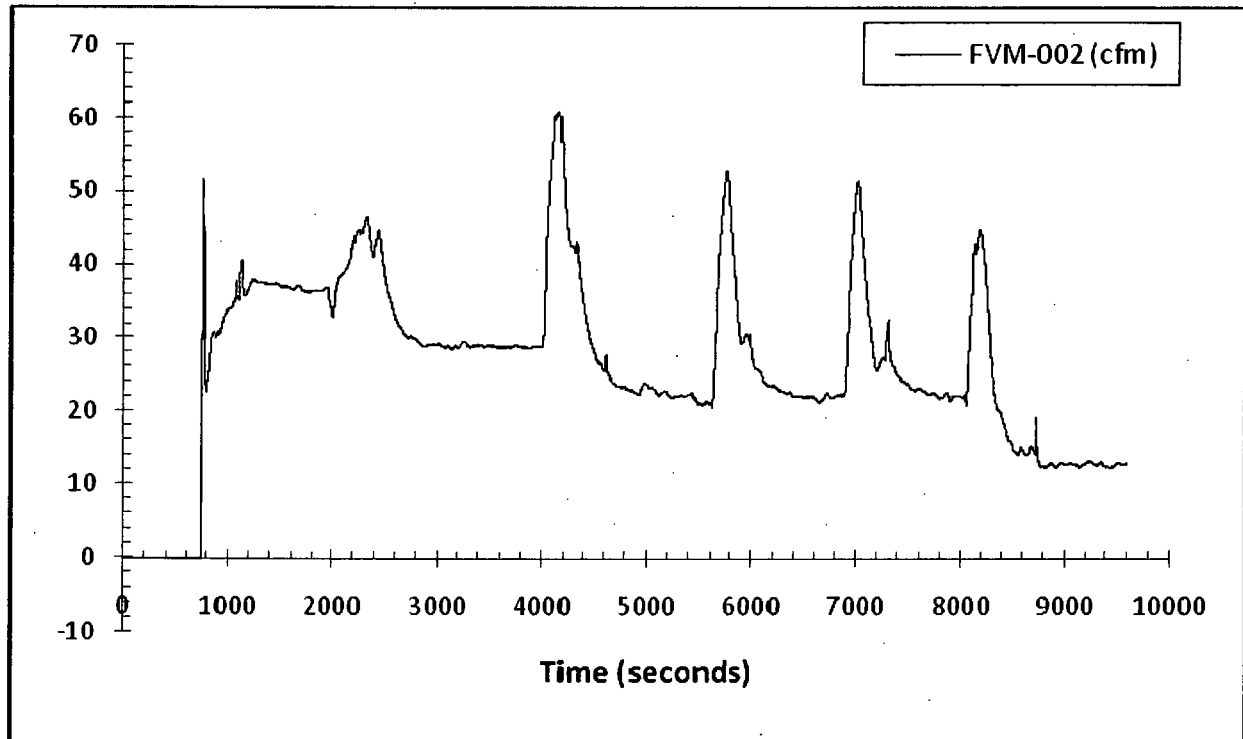
Separator Uncompensated Water Level



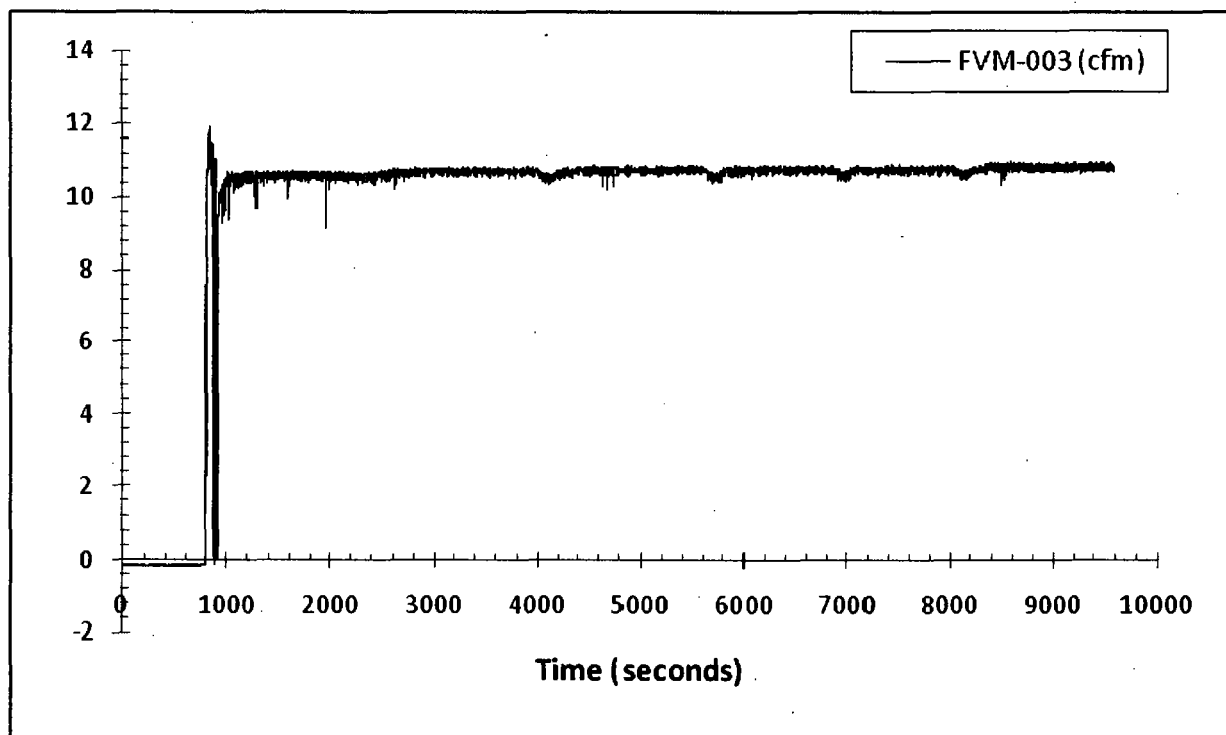
Catch Tank Uncompensated Water Level



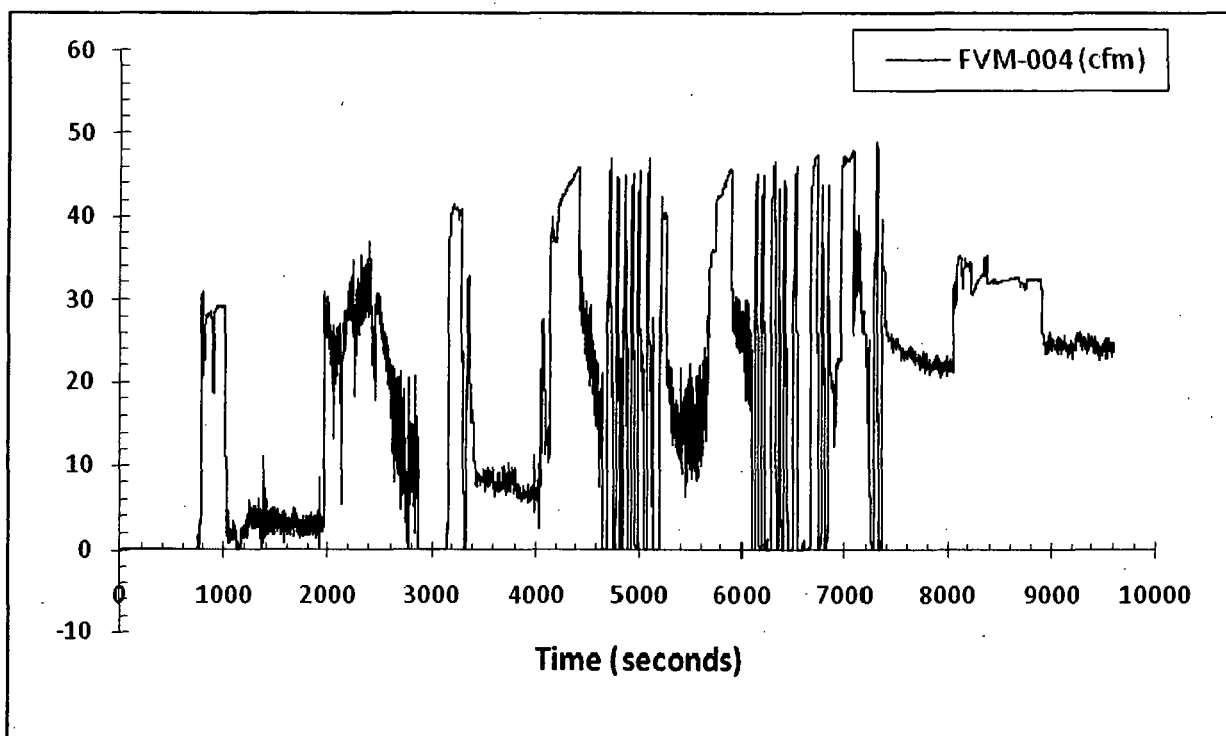
Separator Outlet Steam Flowrate



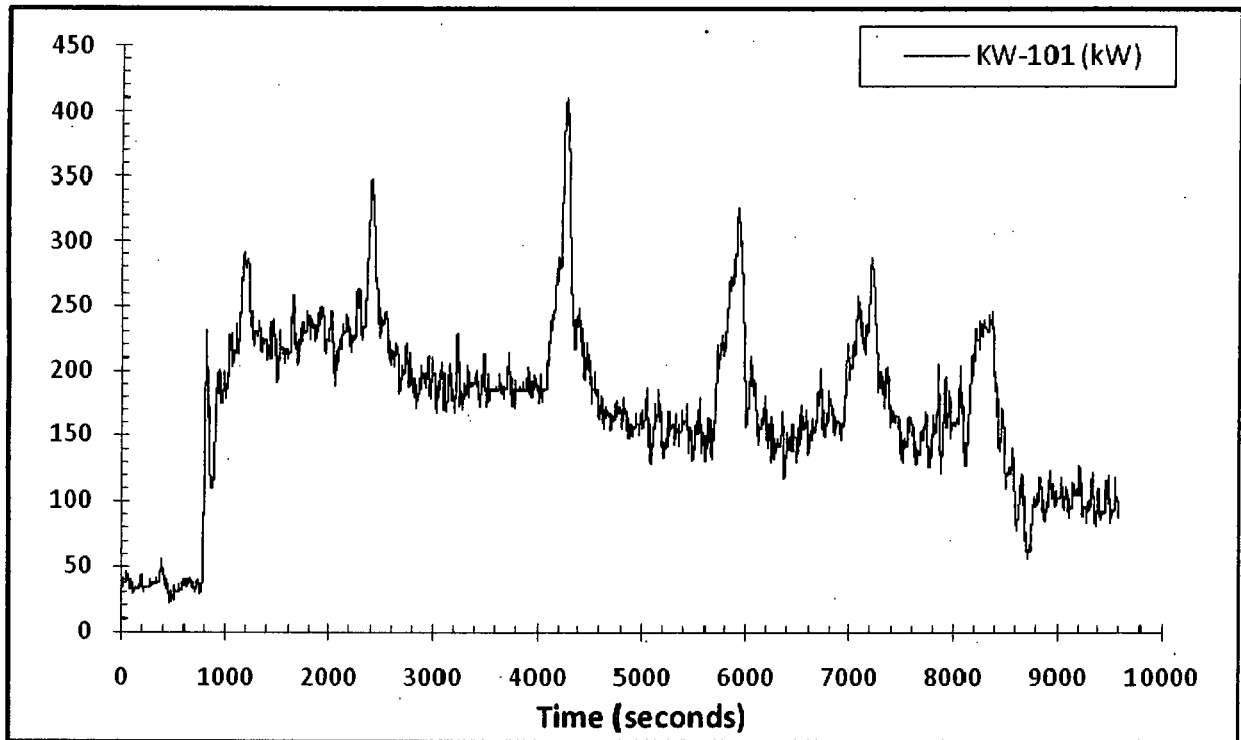
SG-2 Main Steam Flow



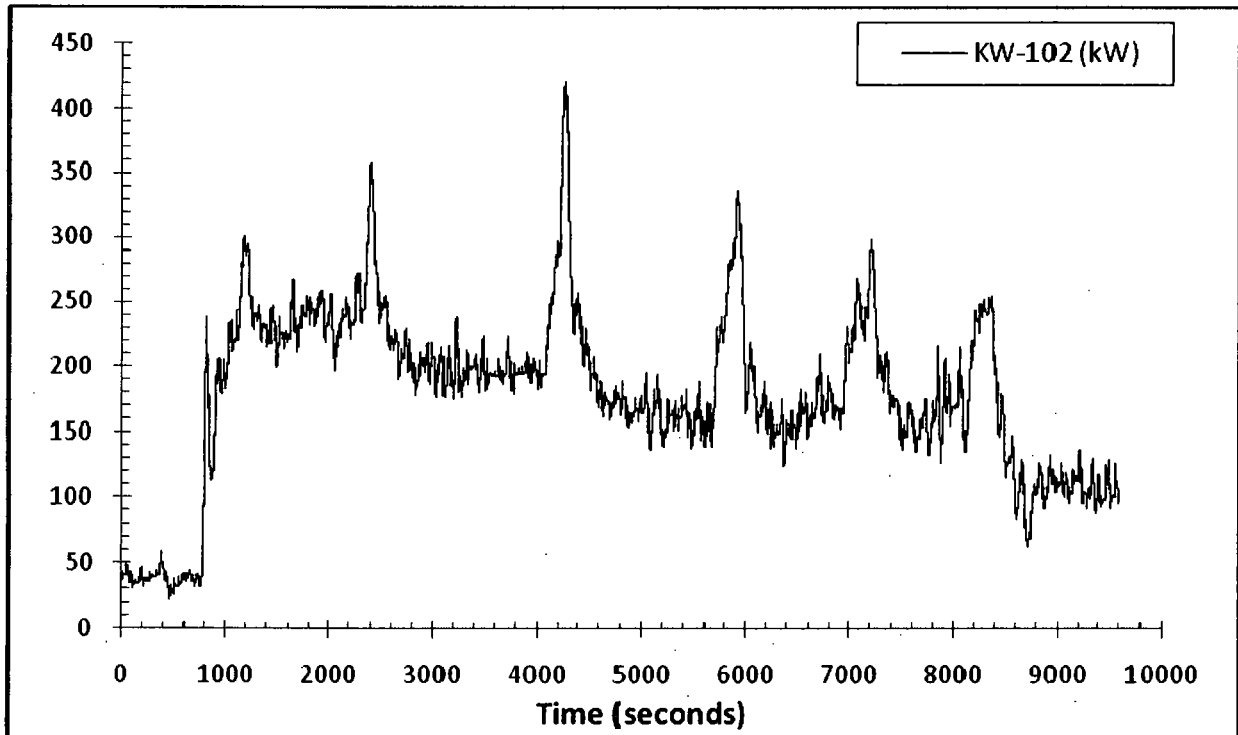
Main Steam Total Flow



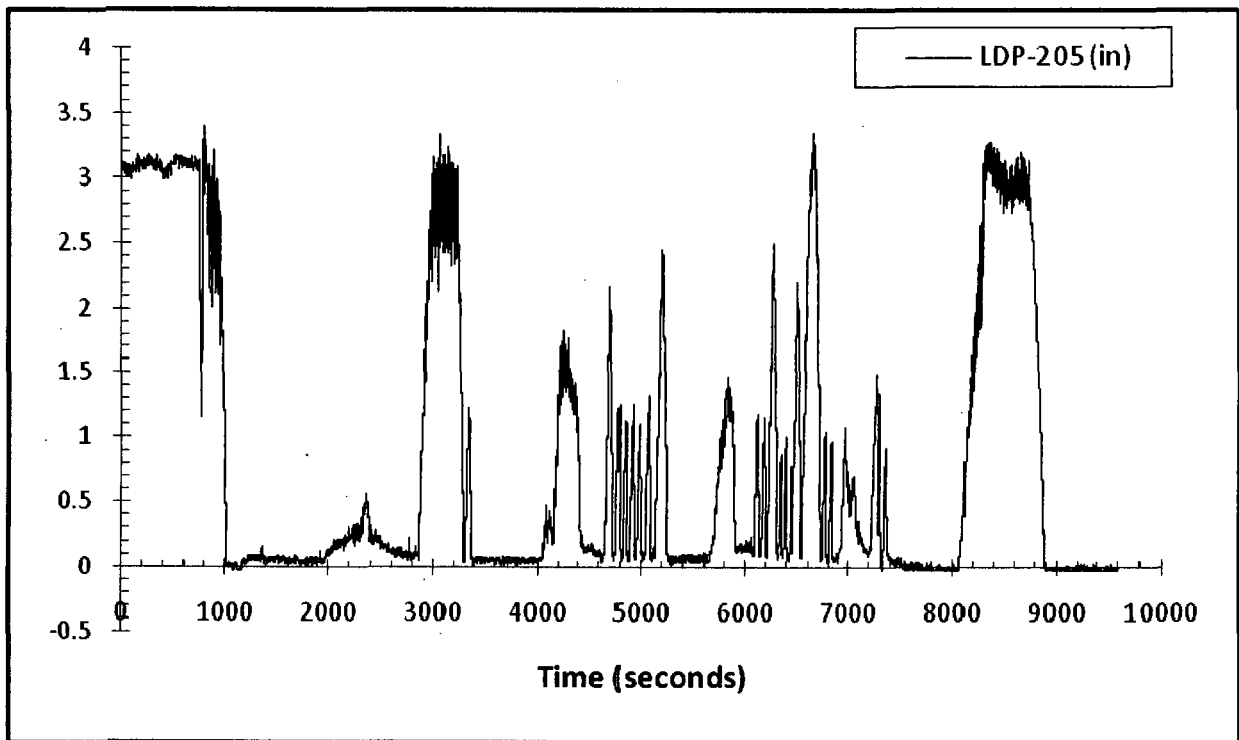
Catch Tank Steam Flow Rate



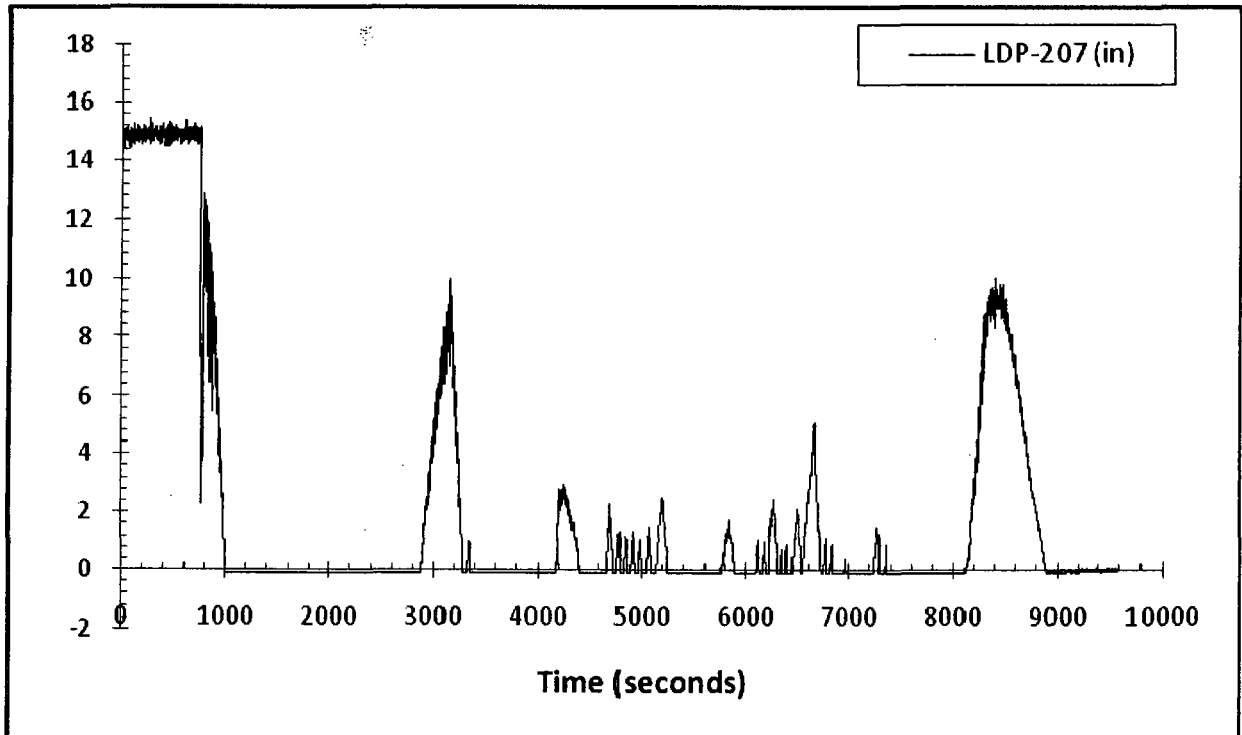
Rx Heater Group 1 Power



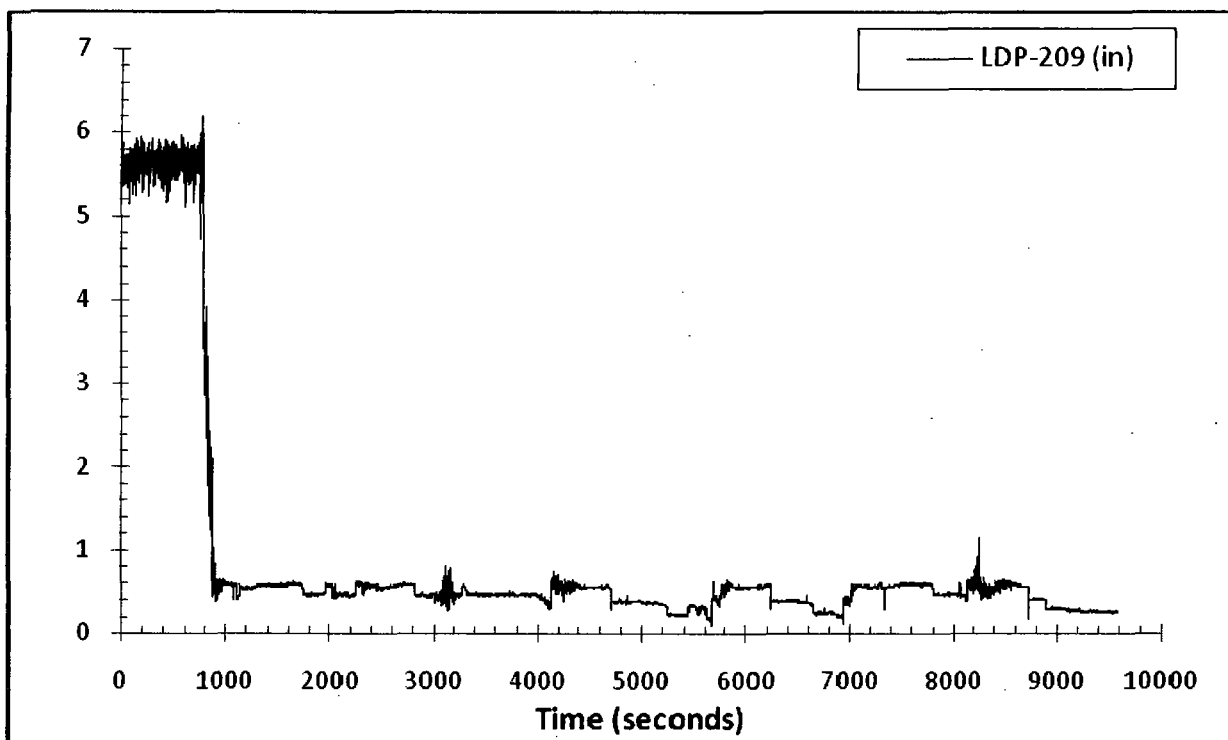
Rx Heater Group 2 Power



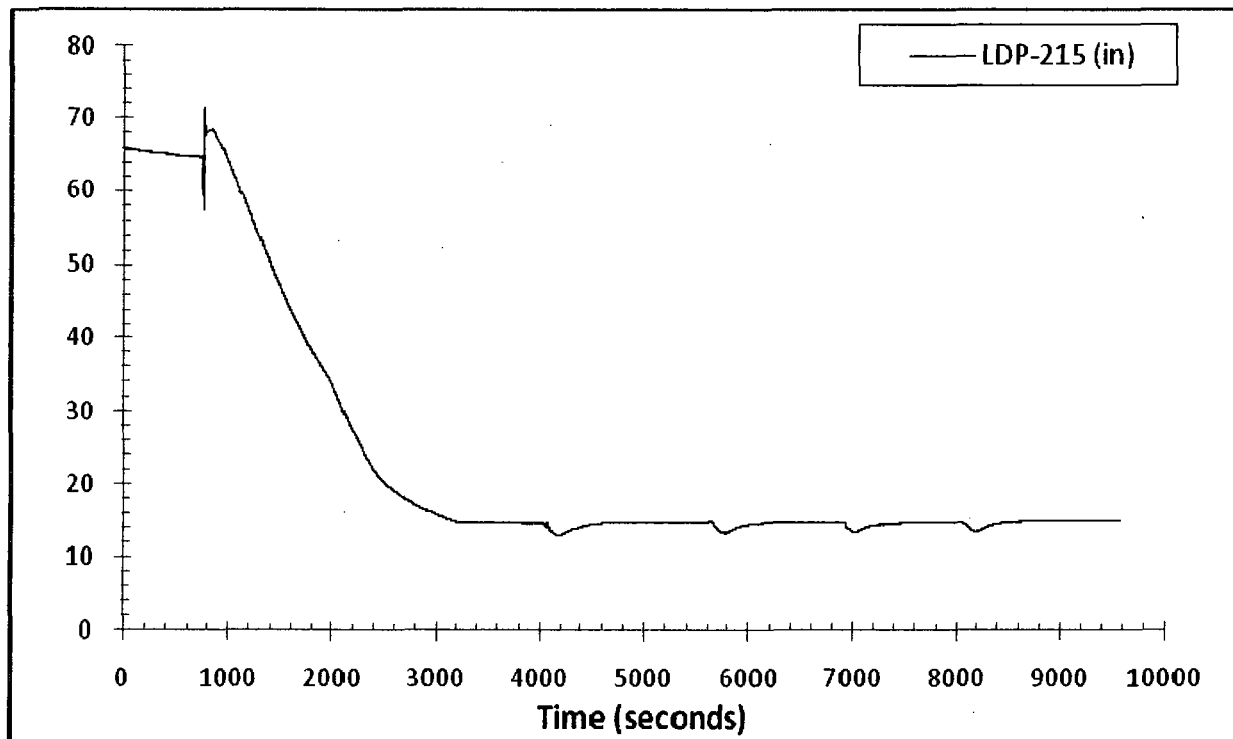
HL-1 Uncompensated Water Level



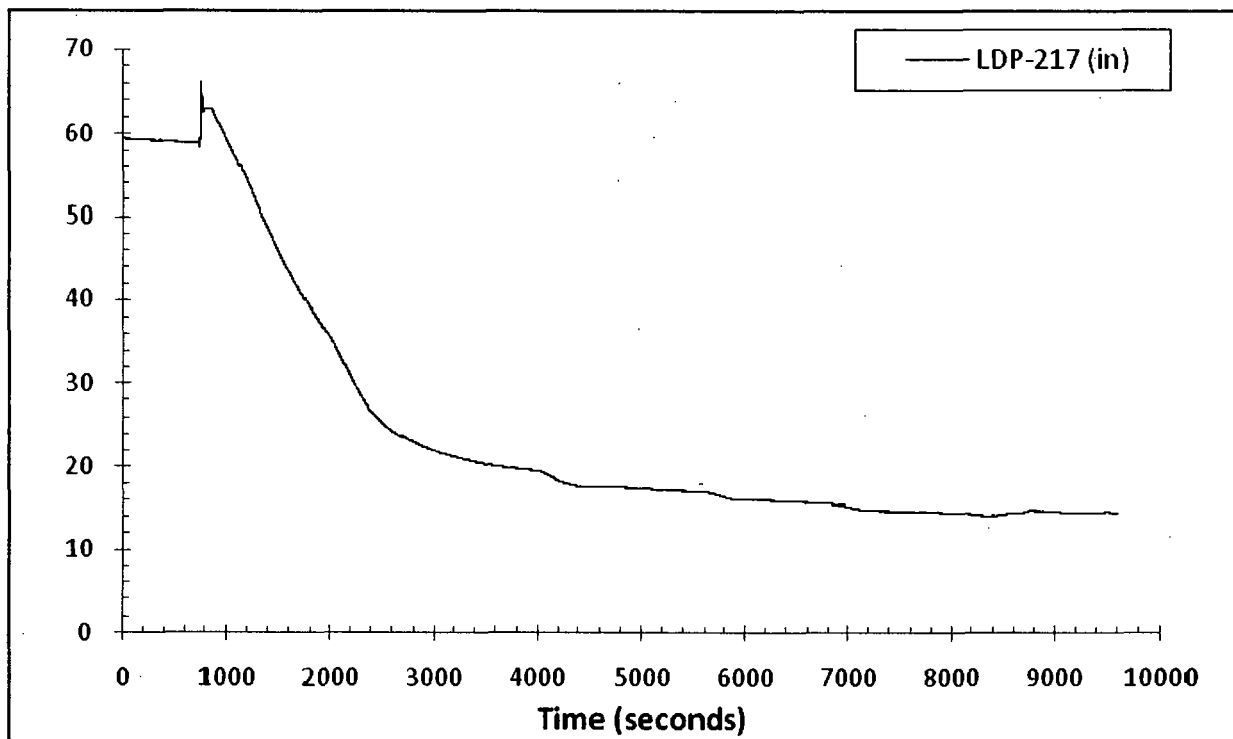
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



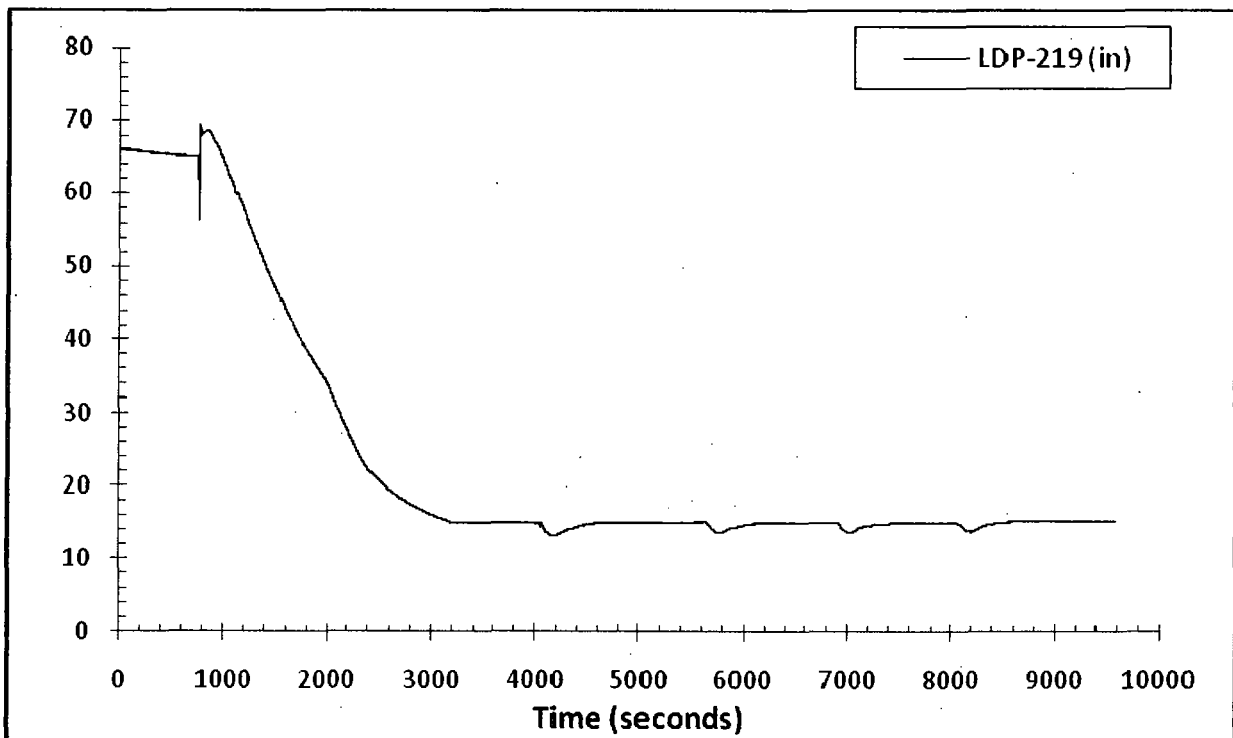
SG-1 to HL-1 Plenum Uncompensated Water Level



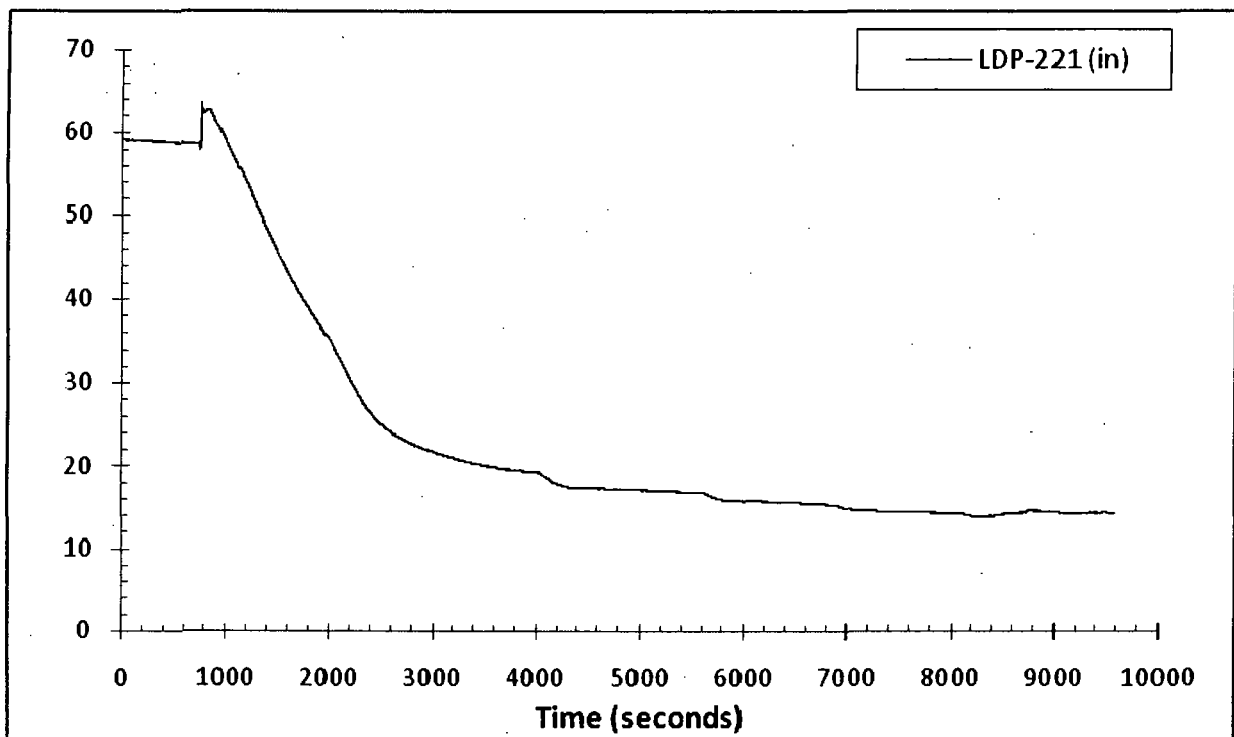
SG-1 Long Tube to HL Uncompensated Water Level



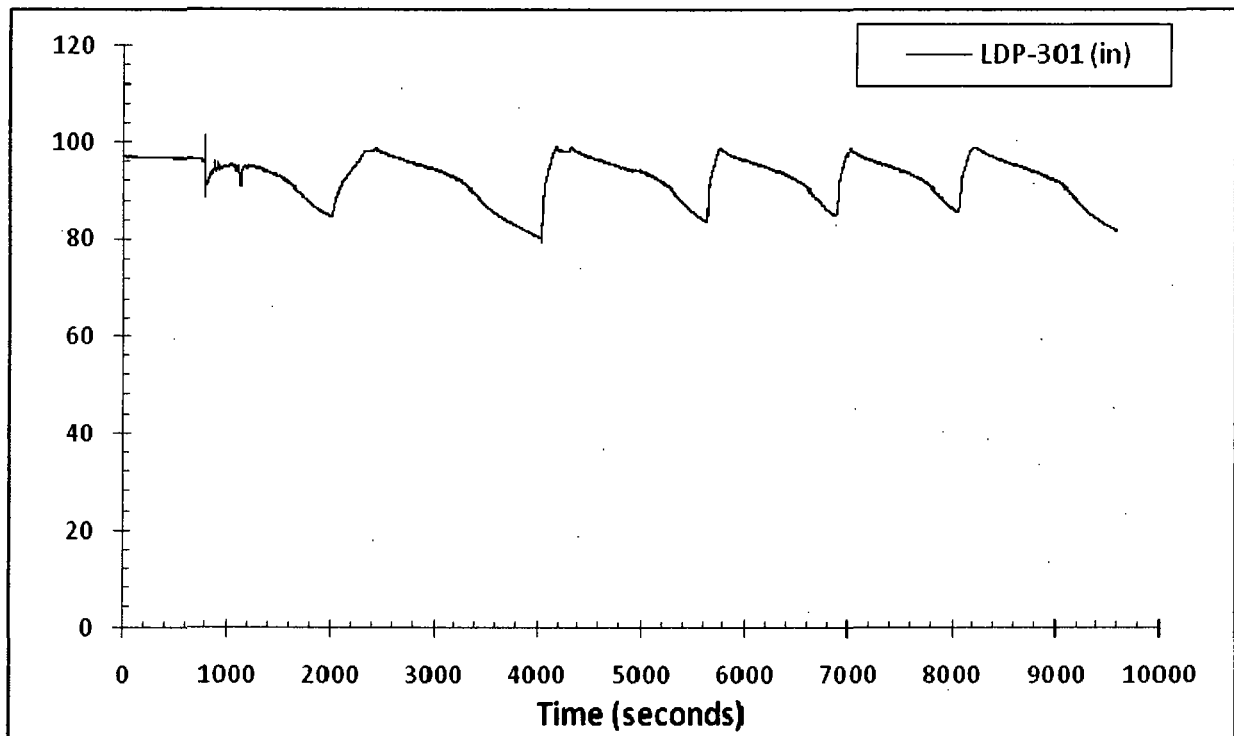
SG-1 Short Tube to HL Uncompensated Water Level



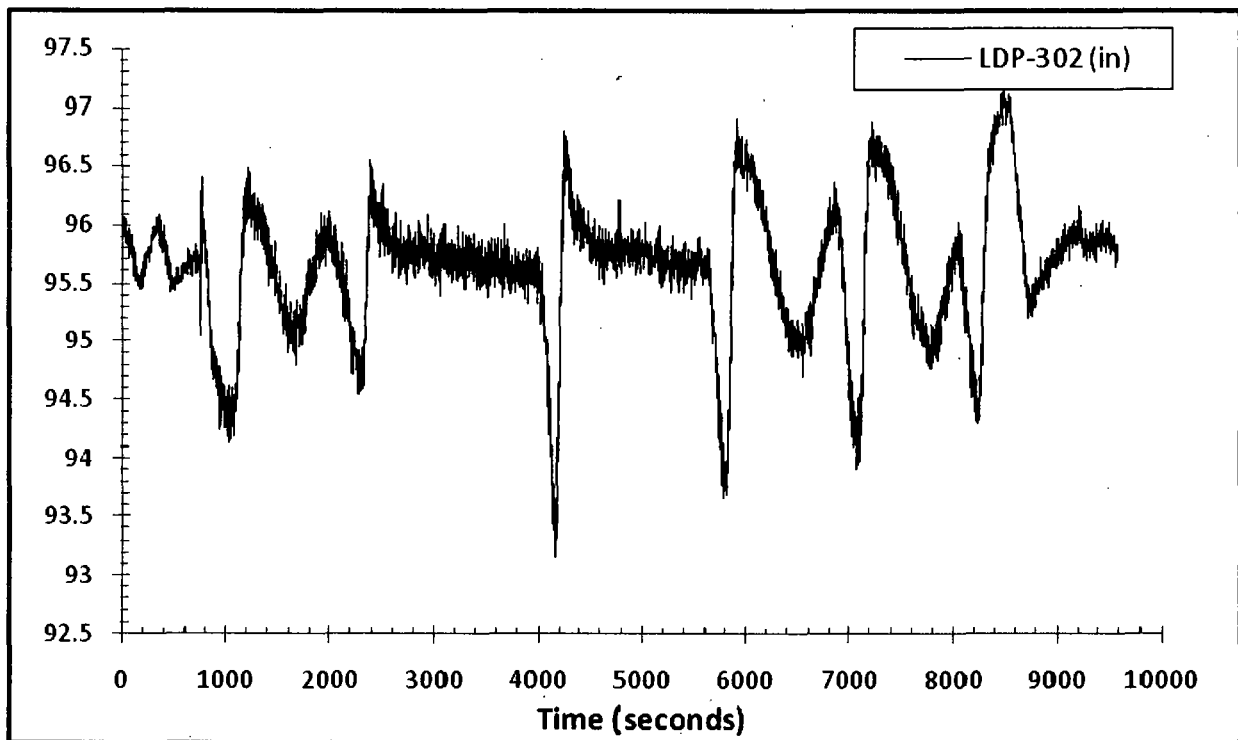
SG-1 Long Tube to CL Uncompensated Water Level



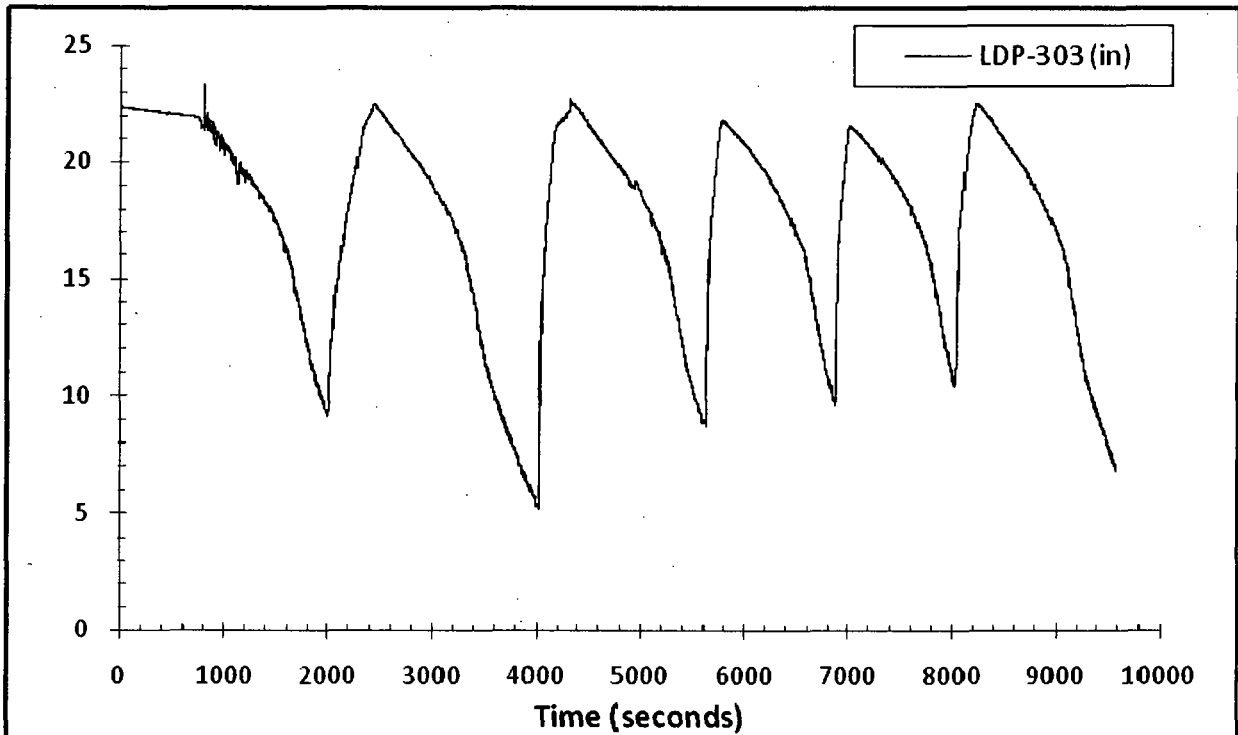
SG-1 Short Tube to CL Uncompensated Water Level



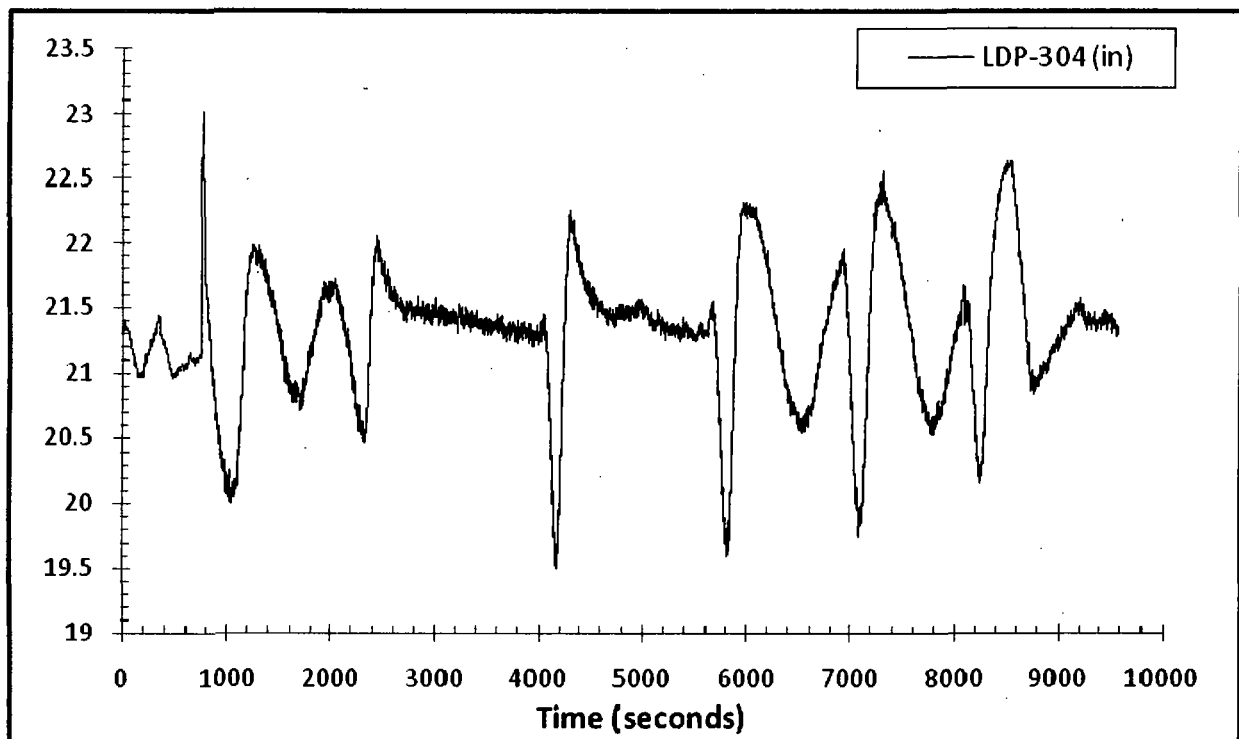
SG-1 WR Uncompensated Water Level



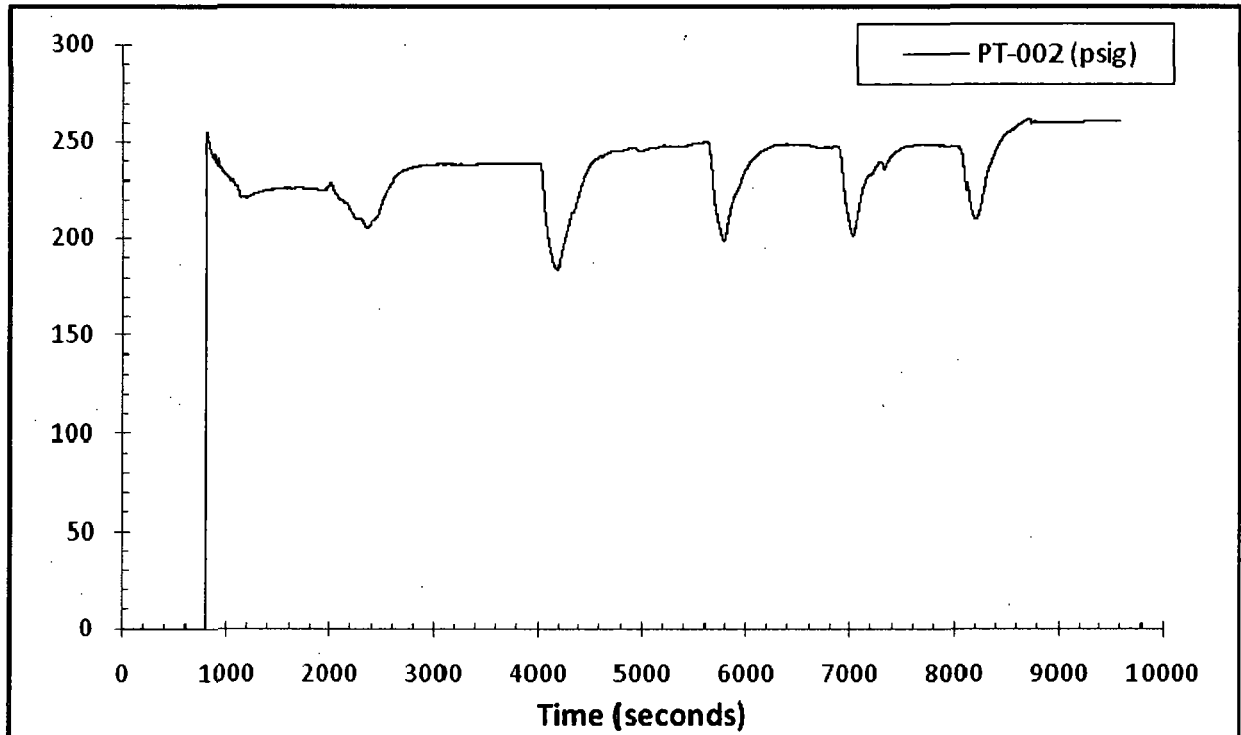
SG-2 WR Uncompensated Water Level



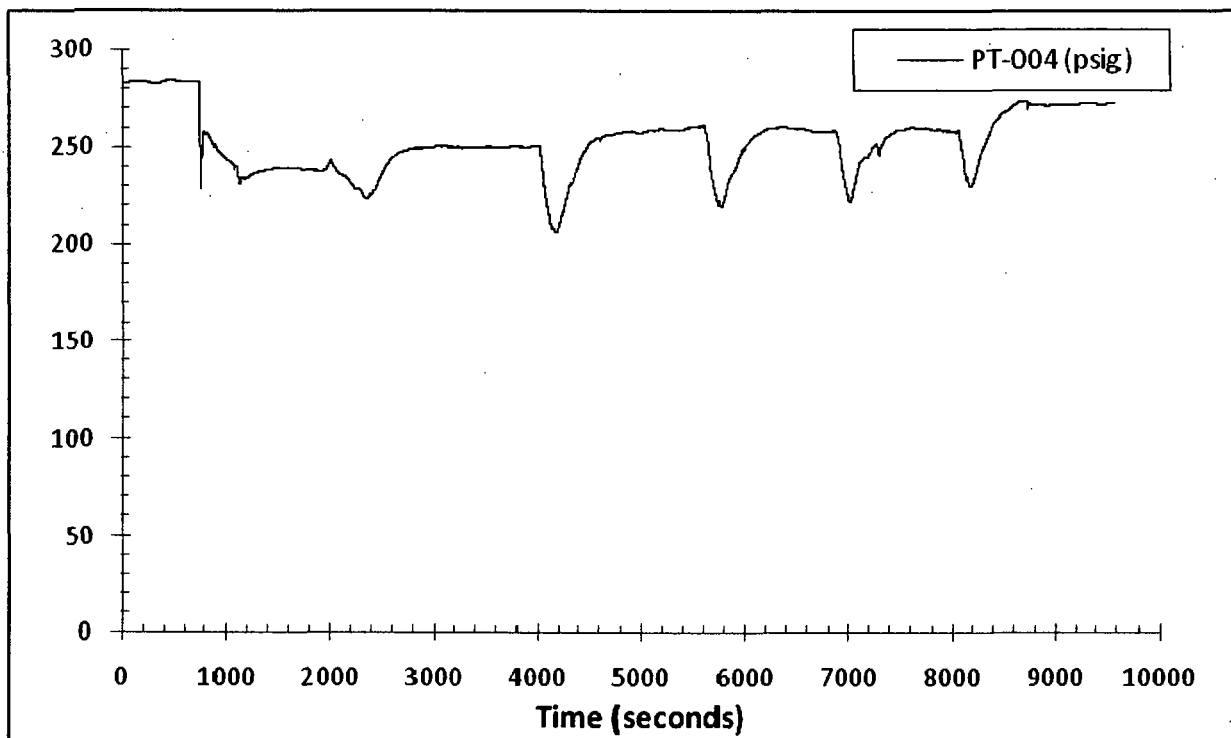
SG-1 NR Uncompensated Water Level



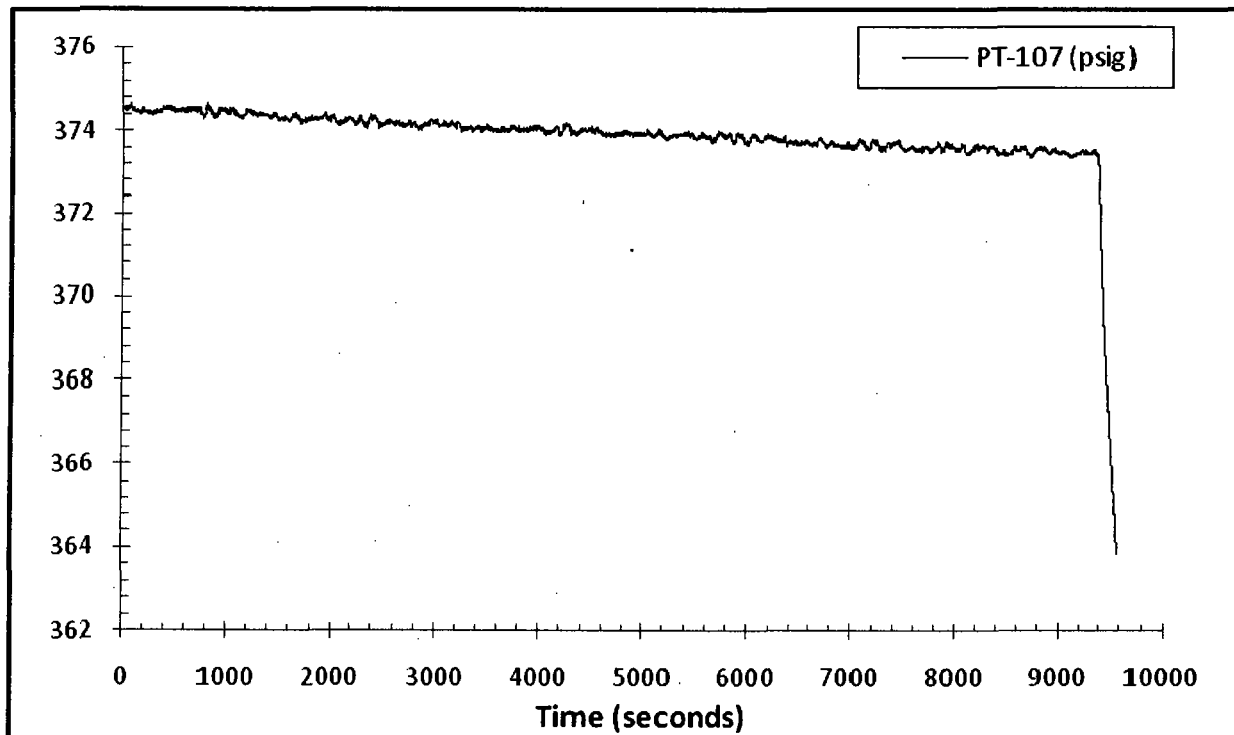
SG-2 NR Uncompensated Water Level



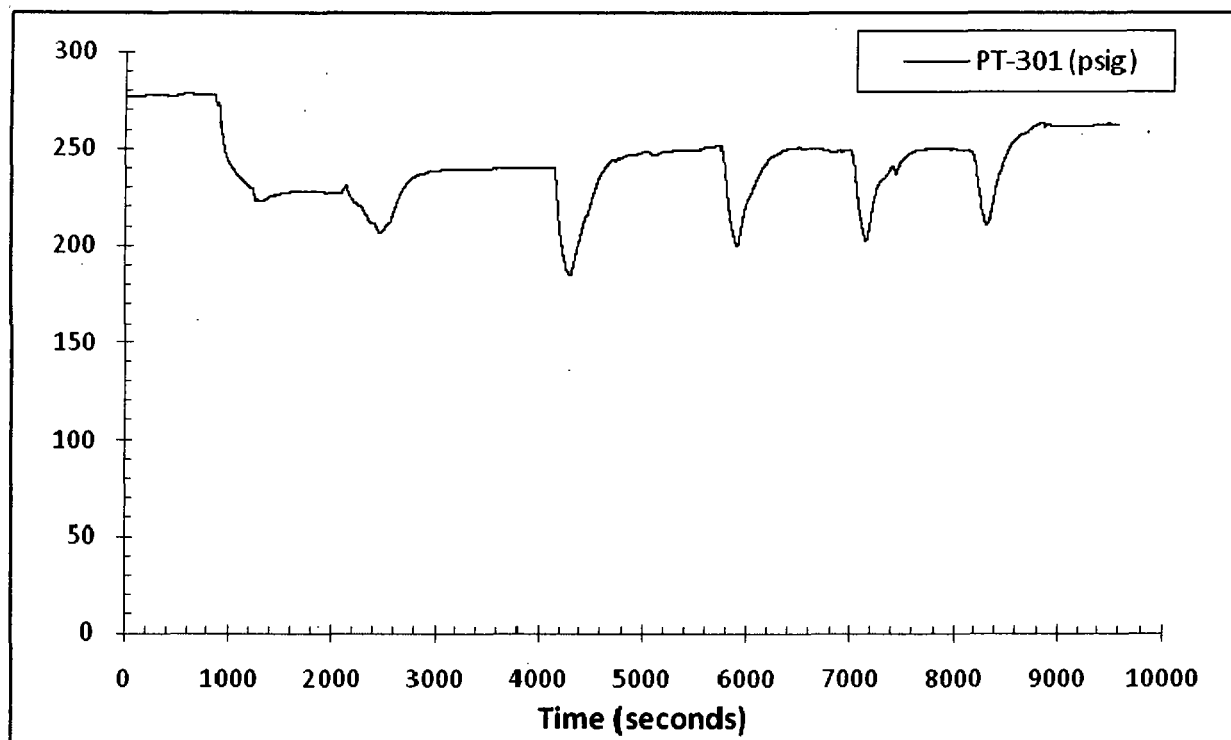
MS Header Pressure



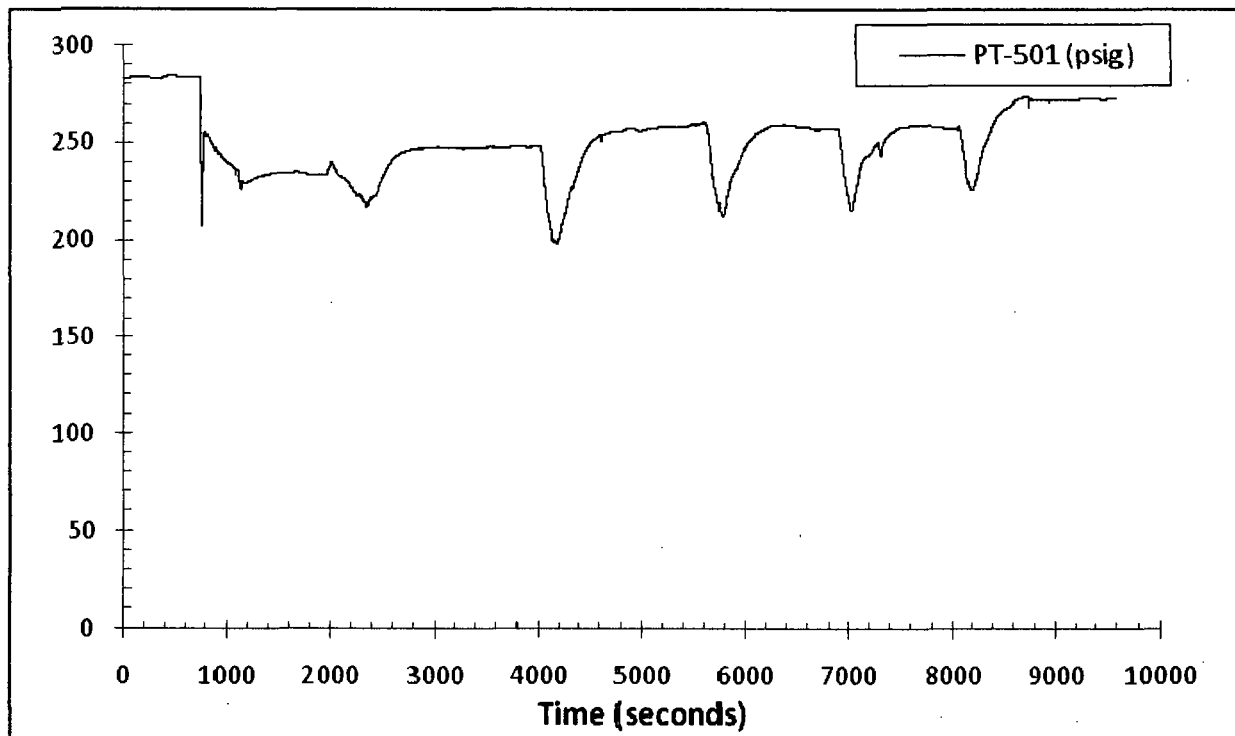
Temp Steam Pressure for FVM-002



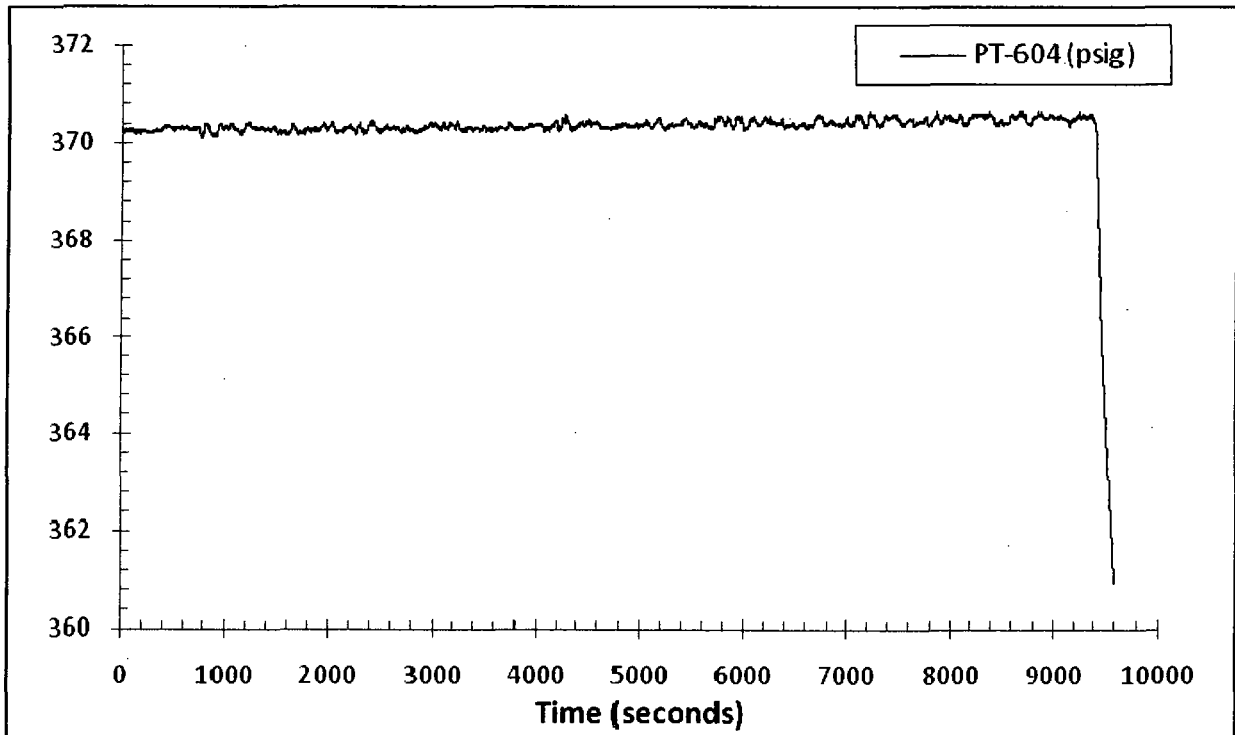
Rx Upper Head Pressure



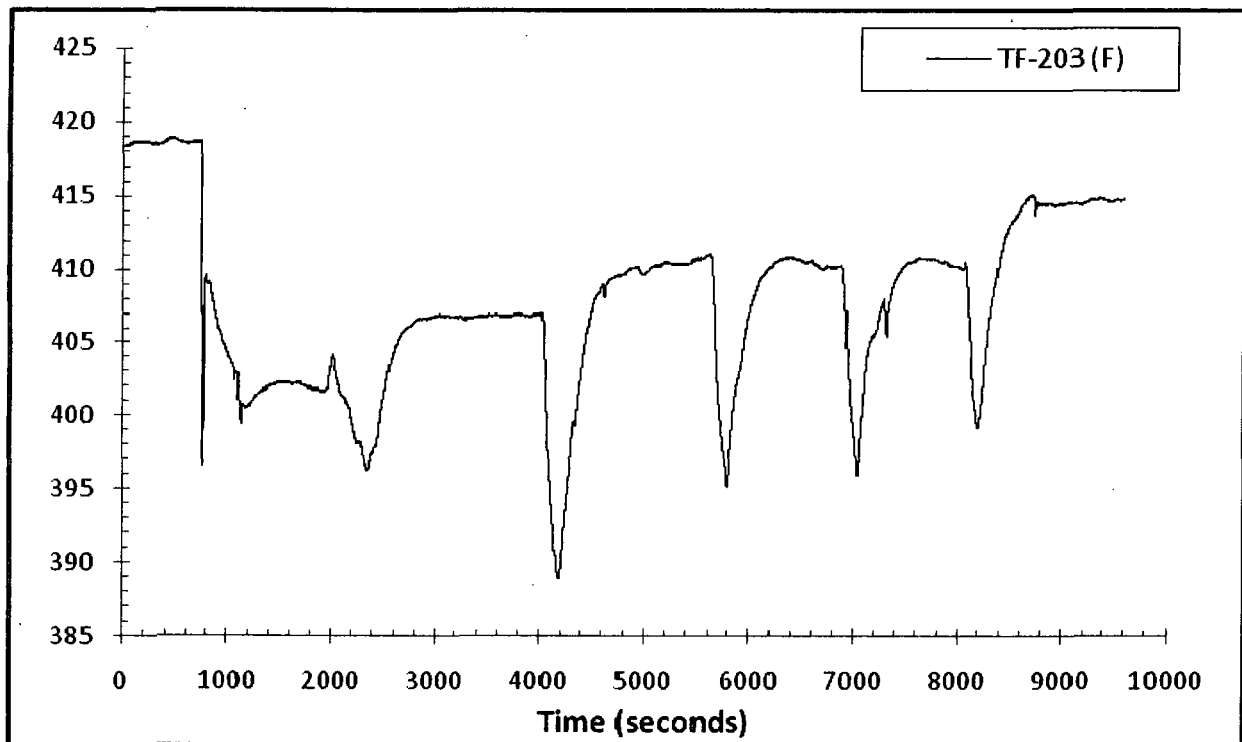
SG-1 Pressure



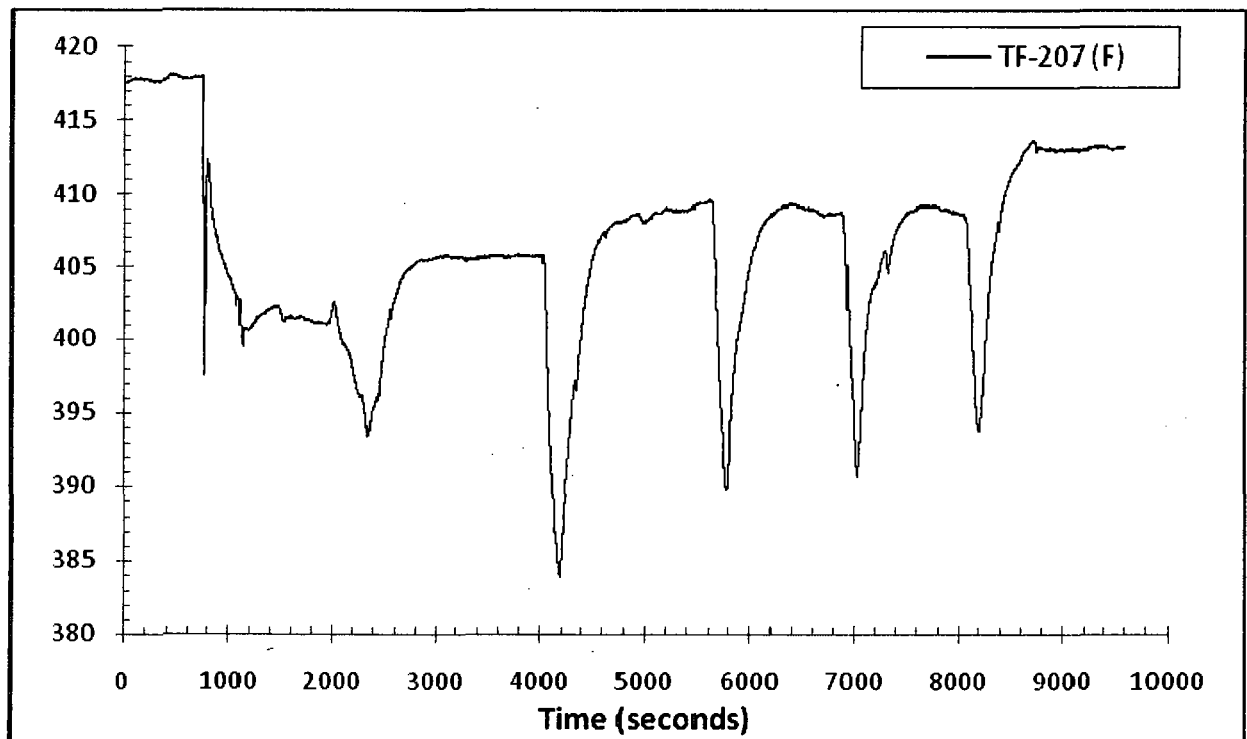
Separator Outlet Steam Pressure



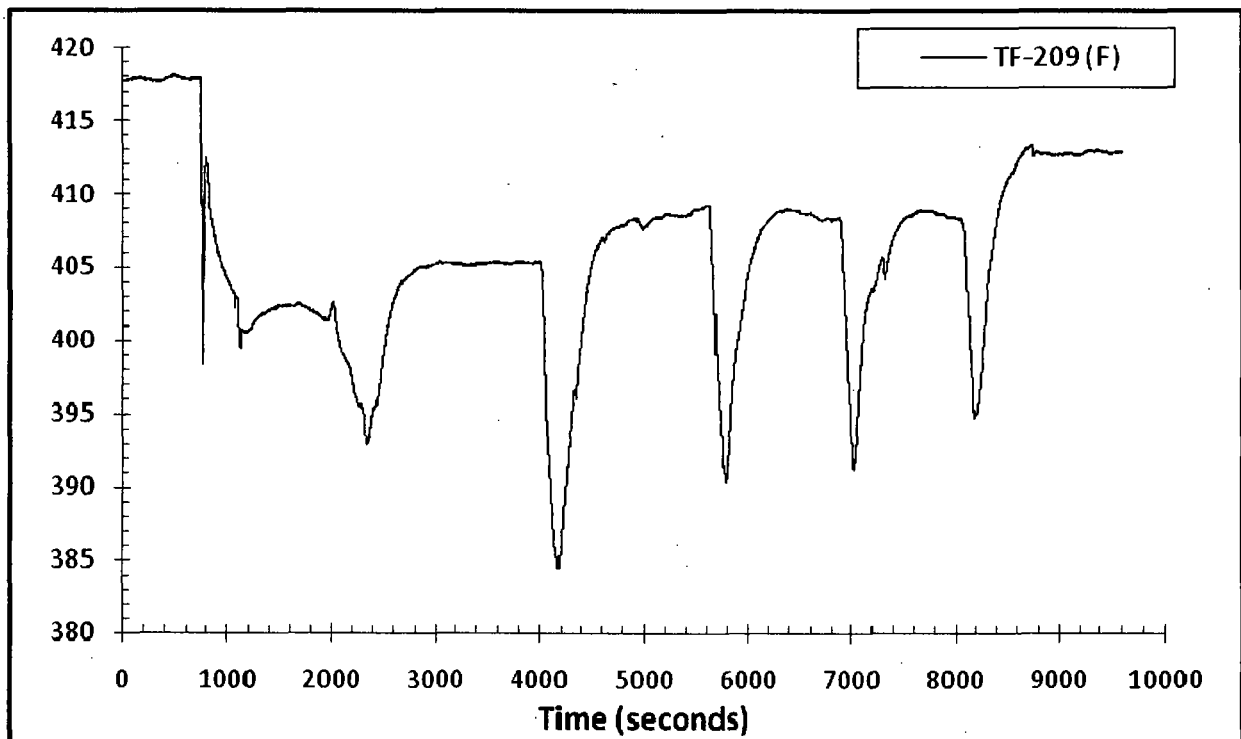
PZR WR Pressure



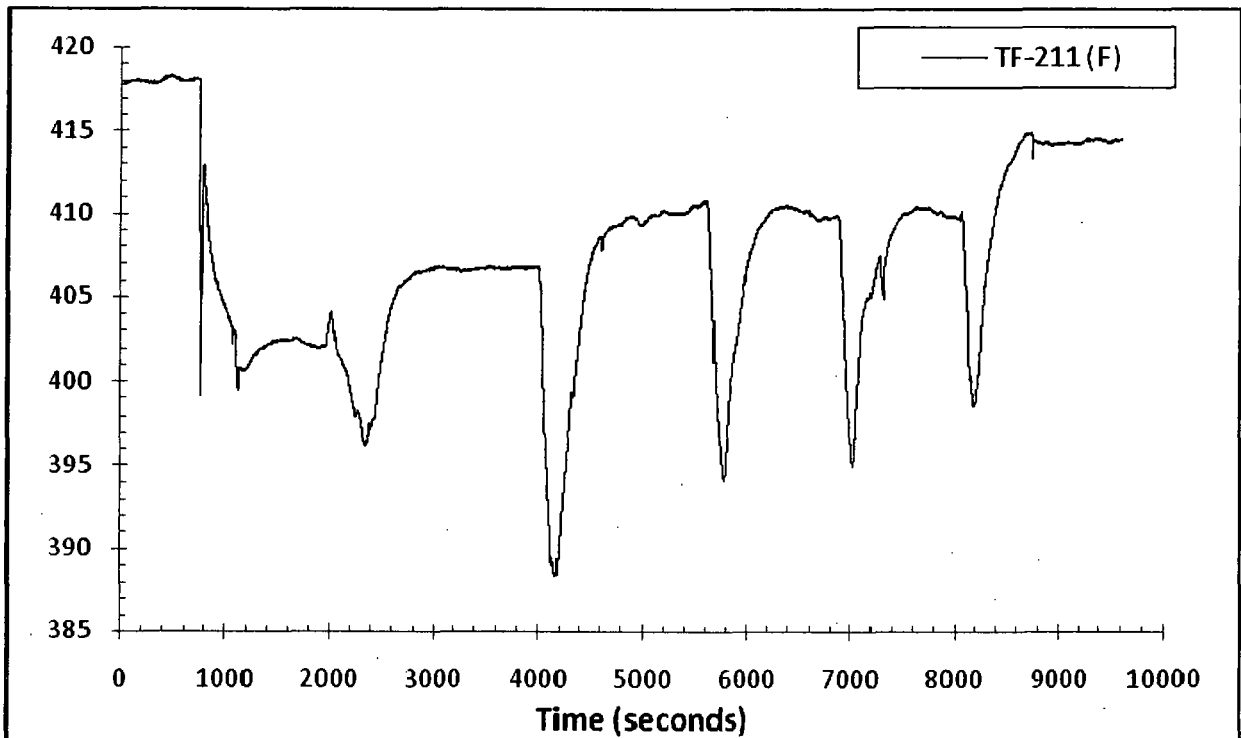
Separator Outlet Steam Temperature



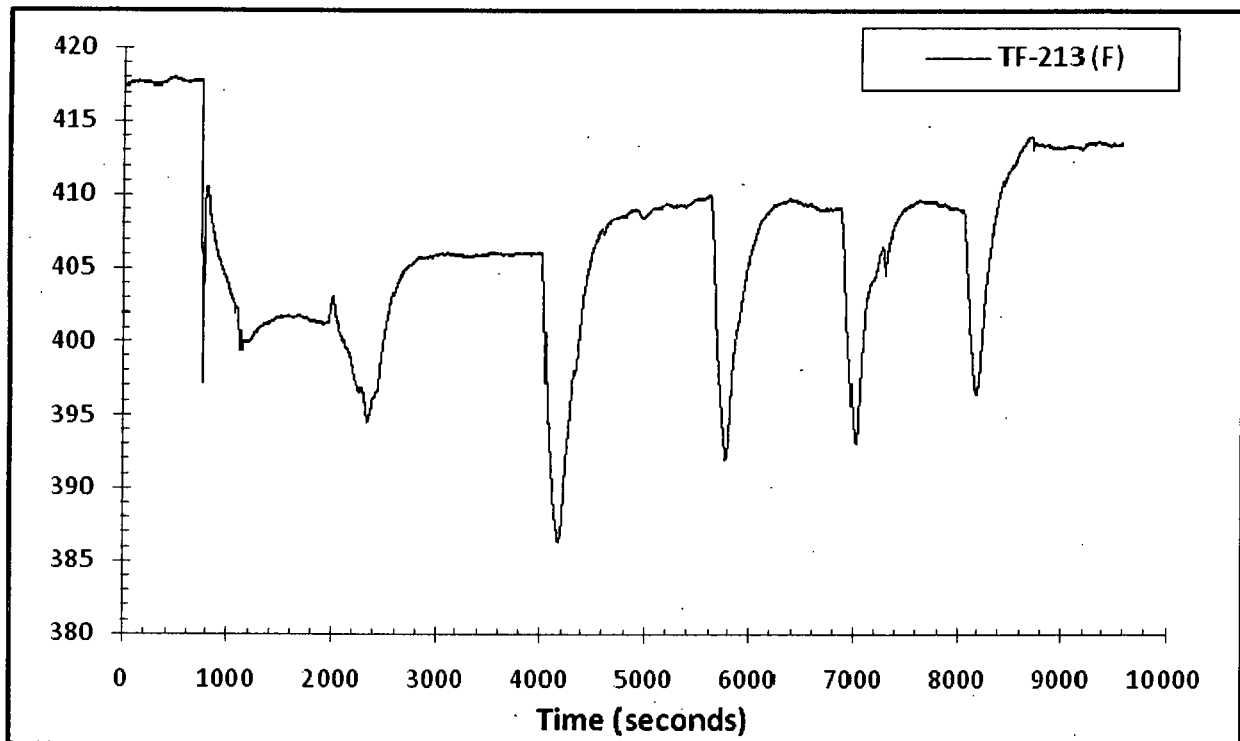
SG-1 Short Tube at Middle Outlet Side Temperature



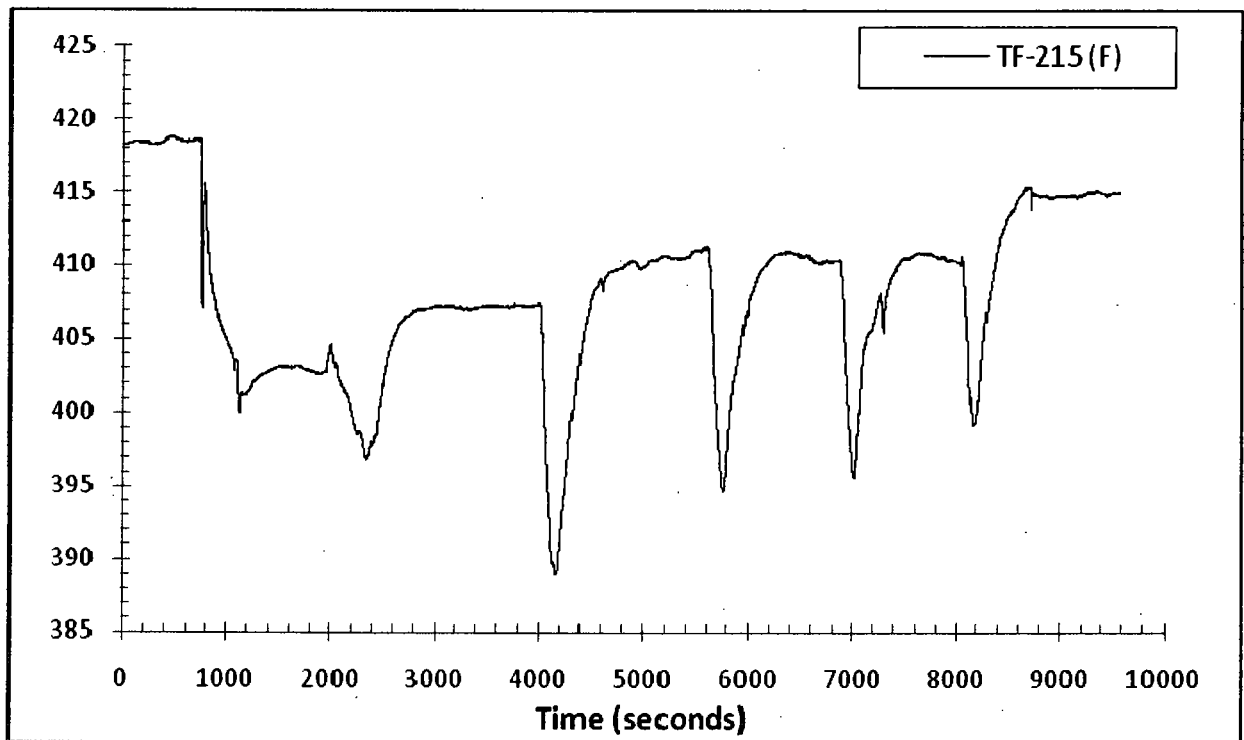
SG-1 Short Tube at Middle Inlet Side Temperature



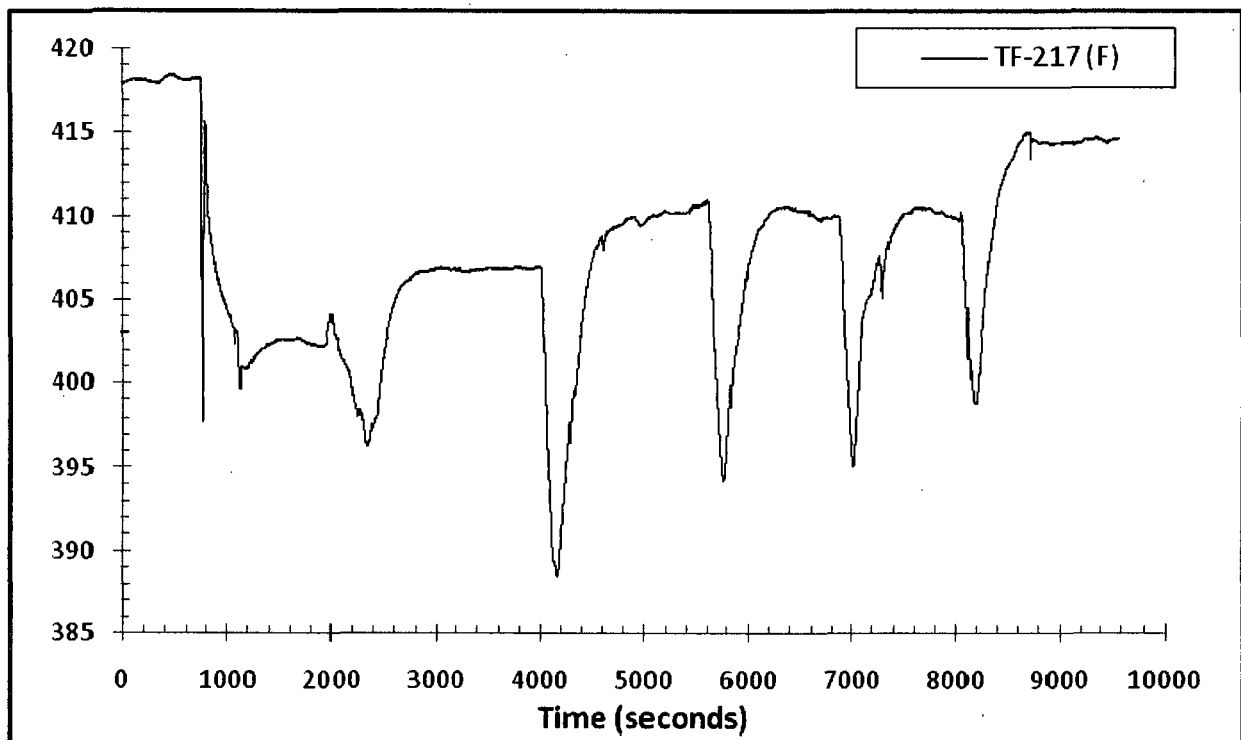
SG-1 Long Tube at Middle Outlet Temperature



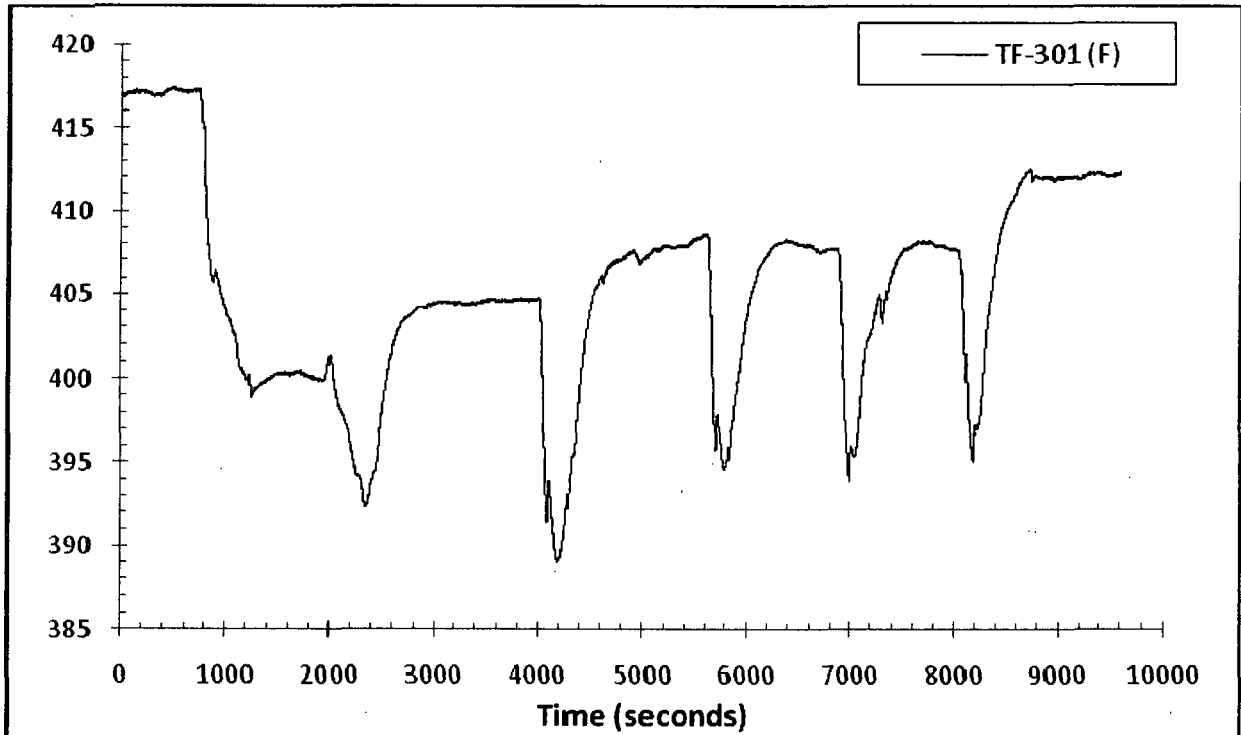
SG-1 Long Tube at Middle Inlet Temperature



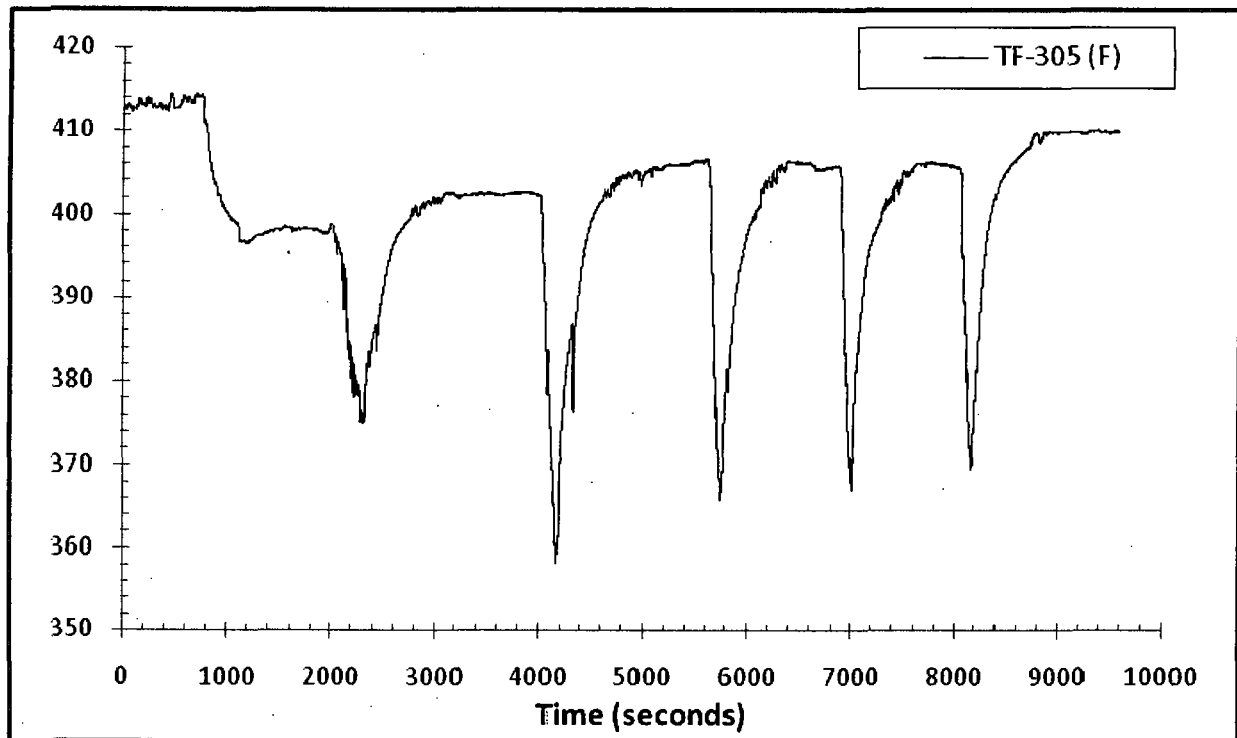
SG-1 Short Tube at Top Temperature



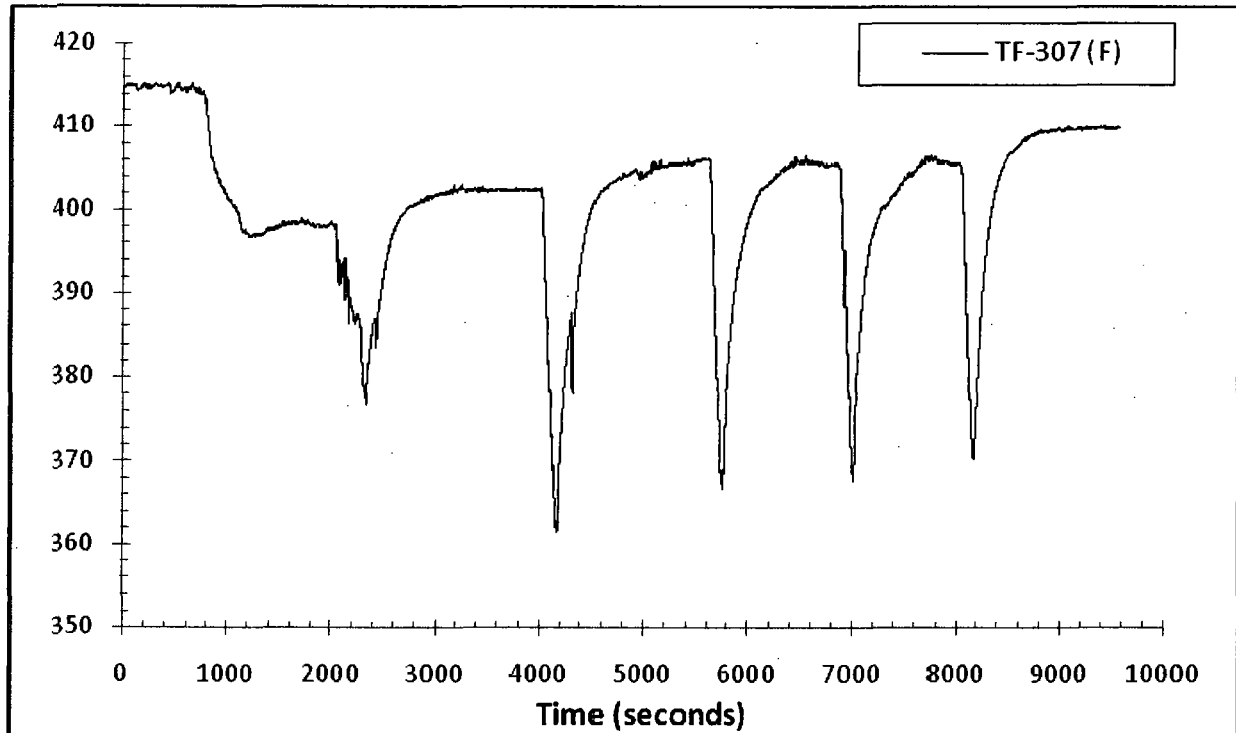
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)



SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

NRC-COND-02: Steam Generator U-Tube Condensation Test @ 285 psig

Oregon State University

Start time = 12/14/2005 11:19:21

End time = 12/14/2005 13:59:10

File created on 12/14/2005 14:35:31

| Timestamp | Interval (sec) | Tagname | Description | Area | Value |
|------------------|----------------|----------------|-------------------------------|----------|---------|
| 12/14/2005 11:17 | -119 | TEST_SW | Facility Test Switch | Switches | In Test |
| 12/14/2005 11:17 | -119 | dMuteSCR_Alarm | SCR Signal loss audible alarm | Status | ON |
| 12/14/2005 11:32 | 789 | M001_HS_O | SG-1 Strm Stop HS | Switches | Open |
| 12/14/2005 11:32 | 789 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 12/14/2005 11:43 | 1472 | MF_001 | FST Fill Valve | Valves | Open |
| 12/14/2005 11:49 | 1800 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/14/2005 11:57 | 2317 | MF_001 | FST Fill Valve | Valves | Open |
| 12/14/2005 12:04 | 2714 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/14/2005 12:22 | 3806 | MF_001 | FST Fill Valve | Valves | Open |
| 12/14/2005 12:31 | 4320 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/14/2005 12:51 | 5540 | MF_001 | FST Fill Valve | Valves | Open |
| 12/14/2005 12:59 | 5994 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/14/2005 13:15 | 6983 | MF_001 | FST Fill Valve | Valves | Open |
| 12/14/2005 13:21 | 7341 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/14/2005 13:35 | 8194 | MF_001 | FST Fill Valve | Valves | Open |
| 12/14/2005 13:41 | 8526 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/15/2005 13:59 | 9589 | TEST_SW | Facility Test Switch | Switches | Normal |

AP1000 Tag Details
Oregon State University
File created on 11/07/2005 11:13:17

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|--|---------|---------|---------|---------|--------------------------------|
| DP-111 | DP across Upper Core Plate | 0.9963 | 4.9931 | -30 | 30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 0.9934 | 4.9796 | -375 | 375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 0.989 | 4.9563 | -25 | 25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 0.9931 | 4.9591 | -25 | 25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 0.9957 | 4.9743 | -25 | 25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 0.9924 | 4.9561 | -25 | 25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 0.9951 | 4.97 | 0 | 30 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 0.9949 | 4.9707 | 0 | 30 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 0.9959 | 4.9709 | -25 | 25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 0.9958 | 4.9736 | -25 | 25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 0.9941 | 4.9622 | -50 | 50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 0.9939 | 4.9689 | -25 | 25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 0.9916 | 4.9588 | 0 | 200 | Differential Pressure (in h2o) |
| DP-203 | RCP-1 Differential Pressure | 0.9941 | 4.9688 | 0 | 200 | Differential Pressure (in h2o) |
| DP-204 | CL-2 Differential Pressure | 0.9969 | 4.9814 | -25 | 25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 0.995 | 4.978 | 0 | 200 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 0.9959 | 4.984 | 0 | 200 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 0.9967 | 4.9817 | -25 | 25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 0.9984 | 4.9905 | -25 | 25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 0.998 | 4.9858 | -25 | 25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 0.9933 | 4.9649 | -25 | 25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 0.9979 | 4.9849 | 0 | 25 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 0.9979 | 4.9838 | 0 | 25 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 0.9965 | 4.9788 | -15 | 15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 0.9973 | 4.981 | 0 | 15 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 0.9981 | 4.9807 | 0 | 500 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 0.9964 | 4.9729 | 0 | 500 | Differential Pressure (psid) |
| DP-217 | U-Tube Condensation Separator Level | 0.9966 | 4.9818 | 0 | 36.67 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 0.9992 | 4.9889 | 0 | 150 | Differential Pressure (in h2o) |
| DP-219 | U-Tube Condensation Catch Tank Level | 0.9949 | 4.9686 | 0 | 30.95 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 0.9936 | 4.9627 | 0 | 150 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 0.9951 | 4.9677 | 0 | 150 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 0.9975 | 4.983 | 0 | 150 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 0.9987 | 4.9915 | 0 | 150 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 0.9944 | 4.9665 | 0 | 150 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 0.9975 | 4.979 | 0 | 400 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 0.9958 | 4.9736 | 0 | 400 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 0.9948 | 4.9675 | -150 | 150 | Differential Pressure (in h2o) |
| DP-502 | CMT-2 Injection Differential Pressure | 0.9947 | 4.9645 | -150 | 150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 0.998 | 4.9858 | -150 | 150 | Differential Pressure (in h2o) |
| DP-504 | CMT-2 Balance Line Differential Pressure | 1.0007 | 4.9955 | -100 | 100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 1.0008 | 4.9969 | 0 | 10 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 0.9948 | 4.967 | 0 | 10 | Differential Pressure (psid) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|--|---------|---------|---------|---------|--------------------------------|
| DP-603 | ADS4-1 Venturi | 0.9985 | 4.9847 | 0 | 100 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 0.9941 | 4.964 | 0 | 100 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 0.9993 | 4.9881 | 0 | 50 | Differential Pressure (in h2o) |
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 0.9991 | 4.9857 | 0 | 50 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 0.9967 | 4.9773 | -25 | 25 | Differential Pressure (in h2o) |
| DP-701 | IRWST-1 Injection Differential Pressure | 0.9982 | 4.9872 | 0 | 30 | Differential Pressure (psid) |
| DP-702 | IRWST-2 Injection Differential Pressure | 0.9981 | 4.9871 | 0 | 30 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 0.9994 | 4.9905 | 0 | 100 | Differential Pressure (psid) |
| FDP-604 | ADS-2 Flow Differential Pressure | 0.9961 | 4.9738 | 0 | 100 | Differential Pressure (psid) |
| FDP-605 | ADS-1 Flow Differential Pressure | 0.9993 | 4.9896 | 0 | 250 | Differential Pressure (psid) |
| FDP-606 | ADS-3 Flow Differential Pressure | 1.0023 | 5.0051 | 0 | 100 | Differential Pressure (psid) |
| FMM-001 | SG-1 Feed Flow | 0.9961 | 4.9838 | 0 | 6 | Volumetric Flow Rate (gpm) |
| FMM-002 | SG-2 Feed Flow | 0.9925 | 4.9642 | 0 | 6 | Volumetric Flow Rate (gpm) |
| FMM-201 | CL-1 Loop Flow | 0.9921 | 4.9607 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-202 | CL-2 Loop Flow | 0.9943 | 4.9754 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-203 | CL-3 Loop Flow | 0.9974 | 4.9853 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-204 | CL-4 Loop Flow | 0.9936 | 4.9729 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-205 | DVI-1 Flow | 0.996 | 4.9706 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-206 | DVI-2 Flow | 0.9969 | 4.9767 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-401 | ACC-1 Injection Flow | 0.9932 | 4.9516 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-402 | ACC-2 Injection Flow | 0.9965 | 4.9772 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-501 | CMT-1 Injection Flow | 1.0006 | 4.9959 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-502 | CMT-2 CL Balance Line Flow | 0.9994 | 4.9742 | 0 | 70 | Volumetric Flow Rate (gpm) |
| FMM-503 | CMT-1 CL Balance Line Flow | 0.9985 | 4.9717 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-504 | CMT-2 Injection Flow | 0.9925 | 4.9523 | 0 | 20 | Volumetric Flow Rate (gpm) |
| FMM-601 | ADS1-3 Loop Seal Flow | 1.004 | 5.0168 | 0 | 200 | Volumetric Flow Rate (gpm) |
| FMM-602 | ADS4-2 Loop Seal Flow | 1.0117 | 5.0507 | 0 | 60 | Volumetric Flow Rate (gpm) |
| FMM-603 | ADS4-1 Loop Seal Flow | 1.0129 | 5.0571 | 0 | 60 | Volumetric Flow Rate (gpm) |
| FMM-701 | IRWST/DVI-1 Injection Flow | 0.9954 | 4.9738 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-702 | IRWST/DVI-2 Injection Flow | 0.9955 | 4.9724 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-703 | IRWST Overflow | 0.9966 | 4.9663 | 0 | 10 | Volumetric Flow Rate (gpm) |
| FMM-801 | CVSP Discharge Flow | 0.9998 | 4.9876 | 0 | 8 | Volumetric Flow Rate (gpm) |
| FMM-802 | PRHR Inlet Flow | 0.9966 | 4.9656 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-803 | RNSP to DVI-2 Flow | 0.9942 | 4.9629 | 0 | 30 | Volumetric Flow Rate (gpm) |
| FMM-804 | PRHR Outlet Flow | 0.9963 | 4.9612 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-805 | RNSP Discharge Flow | 0.9936 | 4.9711 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-901 | Primary Sump-1 Recirculation Injection Flow | 0.9936 | 4.9673 | -40 | 40 | Volumetric Flow Rate (gpm) |
| FMM-902 | Primary Sump-2 Recirculation Injection Flow | 0.9948 | 4.9726 | -40 | 40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Break Separator Loop Seal Flow | 1.0902 | 5.1224 | -90 | 90 | Volumetric Flow Rate (gpm) |
| FVM-001 | U-Tube Outlet Steam Flow | 1.0036 | 5.0202 | 0 | 70 | Steam Flow Rate (cfm) |
| FVM-002 | U-Tube Inlet Steam Flow | 0.9986 | 4.9885 | 0 | 70 | Steam Flow Rate (cfm) |
| FVM-003 | SG 2 Secondary Side Steam Flow | 0.9988 | 5.0101 | 0 | 140 | Steam Flow Rate (cfm) |
| FVM-004 | Catch Tank Outlet Steam Flow | 1.001 | 4.9885 | 0 | 70 | Steam Flow Rate (cfm) |
| FVM-009 | SG-1 PORV Blowdown Steam Flow | 0.9967 | 4.9836 | 0 | 381 | Steam Flow Rate (cfm) |
| FVM-010 | SG-2 PORV Blowdown Steam Flow | 0.9971 | 4.9817 | 0 | 381 | Steam Flow Rate (cfm) |
| FVM-601 | ADS1-3 Separator Steam Flow | 1.0017 | 4.9995 | 0 | 2000 | Steam Flow Rate (cfm) |
| FVM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 1.0018 | 5.006 | 0 | 2000 | Steam Flow Rate (cfm) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|---|---------|---------|---------|---------|-----------------------|
| FVM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 1.0024 | 5.0062 | 0 | 1600 | Steam Flow Rate (cfm) |
| FVM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 1.0026 | 5.0034 | 0 | 348 | Steam Flow Rate (cfm) |
| FVM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 1.0028 | 5.0037 | 0 | 348 | Steam Flow Rate (cfm) |
| FVM-901 | BAMS HDR 6-inch Line Steam Flow | 1.0023 | 5.0021 | 0 | 5000 | Steam Flow Rate (cfm) |
| FVM-902 | BAMS HDR 10-inch Line Steam Flow | 1.0027 | 5.01 | 0 | 12500 | Steam Flow Rate (cfm) |
| FVM-903 | Primary Sump Steam Exhaust Flow | 0.9949 | 4.9879 | 0 | 22 | Steam Flow Rate (cfm) |
| FVM-904 | Break Separator 3-inch Line Steam Flow | 0.9979 | 4.9986 | 0 | 400 | Steam Flow Rate (cfm) |
| FVM-905 | Break Separator 6-inch Line Steam Flow | 1.004 | 5.0036 | 0 | 6000 | Steam Flow Rate (cfm) |
| FVM-906 | Break Separator 8-inch Line Steam Flow | 1.0025 | 5.0048 | 0 | 4000 | Steam Flow Rate (cfm) |
| KW-101 | Rx Heater Group 1 Power | 1.1171 | 4.3222 | 0 | 472 | Power (kW) |
| KW-102 | Rx Heater Group 2 Power | 1.0045 | 4.1621 | 0 | 486 | Power (kW) |
| KW-103 | Rx Heater Group 1 Power | 0.9786 | 4.8931 | 0 | 496 | Power (kW) |
| KW-104 | Rx Heater Group 2 Power | 0.9946 | 4.912 | 0 | 492 | Power (kW) |
| KW-601 | PZR Heater Power | 0.982 | 4.9435 | 0 | 24.3 | Power (kW) |
| LCT-701 | IRWST Weight | 0.9976 | 4.9831 | 0 | 40000 | Mass (lbm) |
| LCT-901 | Primary Sump Weight | 0.9969 | 4.977 | 0 | 28800 | Mass (lbm) |
| LCT-902 | Secondary Sump Weight | 0.9983 | 4.9845 | 0 | 16700 | Mass (lbm) |
| LDP-001 | FST Uncompensated Water Level | 1.0017 | 5.0056 | 0 | 91.88 | Water Level (in) |
| LDP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 0.9945 | 4.9645 | 0 | 5.561 | Water Level (in) |
| LDP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 0.9963 | 4.9725 | 0 | 5.938 | Water Level (in) |
| LDP-103 | DVI to CL Uncompensated Water Level (270) | 0.9982 | 4.9807 | 0 | 11.692 | Water Level (in) |
| LDP-104 | DVI to CL Uncompensated Water Level (180) | 0.9992 | 4.9748 | 0 | 12.376 | Water Level (in) |
| LDP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 1.0058 | 5.0076 | 0 | 11.929 | Water Level (in) |
| LDP-106 | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 0.9985 | 4.9732 | 0 | 8.198 | Water Level (in) |
| LDP-107 | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 0.9958 | 4.9713 | 0 | 8.223 | Water Level (in) |
| LDP-108 | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 0.9953 | 4.9683 | 0 | 8.562 | Water Level (in) |
| LDP-109 | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 0.9988 | 4.984 | 0 | 19.763 | Water Level (in) |
| LDP-110 | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 0.9991 | 4.9909 | 0 | 20.02 | Water Level (in) |
| LDP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 0.9963 | 4.9755 | 0 | 4.696 | Water Level (in) |
| LDP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 0.9986 | 4.9849 | 0 | 15.614 | Water Level (in) |
| LDP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 0.9996 | 4.9896 | 0 | 24.28 | Water Level (in) |
| LDP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 0.9949 | 4.9638 | 0 | 77.59 | Water Level (in) |
| LDP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 0.9983 | 4.9838 | 0 | 11.383 | Water Level (in) |
| LDP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 0.9988 | 4.9848 | 0 | 39.98 | Water Level (in) |
| LDP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 0.9996 | 4.988 | 0 | 40.26 | Water Level (in) |
| LDP-127 | Rx Wide Range Uncompensated Water Level | 1.0007 | 4.999 | 0 | 98.97 | Water Level (in) |
| LDP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 0.9946 | 4.9639 | 0 | 39.3 | Water Level (in) |
| LDP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 0.9982 | 4.9837 | 0 | 24.166 | Water Level (in) |
| LDP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 1.0014 | 4.9981 | 0 | 78.02 | Water Level (in) |
| LDP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 0.9994 | 4.9843 | 0 | 20.135 | Water Level (in) |
| LDP-201 | CL-1 Uncompensated Water Level | 1.0002 | 4.9961 | 0 | 2.496 | Water Level (in) |
| LDP-202 | CL-2 Uncompensated Water Level | 0.9994 | 4.9924 | 0 | 2.223 | Water Level (in) |
| LDP-203 | CL-3 Uncompensated Water Level | 0.9994 | 4.9923 | 0 | 2.532 | Water Level (in) |
| LDP-204 | CL-4 Uncompensated Water Level | 0.9927 | 4.9594 | 0 | 2.47 | Water Level (in) |
| LDP-205 | HL-1 Uncompensated Water Level | 0.9945 | 4.9663 | 0 | 4.085 | Water Level (in) |
| LDP-206 | HL-2 Uncompensated Water Level | 0.9944 | 4.9653 | 0 | 4.013 | Water Level (in) |
| LDP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 0.9972 | 4.9779 | 0 | 17.91 | Water Level (in) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|--|---------|---------|---------|---------|------------------|
| LDP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 0.9969 | 4.9825 | 0 | 19.247 | Water Level (in) |
| LDP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 1.0002 | 4.9954 | 0 | 10.939 | Water Level (in) |
| LDP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 0.9943 | 4.9677 | 0 | 16.988 | Water Level (in) |
| LDP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 0.993 | 4.9613 | 0 | 16.793 | Water Level (in) |
| LDP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 0.9982 | 4.9836 | 0 | 16.772 | Water Level (in) |
| LDP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 0.9978 | 4.9864 | 0 | 16.747 | Water Level (in) |
| LDP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 1.0002 | 4.9953 | 0 | 11.571 | Water Level (in) |
| LDP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 0.9992 | 4.99 | 0 | 102.06 | Water Level (in) |
| LDP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 0.9955 | 4.9717 | 0 | 95.55 | Water Level (in) |
| LDP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 0.9932 | 4.9618 | 0 | 96.25 | Water Level (in) |
| LDP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 0.9943 | 4.9658 | 0 | 103.14 | Water Level (in) |
| LDP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 0.9992 | 4.9867 | 0 | 102.45 | Water Level (in) |
| LDP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 0.9971 | 4.9786 | 0 | 96 | Water Level (in) |
| LDP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 0.9986 | 4.985 | 0 | 95.98 | Water Level (in) |
| LDP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 0.9947 | 4.9628 | 0 | 102.71 | Water Level (in) |
| LDP-301 | SG-1 WR Uncompensated Water Level | 1.0006 | 5.0022 | 0 | 119.25 | Water Level (in) |
| LDP-302 | SG-2 WR Uncompensated Water Level | 1.0003 | 4.9995 | 0 | 119.02 | Water Level (in) |
| LDP-303 | SG-1 NR Uncompensated Water Level | 0.9934 | 4.9699 | 0 | 31.81 | Water Level (in) |
| LDP-304 | SG-2 NR Uncompensated Water Level | 0.995 | 4.9748 | 0 | 31.52 | Water Level (in) |
| LDP-401 | ACC-1 Uncompensated Water Level | 0.9951 | 4.987 | 0 | 38.26 | Water Level (in) |
| LDP-402 | ACC-2 Uncompensated Water Level | 1.0332 | 5.166 | 0 | 38.34 | Water Level (in) |
| LDP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 0.9986 | 4.9834 | 0 | 5.31 | Water Level (in) |
| LDP-502 | CMT-2 WR Uncompensated Water Level | 1.0396 | 5.1958 | 0 | 57.5 | Water Level (in) |
| LDP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 0.9979 | 4.984 | 0 | 46.77 | Water Level (in) |
| LDP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 0.9972 | 4.9793 | 0 | 5.226 | Water Level (in) |
| LDP-505 | CMT-1 NR Uncompensated Water Level (Top) | 1 | 4.994 | 0 | 5.486 | Water Level (in) |
| LDP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 0.9975 | 4.9823 | 0 | 46.96 | Water Level (in) |
| LDP-507 | CMT-1 WR Uncompensated Water Level | 1.0383 | 5.1887 | 0 | 57.5 | Water Level (in) |
| LDP-508 | CMT-2 NR Uncompensated Water Level (Top) | 0.9994 | 4.9913 | 0 | 5.309 | Water Level (in) |
| LDP-509 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 0.9968 | 4.9772 | 0 | 78.84 | Water Level (in) |
| LDP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 0.9942 | 4.9653 | 0 | 78.28 | Water Level (in) |
| LDP-601 | PZR WR Uncompensated Water Level | 0.9991 | 5.0006 | 0 | 140.47 | Water Level (in) |
| LDP-602 | PZR Surge Line Uncompensated Water Level | 0.997 | 4.9777 | 0 | 47.5 | Water Level (in) |
| LDP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 0.9963 | 4.9735 | 0 | 3.533 | Water Level (in) |
| LDP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 0.9958 | 4.9724 | 0 | 18.696 | Water Level (in) |
| LDP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 0.996 | 4.9737 | 0 | 4.127 | Water Level (in) |
| LDP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 0.9964 | 4.9731 | 0 | 3.82 | Water Level (in) |
| LDP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 1.0011 | 4.996 | 0 | 14.717 | Water Level (in) |
| LDP-610 | ADS1-3 Separator Uncompensated Water Level | 1.0399 | 5.193 | 0 | 45.24 | Water Level (in) |
| LDP-611 | ADS4-1 Separator Uncompensated Water Level | 1.0342 | 5.1628 | 0 | 55.97 | Water Level (in) |
| LDP-612 | ADS4-2 Separator Uncompensated Water Level | 1.0386 | 5.1859 | 0 | 56.6 | Water Level (in) |
| LDP-701 | IRWST Uncompensated Water Level | 1.0048 | 5.0202 | 0 | 115.8 | Water Level (in) |
| LDP-801 | PRHR HX Inlet Head Uncompensated Water Level | 1.0013 | 4.9945 | 0 | 6.971 | Water Level (in) |
| LDP-802 | PRHR HX WR Uncompensated Water Level | 0.9998 | 4.9871 | 0 | 57.08 | Water Level (in) |
| LDP-901 | Primary Sump Uncompensated Water Level | 1.0015 | 5.0016 | 0 | 104.36 | Water Level (in) |
| LDP-902 | Secondary Sump Uncompensated Water Level | 1.0007 | 5.0018 | 0 | 102.56 | Water Level (in) |
| LDP-903 | CRT Uncompensated Water Level | 1.0346 | 5.1669 | 0 | 32.358 | Water Level (in) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|---|---------|---------|---------|---------|-----------------------|
| LDP-905 | Break Separator Uncompensated Water Level | 1.0378 | 5.1788 | 0 | 130.68 | Water Level (in) |
| LT-120 | Rx Vessel Capacitance Probe Water Level | 1.0042 | 5.0053 | 50 | 99 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 1.0121 | 5.0658 | 0 | 600 | Pressure (psig) |
| PT-002 | SG 2 (FVM-003) Steam Pressure | 0.9962 | 4.9759 | 0 | 500 | Pressure (psig) |
| PT-003 | Lab Barometer | 0.9944 | 4.9656 | 10 | 20 | Pressure (psia) |
| PT-004 | U-Tube Inlet (FVM-002) Steam Pressure | 1.002 | 5.0031 | 0 | 400 | Pressure (psig) |
| PT-009 | SG-1 PORV Blowdown Pressure | 0.9983 | 4.9816 | 0 | 300 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 1.0004 | 4.9924 | 0 | 300 | Pressure (psig) |
| PT-101 | CL-1 Pressure at Rx Flange | 0.9986 | 4.9877 | 0 | 500 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 0.9958 | 4.9706 | 0 | 10 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 0.9946 | 4.9646 | 0 | 10 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 0.9988 | 4.9882 | 0 | 500 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 1.0096 | 5.0478 | 0 | 500 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 0.9938 | 4.9637 | 0 | 500 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 0.998 | 4.9874 | 0 | 500 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 0.9984 | 4.9825 | 0 | 10 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 0.9982 | 4.9886 | 0 | 500 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 0.9958 | 4.977 | 0 | 10 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 0.9921 | 4.9616 | 0 | 500 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 1.0008 | 4.9935 | 0 | 500 | Pressure (psig) |
| PT-202 | HL-2 Pressure at SG-2 Flange | 0.9978 | 4.9841 | 0 | 500 | Pressure (psig) |
| PT-203 | CL Break Pressure at Break Valve | 0.9982 | 4.988 | 0 | 500 | Pressure (psig) |
| PT-204 | SG-2 Long Tube Pressure (Top) | 1.0005 | 4.9974 | 0 | 500 | Pressure (psig) |
| PT-205 | HL-1 Pressure at SG-1 Flange | 0.9993 | 4.9842 | 0 | 10 | Pressure (psig) |
| PT-206 | HL Break Pressure at Break Valve | 0.9982 | 4.9869 | 0 | 500 | Pressure (psig) |
| PT-301 | SG-1 Pressure | 1.0123 | 5.0617 | 0 | 500 | Pressure (psig) |
| PT-302 | SG-2 Pressure | 1.0219 | 5.1023 | 0 | 500 | Pressure (psig) |
| PT-401 | ACC-1 Pressure | 0.9993 | 4.9908 | 0 | 300 | Pressure (psig) |
| PT-402 | ACC-2 Pressure | 0.9975 | 4.9802 | 0 | 300 | Pressure (psig) |
| PT-501 | U-Tube Outlet (FVM-001) Steam Pressure | 0.9979 | 4.982 | 0 | 300 | Pressure (psig) |
| PT-502 | CMT-2 Pressure | 0.998 | 4.9869 | 0 | 500 | Pressure (psig) |
| PT-602 | PZR NR Pressure | 0.9988 | 4.9747 | 300 | 400 | Pressure (psig) |
| PT-603 | PZR NR Pressure | 0.9944 | 4.9616 | 0 | 10 | Pressure (psig) |
| PT-604 | PZR WR Pressure | 0.9942 | 4.9794 | 0 | 500 | Pressure (psig) |
| PT-605 | ADS1-3 Separator Pressure | 0.9966 | 4.9725 | 0 | 100 | Pressure (psig) |
| PT-606 | IRWST Sparger Line Pressure | 0.995 | 4.9653 | 0 | 100 | Pressure (psig) |
| PT-610 | ADS4-2 Separator Pressure | 0.9983 | 4.9845 | 0 | 10 | Pressure (psig) |
| PT-611 | ADS4-1 Separator Pressure | 0.9977 | 4.9806 | 0 | 10 | Pressure (psig) |
| PT-701 | IRWST Pressure | 1.0087 | 5.0436 | 0 | 15 | Pressure (psig) |
| PT-801 | CVSP Discharge Pressure | 0.9993 | 4.9909 | 0 | 500 | Pressure (psig) |
| PT-802 | RNSP Discharge Pressure | 0.9962 | 4.9768 | 0 | 250 | Pressure (psig) |
| PT-901 | Primary Sump Pressure | 0.9947 | 4.9659 | 0 | 10 | Pressure (psig) |
| PT-902 | BAMS Header Pressure | 1.0013 | 4.9988 | 0 | 16 | Pressure (psig) |
| PT-905 | Break Separator Pressure | 1.0067 | 5.0265 | 0 | 20 | Pressure (psig) |
| TF-005 | Lab Ambient Temperature at Ground Level | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-006 | Lab Ambient Temperature at Second Level | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-007 | Lab Ambient Temperature at Third Level | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------------|---|---------|---------|---------|---------|-----------------------|
| TF-009 | SG-1 PORV Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-010 | SG-2 PORV Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101 | CL-3 Temperature (SC-101) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-101-1.3D-2 | CL-1 Downcomer Temperature at 1.3D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-2D-1 | CL-1 Downcomer Temperature at 2D, 120 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-2D-2 | CL-1 Downcomer Temperature at 2D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-2D-3 | CL-1 Downcomer Temperature at 2D, 150 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-3D-1 | CL-1 Downcomer Temperature at 3D, 104 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-3D-2 | CL-1 Downcomer Temperature at 3D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-3D-3 | CL-1 Downcomer Temperature at 3D, 166 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-4D-1 | CL-1 Downcomer Temperature at 4D, 90 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-4D-2 | CL-1 Downcomer Temperature at 4D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-8D-1 | CL-1 Downcomer Temperature at 8D, 90 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-8D-2 | CL-1 Downcomer Temperature at 8D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102 | CL-4 Temperature (SC-102) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-102-1.3D-2 | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-2D-1 | CL-2 Downcomer Temperature at 2D, 210 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-2D-2 | CL-2 Downcomer Temperature at 2D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-2D-3 | CL-2 Downcomer Temperature at 2D, 240 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-3D-1 | CL-2 Downcomer Temperature at 3D, 194 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-3D-2 | CL-2 Downcomer Temperature at 3D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------------|--|---------|---------|---------|---------|-----------------------|
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-105 | CL-1 Temperature (SC-105) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-106 | CL-2 Temperature (SC-106) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-108 | CL-2/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-113 | DVI-1/Rx Flange at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-114 | DVI-2/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-116 | DVI-2/Rx Flange at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-126 | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-142 | HL-2/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-143 | HL-1/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|----------|---|---------|---------|---------|---------|-----------------------|
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-167 | Rx Heater Rod B2-319 at 40.13 inches | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-171 | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-201 | CL-1 at RCP-1 Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-202 | CL-2 at RCP-2 Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-203 | U-Tube Outlet (FVM-001) Steam Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-204 | CL-4 at RCP-4 Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-211 | SG-1 Long Tube at Middle Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-212 | SG-2 Long Tube at Middle Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|----------|---|---------|---------|---------|---------|-----------------------|
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-311 | SG-1 Feed Header Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-312 | SG-2 Feed Header Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-502 | CMT-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-528 | CMT 2/3 HEAD TEMP | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|---|---------|---------|---------|---------|-----------------------|
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-546 | CMT-2 Balance Line at CMT Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|--|---------|---------|---------|---------|-----------------------|
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-719 | IRWST Sparger Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-903 | Primary Sump Temperature (SC-903) | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|----------|---|---------|---------|---------|---------|------------------------------|
| TF-911 | CRP Discharge to IRWST Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 40 | 200 | 40 | 200 | Fluid Temperature (F) |
| TF-915 | Break Separator 6-inch Steam Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TH-602 | PZR Heater Rod #2 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------------|--|---------|---------|---------|---------|----------------------|
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-201 | SG-1 Short Tube Bottom Outlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-203 | SG-1 Short Tube Bottom Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-208 | SG-2 Long Tube Bottom Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-601 | ADS1-3 Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-602 | ADS4-2 Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-603 | ADS4-1 Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-801 | PRHR HX Long Tube Outlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-802 | PRHR HX Short Tube Outlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-805 | PRHR HX Short Tube Upper Mid-piece | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-806 | PRHR HX Long Tube Upper Mid-piece | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-807 | PRHR HX Short Tube Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-808 | PRHR HX Long Tube Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-905 | Break Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |




DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS

**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**

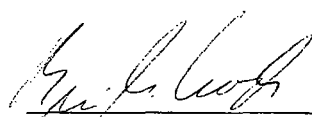
**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 100 PSIG**

NRC-COND-03

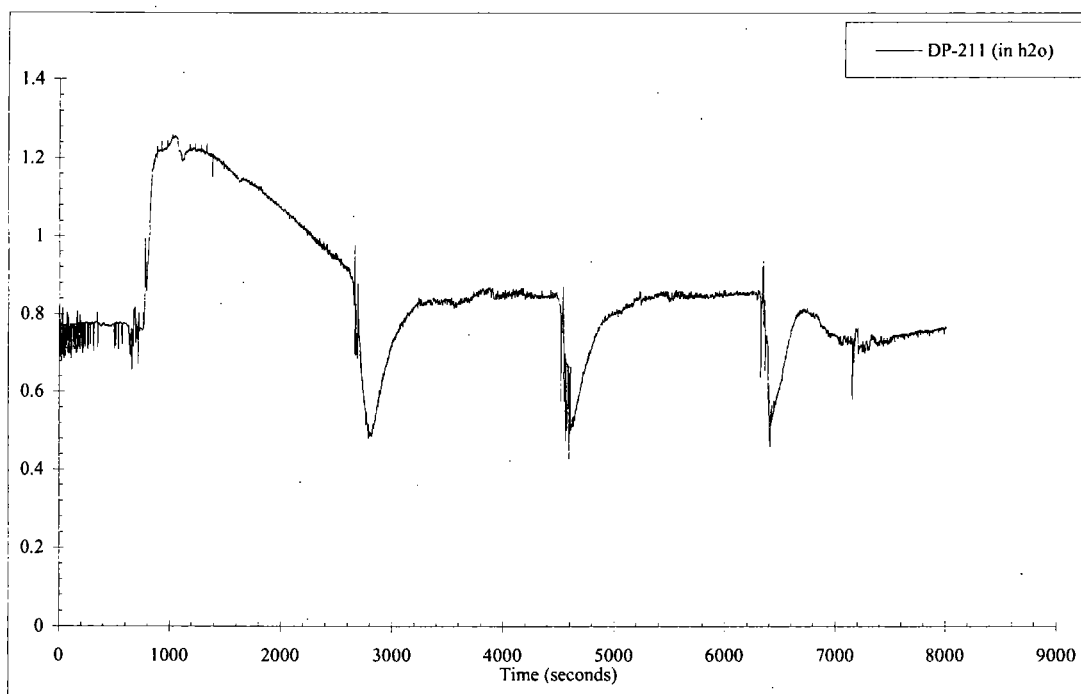
Revision 0

 12/16/05

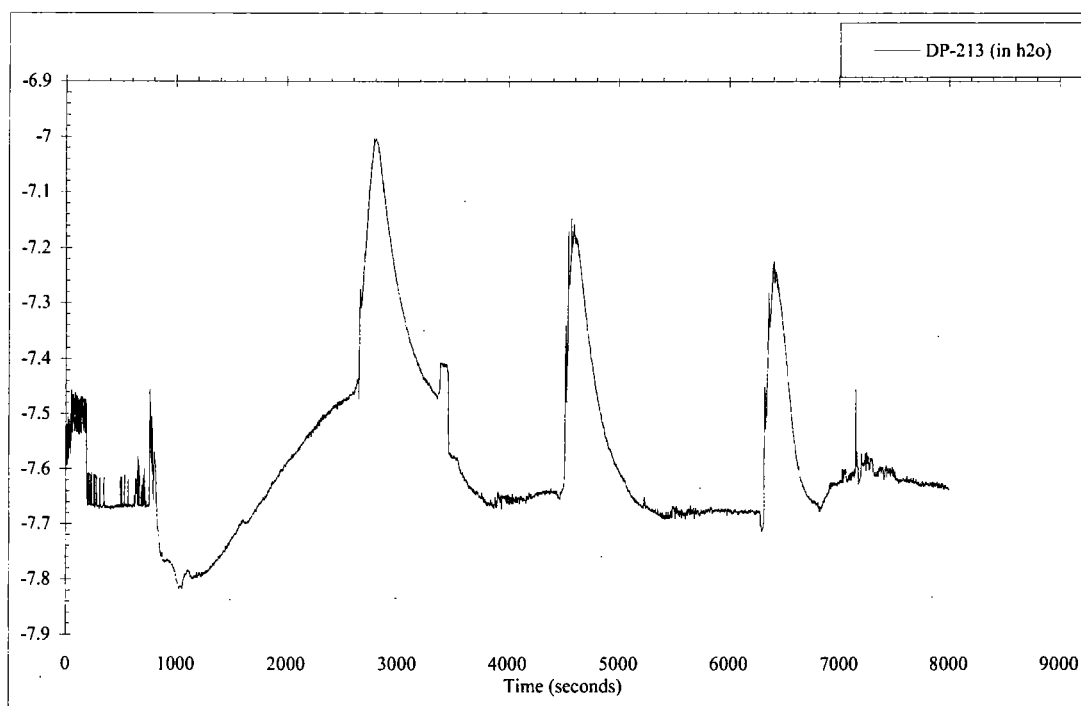
John Groome, Originator Date
Facility Operations Manager
Research Assistant

 12/16/05

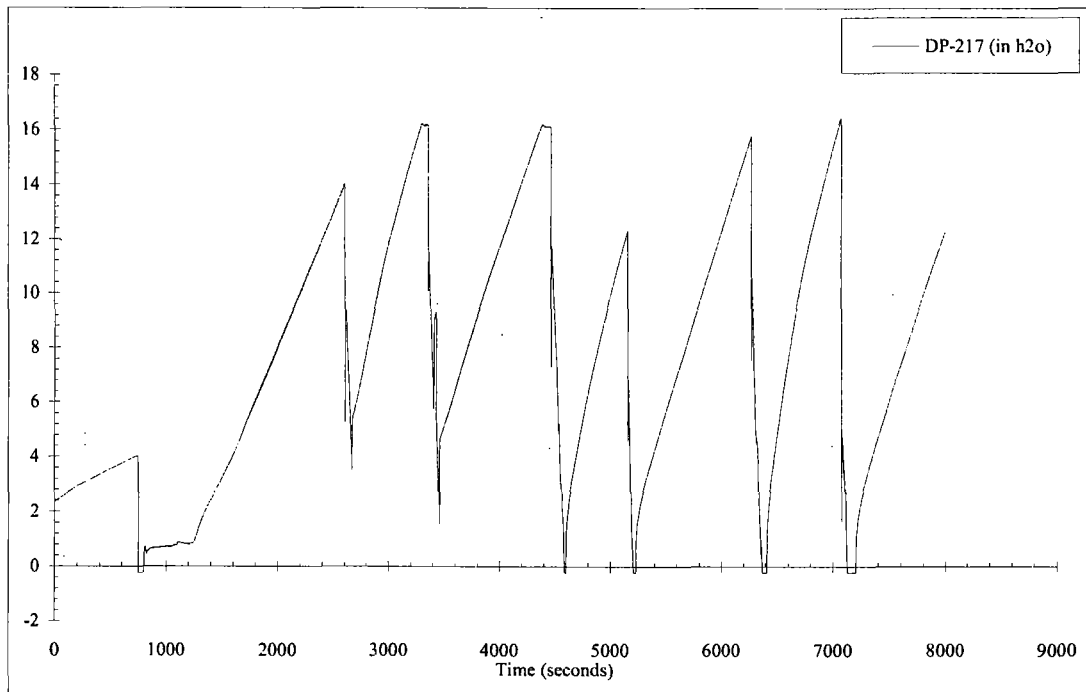
Brian Woods, Approval Date
Program Manager
Assistant Professor



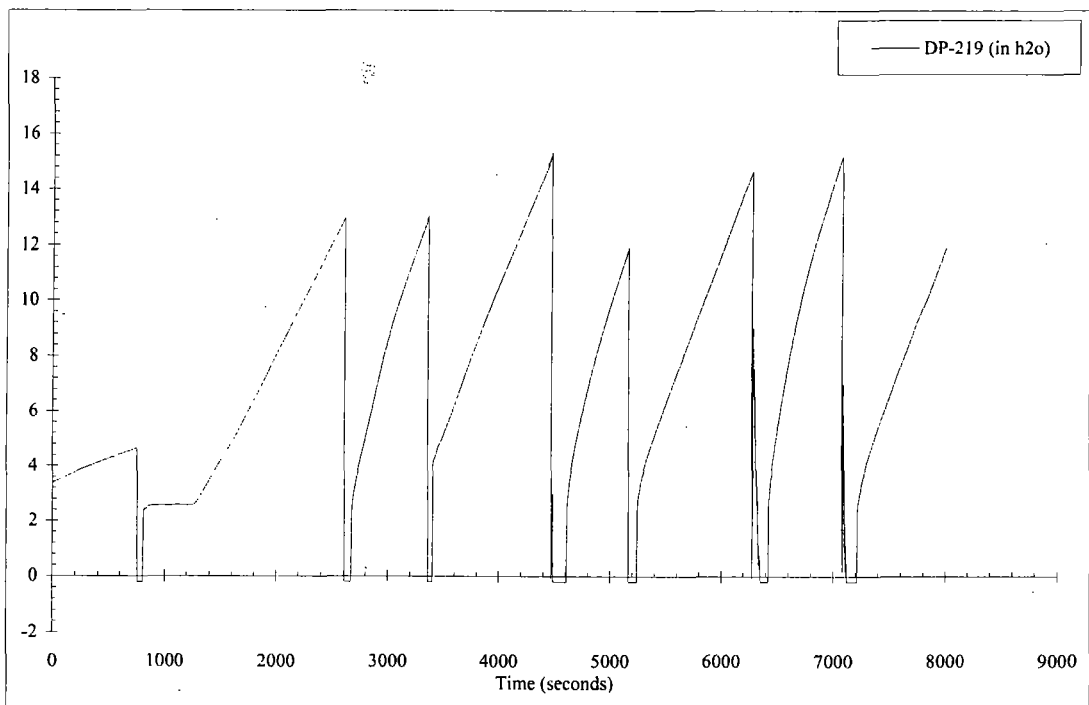
SG-1 Short Tube Entrance Losses



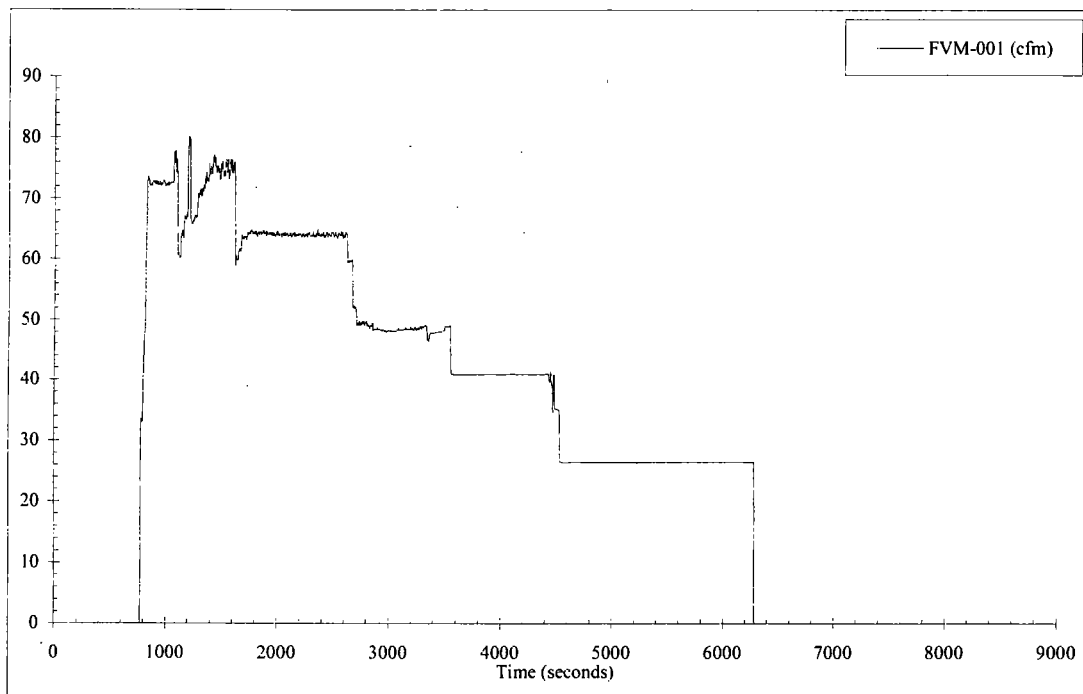
SG-1 Long Tube Exit Losses



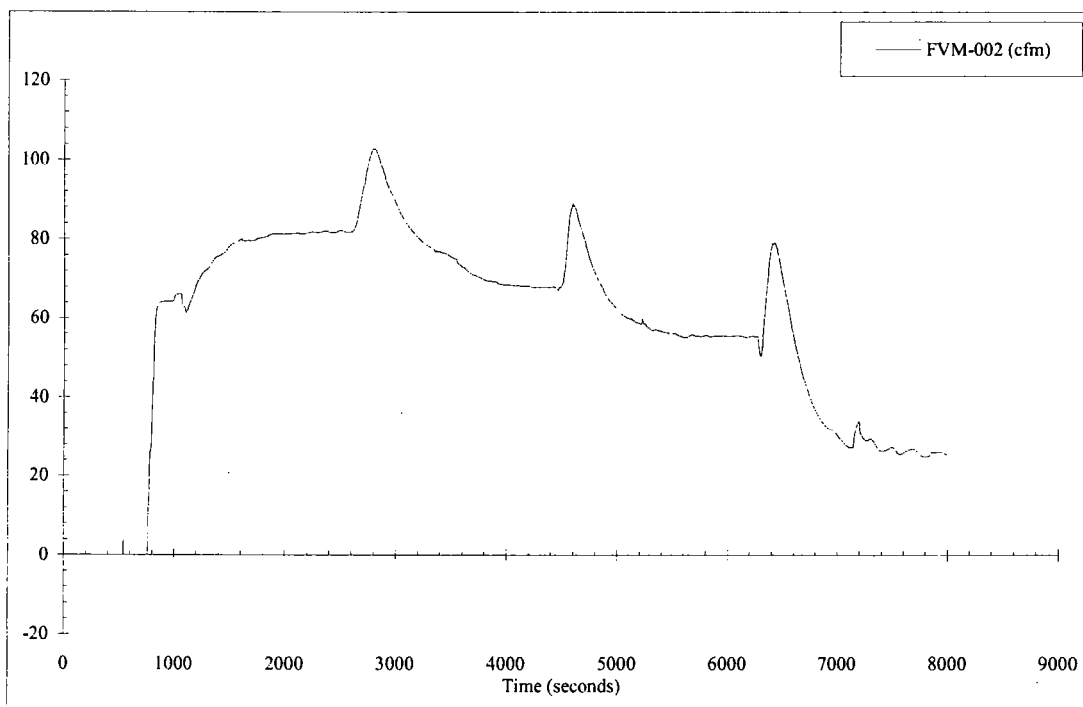
Separator Uncompensated Water Level



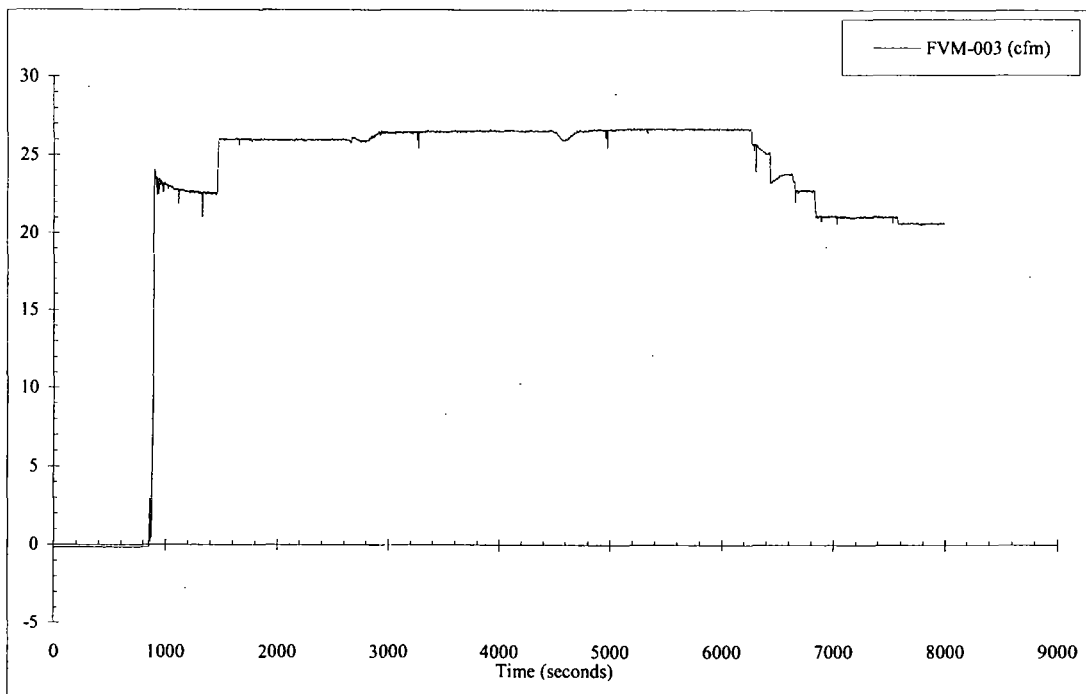
Catch Tank Uncompensated Water Level



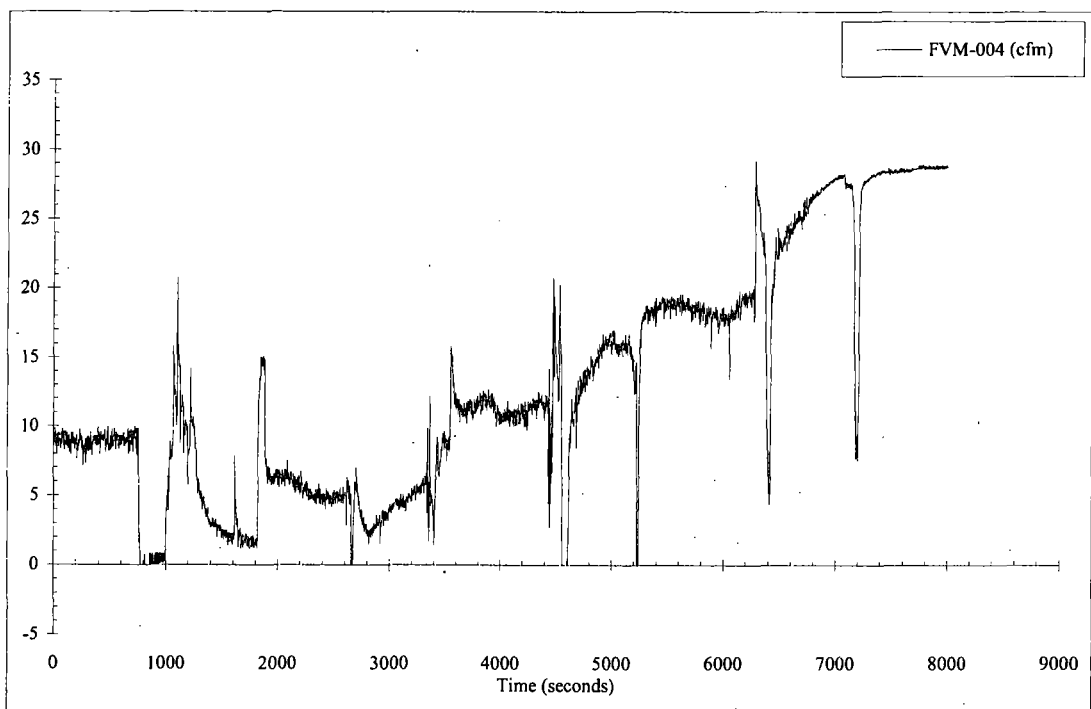
Separator Outlet Steam Flowrate



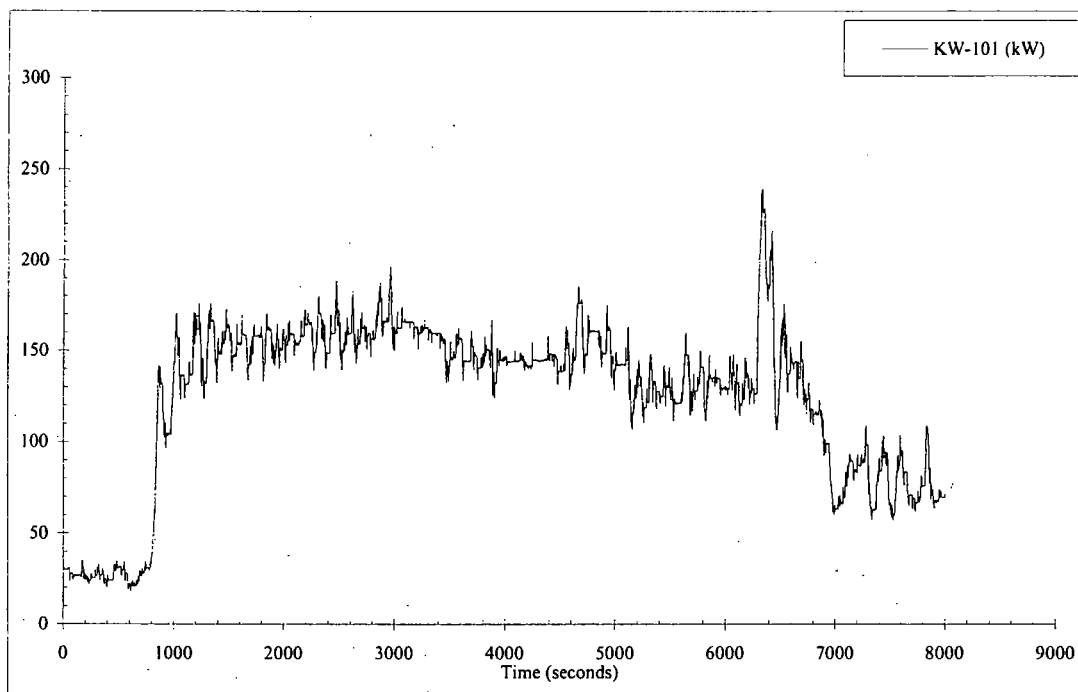
SG-2 Main Steam Flow



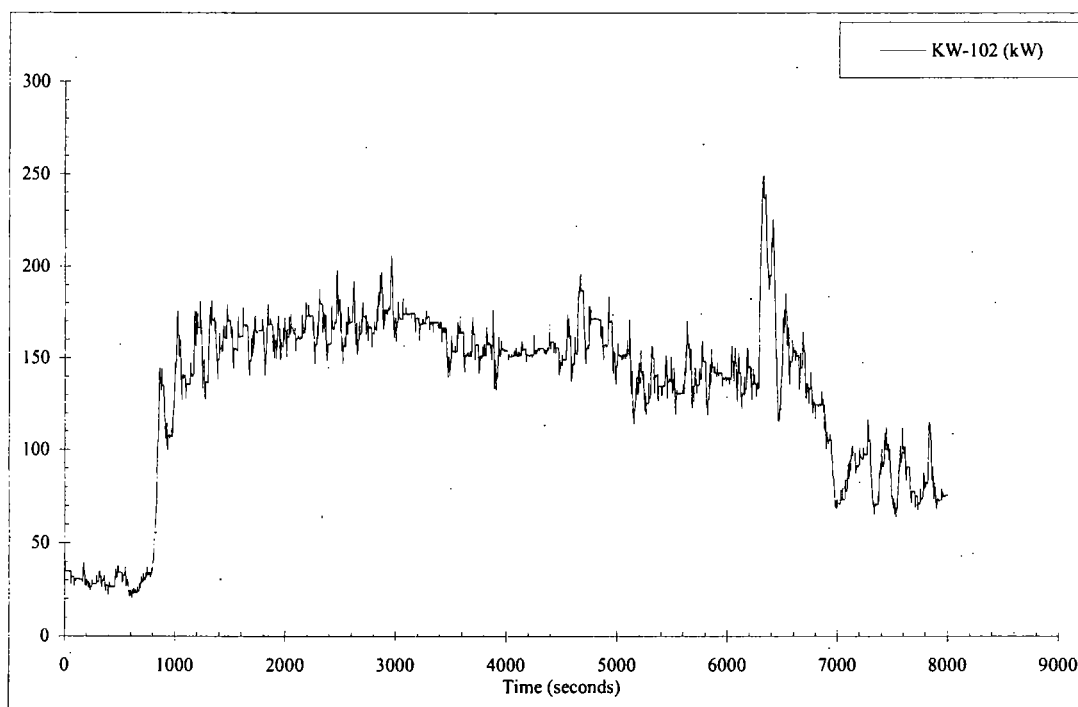
Main Steam Total Flow



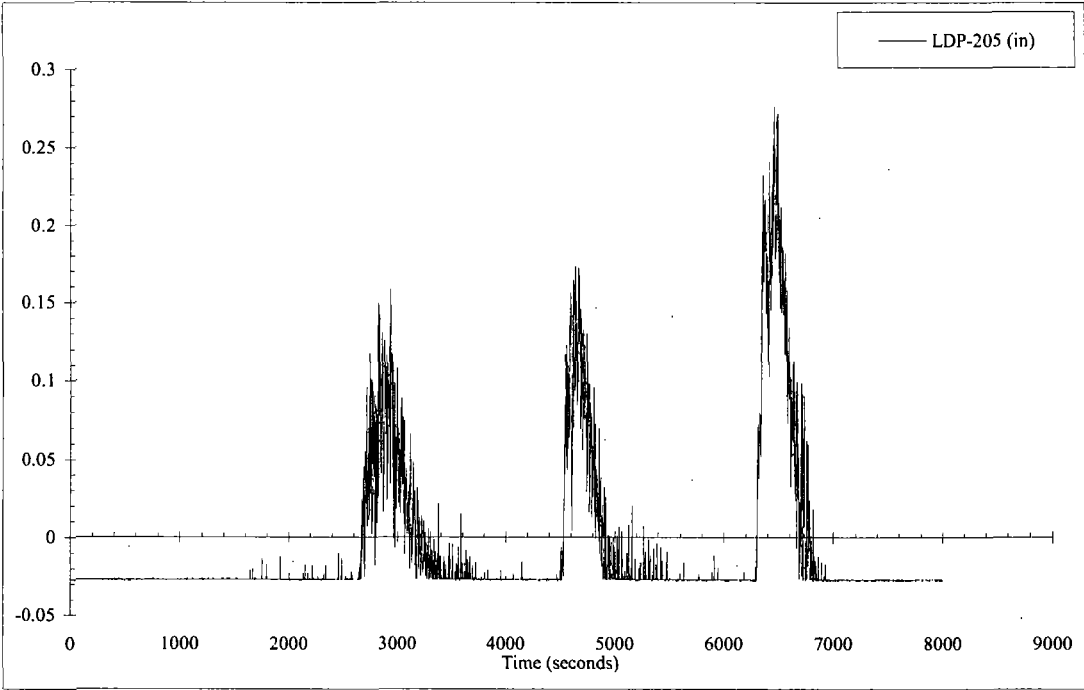
Catch Tank Steam Flow Rate



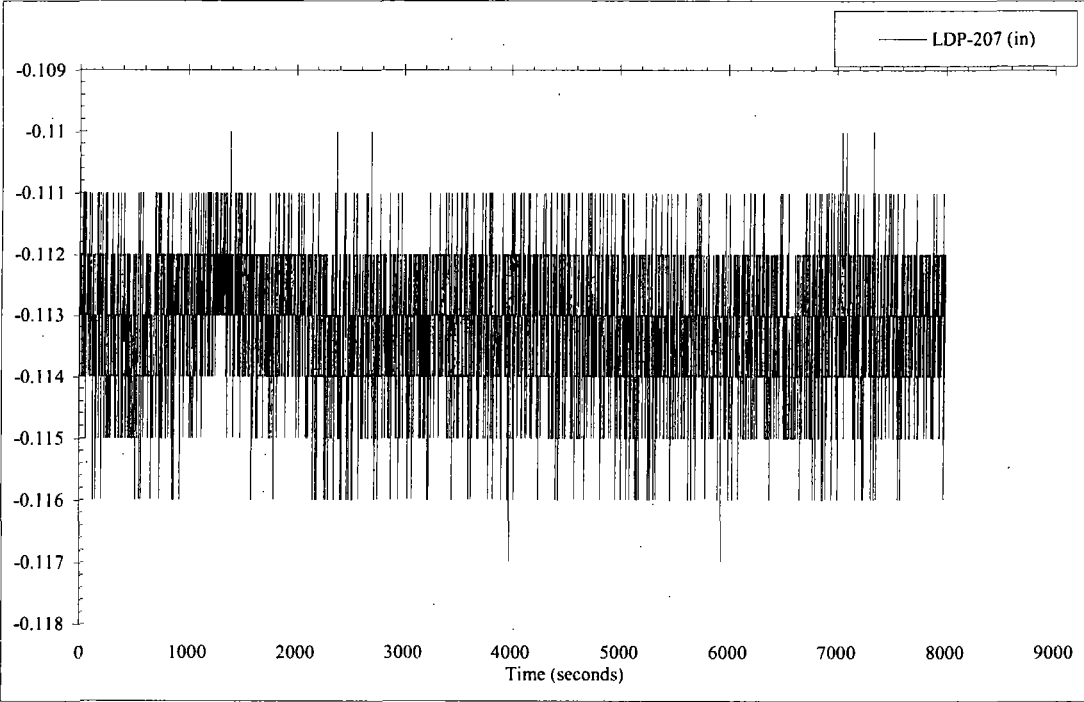
Rx Heater Group 1 Power



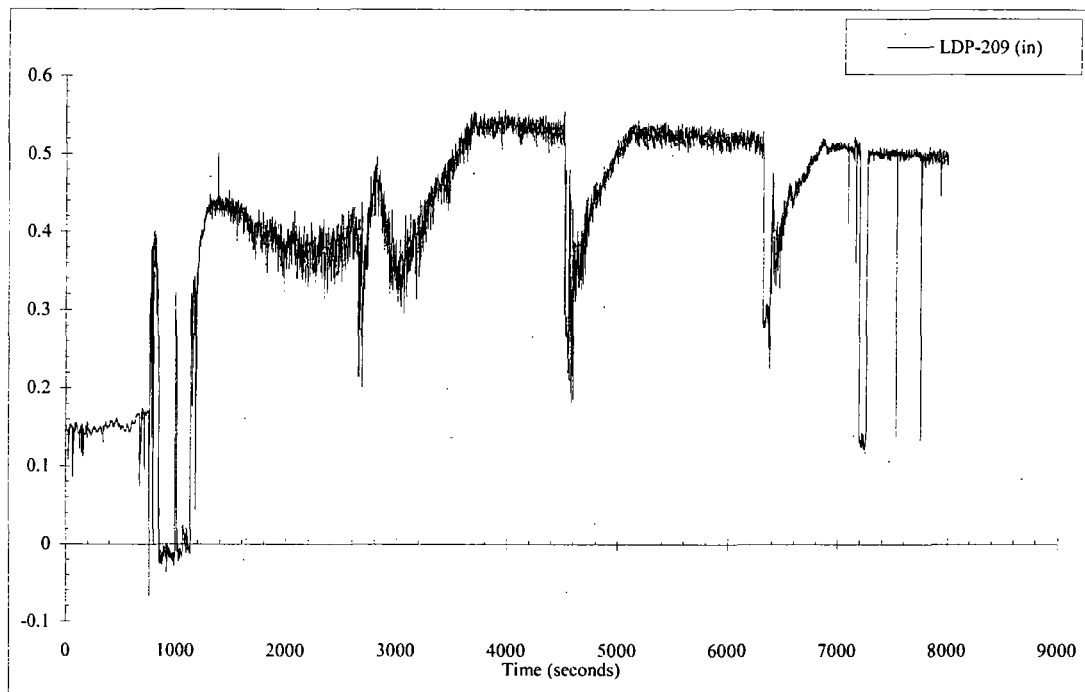
Rx Heater Group 2 Power



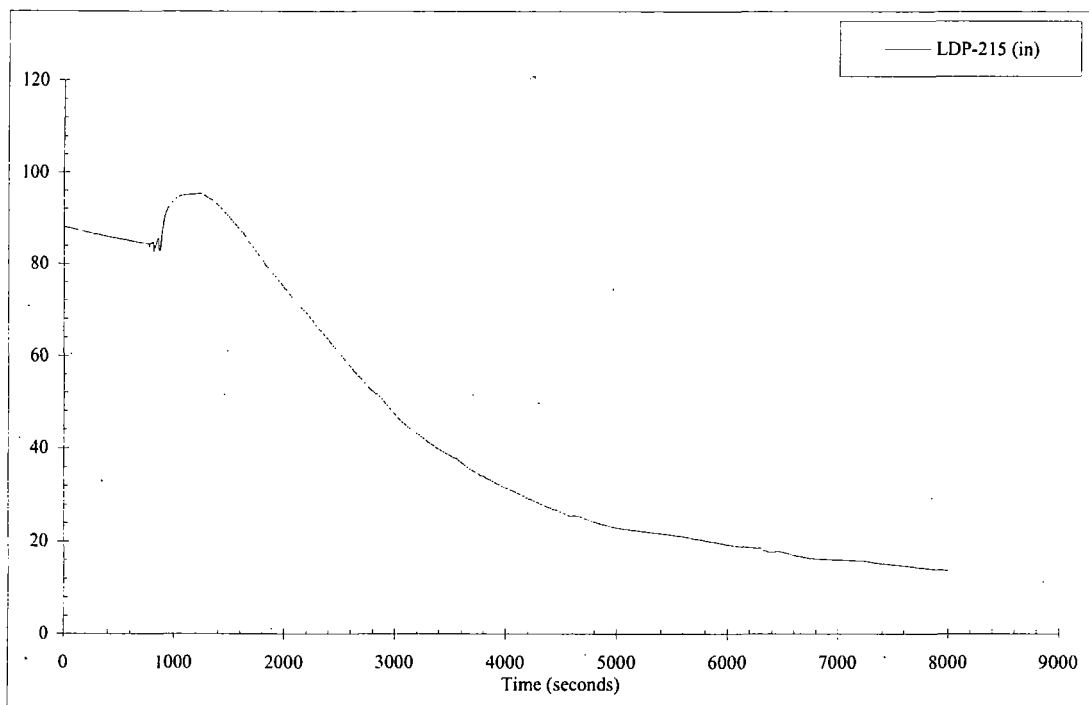
HL-1 Uncompensated Water Level



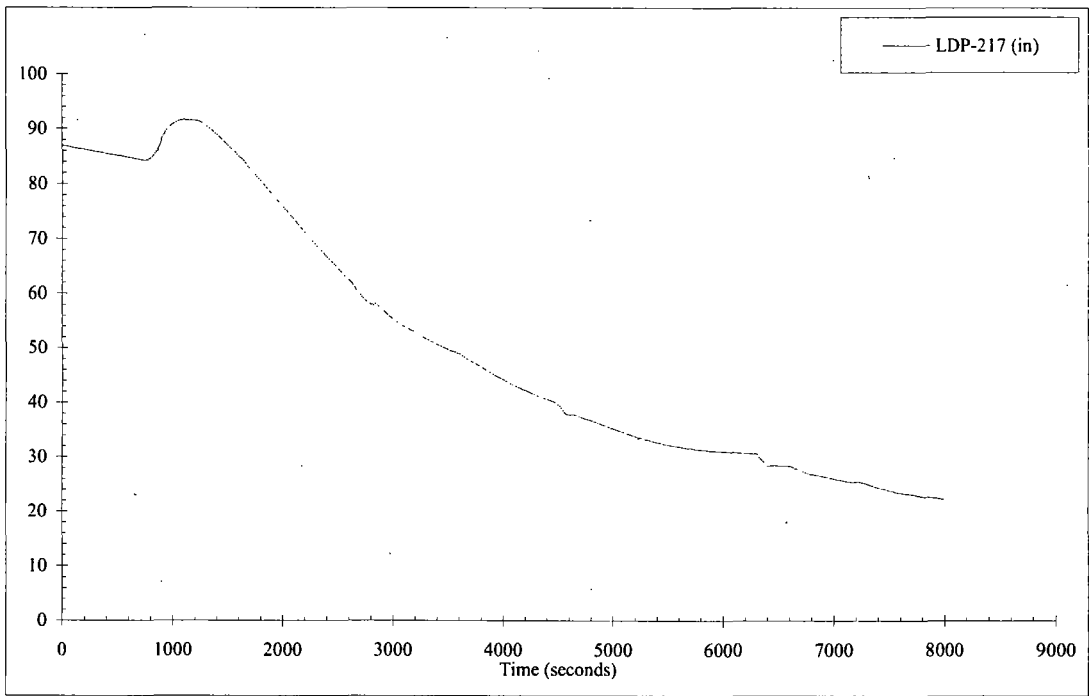
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



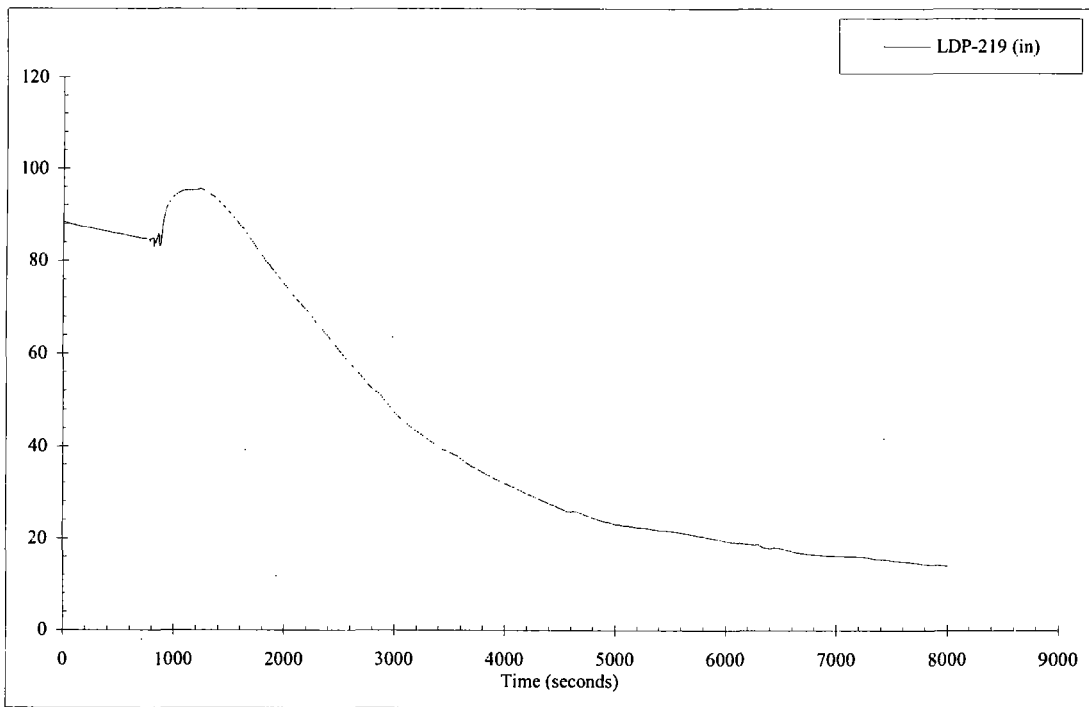
SG-1 to HL-1 Plenum Uncompensated Water Level



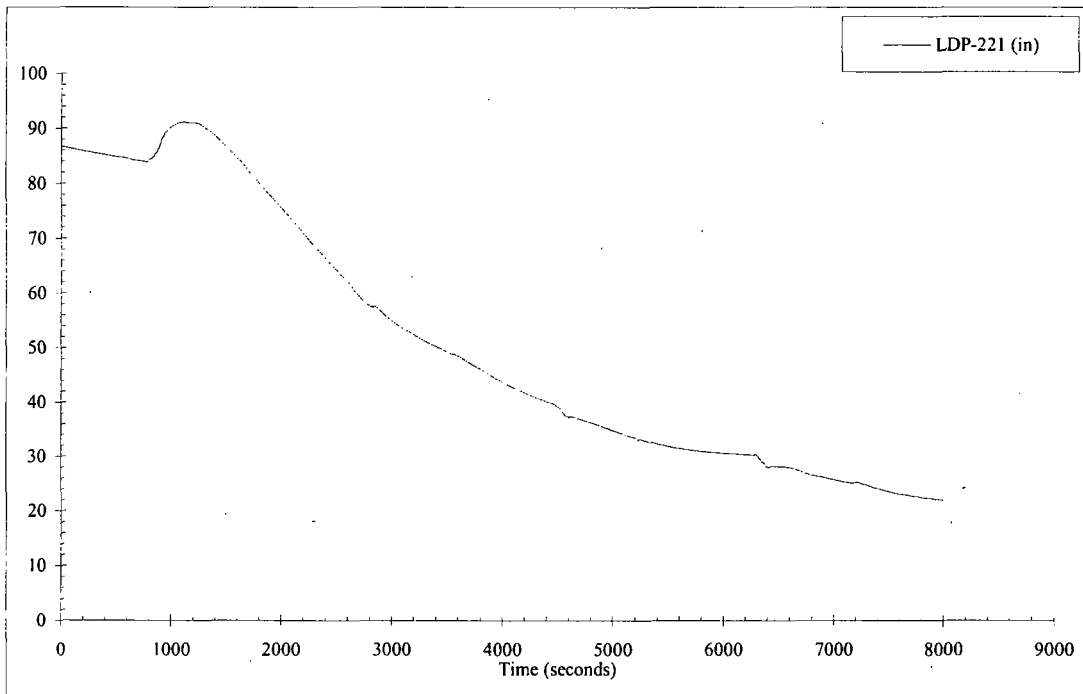
SG-1 Long Tube to HL Uncompensated Water Level



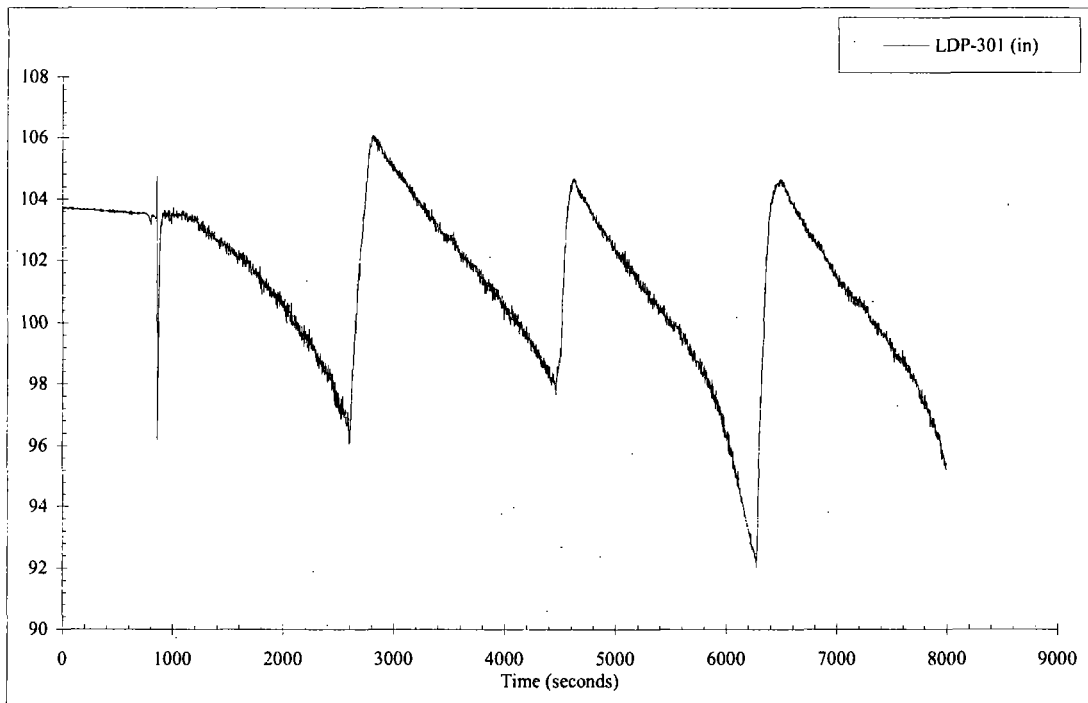
SG-1 Short Tube to HL Uncompensated Water Level



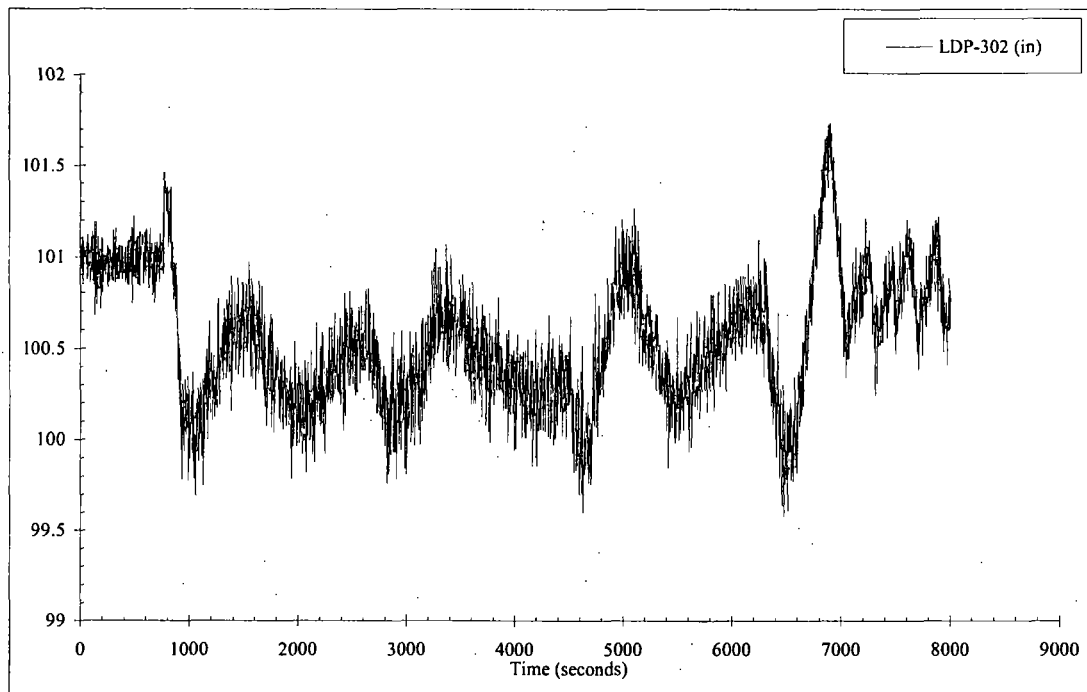
SG-1 Long Tube to CL Uncompensated Water Level



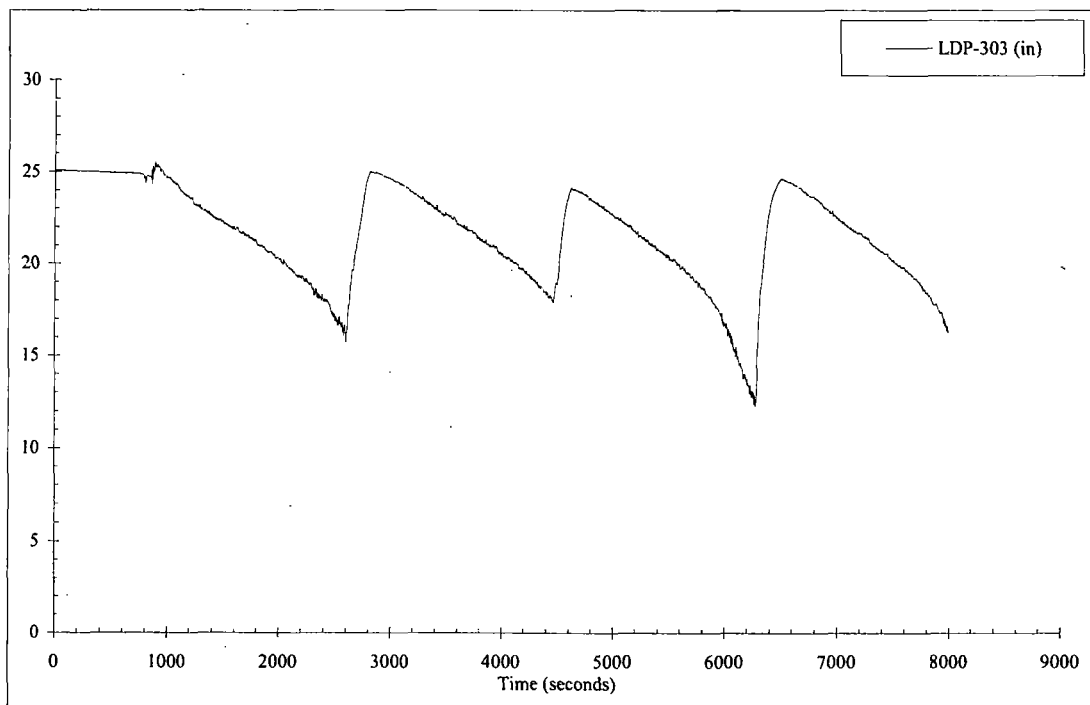
SG-1 Short Tube to CL Uncompensated Water Level



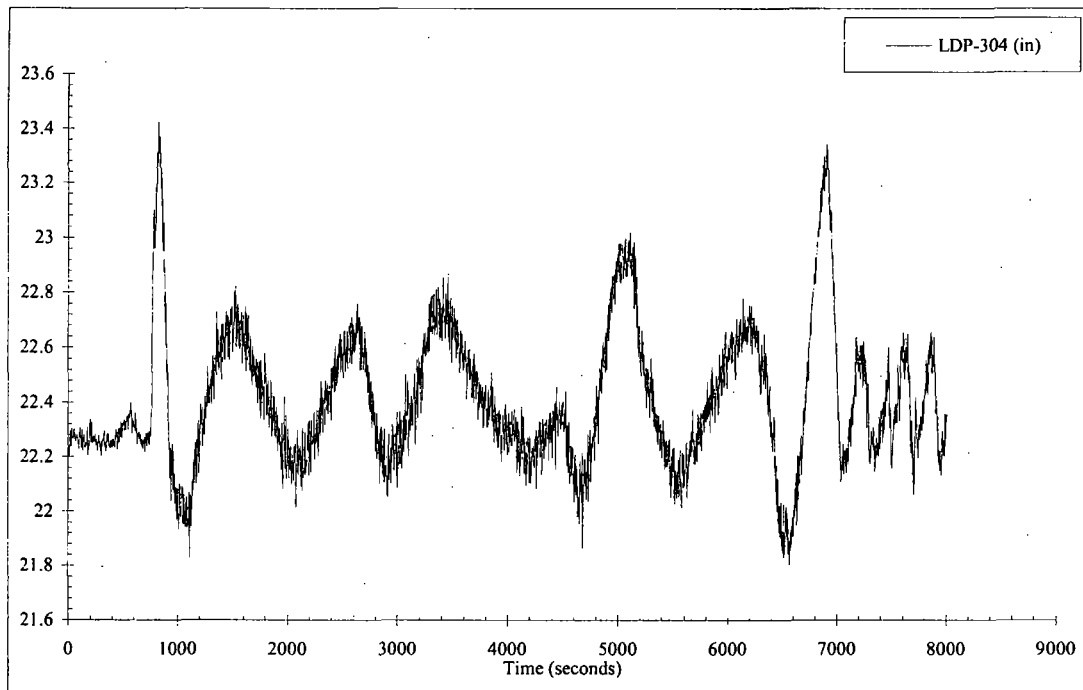
SG-1 WR Uncompensated Water Level



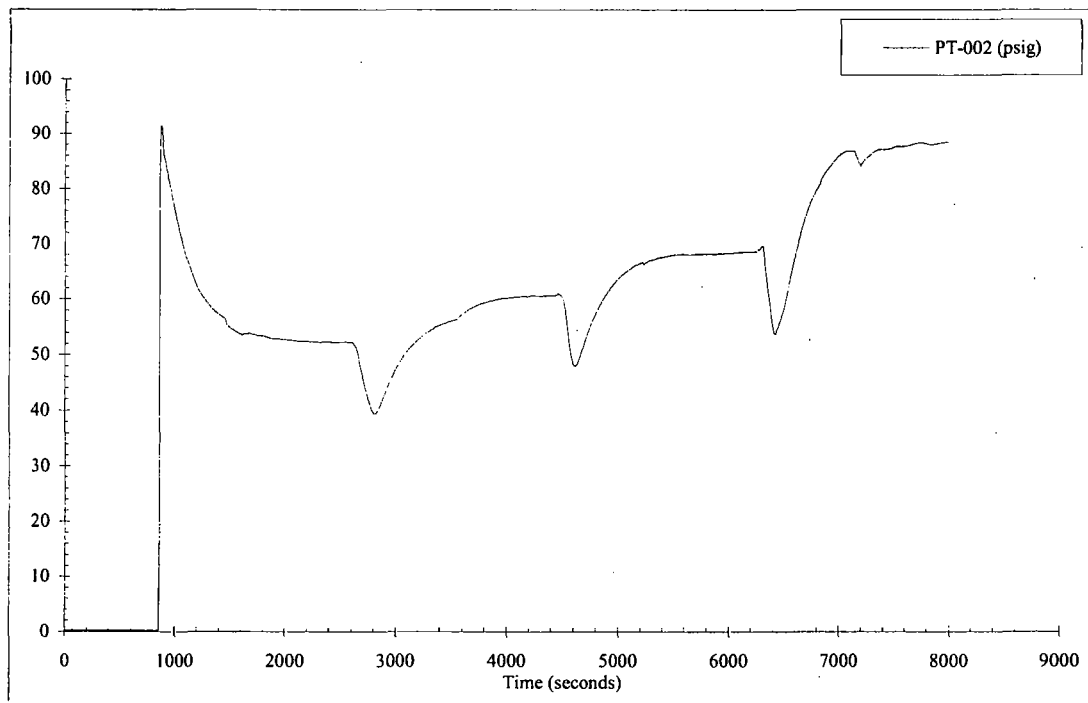
SG-2 WR Uncompensated Water Level



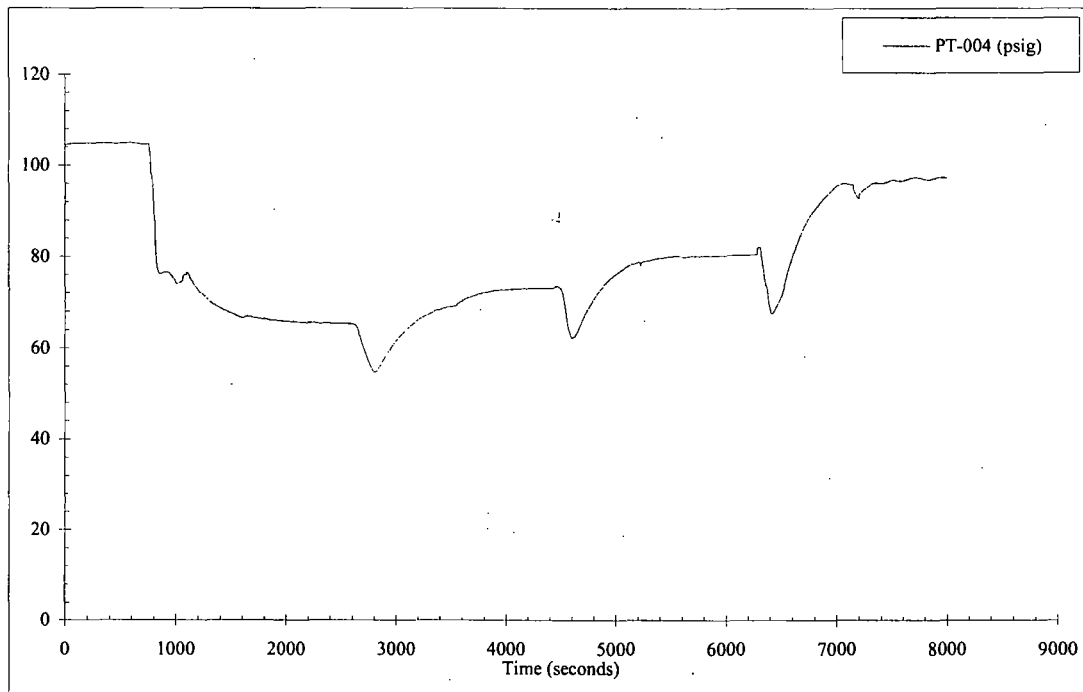
SG-1 NR Uncompensated Water Level



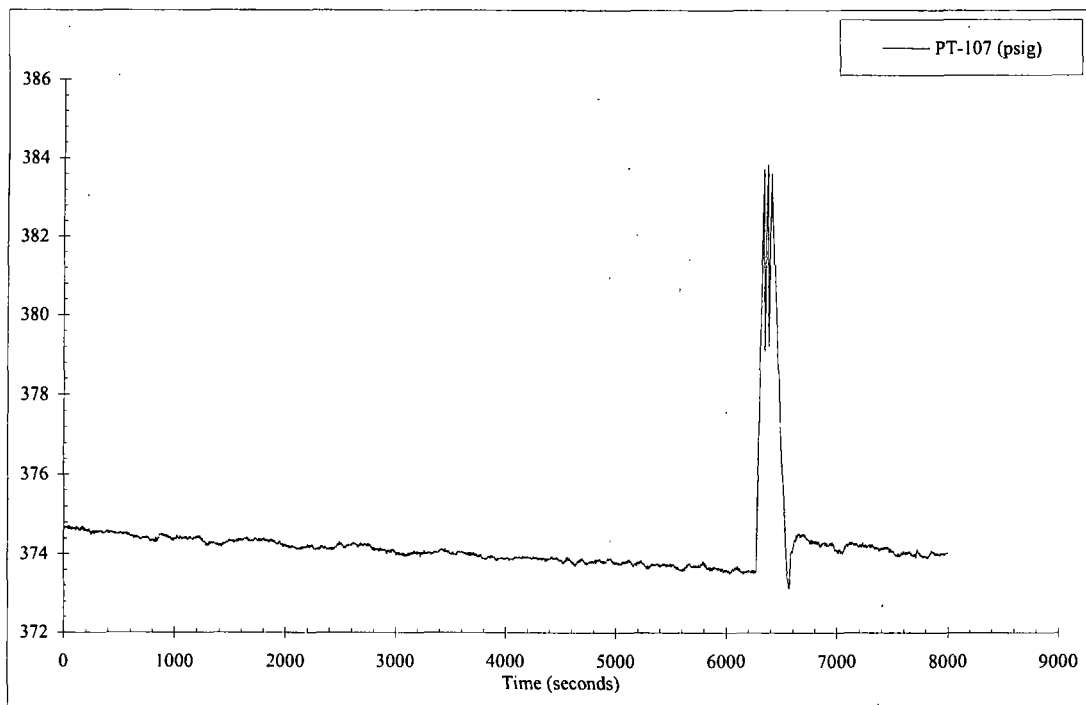
SG-2 NR Uncompensated Water Level



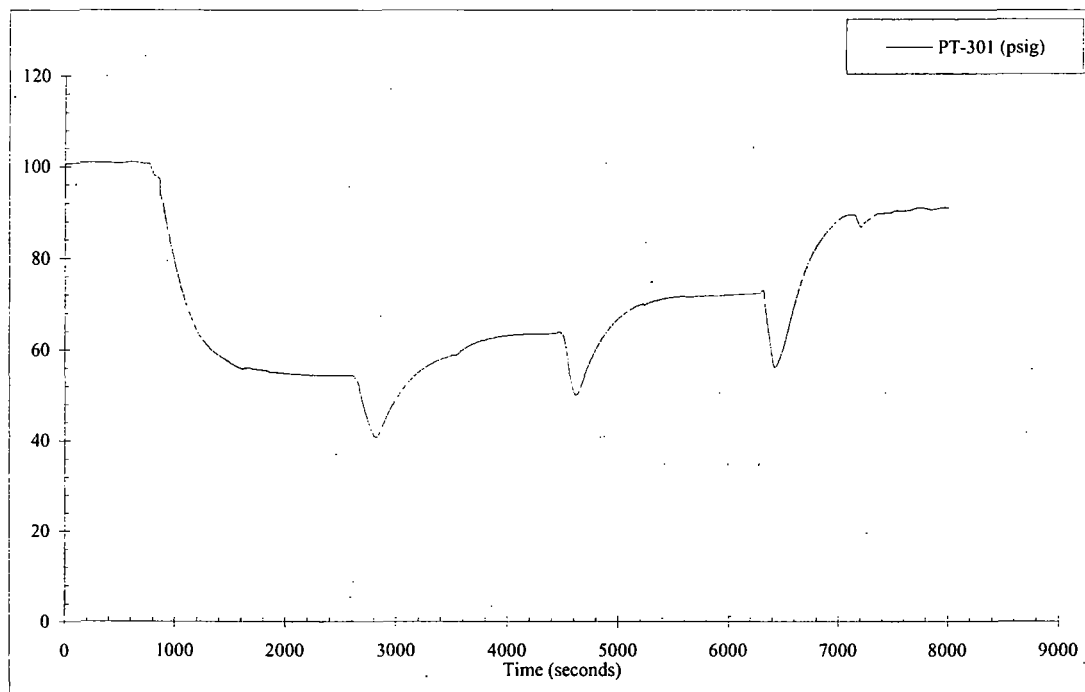
MS Header Pressure



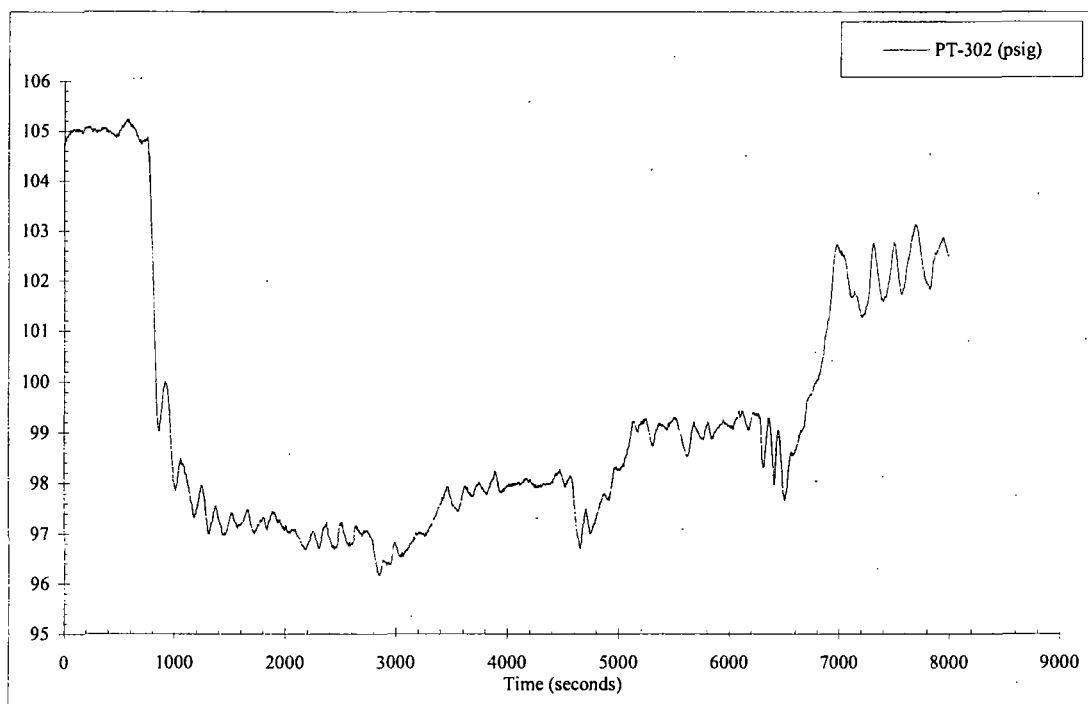
Temp Steam Pressure for FVM-002



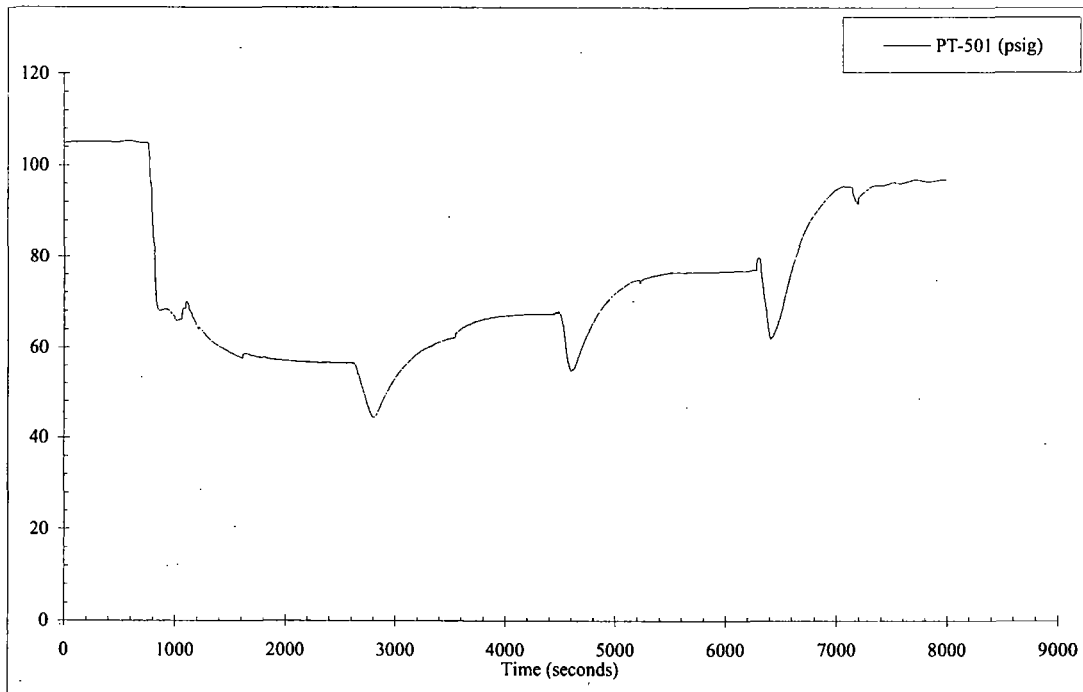
Rx Upper Head Pressure



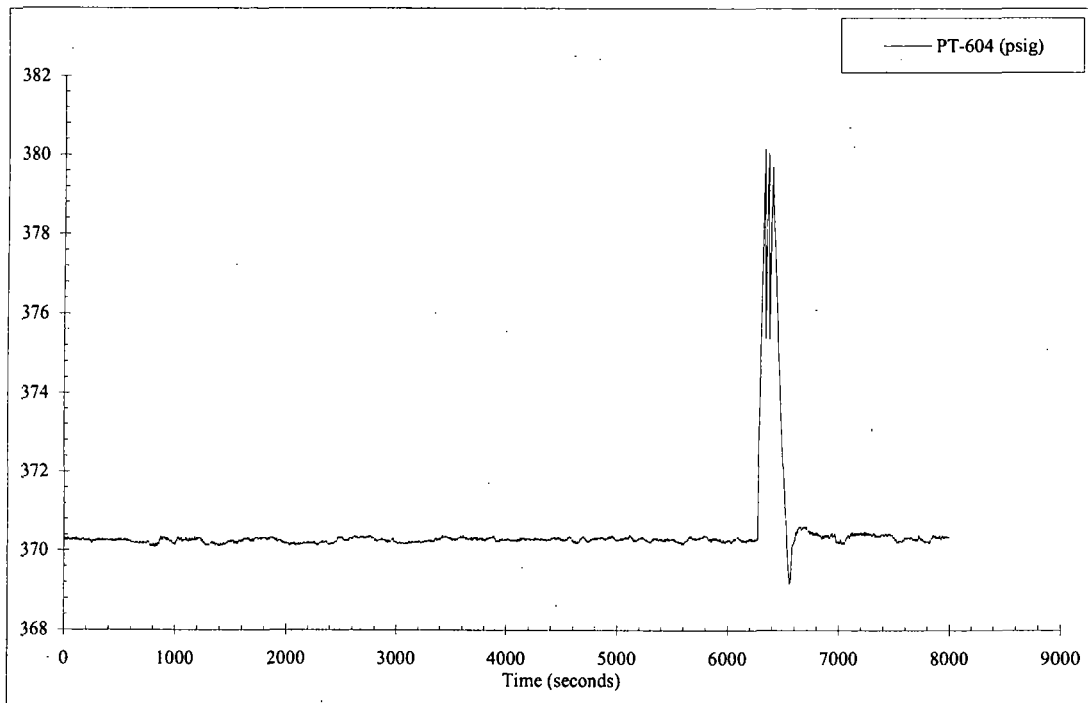
SG-1 Pressure



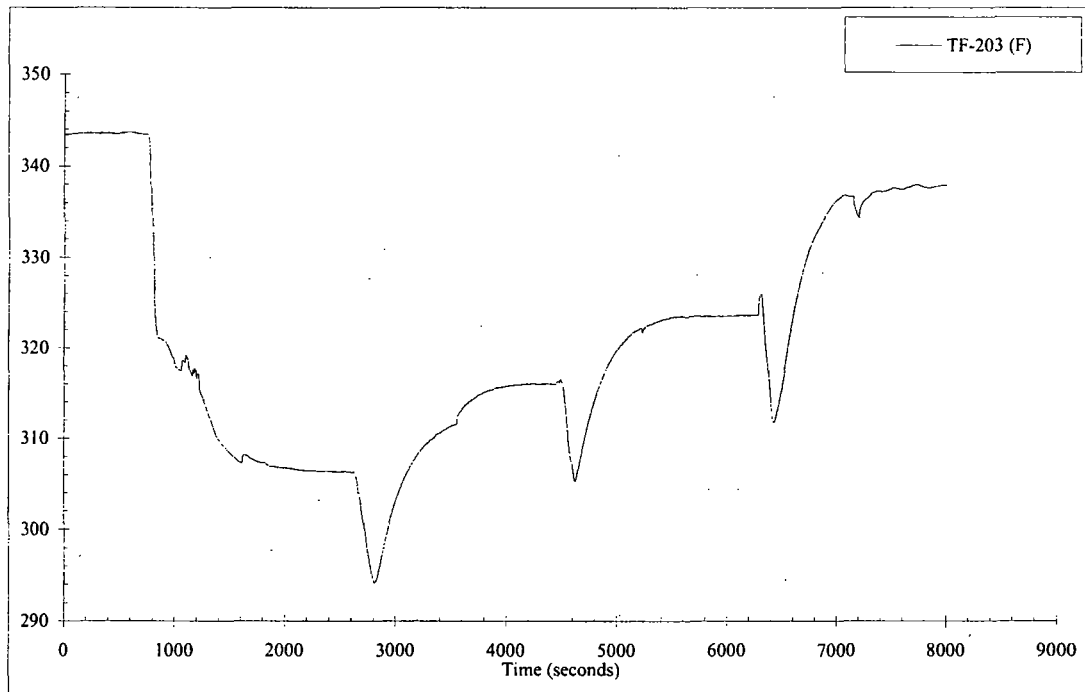
SG-2 Pressure



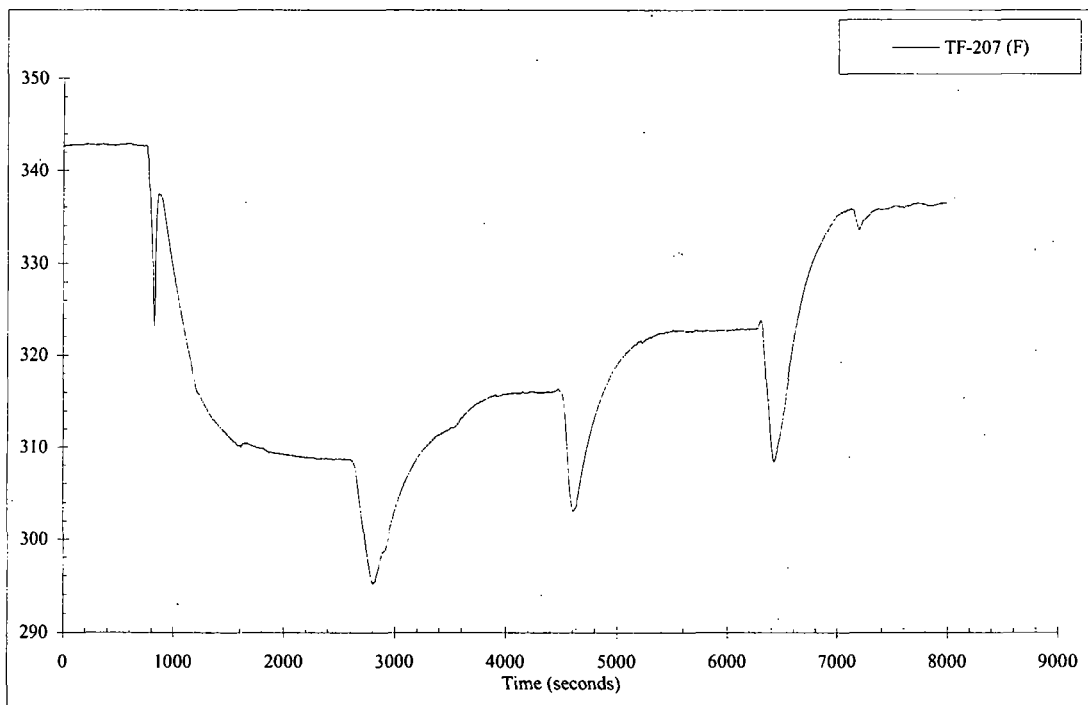
Separator Outlet Steam Pressure



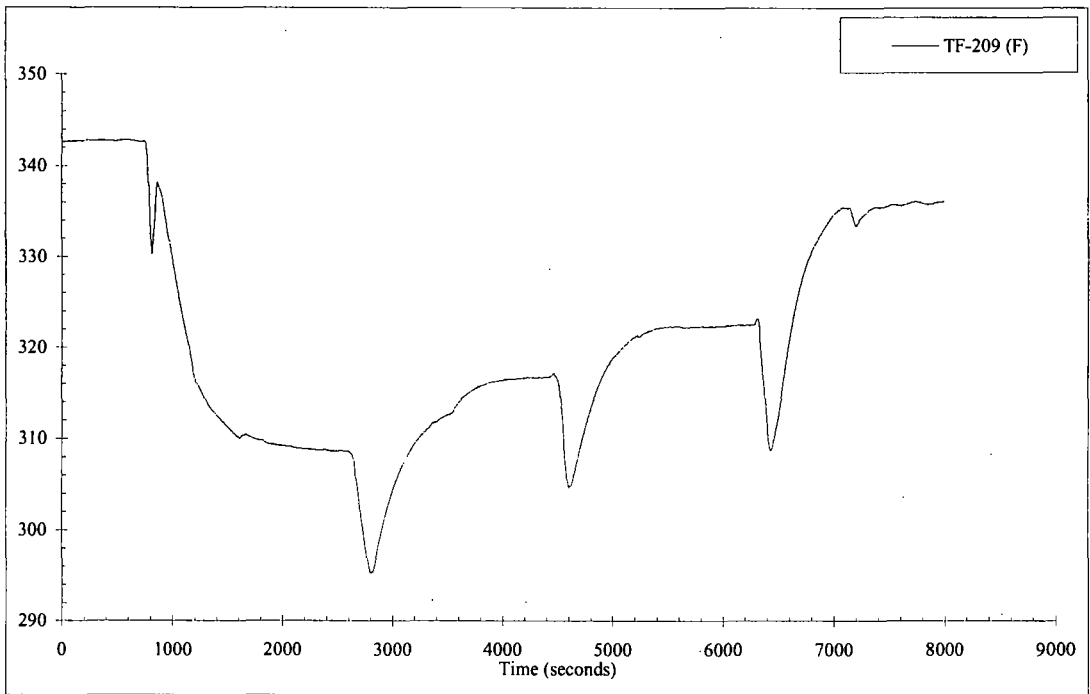
PZR WR Pressure



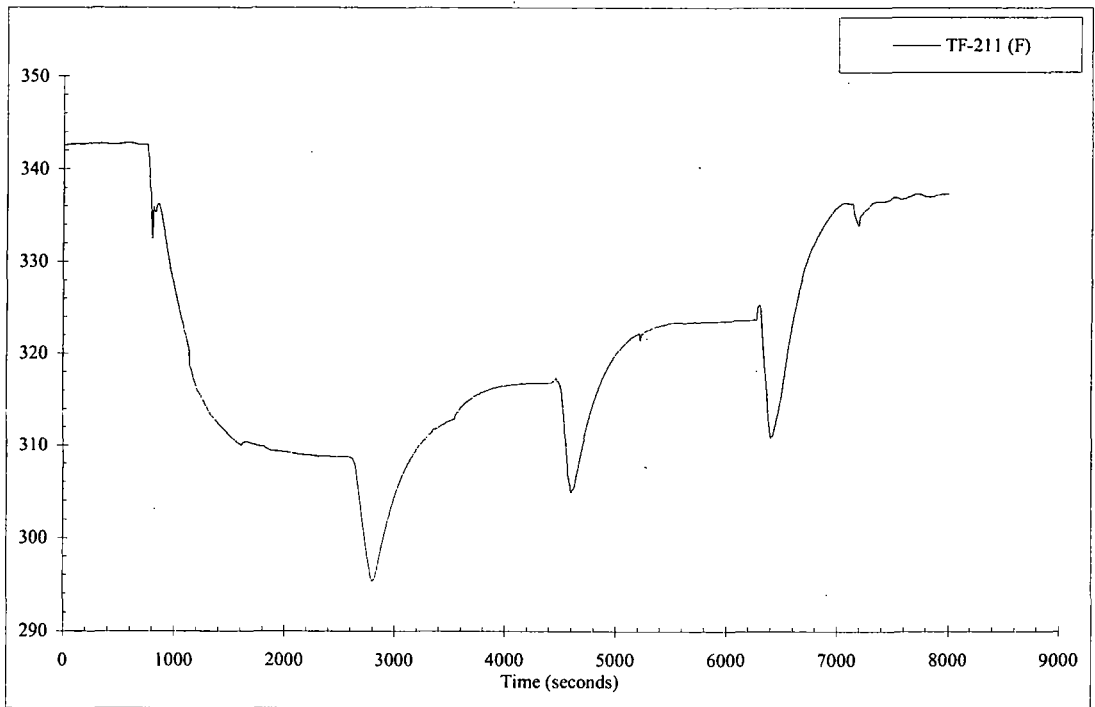
Separator Outlet Steam Temperature



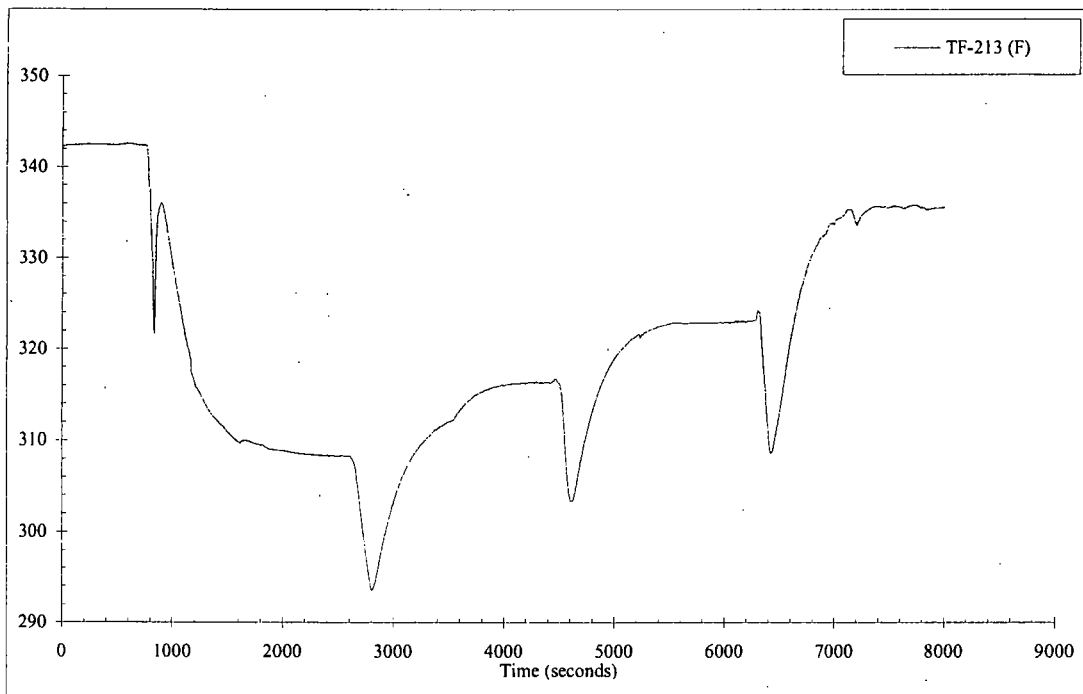
SG-1 Short Tube at Middle Outlet Side Temperature



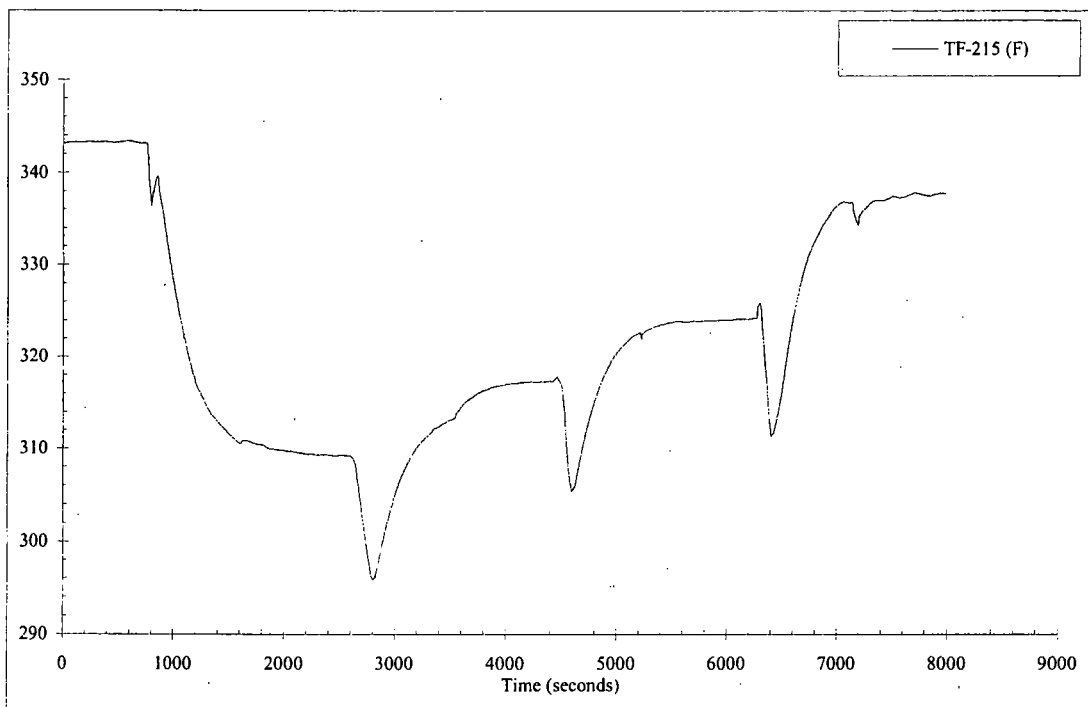
SG-1 Short Tube at Middle Inlet Side Temperature



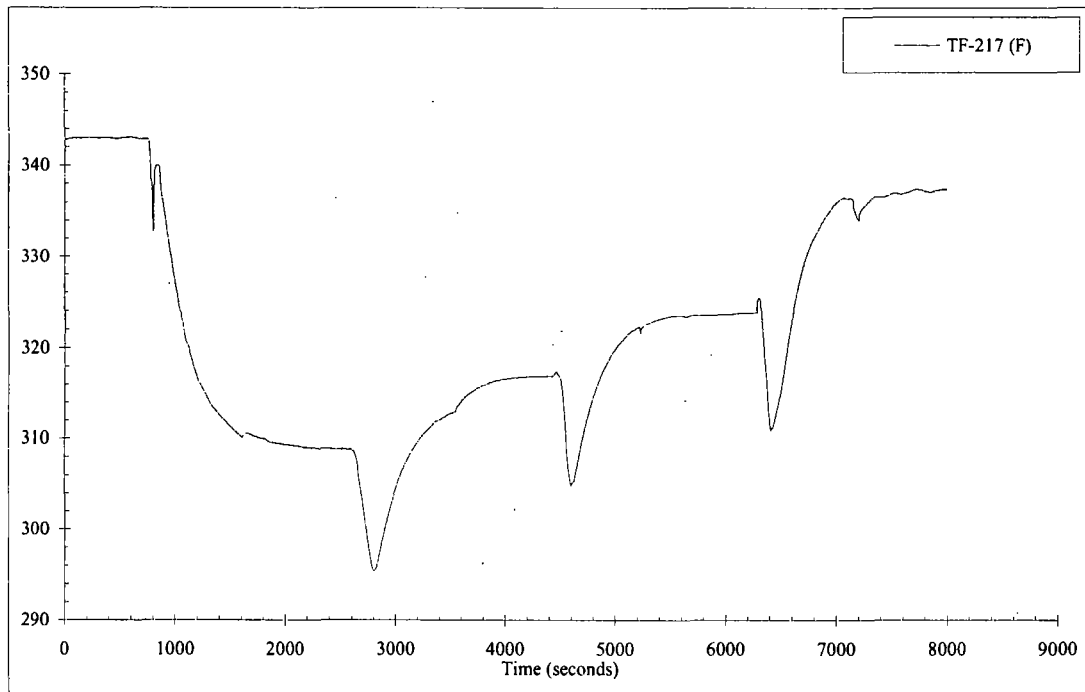
SG-1 Long Tube at Middle Outlet Temperature



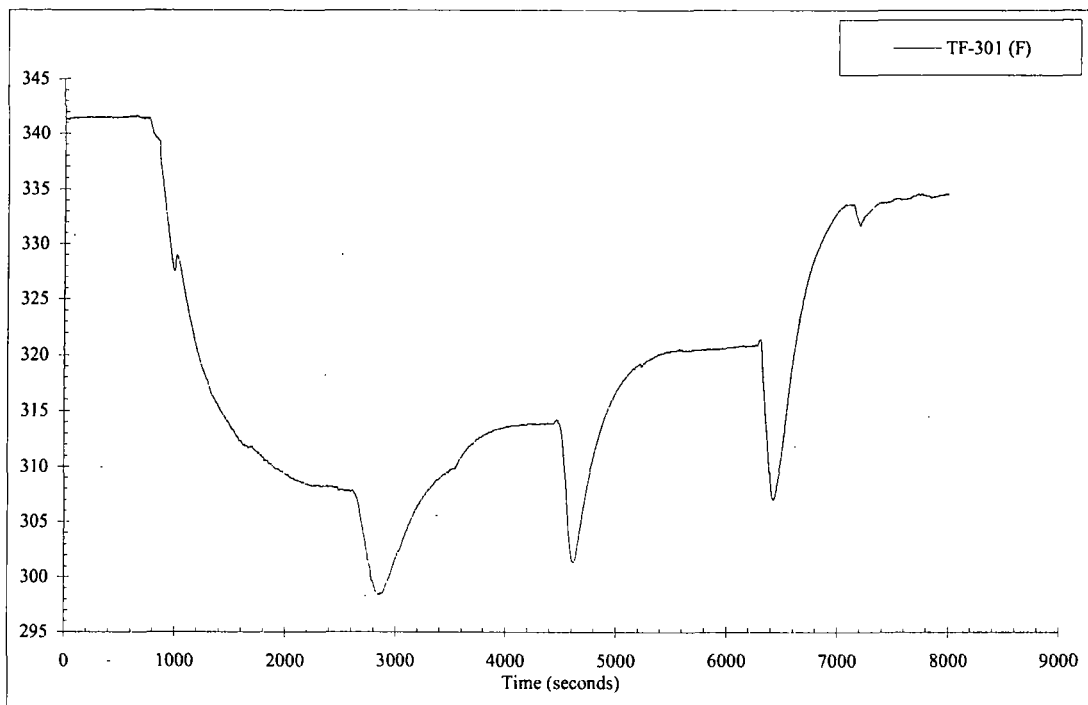
SG-1 Long Tube at Middle Inlet Temperature



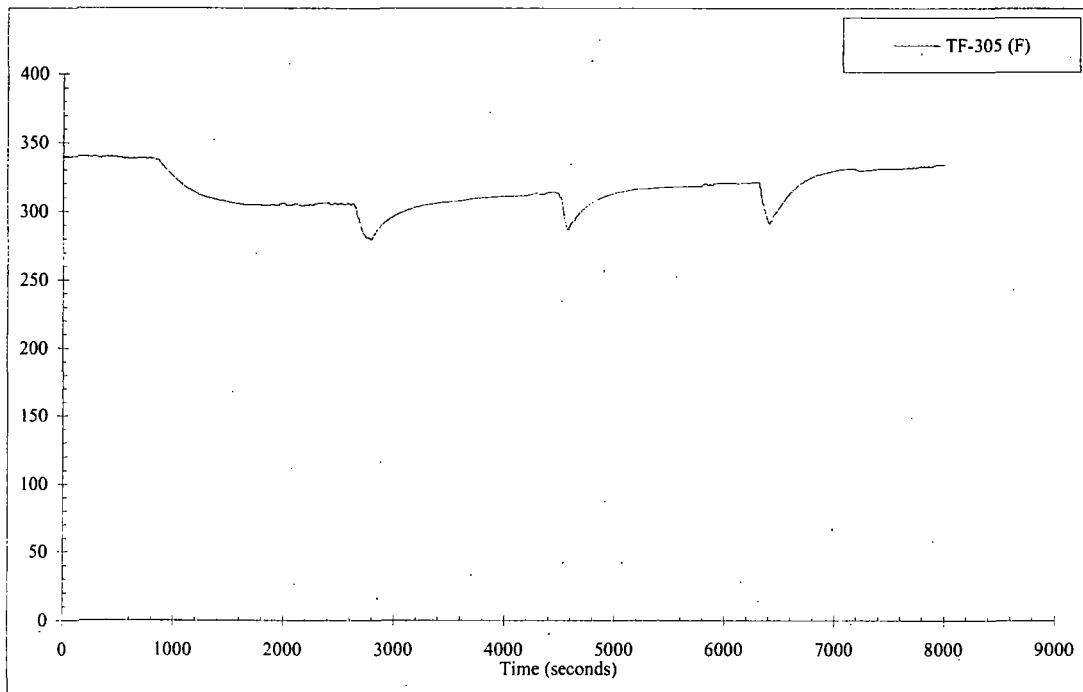
SG-1 Short Tube at Top Temperature



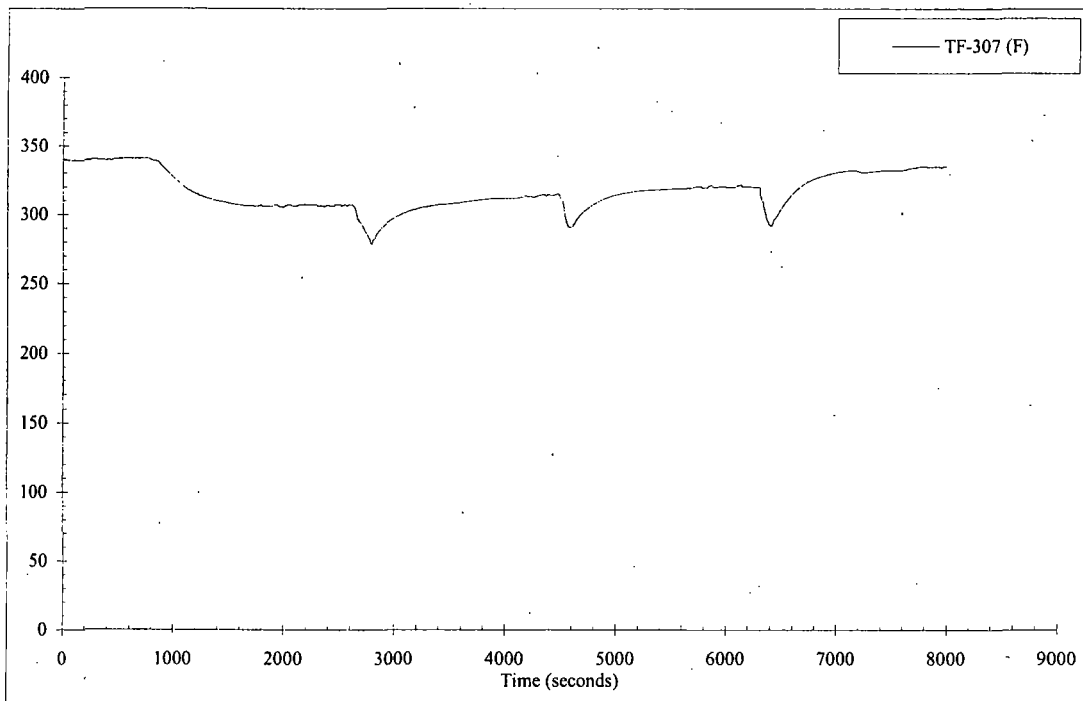
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)



SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

NRC-COND-03: Steam Generator U-Tube Condensation Test @ 100 psig
 Oregon State University
 Start time = 12/16/2005 11:56:00
 End time = 12/16/2005 14:10:00
 File created on 12/16/2005 14:36:58

| Timestamp | Interval (sec) | Tagname | Description | Area | Value |
|------------------|----------------|-----------|----------------------|----------|---------|
| 12/16/2005 11:54 | -119 | TEST_SW | Facility Test Switch | Switches | In Test |
| 12/16/2005 12:10 | 854 | M001_HS_A | SG-1 Stm Stop HS | Switches | Auto |
| 12/16/2005 12:10 | 854 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 12/16/2005 12:19 | 1434 | MF_001 | FST Fill Valve | Valves | Open |
| 12/16/2005 12:23 | 1662 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/16/2005 12:40 | 2698 | MF_001 | FST Fill Valve | Valves | Open |
| 12/16/2005 12:45 | 2992 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/16/2005 13:07 | 4301 | MF_001 | FST Fill Valve | Valves | Open |
| 12/16/2005 13:12 | 4593 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/16/2005 13:35 | 5945 | MF_001 | FST Fill Valve | Valves | Open |
| 12/16/2005 13:39 | 6182 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/16/2005 13:40 | 6265 | CVSP_HS_R | CVS Pump HS | Switches | Run |
| 12/16/2005 13:40 | 6265 | CVSP_X | CVS Pump | Pumps | Running |
| 12/16/2005 13:41 | 6332 | R610_STAT | PZR Vent | Valves | Open |
| 12/16/2005 13:41 | 6343 | R610_STAT | PZR Vent | Valves | Closed |
| 12/16/2005 13:42 | 6365 | R610_STAT | PZR Vent | Valves | Open |
| 12/16/2005 13:42 | 6379 | R610_STAT | PZR Vent | Valves | Closed |
| 12/16/2005 13:42 | 6398 | CVSP_HS_R | CVS Pump HS | Switches | Off |
| 12/16/2005 13:42 | 6398 | CVSP_X | CVS Pump | Pumps | Off |
| 12/16/2005 13:46 | 6615 | MF_001 | FST Fill Valve | Valves | Open |
| 12/16/2005 13:50 | 6849 | MF_001 | FST Fill Valve | Valves | Closed |
| 12/16/2005 14:10 | 8040 | TEST_SW | Facility Test Switch | Switches | Normal |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|--|---------|---------|---------|---------|--------------------------------|
| DP-111 | DP across Upper Core Plate | 0.9963 | 4.9931 | -30 | 30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 0.9934 | 4.9796 | -375 | 375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 0.989 | 4.9563 | -25 | 25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 0.9931 | 4.9591 | -25 | 25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 0.9957 | 4.9743 | -25 | 25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 0.9924 | 4.9561 | -25 | 25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 0.9951 | 4.97 | 0 | 30 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 0.9949 | 4.9707 | 0 | 30 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 0.9959 | 4.9709 | -25 | 25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 0.9958 | 4.9736 | -25 | 25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 0.9941 | 4.9622 | -50 | 50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 0.9939 | 4.9689 | -25 | 25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 0.9916 | 4.9588 | 0 | 200 | Differential Pressure (in h2o) |
| DP-203 | HL-1 to CL1 Differential Pressure at SG1 | 0.9946 | 4.9692 | 0 | 27 | Differential Pressure (psid) |
| DP-204 | CL-2 Differential Pressure | 0.9969 | 4.9814 | -25 | 25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 0.995 | 4.978 | 0 | 200 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 0.9959 | 4.984 | 0 | 200 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 0.9967 | 4.9817 | -25 | 25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 0.9984 | 4.9905 | -25 | 25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 0.998 | 4.9858 | -25 | 25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 0.9933 | 4.9649 | -25 | 25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 0.9979 | 4.9849 | 0 | 25 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 0.9979 | 4.9838 | 0 | 25 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 0.9965 | 4.9788 | -15 | 15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 0.9973 | 4.981 | 0 | 15 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 0.9981 | 4.9807 | 0 | 500 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 0.9964 | 4.9729 | 0 | 500 | Differential Pressure (psid) |
| DP-217 | U-Tube Condensation Separator Level | 0.9966 | 4.9818 | 0 | 36.67 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 0.9992 | 4.9889 | 0 | 150 | Differential Pressure (in h2o) |
| DP-219 | U-Tube Condensation Catch Tank Level | 0.9949 | 4.9686 | 0 | 30.95 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 0.9936 | 4.9627 | 0 | 150 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 0.9951 | 4.9677 | 0 | 150 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 0.9975 | 4.983 | 0 | 150 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 0.9987 | 4.9915 | 0 | 150 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 0.9944 | 4.9665 | 0 | 150 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 0.9975 | 4.979 | 0 | 400 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 0.9958 | 4.9736 | 0 | 400 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 0.9948 | 4.9675 | -150 | 150 | Differential Pressure (in h2o) |
| DP-502 | CMT-2 Injection Differential Pressure | 0.9947 | 4.9645 | -150 | 150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 0.998 | 4.9858 | -150 | 150 | Differential Pressure (in h2o) |
| DP-504 | CMT-2 Balance Line Differential Pressure | 1.0007 | 4.9955 | -100 | 100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 1.0008 | 4.9969 | 0 | 10 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 0.9948 | 4.967 | 0 | 10 | Differential Pressure (psid) |
| DP-603 | ADS4-1 Venturi | 0.9985 | 4.9847 | 0 | 100 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 0.9941 | 4.964 | 0 | 100 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 0.9993 | 4.9881 | 0 | 50 | Differential Pressure (in h2o) |
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 0.9991 | 4.9857 | 0 | 50 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 0.9967 | 4.9773 | -25 | 25 | Differential Pressure (in h2o) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|--|---------|---------|---------|---------|------------------------------|
| DP-701 | IRWST-1 Injection Differential Pressure | 0.9982 | 4.9872 | 0 | 30 | Differential Pressure (psid) |
| DP-702 | IRWST-2 Injection Differential Pressure | 0.9981 | 4.9871 | 0 | 30 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 0.9994 | 4.9905 | 0 | 100 | Differential Pressure (psid) |
| FDP-604 | ADS-2 Flow Differential Pressure | 0.9961 | 4.9738 | 0 | 100 | Differential Pressure (psid) |
| FDP-605 | ADS-1 Flow Differential Pressure | 0.9993 | 4.9896 | 0 | 250 | Differential Pressure (psid) |
| FDP-606 | ADS-3 Flow Differential Pressure | 1.0023 | 5.0051 | 0 | 100 | Differential Pressure (psid) |
| FMM-001 | SG-1 Feed Flow | 0.9961 | 4.9838 | 0 | 6 | Volumetric Flow Rate (gpm) |
| FMM-002 | SG-2 Feed Flow | 0.9925 | 4.9642 | 0 | 6 | Volumetric Flow Rate (gpm) |
| FMM-201 | CL-1 Loop Flow | 0.9921 | 4.9607 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-202 | CL-2 Loop Flow | 0.9943 | 4.9754 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-203 | CL-3 Loop Flow | 0.9974 | 4.9853 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-204 | CL-4 Loop Flow | 0.9936 | 4.9729 | -100 | 100 | Volumetric Flow Rate (gpm) |
| FMM-205 | DVI-1 Flow | 0.996 | 4.9706 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-206 | DVI-2 Flow | 0.9969 | 4.9767 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-401 | ACC-1 Injection Flow | 0.9932 | 4.9516 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-402 | ACC-2 Injection Flow | 0.9965 | 4.9772 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-501 | CMT-1 Injection Flow | 1.0006 | 4.9959 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-502 | CMT-2 CL Balance Line Flow | 0.9994 | 4.9742 | 0 | 70 | Volumetric Flow Rate (gpm) |
| FMM-503 | CMT-1 CL Balance Line Flow | 0.9985 | 4.9717 | 0 | 75 | Volumetric Flow Rate (gpm) |
| FMM-504 | CMT-2 Injection Flow | 0.9925 | 4.9523 | 0 | 20 | Volumetric Flow Rate (gpm) |
| FMM-601 | ADS1-3 Loop Seal Flow | 1.004 | 5.0168 | 0 | 200 | Volumetric Flow Rate (gpm) |
| FMM-602 | ADS4-2 Loop Seal Flow | 1.0117 | 5.0507 | 0 | 60 | Volumetric Flow Rate (gpm) |
| FMM-603 | ADS4-1 Loop Seal Flow | 1.0129 | 5.0571 | 0 | 60 | Volumetric Flow Rate (gpm) |
| FMM-701 | IRWST/DVI-1 Injection Flow | 0.9954 | 4.9738 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-702 | IRWST/DVI-2 Injection Flow | 0.9955 | 4.9724 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-703 | IRWST Overflow | 0.9966 | 4.9663 | 0 | 10 | Volumetric Flow Rate (gpm) |
| FMM-801 | CVSP Discharge Flow | 0.9998 | 4.9876 | 0 | 8 | Volumetric Flow Rate (gpm) |
| FMM-802 | PRHR Inlet Flow | 0.9966 | 4.9656 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-803 | RNSP to DVI-2 Flow | 0.9942 | 4.9629 | 0 | 30 | Volumetric Flow Rate (gpm) |
| FMM-804 | PRHR Outlet Flow | 0.9963 | 4.9612 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-805 | RNSP Discharge Flow | 0.9936 | 4.9711 | 0 | 40 | Volumetric Flow Rate (gpm) |
| FMM-901 | Primary Sump-1 Recirculation Injection Flow | 0.9936 | 4.9673 | -40 | 40 | Volumetric Flow Rate (gpm) |
| FMM-902 | Primary Sump-2 Recirculation Injection Flow | 0.9948 | 4.9726 | -40 | 40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Break Separator Loop Seal Flow | 1.0902 | 5.1224 | -90 | 90 | Volumetric Flow Rate (gpm) |
| FVM-001 | U-Tube Outlet Steam Flow | 1.0036 | 5.0202 | 0 | 70 | Steam Flow Rate (cfm) |
| FVM-002 | U-Tube Inlet Steam Flow | 0.9986 | 4.9885 | 0 | 100 | Steam Flow Rate (cfm) |
| FVM-003 | SG 2 Secondary Side Steam Flow | 0.9988 | 5.0101 | 0 | 140 | Steam Flow Rate (cfm) |
| FVM-004 | Catch Tank Outlet Steam Flow | 1.001 | 4.9885 | 0 | 70 | Steam Flow Rate (cfm) |
| FVM-009 | SG-1 PORV Blowdown Steam Flow | 0.9967 | 4.9836 | 0 | 381 | Steam Flow Rate (cfm) |
| FVM-010 | SG-2 PORV Blowdown Steam Flow | 0.9971 | 4.9817 | 0 | 381 | Steam Flow Rate (cfm) |
| FVM-601 | ADS1-3 Separator Steam Flow | 1.0017 | 4.9995 | 0 | 2000 | Steam Flow Rate (cfm) |
| FVM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 1.0018 | 5.006 | 0 | 2000 | Steam Flow Rate (cfm) |
| FVM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 1.0024 | 5.0062 | 0 | 1600 | Steam Flow Rate (cfm) |
| FVM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 1.0026 | 5.0034 | 0 | 348 | Steam Flow Rate (cfm) |
| FVM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 1.0028 | 5.0037 | 0 | 348 | Steam Flow Rate (cfm) |
| FVM-901 | BAMS HDR 6-inch Line Steam Flow | 1.0023 | 5.0021 | 0 | 5000 | Steam Flow Rate (cfm) |
| FVM-902 | BAMS HDR 10-inch Line Steam Flow | 1.0027 | 5.01 | 0 | 12500 | Steam Flow Rate (cfm) |
| FVM-903 | Primary Sump Steam Exhaust Flow | 0.9949 | 4.9879 | 0 | 22 | Steam Flow Rate (cfm) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|---|---------|---------|---------|---------|-----------------------|
| FVM-904 | Break Separator 3-inch Line Steam Flow | 0.9979 | 4.9986 | 0 | 400 | Steam Flow Rate (cfm) |
| FVM-905 | Break Separator 6-inch Line Steam Flow | 1.004 | 5.0036 | 0 | 6000 | Steam Flow Rate (cfm) |
| FVM-906 | Break Separator 8-inch Line Steam Flow | 1.0025 | 5.0048 | 0 | 4000 | Steam Flow Rate (cfm) |
| KW-101 | Rx Heater Group 1 Power | 1.1171 | 4.3222 | 0 | 472 | Power (kW) |
| KW-102 | Rx Heater Group 2 Power | 1.0045 | 4.1621 | 0 | 486 | Power (kW) |
| KW-103 | Rx Heater Group 1 Power | 0.9786 | 4.8931 | 0 | 496 | Power (kW) |
| KW-104 | Rx Heater Group 2 Power | 0.9946 | 4.912 | 0 | 492 | Power (kW) |
| KW-601 | PZR Heater Power | 0.982 | 4.9435 | 0 | 24.3 | Power (kW) |
| LCT-701 | IRWST Weight | 0.9976 | 4.9831 | 0 | 40000 | Mass (lbm) |
| LCT-901 | Primary Sump Weight | 0.9969 | 4.977 | 0 | 28800 | Mass (lbm) |
| LCT-902 | Secondary Sump Weight | 0.9983 | 4.9845 | 0 | 16700 | Mass (lbm) |
| LDP-001 | FST Uncompensated Water Level | 1.0017 | 5.0056 | 0 | 91.88 | Water Level (in) |
| LDP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 0.9945 | 4.9645 | 0 | 5.561 | Water Level (in) |
| LDP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 0.9963 | 4.9725 | 0 | 5.938 | Water Level (in) |
| LDP-103 | DVI to CL Uncompensated Water Level (270) | 0.9982 | 4.9807 | 0 | 11.692 | Water Level (in) |
| LDP-104 | DVI to CL Uncompensated Water Level (180) | 0.9992 | 4.9748 | 0 | 12.376 | Water Level (in) |
| LDP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 1.0058 | 5.0076 | 0 | 11.929 | Water Level (in) |
| LDP-106 | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 0.9985 | 4.9732 | 0 | 8.198 | Water Level (in) |
| LDP-107 | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 0.9958 | 4.9713 | 0 | 8.223 | Water Level (in) |
| LDP-108 | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 0.9953 | 4.9683 | 0 | 8.562 | Water Level (in) |
| LDP-109 | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 0.9988 | 4.984 | 0 | 19.763 | Water Level (in) |
| LDP-110 | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 0.9991 | 4.9909 | 0 | 20.02 | Water Level (in) |
| LDP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 0.9963 | 4.9755 | 0 | 4.696 | Water Level (in) |
| LDP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 0.9986 | 4.9849 | 0 | 15.614 | Water Level (in) |
| LDP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 0.9996 | 4.9896 | 0 | 24.28 | Water Level (in) |
| LDP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 0.9949 | 4.9638 | 0 | 77.59 | Water Level (in) |
| LDP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 0.9983 | 4.9838 | 0 | 11.383 | Water Level (in) |
| LDP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 0.9988 | 4.9848 | 0 | 39.98 | Water Level (in) |
| LDP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 0.9996 | 4.988 | 0 | 40.26 | Water Level (in) |
| LDP-127 | Rx Wide Range Uncompensated Water Level | 1.0007 | 4.999 | 0 | 98.97 | Water Level (in) |
| LDP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 0.9946 | 4.9639 | 0 | 39.3 | Water Level (in) |
| LDP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 0.9982 | 4.9837 | 0 | 24.166 | Water Level (in) |
| LDP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 1.0014 | 4.9981 | 0 | 78.02 | Water Level (in) |
| LDP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 0.9994 | 4.9843 | 0 | 20.135 | Water Level (in) |
| LDP-201 | CL-1 Uncompensated Water Level | 1.0002 | 4.9961 | 0 | 2.496 | Water Level (in) |
| LDP-202 | CL-2 Uncompensated Water Level | 0.9994 | 4.9924 | 0 | 2.223 | Water Level (in) |
| LDP-203 | CL-3 Uncompensated Water Level | 0.9994 | 4.9923 | 0 | 2.532 | Water Level (in) |
| LDP-204 | CL-4 Uncompensated Water Level | 0.9927 | 4.9594 | 0 | 2.47 | Water Level (in) |
| LDP-205 | HL-1 Uncompensated Water Level | 0.9945 | 4.9663 | 0 | 4.415 | Water Level (in) |
| LDP-206 | HL-2 Uncompensated Water Level | 0.9944 | 4.9653 | 0 | 4.013 | Water Level (in) |
| LDP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 0.9972 | 4.9779 | 0 | 18.3 | Water Level (in) |
| LDP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 0.9969 | 4.9825 | 0 | 19.247 | Water Level (in) |
| LDP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 1.0002 | 4.9954 | 0 | 10.939 | Water Level (in) |
| LDP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 0.9943 | 4.9677 | 0 | 16.988 | Water Level (in) |
| LDP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 0.993 | 4.9613 | 0 | 16.793 | Water Level (in) |
| LDP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 0.9982 | 4.9836 | 0 | 16.772 | Water Level (in) |
| LDP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 0.9978 | 4.9864 | 0 | 16.747 | Water Level (in) |
| LDP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 1.0002 | 4.9953 | 0 | 11.571 | Water Level (in) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------|--|---------|---------|---------|---------|------------------|
| LDP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 0.9992 | 4.99 | 0 | 102.06 | Water Level (in) |
| LDP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 0.9955 | 4.9717 | 0 | 95.55 | Water Level (in) |
| LDP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 0.9932 | 4.9618 | 0 | 96.25 | Water Level (in) |
| LDP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 0.9943 | 4.9658 | 0 | 103.14 | Water Level (in) |
| LDP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 0.9992 | 4.9867 | 0 | 102.45 | Water Level (in) |
| LDP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 0.9971 | 4.9786 | 0 | 96 | Water Level (in) |
| LDP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 0.9986 | 4.985 | 0 | 95.98 | Water Level (in) |
| LDP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 0.9947 | 4.9628 | 0 | 102.71 | Water Level (in) |
| LDP-301 | SG-1 WR Uncompensated Water Level | 1.0006 | 5.0022 | 0 | 119.25 | Water Level (in) |
| LDP-302 | SG-2 WR Uncompensated Water Level | 1.0003 | 4.9995 | 0 | 119.02 | Water Level (in) |
| LDP-303 | SG-1 NR Uncompensated Water Level | 0.9934 | 4.9699 | 0 | 31.81 | Water Level (in) |
| LDP-304 | SG-2 NR Uncompensated Water Level | 0.995 | 4.9748 | 0 | 31.52 | Water Level (in) |
| LDP-401 | ACC-1 Uncompensated Water Level | 0.9951 | 4.987 | 0 | 38.26 | Water Level (in) |
| LDP-402 | ACC-2 Uncompensated Water Level | 1.0332 | 5.166 | 0 | 38.34 | Water Level (in) |
| LDP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 0.9986 | 4.9834 | 0 | 5.31 | Water Level (in) |
| LDP-502 | CMT-2 WR Uncompensated Water Level | 1.0396 | 5.1958 | 0 | 57.5 | Water Level (in) |
| LDP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 0.9979 | 4.984 | 0 | 46.77 | Water Level (in) |
| LDP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 0.9972 | 4.9793 | 0 | 5.226 | Water Level (in) |
| LDP-505 | CMT-1 NR Uncompensated Water Level (Top) | 1 | 4.994 | 0 | 5.486 | Water Level (in) |
| LDP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 0.9975 | 4.9823 | 0 | 46.96 | Water Level (in) |
| LDP-507 | CMT-1 WR Uncompensated Water Level | 1.0383 | 5.1887 | 0 | 57.5 | Water Level (in) |
| LDP-508 | CMT-2 NR Uncompensated Water Level (Top) | 0.9994 | 4.9913 | 0 | 5.309 | Water Level (in) |
| LDP-509 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 0.9968 | 4.9772 | 0 | 78.84 | Water Level (in) |
| LDP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 0.9942 | 4.9653 | 0 | 78.28 | Water Level (in) |
| LDP-601 | PZR WR Uncompensated Water Level | 0.9991 | 5.0006 | 0 | 140.47 | Water Level (in) |
| LDP-602 | PZR Surge Line Uncompensated Water Level | 0.997 | 4.9777 | 0 | 47.5 | Water Level (in) |
| LDP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 0.9963 | 4.9735 | 0 | 3.533 | Water Level (in) |
| LDP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 0.9958 | 4.9724 | 0 | 18.696 | Water Level (in) |
| LDP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 0.996 | 4.9737 | 0 | 4.127 | Water Level (in) |
| LDP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 0.9964 | 4.9731 | 0 | 3.82 | Water Level (in) |
| LDP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 1.0011 | 4.996 | 0 | 14.717 | Water Level (in) |
| LDP-610 | ADS1-3 Separator Uncompensated Water Level | 1.0399 | 5.193 | 0 | 45.24 | Water Level (in) |
| LDP-611 | ADS4-1 Separator Uncompensated Water Level | 1.0342 | 5.1628 | 0 | 55.97 | Water Level (in) |
| LDP-612 | ADS4-2 Separator Uncompensated Water Level | 1.0386 | 5.1859 | 0 | 56.6 | Water Level (in) |
| LDP-701 | IRWST Uncompensated Water Level | 1.0048 | 5.0202 | 0 | 115.8 | Water Level (in) |
| LDP-801 | PRHR HX Inlet Head Uncompensated Water Level | 1.0013 | 4.9945 | 0 | 6.971 | Water Level (in) |
| LDP-802 | PRHR HX WR Uncompensated Water Level | 0.9998 | 4.9871 | 0 | 57.08 | Water Level (in) |
| LDP-901 | Primary Sump Uncompensated Water Level | 1.0015 | 5.0016 | 0 | 104.36 | Water Level (in) |
| LDP-902 | Secondary Sump Uncompensated Water Level | 1.0007 | 5.0018 | 0 | 102.56 | Water Level (in) |
| LDP-903 | CRT Uncompensated Water Level | 1.0346 | 5.1669 | 0 | 32.358 | Water Level (in) |
| LDP-905 | Break Separator Uncompensated Water Level | 1.0378 | 5.1788 | 0 | 130.68 | Water Level (in) |
| LT-120 | Rx Vessel Capacitance Probe Water Level | 1.0042 | 5.0053 | 50 | 99 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 1.0121 | 5.0658 | 0 | 600 | Pressure (psig) |
| PT-002 | SG 2 (FVM-003) Steam Pressure | 0.9962 | 4.9759 | 0 | 500 | Pressure (psig) |
| PT-003 | Lab Barometer | 0.9944 | 4.9656 | 10 | 20 | Pressure (psia) |
| PT-004 | U-Tube Inlet (FVM-002) Steam Pressure | 1.0016 | 5.0026 | 0 | 400 | Pressure (psig) |
| PT-009 | SG-1 PORV Blowdown Pressure | 0.9983 | 4.9816 | 0 | 300 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 1.0004 | 4.9924 | 0 | 300 | Pressure (psig) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------------|---|---------|---------|---------|---------|-----------------------|
| PT-101 | CL-1 Pressure at Rx Flange | 0.9986 | 4.9877 | 0 | 500 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 0.9958 | 4.9706 | 0 | 10 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 0.9946 | 4.9646 | 0 | 10 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 0.9988 | 4.9882 | 0 | 500 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 1.0096 | 5.0478 | 0 | 500 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 0.9938 | 4.9637 | 0 | 500 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 0.998 | 4.9874 | 0 | 500 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 0.9984 | 4.9825 | 0 | 10 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 0.9982 | 4.9886 | 0 | 500 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 0.9958 | 4.977 | 0 | 10 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 0.9921 | 4.9616 | 0 | 500 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 1.0008 | 4.9935 | 0 | 500 | Pressure (psig) |
| PT-202 | HL-2 Pressure at SG-2 Flange | 0.9978 | 4.9841 | 0 | 500 | Pressure (psig) |
| PT-203 | CL Break Pressure at Break Valve | 0.9982 | 4.988 | 0 | 500 | Pressure (psig) |
| PT-204 | SG-2 Long Tube Pressure (Top) | 1.0005 | 4.9974 | 0 | 500 | Pressure (psig) |
| PT-205 | HL-1 Pressure at SG-1 Flange | 0.9988 | 4.9838 | 0 | 400 | Pressure (psig) |
| PT-206 | HL Break Pressure at Break Valve | 0.9982 | 4.9869 | 0 | 500 | Pressure (psig) |
| PT-301 | SG-1 Pressure | 1.0123 | 5.0617 | 0 | 500 | Pressure (psig) |
| PT-302 | SG-2 Pressure | 1.0219 | 5.1023 | 0 | 500 | Pressure (psig) |
| PT-401 | ACC-1 Pressure | 0.9993 | 4.9908 | 0 | 300 | Pressure (psig) |
| PT-402 | ACC-2 Pressure | 0.9975 | 4.9802 | 0 | 300 | Pressure (psig) |
| PT-501 | U-Tube Outlet (FVM-001) Steam Pressure | 0.9979 | 4.982 | 0 | 300 | Pressure (psig) |
| PT-502 | CMT-2 Pressure | 0.998 | 4.9869 | 0 | 500 | Pressure (psig) |
| PT-602 | PZR NR Pressure | 0.9988 | 4.9747 | 300 | 400 | Pressure (psig) |
| PT-603 | PZR NR Pressure | 0.9944 | 4.9616 | 0 | 10 | Pressure (psig) |
| PT-604 | PZR WR Pressure | 0.9942 | 4.9794 | 0 | 500 | Pressure (psig) |
| PT-605 | ADS1-3 Separator Pressure | 0.9966 | 4.9725 | 0 | 100 | Pressure (psig) |
| PT-606 | IRWST Sparger Line Pressure | 0.995 | 4.9653 | 0 | 100 | Pressure (psig) |
| PT-610 | ADS4-2 Separator Pressure | 0.9983 | 4.9845 | 0 | 10 | Pressure (psig) |
| PT-611 | ADS4-1 Separator Pressure | 0.9977 | 4.9806 | 0 | 10 | Pressure (psig) |
| PT-701 | IRWST Pressure | 1.0087 | 5.0436 | 0 | 15 | Pressure (psig) |
| PT-801 | CVSP Discharge Pressure | 0.9993 | 4.9909 | 0 | 500 | Pressure (psig) |
| PT-802 | RNSP Discharge Pressure | 0.9962 | 4.9768 | 0 | 250 | Pressure (psig) |
| PT-901 | Primary Sump Pressure | 0.9947 | 4.9659 | 0 | 10 | Pressure (psig) |
| PT-902 | BAMS Header Pressure | 1.0013 | 4.9988 | 0 | 16 | Pressure (psig) |
| PT-905 | Break Separator Pressure | 1.0067 | 5.0265 | 0 | 20 | Pressure (psig) |
| TF-005 | Lab Ambient Temperature at Ground Level | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-006 | Lab Ambient Temperature at Second Level | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-007 | Lab Ambient Temperature at Third Level | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-009 | SG-1 PORV Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-010 | SG-2 PORV Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101 | CL-3 Temperature (SC-101) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-101-1.3D-2 | CL-1 Downcomer Temperature at 1.3D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-2D-1 | CL-1 Downcomer Temperature at 2D, 120 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-2D-2 | CL-1 Downcomer Temperature at 2D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-2D-3 | CL-1 Downcomer Temperature at 2D, 150 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-3D-1 | CL-1 Downcomer Temperature at 3D, 104 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-3D-2 | CL-1 Downcomer Temperature at 3D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------------|---|---------|---------|---------|---------|-----------------------|
| TF-101-3D-3 | CL-1 Downcomer Temperature at 3D, 166 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-4D-1 | CL-1 Downcomer Temperature at 4D, 90 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-4D-2 | CL-1 Downcomer Temperature at 4D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-8D-1 | CL-1 Downcomer Temperature at 8D, 90 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-101-8D-2 | CL-1 Downcomer Temperature at 8D, 135 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102 | CL-4 Temperature (SC-102) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-102-1.3D-2 | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-2D-1 | CL-2 Downcomer Temperature at 2D, 210 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-2D-2 | CL-2 Downcomer Temperature at 2D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-2D-3 | CL-2 Downcomer Temperature at 2D, 240 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-3D-1 | CL-2 Downcomer Temperature at 3D, 194 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-3D-2 | CL-2 Downcomer Temperature at 3D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-105 | CL-1 Temperature (SC-105) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|---|---------|---------|---------|---------|-----------------------|
| TF-106 | CL-2 Temperature (SC-106) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-108 | CL-2/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-113 | DVI-1/Rx Flange at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-114 | DVI-2/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-116 | DVI-2/Rx Flange at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-126 | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-142 | HL-2/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-143 | HL-1/Rx Flange at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-167 | Rx Heater Rod B2-319 at 40.13 inches | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-171 | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-201 | CL-1 at RCP-1 Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-202 | CL-2 at RCP-2 Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-203 | U-Tube Outlet (FVM-001) Steam Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|----------|---|---------|---------|---------|---------|-----------------------|
| TF-204 | CL-4 at RCP-4 Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-211 | SG-1 Long Tube at Middle Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-212 | SG-2 Long Tube at Middle Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|---|---------|---------|---------|---------|-----------------------|
| TF-311 | SG-1 Feed Header Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-312 | SG-2 Feed Header Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-502 | CMT-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-528 | CMT 2\3 HEAD TEMP | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-546 | CMT-2 Balance Line at CMT Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|---|---------|---------|---------|---------|-----------------------|
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 40 | 450 | 40 | 450 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|--------|--|---------|---------|---------|---------|------------------------------|
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-719 | IRWST Sparger Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-903 | Primary Sump Temperature (SC-903) | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-911 | CRP Discharge to IRWST Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 40 | 200 | 40 | 200 | Fluid Temperature (F) |
| TF-915 | Break Separator 6-inch Steam Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 40 | 240 | 40 | 240 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 0 | 1000 | 0 | 1000 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 40 | 1000 | 40 | 1000 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |

| Name | Description | Raw Min | Raw Max | Eng Min | Eng Max | Units |
|---------------|--|---------|---------|---------|---------|------------------------------|
| TH-602 | PZR Heater Rod #2 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches | 0 | 1000 | 0 | 1000 | Internal Rod Temperature (F) |
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-201 | SG-1 Short Tube Bottom Outlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-203 | SG-1 Short Tube Bottom Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-208 | SG-2 Long Tube Bottom Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-601 | ADS1-3 Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-602 | ADS4-2 Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-603 | ADS4-1 Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-801 | PRHR HX Long Tube Outlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-802 | PRHR HX Short Tube Outlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-805 | PRHR HX Short Tube Upper Mid-piece | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-806 | PRHR HX Long Tube Upper Mid-piece | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-807 | PRHR HX Short Tube Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-808 | PRHR HX Long Tube Inlet | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |
| TW-905 | Break Separator Wall Temperature | 0 | 1000 | 0 | 1000 | Wall Temperature (F) |



DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS

**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**

**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 300 PSIG**

NRC-COND-04

Revision 0

A handwritten signature in black ink, appearing to read "J. Groome", written over a horizontal line.

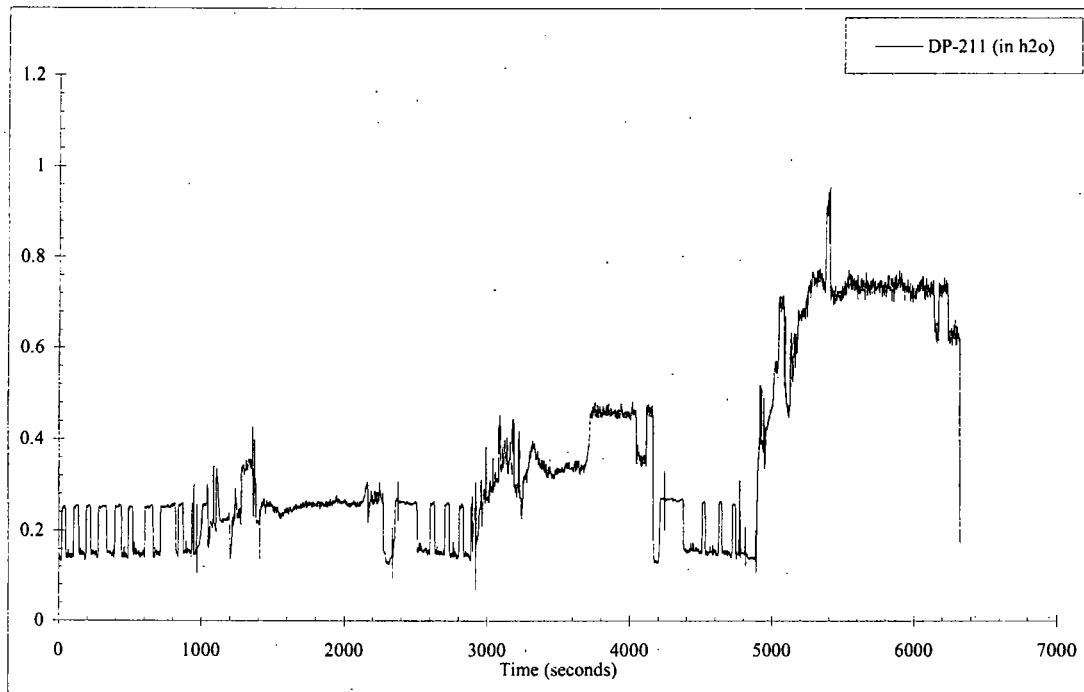
John Groome, Originator
Facility Operations Manager
Research Assistant

1/18/2007
Date

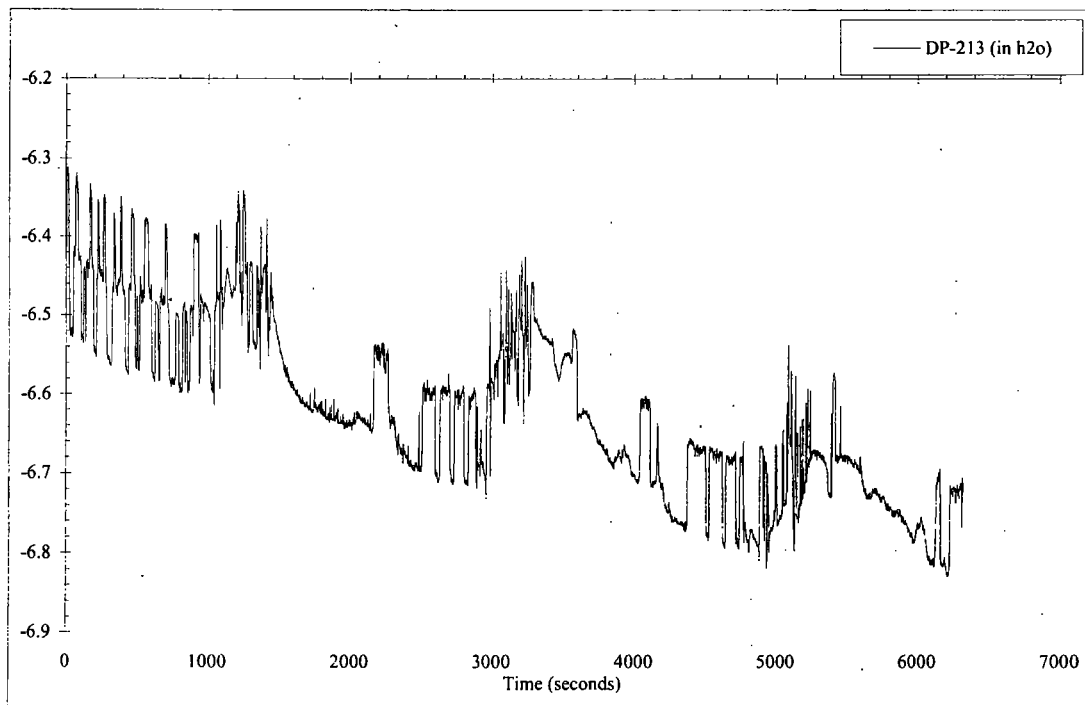
A handwritten signature in black ink, appearing to read "Brian Woods", written over a horizontal line.

Brian Woods, Approval
Program Manager
Assistant Professor

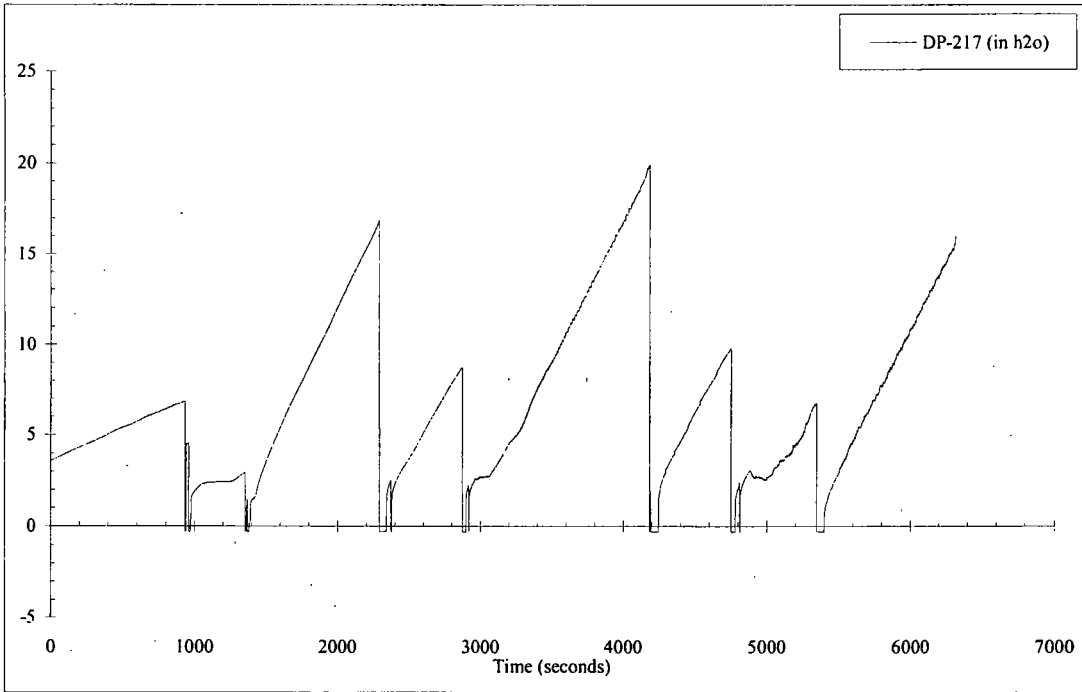
1/18/2007
Date



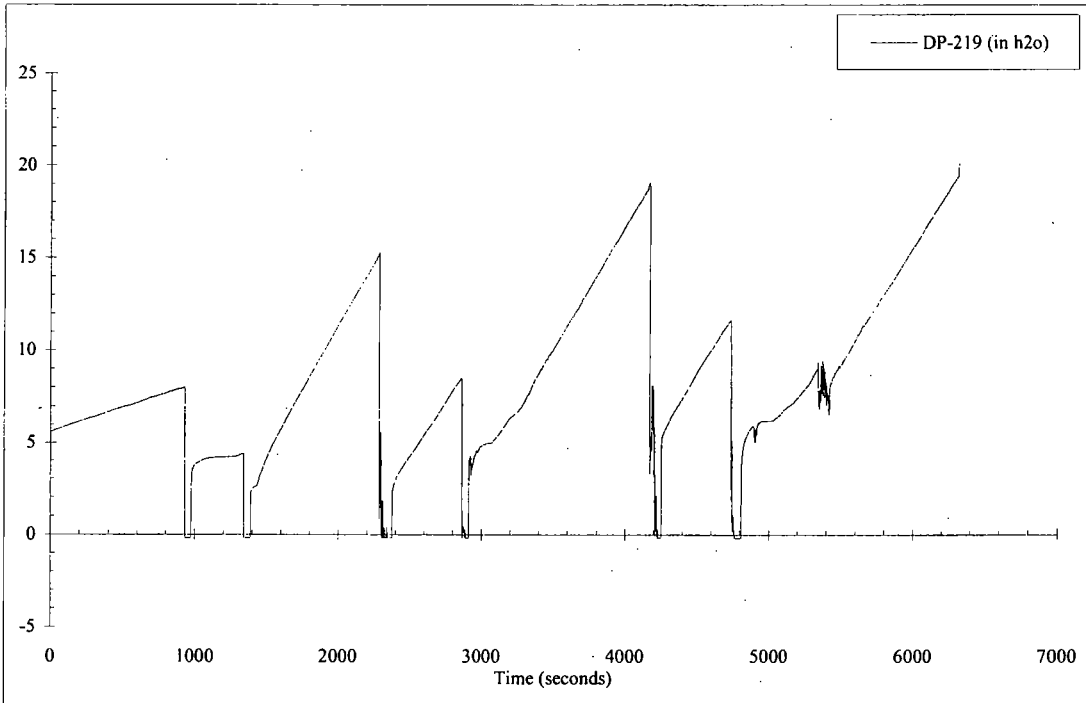
SG-1 Short Tube Entrance Losses



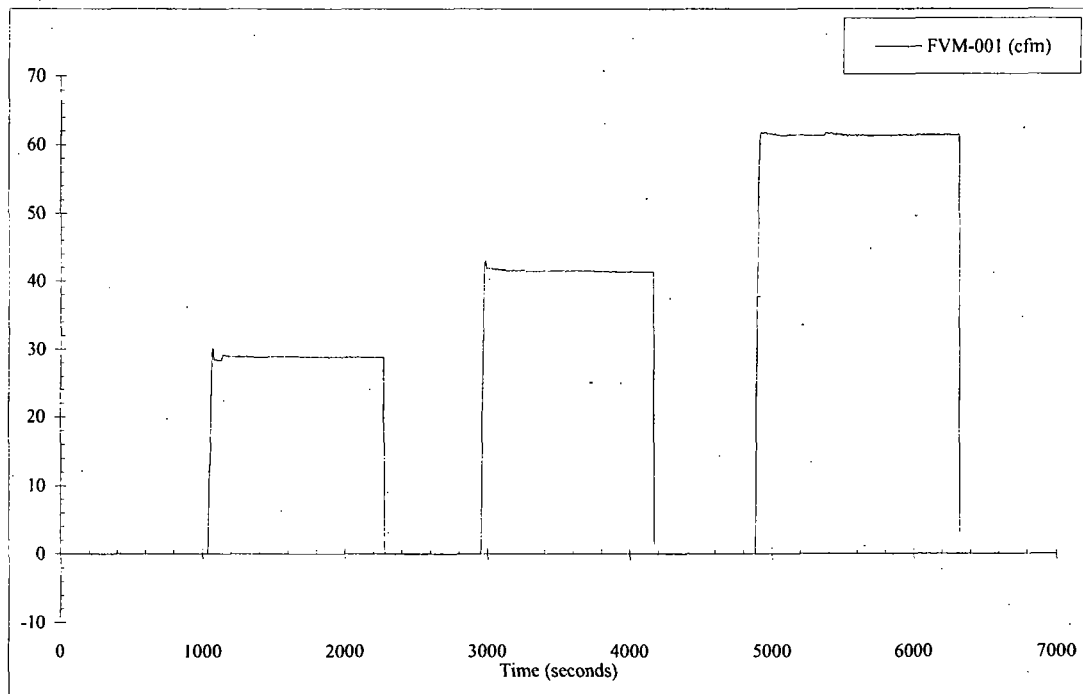
SG-1 Long Tube Exit Losses



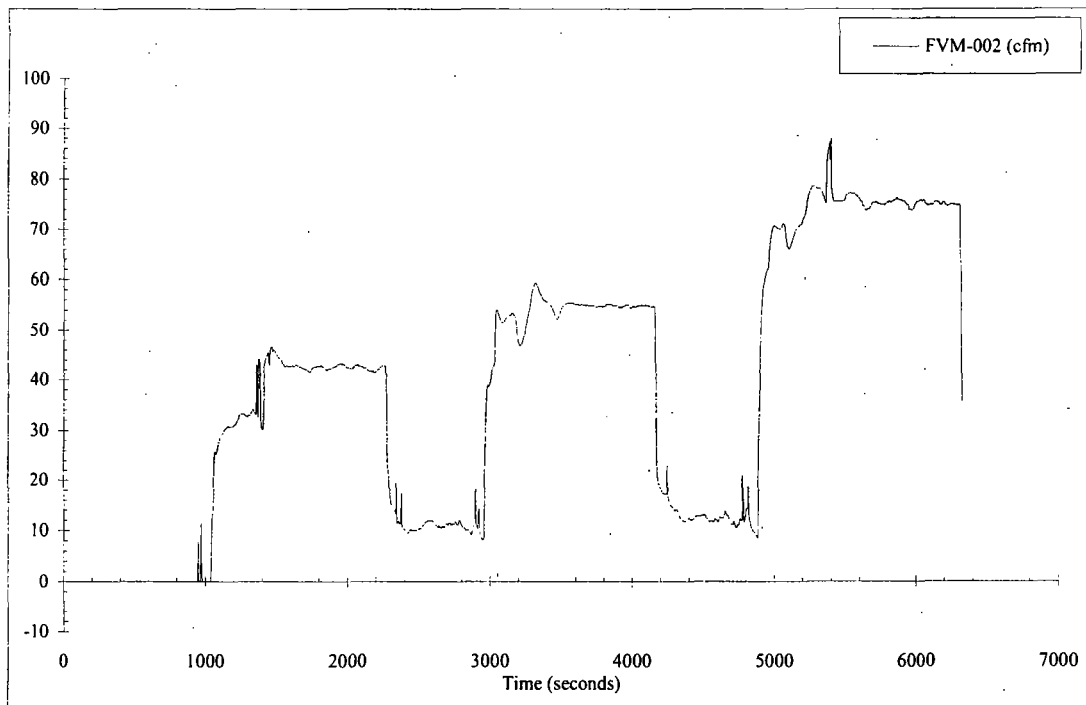
Separator Uncompensated Water Level



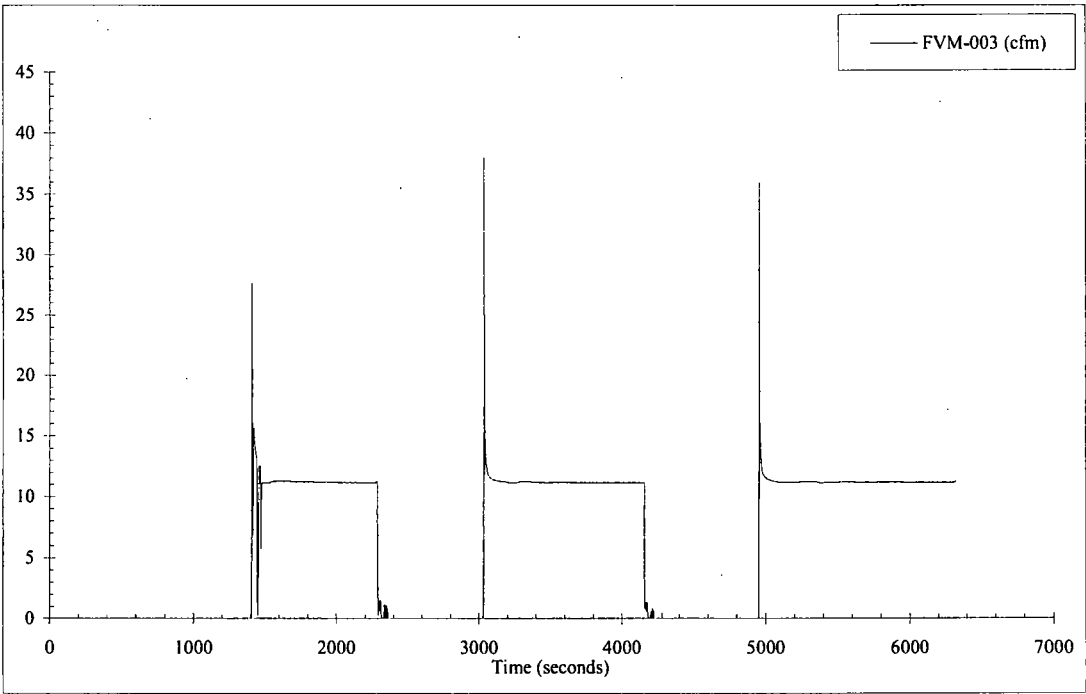
Catch Tank Uncompensated Water Level



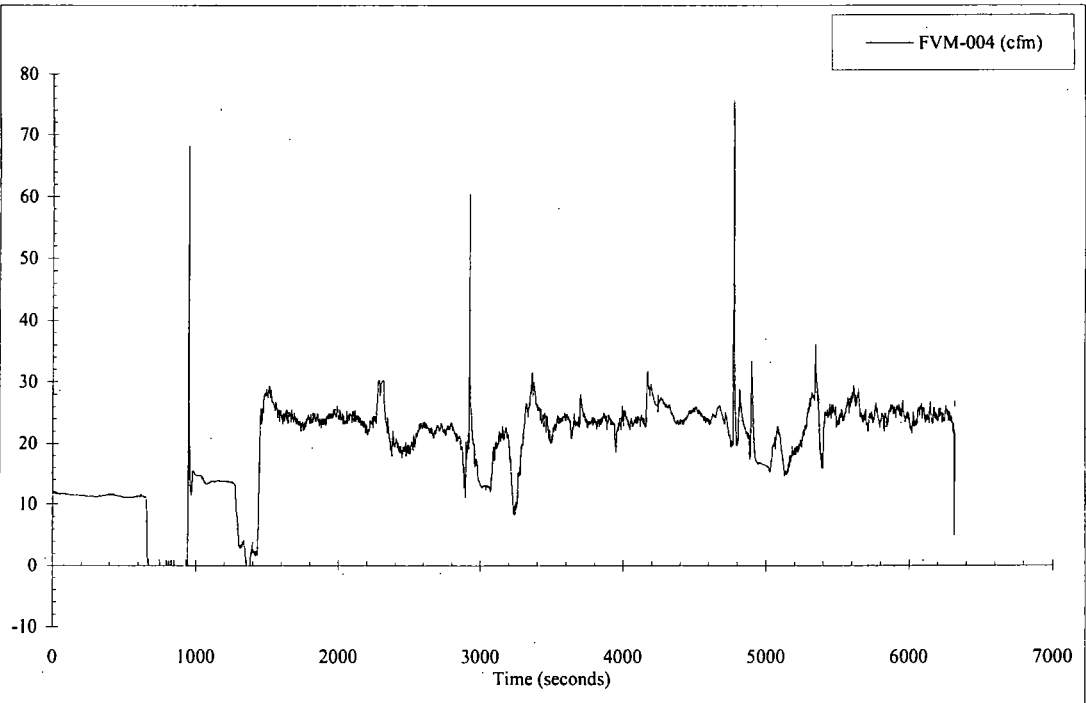
Separator Outlet Steam Flowrate



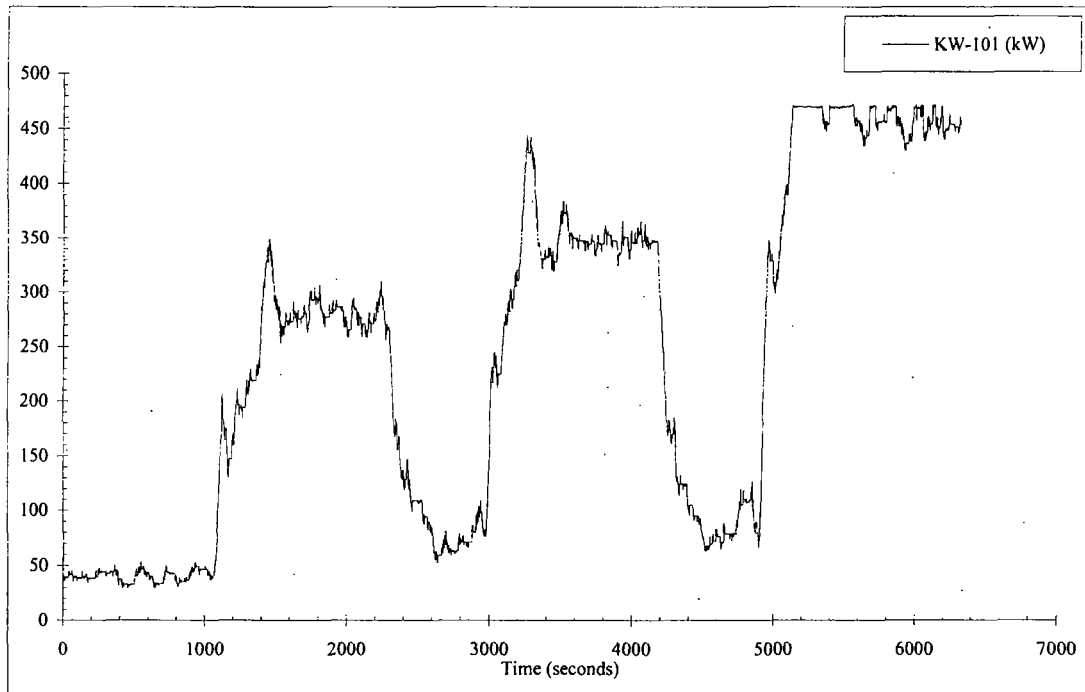
SG-2 Main Steam Flow



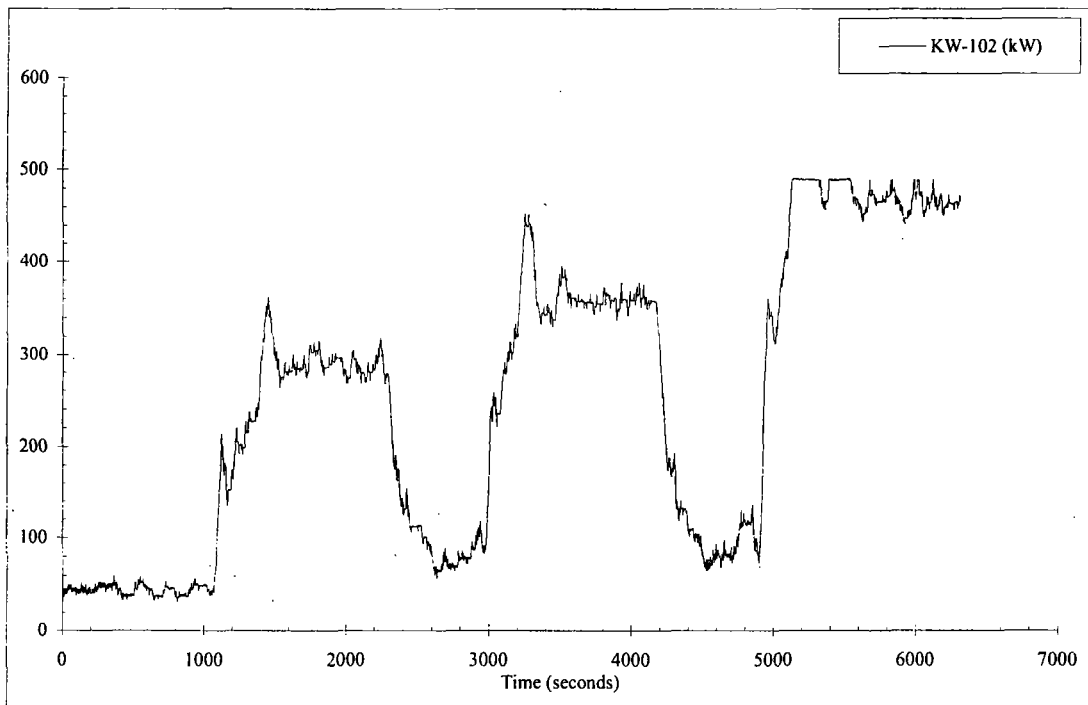
Main Steam Total Flow



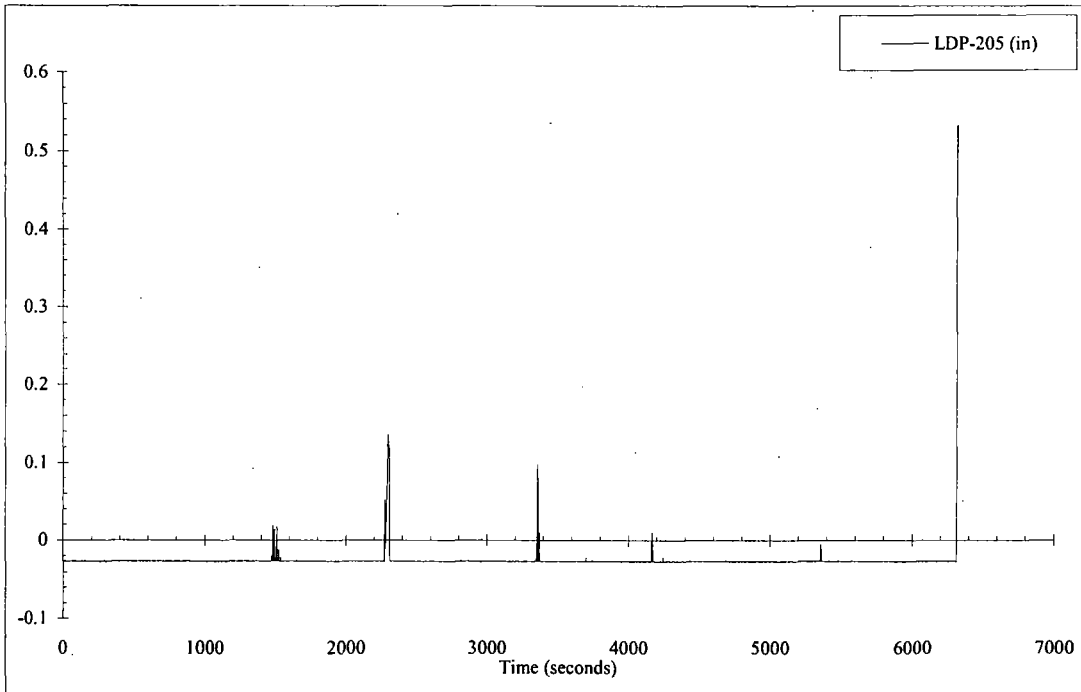
Catch Tank Steam Flow Rate



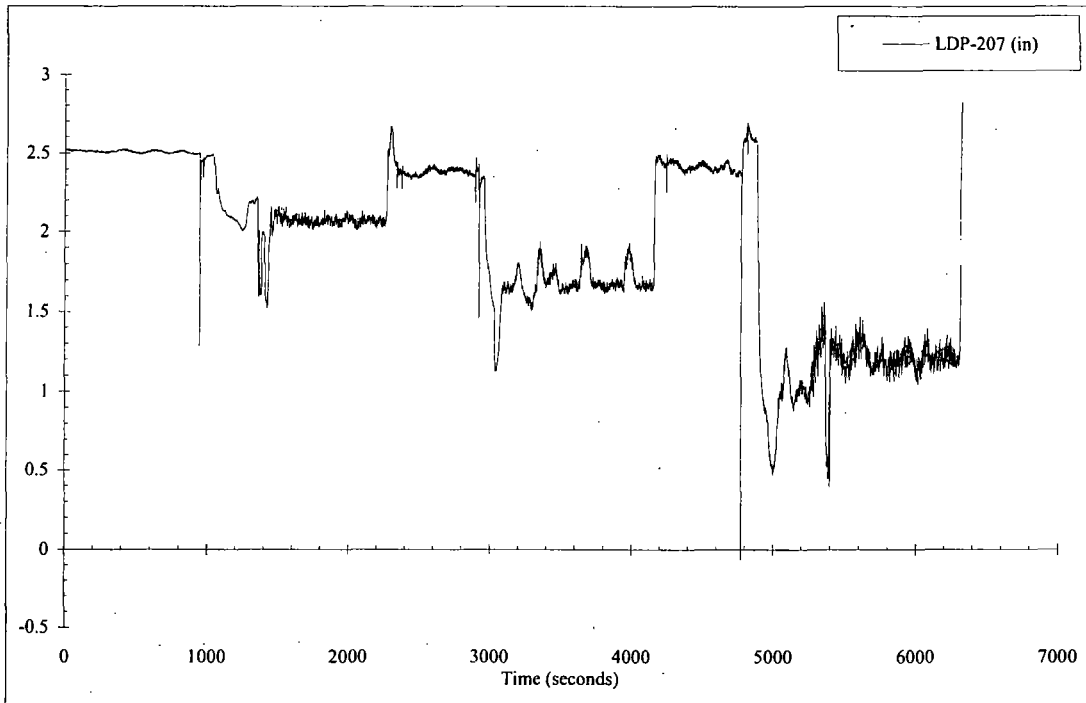
Rx Heater Group 1 Power



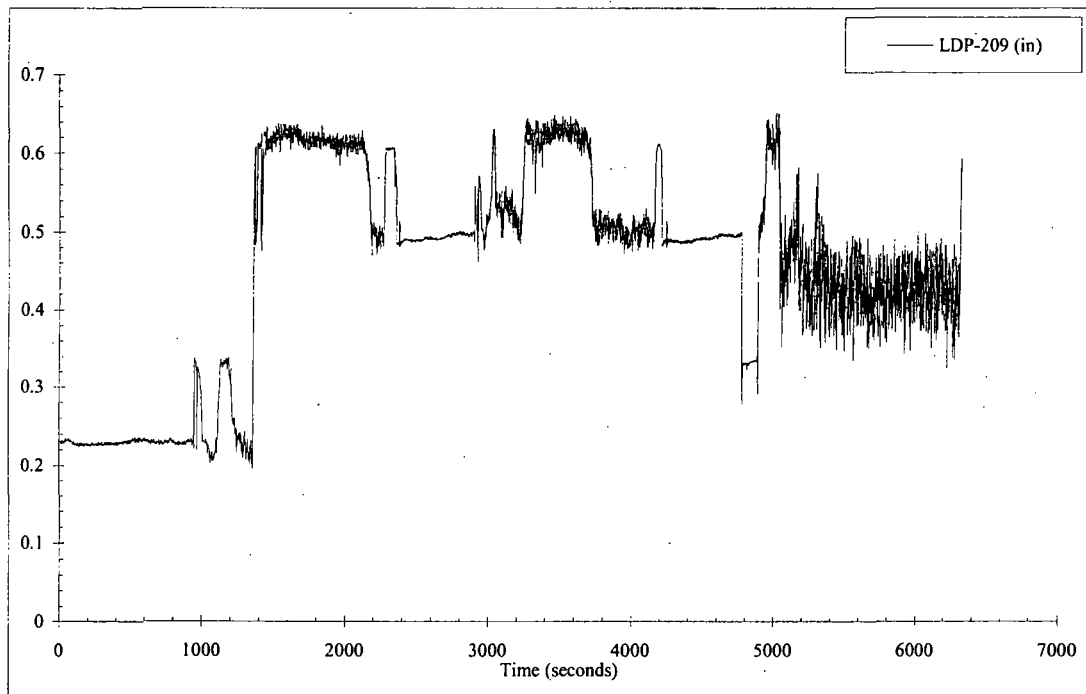
Rx Heater Group 2 Power



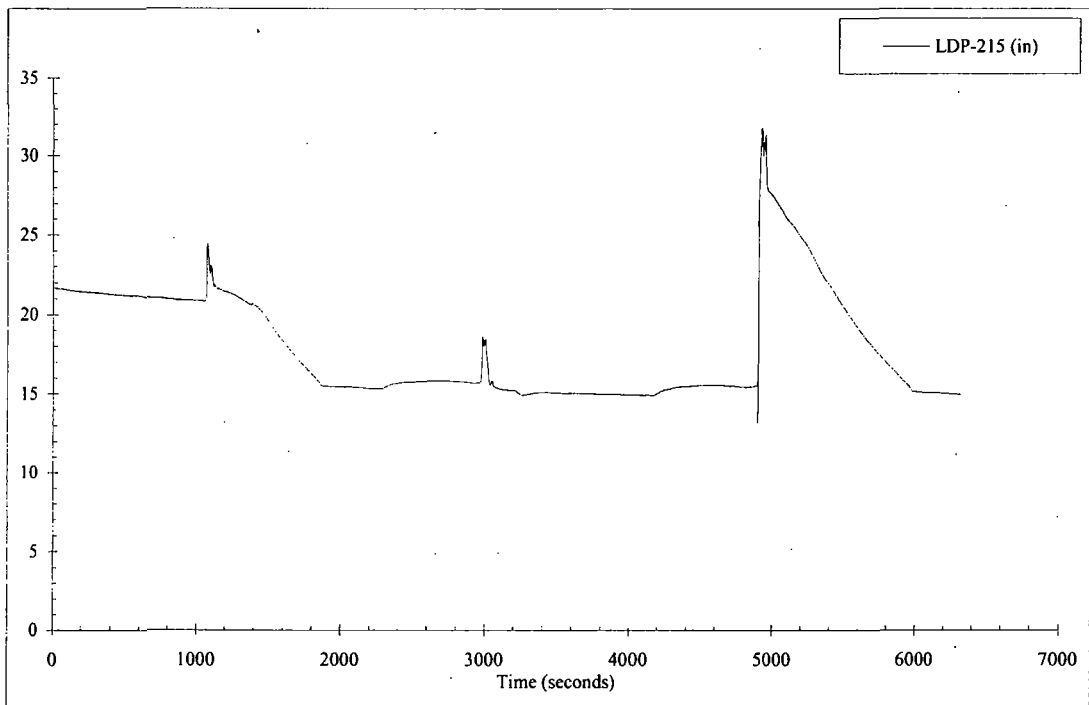
HL-1 Uncompensated Water Level



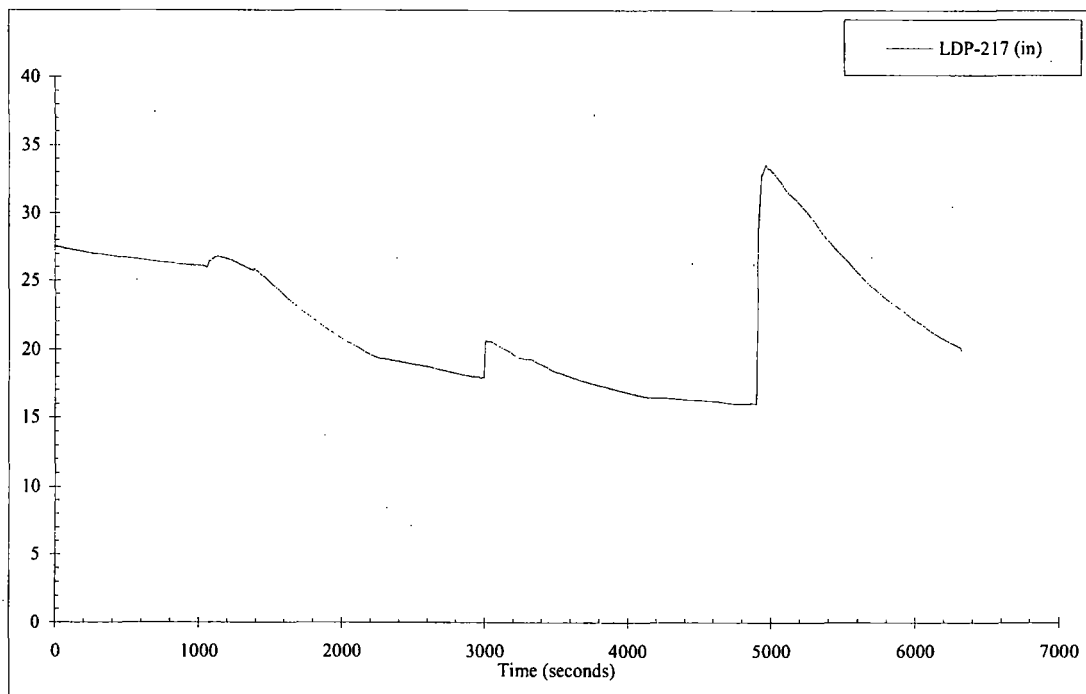
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



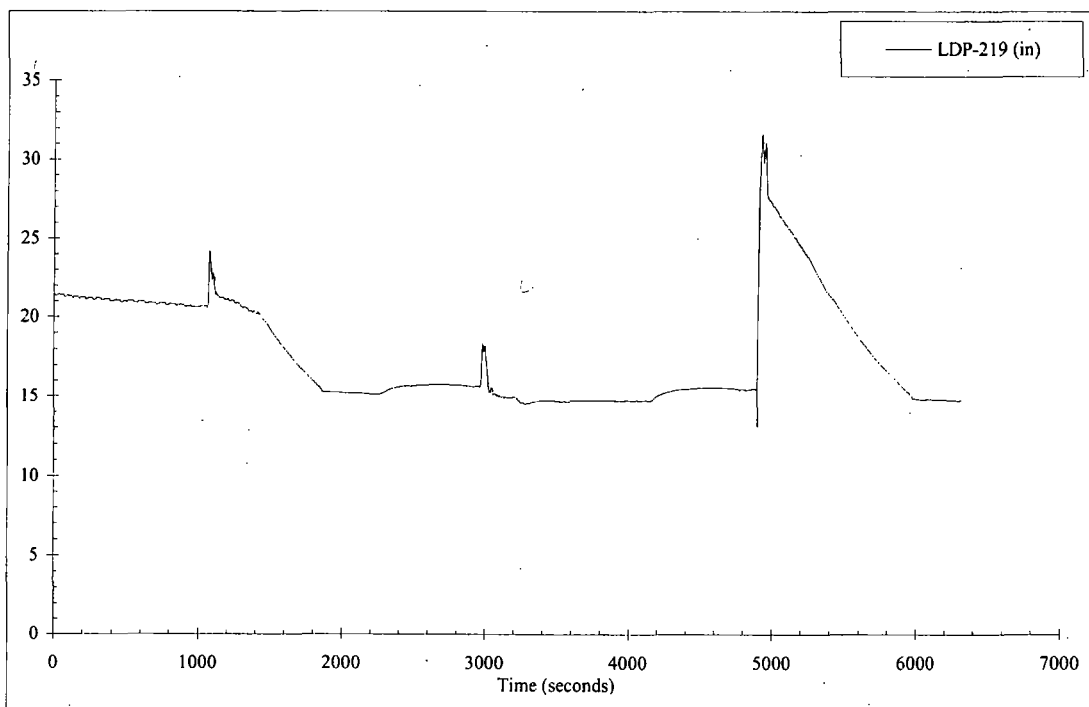
SG-1 to HL-1 Plenum Uncompensated Water Level



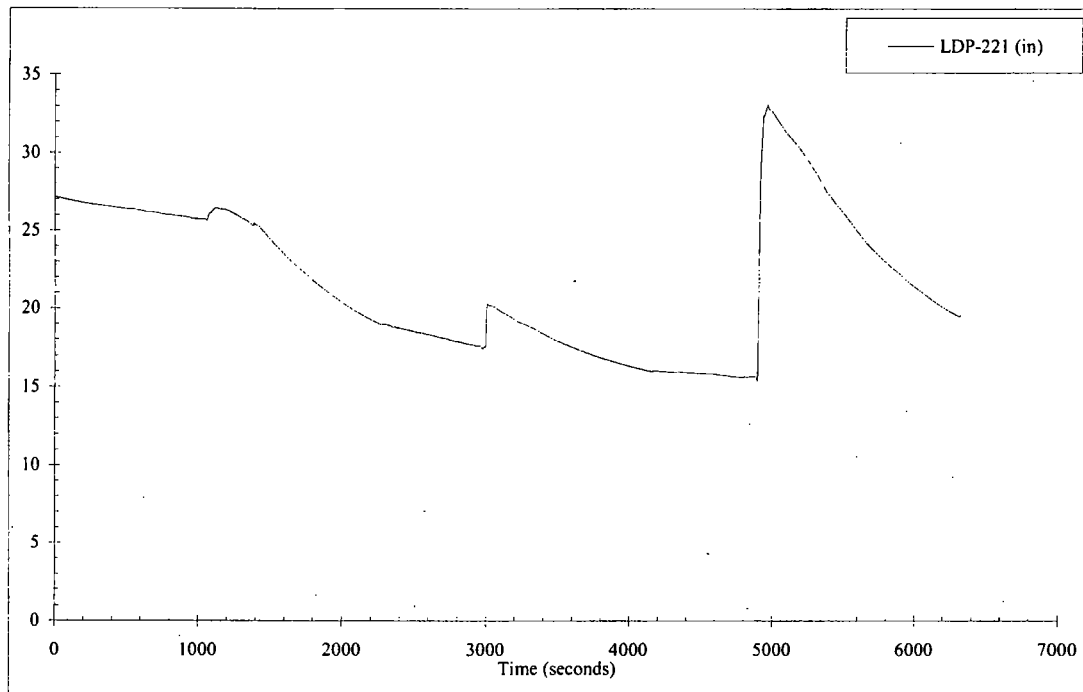
SG-1 Long Tube to HL Uncompensated Water Level



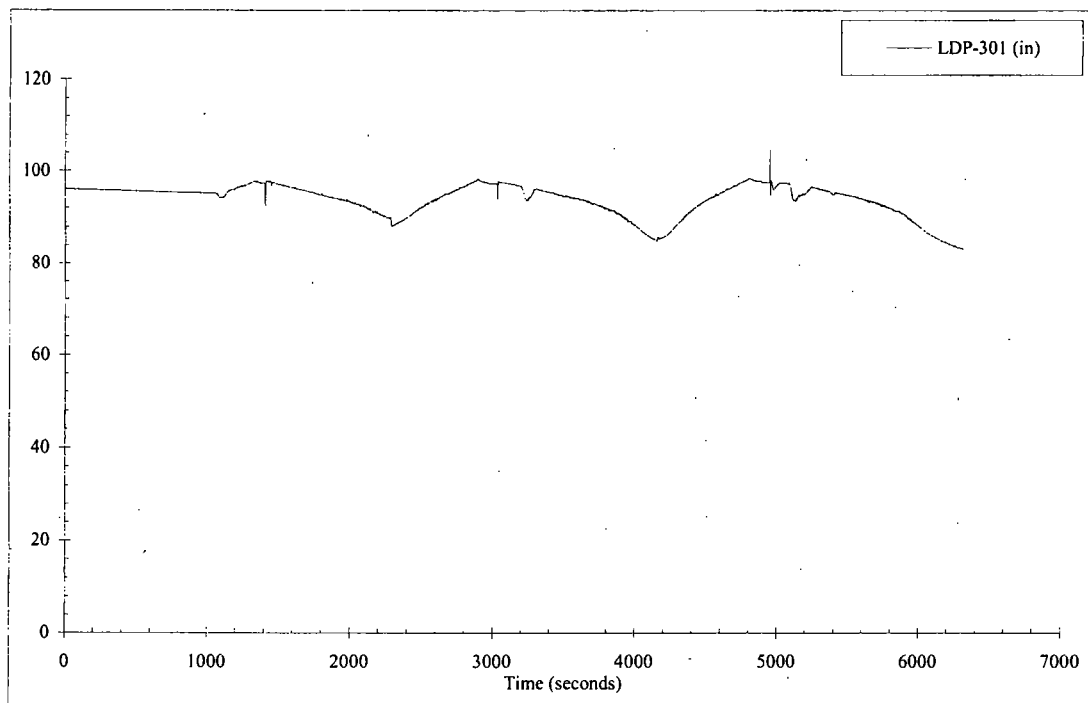
SG-1 Short Tube to HL Uncompensated Water Level



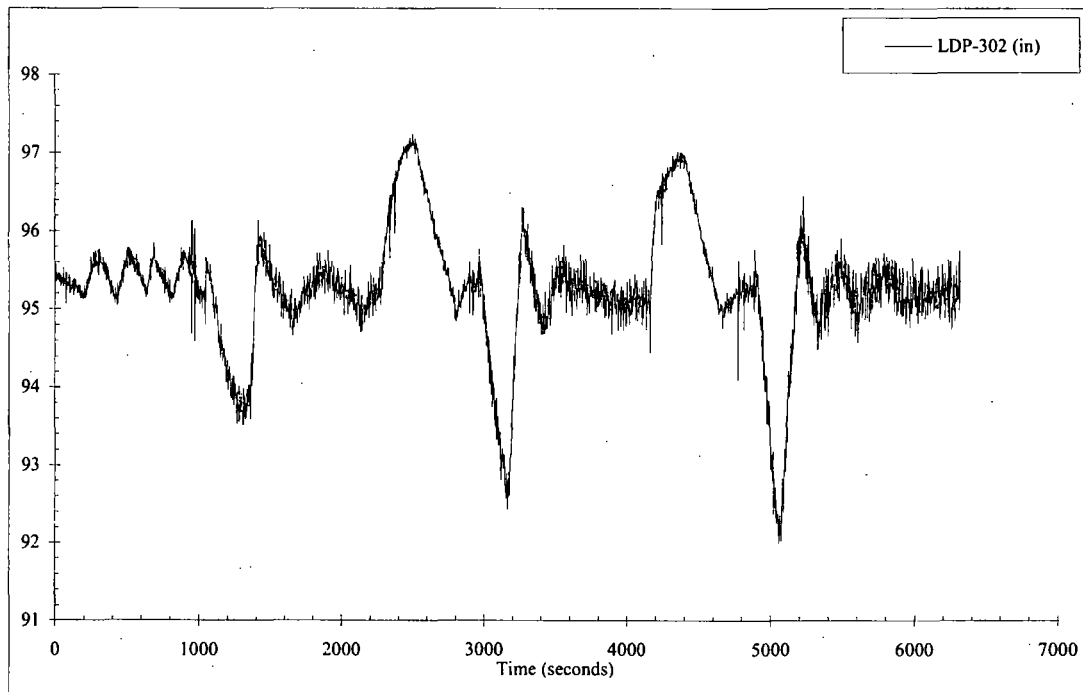
SG-1 Long Tube to CL Uncompensated Water Level



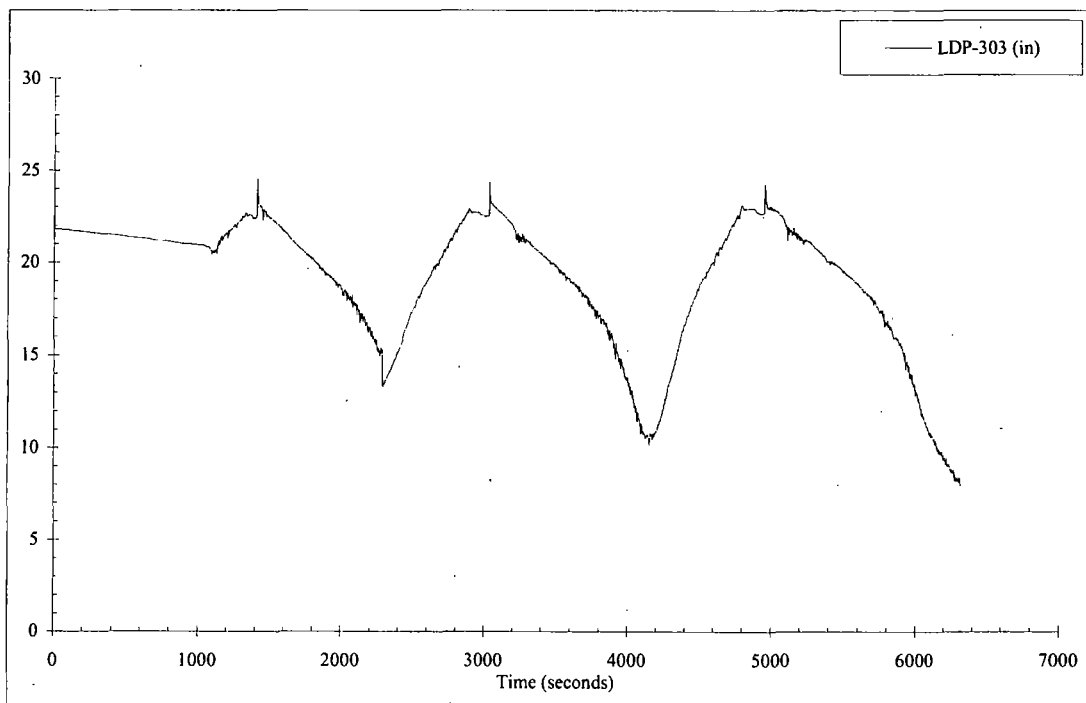
SG-1 Short Tube to CL Uncompensated Water Level



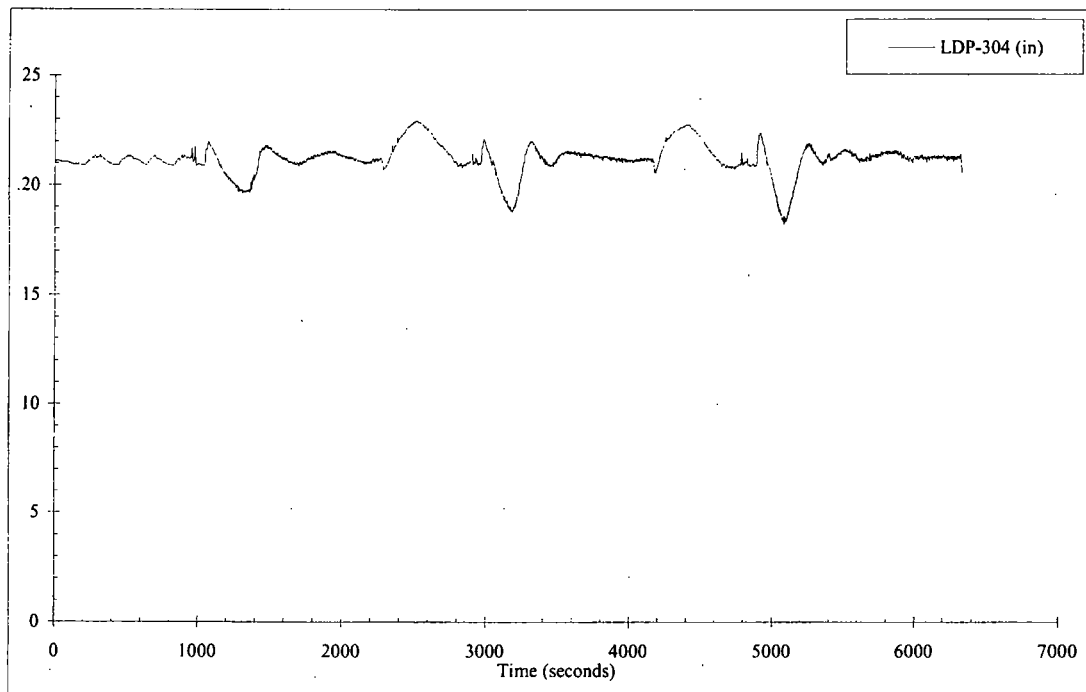
SG-1 WR Uncompensated Water Level



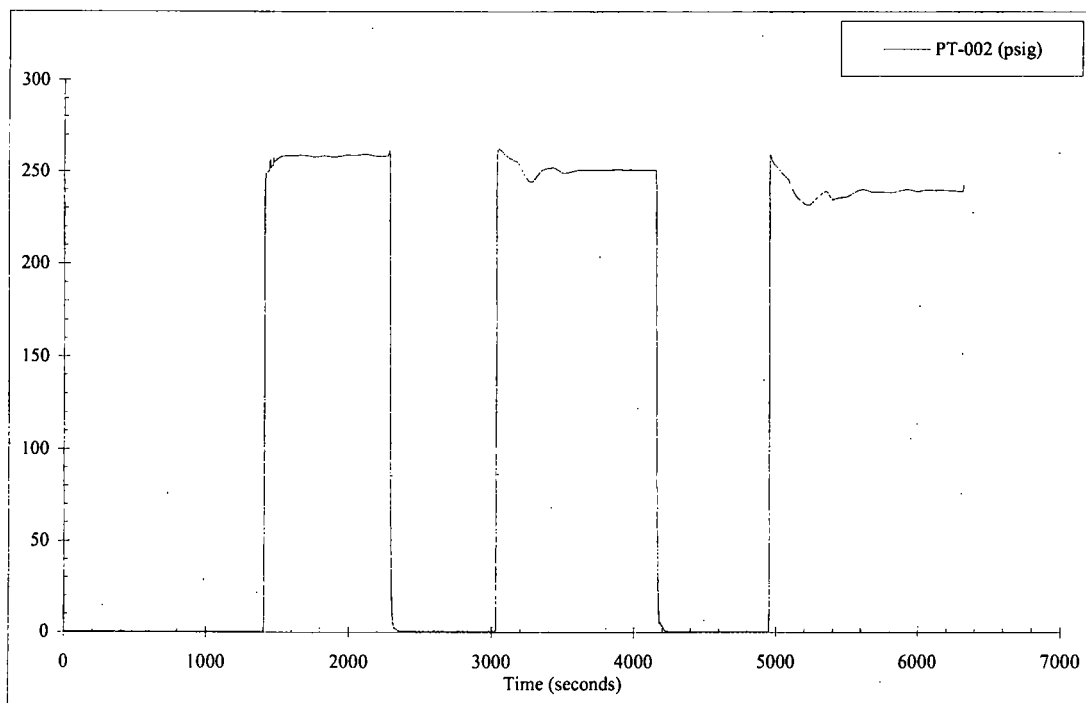
SG-2 WR Uncompensated Water Level



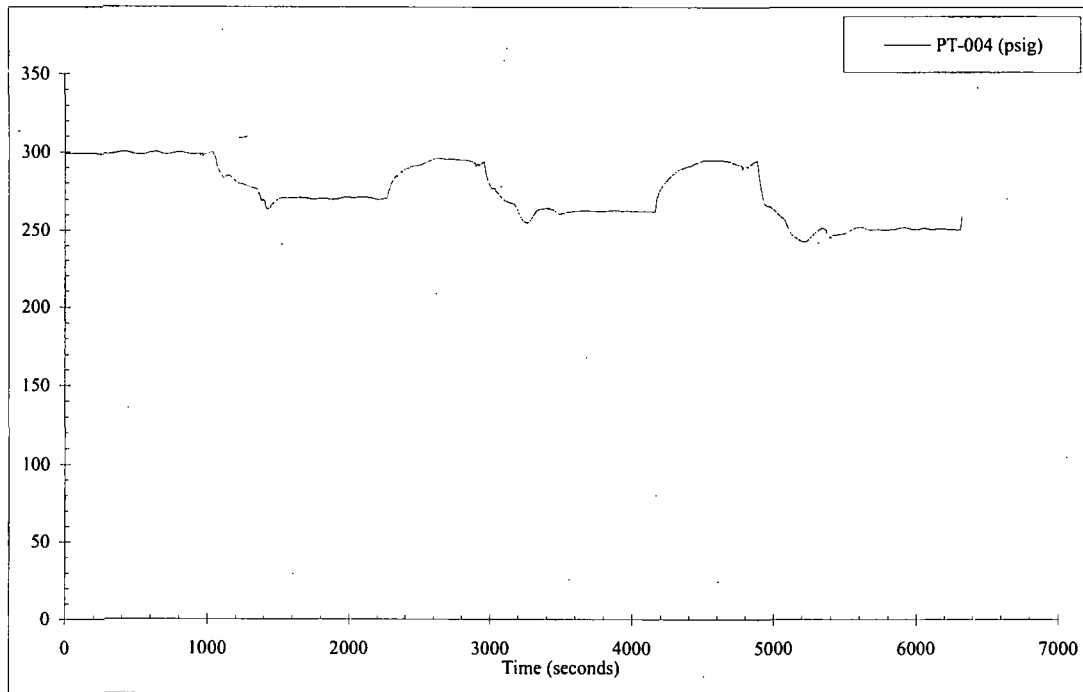
SG-1 NR Uncompensated Water Level



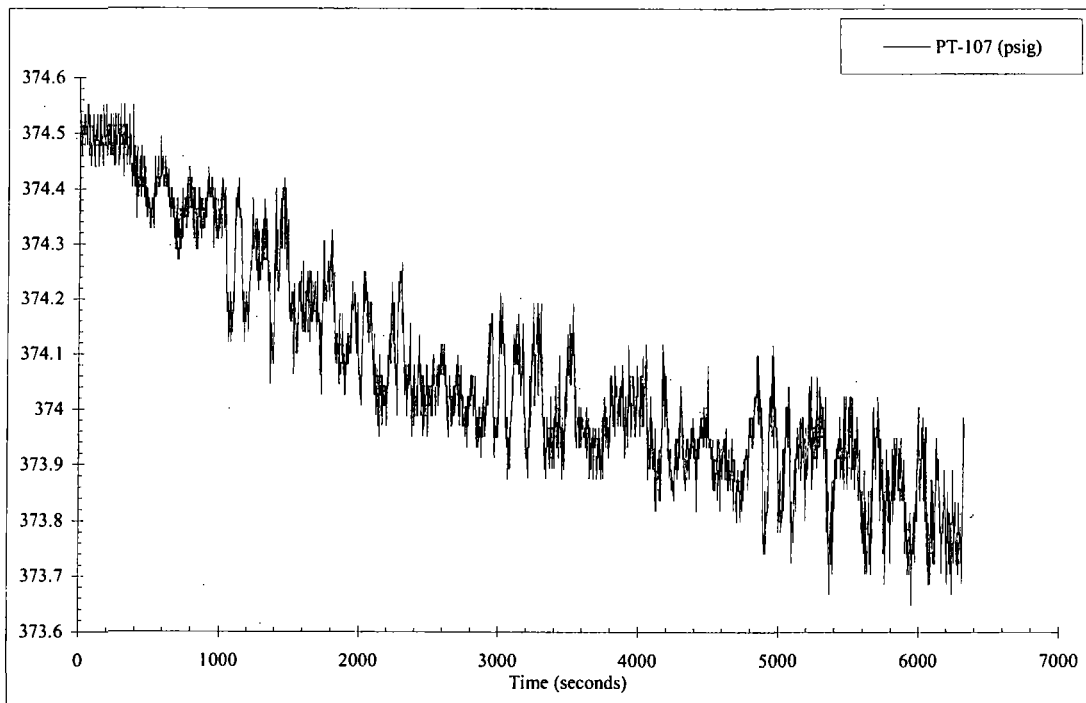
SG-2 NR Uncompensated Water Level



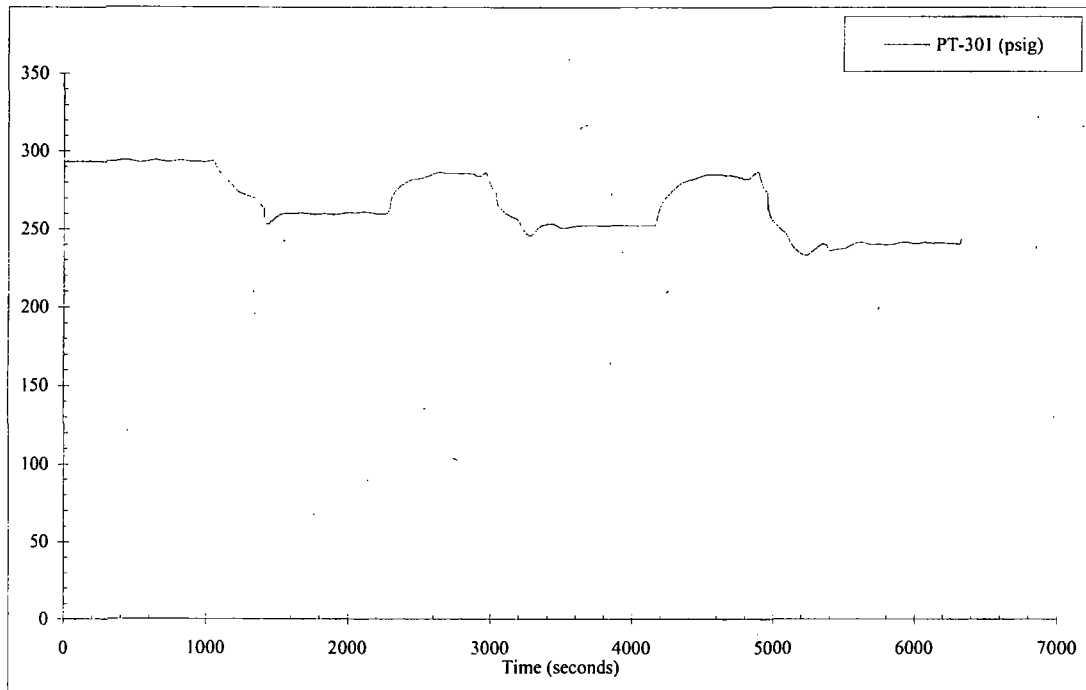
MS Header Pressure



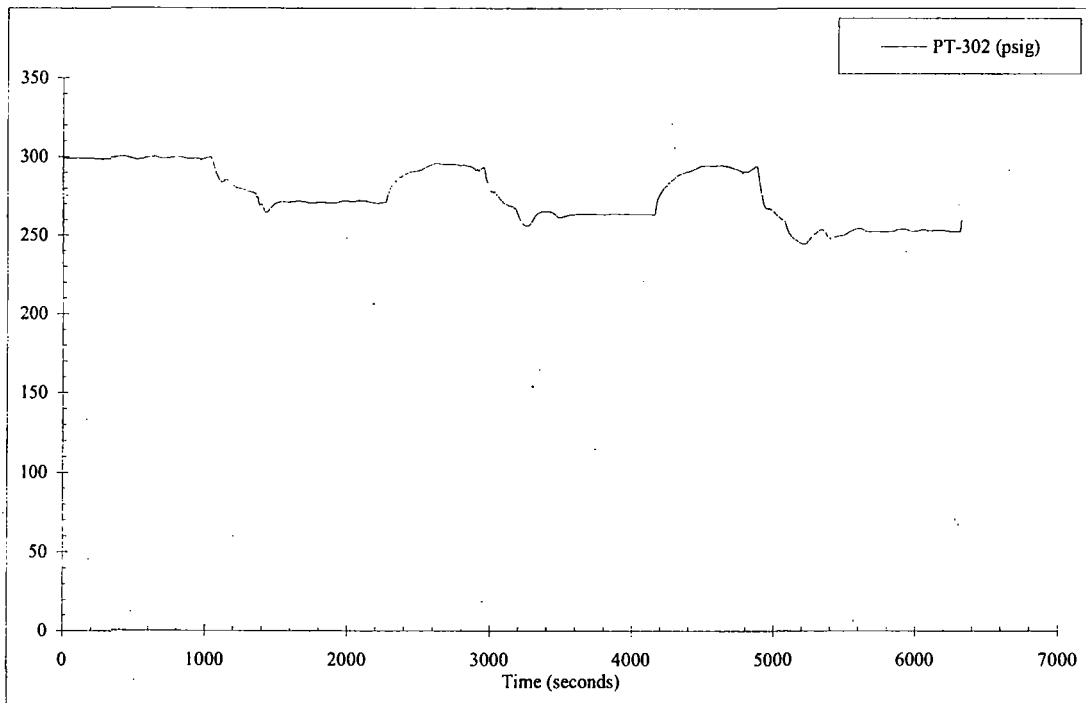
Temp Steam Pressure for FVM-002



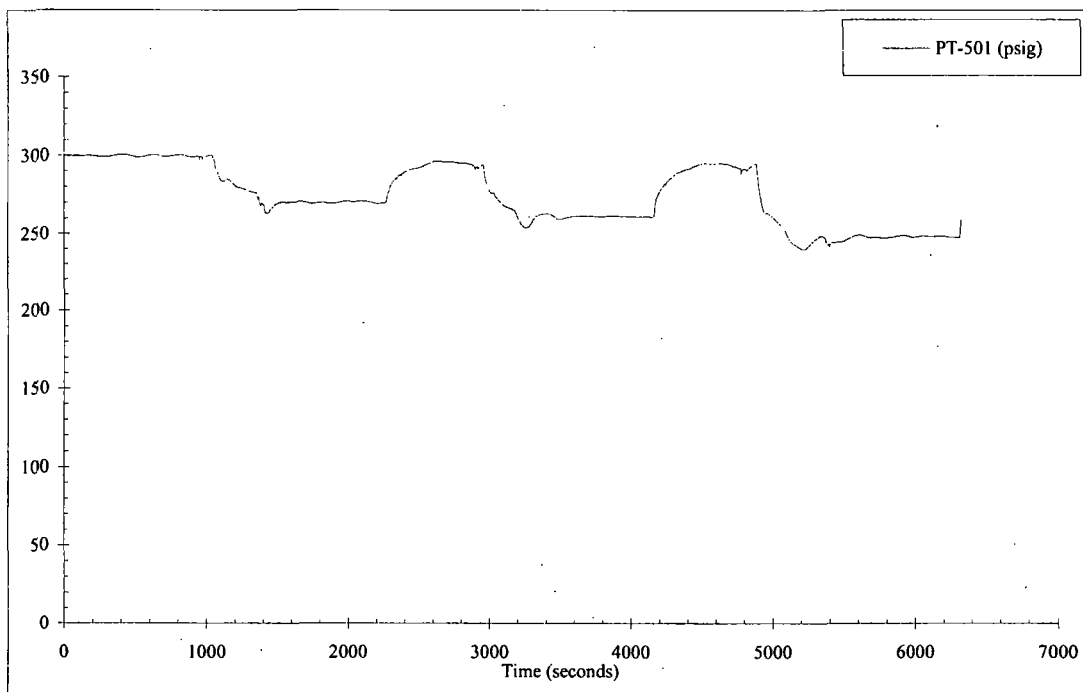
Rx Upper Head Pressure



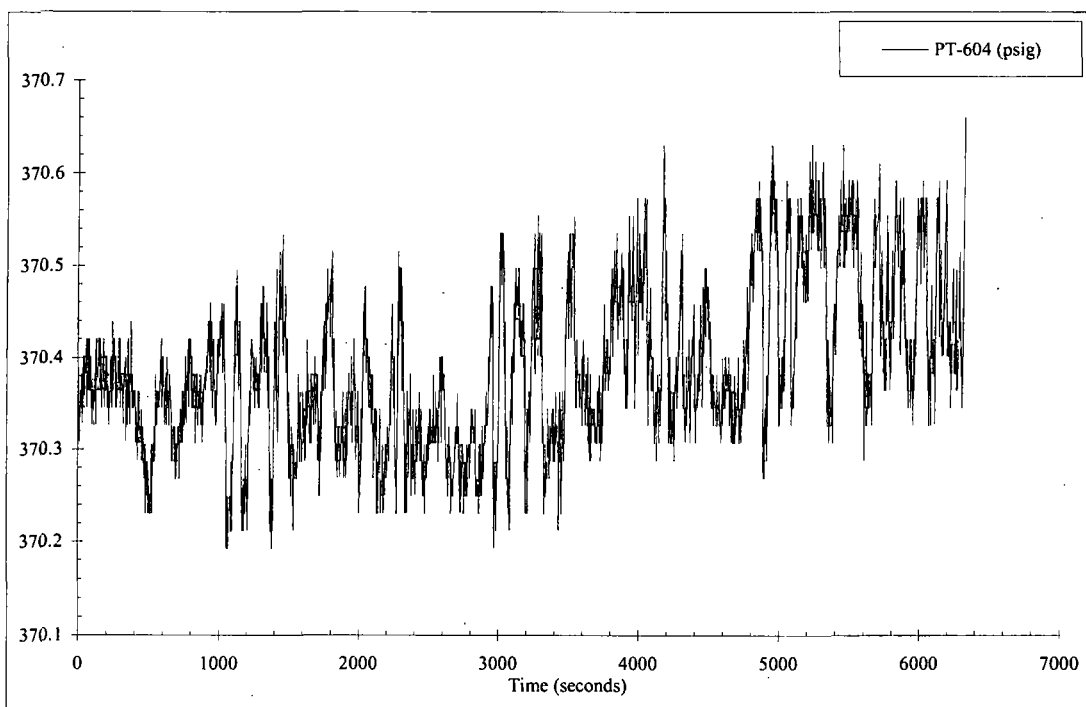
SG-1 Pressure



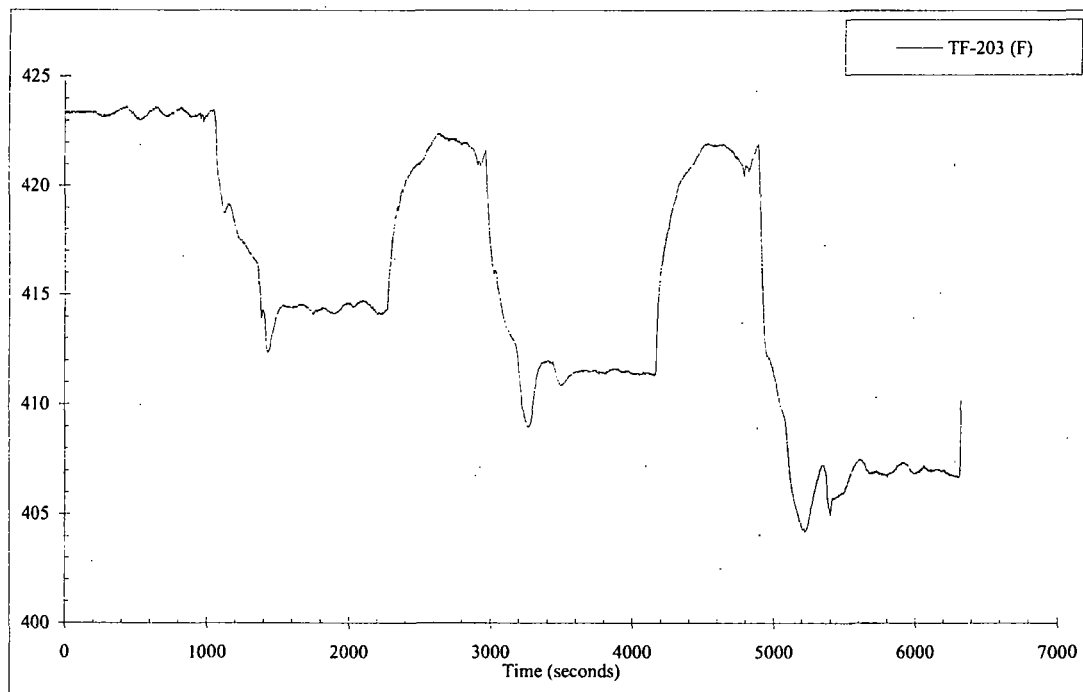
SG-2 Pressure



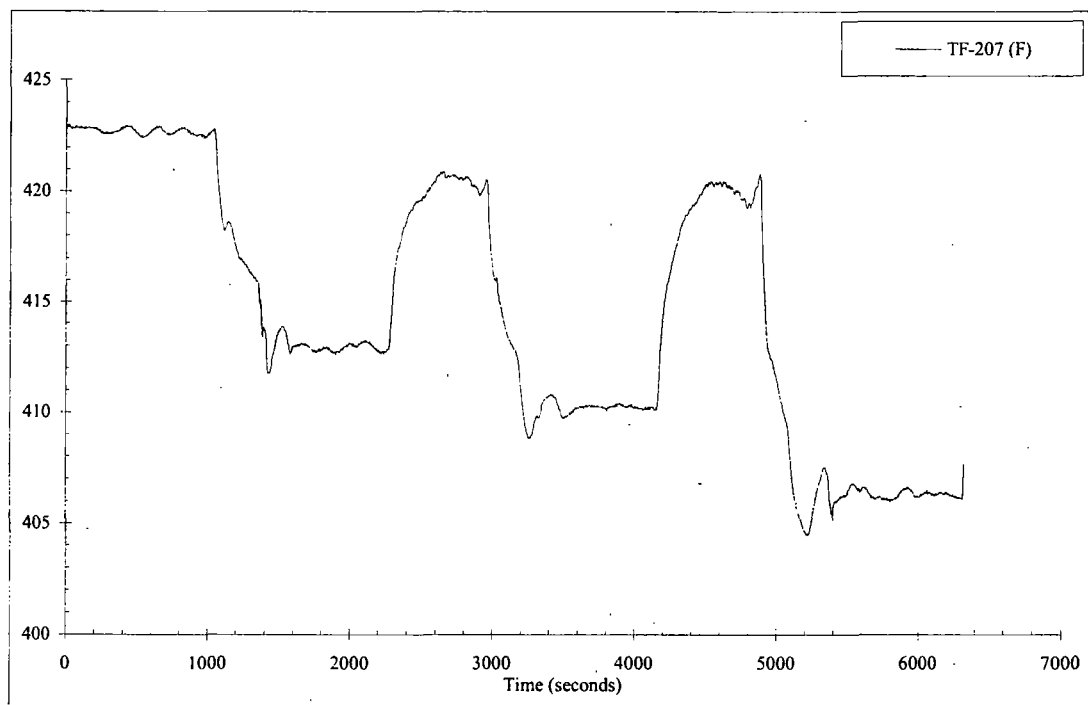
Separator Outlet Steam Pressure



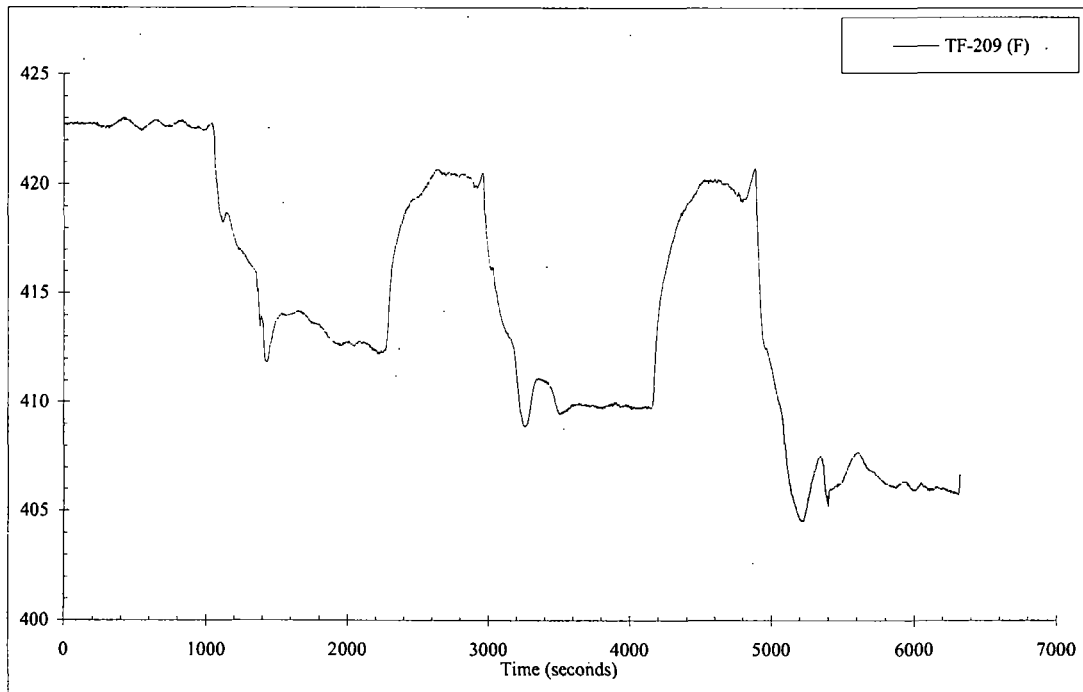
PZR WR Pressure



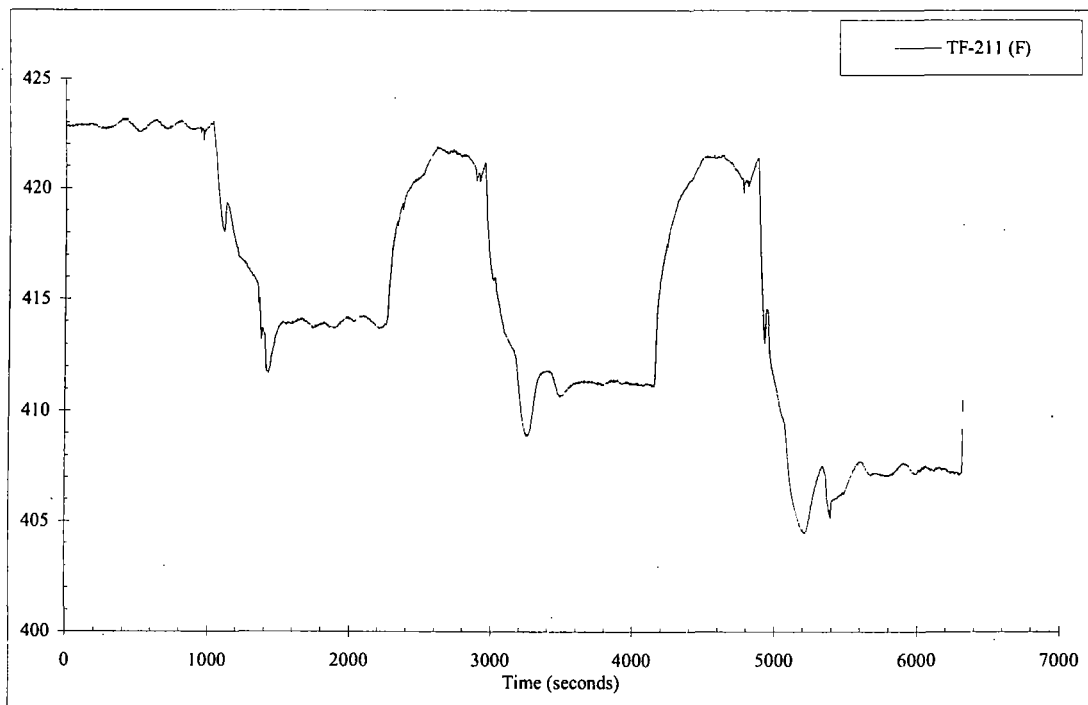
Separator Outlet Steam Temperature



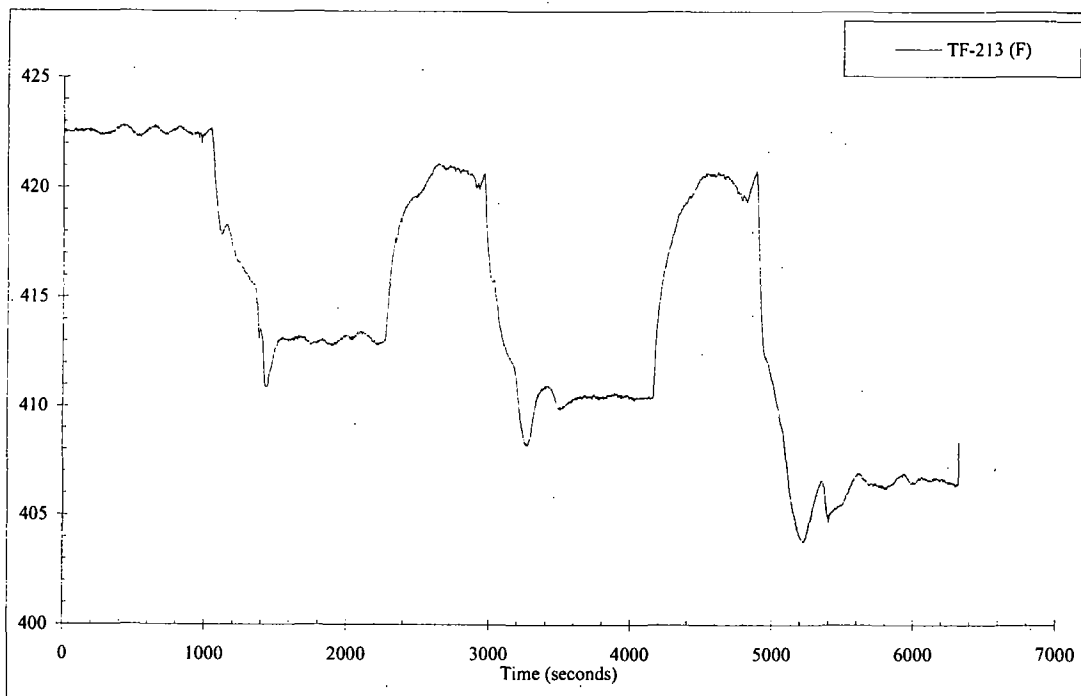
SG-1 Short Tube at Middle Outlet Side Temperature



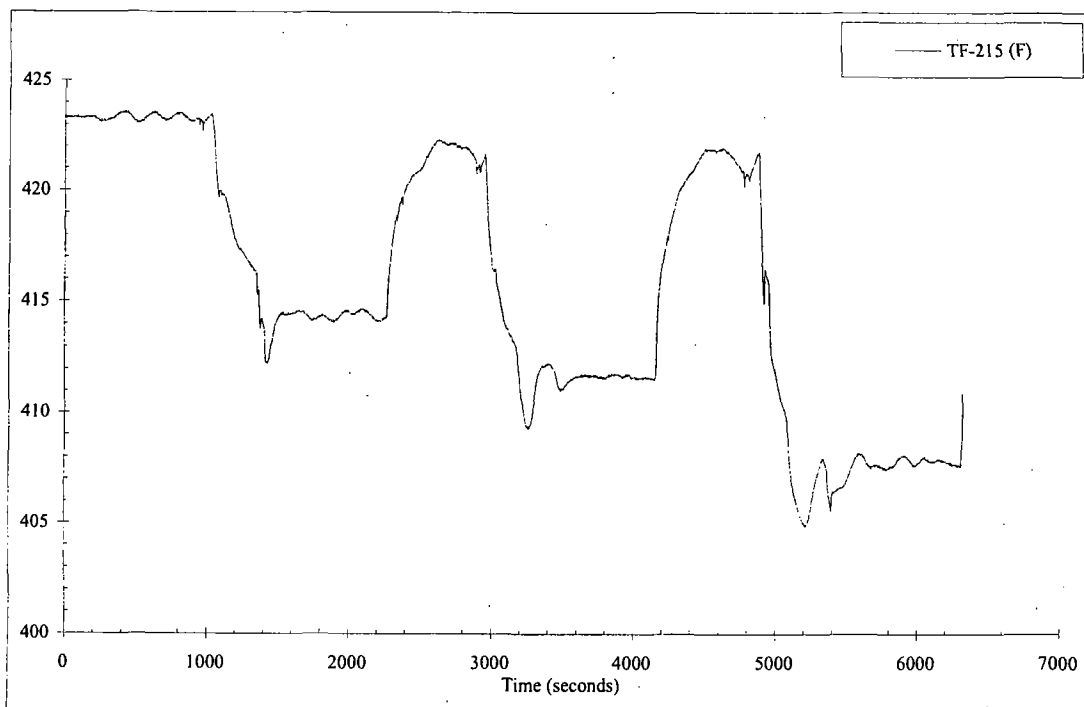
SG-1 Short Tube at Middle Inlet Side Temperature



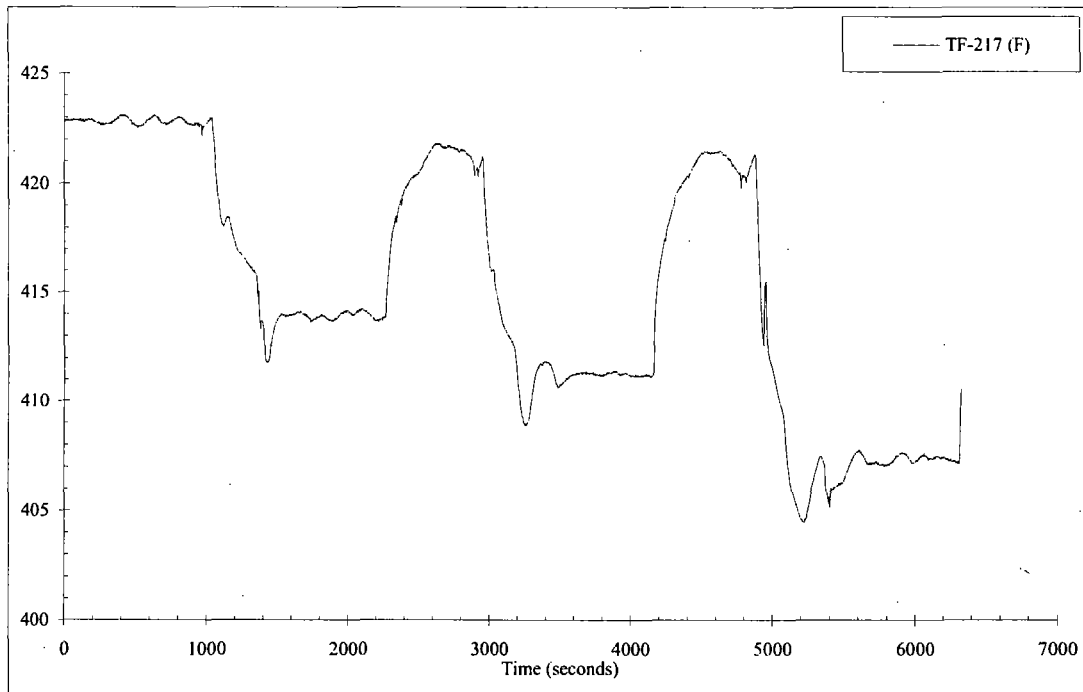
SG-1 Long Tube at Middle Outlet Temperature



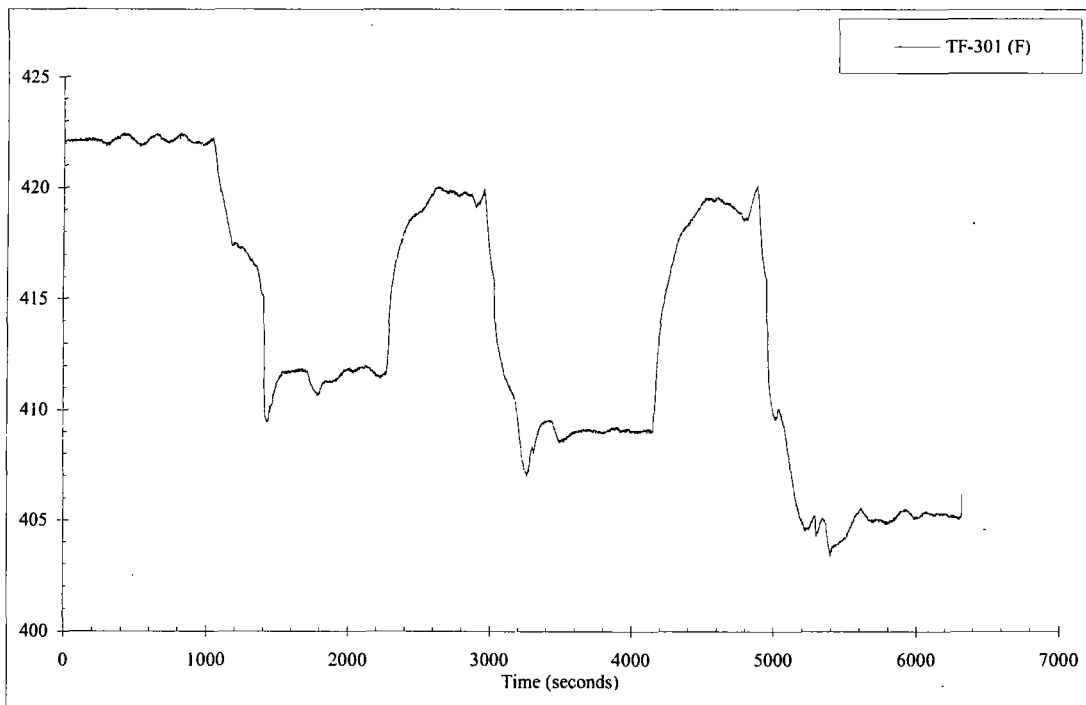
SG-1 Long Tube at Middle Inlet Temperature



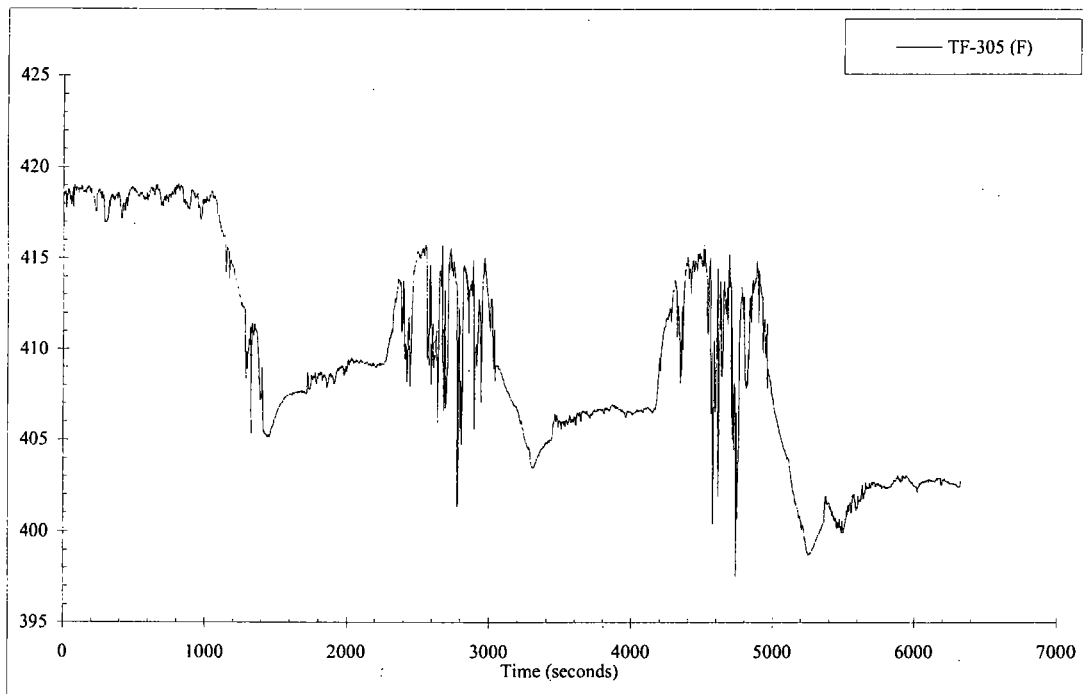
SG-1 Short Tube at Top Temperature



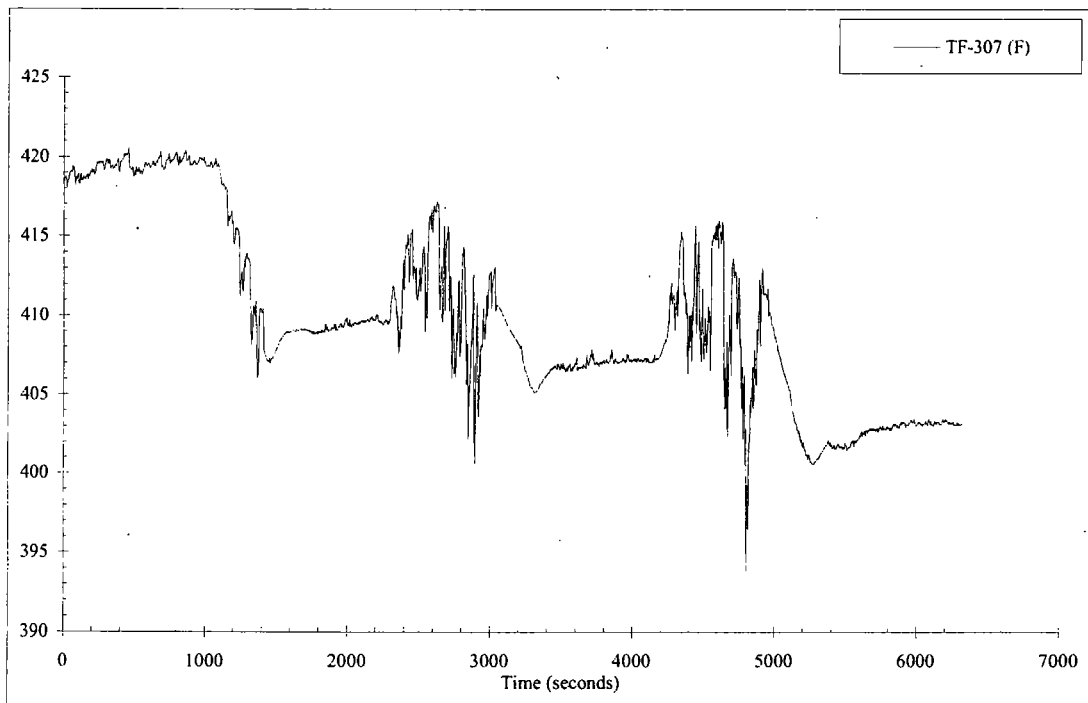
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)



SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

Sequence of Events Summary

| Date | Time | ΔT | Action | Event | | |
|-----------|------------|------|----------------|-------------------------------|----------|---------|
| 1/18/2007 | 1:23:03 PM | -119 | TEST_SW | Facility Test Switch | Switches | In Test |
| 1/18/2007 | 1:23:03 PM | -119 | dMuteSCR_Alarm | SCR Signal loss audible alarm | Status | ON |
| 1/18/2007 | 1:48:26 PM | 1403 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 1/18/2007 | 1:48:27 PM | 1404 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 1/18/2007 | 1:49:13 PM | 1450 | MF_001 | FST Fill Valve | Valves | Open |
| 1/18/2007 | 1:54:56 PM | 1793 | MF_001 | FST Fill Valve | Valves | Closed |
| 1/18/2007 | 2:03:06 PM | 2283 | M001_HS_O | SG-1 Stm Stop HS | Switches | Close |
| 1/18/2007 | 2:03:08 PM | 2285 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 1/18/2007 | 2:06:29 PM | 2486 | MF_001 | FST Fill Valve | Valves | Open |
| 1/18/2007 | 2:11:17 PM | 2774 | MF_001 | FST Fill Valve | Valves | Closed |
| 1/18/2007 | 2:15:33 PM | 3030 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 1/18/2007 | 2:15:35 PM | 3032 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 1/18/2007 | 2:23:29 PM | 3506 | MF_001 | FST Fill Valve | Valves | Open |
| 1/18/2007 | 2:29:55 PM | 3892 | MF_001 | FST Fill Valve | Valves | Closed |
| 1/18/2007 | 2:34:16 PM | 4153 | M001_HS_O | SG-1 Stm Stop HS | Switches | Close |
| 1/18/2007 | 2:34:18 PM | 4155 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 1/18/2007 | 2:40:16 PM | 4513 | MF_001 | FST Fill Valve | Valves | Open |
| 1/18/2007 | 2:45:25 PM | 4822 | MF_001 | FST Fill Valve | Valves | Closed |
| 1/18/2007 | 2:47:33 PM | 4950 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 1/18/2007 | 2:47:34 PM | 4951 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 1/18/2007 | 2:54:48 PM | 5385 | MF_001 | FST Fill Valve | Valves | Open |
| 1/18/2007 | 3:03:09 PM | 5886 | MF_001 | FST Fill Valve | Valves | Closed |
| 1/18/2007 | 3:10:26 PM | 6323 | TEST_SW | Facility Test Switch | Switches | Normal |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|-------------------|-------------------|-------------------|-------------------|--------------------------------|
| DP-111 | DP across Upper Core Plate | 4.9931 | 0.9963 | 30 | -30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 4.9796 | 0.9934 | 375 | -375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 4.9563 | 0.989 | 25 | -25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 4.9591 | 0.9931 | 25 | -25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 4.9743 | 0.9957 | 25 | -25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 4.9561 | 0.9924 | 25 | -25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 4.97 | 0.9951 | 30 | 0 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 4.9707 | 0.9949 | 30 | 0 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 4.9709 | 0.9959 | 25 | -25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 4.9736 | 0.9958 | 25 | -25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 4.9622 | 0.9941 | 50 | -50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 4.9689 | 0.9939 | 25 | -25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 4.9588 | 0.9916 | 200 | 0 | Differential Pressure (in h2o) |
| DP-203 | RCP-1 Differential Pressure | 4.9692 | 0.9946 | 27 | 0 | Differential Pressure (psid) |
| DP-204 | CL-2 Differential Pressure | 4.9814 | 0.9969 | 25 | -25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 4.978 | 0.995 | 200 | 0 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 4.984 | 0.9959 | 200 | 0 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 4.9817 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 4.9905 | 0.9984 | 25 | -25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 4.9858 | 0.998 | 25 | -25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 4.9649 | 0.9933 | 25 | -25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 4.9849 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 4.9838 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 4.9788 | 0.9965 | 15 | -15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 4.981 | 0.9973 | 15 | 0 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 4.9807 | 0.9981 | 500 | 0 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 4.9729 | 0.9964 | 500 | 0 | Differential Pressure (psid) |
| DP-217 | HL-1 to CL1 Differential Pressure at SG1 | 4.9835 | 0.9981 | 46.83 | 0 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 4.9889 | 0.9992 | 150 | 0 | Differential Pressure (in h2o) |
| DP-219 | HL-1 to CL3 Differential Pressure at SG1 | 4.9686 | 0.9949 | 30.95 | 0 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 4.9627 | 0.9936 | 150 | 0 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 4.9677 | 0.9951 | 150 | 0 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 4.983 | 0.9975 | 150 | 0 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 4.9915 | 0.9987 | 150 | 0 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 4.9665 | 0.9944 | 150 | 0 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 4.979 | 0.9975 | 400 | 0 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 4.9736 | 0.9958 | 400 | 0 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 4.9675 | 0.9948 | 150 | -150 | Differential Pressure (in h2o) |

NRC-COND-04

DAS Configuration

| | | | | | | |
|---------|--|--------|--------|-----|------|--------------------------------|
| DP-502 | CMT-2 Injection Differential Pressure | 4.9645 | 0.9947 | 150 | -150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 4.9858 | 0.998 | 150 | -150 | Differential Pressure (in h2o) |
| DP-504 | CMT-2 Balance Line Differential Pressure | 4.9955 | 1.0007 | 100 | -100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 4.9969 | 1.0008 | 10 | 0 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 4.967 | 0.9948 | 10 | 0 | Differential Pressure (psid) |
| DP-603 | ADS4-1 Venturi | 4.9847 | 0.9985 | 100 | 0 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 4.964 | 0.9941 | 100 | 0 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 4.9881 | 0.9993 | 50 | 0 | Differential Pressure (in h2o) |
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 4.9857 | 0.9991 | 50 | 0 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 4.9773 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-701 | IRWST-1 Injection Differential Pressure | 4.9872 | 0.9982 | 30 | 0 | Differential Pressure (psid) |
| DP-702 | IRWST-2 Injection Differential Pressure | 4.9871 | 0.9981 | 30 | 0 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 4.9905 | 0.9994 | 100 | 0 | Differential Pressure (psid) |
| FDP-604 | ADS-2 Flow Differential Pressure | 4.9738 | 0.9961 | 100 | 0 | Differential Pressure (psid) |
| FDP-605 | ADS-1 Flow Differential Pressure | 4.9896 | 0.9993 | 250 | 0 | Differential Pressure (psid) |
| FDP-606 | ADS-3 Flow Differential Pressure | 5.0051 | 1.0023 | 100 | 0 | Differential Pressure (psid) |
| FMM-001 | SG-1 Feed Flow | 4.9838 | 0.9961 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-002 | SG-2 Feed Flow | 4.9642 | 0.9925 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-201 | CL-1 Loop Flow | 4.9607 | 0.9921 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-202 | CL-2 Loop Flow | 4.9754 | 0.9943 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-203 | CL-3 Loop Flow | 4.9853 | 0.9974 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-204 | CL-4 Loop Flow | 4.9729 | 0.9936 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-205 | DVI-1 Flow | 4.9706 | 0.996 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-206 | DVI-2 Flow | 4.9767 | 0.9969 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-401 | ACC-1 Injection Flow | 4.9516 | 0.9932 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-402 | ACC-2 Injection Flow | 4.9772 | 0.9965 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-501 | CMT-1 Injection Flow | 4.9959 | 1.0006 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-502 | CMT-2 CL Balance Line Flow | 4.9742 | 0.9994 | 70 | 0 | Volumetric Flow Rate (gpm) |
| FMM-503 | CMT-1 CL Balance Line Flow | 4.9717 | 0.9985 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-504 | CMT-2 Injection Flow | 4.9523 | 0.9925 | 20 | 0 | Volumetric Flow Rate (gpm) |
| FMM-601 | ADS1-3 Loop Seal Flow | 5.0168 | 1.004 | 200 | 0 | Volumetric Flow Rate (gpm) |
| FMM-602 | ADS4-2 Loop Seal Flow | 5.0507 | 1.0117 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-603 | ADS4-1 Loop Seal Flow | 5.0571 | 1.0129 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-701 | IRWST/DVI-1 Injection Flow | 4.9738 | 0.9954 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-702 | IRWST/DVI-2 Injection Flow | 4.9724 | 0.9955 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-703 | IRWST Overflow | 4.9663 | 0.9966 | 10 | 0 | Volumetric Flow Rate (gpm) |
| FMM-801 | CVSP Discharge Flow | 4.9876 | 0.9998 | 8 | 0 | Volumetric Flow Rate (gpm) |
| FMM-802 | PRHR Inlet Flow | 4.9656 | 0.9966 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-803 | RNSP to DVI-2 Flow | 4.9629 | 0.9942 | 30 | 0 | Volumetric Flow Rate (gpm) |
| FMM-804 | PRHR Outlet Flow | 4.9612 | 0.9963 | 40 | 0 | Volumetric Flow Rate (gpm) |

NRC-COND-04

DAS Configuration

| | | | | | | |
|-----------|---|--------|--------|-------|-----|----------------------------|
| FMM-805 | RNSP Discharge Flow | 4.9711 | 0.9936 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-901 | Primary Sump-1 Recirculation Injection Flow | 4.9673 | 0.9936 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-902 | Primary Sump-2 Recirculation Injection Flow | 4.9726 | 0.9948 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Break Separator Loop Seal Flow | 5.1224 | 1.0902 | 90 | -90 | Volumetric Flow Rate (gpm) |
| FVM-001 | SG-1 Main Steam Flow | 5.0223 | 1.005 | 100 | 0 | Steam Flow Rate (cfm) |
| FVM-002 | SG-2 Main Steam Flow | 4.9878 | 0.9982 | 100 | 0 | Steam Flow Rate (cfm) |
| FVM-003 | Main Steam Total Flow | 4.9815 | 0.9978 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-009 | SG-1 PORV Blowdown Steam Flow | 4.9836 | 0.9967 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-010 | SG-2 PORV Blowdown Steam Flow | 4.9817 | 0.9971 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-601 | ADS1-3 Separator Steam Flow | 4.9995 | 1.0017 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 5.006 | 1.0018 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 5.0062 | 1.0024 | 1600 | 0 | Steam Flow Rate (cfm) |
| FVM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 5.0034 | 1.0026 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 5.0037 | 1.0028 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-901 | BAMS HDR 6-inch Line Steam Flow | 5.0021 | 1.0023 | 5000 | 0 | Steam Flow Rate (cfm) |
| FVM-902 | BAMS HDR 10-inch Line Steam Flow | 5.01 | 1.0027 | 12500 | 0 | Steam Flow Rate (cfm) |
| FVM-903 | Primary Sump Steam Exhaust Flow | 4.9879 | 0.9949 | 22 | 0 | Steam Flow Rate (cfm) |
| FVM-904 | Break Separator 3-inch Line Steam Flow | 4.9986 | 0.9979 | 400 | 0 | Steam Flow Rate (cfm) |
| FVM-905 | Break Separator 6-inch Line Steam Flow | 5.0036 | 1.004 | 6000 | 0 | Steam Flow Rate (cfm) |
| FVM-906 | Break Separator 8-inch Line Steam Flow | 5.0048 | 1.0025 | 4000 | 0 | Steam Flow Rate (cfm) |
| HPS-201-1 | CL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-2 | CL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-3 | CL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-1 | CL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-2 | CL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-3 | CL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-1 | CL-3 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-2 | CL-3 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-3 | CL-3 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-1 | CL-4 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-2 | CL-4 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-3 | CL-4 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-1 | HL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-2 | HL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-3 | HL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-1 | HL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-2 | HL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-3 | HL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-1 | CMT-1 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-2 | CMT-1 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |

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| HPS-509-3 | CMT-1 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-1 | CMT-2 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-2 | CMT-2 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-3 | CMT-2 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-1 | Lower PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-2 | Lower PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-3 | Lower PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-1 | ADS1-3 Common Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-2 | ADS1-3 Common Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-3 | ADS1-3 Common Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-1 | Upper PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-2 | Upper PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-3 | Upper PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-1 | PRHR HX Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-2 | PRHR HX Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-3 | PRHR HX Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| KW-101 | Rx Heater Group 1 Power | 4.3222 | 1.1171 | 472 | 0 | Power (kW) |
| KW-102 | Rx Heater Group 2 Power | 4.1621 | 1.0045 | 486 | 0 | Power (kW) |
| KW-103 | Rx Heater Group 1 Power | 4.8931 | 0.9786 | 496 | 0 | Power (kW) |
| KW-104 | Rx Heater Group 2 Power | 4.912 | 0.9946 | 492 | 0 | Power (kW) |
| KW-601 | PZR Heater Power | 4.9435 | 0.982 | 24.3 | 0 | Power (kW) |
| LCT-701 | IRWST Weight | 4.9831 | 0.9976 | 40000 | 0 | Mass (lbm) |
| LCT-901 | Primary Sump Weight | 4.977 | 0.9969 | 28800 | 0 | Mass (lbm) |
| LCT-902 | Secondary Sump Weight | 4.9845 | 0.9983 | 16700 | 0 | Mass (lbm) |
| LDP-001 | FST Uncompensated Water Level | 5.0056 | 1.0017 | 91.88 | 0 | Water Level (in) |
| LDP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 4.9645 | 0.9945 | 5.561 | 0 | Water Level (in) |
| LDP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 4.9725 | 0.9963 | 5.938 | 0 | Water Level (in) |
| LDP-103 | DVI to CL Uncompensated Water Level (270) | 4.9807 | 0.9982 | 11.692 | 0 | Water Level (in) |
| LDP-104 | DVI to CL Uncompensated Water Level (180) | 4.9748 | 0.9992 | 12.376 | 0 | Water Level (in) |
| LDP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 5.0076 | 1.0058 | 11.929 | 0 | Water Level (in) |
| LDP-106 | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 4.9732 | 0.9985 | 8.198 | 0 | Water Level (in) |
| LDP-107 | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 4.9713 | 0.9958 | 8.223 | 0 | Water Level (in) |
| LDP-108 | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 4.9683 | 0.9953 | 8.562 | 0 | Water Level (in) |
| LDP-109 | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 4.984 | 0.9988 | 19.763 | 0 | Water Level (in) |
| LDP-110 | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 4.9909 | 0.9991 | 20.02 | 0 | Water Level (in) |
| LDP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 4.9755 | 0.9963 | 4.696 | 0 | Water Level (in) |
| LDP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 4.9849 | 0.9986 | 15.614 | 0 | Water Level (in) |
| LDP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 4.9896 | 0.9996 | 24.28 | 0 | Water Level (in) |
| LDP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 4.9638 | 0.9949 | 77.59 | 0 | Water Level (in) |
| LDP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 4.9838 | 0.9983 | 11.383 | 0 | Water Level (in) |

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| LDP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 4.9848 | 0.9988 | 39.98 | 0 | Water Level (in) |
| LDP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 4.988 | 0.9996 | 40.26 | 0 | Water Level (in) |
| LDP-127 | Rx Wide Range Uncompensated Water Level | 4.999 | 1.0007 | 98.97 | 0 | Water Level (in) |
| LDP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Le | 4.9639 | 0.9946 | 39.3 | 0 | Water Level (in) |
| LDP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 4.9837 | 0.9982 | 24.166 | 0 | Water Level (in) |
| LDP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 4.9981 | 1.0014 | 78.02 | 0 | Water Level (in) |
| LDP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 4.9843 | 0.9994 | 20.135 | 0 | Water Level (in) |
| LDP-201 | CL-1 Uncompensated Water Level | 4.9961 | 1.0002 | 2.496 | 0 | Water Level (in) |
| LDP-202 | CL-2 Uncompensated Water Level | 4.9924 | 0.9994 | 2.223 | 0 | Water Level (in) |
| LDP-203 | CL-3 Uncompensated Water Level | 4.9923 | 0.9994 | 2.532 | 0 | Water Level (in) |
| LDP-204 | CL-4 Uncompensated Water Level | 4.9594 | 0.9927 | 2.47 | 0 | Water Level (in) |
| LDP-205 | HL-1 Uncompensated Water Level | 4.9663 | 0.9945 | 4.415 | 0 | Water Level (in) |
| LDP-206 | HL-2 Uncompensated Water Level | 4.9653 | 0.9944 | 4.013 | 0 | Water Level (in) |
| LDP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 4.9779 | 0.9972 | 18.3 | 0 | Water Level (in) |
| LDP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 4.9825 | 0.9969 | 19.247 | 0 | Water Level (in) |
| LDP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 4.9954 | 1.0002 | 10.939 | 0 | Water Level (in) |
| LDP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 4.9677 | 0.9943 | 16.988 | 0 | Water Level (in) |
| LDP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 4.9613 | 0.993 | 16.793 | 0 | Water Level (in) |
| LDP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 4.9836 | 0.9982 | 16.772 | 0 | Water Level (in) |
| LDP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 4.9864 | 0.9978 | 16.747 | 0 | Water Level (in) |
| LDP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 4.9953 | 1.0002 | 11.571 | 0 | Water Level (in) |
| LDP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 4.99 | 0.9992 | 102.06 | 0 | Water Level (in) |
| LDP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 4.9717 | 0.9955 | 95.55 | 0 | Water Level (in) |
| LDP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 4.9618 | 0.9932 | 96.25 | 0 | Water Level (in) |
| LDP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 4.9658 | 0.9943 | 103.14 | 0 | Water Level (in) |
| LDP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 4.9867 | 0.9992 | 102.45 | 0 | Water Level (in) |
| LDP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 4.9786 | 0.9971 | 96 | 0 | Water Level (in) |
| LDP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 4.985 | 0.9986 | 95.98 | 0 | Water Level (in) |
| LDP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 4.9628 | 0.9947 | 102.71 | 0 | Water Level (in) |
| LDP-301 | SG-1 WR Uncompensated Water Level | 5.0022 | 1.0006 | 119.25 | 0 | Water Level (in) |
| LDP-302 | SG-2 WR Uncompensated Water Level | 4.9995 | 1.0003 | 119.02 | 0 | Water Level (in) |
| LDP-303 | SG-1 NR Uncompensated Water Level | 4.9699 | 0.9934 | 31.81 | 0 | Water Level (in) |
| LDP-304 | SG-2 NR Uncompensated Water Level | 4.9748 | 0.995 | 31.52 | 0 | Water Level (in) |
| LDP-401 | ACC-1 Uncompensated Water Level | 4.987 | 0.9951 | 38.26 | 0 | Water Level (in) |
| LDP-402 | ACC-2 Uncompensated Water Level | 5.166 | 1.0332 | 38.34 | 0 | Water Level (in) |
| LDP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 4.9834 | 0.9986 | 5.31 | 0 | Water Level (in) |
| LDP-502 | CMT-2 WR Uncompensated Water Level | 5.1958 | 1.0396 | 57.5 | 0 | Water Level (in) |
| LDP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 4.984 | 0.9979 | 46.77 | 0 | Water Level (in) |
| LDP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 4.9793 | 0.9972 | 5.226 | 0 | Water Level (in) |
| LDP-505 | CMT-1 NR Uncompensated Water Level (Top) | 4.994 | 1 | 5.486 | 0 | Water Level (in) |

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| LDP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 4.9823 | 0.9975 | 46.96 | 0 | Water Level (in) |
| LDP-507 | CMT-1 WR Uncompensated Water Level | 5.1887 | 1.0383 | 57.5 | 0 | Water Level (in) |
| LDP-508 | CMT-2 NR Uncompensated Water Level (Top) | 4.9913 | 0.9994 | 5.309 | 0 | Water Level (in) |
| LDP-509 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 4.9772 | 0.9968 | 78.84 | 0 | Water Level (in) |
| LDP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 4.9653 | 0.9942 | 78.28 | 0 | Water Level (in) |
| LDP-601 | PZR WR Uncompensated Water Level | 5.0006 | 0.9991 | 140.47 | 0 | Water Level (in) |
| LDP-602 | PZR Surge Line Uncompensated Water Level | 4.9777 | 0.997 | 47.5 | 0 | Water Level (in) |
| LDP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 4.9735 | 0.9963 | 3.533 | 0 | Water Level (in) |
| LDP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 4.9724 | 0.9958 | 18.696 | 0 | Water Level (in) |
| LDP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 4.9737 | 0.996 | 4.127 | 0 | Water Level (in) |
| LDP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 4.9731 | 0.9964 | 3.82 | 0 | Water Level (in) |
| LDP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 4.996 | 1.0011 | 14.717 | 0 | Water Level (in) |
| LDP-610 | ADS1-3 Separator Uncompensated Water Level | 5.193 | 1.0399 | 45.24 | 0 | Water Level (in) |
| LDP-611 | ADS4-1 Separator Uncompensated Water Level | 5.1628 | 1.0342 | 55.97 | 0 | Water Level (in) |
| LDP-612 | ADS4-2 Separator Uncompensated Water Level | 5.1859 | 1.0386 | 56.6 | 0 | Water Level (in) |
| LDP-701 | IRWST Uncompensated Water Level | 5.0202 | 1.0048 | 115.8 | 0 | Water Level (in) |
| LDP-801 | PRHR HX Inlet Head Uncompensated Water Level | 4.9945 | 1.0013 | 6.971 | 0 | Water Level (in) |
| LDP-802 | PRHR HX WR Uncompensated Water Level | 4.9871 | 0.9998 | 57.08 | 0 | Water Level (in) |
| LDP-901 | Primary Sump Uncompensated Water Level | 5.0016 | 1.0015 | 104.36 | 0 | Water Level (in) |
| LDP-902 | Secondary Sump Uncompensated Water Level | 5.0018 | 1.0007 | 102.56 | 0 | Water Level (in) |
| LDP-903 | CRT Uncompensated Water Level | 5.1669 | 1.0346 | 32.358 | 0 | Water Level (in) |
| LDP-905 | Break Separator Uncompensated Water Level | 5.1788 | 1.0378 | 130.68 | 0 | Water Level (in) |
| LT-120 | Rx Vessel Capacitance Probe Water Level | 5.0053 | 1.0042 | 99 | 50 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 5.0658 | 1.0121 | 600 | 0 | Pressure (psig) |
| PT-002 | MS Header Pressure | 4.9759 | 0.9962 | 500 | 0 | Pressure (psig) |
| PT-003 | Lab Barometer | 4.9656 | 0.9944 | 20 | 10 | Pressure (psia) |
| PT-009 | SG-1 PORV Blowdown Pressure | 4.9816 | 0.9983 | 300 | 0 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 4.9924 | 1.0004 | 300 | 0 | Pressure (psig) |
| PT-101 | CL-1 Pressure at Rx Flange | 4.9877 | 0.9986 | 500 | 0 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 4.9706 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 4.9646 | 0.9946 | 10 | 0 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 4.9882 | 0.9988 | 500 | 0 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 5.0478 | 1.0096 | 500 | 0 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 4.9637 | 0.9938 | 500 | 0 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 4.9874 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 4.9825 | 0.9984 | 10 | 0 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 4.9886 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 4.977 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 4.9616 | 0.9921 | 500 | 0 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 4.9935 | 1.0008 | 500 | 0 | Pressure (psig) |

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| PT-202 | HL-2 Pressure at SG-2 Flange | 4.9841 | 0.9978 | 500 | 0 | Pressure (psig) |
| PT-203 | CL Break Pressure at Break Valve | 4.988 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-204 | SG-2 Long Tube Pressure (Top) | 4.9974 | 1.0005 | 500 | 0 | Pressure (psig) |
| PT-205 | HL-1 Pressure at SG-1 Flange | 4.9838 | 0.9988 | 400 | 0 | Pressure (psig) |
| PT-206 | HL Break Pressure at Break Valve | 4.9869 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-301 | SG-1 Pressure | 5.0617 | 1.0123 | 500 | 0 | Pressure (psig) |
| PT-302 | SG-2 Pressure | 5.1023 | 1.0219 | 500 | 0 | Pressure (psig) |
| PT-401 | ACC-1 Pressure | 4.9908 | 0.9993 | 300 | 0 | Pressure (psig) |
| PT-402 | ACC-2 Pressure | 4.9802 | 0.9975 | 300 | 0 | Pressure (psig) |
| PT-501 | CMT-1 Pressure | 4.982 | 0.9979 | 300 | 0 | Pressure (psig) |
| PT-502 | CMT-2 Pressure | 4.9869 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-602 | PZR NR Pressure | 4.9747 | 0.9988 | 400 | 300 | Pressure (psig) |
| PT-603 | PZR NR Pressure | 4.9616 | 0.9944 | 10 | 0 | Pressure (psig) |
| PT-604 | PZR WR Pressure | 4.9794 | 0.9942 | 500 | 0 | Pressure (psig) |
| PT-605 | ADS1-3 Separator Pressure | 4.9725 | 0.9966 | 100 | 0 | Pressure (psig) |
| PT-606 | IRWST Sparger Line Pressure | 4.9653 | 0.995 | 100 | 0 | Pressure (psig) |
| PT-610 | ADS4-2 Separator Pressure | 4.9845 | 0.9983 | 10 | 0 | Pressure (psig) |
| PT-611 | ADS4-1 Separator Pressure | 4.9806 | 0.9977 | 10 | 0 | Pressure (psig) |
| PT-701 | IRWST Pressure | 5.0436 | 1.0087 | 15 | 0 | Pressure (psig) |
| PT-801 | CVSP Discharge Pressure | 4.9909 | 0.9993 | 500 | 0 | Pressure (psig) |
| PT-802 | RNSP Discharge Pressure | 4.9768 | 0.9962 | 250 | 0 | Pressure (psig) |
| PT-901 | Primary Sump Pressure | 4.9659 | 0.9947 | 10 | 0 | Pressure (psig) |
| PT-902 | BAMS Header Pressure | 4.9988 | 1.0013 | 16 | 0 | Pressure (psig) |
| PT-905 | Break Separator Pressure | 5.0265 | 1.0067 | 20 | 0 | Pressure (psig) |
| TF-005 | Lab Ambient Temperature at Ground Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-006 | Lab Ambient Temperature at Second Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-007 | Lab Ambient Temperature at Third Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-009 | SG-1 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-010 | SG-2 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101 | CL-3 Temperature (SC-101) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-101-1.3D-2 | CL-1 Downcomer Temperature at 1.3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-1 | CL-1 Downcomer Temperature at 2D, 120 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-2 | CL-1 Downcomer Temperature at 2D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-3 | CL-1 Downcomer Temperature at 2D, 150 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-1 | CL-1 Downcomer Temperature at 3D, 104 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-2 | CL-1 Downcomer Temperature at 3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-3 | CL-1 Downcomer Temperature at 3D, 166 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-1 | CL-1 Downcomer Temperature at 4D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-2 | CL-1 Downcomer Temperature at 4D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-1 | CL-1 Downcomer Temperature at 8D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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| TF-101-8D-2 | CL-1 Downcomer Temperature at 8D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102 | CL-4 Temperature (SC-102) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-102-1.3D-2 | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-1 | CL-2 Downcomer Temperature at 2D, 210 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-2 | CL-2 Downcomer Temperature at 2D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-3 | CL-2 Downcomer Temperature at 2D, 240 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-1 | CL-2 Downcomer Temperature at 3D, 194 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-2 | CL-2 Downcomer Temperature at 3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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|---------------|--|------|----|------|----|-----------------------|
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-105 | CL-1 Temperature (SC-105) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-106 | CL-2 Temperature (SC-106) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-108 | CL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-113 | DVI-1/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-114 | DVI-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-116 | DVI-2/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-126 | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-142 | HL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-143 | HL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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|--------|---|------|----|------|----|-----------------------|
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-167 | Rx Heater Rod B2-319 at 40.13 inches | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-170 | Upper Rx Vessel Layer M-M at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-171 | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-172 | Lower Rx Vessel Layer AA-AA at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-201 | CL-1 at RCP-1 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-202 | CL-2 at RCP-2 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-203 | CL-3 at RCP-3 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-204 | CL-4 at RCP-4 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-211 | SG-1 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-212 | SG-2 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-221 | CL-3 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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|----------|---|------|----|------|----|-----------------------|
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-311 | SG-1 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-312 | SG-2 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-502 | CMT-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-509 | CMT-1 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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|--------|---|------|---|------|---|-----------------------|
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-512 | CMT-2 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-526 | CMT-2 SPARGER 2\3 TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-528 | CMT 2\3 HEAD TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-530 | CMT-2 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-546 | CMT-2 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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|--------|---|------|----|------|----|-----------------------|
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

NRC-COND-04

DAS Configuration

| | | | | | | |
|--------|--|------|----|------|----|-----------------------|
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-719 | IRWST Sparger Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-903 | Primary Sump Temperature (SC-903) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-911 | CRP Discharge to IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 200 | 40 | 200 | 40 | Fluid Temperature (F) |

NRC-COND-04

DAS Configuration

| | | | | | | |
|----------|---|------|----|------|----|------------------------------|
| TF-915 | Break Separator 6-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-602 | PZR Heater Rod #2 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-1 | Core Thermocouple Rod D-001 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |

NRC-COND-04

DAS Configuration

| | | | | | | |
|---------------|---|--------|--------|------|-----|------------------------------|
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-201 | SG-1 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-202 | SG-2 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-203 | SG-1 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-204 | SG-2 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-205 | SG-1 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-206 | SG-2 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-208 | SG-2 Long Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-209 | SG-1 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-210 | SG-2 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-601 | ADS1-3 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-602 | ADS4-2 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-603 | ADS4-1 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-801 | PRHR HX Long Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-802 | PRHR HX Short Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-803 | PRHR HX Long Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-804 | PRHR HX Short Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-805 | PRHR HX Short Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-806 | PRHR HX Long Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-807 | PRHR HX Short Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-808 | PRHR HX Long Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-905 | Break Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| DASRunning | DSC Engine is running, but not necessarily logging data | N/A | N/A | N/A | N/A | N/A |
| DASLogging | DSC Engine is logging data to the Citadel database | N/A | N/A | N/A | N/A | N/A |
| FVM-004 | Catch Tank Steam Flow Rate | 4.9885 | 1.001 | 70 | 0 | Steam Flow Rate (cfm) |
| PT-004 | Temp Steam Pressure for FVM-002 | 5.0026 | 1.0016 | 400 | 0 | Pressure (psig) |



DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS

**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**


**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 330 PSIG**

NRC-COND-05

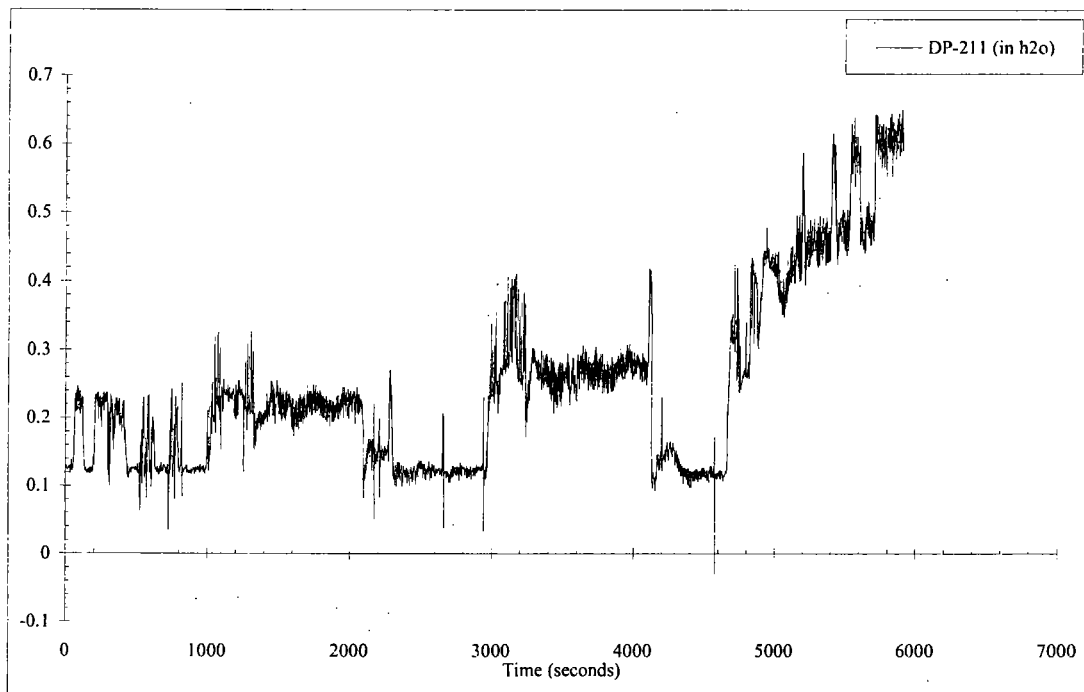
Revision 0

 2/19/07

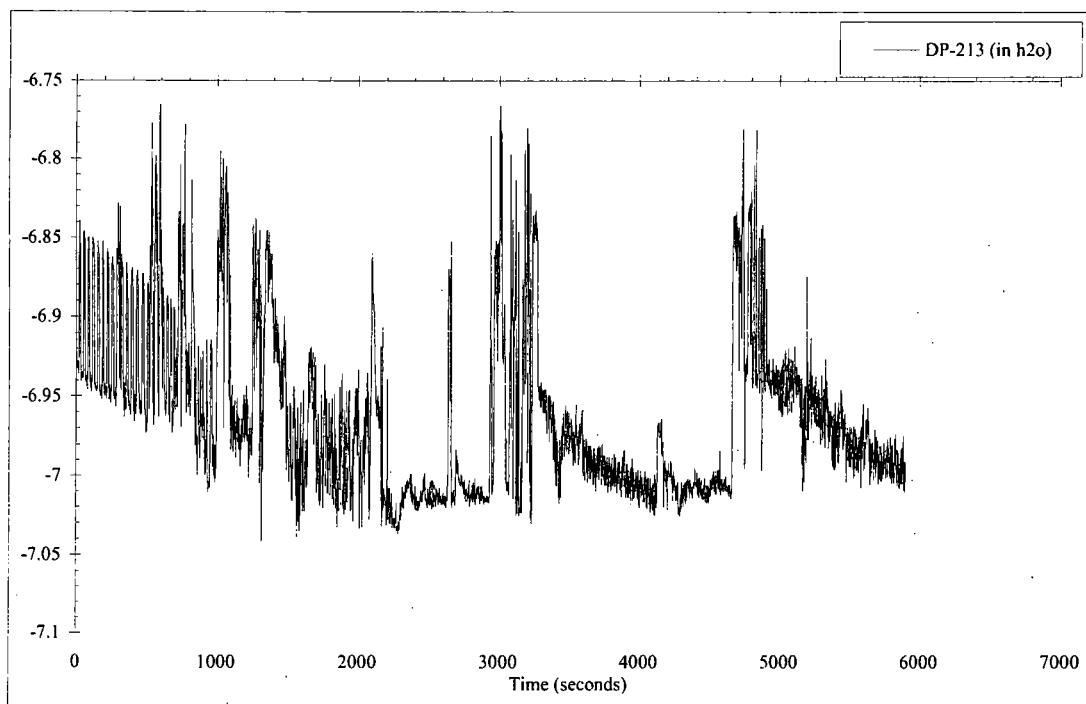
John Groome, Originator Date
Facility Operations Manager
Research Assistant

 2/19/07

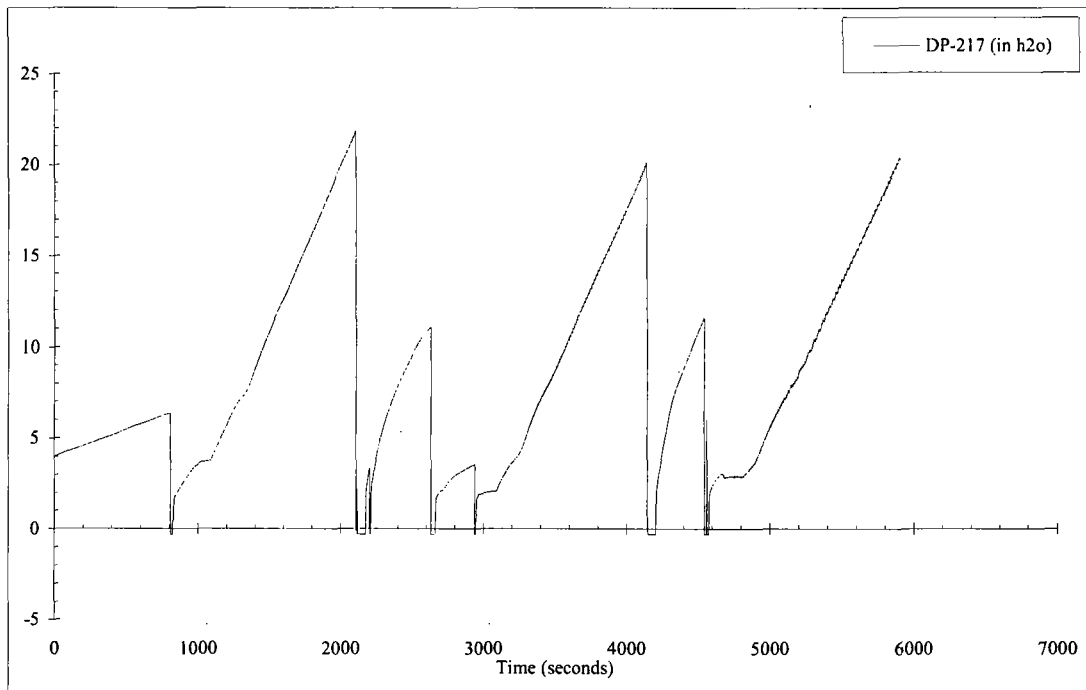
Brian Woods, Approval Date
Program Manager
Assistant Professor



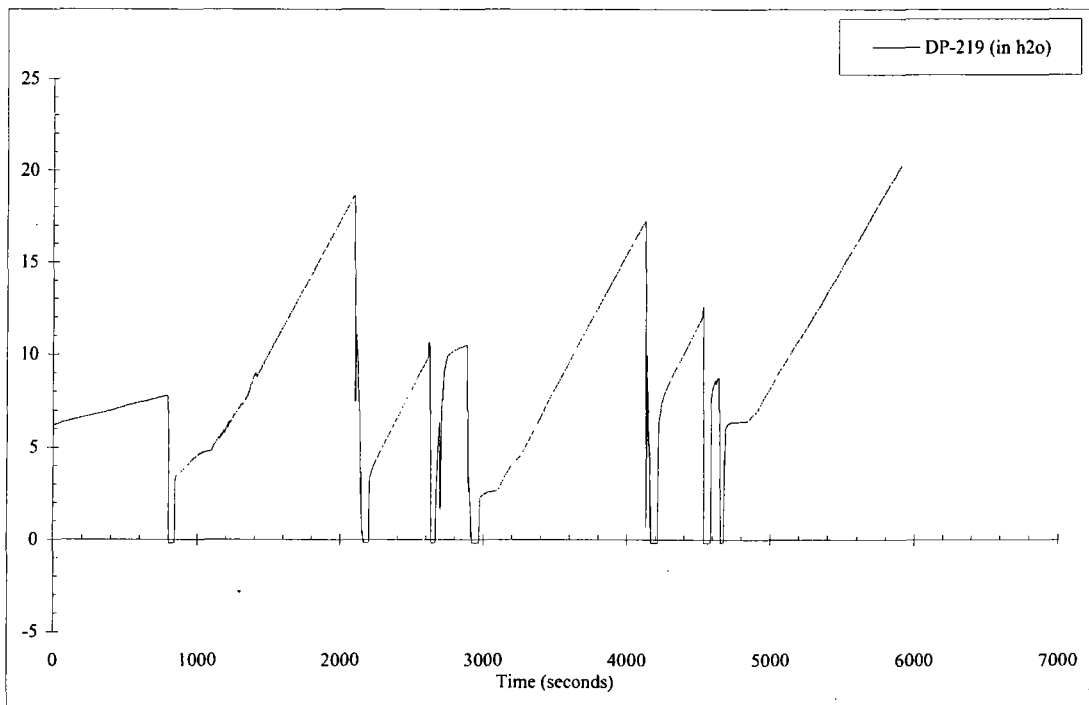
SG-1 Short Tube Entrance Losses



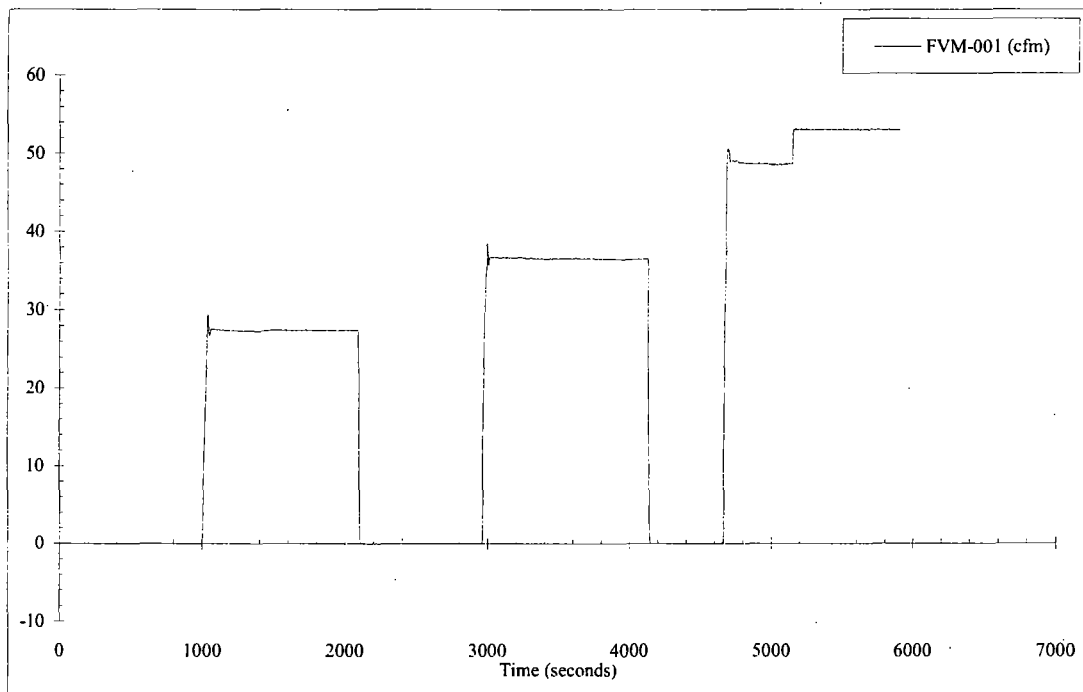
SG-1 Long Tube Exit Losses



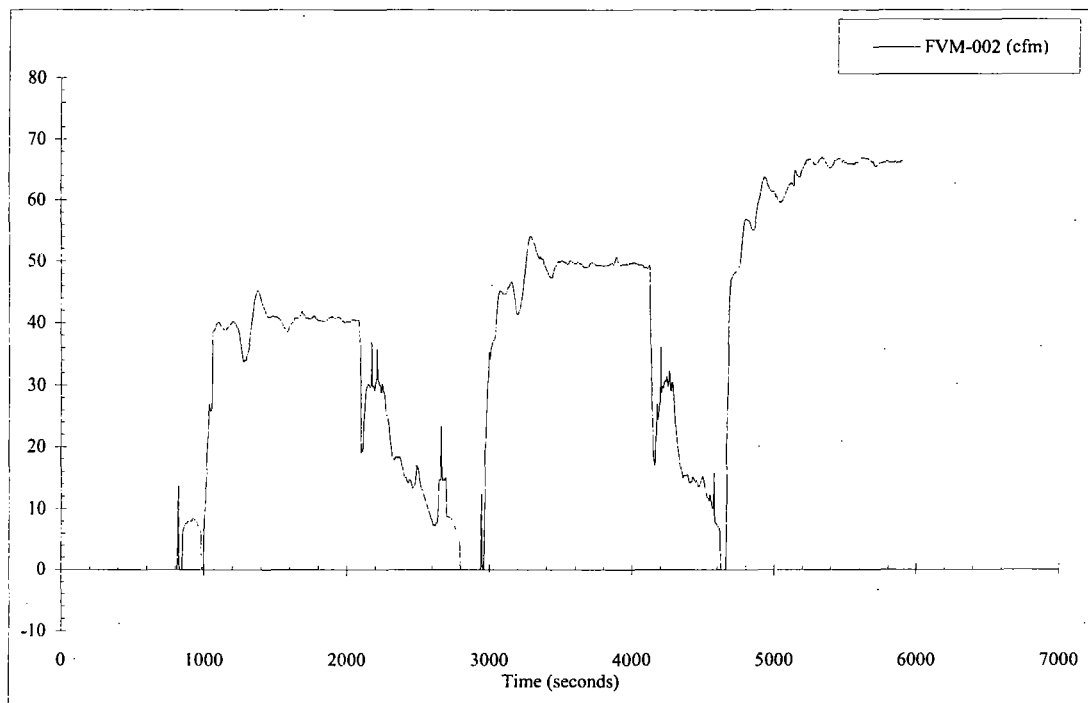
Separator Uncompensated Water Level



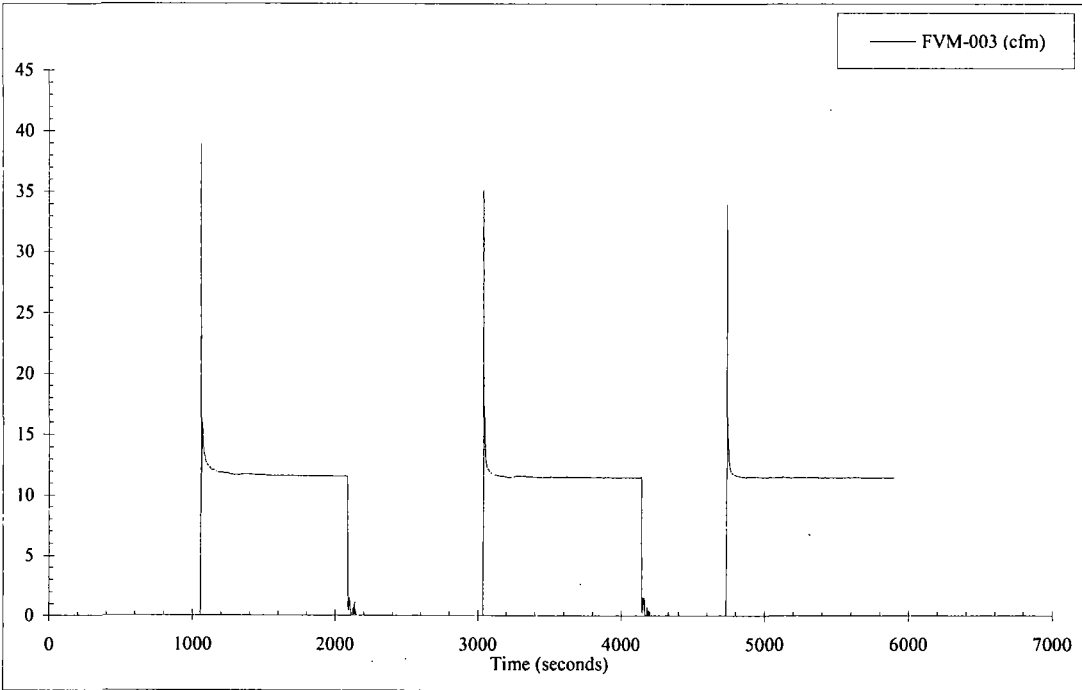
Catch Tank Uncompensated Water Level



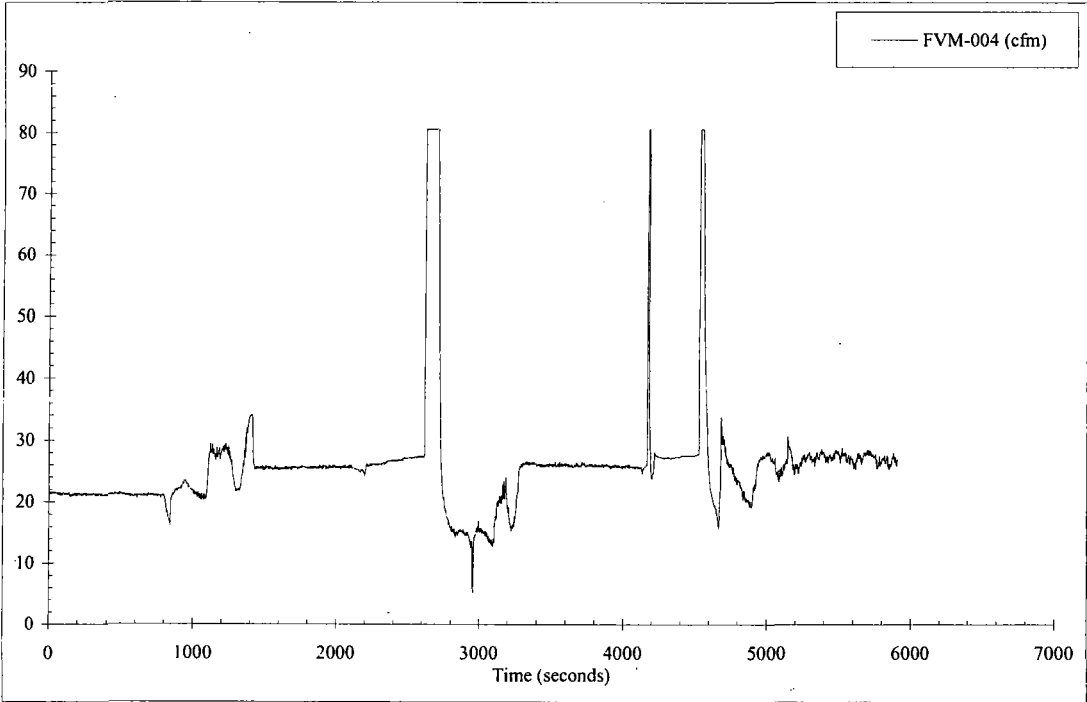
Separator Outlet Steam Flowrate



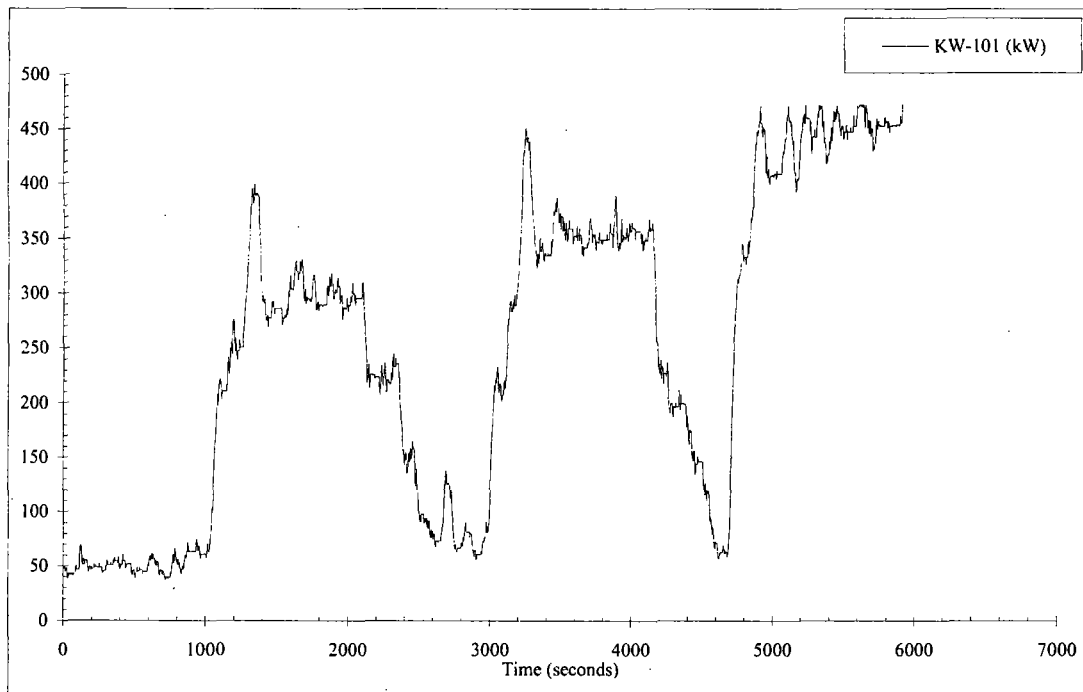
SG-2 Main Steam Flow



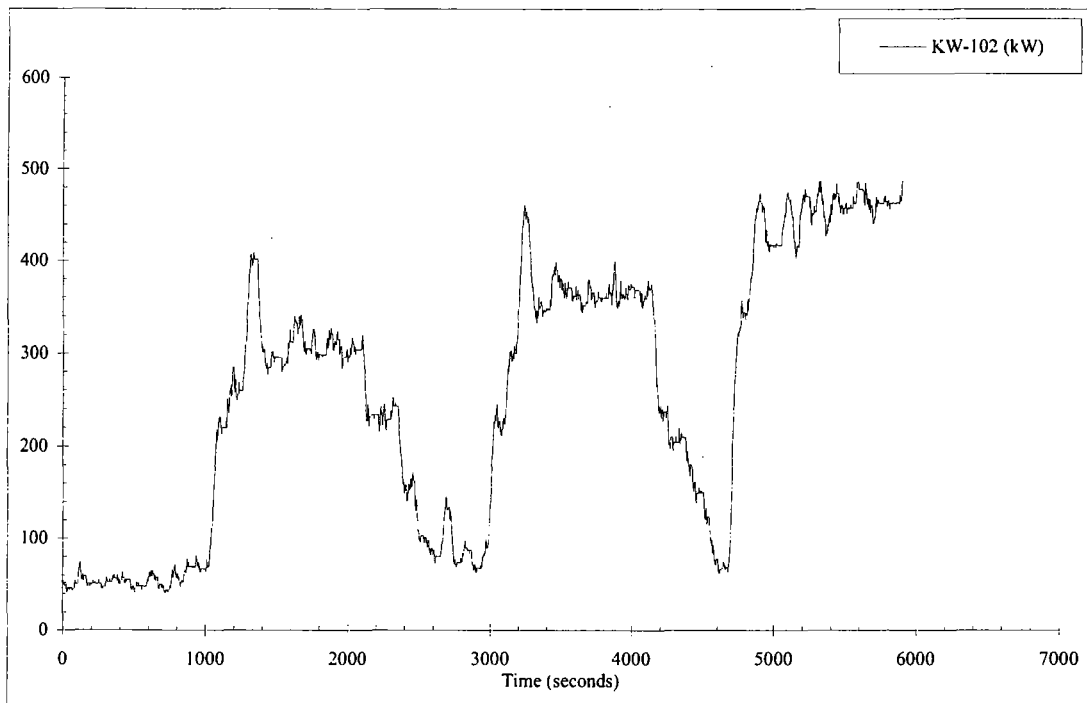
Main Steam Total Flow



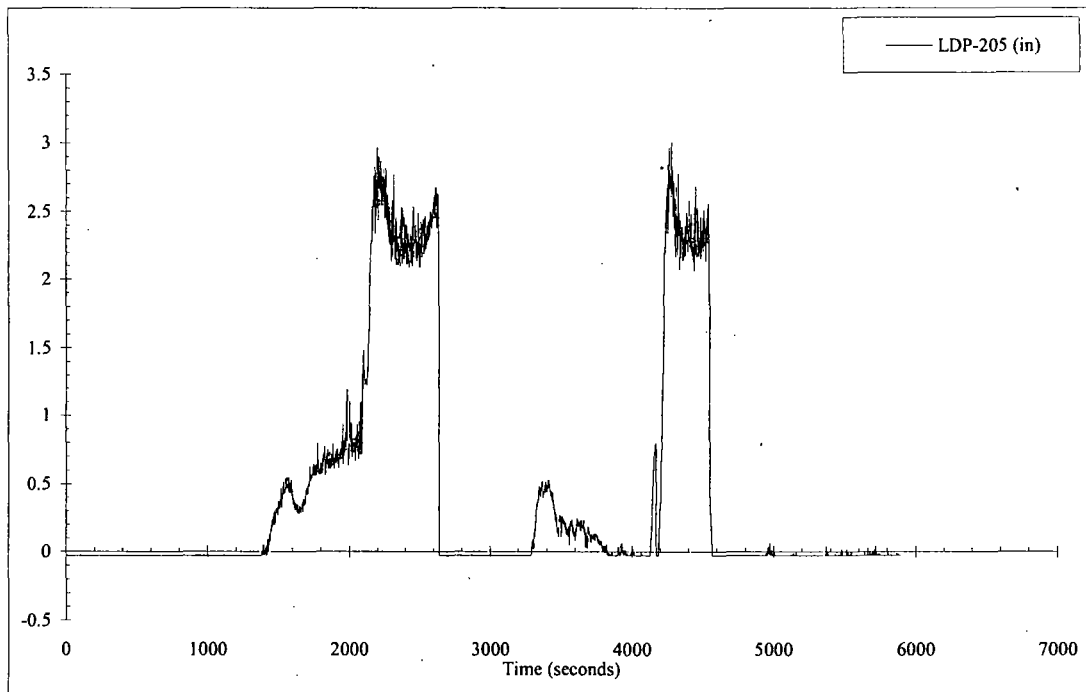
Catch Tank Steam Flow Rate



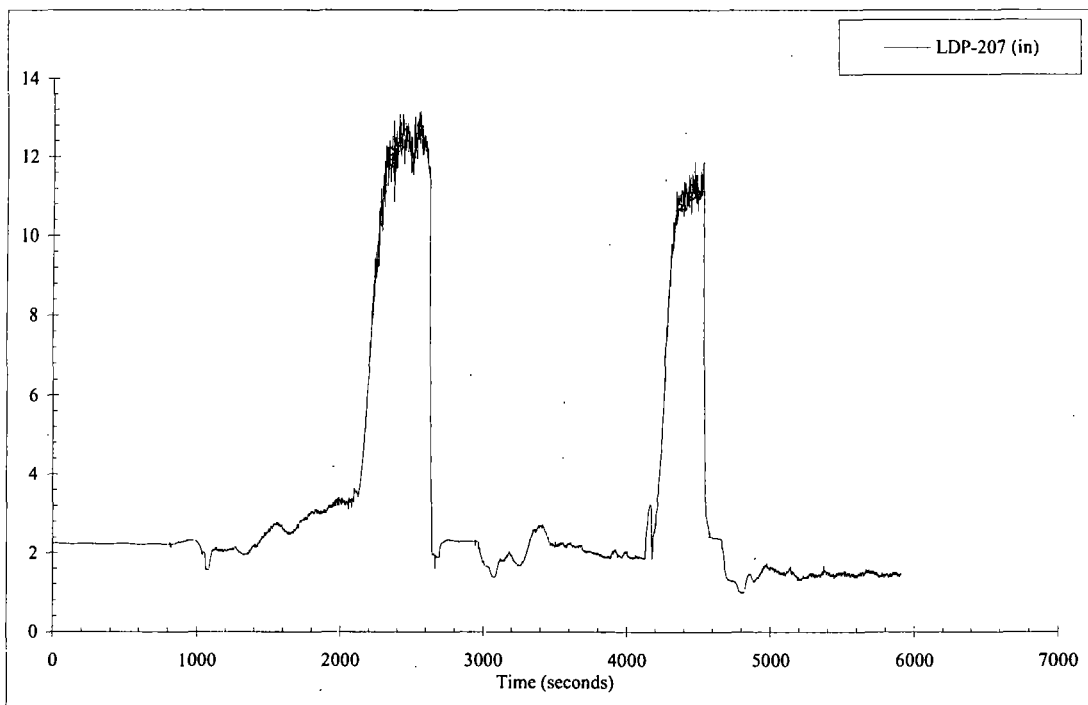
Rx Heater Group 1 Power



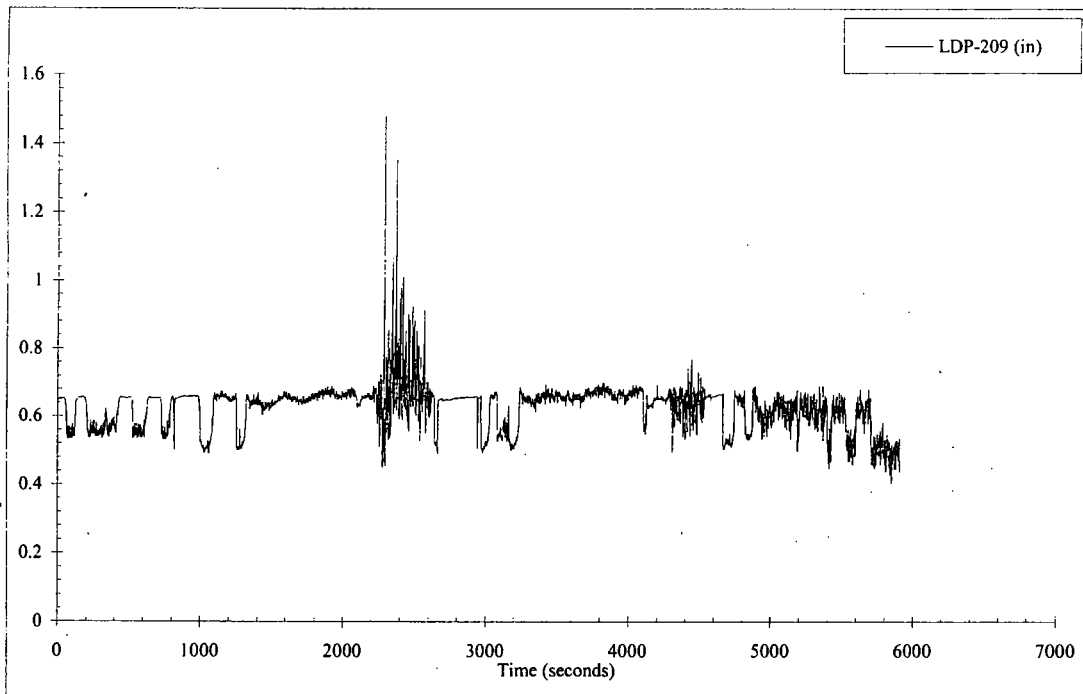
Rx Heater Group 2 Power



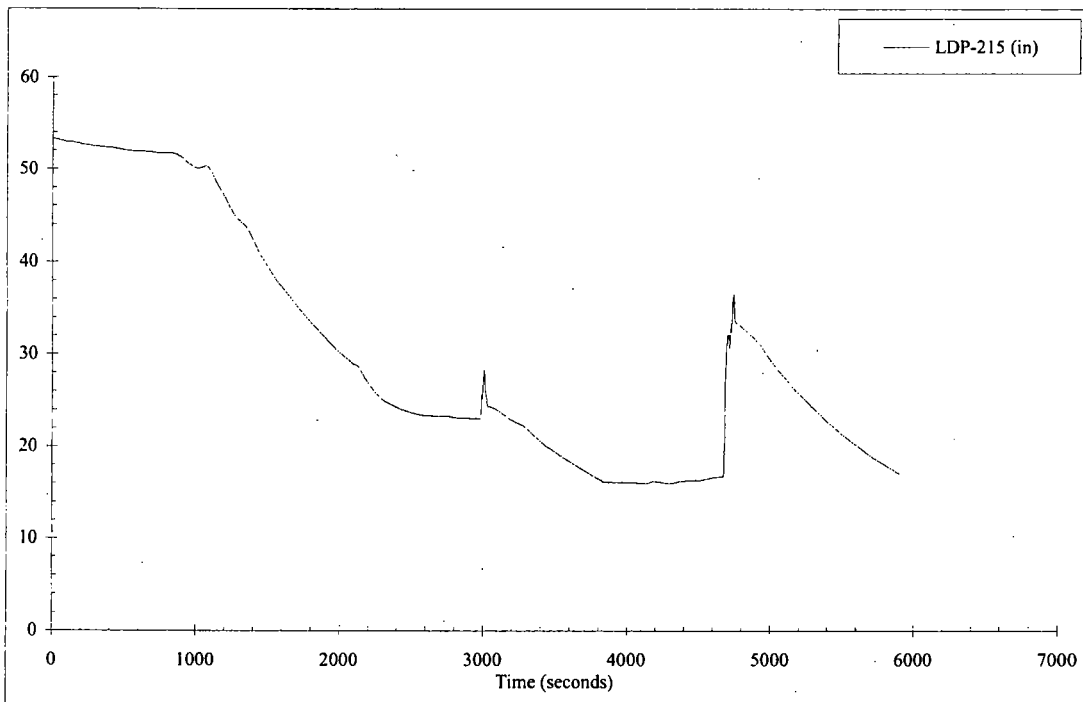
HL-1 Uncompensated Water Level



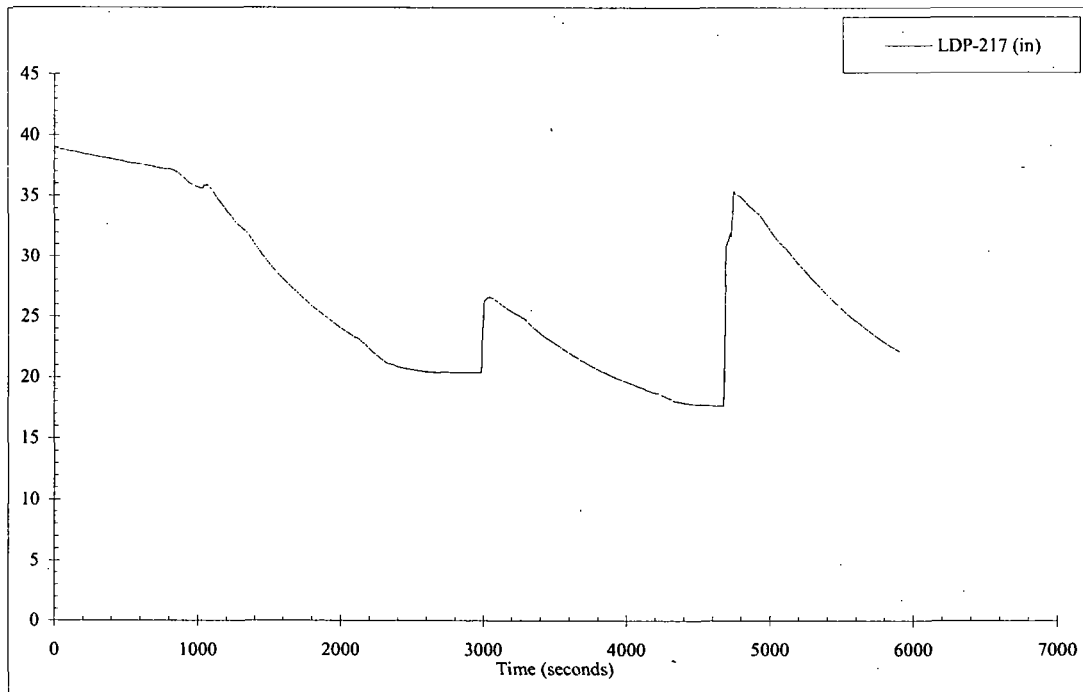
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



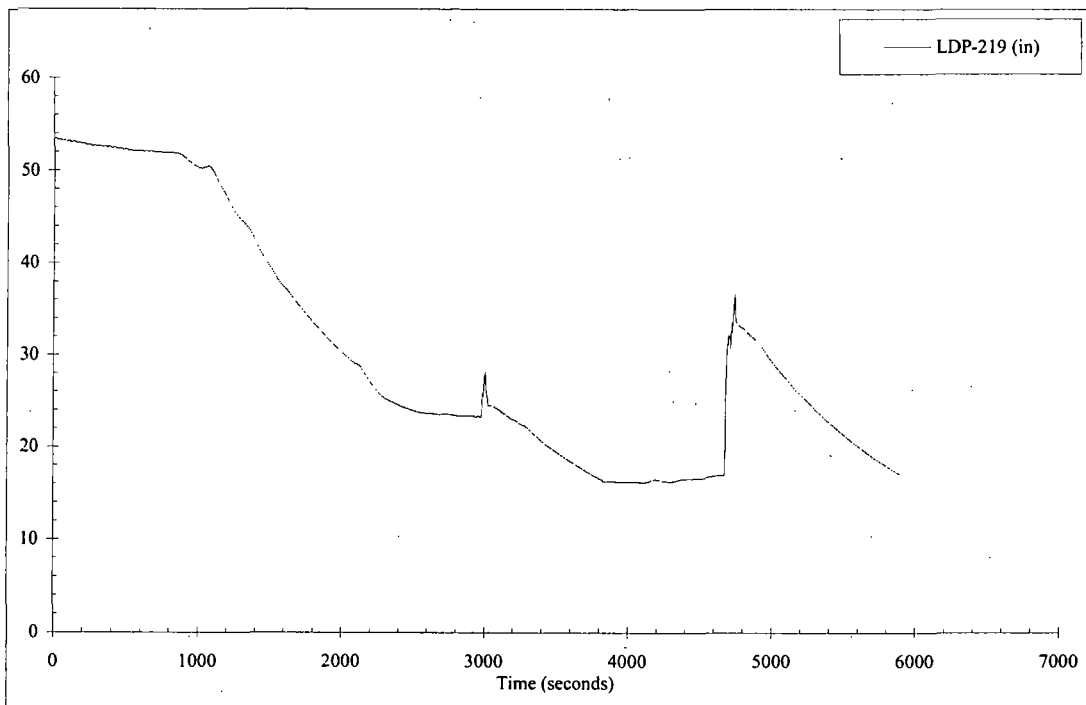
SG-1 to HL-1 Plenum Uncompensated Water Level



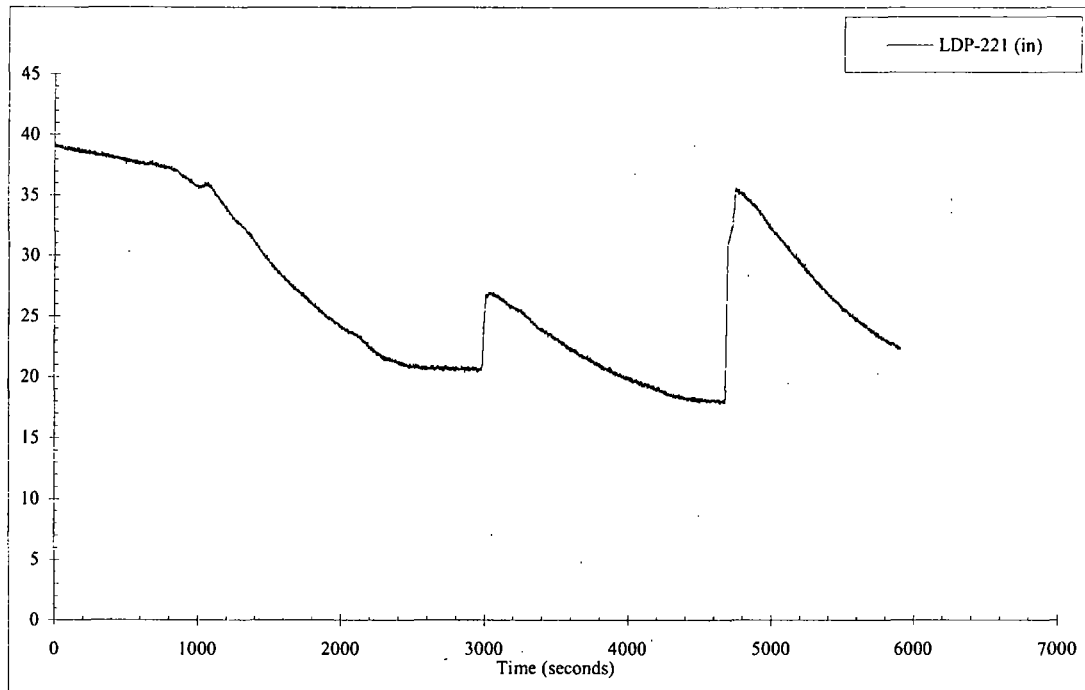
SG-1 Long Tube to HL Uncompensated Water Level



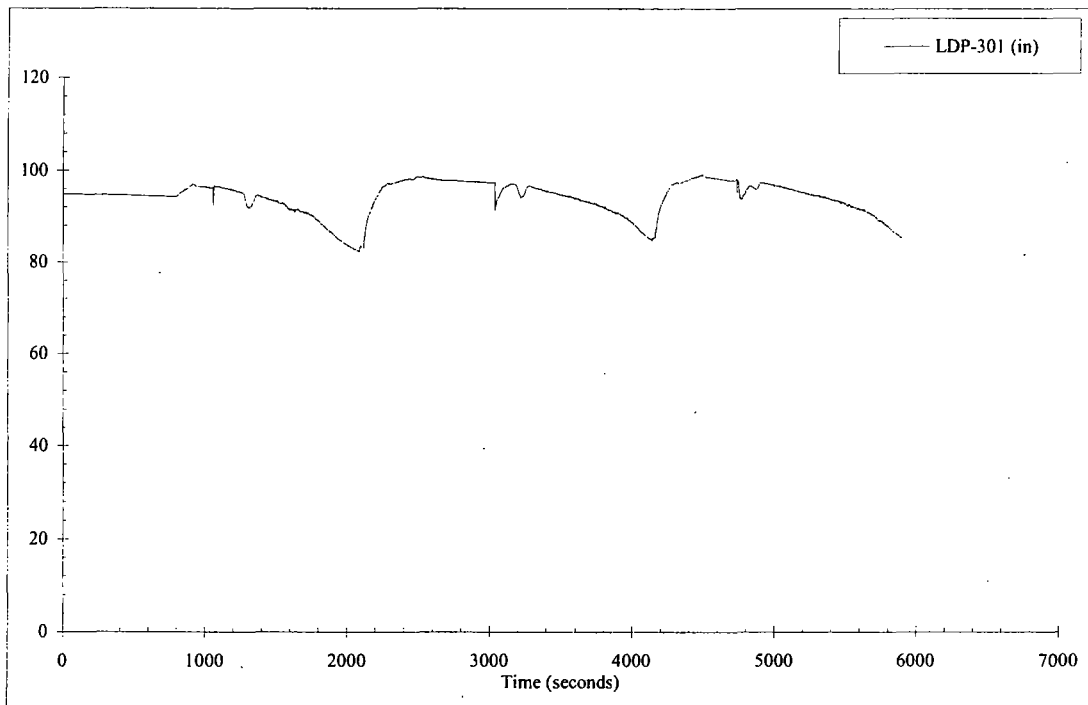
SG-1 Short Tube to HL Uncompensated Water Level



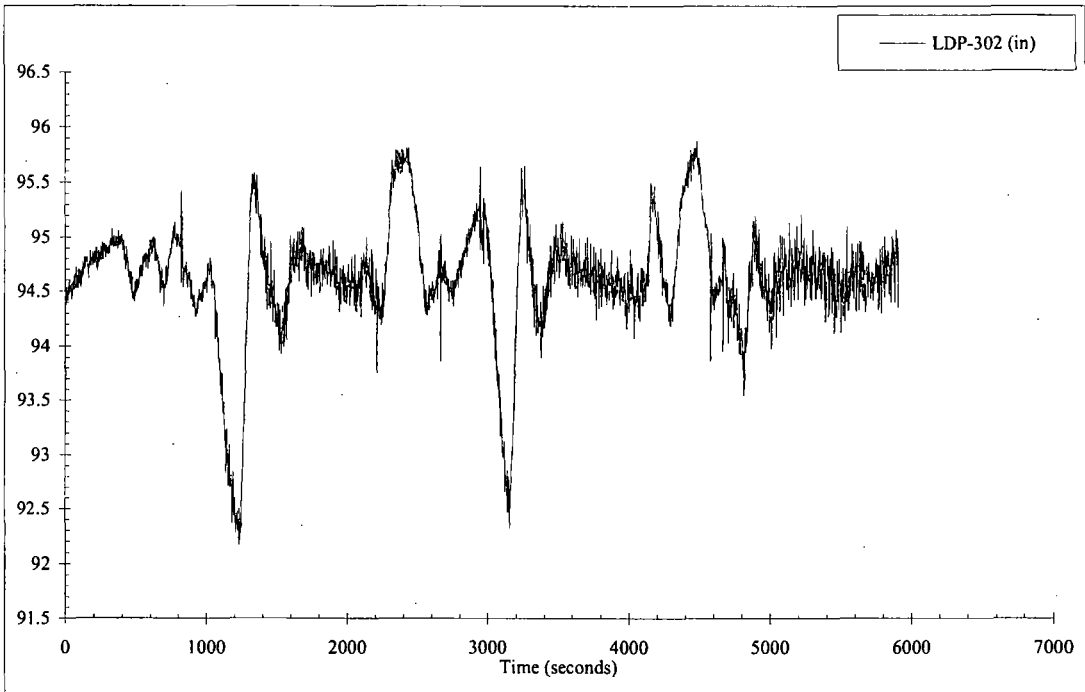
SG-1 Long Tube to CL Uncompensated Water Level



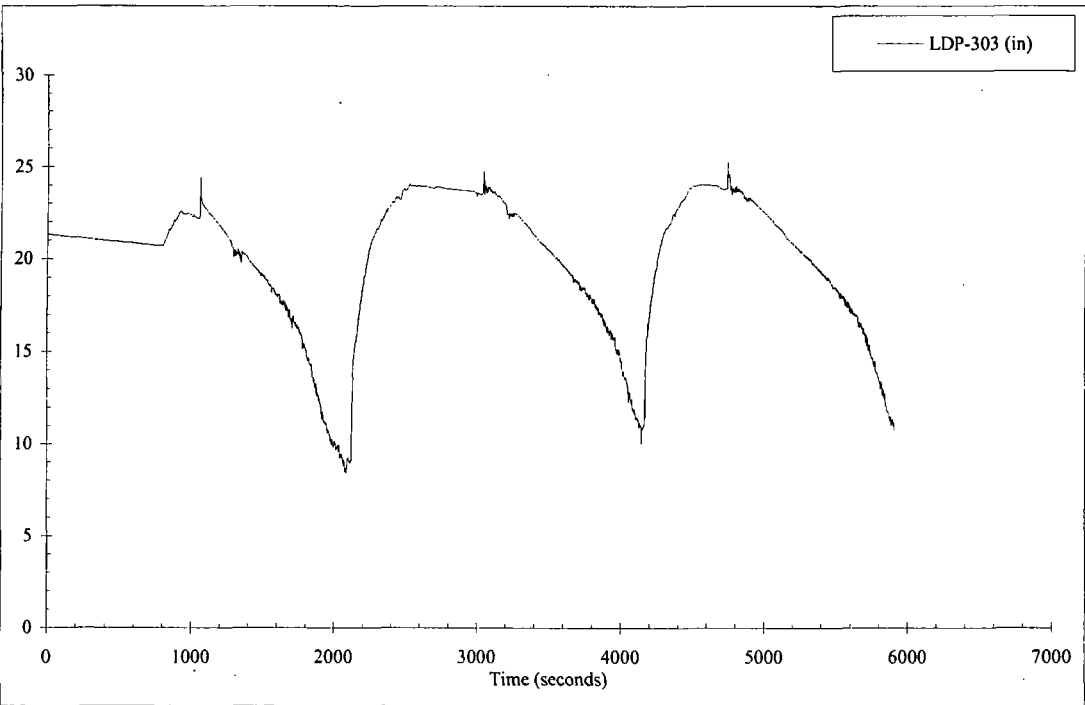
SG-1 Short Tube to CL Uncompensated Water Level



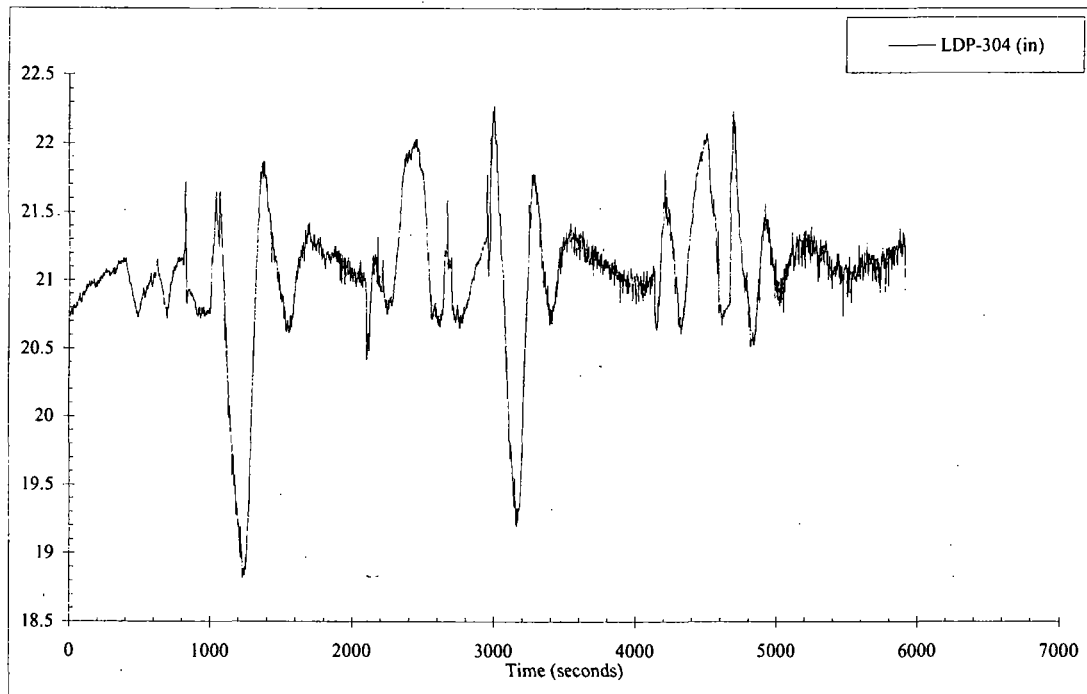
SG-1 WR Uncompensated Water Level



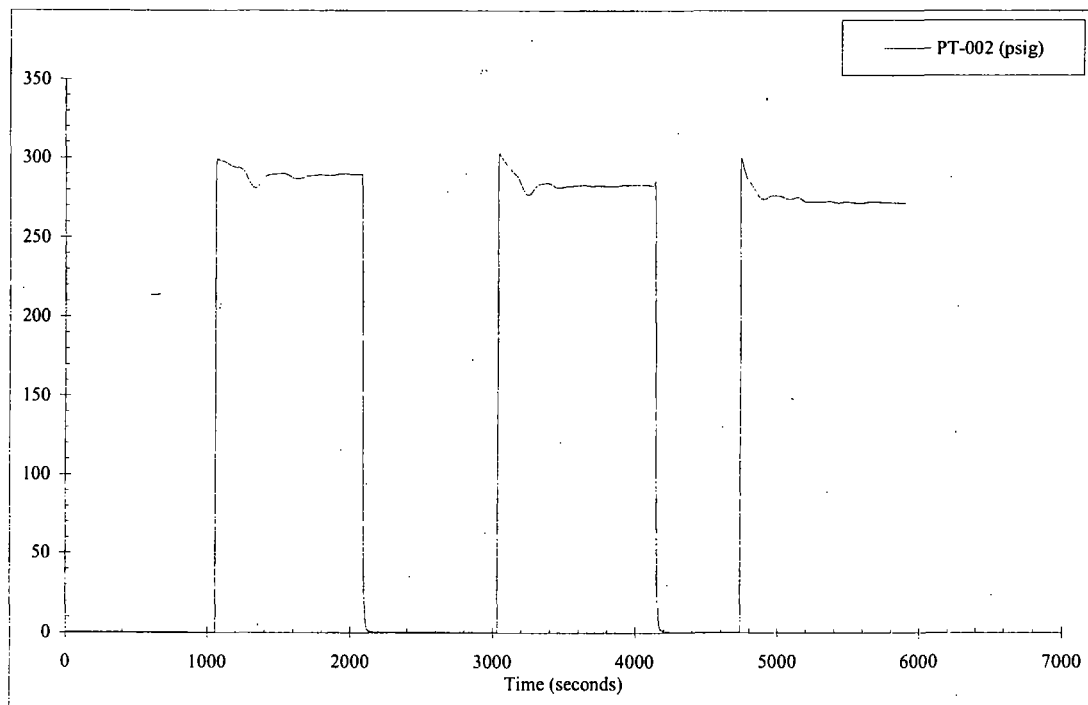
SG-2 WR Uncompensated Water Level



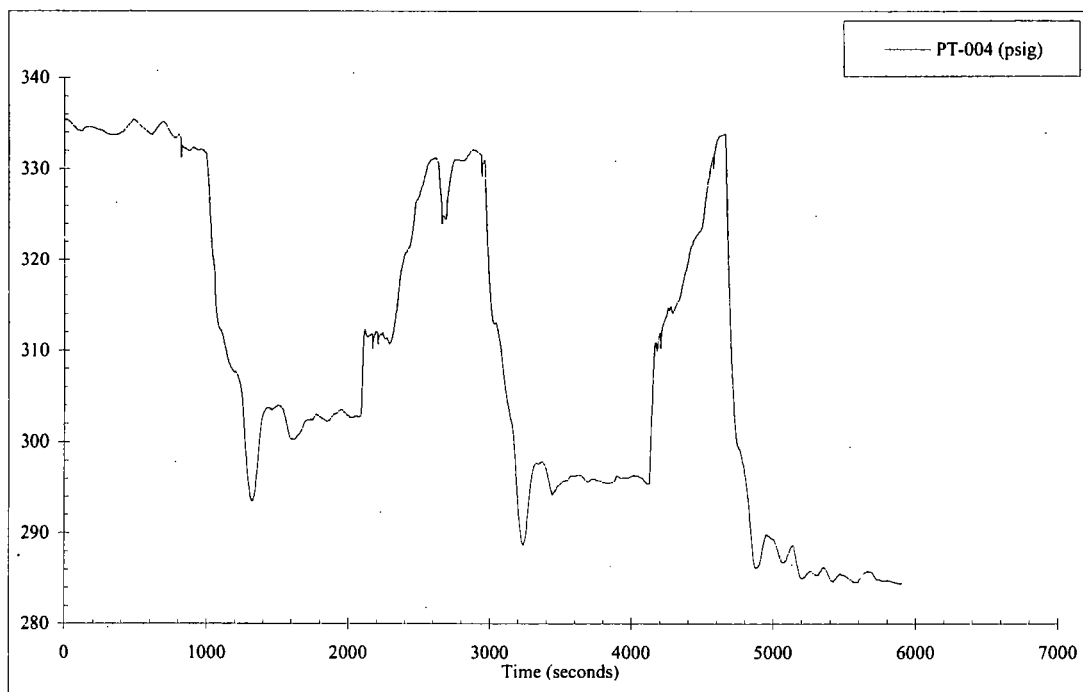
SG-1 NR Uncompensated Water Level



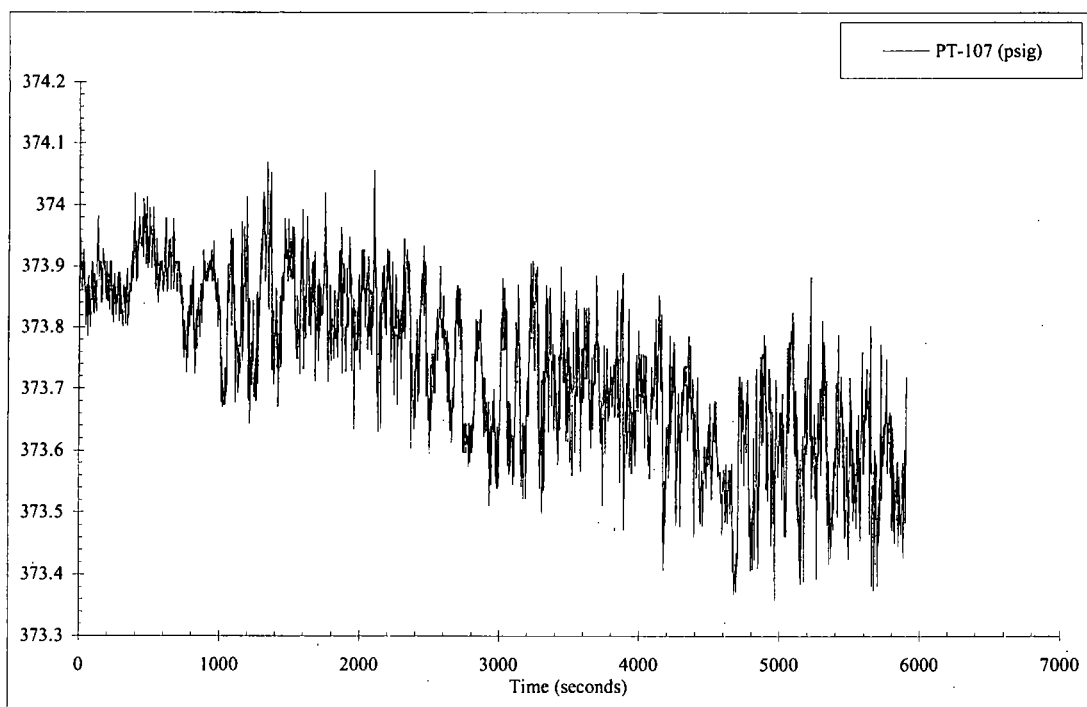
SG-2 NR Uncompensated Water Level



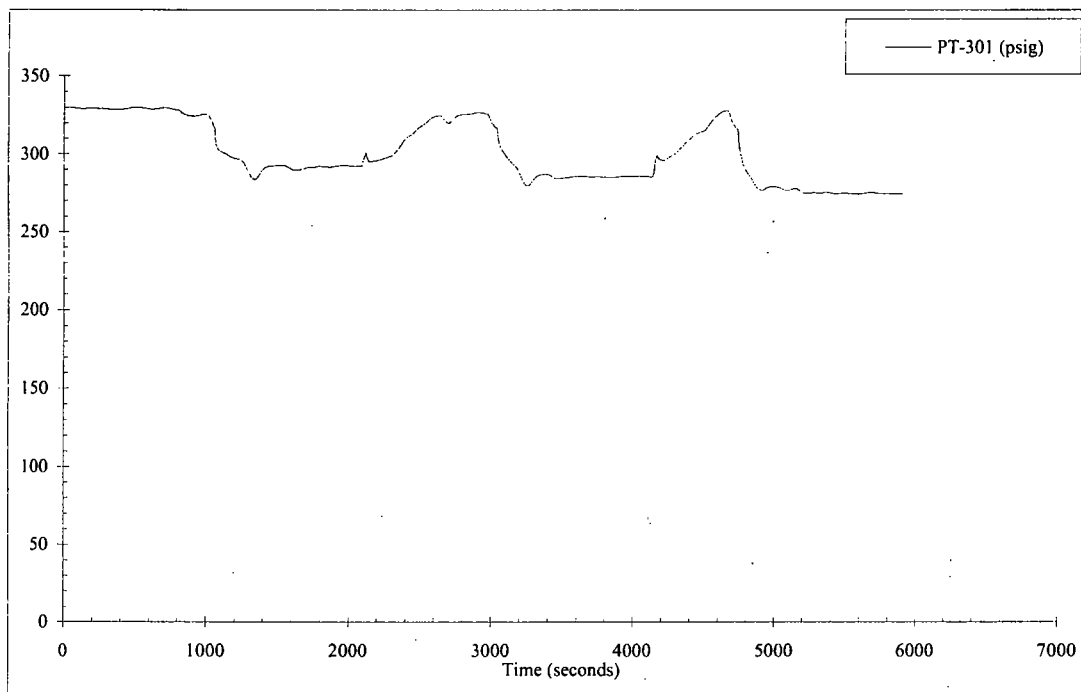
MS Header Pressure



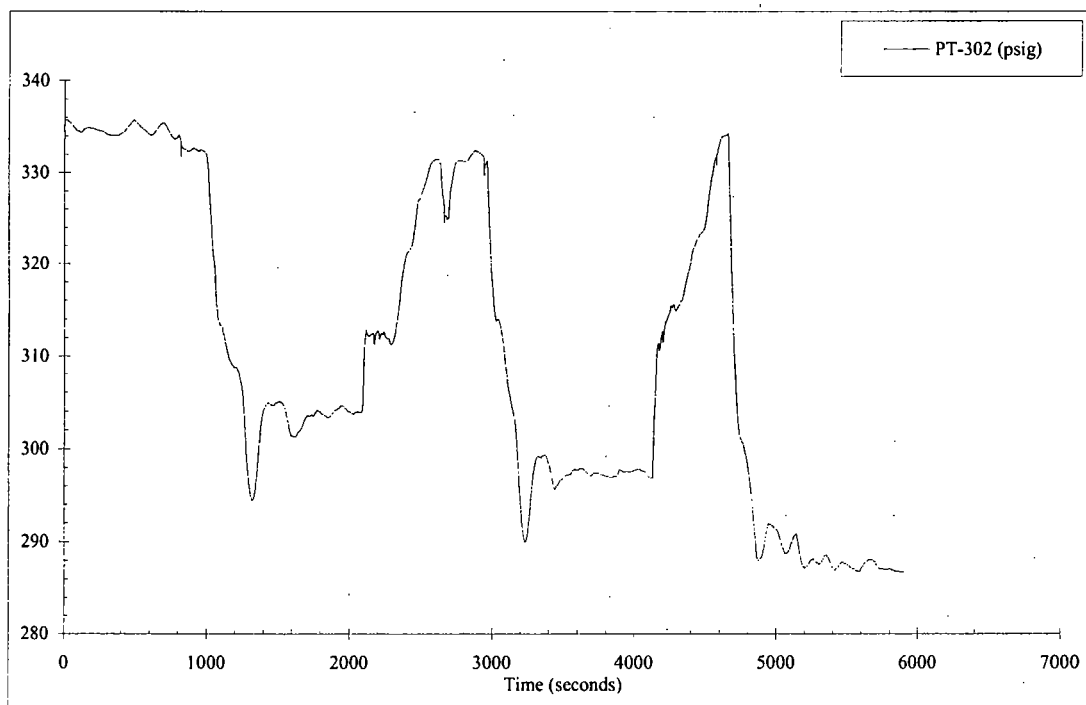
Temp Steam Pressure for FVM-002



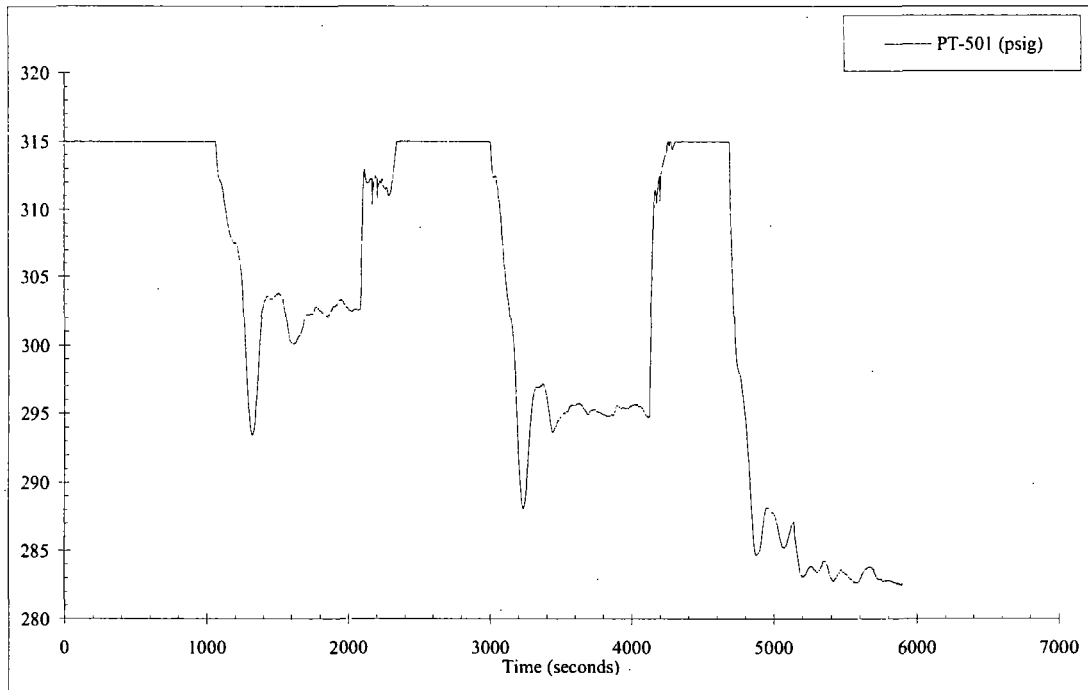
Rx Upper Head Pressure



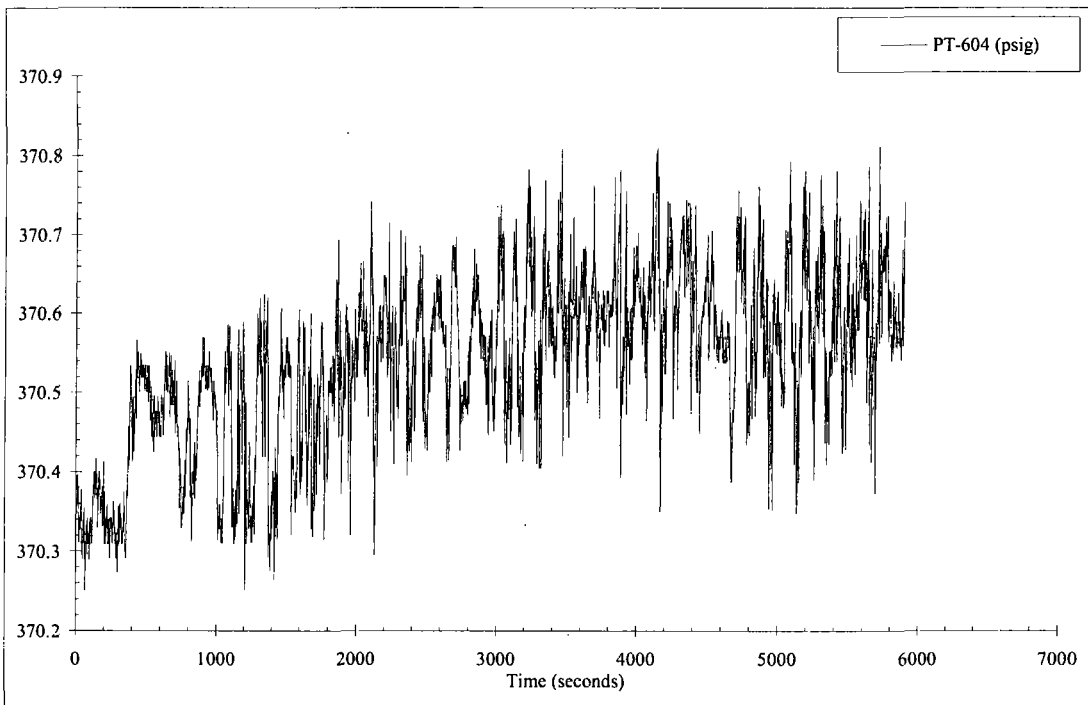
SG-1 Pressure



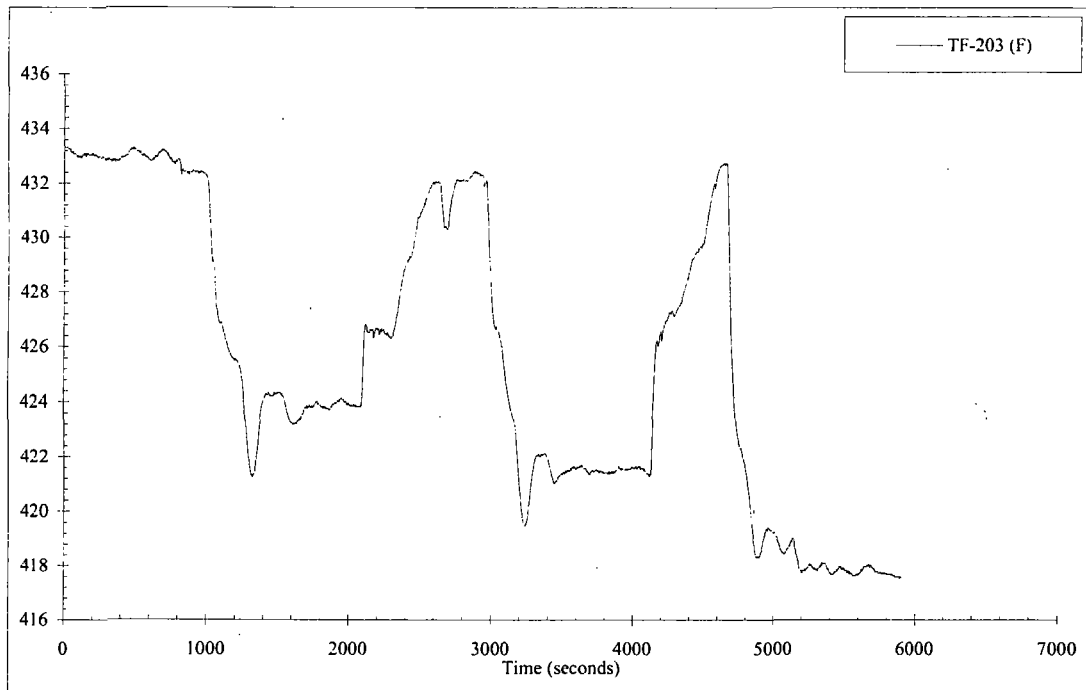
SG-2 Pressure



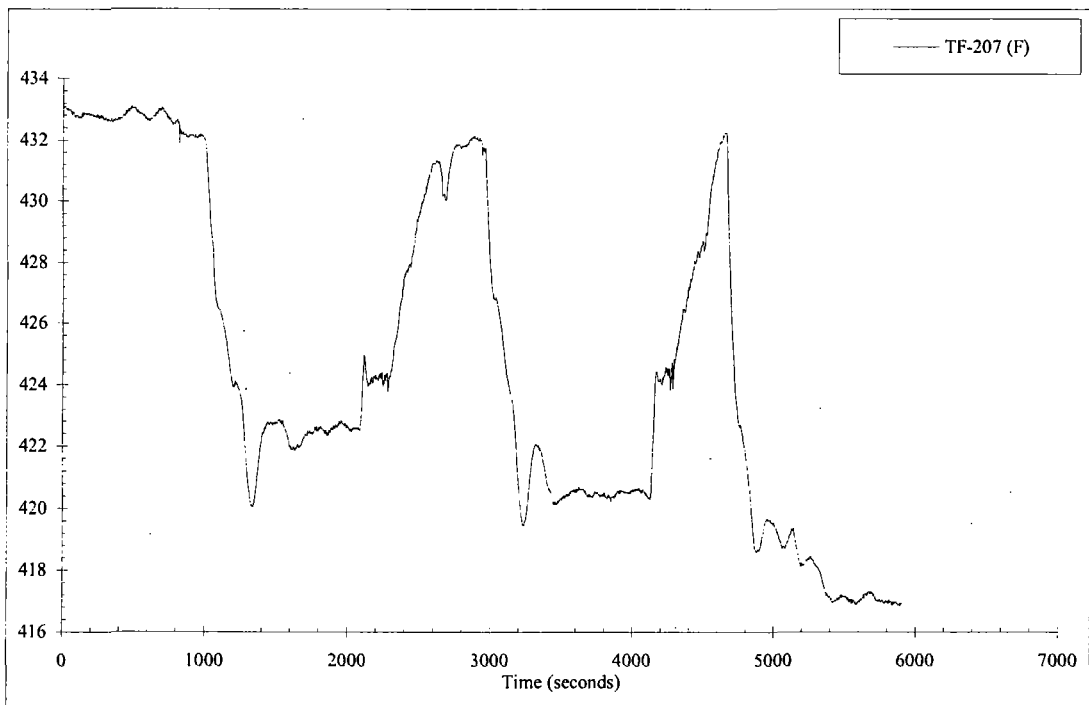
Separator Outlet Steam Pressure



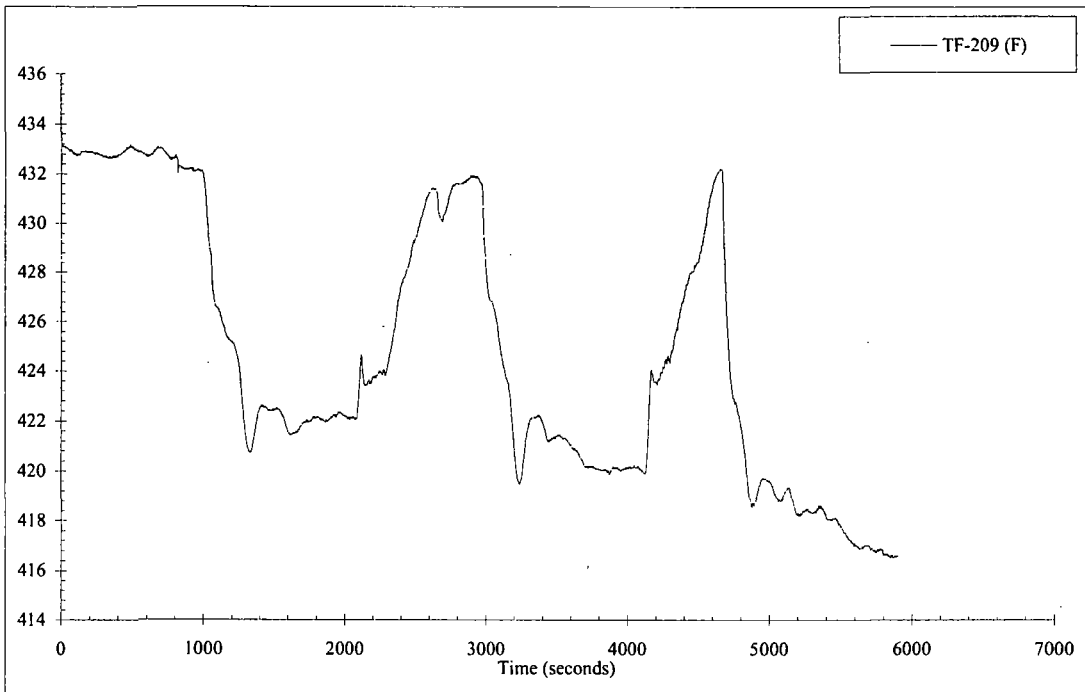
PZR WR Pressure



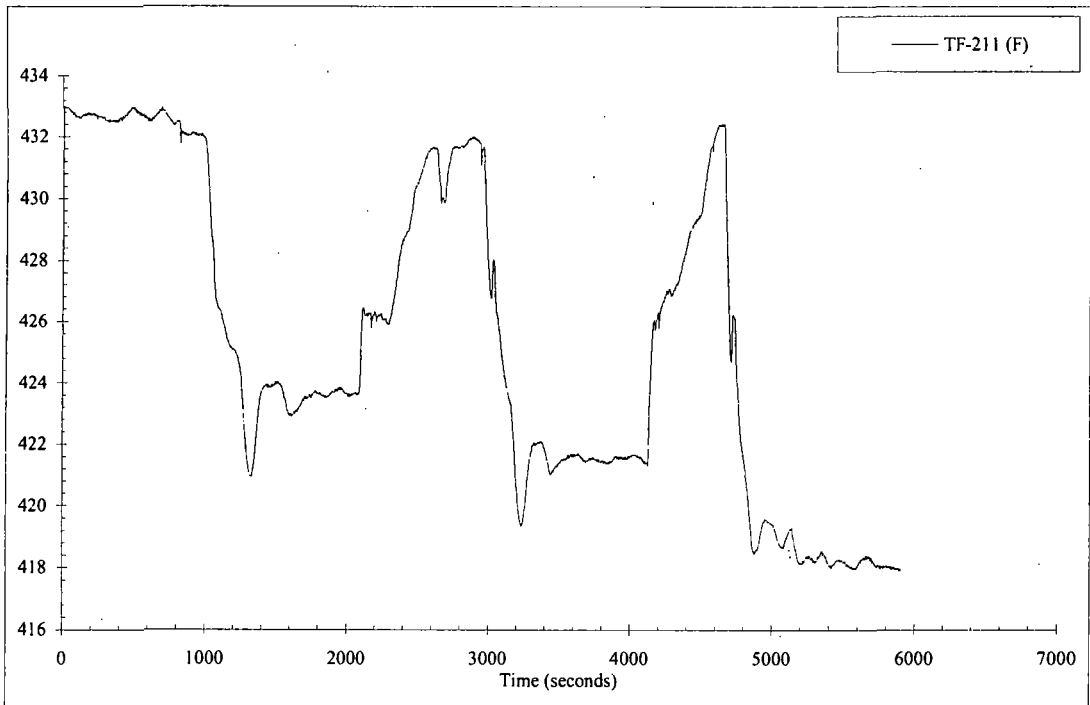
Separator Outlet Steam Temperature



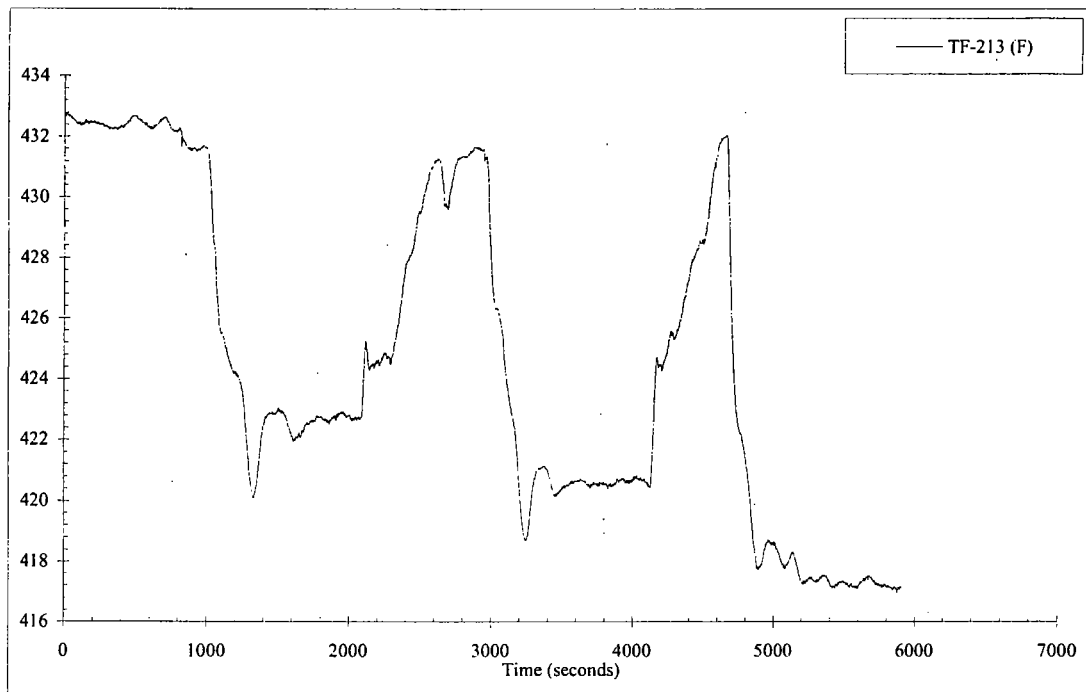
SG-1 Short Tube at Middle Outlet Side Temperature



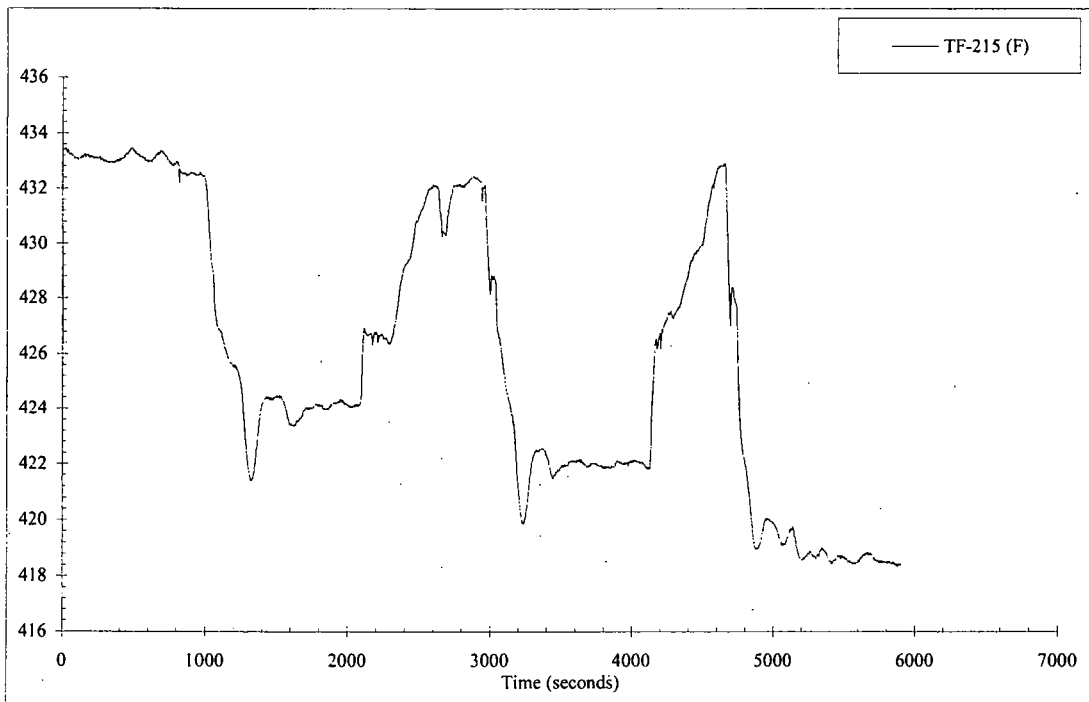
SG-1 Short Tube at Middle Inlet Side Temperature



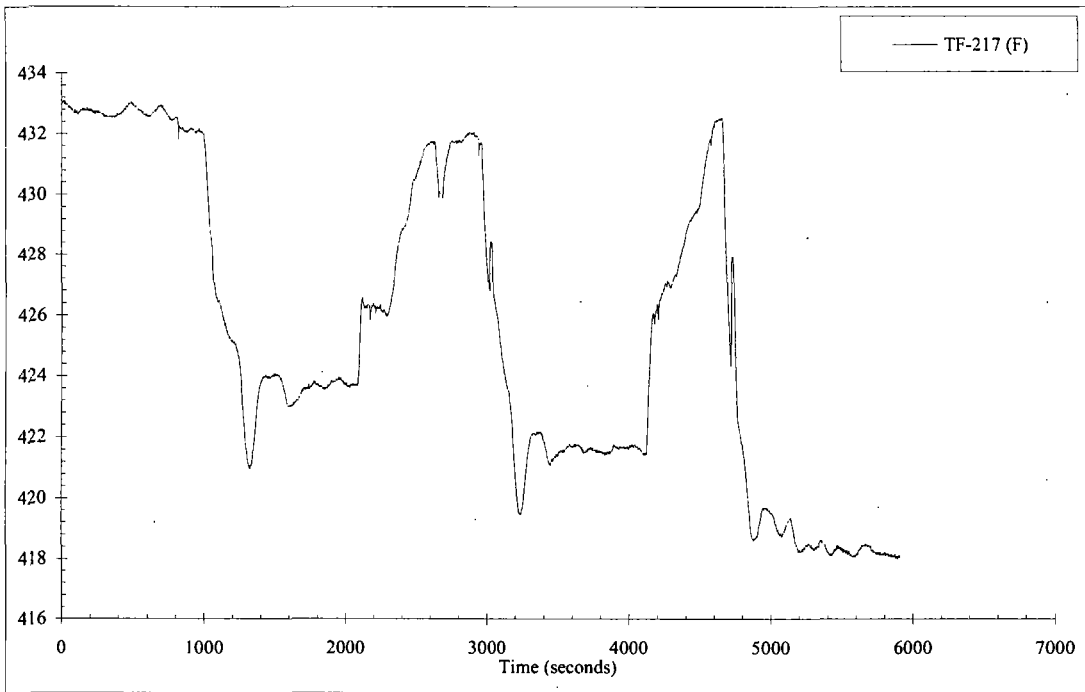
SG-1 Long Tube at Middle Outlet Temperature



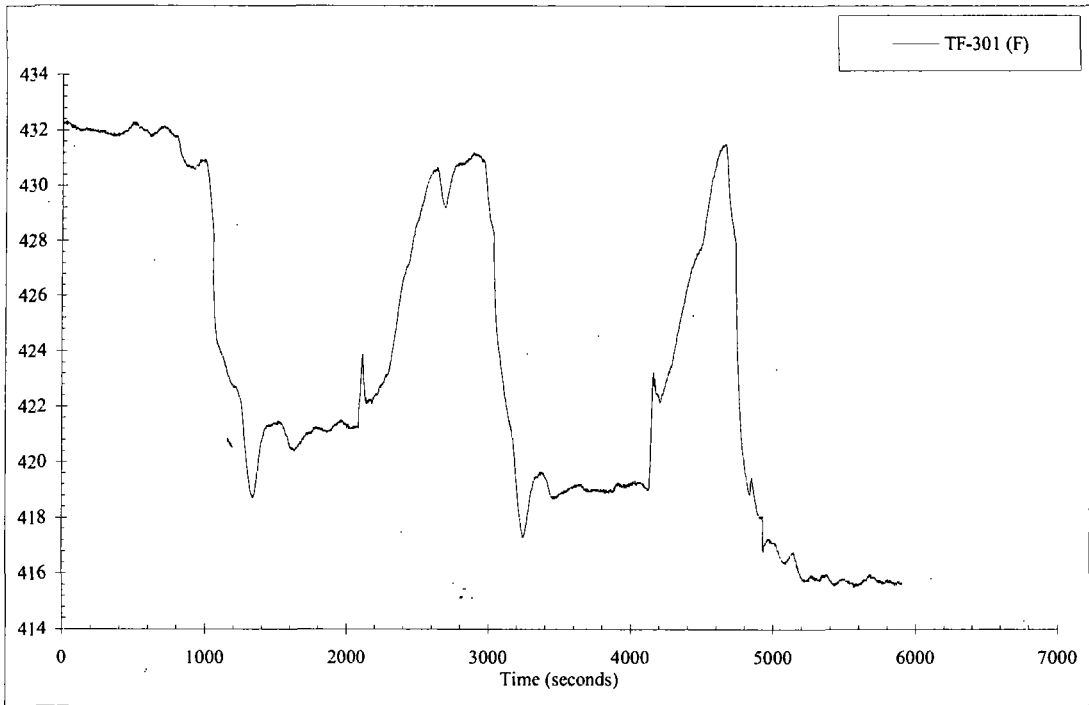
SG-1 Long Tube at Middle Inlet Temperature



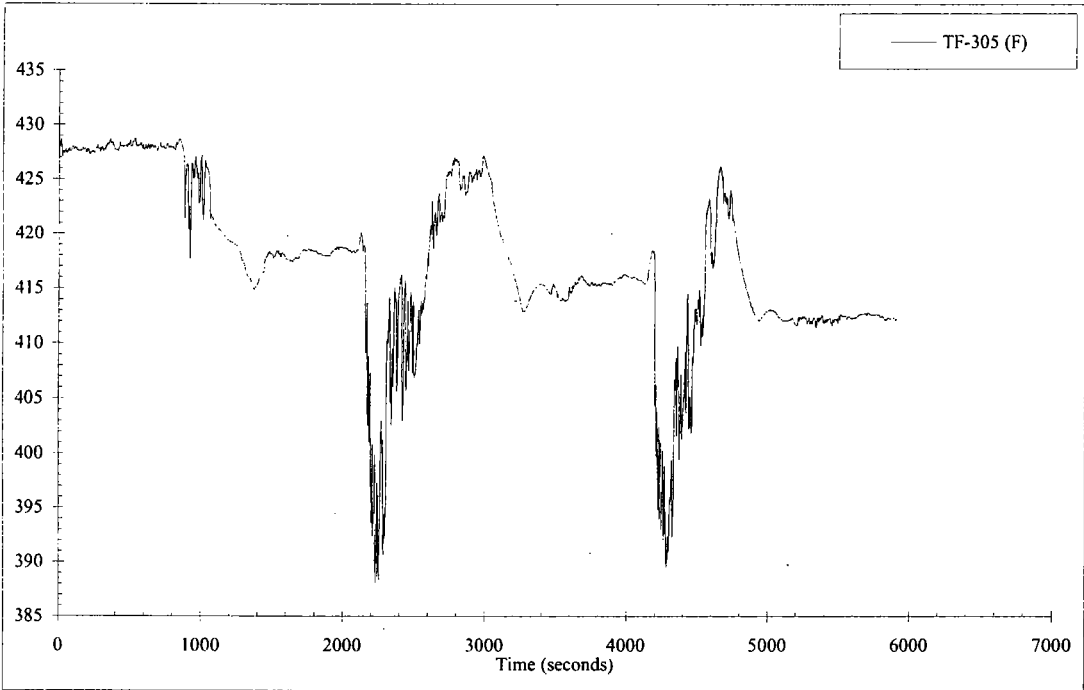
SG-1 Short Tube at Top Temperature



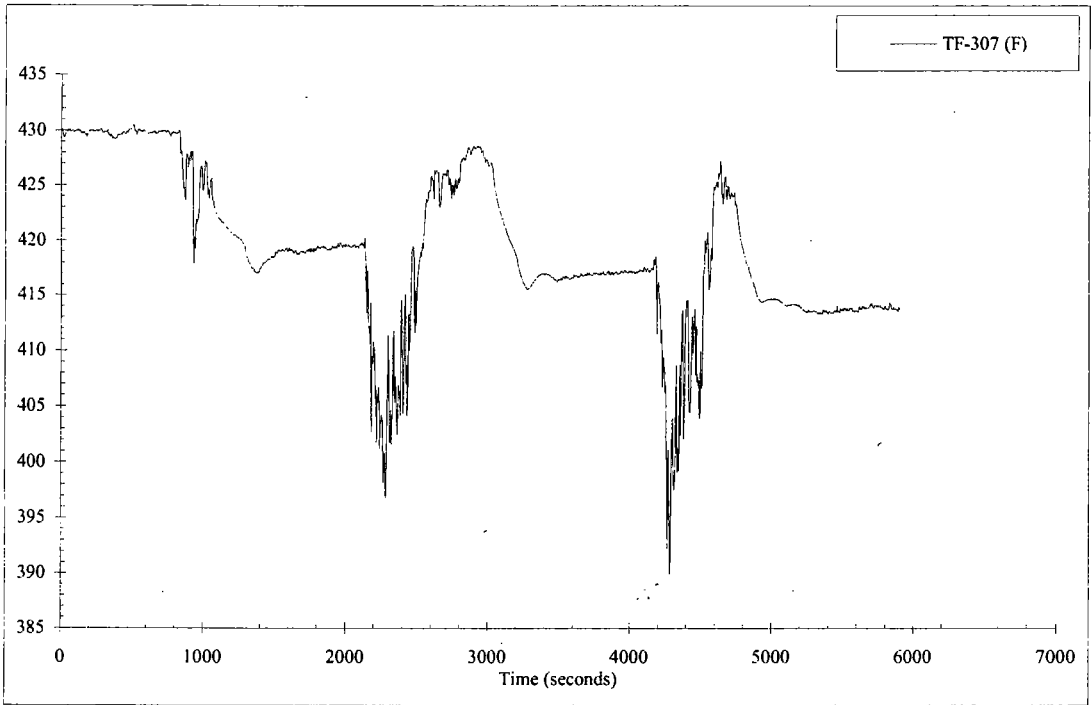
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)



SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

Sequence of Events Summary

| Timestamp | Interval | Tagname | Description | Area | Value |
|-------------|----------|----------------|-------------------------------|----------|---------|
| 12:57:27 PM | -119 | TEST_SW | Facility Test Switch | Switches | In Test |
| 12:57:27 PM | -119 | dMuteSCR_Alarm | SCR Signal loss audible alarm | Status | ON |
| 1:17:01 PM | 1054 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 1:17:01 PM | 1054 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 1:21:42 PM | 1335 | MF_001 | FST Fill Valve | Valves | Open |
| 1:25:26 PM | 1559 | MF_001 | FST Fill Valve | Valves | Closed |
| 1:34:11 PM | 2084 | M001_HS_O | SG-1 Stm Stop HS | Switches | Close |
| 1:34:11 PM | 2084 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 1:35:22 PM | 2155 | MF_001 | FST Fill Valve | Valves | Open |
| 1:40:35 PM | 2468 | MF_001 | FST Fill Valve | Valves | Closed |
| 1:40:42 PM | 2475 | MFP_X | Main Feed Pump | Pumps | Off |
| 1:40:45 PM | 2478 | MFP_HS_R | Main Feed Pump HS | Switches | Run |
| 1:40:45 PM | 2478 | MFP_HS_A | Main Feed Pump HS | Switches | Off |
| 1:40:45 PM | 2478 | MFP_X | Main Feed Pump | Pumps | Running |
| 1:50:01 PM | 3034 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 1:50:02 PM | 3035 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 1:57:51 PM | 3504 | MF_001 | FST Fill Valve | Valves | Open |
| 2:01:58 PM | 3751 | MF_001 | FST Fill Valve | Valves | Closed |
| 2:08:28 PM | 4141 | M001_HS_O | SG-1 Stm Stop HS | Switches | Close |
| 2:08:28 PM | 4141 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 2:09:59 PM | 4232 | MF_001 | FST Fill Valve | Valves | Open |
| 2:14:45 PM | 4518 | MF_001 | FST Fill Valve | Valves | Closed |
| 2:18:21 PM | 4734 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 2:18:22 PM | 4735 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 2:26:04 PM | 5197 | MF_001 | FST Fill Valve | Valves | Open |
| 2:31:09 PM | 5502 | MF_001 | FST Fill Valve | Valves | Closed |

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DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|-------------------|-------------------|-------------------|-------------------|--------------------------------|
| DP-111 | DP across Upper Core Plate | 4.9931 | 0.9963 | 30 | -30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 4.9796 | 0.9934 | 375 | -375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 4.9563 | 0.989 | 25 | -25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 4.9591 | 0.9931 | 25 | -25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 4.9743 | 0.9957 | 25 | -25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 4.9561 | 0.9924 | 25 | -25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 4.97 | 0.9951 | 30 | 0 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 4.9707 | 0.9949 | 30 | 0 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 4.9709 | 0.9959 | 25 | -25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 4.9736 | 0.9958 | 25 | -25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 4.9622 | 0.9941 | 50 | -50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 4.9689 | 0.9939 | 25 | -25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 4.9588 | 0.9916 | 200 | 0 | Differential Pressure (in h2o) |
| DP-203 | RCP-1 Differential Pressure | 4.9692 | 0.9946 | 27 | 0 | Differential Pressure (psid) |
| DP-204 | CL-2 Differential Pressure | 4.9814 | 0.9969 | 25 | -25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 4.978 | 0.995 | 200 | 0 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 4.984 | 0.9959 | 200 | 0 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 4.9817 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 4.9905 | 0.9984 | 25 | -25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 4.9858 | 0.998 | 25 | -25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 4.9649 | 0.9933 | 25 | -25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 4.9849 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 4.9838 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 4.9788 | 0.9965 | 15 | -15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 4.981 | 0.9973 | 15 | 0 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 4.9807 | 0.9981 | 500 | 0 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 4.9729 | 0.9964 | 500 | 0 | Differential Pressure (psid) |
| DP-217 | HL-1 to CL1 Differential Pressure at SG1 | 4.9835 | 0.9981 | 46.83 | 0 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 4.9889 | 0.9992 | 150 | 0 | Differential Pressure (in h2o) |
| DP-219 | HL-1 to CL3 Differential Pressure at SG1 | 4.9686 | 0.9949 | 30.95 | 0 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 4.9627 | 0.9936 | 150 | 0 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 4.9677 | 0.9951 | 150 | 0 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 4.983 | 0.9975 | 150 | 0 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 4.9915 | 0.9987 | 150 | 0 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 4.9665 | 0.9944 | 150 | 0 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 4.979 | 0.9975 | 400 | 0 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 4.9736 | 0.9958 | 400 | 0 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 4.9675 | 0.9948 | 150 | -150 | Differential Pressure (in h2o) |
| DP-502 | CMT-2 Injection Differential Pressure | 4.9645 | 0.9947 | 150 | -150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 4.9858 | 0.998 | 150 | -150 | Differential Pressure (in h2o) |
| DP-504 | CMT-2 Balance Line Differential Pressure | 4.9955 | 1.0007 | 100 | -100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 4.9969 | 1.0008 | 10 | 0 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 4.967 | 0.9948 | 10 | 0 | Differential Pressure (psid) |
| DP-603 | ADS4-1 Venturi | 4.9847 | 0.9985 | 100 | 0 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 4.964 | 0.9941 | 100 | 0 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 4.9881 | 0.9993 | 50 | 0 | Differential Pressure (in h2o) |

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| | | | | | | |
|---------|--|--------|--------|-------|------|--------------------------------|
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 4.9857 | 0.9991 | 50 | 0 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 4.9773 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-701 | IRWST-1 Injection Differential Pressure | 4.9872 | 0.9982 | 30 | 0 | Differential Pressure (psid) |
| DP-702 | IRWST-2 Injection Differential Pressure | 4.9871 | 0.9981 | 30 | 0 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 4.9905 | 0.9994 | 100 | 0 | Differential Pressure (psid) |
| FDP-604 | ADS-2 Flow Differential Pressure | 4.9738 | 0.9961 | 100 | 0 | Differential Pressure (psid) |
| FDP-605 | ADS-1 Flow Differential Pressure | 4.9896 | 0.9993 | 250 | 0 | Differential Pressure (psid) |
| FDP-606 | ADS-3 Flow Differential Pressure | 5.0051 | 1.0023 | 100 | 0 | Differential Pressure (psid) |
| FMM-001 | SG-1 Feed Flow | 4.9838 | 0.9961 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-002 | SG-2 Feed Flow | 4.9642 | 0.9925 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-201 | CL-1 Loop Flow | 4.9607 | 0.9921 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-202 | CL-2 Loop Flow | 4.9754 | 0.9943 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-203 | CL-3 Loop Flow | 4.9853 | 0.9974 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-204 | CL-4 Loop Flow | 4.9729 | 0.9936 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-205 | DVI-1 Flow | 4.9706 | 0.996 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-206 | DVI-2 Flow | 4.9767 | 0.9969 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-401 | ACC-1 Injection Flow | 4.9516 | 0.9932 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-402 | ACC-2 Injection Flow | 4.9772 | 0.9965 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-501 | CMT-1 Injection Flow | 4.9959 | 1.0006 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-502 | CMT-2 CL Balance Line Flow | 4.9742 | 0.9994 | 70 | 0 | Volumetric Flow Rate (gpm) |
| FMM-503 | CMT-1 CL Balance Line Flow | 4.9717 | 0.9985 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-504 | CMT-2 Injection Flow | 4.9523 | 0.9925 | 20 | 0 | Volumetric Flow Rate (gpm) |
| FMM-601 | ADS1-3 Loop Seal Flow | 5.0168 | 1.004 | 200 | 0 | Volumetric Flow Rate (gpm) |
| FMM-602 | ADS4-2 Loop Seal Flow | 5.0507 | 1.0117 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-603 | ADS4-1 Loop Seal Flow | 5.0571 | 1.0129 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-701 | IRWST/DVI-1 Injection Flow | 4.9738 | 0.9954 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-702 | IRWST/DVI-2 Injection Flow | 4.9724 | 0.9955 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-703 | IRWST Overflow | 4.9663 | 0.9966 | 10 | 0 | Volumetric Flow Rate (gpm) |
| FMM-801 | CVSP Discharge Flow | 4.9876 | 0.9998 | 8 | 0 | Volumetric Flow Rate (gpm) |
| FMM-802 | PRHR Inlet Flow | 4.9656 | 0.9966 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-803 | RNSP to DVI-2 Flow | 4.9629 | 0.9942 | 30 | 0 | Volumetric Flow Rate (gpm) |
| FMM-804 | PRHR Outlet Flow | 4.9612 | 0.9963 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-805 | RNSP Discharge Flow | 4.9711 | 0.9936 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-901 | Primary Sump-1 Recirculation Injection Flow | 4.9673 | 0.9936 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-902 | Primary Sump-2 Recirculation Injection Flow | 4.9726 | 0.9948 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Break Separator Loop Seal Flow | 5.1224 | 1.0902 | 90 | -90 | Volumetric Flow Rate (gpm) |
| FVM-001 | SG-1 Main Steam Flow | 5.0223 | 1.005 | 100 | 0 | Steam Flow Rate (cfm) |
| FVM-002 | SG-2 Main Steam Flow | 4.9878 | 0.9982 | 100 | 0 | Steam Flow Rate (cfm) |
| FVM-003 | Main Steam Total Flow | 4.9815 | 0.9978 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-009 | SG-1 PORV Blowdown Steam Flow | 4.9836 | 0.9967 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-010 | SG-2 PORV Blowdown Steam Flow | 4.9817 | 0.9971 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-601 | ADS1-3 Separator Steam Flow | 4.9995 | 1.0017 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 5.006 | 1.0018 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 5.0062 | 1.0024 | 1600 | 0 | Steam Flow Rate (cfm) |
| FVM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 5.0034 | 1.0026 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 5.0037 | 1.0028 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-901 | BAMS HDR 6-inch Line Steam Flow | 5.0021 | 1.0023 | 5000 | 0 | Steam Flow Rate (cfm) |
| FVM-902 | BAMS HDR 10-inch Line Steam Flow | 5.01 | 1.0027 | 12500 | 0 | Steam Flow Rate (cfm) |

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|-----------|---|--------|--------|-------|---|-----------------------|
| FVM-903 | Primary Sump Steam Exhaust Flow | 4.9879 | 0.9949 | 22 | 0 | Steam Flow Rate (cfm) |
| FVM-904 | Break Separator 3-inch Line Steam Flow | 4.9986 | 0.9979 | 400 | 0 | Steam Flow Rate (cfm) |
| FVM-905 | Break Separator 6-inch Line Steam Flow | 5.0036 | 1.004 | 6000 | 0 | Steam Flow Rate (cfm) |
| FVM-906 | Break Separator 8-inch Line Steam Flow | 5.0048 | 1.0025 | 4000 | 0 | Steam Flow Rate (cfm) |
| HPS-201-1 | CL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-2 | CL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-3 | CL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-1 | CL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-2 | CL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-3 | CL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-1 | CL-3 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-2 | CL-3 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-3 | CL-3 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-1 | CL-4 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-2 | CL-4 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-3 | CL-4 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-1 | HL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-2 | HL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-3 | HL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-1 | HL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-2 | HL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-3 | HL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-1 | CMT-1 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-2 | CMT-1 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-3 | CMT-1 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-1 | CMT-2 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-2 | CMT-2 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-3 | CMT-2 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-1 | Lower PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-2 | Lower PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-3 | Lower PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-1 | ADS1-3 Common Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-2 | ADS1-3 Common Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-3 | ADS1-3 Common Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-1 | Upper PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-2 | Upper PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-3 | Upper PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-1 | PRHR HX Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-2 | PRHR HX Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-3 | PRHR HX Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| KW-101 | Rx Heater Group 1 Power | 4.3222 | 1.1171 | 472 | 0 | Power (kW) |
| KW-102 | Rx Heater Group 2 Power | 4.1621 | 1.0045 | 486 | 0 | Power (kW) |
| KW-103 | Rx Heater Group 1 Power | 4.8931 | 0.9786 | 496 | 0 | Power (kW) |
| KW-104 | Rx Heater Group 2 Power | 4.912 | 0.9946 | 492 | 0 | Power (kW) |
| KW-601 | PZR Heater Power | 4.9435 | 0.982 | 24.3 | 0 | Power (kW) |
| LCT-701 | IRWST Weight | 4.9831 | 0.9976 | 40000 | 0 | Mass (lbm) |
| LCT-901 | Primary Sump Weight | 4.977 | 0.9969 | 28800 | 0 | Mass (lbm) |
| LCT-902 | Secondary Sump Weight | 4.9845 | 0.9983 | 16700 | 0 | Mass (lbm) |

| NRC-COND-05 | | DAS Configuration | | | | |
|-------------|---|-------------------|--------|--------|---|------------------|
| LDP-001 | FST Uncompensated Water Level | 5.0056 | 1.0017 | 91.88 | 0 | Water Level (in) |
| LDP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 4.9645 | 0.9945 | 5.561 | 0 | Water Level (in) |
| LDP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 4.9725 | 0.9963 | 5.938 | 0 | Water Level (in) |
| LDP-103 | DVI to CL Uncompensated Water Level (270) | 4.9807 | 0.9982 | 11.692 | 0 | Water Level (in) |
| LDP-104 | DVI to CL Uncompensated Water Level (180) | 4.9748 | 0.9992 | 12.376 | 0 | Water Level (in) |
| LDP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 5.0076 | 1.0058 | 11.929 | 0 | Water Level (in) |
| LDP-106 | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 4.9732 | 0.9985 | 8.198 | 0 | Water Level (in) |
| LDP-107 | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 4.9713 | 0.9958 | 8.223 | 0 | Water Level (in) |
| LDP-108 | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 4.9683 | 0.9953 | 8.562 | 0 | Water Level (in) |
| LDP-109 | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 4.984 | 0.9988 | 19.763 | 0 | Water Level (in) |
| LDP-110 | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 4.9909 | 0.9991 | 20.02 | 0 | Water Level (in) |
| LDP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 4.9755 | 0.9963 | 4.696 | 0 | Water Level (in) |
| LDP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 4.9849 | 0.9986 | 15.614 | 0 | Water Level (in) |
| LDP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 4.9896 | 0.9996 | 24.28 | 0 | Water Level (in) |
| LDP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 4.9638 | 0.9949 | 77.59 | 0 | Water Level (in) |
| LDP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 4.9838 | 0.9983 | 11.383 | 0 | Water Level (in) |
| LDP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 4.9848 | 0.9988 | 39.98 | 0 | Water Level (in) |
| LDP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 4.988 | 0.9996 | 40.26 | 0 | Water Level (in) |
| LDP-127 | Rx Wide Range Uncompensated Water Level | 4.999 | 1.0007 | 98.97 | 0 | Water Level (in) |
| LDP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 4.9639 | 0.9946 | 39.3 | 0 | Water Level (in) |
| LDP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 4.9837 | 0.9982 | 24.166 | 0 | Water Level (in) |
| LDP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 4.9981 | 1.0014 | 78.02 | 0 | Water Level (in) |
| LDP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 4.9843 | 0.9994 | 20.135 | 0 | Water Level (in) |
| LDP-201 | CL-1 Uncompensated Water Level | 4.9961 | 1.0002 | 2.496 | 0 | Water Level (in) |
| LDP-202 | CL-2 Uncompensated Water Level | 4.9924 | 0.9994 | 2.223 | 0 | Water Level (in) |
| LDP-203 | CL-3 Uncompensated Water Level | 4.9923 | 0.9994 | 2.532 | 0 | Water Level (in) |
| LDP-204 | CL-4 Uncompensated Water Level | 4.9594 | 0.9927 | 2.47 | 0 | Water Level (in) |
| LDP-205 | HL-1 Uncompensated Water Level | 4.9663 | 0.9945 | 4.415 | 0 | Water Level (in) |
| LDP-206 | HL-2 Uncompensated Water Level | 4.9653 | 0.9944 | 4.013 | 0 | Water Level (in) |
| LDP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 4.9779 | 0.9972 | 18.3 | 0 | Water Level (in) |
| LDP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 4.9825 | 0.9969 | 19.247 | 0 | Water Level (in) |
| LDP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 4.9954 | 1.0002 | 10.939 | 0 | Water Level (in) |
| LDP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 4.9677 | 0.9943 | 16.988 | 0 | Water Level (in) |
| LDP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 4.9613 | 0.993 | 16.793 | 0 | Water Level (in) |
| LDP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 4.9836 | 0.9982 | 16.772 | 0 | Water Level (in) |
| LDP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 4.9864 | 0.9978 | 16.747 | 0 | Water Level (in) |
| LDP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 4.9953 | 1.0002 | 11.571 | 0 | Water Level (in) |
| LDP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 4.99 | 0.9992 | 102.06 | 0 | Water Level (in) |
| LDP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 4.9717 | 0.9955 | 95.55 | 0 | Water Level (in) |
| LDP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 4.9618 | 0.9932 | 96.25 | 0 | Water Level (in) |
| LDP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 4.9658 | 0.9943 | 103.14 | 0 | Water Level (in) |
| LDP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 4.9867 | 0.9992 | 102.45 | 0 | Water Level (in) |
| LDP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 4.9786 | 0.9971 | 96 | 0 | Water Level (in) |
| LDP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 4.985 | 0.9986 | 95.98 | 0 | Water Level (in) |
| LDP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 4.9628 | 0.9947 | 102.71 | 0 | Water Level (in) |
| LDP-301 | SG-1 WR Uncompensated Water Level | 5.0022 | 1.0006 | 119.25 | 0 | Water Level (in) |
| LDP-302 | SG-2 WR Uncompensated Water Level | 4.9995 | 1.0003 | 119.02 | 0 | Water Level (in) |
| LDP-303 | SG-1 NR Uncompensated Water Level | 4.9699 | 0.9934 | 31.81 | 0 | Water Level (in) |

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DAS Configuration

| | | | | | | |
|---------|--|--------|--------|--------|----|------------------|
| LDP-304 | SG-2 NR Uncompensated Water Level | 4.9748 | 0.995 | 31.52 | 0 | Water Level (in) |
| LDP-401 | ACC-1 Uncompensated Water Level | 4.987 | 0.9951 | 38.26 | 0 | Water Level (in) |
| LDP-402 | ACC-2 Uncompensated Water Level | 5.166 | 1.0332 | 38.34 | 0 | Water Level (in) |
| LDP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 4.9834 | 0.9986 | 5.31 | 0 | Water Level (in) |
| LDP-502 | CMT-2 WR Uncompensated Water Level | 5.1958 | 1.0396 | 57.5 | 0 | Water Level (in) |
| LDP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 4.984 | 0.9979 | 46.77 | 0 | Water Level (in) |
| LDP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 4.9793 | 0.9972 | 5.226 | 0 | Water Level (in) |
| LDP-505 | CMT-1 NR Uncompensated Water Level (Top) | 4.994 | 1 | 5.486 | 0 | Water Level (in) |
| LDP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 4.9823 | 0.9975 | 46.96 | 0 | Water Level (in) |
| LDP-507 | CMT-1 WR Uncompensated Water Level | 5.1887 | 1.0383 | 57.5 | 0 | Water Level (in) |
| LDP-508 | CMT-2 NR Uncompensated Water Level (Top) | 4.9913 | 0.9994 | 5.309 | 0 | Water Level (in) |
| LDP-609 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 4.9772 | 0.9968 | 78.84 | 0 | Water Level (in) |
| LDP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 4.9653 | 0.9942 | 78.28 | 0 | Water Level (in) |
| LDP-601 | PZR WR Uncompensated Water Level | 5.0006 | 0.9991 | 140.47 | 0 | Water Level (in) |
| LDP-602 | PZR Surge Line Uncompensated Water Level | 4.9777 | 0.997 | 47.5 | 0 | Water Level (in) |
| LDP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 4.9735 | 0.9963 | 3.533 | 0 | Water Level (in) |
| LDP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 4.9724 | 0.9958 | 18.696 | 0 | Water Level (in) |
| LDP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 4.9737 | 0.996 | 4.127 | 0 | Water Level (in) |
| LDP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 4.9731 | 0.9964 | 3.82 | 0 | Water Level (in) |
| LDP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 4.996 | 1.0011 | 14.717 | 0 | Water Level (in) |
| LDP-610 | ADS1-3 Separator Uncompensated Water Level | 5.193 | 1.0399 | 45.24 | 0 | Water Level (in) |
| LDP-611 | ADS4-1 Separator Uncompensated Water Level | 5.1628 | 1.0342 | 55.97 | 0 | Water Level (in) |
| LDP-612 | ADS4-2 Separator Uncompensated Water Level | 5.1859 | 1.0386 | 56.6 | 0 | Water Level (in) |
| LDP-701 | IRWST Uncompensated Water Level | 5.0202 | 1.0048 | 115.8 | 0 | Water Level (in) |
| LDP-801 | PRHR HX Inlet Head Uncompensated Water Level | 4.9945 | 1.0013 | 6.971 | 0 | Water Level (in) |
| LDP-802 | PRHR HX WR Uncompensated Water Level | 4.9871 | 0.9998 | 57.08 | 0 | Water Level (in) |
| LDP-901 | Primary Sump Uncompensated Water Level | 5.0016 | 1.0015 | 104.36 | 0 | Water Level (in) |
| LDP-902 | Secondary Sump Uncompensated Water Level | 5.0018 | 1.0007 | 102.56 | 0 | Water Level (in) |
| LDP-903 | CRT Uncompensated Water Level | 5.1669 | 1.0346 | 32.358 | 0 | Water Level (in) |
| LDP-905 | Break Separator Uncompensated Water Level | 5.1788 | 1.0378 | 130.68 | 0 | Water Level (in) |
| LT-120 | Rx Vessel Capacitance Probe Water Level | 5.0053 | 1.0042 | 99 | 50 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 5.0658 | 1.0121 | 600 | 0 | Pressure (psig) |
| PT-002 | MS Header Pressure | 4.9759 | 0.9962 | 500 | 0 | Pressure (psig) |
| PT-003 | Lab Barometer | 4.9656 | 0.9944 | 20 | 10 | Pressure (psia) |
| PT-009 | SG-1 PORV Blowdown Pressure | 4.9816 | 0.9983 | 300 | 0 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 4.9924 | 1.0004 | 300 | 0 | Pressure (psig) |
| PT-101 | CL-1 Pressure at Rx Flange | 4.9877 | 0.9986 | 500 | 0 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 4.9706 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 4.9646 | 0.9946 | 10 | 0 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 4.9882 | 0.9988 | 500 | 0 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 5.0478 | 1.0096 | 500 | 0 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 4.9637 | 0.9938 | 500 | 0 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 4.9874 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 4.9825 | 0.9984 | 10 | 0 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 4.9886 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 4.977 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 4.9616 | 0.9921 | 500 | 0 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 4.9935 | 1.0008 | 500 | 0 | Pressure (psig) |

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DAS Configuration

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|---------------|--|
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees |
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees |
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees |
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees |
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees |
| TF-105 | CL-1 Temperature (SC-105) |
| TF-106 | CL-2 Temperature (SC-106) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature |
| TF-108 | CL-2/Rx Flange at Bottom Temperature |
| TF-113 | DVI-1/Rx Flange at Top Temperature |
| TF-114 | DVI-2/Rx Flange at Bottom Temperature |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature |
| TF-116 | DVI-2/Rx Flange at Top Temperature |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature |
| TF-126 | Lower Rx Vessel Layer A-A at 225 degrees Temperature |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature |

DAS Configuration

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| | |
|--------|---|
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) |
| TF-142 | HL-2/Rx Flange at Bottom Temperature |
| TF-143 | HL-1/Rx Flange at Bottom Temperature |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature |
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature |
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature |
| TF-167 | Rx Heater Rod B2-319 at 40.13 inches |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature |
| TF-170 | Upper Rx Vessel Layer M-M at 270 degrees Temperature |
| TF-171 | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature |
| TF-172 | Lower Rx Vessel Layer AA-AA at 0 degrees Temperature |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature |
| TF-201 | CL-1 at RCP-1 Inlet Temperature |
| TF-202 | CL-2 at RCP-2 Inlet Temperature |
| TF-203 | CL-3 at RCP-3 Inlet Temperature |
| TF-204 | CL-4 at RCP-4 Inlet Temperature |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature |
| TF-211 | SG-1 Long Tube at Middle Outlet Temperature |
| TF-212 | SG-2 Long Tube at Middle Outlet Temperature |
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature |

DAS Configuration

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NRC-COND-05

DAS Configuration

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|----------|---|------|----|------|----|-----------------------|
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-221 | CL-3 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-311 | SG-1 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-312 | SG-2 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2 Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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|-------------|---|-------------------|---|------|---|-----------------------|
| TF-502 | CMT-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-509 | CMT-1 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-512 | CMT-2 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-526 | CMT-2 SPARGER 2\3 TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-528 | CMT 2\3 HEAD TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-530 | CMT-2 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-546 | CMT-2 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| NRC-COND-05 | | DAS Configuration | | | | |
|-------------|---|-------------------|----|------|----|-----------------------|
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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DAS Configuration

| | | | | | | |
|----------|--|------|----|------|----|------------------------------|
| TF-719 | IRWST Sparger Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-903 | Primary Sump Temperature (SC-903) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-911 | CRP Discharge to IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 200 | 40 | 200 | 40 | Fluid Temperature (F) |
| TF-915 | Break Separator 6-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-602 | PZR Heater Rod #2 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-1 | Core Thermocouple Rod D-001 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |

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| | |
|---------------|--|
| TR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches |
| TR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches |
| TR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches |
| TR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches |
| TR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches |
| TR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches |
| TR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches |
| TR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches |
| TR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches |
| TR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches |
| TR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches |
| TR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches |
| TR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches |
| TR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches |
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches |
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches |
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches |
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees |
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees |
| TW-201 | SG-1 Short Tube Bottom Outlet |
| TW-202 | SG-2 Short Tube Bottom Outlet |
| TW-203 | SG-1 Short Tube Bottom Inlet |
| TW-204 | SG-2 Short Tube Bottom Inlet |
| TW-205 | SG-1 Long Tube Bottom Outlet |
| TW-206 | SG-2 Long Tube Bottom Outlet |
| TW-208 | SG-2 Long Tube Bottom Inlet |
| TW-209 | SG-1 Short Tube Top Outlet |
| TW-210 | SG-2 Short Tube Top Outlet |
| TW-601 | ADS1-3 Separator Wall Temperature |
| TW-602 | ADS4-2 Separator Wall Temperature |
| TW-603 | ADS4-1 Separator Wall Temperature |
| TW-801 | PRHR HX Long Tube Outlet |
| TW-802 | PRHR HX Short Tube Outlet |
| TW-803 | PRHR HX Long Tube Lower Mid-piece |
| TW-804 | PRHR HX Short Tube Lower Mid-piece |
| TW-805 | PRHR HX Short Tube Upper Mid-piece |

DAS Configuration

[illegible]

NRC-COND-05

| | |
|------------|---|
| TW-806 | PRHR HX Long Tube Upper Mid-piece |
| TW-807 | PRHR HX Short Tube Inlet |
| TW-808 | PRHR HX Long Tube Inlet |
| TW-905 | Break Separator Wall Temperature |
| DASRunning | DSC Engine is running, but not necessarily logging data |
| DASLogging | DSC Engine is logging data to the Citadel database |
| FVM-004 | Catch Tank Steam Flow Rate |
| PT-004 | Temp Steam Pressure for FVM-002 |

DAS Configuration

| | | | | |
|--------|--------|------|-----|-----------------------|
| 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A |
| 4.9885 | 1.001 | 70 | 0 | Steam Flow Rate (cfm) |
| 5.0026 | 1.0016 | 400 | 0 | Pressure (psig) |




DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS

**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**

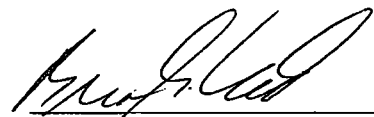
**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 50 PSIG**

NRC-COND-06

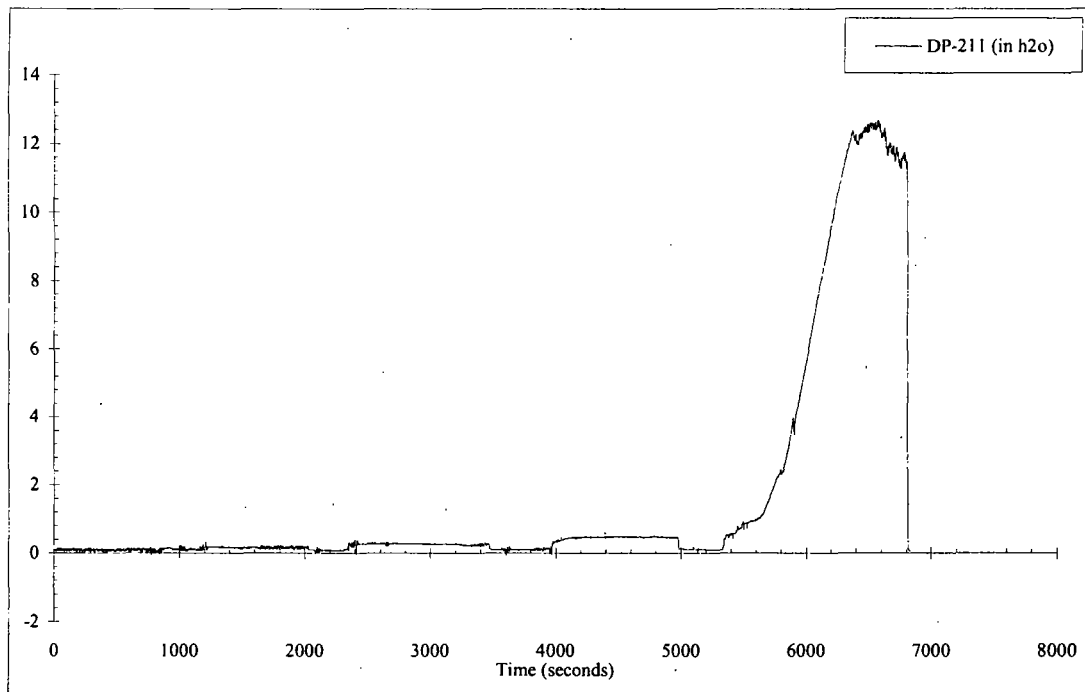
Revision 0

 3/07/07

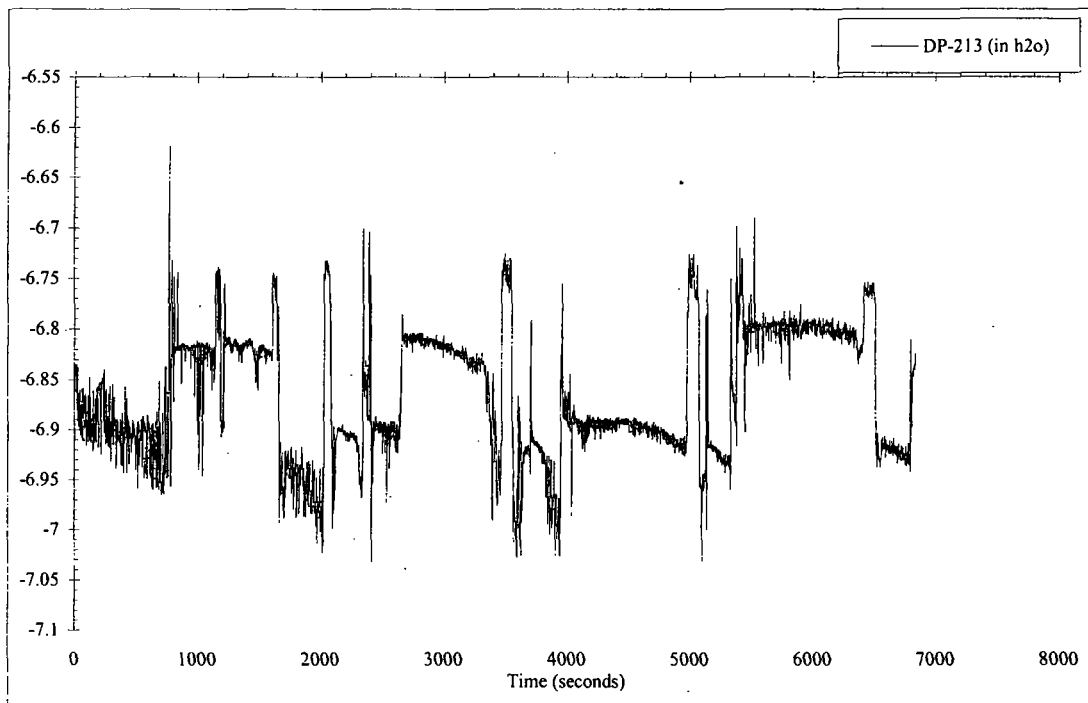
John Groome, Originator Date
Facility Operations Manager
Research Assistant

 3/7/07

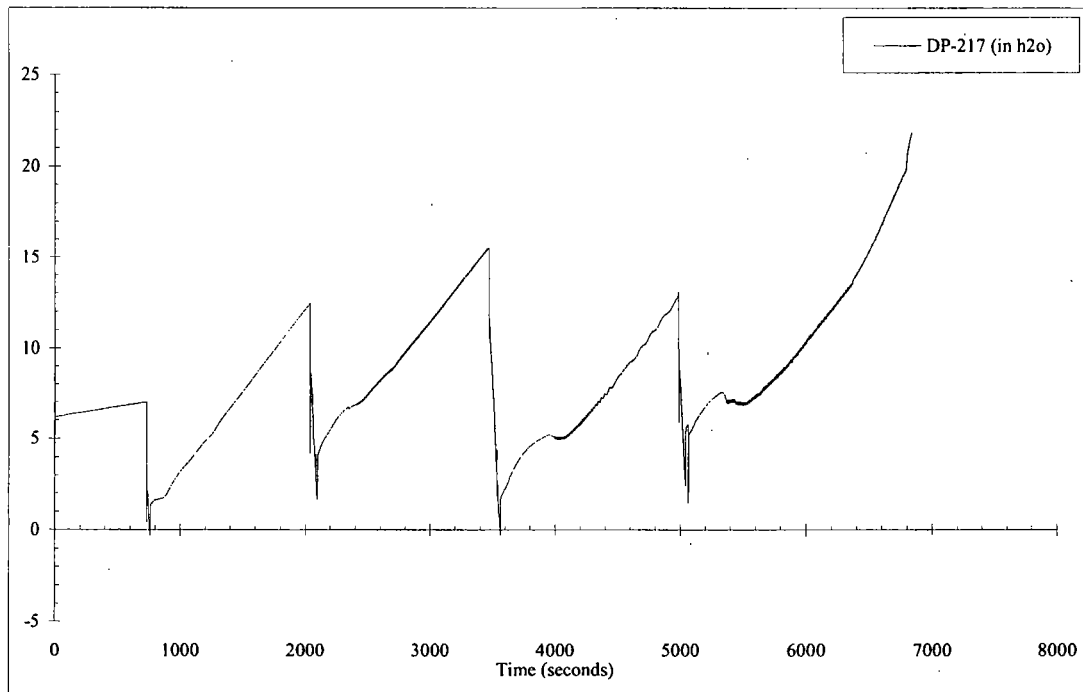
Brian Woods, Approval Date
Program Manager
Assistant Professor



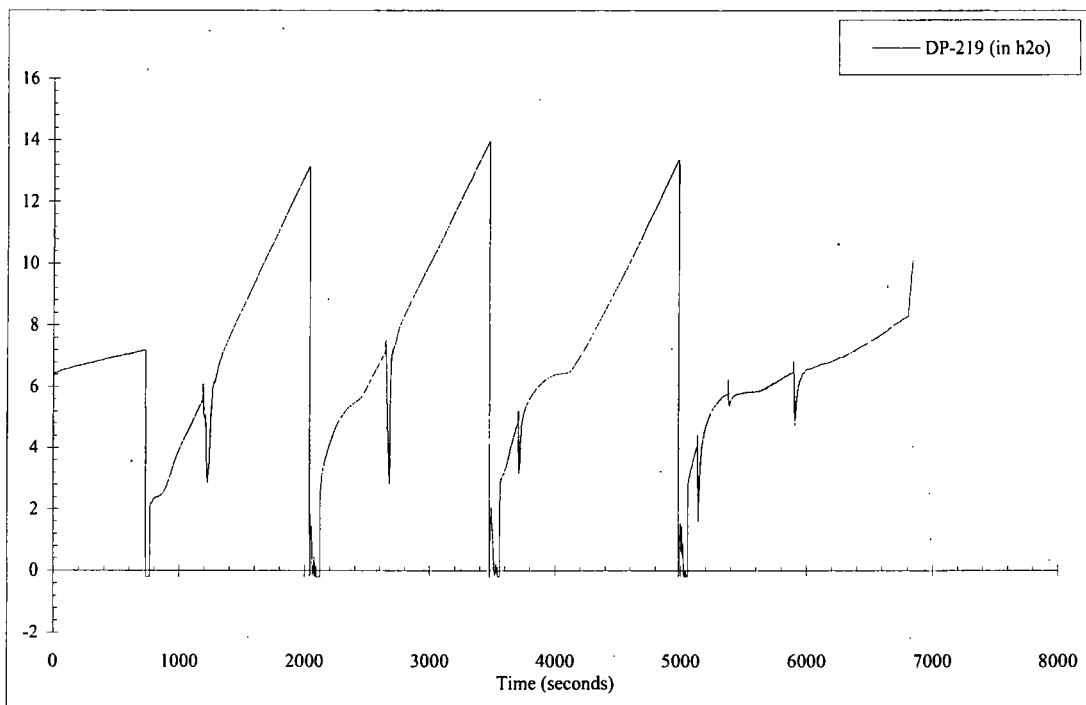
SG-1 Short Tube Entrance Losses



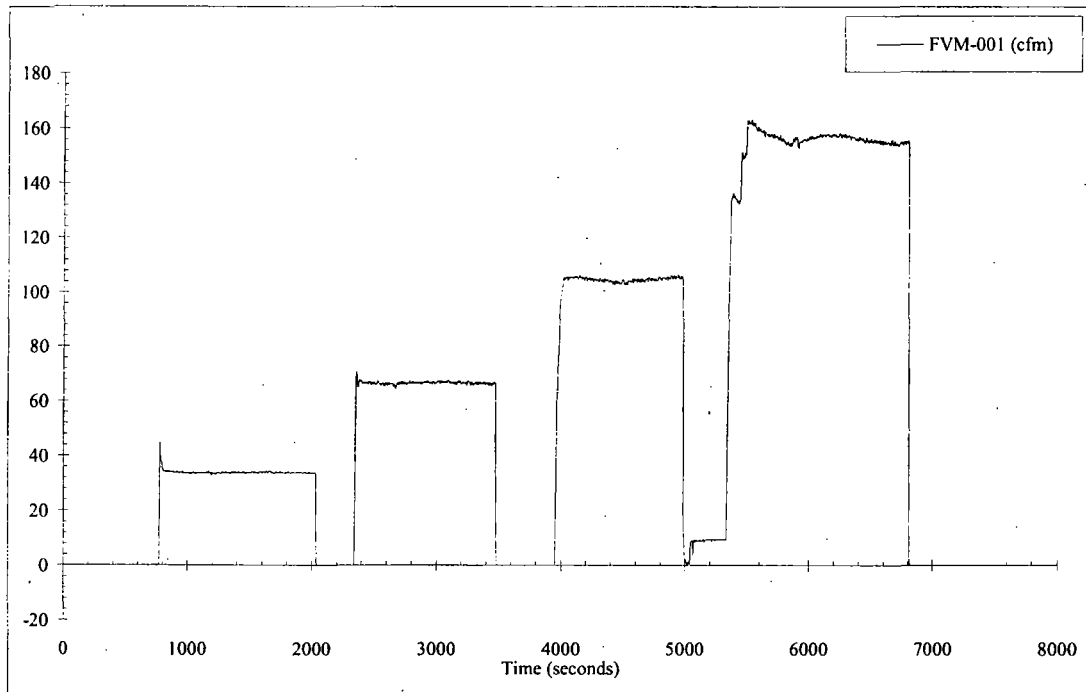
SG-1 Long Tube Exit Losses



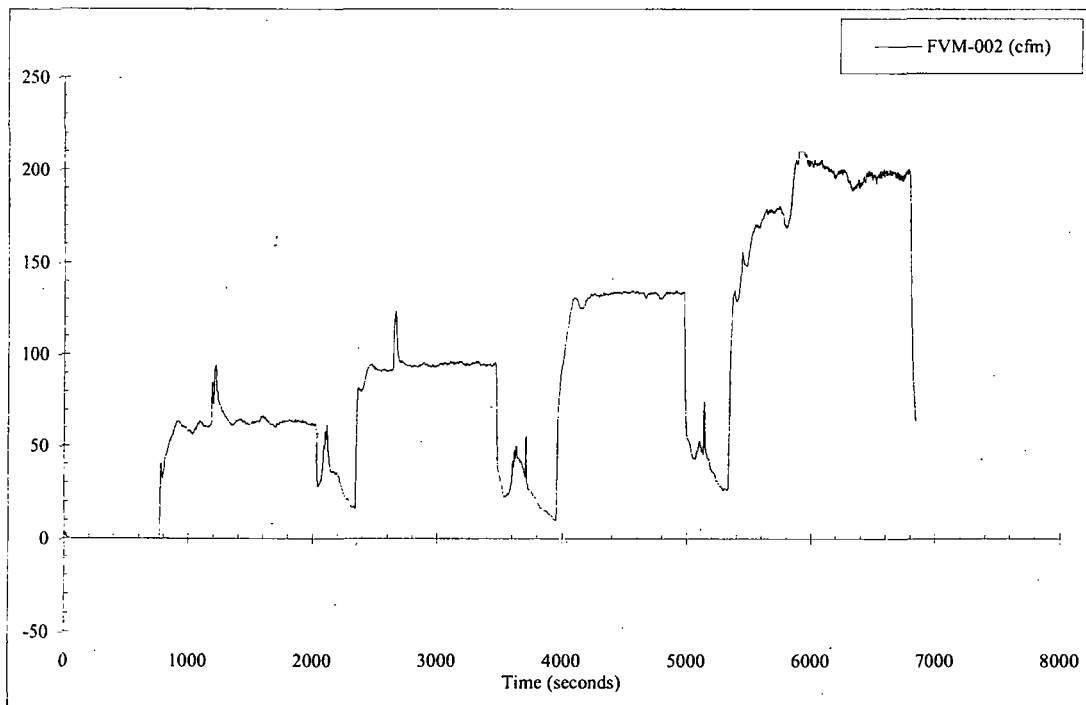
Separator Uncompensated Water Level



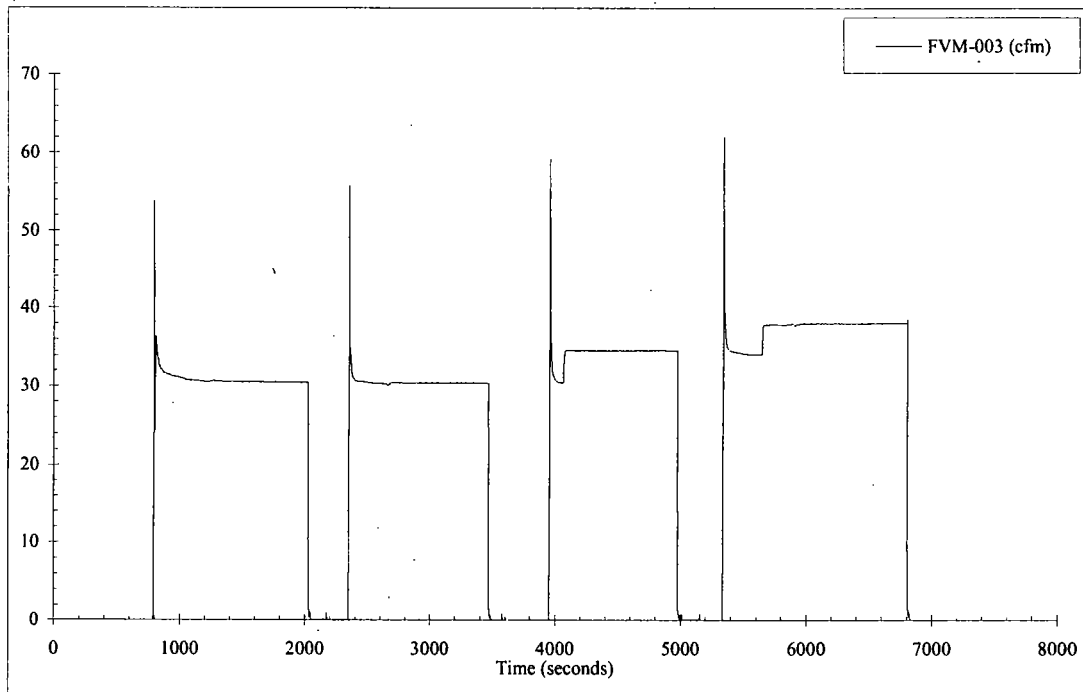
Catch Tank Uncompensated Water Level



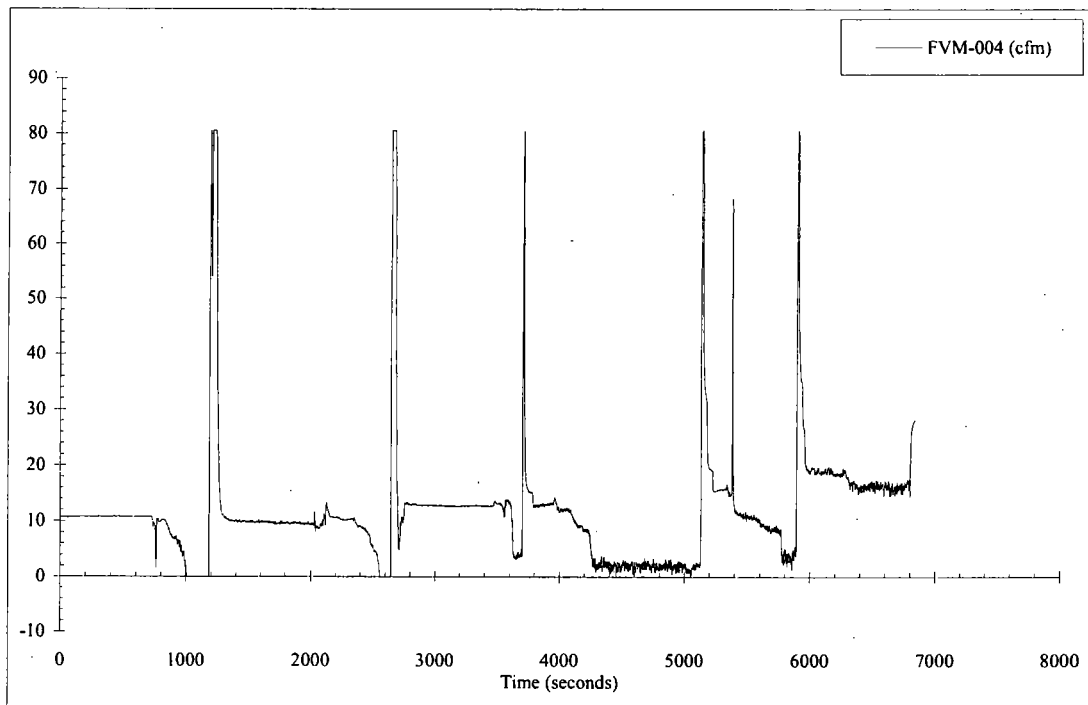
Separator Outlet Steam Flowrate



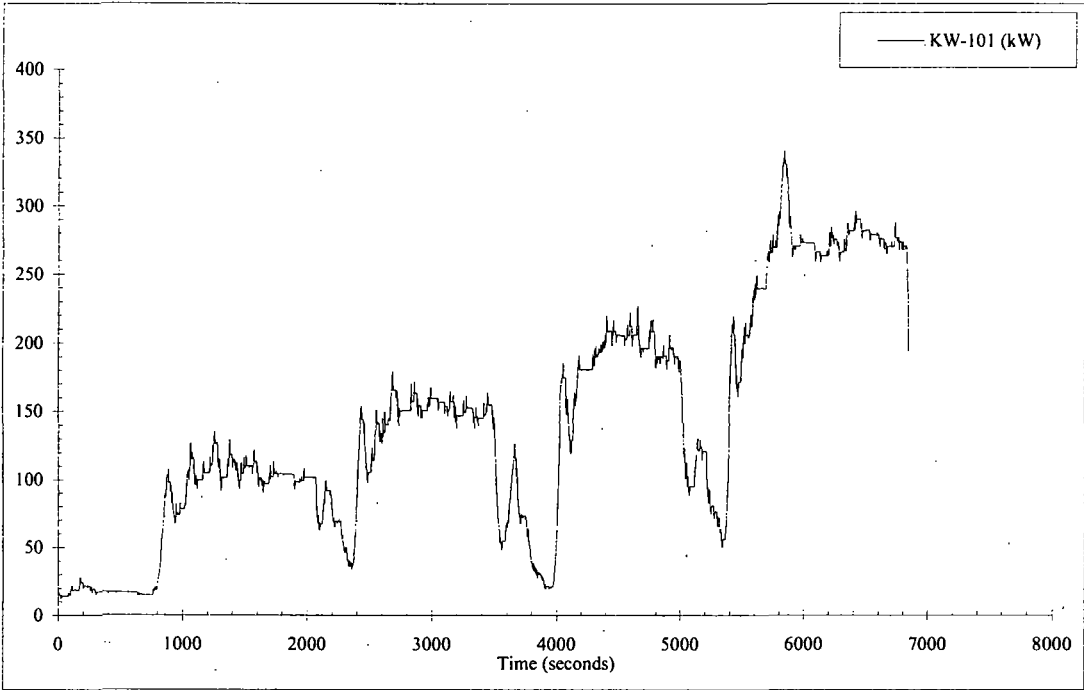
SG-2 Main Steam Flow



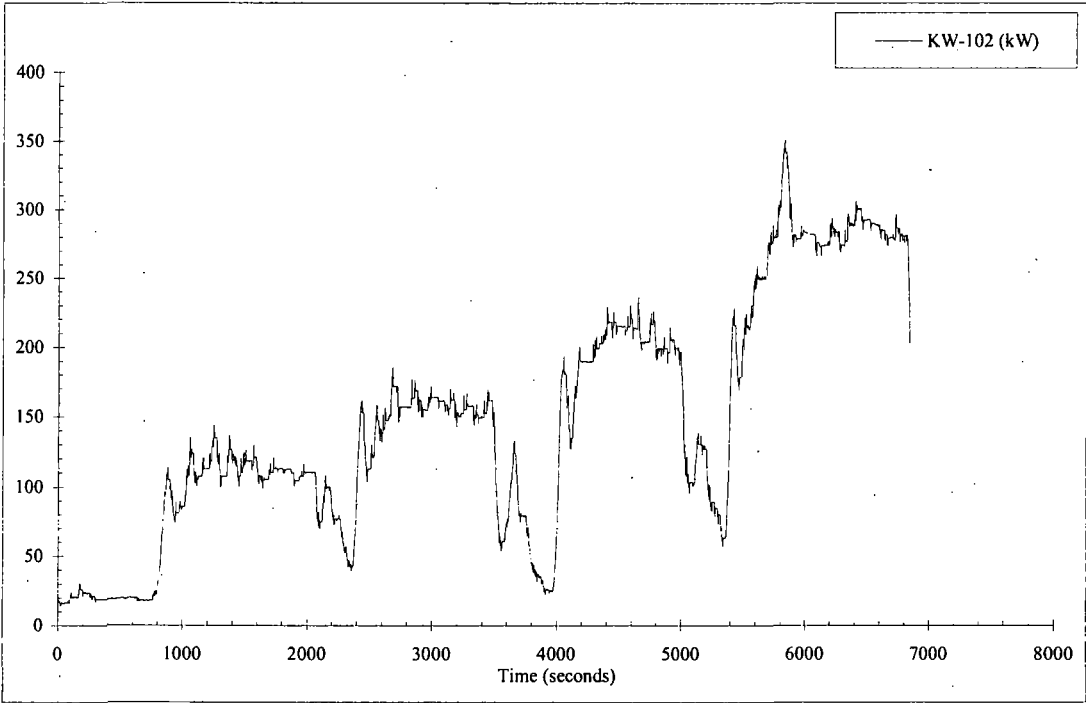
Main Steam Total Flow



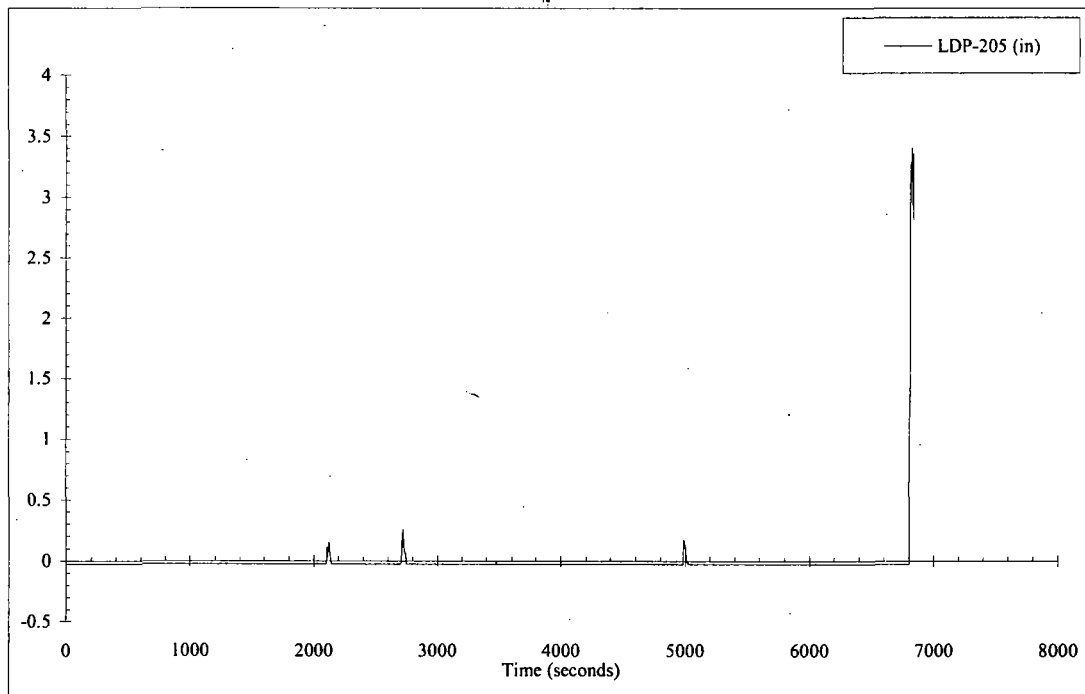
Catch Tank Steam Flow Rate



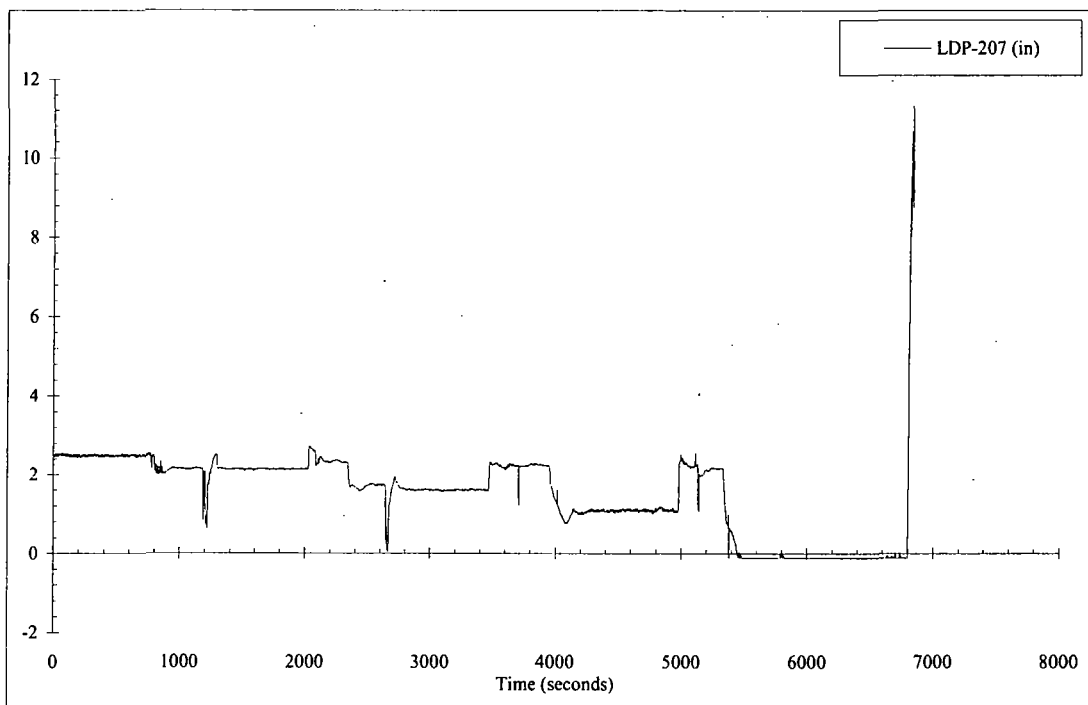
Rx Heater Group 1 Power



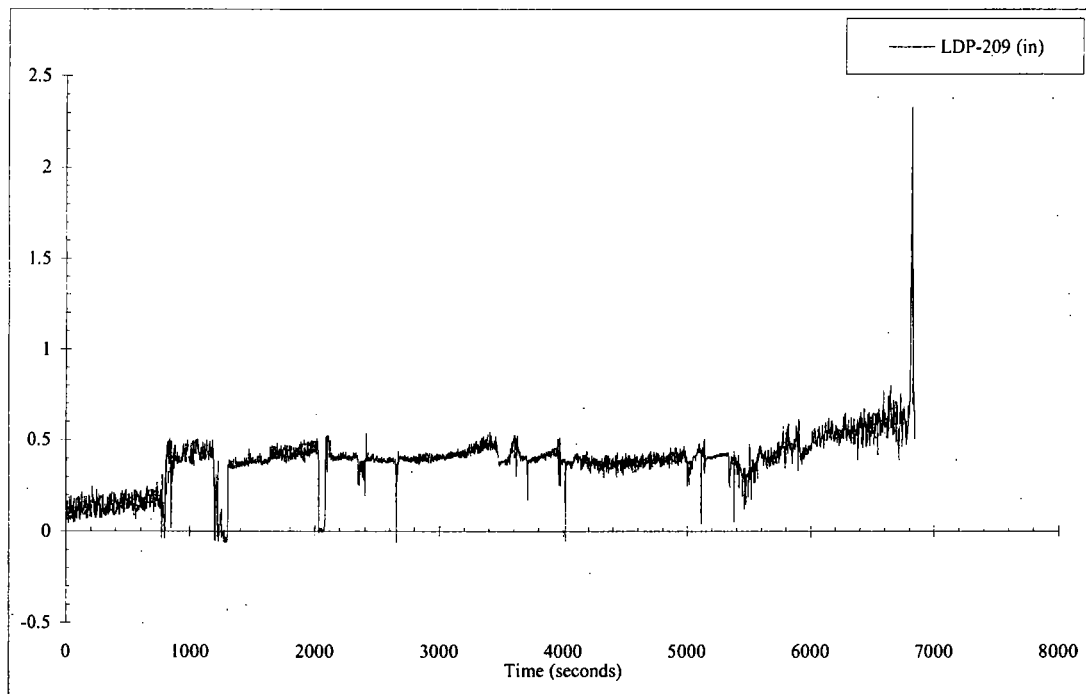
Rx Heater Group 2 Power



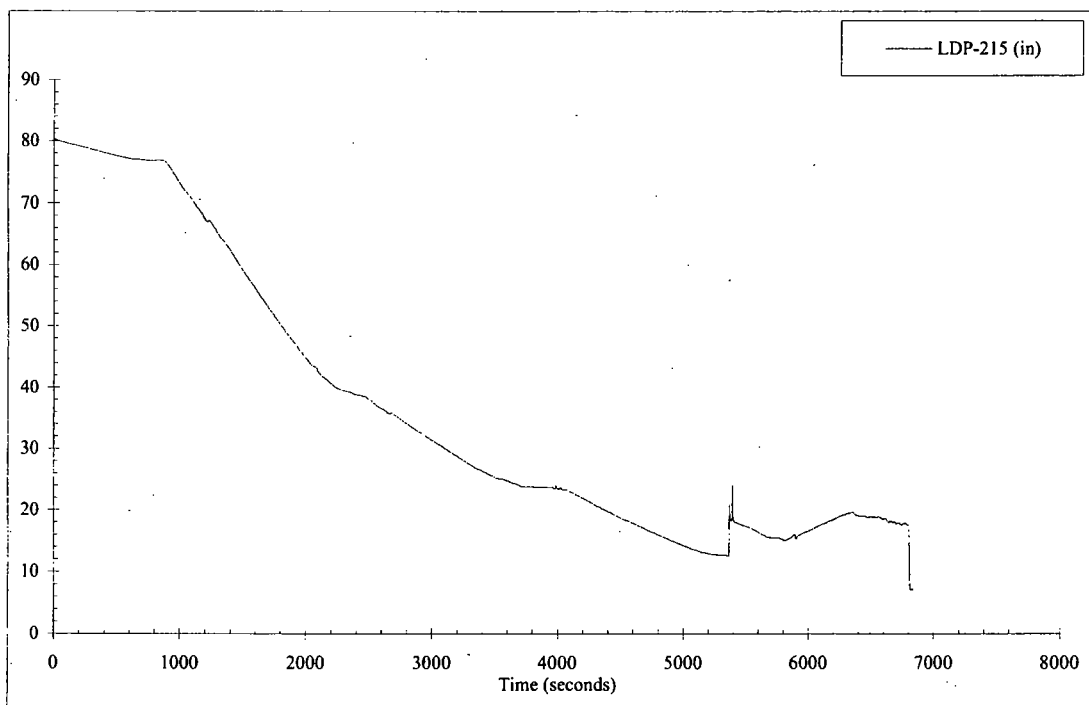
HL-1 Uncompensated Water Level



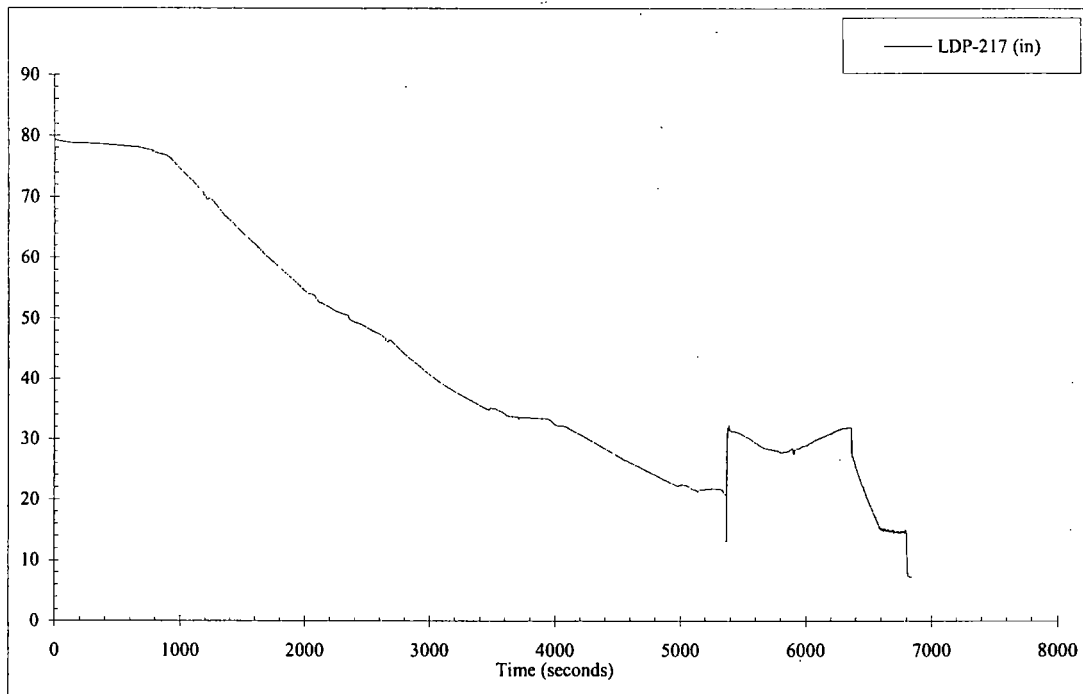
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



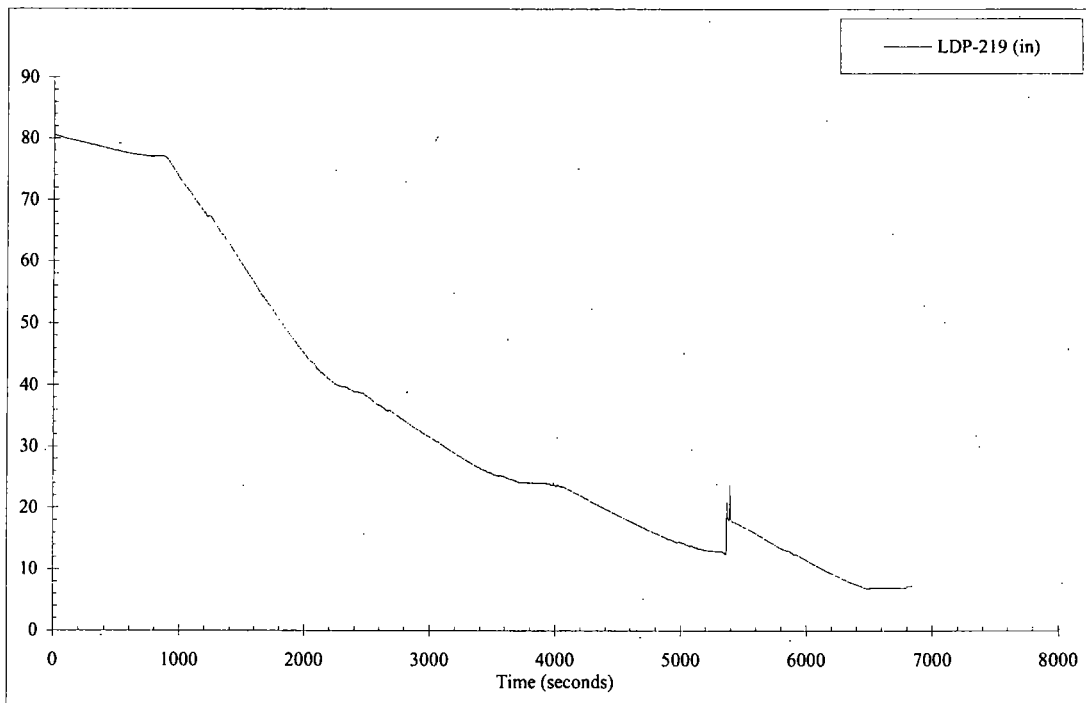
SG-1 to HL-1 Plenum Uncompensated Water Level



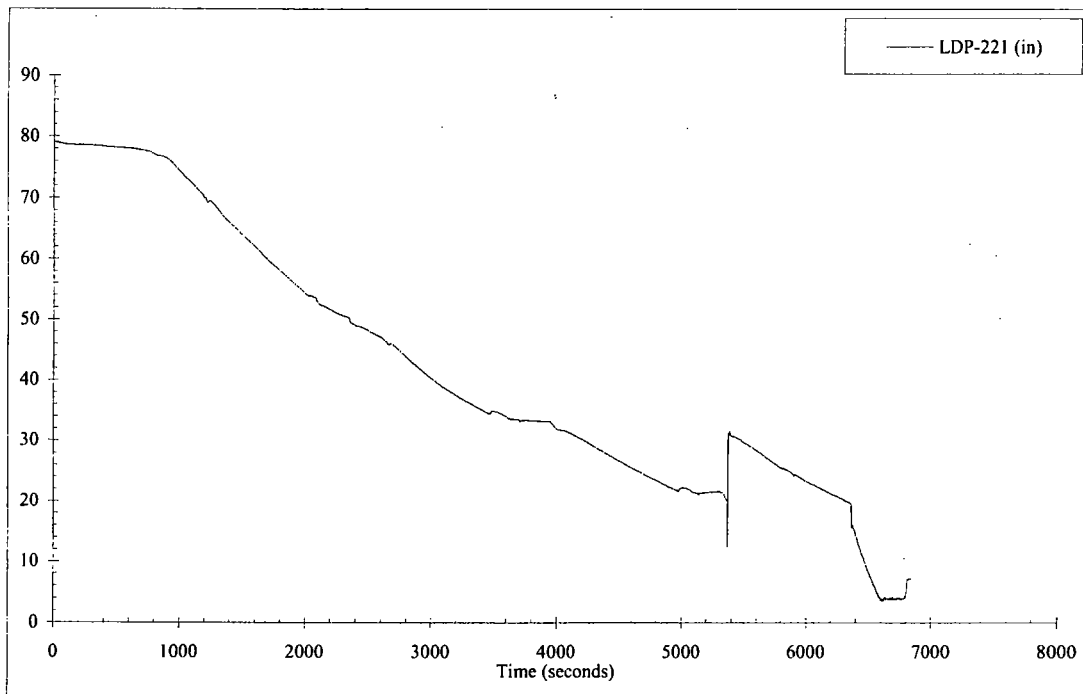
SG-1 Long Tube to HL Uncompensated Water Level



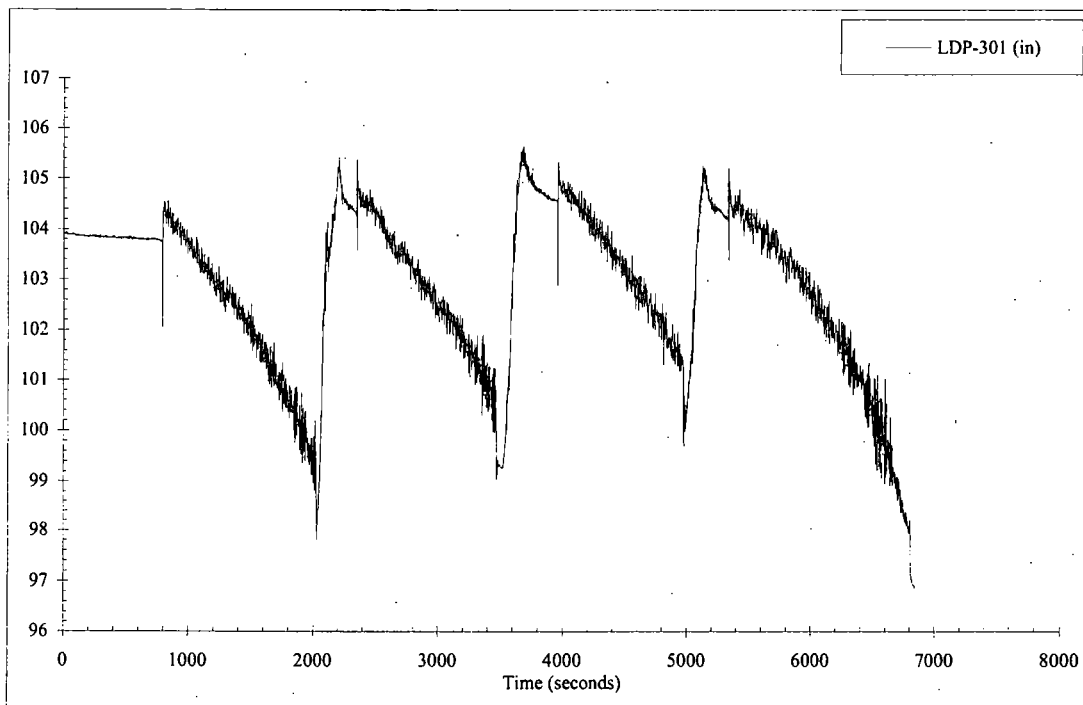
SG-1 Short Tube to HL Uncompensated Water Level



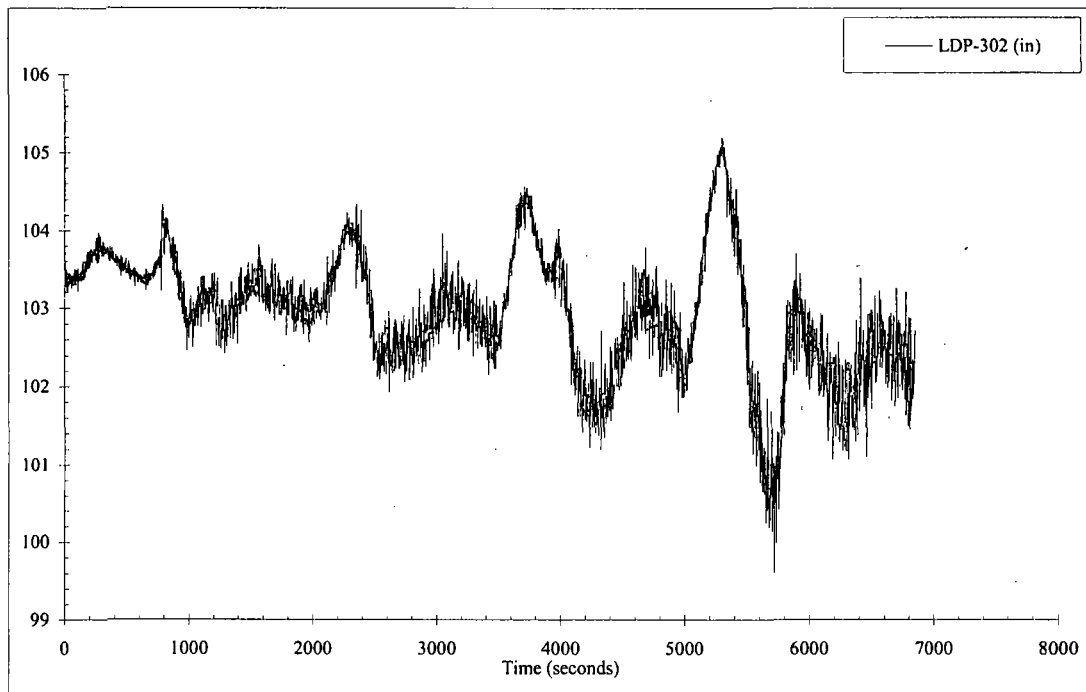
SG-1 Long Tube to CL Uncompensated Water Level



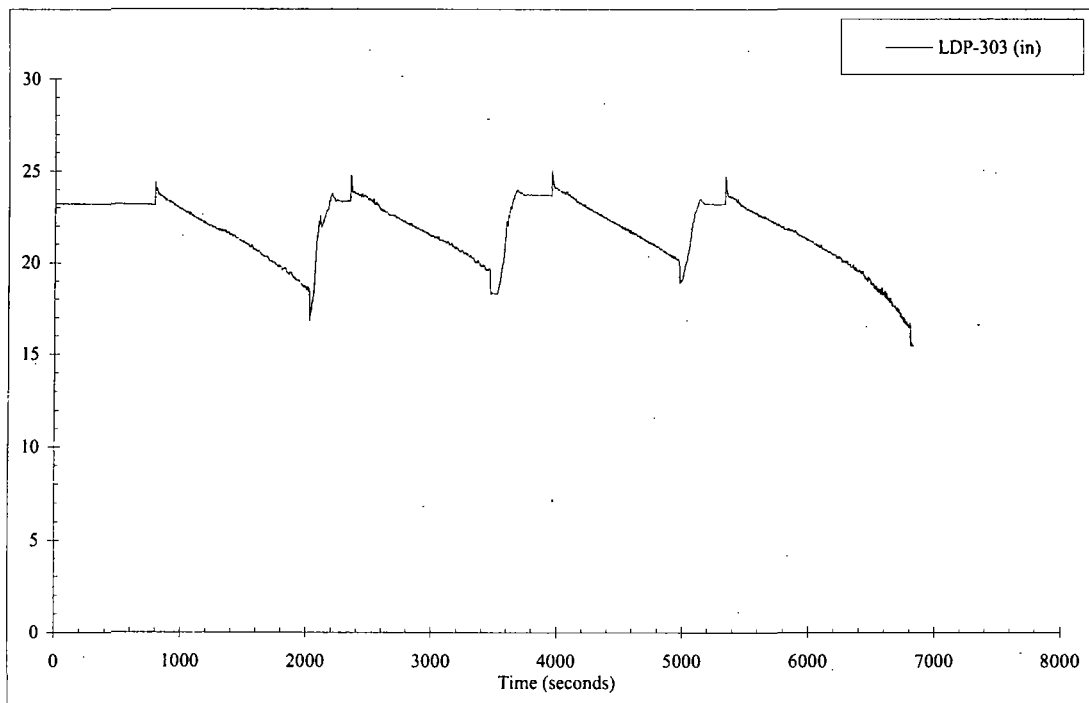
SG-1 Short Tube to CL Uncompensated Water Level



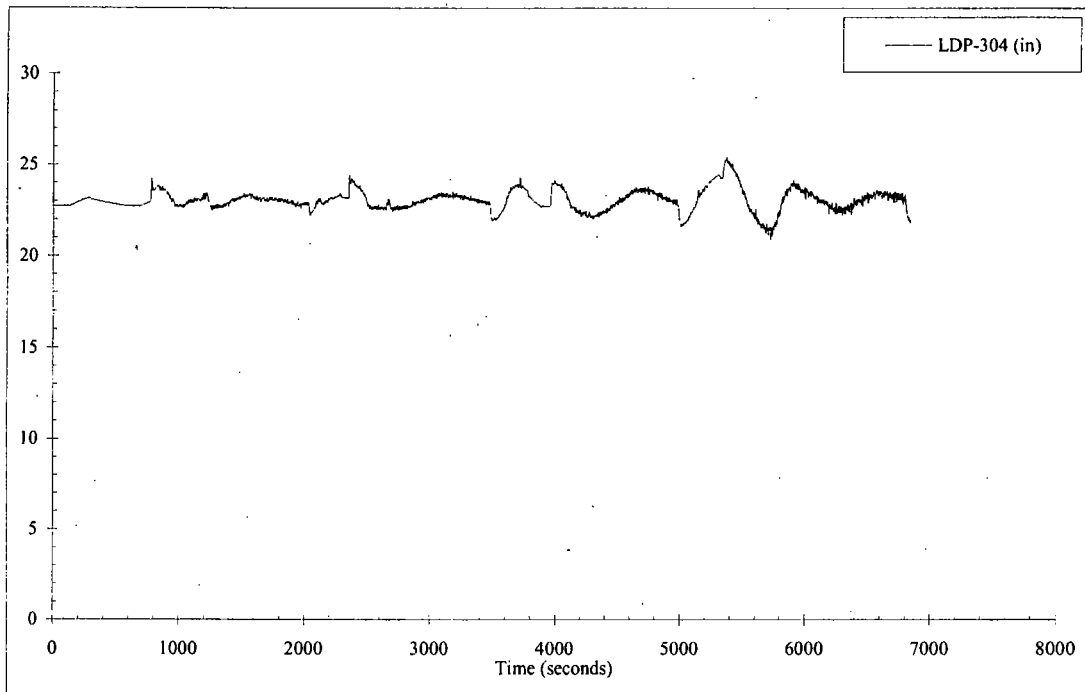
SG-1 WR Uncompensated Water Level



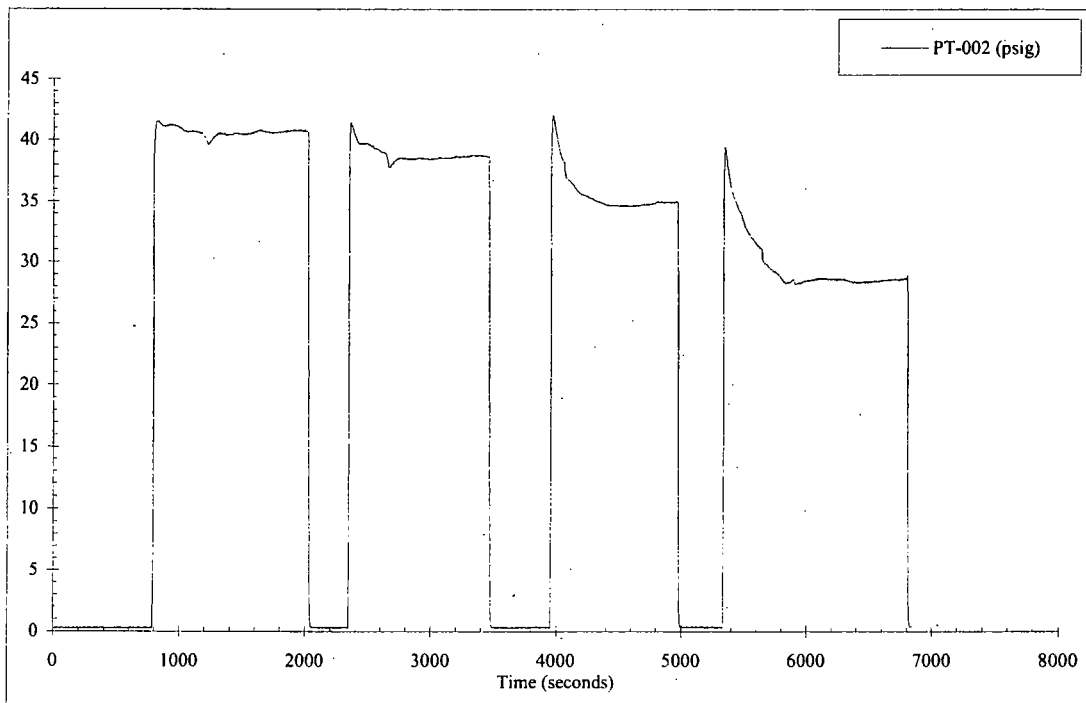
SG-2 WR Uncompensated Water Level



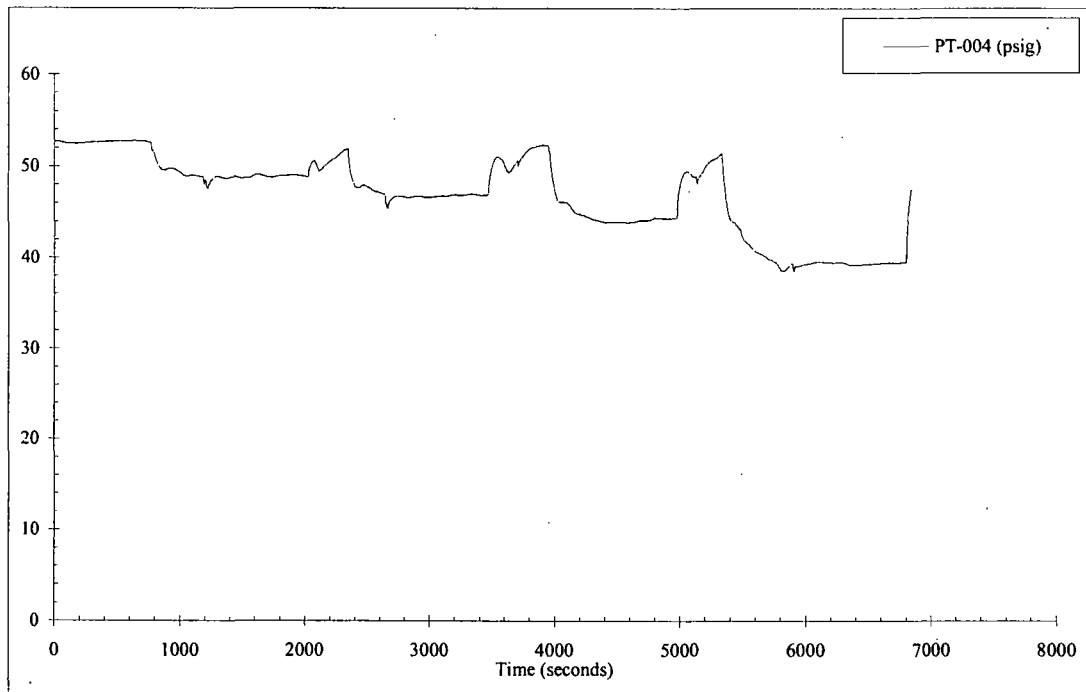
SG-1 NR Uncompensated Water Level



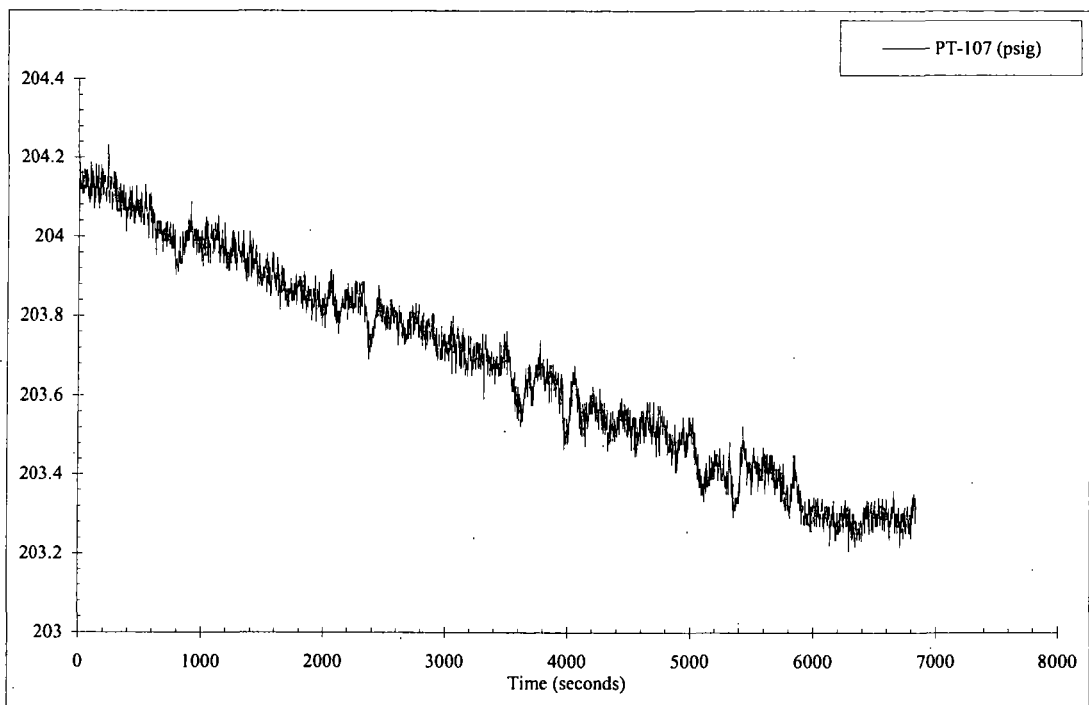
SG-2 NR Uncompensated Water Level



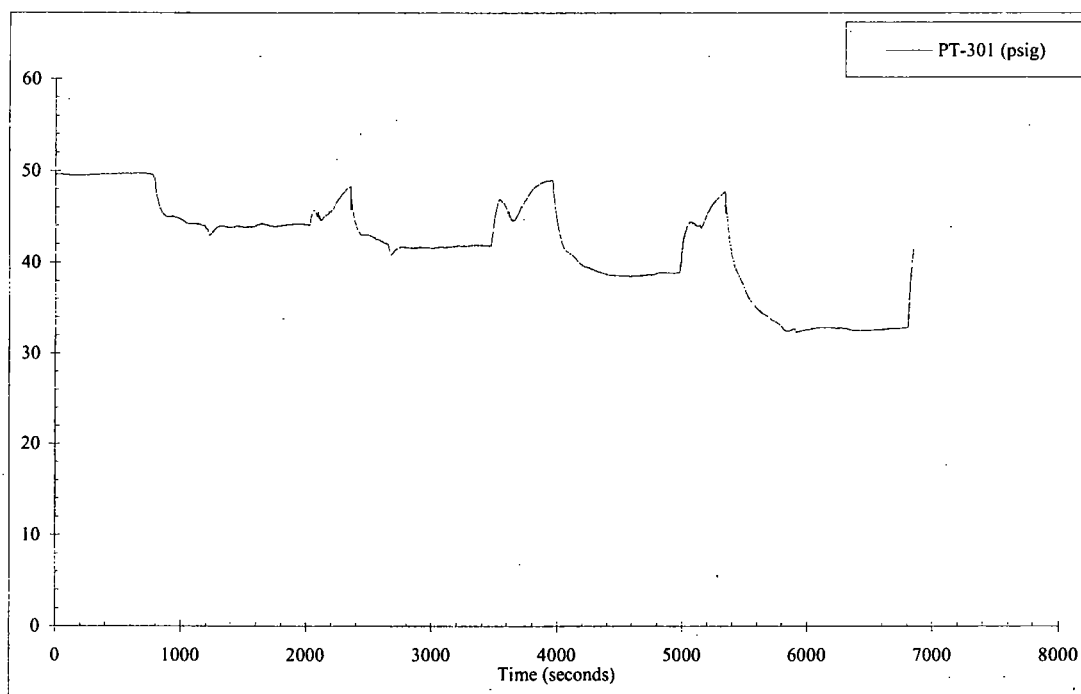
MS Header Pressure



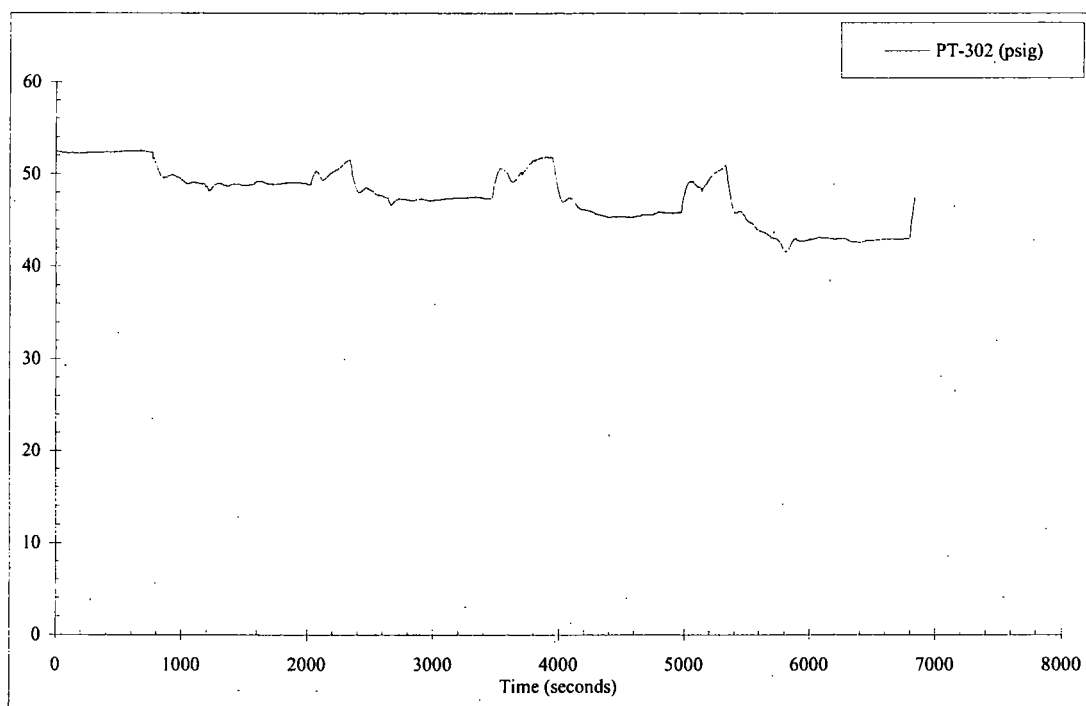
Temp Steam Pressure for FVM-002



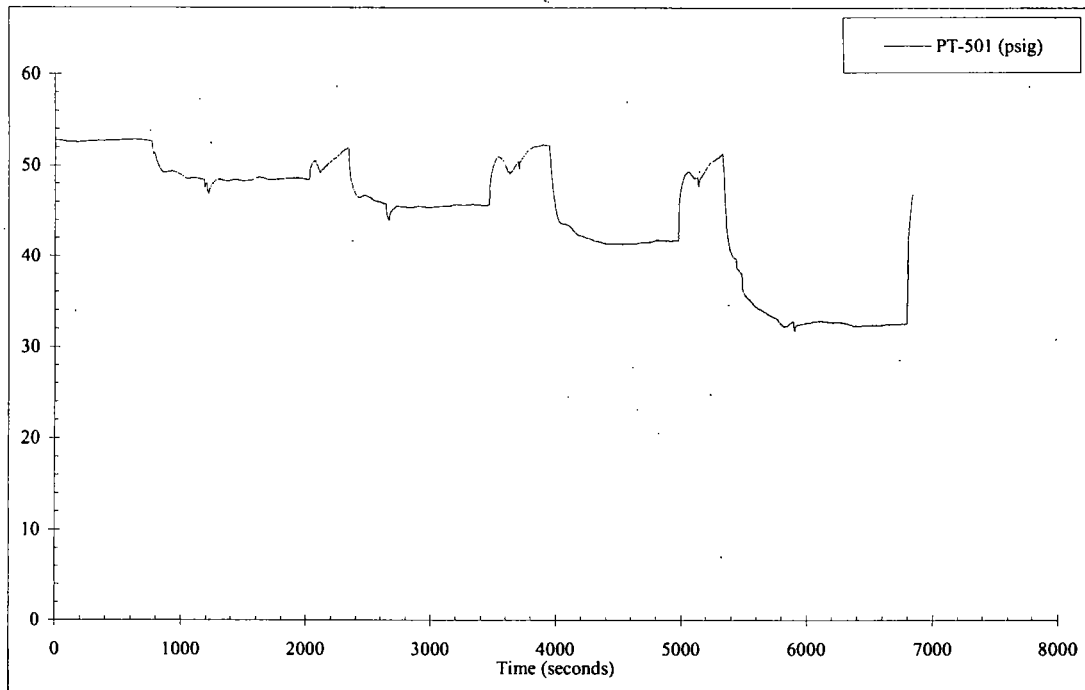
Rx Upper Head Pressure



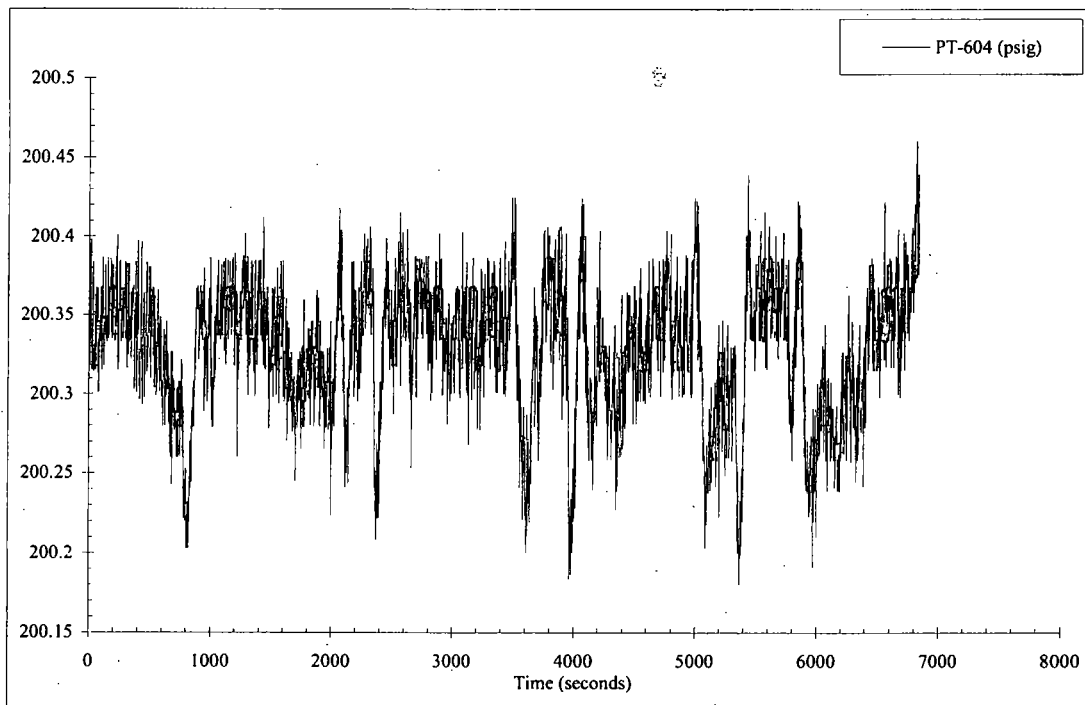
SG-1 Pressure



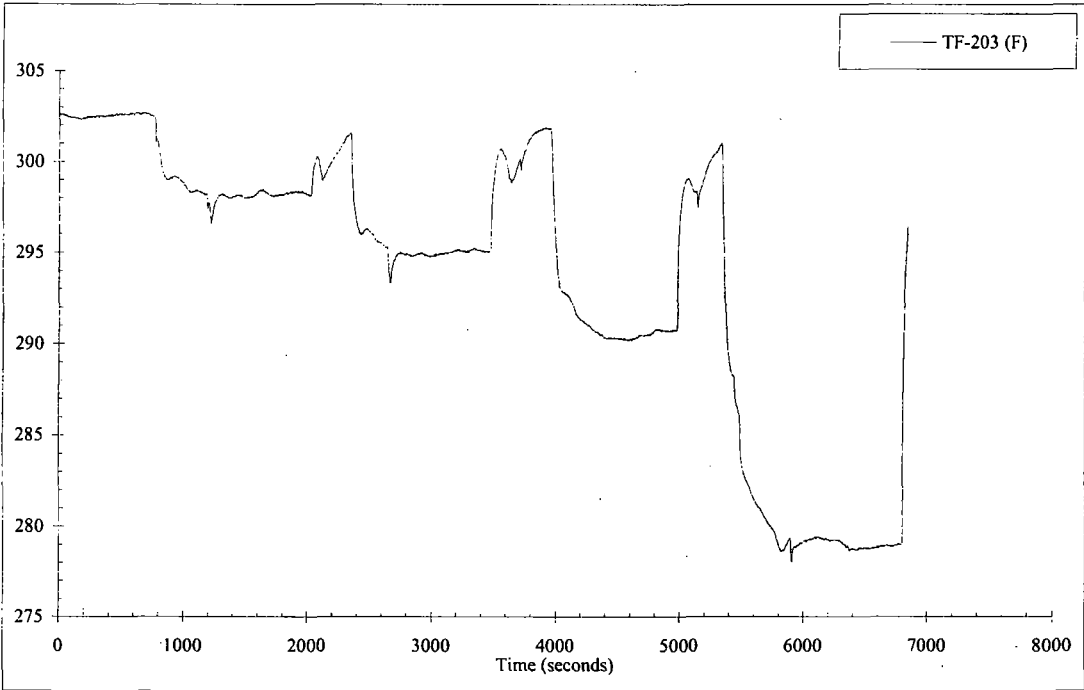
SG-2 Pressure



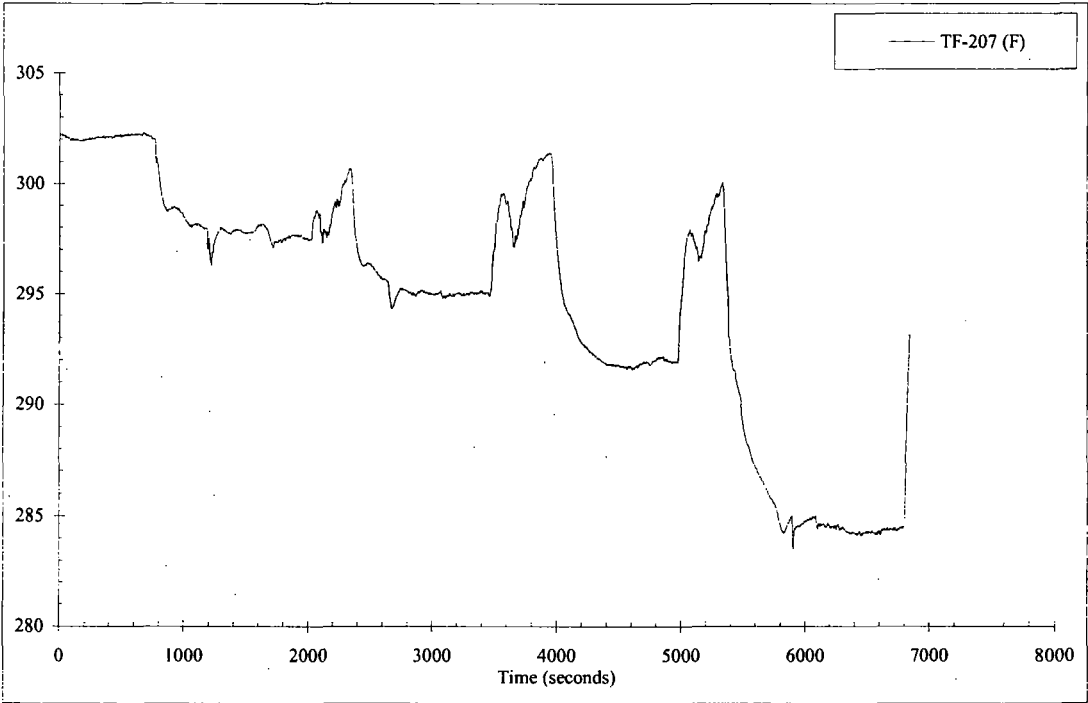
Separator Outlet Steam Pressure



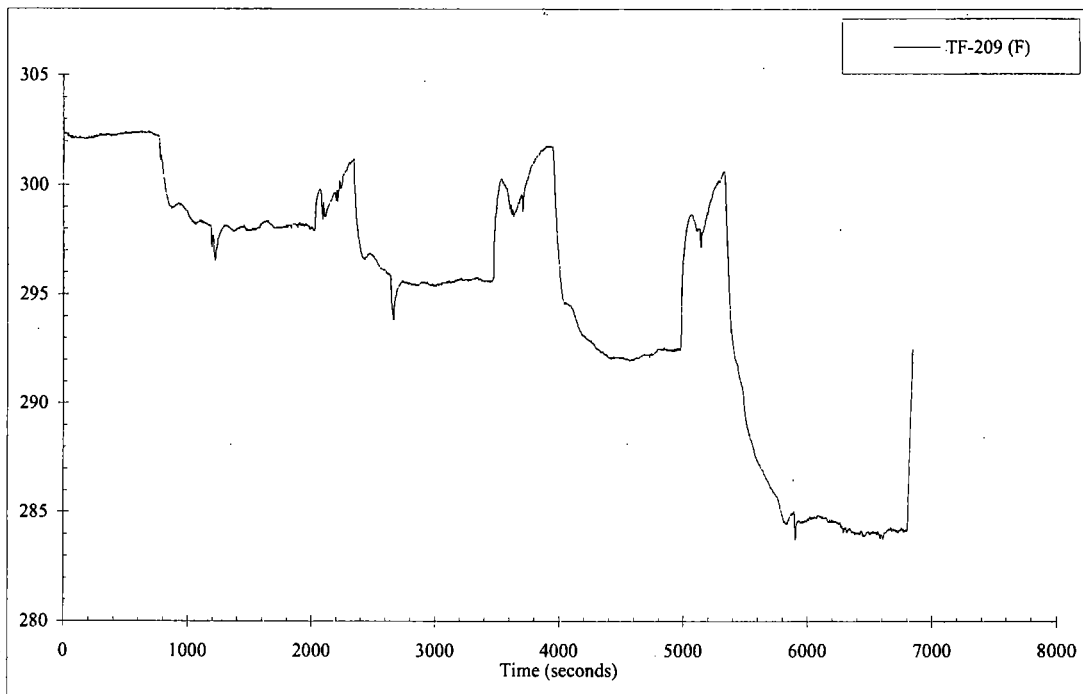
PZR WR Pressure



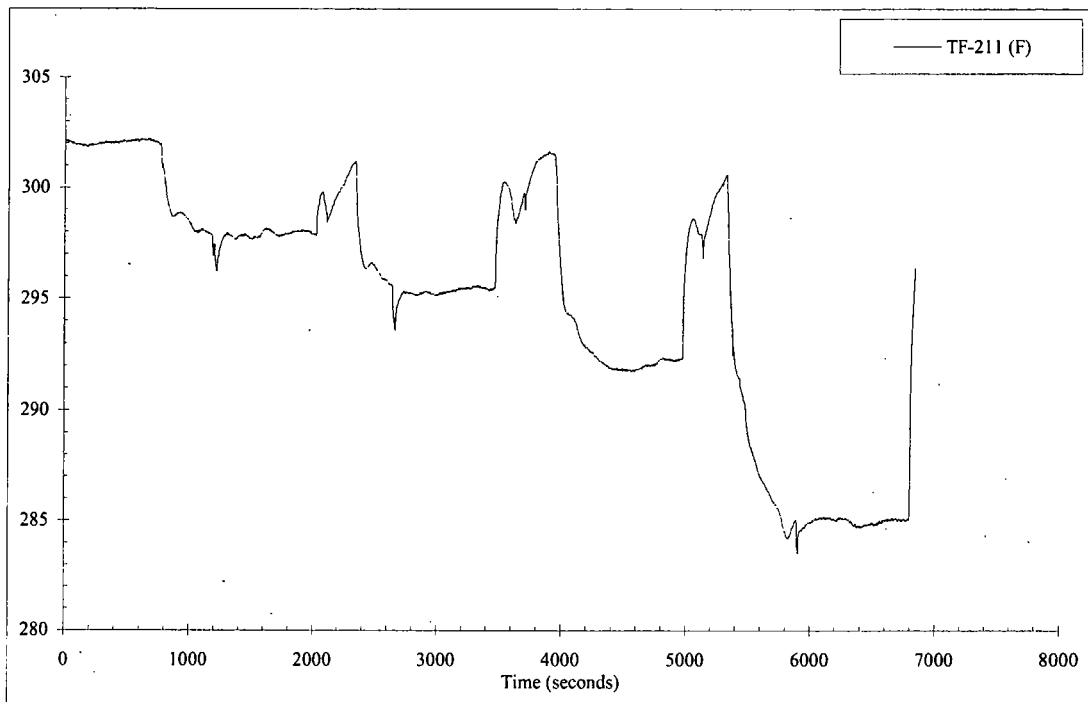
Separator Outlet Steam Temperature



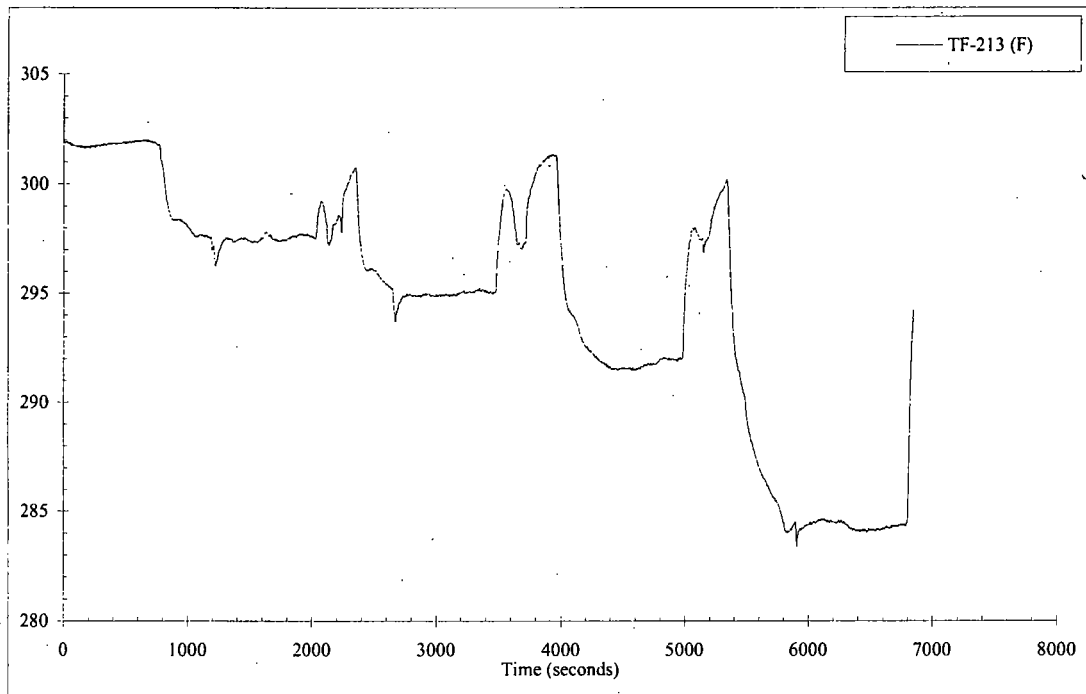
SG-1 Short Tube at Middle Outlet Side Temperature



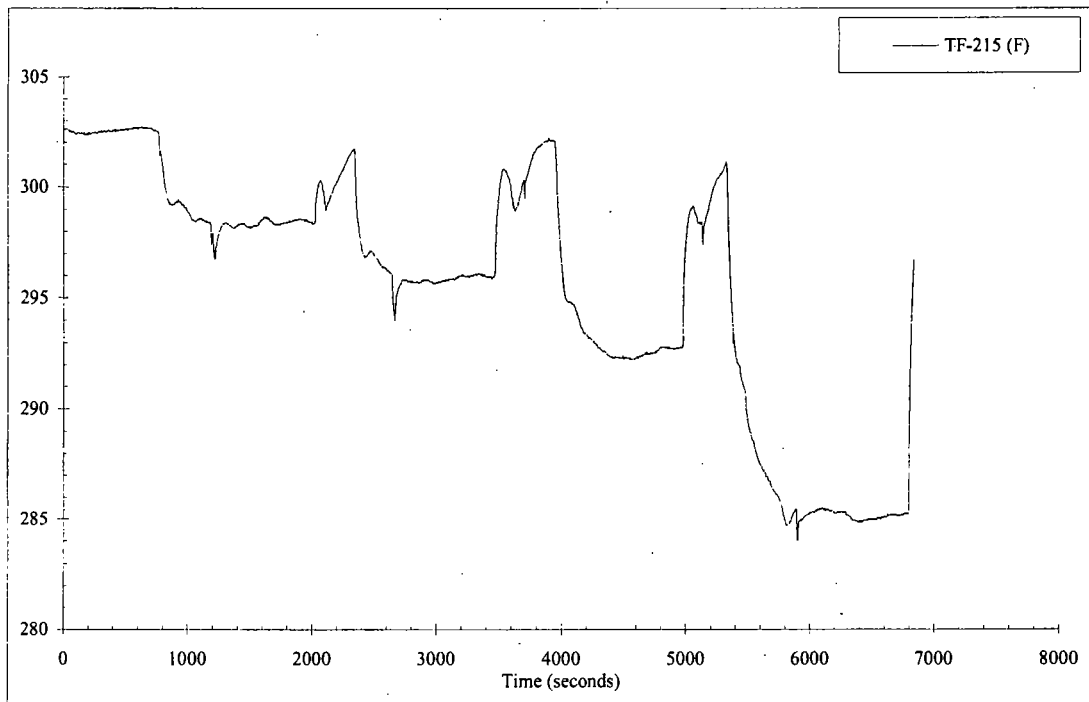
SG-1 Short Tube at Middle Inlet Side Temperature



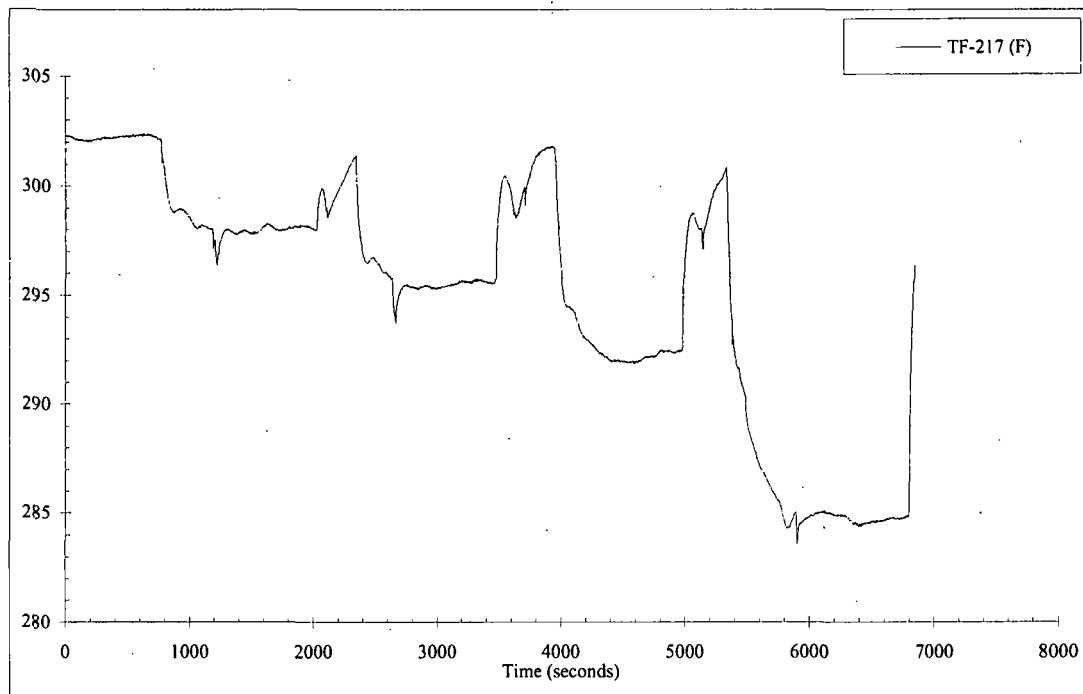
SG-1 Long Tube at Middle Outlet Temperature



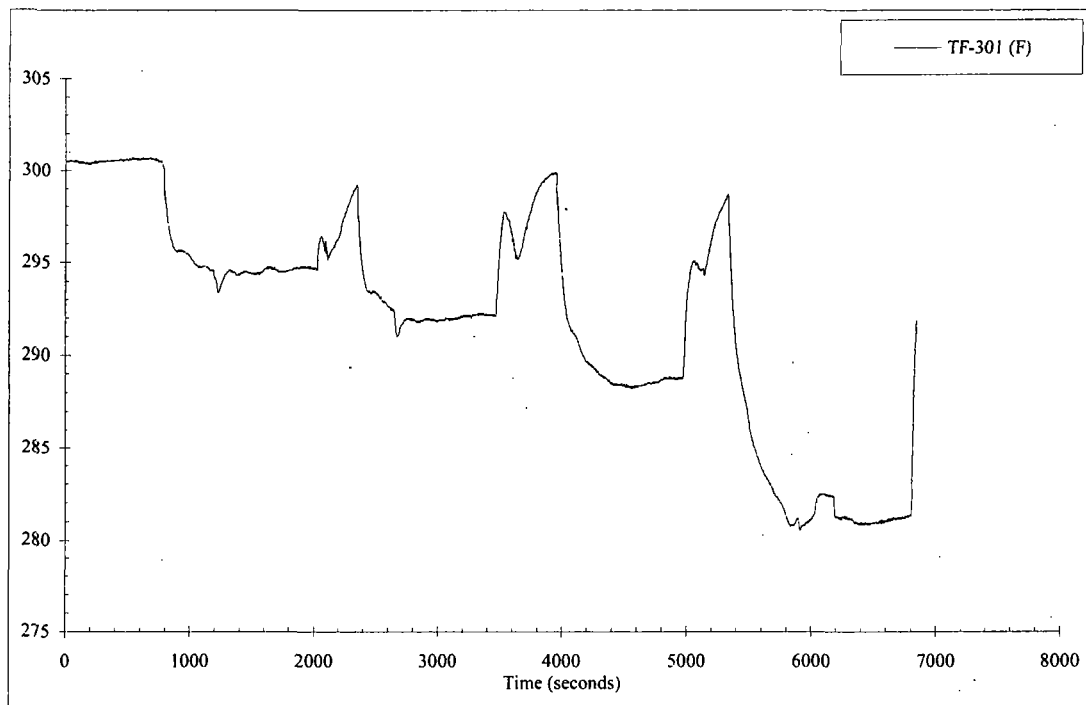
SG-1 Long Tube at Middle Inlet Temperature



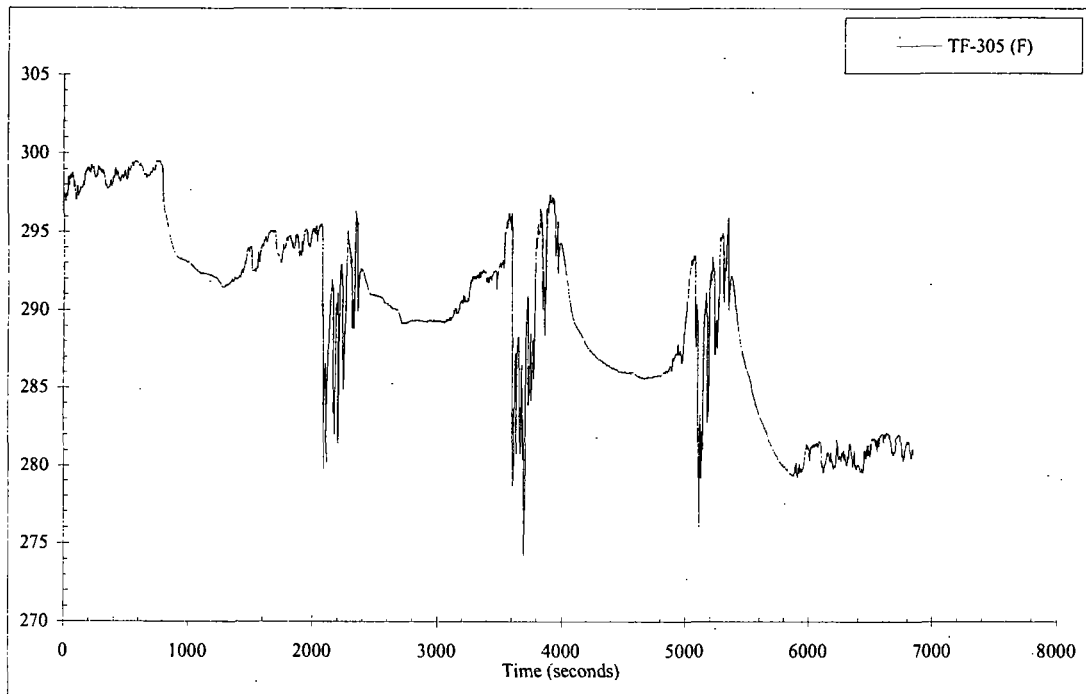
SG-1 Short Tube at Top Temperature



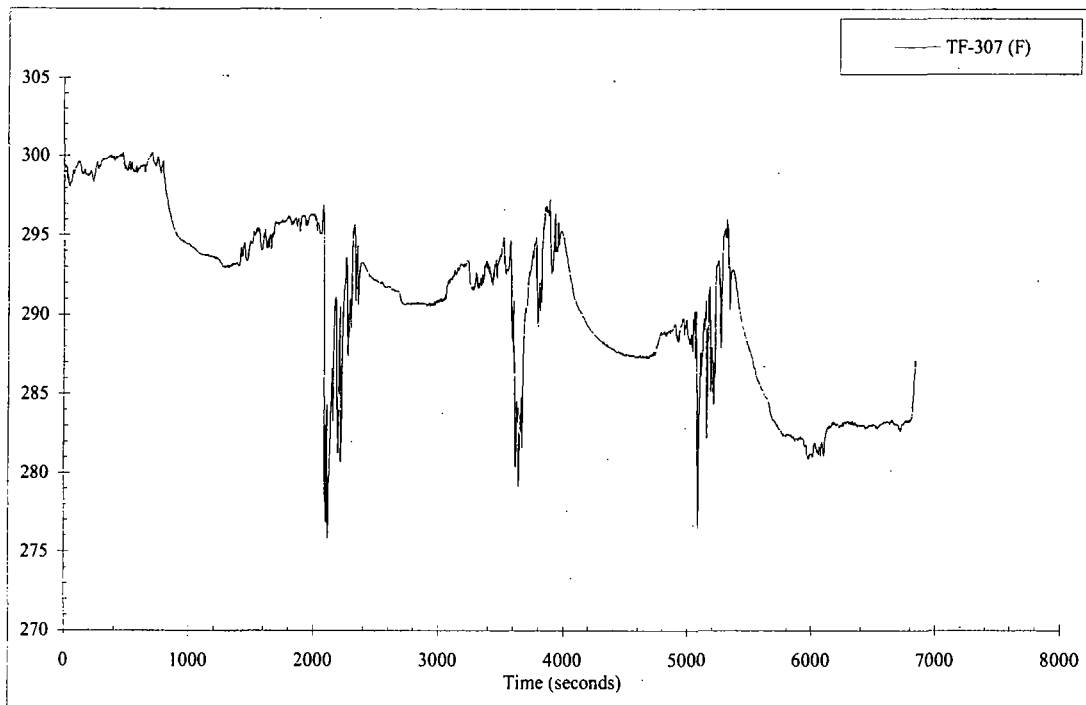
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)



SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

***NO SEQUENCE-OF-
EVENTS***

FOR

NRC-COND-06

Revision 0

NRC-COND-06

| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|-----------|--|----------------|----------------|----------------|----------------|--------------------------------|
| DP-111 | Analog | DP across Upper Core Plate | 4.9931 | 0.9963 | 30 | -30 | Differential Pressure (in h2o) |
| DP-114 | Analog | DP across Upper Support Plate | 4.9796 | 0.9934 | 375 | -375 | Differential Pressure (in h2o) |
| DP-121 | Analog | DVI-1/CL-1 Differential Pressure | 4.9563 | 0.989 | 25 | -25 | Differential Pressure (in h2o) |
| DP-122 | Analog | DVI-2/CL-2 Differential Pressure | 4.9591 | 0.9931 | 25 | -25 | Differential Pressure (in h2o) |
| DP-123 | Analog | DVI-1/CL-3 Differential Pressure | 4.9743 | 0.9957 | 25 | -25 | Differential Pressure (in h2o) |
| DP-124 | Analog | DVI-2/CL-4 Differential Pressure | 4.9561 | 0.9924 | 25 | -25 | Differential Pressure (in h2o) |
| DP-125 | Analog | HL-1 entrance losses | 4.97 | 0.9951 | 30 | 0 | Differential Pressure (in h2o) |
| DP-126 | Analog | HL-2 entrance losses | 4.9707 | 0.9949 | 30 | 0 | Differential Pressure (in h2o) |
| DP-128 | Analog | DVI-1 entrance losses | 4.9709 | 0.9959 | 25 | -25 | Differential Pressure (in h2o) |
| DP-129 | Analog | DVI-2 entrance losses | 4.9736 | 0.9958 | 25 | -25 | Differential Pressure (in h2o) |
| DP-130 | Analog | Upper Head Differential Pressure | 4.9622 | 0.9941 | 50 | -50 | Differential Pressure (in h2o) |
| DP-201 | Analog | CL-1 Differential Pressure | 4.9689 | 0.9939 | 25 | -25 | Differential Pressure (in h2o) |
| DP-202 | Analog | RCP-2 Differential Pressure | 4.9588 | 0.9916 | 200 | 0 | Differential Pressure (in h2o) |
| DP-203 | Analog | RCP-1 Differential Pressure | 4.9692 | 0.9946 | 27 | 0 | Differential Pressure (psid) |
| DP-204 | Analog | CL-2 Differential Pressure | 4.9814 | 0.9969 | 25 | -25 | Differential Pressure (in h2o) |
| DP-205 | Analog | RCP-3 Differential Pressure | 4.978 | 0.995 | 200 | 0 | Differential Pressure (in h2o) |
| DP-206 | Analog | RCP-4 Differential Pressure | 4.984 | 0.9959 | 200 | 0 | Differential Pressure (in h2o) |
| DP-207 | Analog | CL-3 Differential Pressure | 4.9817 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-208 | Analog | CL-4 Differential Pressure | 4.9905 | 0.9984 | 25 | -25 | Differential Pressure (in h2o) |
| DP-209 | Analog | HL-1 Differential Pressure | 4.9858 | 0.998 | 25 | -25 | Differential Pressure (in h2o) |
| DP-210 | Analog | HL-2 Differential Pressure | 4.9649 | 0.9933 | 25 | -25 | Differential Pressure (in h2o) |
| DP-211 | Analog | SG-1 Short Tube Entrance Losses | 4.9849 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-212 | Analog | SG-2 Long Tube Exit Losses | 4.9838 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-213 | Analog | SG-1 Long Tube Exit Losses | 4.9788 | 0.9965 | 15 | -15 | Differential Pressure (in h2o) |
| DP-214 | Analog | SG-2 Long Tube Entrance Losses | 4.981 | 0.9973 | 15 | 0 | Differential Pressure (in h2o) |
| DP-215 | Analog | Break Differential Pressure | 4.9807 | 0.9981 | 500 | 0 | Differential Pressure (psid) |
| DP-216 | Analog | Break Differential Pressure | 4.9729 | 0.9964 | 500 | 0 | Differential Pressure (psid) |
| DP-217 | Analog | HL-1 to CL1 Differential Pressure at SG1 | 4.9835 | 0.9981 | 46.83 | 0 | Differential Pressure (in h2o) |
| DP-218 | Analog | HL-2 to CL2 Differential Pressure at SG2 | 4.9889 | 0.9992 | 150 | 0 | Differential Pressure (in h2o) |
| DP-219 | Analog | HL-1 to CL3 Differential Pressure at SG1 | 4.9686 | 0.9949 | 30.95 | 0 | Differential Pressure (in h2o) |
| DP-220 | Analog | HL-2 to CL4 Differential Pressure at SG2 | 4.9627 | 0.9936 | 150 | 0 | Differential Pressure (in h2o) |
| DP-221 | Analog | HL-1 to CL1 Differential Pressure at Rx | 4.9677 | 0.9951 | 150 | 0 | Differential Pressure (in h2o) |
| DP-222 | Analog | HL-2 to CL2 Differential Pressure at Rx | 4.983 | 0.9975 | 150 | 0 | Differential Pressure (in h2o) |
| DP-223 | Analog | HL-1 to CL3 Differential Pressure at Rx | 4.9915 | 0.9987 | 150 | 0 | Differential Pressure (in h2o) |
| DP-224 | Analog | HL-2 to CL4 Differential Pressure at Rx | 4.9665 | 0.9944 | 150 | 0 | Differential Pressure (in h2o) |
| DP-401 | Analog | ACC-1 Injection Differential Pressure | 4.979 | 0.9975 | 400 | 0 | Differential Pressure (in h2o) |
| DP-402 | Analog | ACC-2 Injection Differential Pressure | 4.9736 | 0.9958 | 400 | 0 | Differential Pressure (in h2o) |
| DP-501 | Analog | CMT-1 Injection Differential Pressure | 4.9875 | 0.9948 | 150 | -150 | Differential Pressure (in h2o) |
| DP-502 | Analog | CMT-2 Injection Differential Pressure | 4.9645 | 0.9947 | 150 | -150 | Differential Pressure (in h2o) |
| DP-503 | Analog | CMT-1 Balance Line Differential Pressure | 4.9858 | 0.998 | 150 | -150 | Differential Pressure (in h2o) |
| DP-504 | Analog | CMT-2 Balance Line Differential Pressure | 4.9955 | 1.0007 | 100 | -100 | Differential Pressure (in h2o) |
| DP-601 | Analog | HL-1 to ADS4-1 Differential Pressure | 4.9969 | 1.0008 | 10 | 0 | Differential Pressure (psid) |
| DP-602 | Analog | HL-2 to ADS4-2 Differential Pressure | 4.987 | 0.9948 | 10 | 0 | Differential Pressure (psid) |
| DP-603 | Analog | ADS4-1 Venturi | 4.9847 | 0.9985 | 100 | 0 | Differential Pressure (in h2o) |
| DP-604 | Analog | ADS4-2 Venturi | 4.964 | 0.9941 | 100 | 0 | Differential Pressure (in h2o) |
| DP-605 | Analog | ADS4-1 Venturi outlet to Enlarger inlet | 4.9881 | 0.9993 | 50 | 0 | Differential Pressure (in h2o) |
| DP-606 | Analog | ADS4-2 Venturi outlet to Enlarger Inlet | 4.9857 | 0.9991 | 50 | 0 | Differential Pressure (in h2o) |
| DP-611 | Analog | PZR Surge Line Differential Pressure | 4.9773 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-701 | Analog | IRWST-1 Injection Differential Pressure | 4.9872 | 0.9982 | 30 | 0 | Differential Pressure (psid) |
| DP-702 | Analog | IRWST-2 Injection Differential Pressure | 4.9871 | 0.9981 | 30 | 0 | Differential Pressure (psid) |
| DP-905 | Analog | Break Separator Entrance Differential Pressure | 4.9905 | 0.9994 | 100 | 0 | Differential Pressure (psid) |
| FDP-604 | Analog | ADS-2 Flow Differential Pressure | 4.9738 | 0.9961 | 100 | 0 | Differential Pressure (psid) |
| FDP-605 | Analog | ADS-1 Flow Differential Pressure | 4.9896 | 0.9993 | 250 | 0 | Differential Pressure (psid) |
| FDP-606 | Analog | ADS-3 Flow Differential Pressure | 5.0051 | 1.0023 | 100 | 0 | Differential Pressure (psid) |
| FMM-001 | Analog | SG-1 Feed Flow | 4.9838 | 0.9961 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-002 | Analog | SG-2 Feed Flow | 4.9642 | 0.9925 | 6 | 0 | Volumetric Flow Rate (gpm) |

B-202

NRC-COND-06

| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|-----------|-----------|---|----------------|----------------|----------------|----------------|----------------------------|
| FMM-201 | Analog | CL-1 Loop Flow | 4.9607 | 0.9921 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-202 | Analog | CL-2 Loop Flow | 4.9754 | 0.9943 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-203 | Analog | CL-3 Loop Flow | 4.9853 | 0.9974 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-204 | Analog | CL-4 Loop Flow | 4.9729 | 0.9936 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-205 | Analog | DVI-1 Flow | 4.9706 | 0.996 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-206 | Analog | DVI-2 Flow | 4.9767 | 0.9969 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-401 | Analog | ACC-1 Injection Flow | 4.9516 | 0.9932 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-402 | Analog | ACC-2 Injection Flow | 4.9772 | 0.9965 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-501 | Analog | CMT-1 Injection Flow | 4.9959 | 1.0006 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-502 | Analog | CMT-2 CL Balance Line Flow | 4.9742 | 0.9994 | 70 | 0 | Volumetric Flow Rate (gpm) |
| FMM-503 | Analog | CMT-1 CL Balance Line Flow | 4.9717 | 0.9985 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-504 | Analog | CMT-2 Injection Flow | 4.9523 | 0.9925 | 20 | 0 | Volumetric Flow Rate (gpm) |
| FMM-601 | Analog | ADS1-3 Loop Seal Flow | 5.0168 | 1.004 | 200 | 0 | Volumetric Flow Rate (gpm) |
| FMM-602 | Analog | ADS4-2 Loop Seal Flow | 5.0507 | 1.0117 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-603 | Analog | ADS4-1 Loop Seal Flow | 5.0571 | 1.0129 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-701 | Analog | IRWST/DVI-1 Injection Flow | 4.9738 | 0.9954 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-702 | Analog | IRWST/DVI-2 Injection Flow | 4.9724 | 0.9955 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-703 | Analog | IRWST Overflow | 4.9663 | 0.9966 | 10 | 0 | Volumetric Flow Rate (gpm) |
| FMM-801 | Analog | CVSP Discharge Flow | 4.9876 | 0.9998 | 8 | 0 | Volumetric Flow Rate (gpm) |
| FMM-802 | Analog | PRHR Inlet Flow | 4.9656 | 0.9966 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-803 | Analog | RNSP to DVI-2 Flow | 4.9629 | 0.9942 | 30 | 0 | Volumetric Flow Rate (gpm) |
| FMM-804 | Analog | PRHR Outlet Flow | 4.9612 | 0.9963 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-805 | Analog | RNSP Discharge Flow | 4.9711 | 0.9936 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-901 | Analog | Primary Sump-1 Recirculation Injection Flow | 4.9673 | 0.9936 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-902 | Analog | Primary Sump-2 Recirculation Injection Flow | 4.9726 | 0.9948 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Analog | Break Separator Loop Seal Flow | 5.1224 | 1.0902 | 90 | -90 | Volumetric Flow Rate (gpm) |
| FVM-001 | Analog | SG-1 Main Steam Flow | 5.0223 | 1.005 | 200 | 0 | Steam Flow Rate (cfm) |
| FVM-002 | Analog | SG-2 Main Steam Flow | 4.9878 | 0.9982 | 200 | 0 | Steam Flow Rate (cfm) |
| FVM-003 | Analog | Main Steam Total Flow | 4.9815 | 0.9978 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-009 | Analog | SG-1 PORV Blowdown Steam Flow | 4.9836 | 0.9967 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-010 | Analog | SG-2 PORV Blowdown Steam Flow | 4.9817 | 0.9971 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-601 | Analog | ADS1-3 Separator Steam Flow | 4.9995 | 1.0017 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-602 | Analog | ADS4-2 Separator 6-inch Line Steam Flow | 5.006 | 1.0018 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-603 | Analog | ADS4-1 Separator 6-inch Line Steam Flow | 5.0062 | 1.0024 | 1600 | 0 | Steam Flow Rate (cfm) |
| FVM-604 | Analog | ADS4-2 Separator 2-inch Line Steam Flow | 5.0034 | 1.0026 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-605 | Analog | ADS4-1 Separator 2-inch Line Steam Flow | 5.0037 | 1.0028 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-901 | Analog | BAMS HDR 6-inch Line Steam Flow | 5.0021 | 1.0023 | 5000 | 0 | Steam Flow Rate (cfm) |
| FVM-902 | Analog | BAMS HDR 10-inch Line Steam Flow | 5.01 | 1.0027 | 12500 | 0 | Steam Flow Rate (cfm) |
| FVM-903 | Analog | Primary Sump Steam Exhaust Flow | 4.9879 | 0.9949 | 22 | 0 | Steam Flow Rate (cfm) |
| FVM-904 | Analog | Break Separator 3-inch Line Steam Flow | 4.9986 | 0.9979 | 400 | 0 | Steam Flow Rate (cfm) |
| FVM-905 | Analog | Break Separator 6-inch Line Steam Flow | 5.0036 | 1.004 | 6000 | 0 | Steam Flow Rate (cfm) |
| FVM-906 | Analog | Break Separator 8-inch Line Steam Flow | 5.0048 | 1.0025 | 4000 | 0 | Steam Flow Rate (cfm) |
| HPS-201-1 | Analog | CL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-2 | Analog | CL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-3 | Analog | CL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-1 | Analog | CL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-2 | Analog | CL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-3 | Analog | CL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-1 | Analog | CL-3 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-2 | Analog | CL-3 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-3 | Analog | CL-3 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-1 | Analog | CL-4 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-2 | Analog | CL-4 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-3 | Analog | CL-4 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-1 | Analog | HL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-2 | Analog | HL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |

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NRC-COND-06

| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|-----------|-----------|---|----------------|----------------|----------------|----------------|------------------|
| HPS-205-3 | Analog | HL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-1 | Analog | HL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-2 | Analog | HL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-3 | Analog | HL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-1 | Analog | CMT-1 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-2 | Analog | CMT-1 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-3 | Analog | CMT-1 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-1 | Analog | CMT-2 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-2 | Analog | CMT-2 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-3 | Analog | CMT-2 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-1 | Analog | Lower PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-2 | Analog | Lower PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-3 | Analog | Lower PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-1 | Analog | ADS1-3 Common Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-2 | Analog | ADS1-3 Common Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-3 | Analog | ADS1-3 Common Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-1 | Analog | Upper PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-2 | Analog | Upper PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-3 | Analog | Upper PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-1 | Analog | PRHR HX Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-2 | Analog | PRHR HX Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-3 | Analog | PRHR HX Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| KW-101 | Analog | Rx Heater Group 1 Power | 4.3222 | 1.1171 | 472 | 0 | Power (kW) |
| KW-102 | Analog | Rx Heater Group 2 Power | 4.1621 | 1.0045 | 466 | 0 | Power (kW) |
| KW-103 | Analog | Rx Heater Group 1 Power | 4.8931 | 0.8786 | 496 | 0 | Power (kW) |
| KW-104 | Analog | Rx Heater Group 2 Power | 4.912 | 0.9946 | 492 | 0 | Power (kW) |
| KW-601 | Analog | PZR Heater Power | 4.9435 | 0.982 | 24.3 | 0 | Power (kW) |
| LCT-701 | Analog | IRWST Weight | 4.9831 | 0.9976 | 40000 | 0 | Mass (lbm) |
| LCT-901 | Analog | Primary Sump Weight | 4.977 | 0.9969 | 28800 | 0 | Mass (lbm) |
| LCT-902 | Analog | Secondary Sump Weight | 4.9845 | 0.9983 | 16700 | 0 | Mass (lbm) |
| LDP-001 | Analog | FST Uncompensated Water Level | 5.0056 | 1.0017 | 91.88 | 0 | Water Level (in) |
| LDP-101 | Analog | CL to Bypass Holes Uncompensated Water Level (270) | 4.9645 | 0.9945 | 5.561 | 0 | Water Level (in) |
| LDP-102 | Analog | CL to Bypass Holes Uncompensated Water Level (180) | 4.9725 | 0.9963 | 5.938 | 0 | Water Level (in) |
| LDP-103 | Analog | DVI to CL Uncompensated Water Level (270) | 4.9807 | 0.9982 | 11.692 | 0 | Water Level (in) |
| LDP-104 | Analog | DVI to CL Uncompensated Water Level (180) | 4.9748 | 0.9992 | 12.376 | 0 | Water Level (in) |
| LDP-105 | Analog | Upper Core Plate to DVI Uncompensated Water Level (270) | 5.0076 | 1.0058 | 11.929 | 0 | Water Level (in) |
| LDP-106 | Analog | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 4.9732 | 0.9985 | 8.198 | 0 | Water Level (in) |
| LDP-107 | Analog | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 4.9713 | 0.9958 | 8.223 | 0 | Water Level (in) |
| LDP-108 | Analog | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 4.9683 | 0.9953 | 8.562 | 0 | Water Level (in) |
| LDP-109 | Analog | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 4.984 | 0.9988 | 19.763 | 0 | Water Level (in) |
| LDP-110 | Analog | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 4.9909 | 0.9991 | 20.02 | 0 | Water Level (in) |
| LDP-112 | Analog | Upper Core Plate to DVI Uncompensated Water Level (0) | 4.9755 | 0.9963 | 4.696 | 0 | Water Level (in) |
| LDP-113 | Analog | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 4.9849 | 0.9986 | 15.614 | 0 | Water Level (in) |
| LDP-115 | Analog | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 4.9896 | 0.9996 | 24.28 | 0 | Water Level (in) |
| LDP-116 | Analog | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 4.9638 | 0.9949 | 77.59 | 0 | Water Level (in) |
| LDP-117 | Analog | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 4.9838 | 0.9983 | 11.383 | 0 | Water Level (in) |
| LDP-118 | Analog | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 4.9848 | 0.9988 | 39.98 | 0 | Water Level (in) |
| LDP-119 | Analog | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 4.988 | 0.9996 | 40.26 | 0 | Water Level (in) |
| LDP-127 | Analog | Rx Wide Range Uncompensated Water Level | 4.999 | 1.0007 | 98.97 | 0 | Water Level (in) |
| LDP-138 | Analog | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 4.9639 | 0.9946 | 39.3 | 0 | Water Level (in) |
| LDP-139 | Analog | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 4.9837 | 0.9982 | 24.166 | 0 | Water Level (in) |
| LDP-140 | Analog | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 4.9981 | 1.0014 | 78.02 | 0 | Water Level (in) |
| LDP-141 | Analog | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 4.9843 | 0.9994 | 20.135 | 0 | Water Level (in) |
| LDP-201 | Analog | CL-1 Uncompensated Water Level | 4.9981 | 1.0002 | 2.496 | 0 | Water Level (in) |
| LDP-202 | Analog | CL-2 Uncompensated Water Level | 4.9924 | 0.9994 | 2.223 | 0 | Water Level (in) |
| LDP-203 | Analog | CL-3 Uncompensated Water Level | 4.9923 | 0.9994 | 2.532 | 0 | Water Level (in) |

NRC-COND-06

| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|-----------|--|----------------|----------------|----------------|----------------|------------------|
| LDP-204 | Analog | CL-4 Uncompensated Water Level | 4.9594 | 0.9927 | 2.47 | 0 | Water Level (in) |
| LDP-205 | Analog | HL-1 Uncompensated Water Level | 4.9663 | 0.9945 | 4.415 | 0 | Water Level (in) |
| LDP-206 | Analog | HL-2 Uncompensated Water Level | 4.9653 | 0.9944 | 4.013 | 0 | Water Level (in) |
| LDP-207 | Analog | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 4.9779 | 0.9972 | 18.3 | 0 | Water Level (in) |
| LDP-208 | Analog | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 4.9825 | 0.9969 | 19.247 | 0 | Water Level (in) |
| LDP-209 | Analog | SG-1 to HL-1 Plenum Uncompensated Water Level | 4.9954 | 1.0002 | 10.939 | 0 | Water Level (in) |
| LDP-210 | Analog | SG-2 to CL-4 Plenum Uncompensated Water Level | 4.9677 | 0.9943 | 16.988 | 0 | Water Level (in) |
| LDP-211 | Analog | SG-1 to CL-3 Plenum Uncompensated Water Level | 4.9613 | 0.993 | 16.793 | 0 | Water Level (in) |
| LDP-212 | Analog | SG-2 to CL-2 Plenum Uncompensated Water Level | 4.9836 | 0.9982 | 16.772 | 0 | Water Level (in) |
| LDP-213 | Analog | SG-1 to CL-1 Plenum Uncompensated Water Level | 4.9864 | 0.9978 | 16.747 | 0 | Water Level (in) |
| LDP-214 | Analog | SG-2 to HL-2 Plenum Uncompensated Water Level | 4.9953 | 1.0002 | 11.571 | 0 | Water Level (in) |
| LDP-215 | Analog | SG-1 Long Tube to HL Uncompensated Water Level | 4.99 | 0.9992 | 102.06 | 0 | Water Level (in) |
| LDP-216 | Analog | SG-2 Short Tube to HL Uncompensated Water Level | 4.9717 | 0.9955 | 95.55 | 0 | Water Level (in) |
| LDP-217 | Analog | SG-1 Short Tube to HL Uncompensated Water Level | 4.9618 | 0.9932 | 96.25 | 0 | Water Level (in) |
| LDP-218 | Analog | SG-2 Long Tube to HL Uncompensated Water Level | 4.9658 | 0.9943 | 103.14 | 0 | Water Level (in) |
| LDP-219 | Analog | SG-1 Long Tube to CL Uncompensated Water Level | 4.9867 | 0.9992 | 102.45 | 0 | Water Level (in) |
| LDP-220 | Analog | SG-2 Short Tube to CL Uncompensated Water Level | 4.9786 | 0.9971 | 96 | 0 | Water Level (in) |
| LDP-221 | Analog | SG-1 Short Tube to CL Uncompensated Water Level | 4.985 | 0.9986 | 95.98 | 0 | Water Level (in) |
| LDP-222 | Analog | SG-2 Long Tube to CL Uncompensated Water Level | 4.9628 | 0.9947 | 102.71 | 0 | Water Level (in) |
| LDP-301 | Analog | SG-1 WR Uncompensated Water Level | 5.0022 | 1.0006 | 119.25 | 0 | Water Level (in) |
| LDP-302 | Analog | SG-2 WR Uncompensated Water Level | 4.9995 | 1.0003 | 119.02 | 0 | Water Level (in) |
| LDP-303 | Analog | SG-1 NR Uncompensated Water Level | 4.9699 | 0.9934 | 31.81 | 0 | Water Level (in) |
| LDP-304 | Analog | SG-2 NR Uncompensated Water Level | 4.9748 | 0.995 | 31.52 | 0 | Water Level (in) |
| LDP-401 | Analog | ACC-1 Uncompensated Water Level | 4.987 | 0.9951 | 38.26 | 0 | Water Level (in) |
| LDP-402 | Analog | ACC-2 Uncompensated Water Level | 5.166 | 1.0332 | 38.34 | 0 | Water Level (in) |
| LDP-501 | Analog | CMT-1 NR Uncompensated Water Level (Bottom) | 4.9834 | 0.9986 | 5.31 | 0 | Water Level (in) |
| LDP-502 | Analog | CMT-2 WR Uncompensated Water Level | 5.1958 | 1.0396 | 57.5 | 0 | Water Level (in) |
| LDP-503 | Analog | CMT-1 NR Uncompensated Water Level (Middle) | 4.984 | 0.9979 | 46.77 | 0 | Water Level (in) |
| LDP-504 | Analog | CMT-2 NR Uncompensated Water Level (Bottom) | 4.9793 | 0.9972 | 5.226 | 0 | Water Level (in) |
| LDP-505 | Analog | CMT-1 NR Uncompensated Water Level (Top) | 4.994 | 1 | 5.486 | 0 | Water Level (in) |
| LDP-506 | Analog | CMT-2 NR Uncompensated Water Level (Middle) | 4.9823 | 0.9975 | 46.96 | 0 | Water Level (in) |
| LDP-507 | Analog | CMT-1 WR Uncompensated Water Level | 5.1887 | 1.0383 | 57.5 | 0 | Water Level (in) |
| LDP-508 | Analog | CMT-2 NR Uncompensated Water Level (Top) | 4.9913 | 0.9994 | 5.309 | 0 | Water Level (in) |
| LDP-509 | Analog | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 4.9772 | 0.9968 | 78.84 | 0 | Water Level (in) |
| LDP-510 | Analog | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 4.9653 | 0.9942 | 78.28 | 0 | Water Level (in) |
| LDP-601 | Analog | PZR WR Uncompensated Water Level | 5.0006 | 0.9991 | 140.47 | 0 | Water Level (in) |
| LDP-602 | Analog | PZR Surge Line Uncompensated Water Level | 4.9777 | 0.997 | 47.5 | 0 | Water Level (in) |
| LDP-605 | Analog | PZR Upper Surge Line Pipe Uncompensated Water Level | 4.9735 | 0.9963 | 3.533 | 0 | Water Level (in) |
| LDP-606 | Analog | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 4.9724 | 0.9958 | 18.696 | 0 | Water Level (in) |
| LDP-607 | Analog | PZR Middle Surge Line Pipe Uncompensated Water Level | 4.9737 | 0.996 | 4.127 | 0 | Water Level (in) |
| LDP-608 | Analog | PZR Lower Surge Line Pipe Uncompensated Water Level | 4.9731 | 0.9964 | 3.82 | 0 | Water Level (in) |
| LDP-609 | Analog | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 4.996 | 1.0011 | 14.717 | 0 | Water Level (in) |
| LDP-610 | Analog | ADS1-3 Separator Uncompensated Water Level | 5.193 | 1.0399 | 45.24 | 0 | Water Level (in) |
| LDP-611 | Analog | ADS4-1 Separator Uncompensated Water Level | 5.1628 | 1.0342 | 55.97 | 0 | Water Level (in) |
| LDP-612 | Analog | ADS4-2 Separator Uncompensated Water Level | 5.1859 | 1.0386 | 56.6 | 0 | Water Level (in) |
| LDP-701 | Analog | IRWST Uncompensated Water Level | 5.0202 | 1.0048 | 115.8 | 0 | Water Level (in) |
| LDP-801 | Analog | PRHR HX Inlet Head Uncompensated Water Level | 4.9945 | 1.0013 | 6.971 | 0 | Water Level (in) |
| LDP-802 | Analog | PRHR HX WR Uncompensated Water Level | 4.9871 | 0.9998 | 57.08 | 0 | Water Level (in) |
| LDP-901 | Analog | Primary Sump Uncompensated Water Level | 5.0016 | 1.0015 | 104.36 | 0 | Water Level (in) |
| LDP-902 | Analog | Secondary Sump Uncompensated Water Level | 5.0018 | 1.0007 | 102.56 | 0 | Water Level (in) |
| LDP-903 | Analog | CRT Uncompensated Water Level | 5.1669 | 1.0346 | 32.358 | 0 | Water Level (in) |
| LDP-905 | Analog | Break Separator Uncompensated Water Level | 5.1788 | 1.0378 | 130.88 | 0 | Water Level (in) |
| LT-120 | Analog | Rx Vessel Capacitance Probe Water Level | 5.0053 | 1.0042 | 99 | 50 | Water Level (in) |
| PT-001 | Analog | MFP Discharge Pressure | 5.0658 | 1.0121 | 600 | 0 | Pressure (psig) |
| PT-002 | Analog | MS Header Pressure | 4.9759 | 0.9962 | 500 | 0 | Pressure (psig) |
| PT-003 | Analog | Lab Barometer | 4.9656 | 0.9944 | 20 | 10 | Pressure (psia) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|-----------|---|----------------|----------------|----------------|----------------|-----------------------|
| PT-009 | Analog | SG-1 PORV Blowdown Pressure | 4.9816 | 0.9983 | 300 | 0 | Pressure (psig) |
| PT-010 | Analog | SG-2 PORV Blowdown Pressure | 4.9924 | 1.0004 | 300 | 0 | Pressure (psig) |
| PT-101 | Analog | CL-1 Pressure at Rx Flange | 4.9877 | 0.9986 | 500 | 0 | Pressure (psig) |
| PT-102 | Analog | CL-2 Pressure at Rx Flange | 4.9706 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-103 | Analog | CL-3 Pressure at Rx Flange | 4.9646 | 0.9946 | 10 | 0 | Pressure (psig) |
| PT-104 | Analog | CL-4 Pressure at Rx Flange | 4.9882 | 0.9988 | 500 | 0 | Pressure (psig) |
| PT-107 | Analog | Rx Upper Head Pressure | 5.0478 | 1.0096 | 500 | 0 | Pressure (psig) |
| PT-108 | Analog | Bottom of Rx Pressure | 4.9637 | 0.9938 | 500 | 0 | Pressure (psig) |
| PT-109 | Analog | DVI-1 Pressure at Rx Flange | 4.9874 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-110 | Analog | DVI-2 Pressure at Rx Flange | 4.9825 | 0.9984 | 10 | 0 | Pressure (psig) |
| PT-111 | Analog | Rx Annular Pressure at Flow Bypass Holes | 4.9886 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-112 | Analog | Rx Annular Pressure at Bottom of Rx | 4.977 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-113 | Analog | Rx Pressure Below Mid-Core Spacer Grid | 4.9616 | 0.9921 | 500 | 0 | Pressure (psig) |
| PT-201 | Analog | SG-1 Long Tube Pressure (Top) | 4.9935 | 1.0008 | 500 | 0 | Pressure (psig) |
| PT-202 | Analog | HL-2 Pressure at SG-2 Flange | 4.9841 | 0.9978 | 500 | 0 | Pressure (psig) |
| PT-203 | Analog | CL Break Pressure at Break Valve | 4.988 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-204 | Analog | SG-2 Long Tube Pressure (Top) | 4.9974 | 1.0005 | 500 | 0 | Pressure (psig) |
| PT-205 | Analog | HL-1 Pressure at SG-1 Flange | 4.9838 | 0.9988 | 400 | 0 | Pressure (psig) |
| PT-206 | Analog | HL Break Pressure at Break Valve | 4.9869 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-301 | Analog | SG-1 Pressure | 5.0617 | 1.0123 | 500 | 0 | Pressure (psig) |
| PT-302 | Analog | SG-2 Pressure | 5.1023 | 1.0219 | 500 | 0 | Pressure (psig) |
| PT-401 | Analog | ACC-1 Pressure | 4.9908 | 0.9993 | 300 | 0 | Pressure (psig) |
| PT-402 | Analog | ACC-2 Pressure | 4.9802 | 0.9975 | 300 | 0 | Pressure (psig) |
| PT-501 | Analog | CMT-1 Pressure | 4.982 | 0.9979 | 300 | 0 | Pressure (psig) |
| PT-502 | Analog | CMT-2 Pressure | 4.9869 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-602 | Analog | PZR NR Pressure | 4.9747 | 0.9988 | 400 | 300 | Pressure (psig) |
| PT-603 | Analog | PZR NR Pressure | 4.9616 | 0.9944 | 10 | 0 | Pressure (psig) |
| PT-604 | Analog | PZR WR Pressure | 4.9794 | 0.9942 | 500 | 0 | Pressure (psig) |
| PT-605 | Analog | ADS1-3 Separator Pressure | 4.9725 | 0.9966 | 100 | 0 | Pressure (psig) |
| PT-606 | Analog | IRWST Sparger Line Pressure | 4.9653 | 0.995 | 100 | 0 | Pressure (psig) |
| PT-610 | Analog | ADS4-2 Separator Pressure | 4.9845 | 0.9983 | 10 | 0 | Pressure (psig) |
| PT-811 | Analog | ADS4-1 Separator Pressure | 4.9806 | 0.9977 | 10 | 0 | Pressure (psig) |
| PT-701 | Analog | IRWST Pressure | 5.0436 | 1.0087 | 15 | 0 | Pressure (psig) |
| PT-801 | Analog | CVSP Discharge Pressure | 4.9909 | 0.9993 | 500 | 0 | Pressure (psig) |
| PT-802 | Analog | RNSP Discharge Pressure | 4.9768 | 0.9952 | 250 | 0 | Pressure (psig) |
| PT-901 | Analog | Primary Sump Pressure | 4.9659 | 0.9947 | 10 | 0 | Pressure (psig) |
| PT-902 | Analog | BAMS Header Pressure | 4.9988 | 1.0013 | 16 | 0 | Pressure (psig) |
| PT-905 | Analog | Break Separator Pressure | 5.0265 | 1.0067 | 20 | 0 | Pressure (psig) |
| TF-005 | Analog | Lab Ambient Temperature at Ground Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-006 | Analog | Lab Ambient Temperature at Second Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-007 | Analog | Lab Ambient Temperature at Third Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-009 | Analog | SG-1 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-010 | Analog | SG-2 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101 | Analog | CL-3 Temperature (SC-101) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-101-1-3D-2 | Analog | CL-1 Downcomer Temperature at 1,3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-1 | Analog | CL-1 Downcomer Temperature at 2D, 120 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-2 | Analog | CL-1 Downcomer Temperature at 2D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-3 | Analog | CL-1 Downcomer Temperature at 2D, 150 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-1 | Analog | CL-1 Downcomer Temperature at 3D, 104 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-2 | Analog | CL-1 Downcomer Temperature at 3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-3 | Analog | CL-1 Downcomer Temperature at 3D, 166 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-1 | Analog | CL-1 Downcomer Temperature at 4D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-2 | Analog | CL-1 Downcomer Temperature at 4D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-1 | Analog | CL-1 Downcomer Temperature at 8D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-2 | Analog | CL-1 Downcomer Temperature at 8D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102 | Analog | CL-4 Temperature (SC-102) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|-----------|--|----------------|----------------|----------------|----------------|-----------------------|
| TF-102-1.3D-2 | Analog | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-1 | Analog | CL-2 Downcomer Temperature at 2D, 210 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-2 | Analog | CL-2 Downcomer Temperature at 2D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-3 | Analog | CL-2 Downcomer Temperature at 2D, 240 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-1 | Analog | CL-2 Downcomer Temperature at 3D, 194 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-2 | Analog | CL-2 Downcomer Temperature at 3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-3 | Analog | CL-2 Downcomer Temperature at 3D, 256 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-4D-2 | Analog | CL-2 Downcomer Temperature at 4D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-1 | Analog | CL-2 Downcomer Temperature at 8D, 180 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-2 | Analog | CL-2 Downcomer Temperature at 8D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-1.3D-2 | Analog | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-1 | Analog | CL-3 Downcomer Temperature at 2D, 30 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-2 | Analog | CL-3 Downcomer Temperature at 2D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-3 | Analog | CL-3 Downcomer Temperature at 2D, 60 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-1 | Analog | CL-3 Downcomer Temperature at 3D, 14 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-2 | Analog | CL-3 Downcomer Temperature at 3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-3 | Analog | CL-3 Downcomer Temperature at 3D, 78 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-4D-2 | Analog | CL-3 Downcomer Temperature at 4D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-1 | Analog | CL-3 Downcomer Temperature at 8D, 0 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-2 | Analog | CL-3 Downcomer Temperature at 8D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-1.3D-2 | Analog | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-1 | Analog | CL-4 Downcomer Temperature at 2D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-2 | Analog | CL-4 Downcomer Temperature at 2D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-3 | Analog | CL-4 Downcomer Temperature at 2D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1 | Analog | CL-4 Downcomer Temperature at 3D, 284 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1.5 | Analog | CL-4 Downcomer Temperature at 3D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2 | Analog | CL-4 Downcomer Temperature at 3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2.5 | Analog | CL-4 Downcomer Temperature at 3D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-3 | Analog | CL-4 Downcomer Temperature at 3D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1 | Analog | CL-4 Downcomer Temperature at 4D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.3 | Analog | CL-4 Downcomer Temperature at 4D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.6 | Analog | CL-4 Downcomer Temperature at 4D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2 | Analog | CL-4 Downcomer Temperature at 4D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.3 | Analog | CL-4 Downcomer Temperature at 4D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.6 | Analog | CL-4 Downcomer Temperature at 4D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1 | Analog | CL-4 Downcomer Temperature at 8D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.3 | Analog | CL-4 Downcomer Temperature at 8D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.6 | Analog | CL-4 Downcomer Temperature at 8D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2 | Analog | CL-4 Downcomer Temperature at 8D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.3 | Analog | CL-4 Downcomer Temperature at 8D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.6 | Analog | CL-4 Downcomer Temperature at 8D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-105 | Analog | CL-1 Temperature (SC-105) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-106 | Analog | CL-2 Temperature (SC-106) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-107 | Analog | CL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-108 | Analog | CL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-113 | Analog | DVI-1/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-114 | Analog | DVI-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-115 | Analog | DVI-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-116 | Analog | DVI-2/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-118 | Analog | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-120 | Analog | Top of Rx at 8.5 inches & 350 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-126 | Analog | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-127 | Analog | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-128 | Analog | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-129 | Analog | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-130 | Analog | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|-----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-131 | Analog | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-132 | Analog | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-133 | Analog | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-134 | Analog | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-135 | Analog | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-140 | Analog | HL-2 Temperature at Rx Flange (SC-140) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-141 | Analog | HL-1 Temperature at Rx Flange (SC-141) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-142 | Analog | HL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-143 | Analog | HL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-147 | Analog | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-148 | Analog | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-149 | Analog | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-150 | Analog | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-151 | Analog | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-152 | Analog | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-153 | Analog | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-154 | Analog | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-155 | Analog | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-156 | Analog | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-157 | Analog | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-158 | Analog | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-162 | Analog | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-163 | Analog | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-164 | Analog | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-165 | Analog | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-166 | Analog | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-167 | Analog | Rx Heater Rod B2-319 at 40.13 inches | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-168 | Analog | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-169 | Analog | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-170 | Analog | Upper Rx Vessel Layer M-M at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-171 | Analog | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-172 | Analog | Lower Rx Vessel Layer AA-AA at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-173 | Analog | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-201 | Analog | CL-1 at RCP-1 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-202 | Analog | CL-2 at RCP-2 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-203 | Analog | CL-3 at RCP-3 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-204 | Analog | CL-4 at RCP-4 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-205 | Analog | HL-1 Temperature at SG-1 Head (SC-205) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-206 | Analog | HL-2 Temperature at SG-2 Head (SC-206) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-207 | Analog | SG-1 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-208 | Analog | SG-2 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-209 | Analog | SG-1 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-210 | Analog | SG-2 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-211 | Analog | SG-1 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-212 | Analog | SG-2 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-213 | Analog | SG-1 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-214 | Analog | SG-2 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-215 | Analog | SG-1 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-216 | Analog | SG-2 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-217 | Analog | SG-1 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-218 | Analog | SG-2 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-221 | Analog | CL-3 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-222 | Analog | CL-4 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-223 | Analog | CL-3 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-224 | Analog | CL-4 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-225 | Analog | CL-3 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|-----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-226 | Analog | CL-4 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-227 | Analog | CL-3 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-228 | Analog | CL-4 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-229 | Analog | CL-3 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-230 | Analog | CL-4 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-231 | Analog | CL-3 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-232 | Analog | CL-4 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-1 | Analog | CL-1 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-2 | Analog | CL-1 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-3 | Analog | CL-1 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-1 | Analog | CL-2 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-2 | Analog | CL-2 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-3 | Analog | CL-2 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-1 | Analog | CL-3 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-2 | Analog | CL-3 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-3 | Analog | CL-3 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-1 | Analog | CL-4 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-2 | Analog | CL-4 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-3 | Analog | CL-4 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-255 | Analog | CL-1 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-256 | Analog | CL-2 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-257 | Analog | CL-3 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-258 | Analog | CL-4 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-301 | Analog | SG-1 Steam Temperature (SC-301) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-305 | Analog | SG-1 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-306 | Analog | SG-2 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-307 | Analog | SG-1 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-308 | Analog | SG-2 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-310 | Analog | SG-2 Steam Temperature (SC-310) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-311 | Analog | SG-1 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-312 | Analog | SG-2 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-401 | Analog | ACC-1 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-402 | Analog | ACC-2 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-403 | Analog | ACC-1 N2Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-404 | Analog | ACC-2 N2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-405 | Analog | ACC-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-406 | Analog | ACC-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-501 | Analog | CMT-1 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-502 | Analog | CMT-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-503 | Analog | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-504 | Analog | CMT-2 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-505 | Analog | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-506 | Analog | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-507 | Analog | CMT-1 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-508 | Analog | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-509 | Analog | CMT-1 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-510 | Analog | CMT-2 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-511 | Analog | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-512 | Analog | CMT-2 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-513 | Analog | CMT-1 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-514 | Analog | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-515 | Analog | CMT-1 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-516 | Analog | CMT-2 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-517 | Analog | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-518 | Analog | CMT-2 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-519 | Analog | CMT-1 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|-----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-520 | Analog | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-521 | Analog | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-522 | Analog | CMT-2 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-523 | Analog | CMT-1 Long T/C Rod at 49.05 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-524 | Analog | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-525 | Analog | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-526 | Analog | CMT-2 SPARGER 2/3 TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-527 | Analog | CMT-1 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-528 | Analog | CMT 2/3 HEAD TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-529 | Analog | CMT-1 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-530 | Analog | CMT-2 Long T/C Rod at 51.87 Inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-531 | Analog | CMT-1 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-532 | Analog | CMT-2 Long T/C Rod at 56.61 Inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-533 | Analog | CMT-1 CL Balance Line at CL-3 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-535 | Analog | CMT-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-536 | Analog | CMT-2 CL Balance Line at CL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-537 | Analog | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-538 | Analog | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-539 | Analog | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-540 | Analog | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-541 | Analog | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-542 | Analog | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-543 | Analog | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-544 | Analog | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-546 | Analog | CMT-2 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-547 | Analog | CMT-1 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-548 | Analog | CMT-2 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-549 | Analog | CMT-1 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-550 | Analog | CMT-2 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-551 | Analog | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-552 | Analog | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-553 | Analog | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-554 | Analog | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-555 | Analog | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-556 | Analog | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-557 | Analog | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-558 | Analog | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-559 | Analog | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-560 | Analog | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-561 | Analog | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-562 | Analog | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-563 | Analog | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-564 | Analog | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-601 | Analog | PZR Surge Line at PZR Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-602 | Analog | ADS1-3 Common Line at PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-603 | Analog | PZR Surge Line at HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-605 | Analog | PZR Water Space Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-608 | Analog | PZR Temperature (SC-608) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-609 | Analog | ADS4-1 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-610 | Analog | ADS4-2 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-614 | Analog | PZR Steam Vent Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-615 | Analog | ADS1-3 Common Line From PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-616 | Analog | ADS1-3 Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-617 | Analog | ADS1-3 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-618 | Analog | ADS4-2 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-619 | Analog | ADS4-1 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|-----------|--|----------------|----------------|----------------|----------------|-----------------------|
| TF-620 | Analog | ADS4-2 Inlet From HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-621 | Analog | ADS4-1 Inlet From HL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-622 | Analog | ADS4-2 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-623 | Analog | ADS4-1 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-701 | Analog | IRWST/PRHR T/C Rod at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-702 | Analog | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-703 | Analog | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-704 | Analog | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-705 | Analog | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-706 | Analog | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-707 | Analog | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-708 | Analog | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-709 | Analog | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-710 | Analog | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-711 | Analog | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-712 | Analog | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-713 | Analog | IRWST Discharge to DVI-01 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-714 | Analog | IRWST Discharge to DVI-02 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-715 | Analog | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-716 | Analog | IRWST Sparger T/C Rod at 36.63 inches Temperature | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-717 | Analog | IRWST Sparger T/C Rod at 66.34 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-718 | Analog | IRWST Sparger T/C Rod at 98.45 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-719 | Analog | IRWST Sparger Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-720 | Analog | IRWST/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-721 | Analog | IRWST/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-722 | Analog | IRWST Steam Exhaust Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-723 | Analog | IRWST/Primary Sump Overflow Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-801 | Analog | CVSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-802 | Analog | RNSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-803 | Analog | PRHR HX Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-804 | Analog | PRHR HX Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-805 | Analog | PRHR HX Long Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-806 | Analog | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-808 | Analog | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-809 | Analog | PRHR HX Long Tube at Center Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-810 | Analog | PRHR HX Short Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-811 | Analog | PRHR HX Long Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-812 | Analog | PRHR HX Outlet Head Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-813 | Analog | RNSP Discharge to DVI-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-814 | Analog | RNSP Discharge to DVI-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-901 | Analog | Primary Sump Inlet from Fill Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-902 | Analog | Secondary Sump Temperature (SC-902) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-903 | Analog | Primary Sump Temperature (SC-903) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-904 | Analog | Primary Sump/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-905 | Analog | Primary Sump at Secondary Sump Crossover Level Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-906 | Analog | Primary Sump Exhaust Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-907 | Analog | Primary Sump at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-908 | Analog | Break Separator Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-909 | Analog | Primary Sump/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-910 | Analog | CRP Discharge to Primary Sump Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-911 | Analog | CRP Discharge to IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-912 | Analog | Break Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-913 | Analog | Break Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-914 | Analog | Condensate Return Tank Temperature (SC-914) | 200 | 40 | 200 | 40 | Fluid Temperature (F) |
| TF-915 | Analog | Break Separator 6-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-916 | Analog | BAMS Header 10-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

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| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|-----------|--|----------------|----------------|----------------|----------------|------------------------------|
| TF-917 | Analog | BAMS Header Temperature (SC-917) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-918 | Analog | Break Separator 8-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TH-103 | Analog | Rx Heater Rod Temperature (SCTH-101-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-211 | Analog | Rx Heater Rod Temperature (SCTH-103-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-305 | Analog | Rx Heater Rod Temperature (SCTH-304-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-309 | Analog | Rx Heater Rod Temperature (SCTH-102-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-401 | Analog | Rx Heater Rod Temperature (SCTH-104-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-507 | Analog | Rx Heater Rod Temperature (SCTH-314-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-601 | Analog | PZR Heater Rod #1 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-602 | Analog | PZR Heater Rod #2 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-603 | Analog | PZR Heater Rod #3 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-604 | Analog | PZR Heater Rod #4 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-1 | Analog | Core Thermocouple Rod D-001 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-2 | Analog | Core Thermocouple Rod D-001 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-3 | Analog | Core Thermocouple Rod D-001 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-4 | Analog | Core Thermocouple Rod D-001 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-5 | Analog | Core Thermocouple Rod D-001 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-6 | Analog | Core Thermocouple Rod D-001 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-1 | Analog | Core Thermocouple Rod D-303 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-2 | Analog | Core Thermocouple Rod D-303 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-3 | Analog | Core Thermocouple Rod D-303 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-4 | Analog | Core Thermocouple Rod D-303 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-5 | Analog | Core Thermocouple Rod D-303 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-6 | Analog | Core Thermocouple Rod D-303 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-1 | Analog | Core Thermocouple Rod E-308 at 22.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-2 | Analog | Core Thermocouple Rod E-308 at 34.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-3 | Analog | Core Thermocouple Rod E-308 at 46.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-4 | Analog | Core Thermocouple Rod D-001 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-5 | Analog | Core Thermocouple Rod D-001 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-6 | Analog | Core Thermocouple Rod D-303 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-1 | Analog | Core Thermocouple Rod D-313 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-2 | Analog | Core Thermocouple Rod D-313 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-3 | Analog | Core Thermocouple Rod D-313 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-4 | Analog | Core Thermocouple Rod D-313 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-5 | Analog | Core Thermocouple Rod D-313 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-6 | Analog | Core Thermocouple Rod D-313 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-1 | Analog | Core Thermocouple Rod F-318 at 28.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-2 | Analog | Core Thermocouple Rod F-318 at 40.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-3 | Analog | Core Thermocouple Rod F-318 at 51.86 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-4 | Analog | Core Thermocouple Rod D-303 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-5 | Analog | Core Thermocouple Rod D-313 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-6 | Analog | Core Thermocouple Rod D-313 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TW-104-1.5D-2 | Analog | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-2 | Analog | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-3 | Analog | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-201 | Analog | SG-1 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-202 | Analog | SG-2 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-203 | Analog | SG-1 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-204 | Analog | SG-2 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-205 | Analog | SG-1 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-206 | Analog | SG-2 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-208 | Analog | SG-2 Long Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-209 | Analog | SG-1 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-210 | Analog | SG-2 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-601 | Analog | ADS1-3 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-602 | Analog | ADS4-2 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |

NRC-COND-06

| Tag Name | Data Type | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|------------|-----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TW-803 | Analog | ADS4-1 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-801 | Analog | PRHR HX Long Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-802 | Analog | PRHR HX Short Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-803 | Analog | PRHR HX Long Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-804 | Analog | PRHR HX Short Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-805 | Analog | PRHR HX Short Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-806 | Analog | PRHR HX Long Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-807 | Analog | PRHR HX Short Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-808 | Analog | PRHR HX Long Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-905 | Analog | Break Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| DASRunning | Discrete | DSC Engine is running, but not necessarily logging data | N/A | N/A | N/A | N/A | N/A |
| DASLogging | Discrete | DSC Engine is logging data to the Citadel database | N/A | N/A | N/A | N/A | N/A |
| FVM-004 | Analog | Catch Tank Steam Flow Rate | 4.9885 | 1.001 | 70 | 0 | Steam Flow Rate (cfm) |
| PT-004 | Analog | Temp Steam Pressure for FVM-002 | 5.0026 | 1.0016 | 400 | 0 | Pressure (psig) |

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DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS

**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**

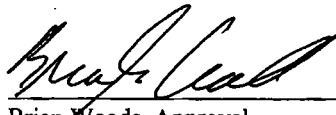
**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 300 PSIG WITH 2.5% NITROGEN**

NRC-COND-07

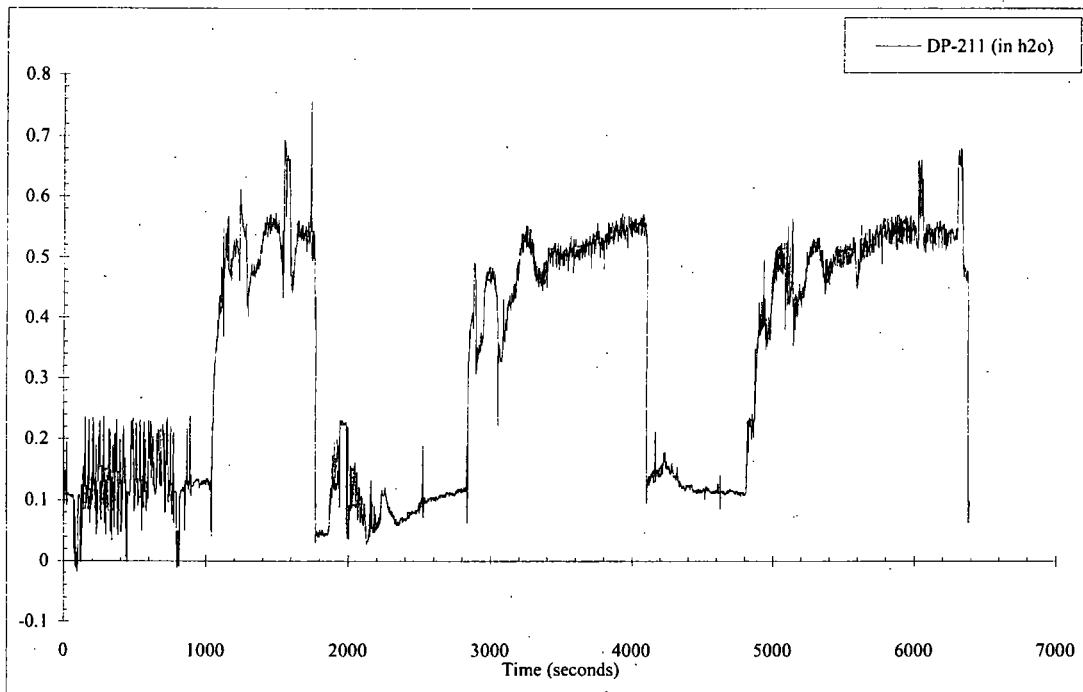
Revision 0

 5/10/2007

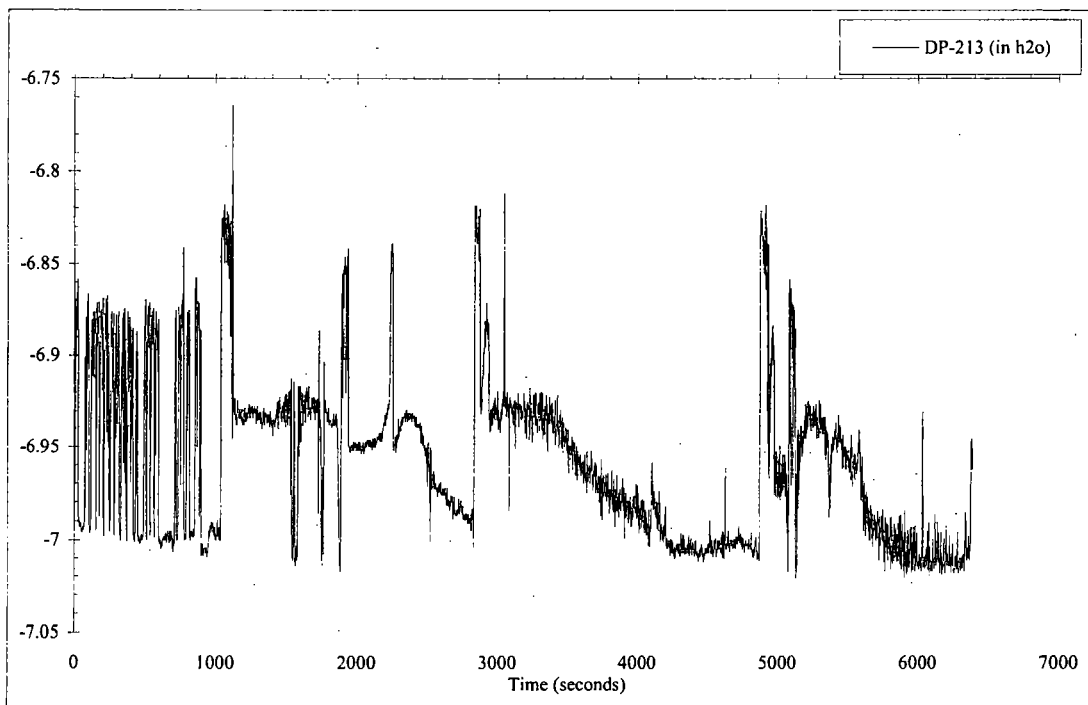
John Groome, Originator Date
Facility Operations Manager
Research Assistant

 5/10/2007

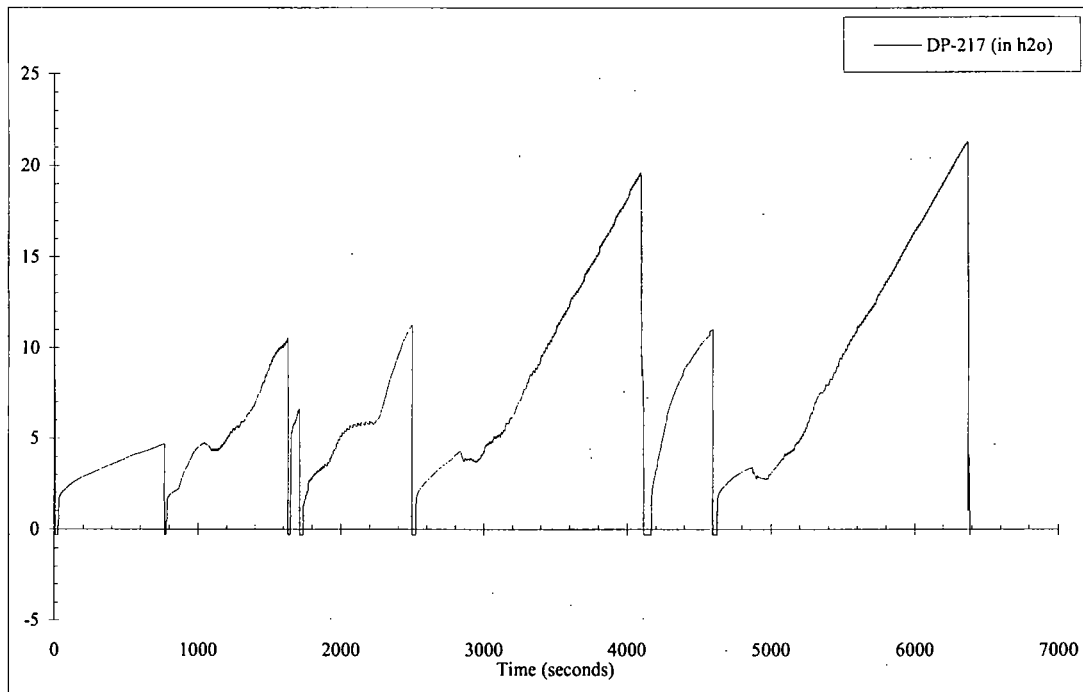
Brian Woods, Approval Date
Program Manager
Assistant Professor



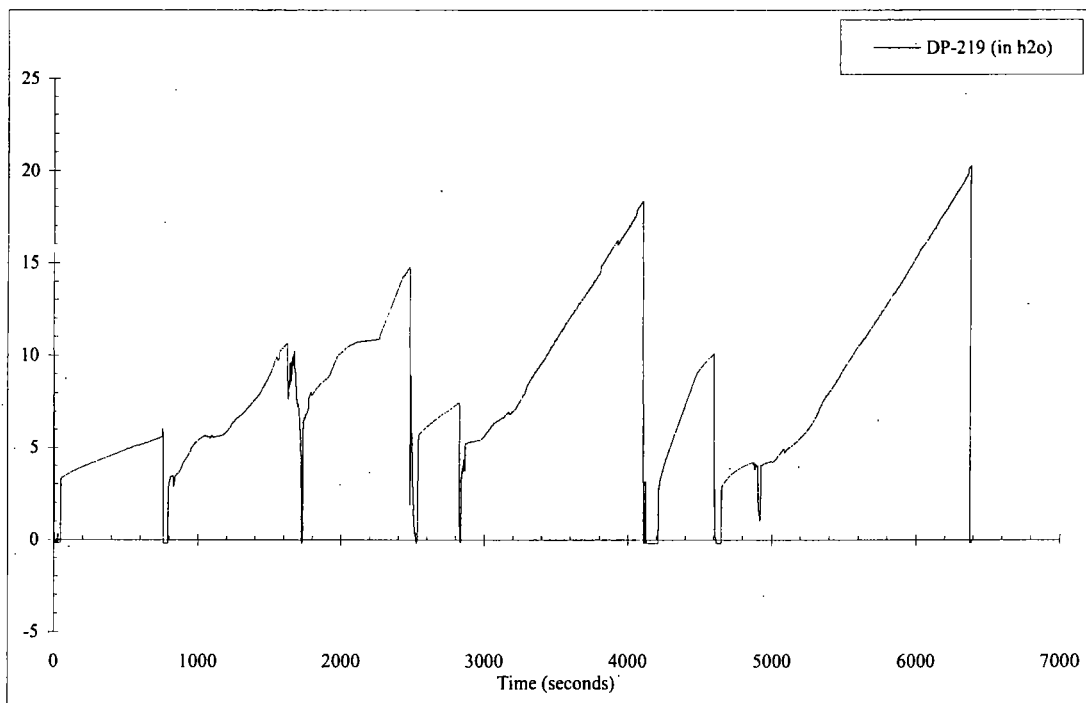
SG-1 Short Tube Entrance Losses



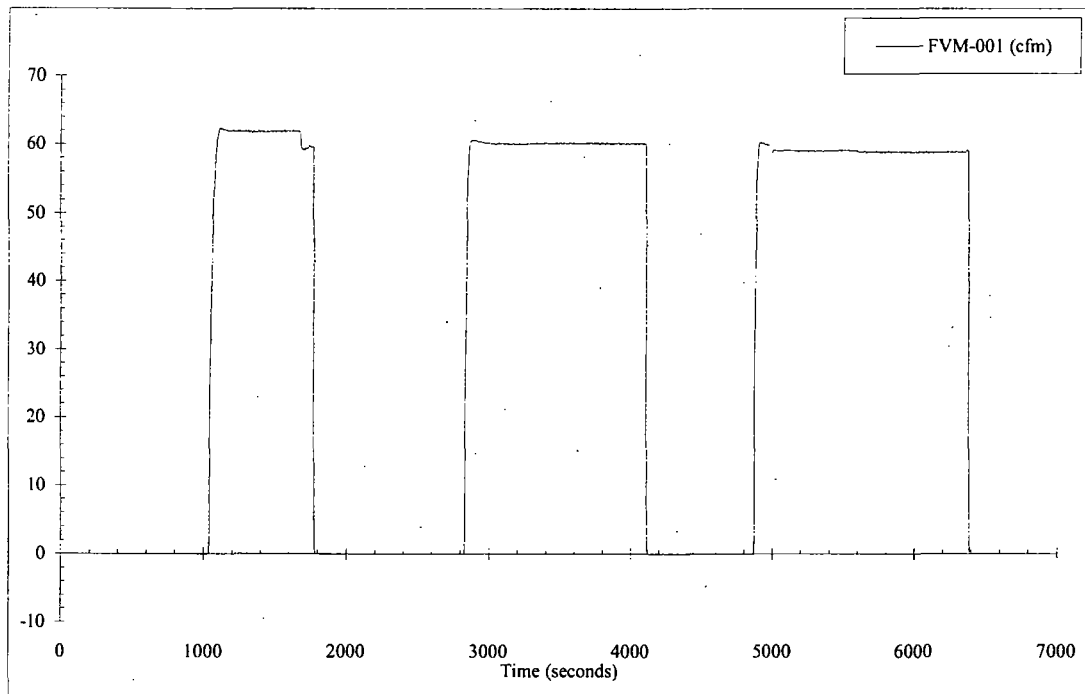
SG-1 Long Tube Exit Losses



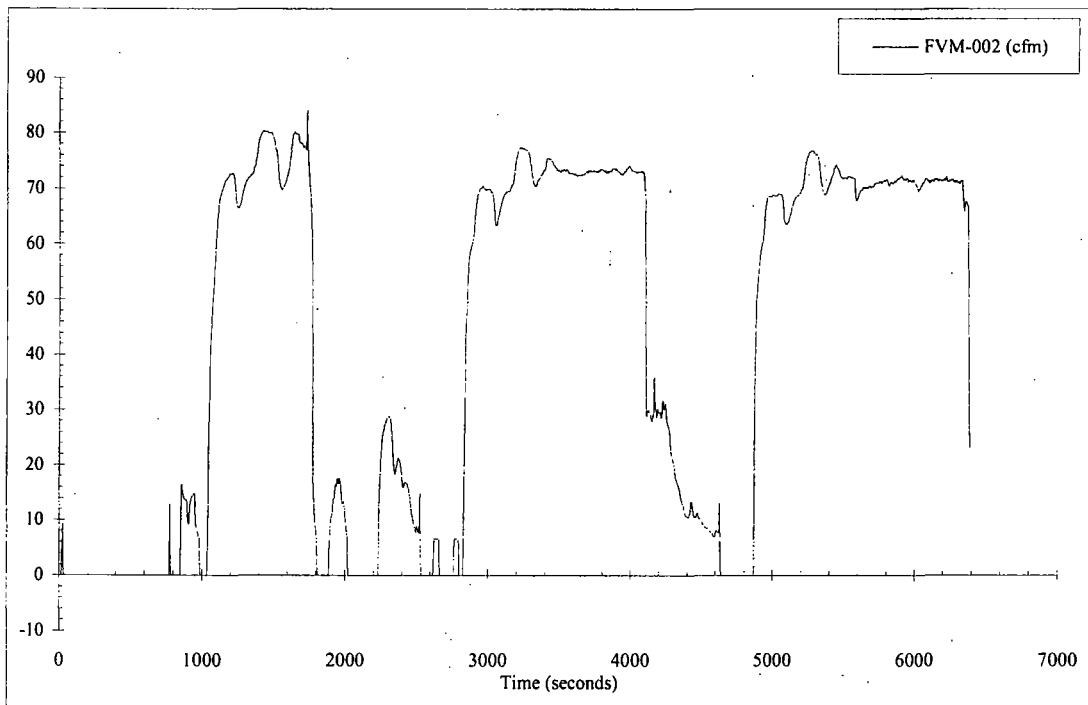
Separator Uncompensated Water Level



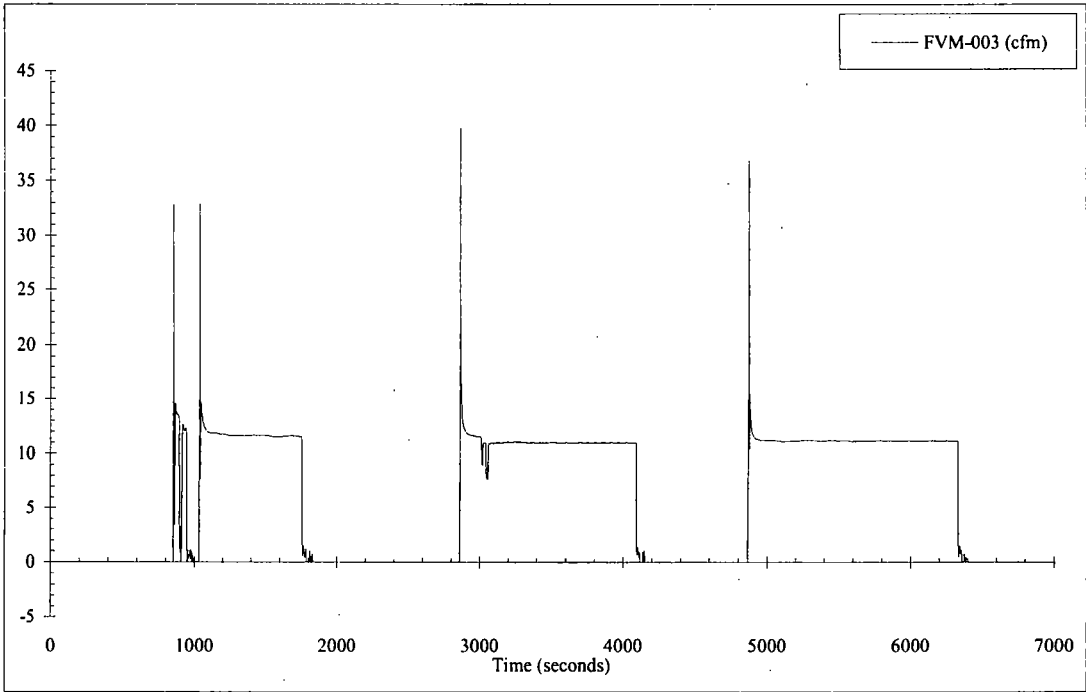
Catch Tank Uncompensated Water Level



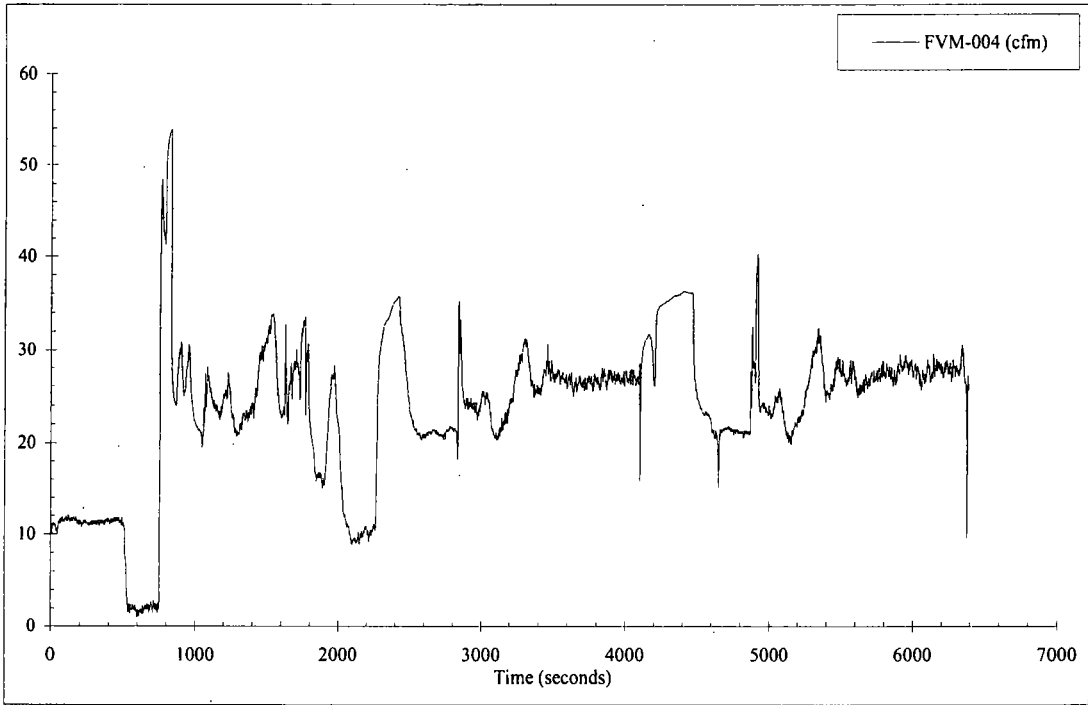
Separator Outlet Steam Flowrate



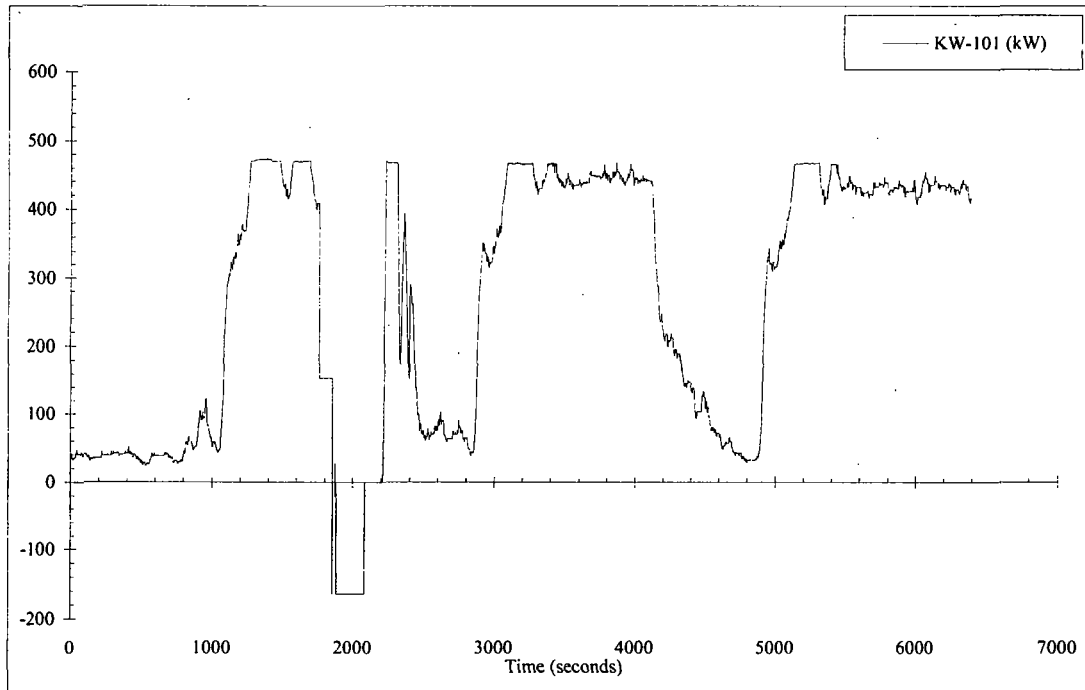
SG-2 Main Steam Flow



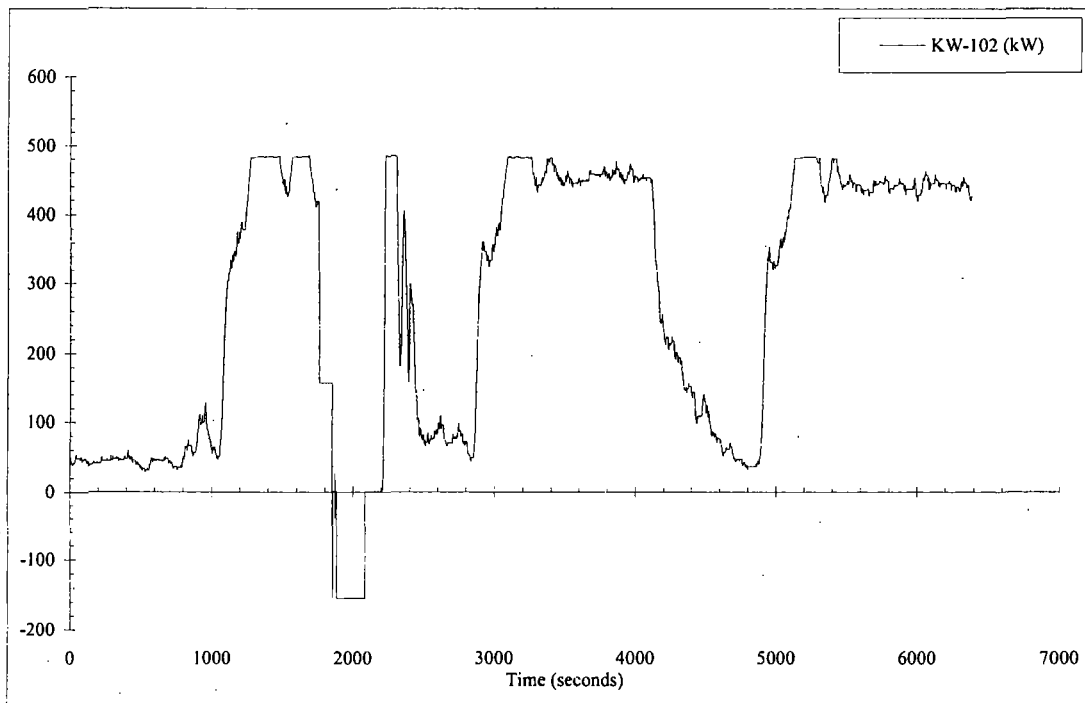
Main Steam Total Flow



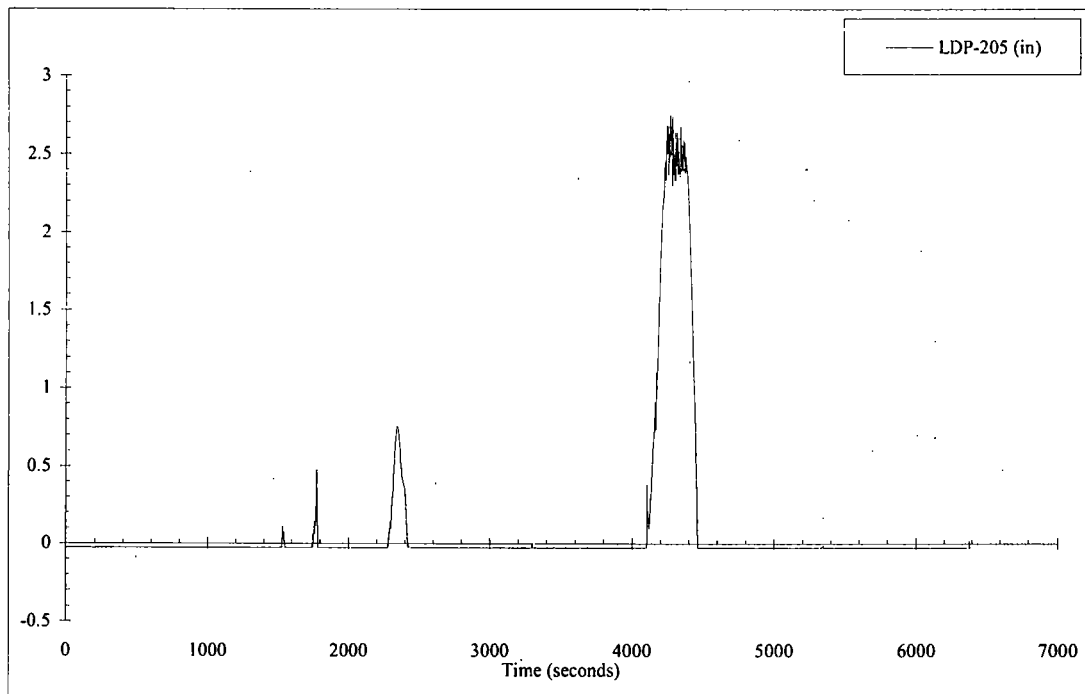
Catch Tank Steam Flow Rate



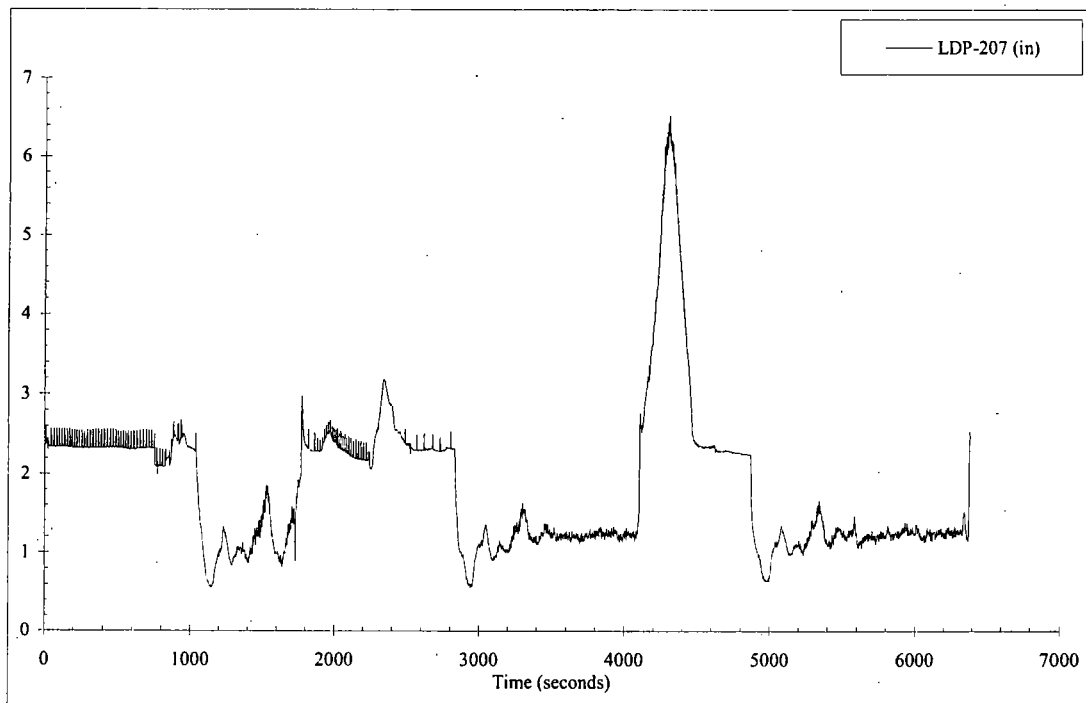
Rx Heater Group 1 Power



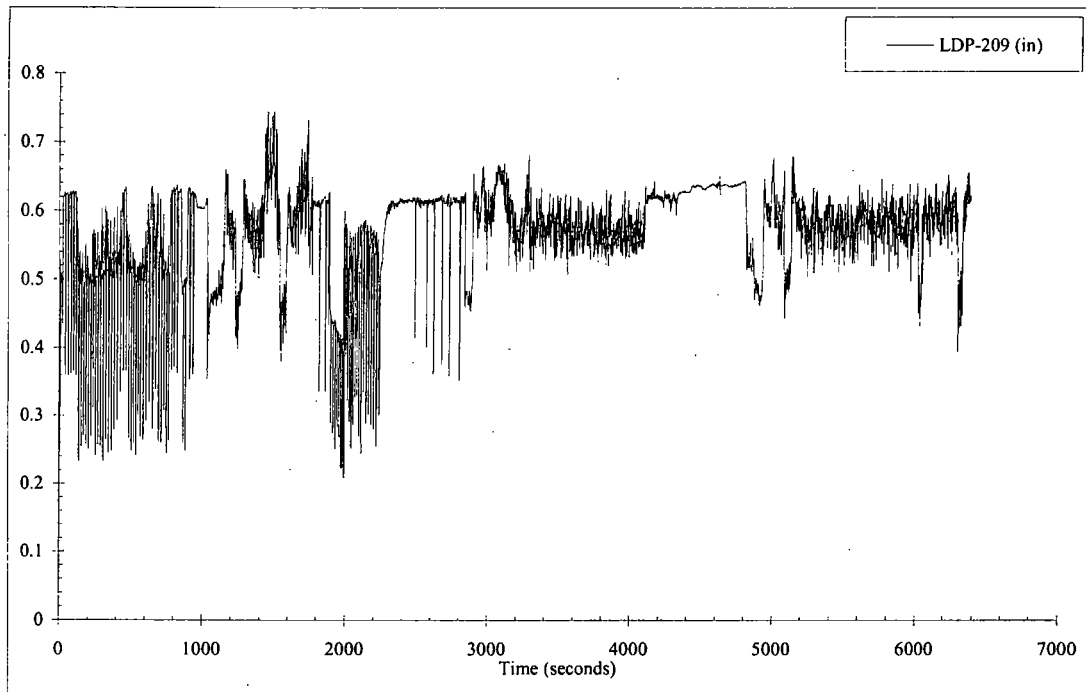
Rx Heater Group 2 Power



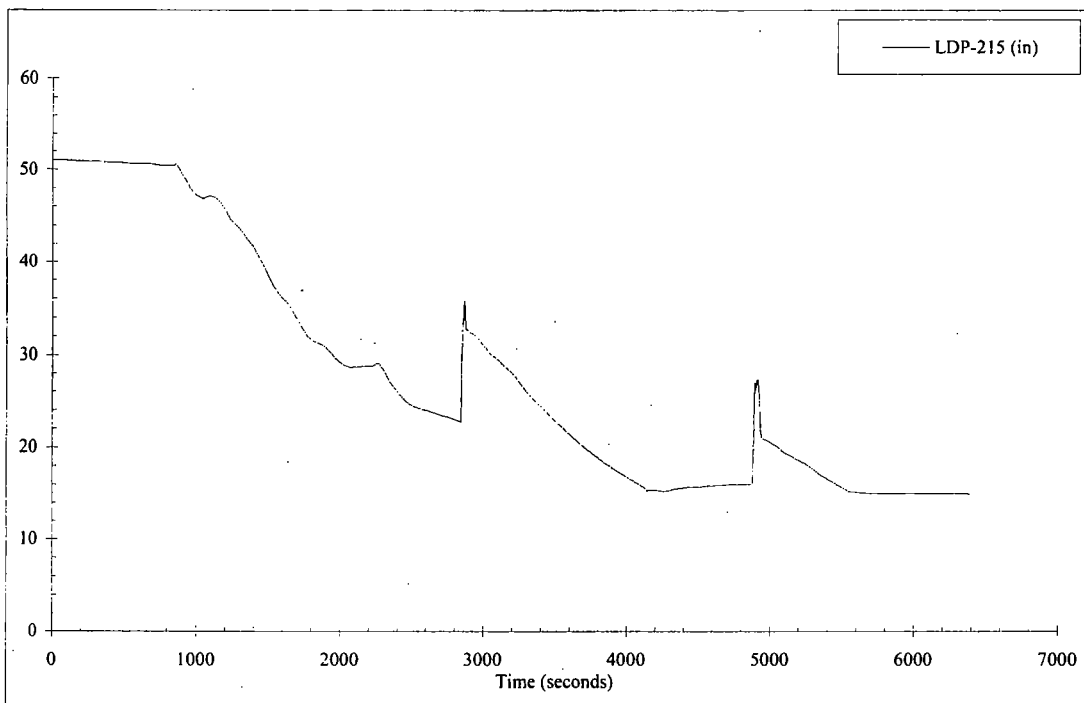
HL-1 Uncompensated Water Level



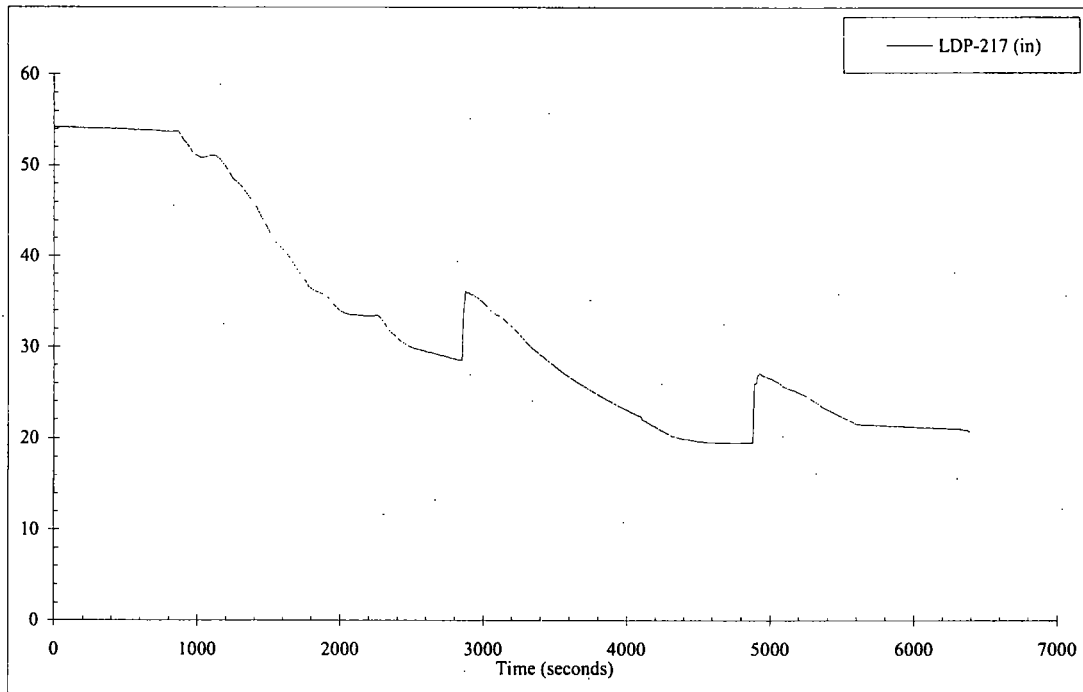
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



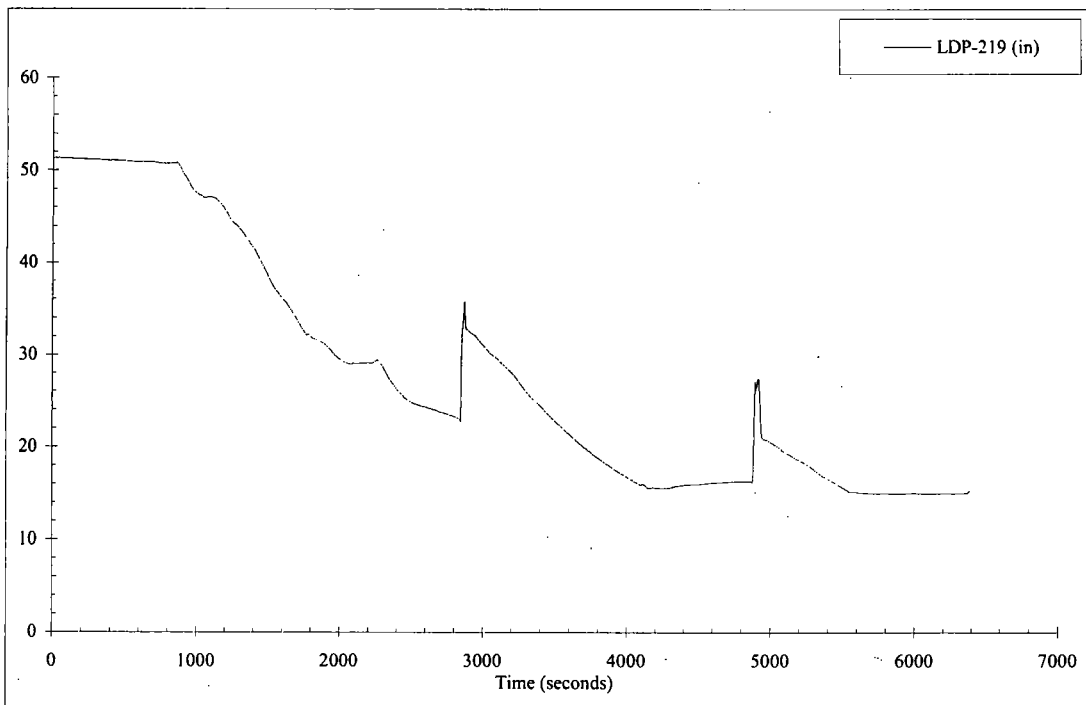
SG-1 to HL-1 Plenum Uncompensated Water Level



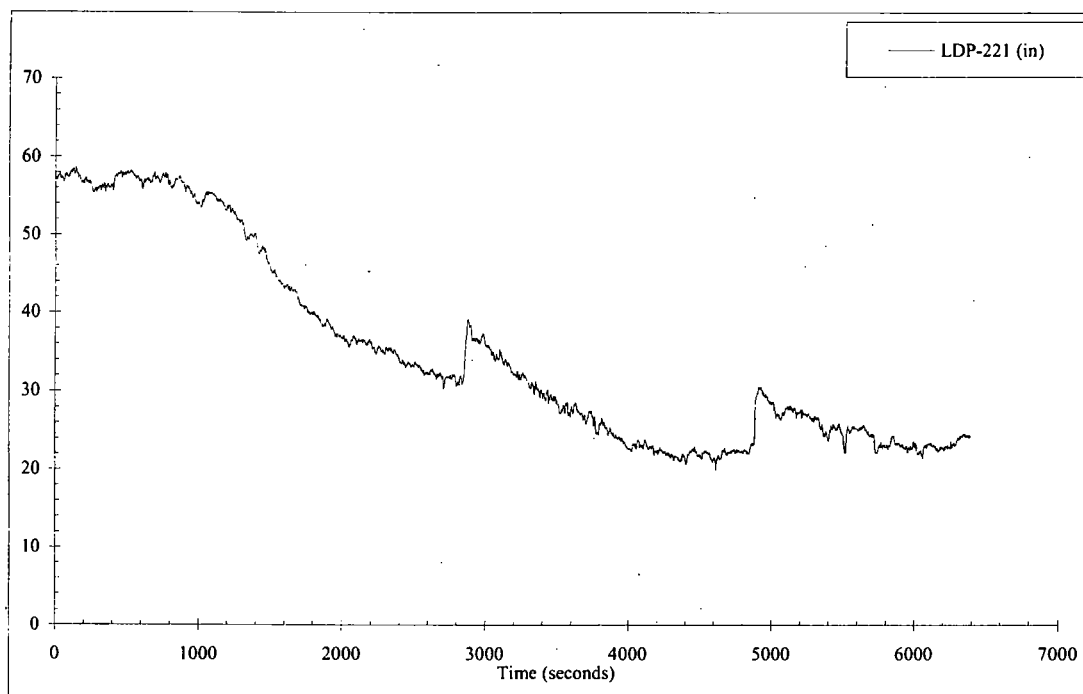
SG-1 Long Tube to HL Uncompensated Water Level



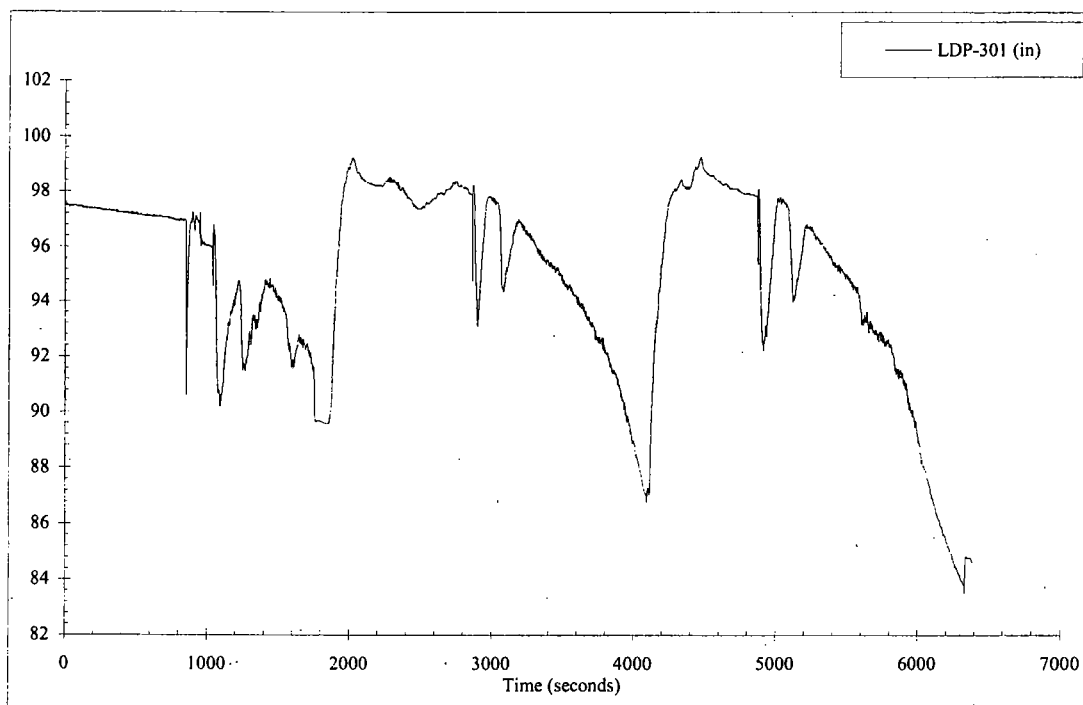
SG-1 Short Tube to HL Uncompensated Water Level



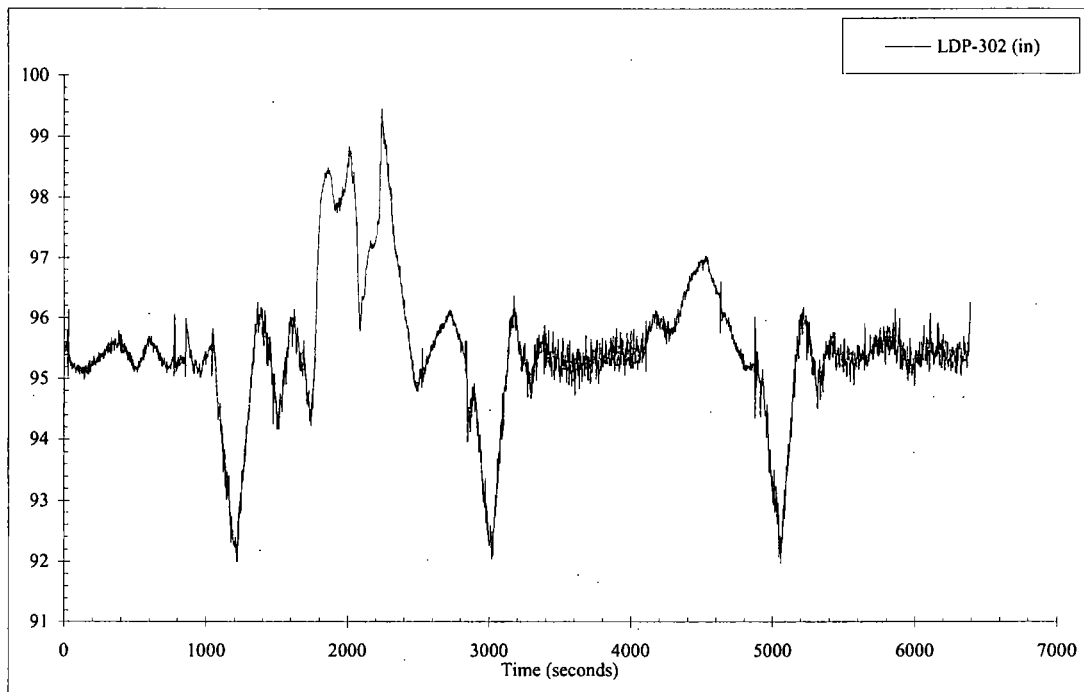
SG-1 Long Tube to CL Uncompensated Water Level



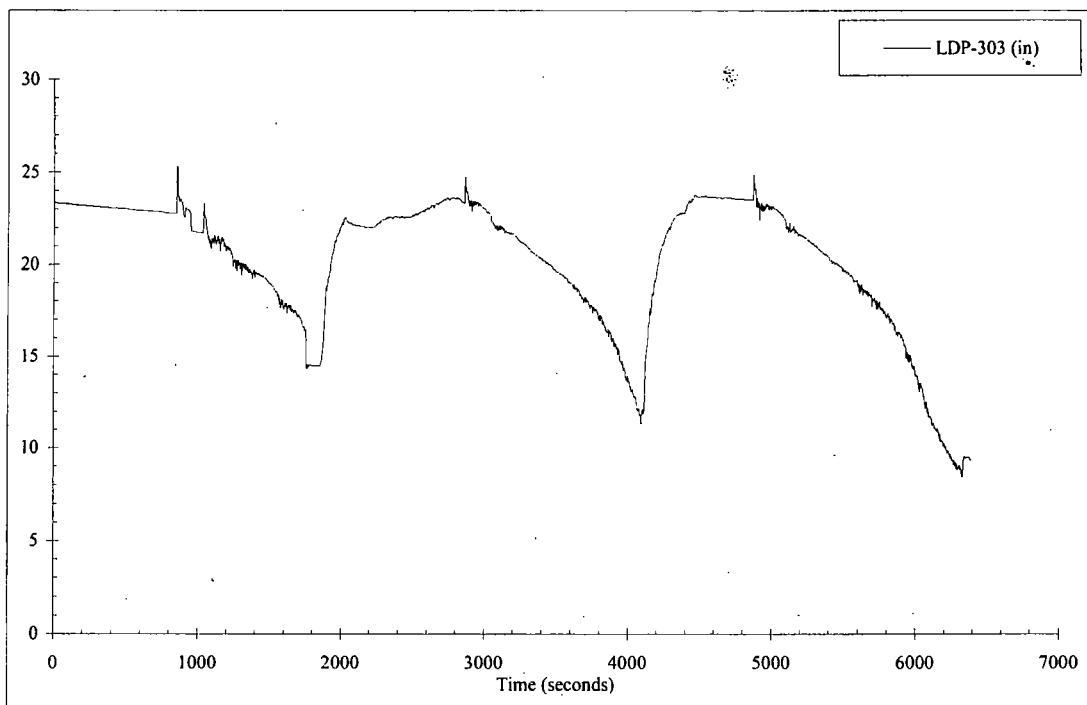
SG-1 Short Tube to CL Uncompensated Water Level



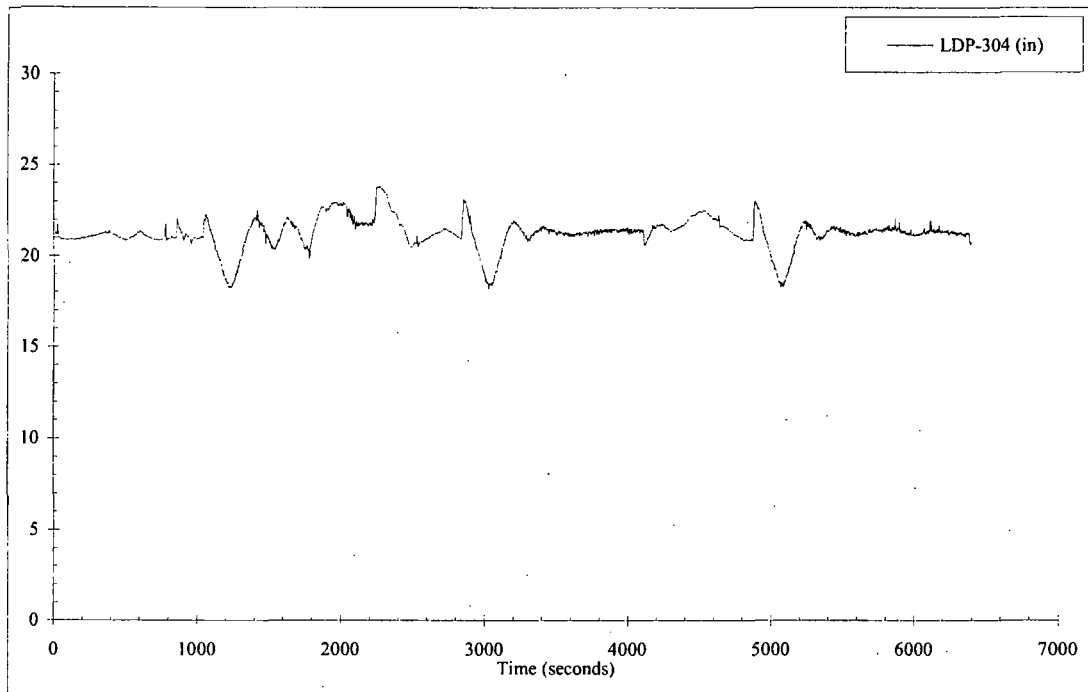
SG-1 WR Uncompensated Water Level



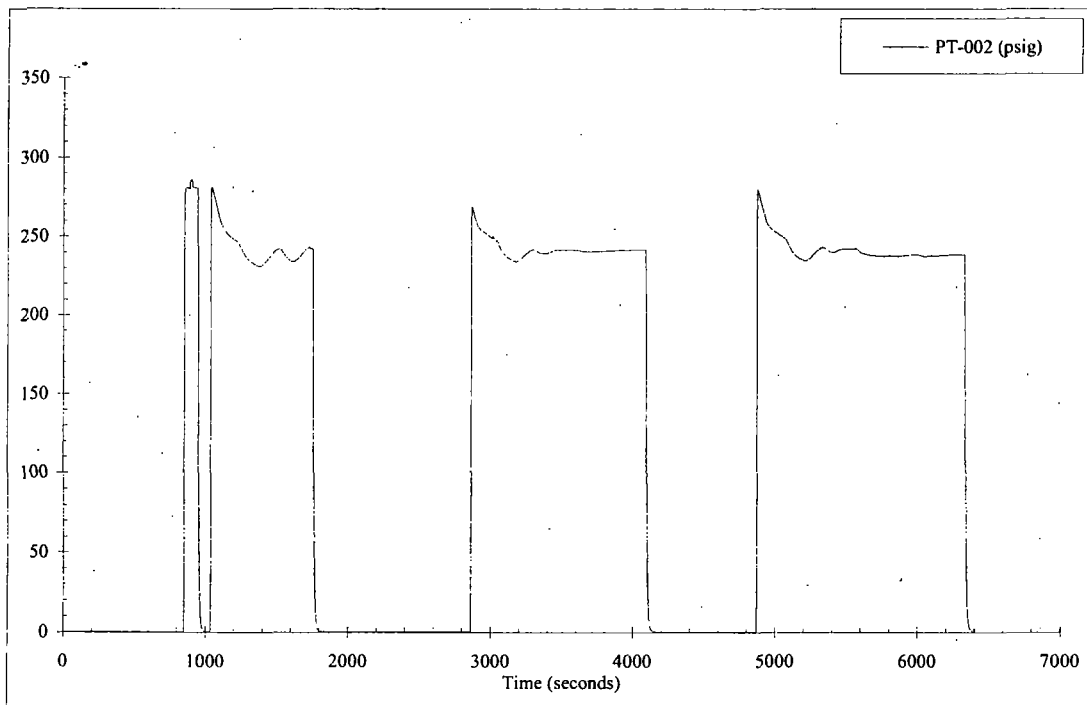
SG-2 WR Uncompensated Water Level



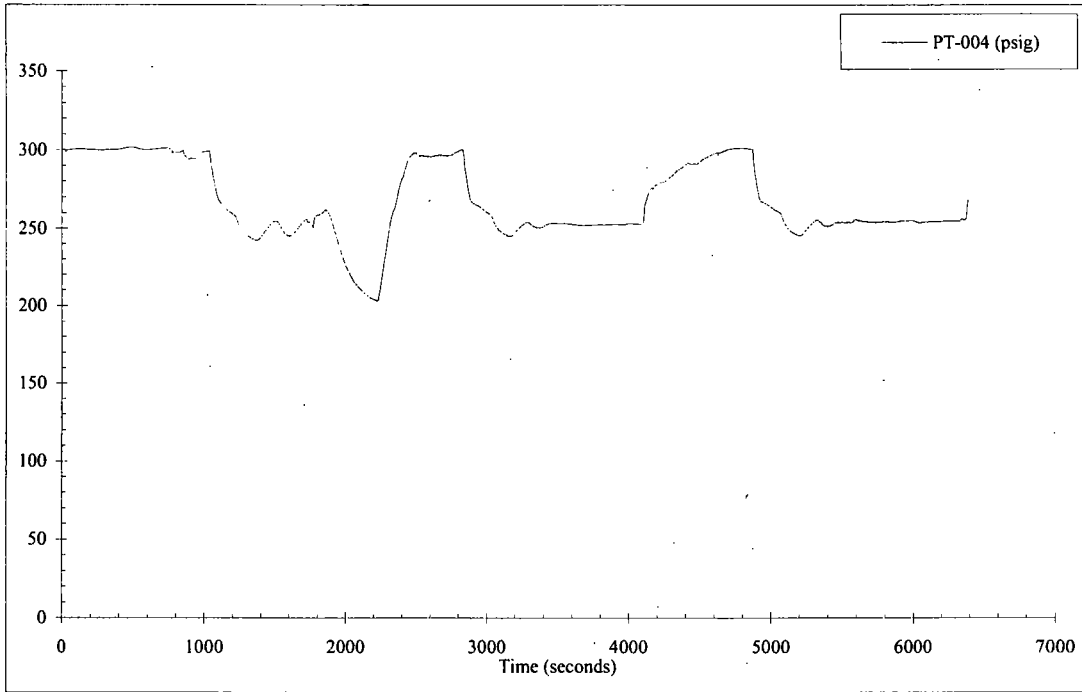
SG-1 NR Uncompensated Water Level



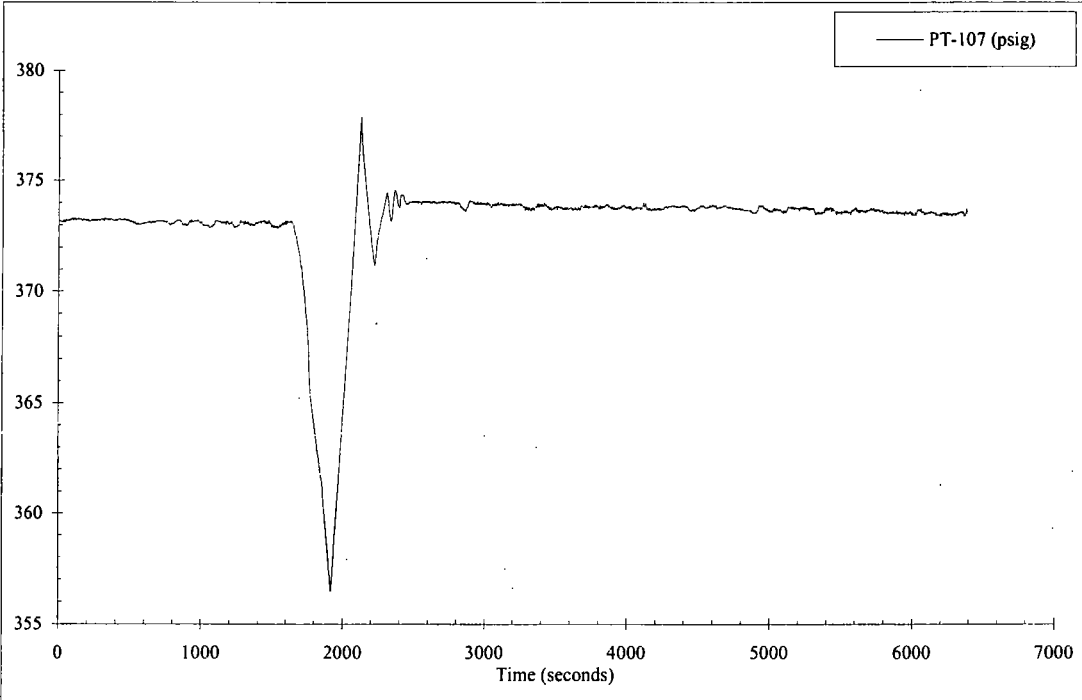
SG-2 NR Uncompensated Water Level



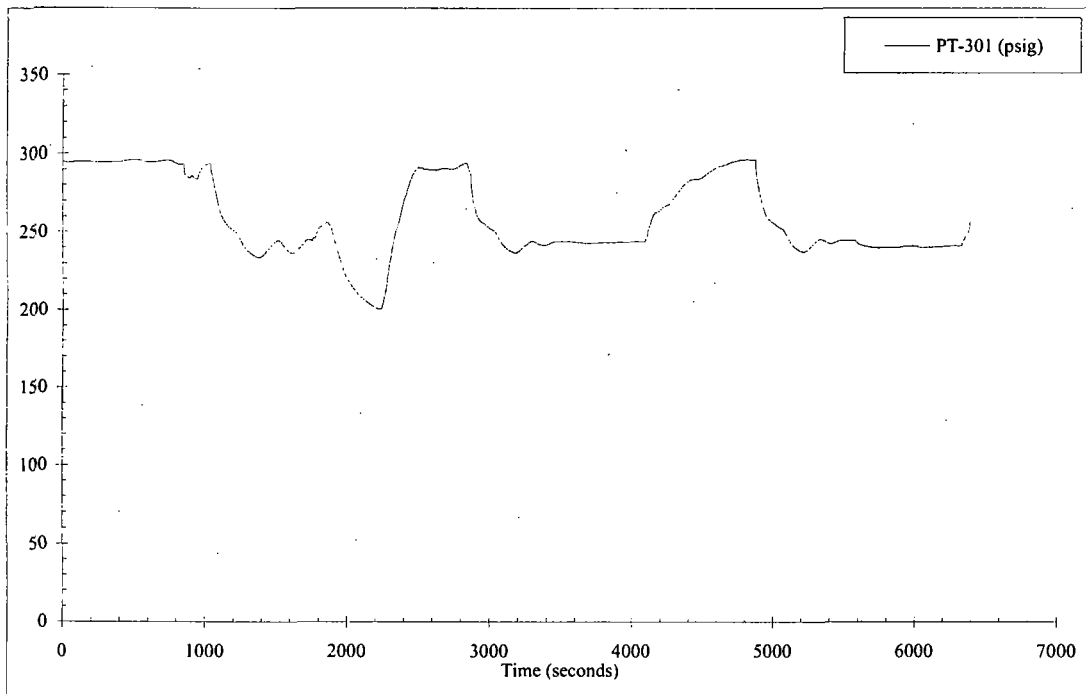
MS Header Pressure



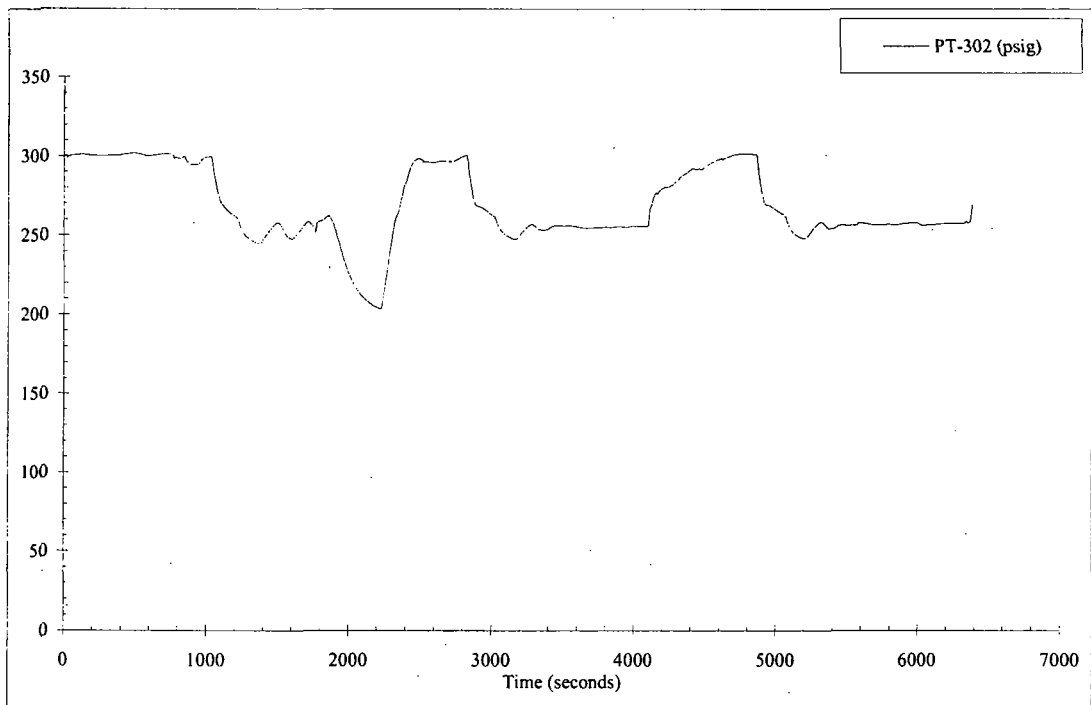
Temp Steam Pressure for FVM-002



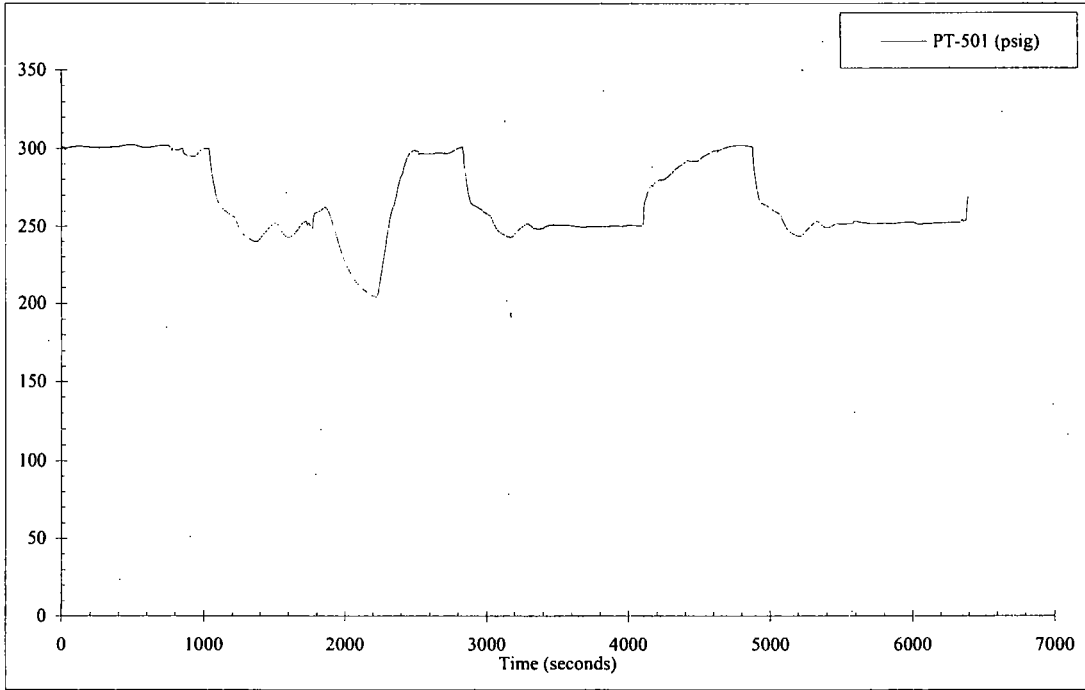
Rx Upper Head Pressure



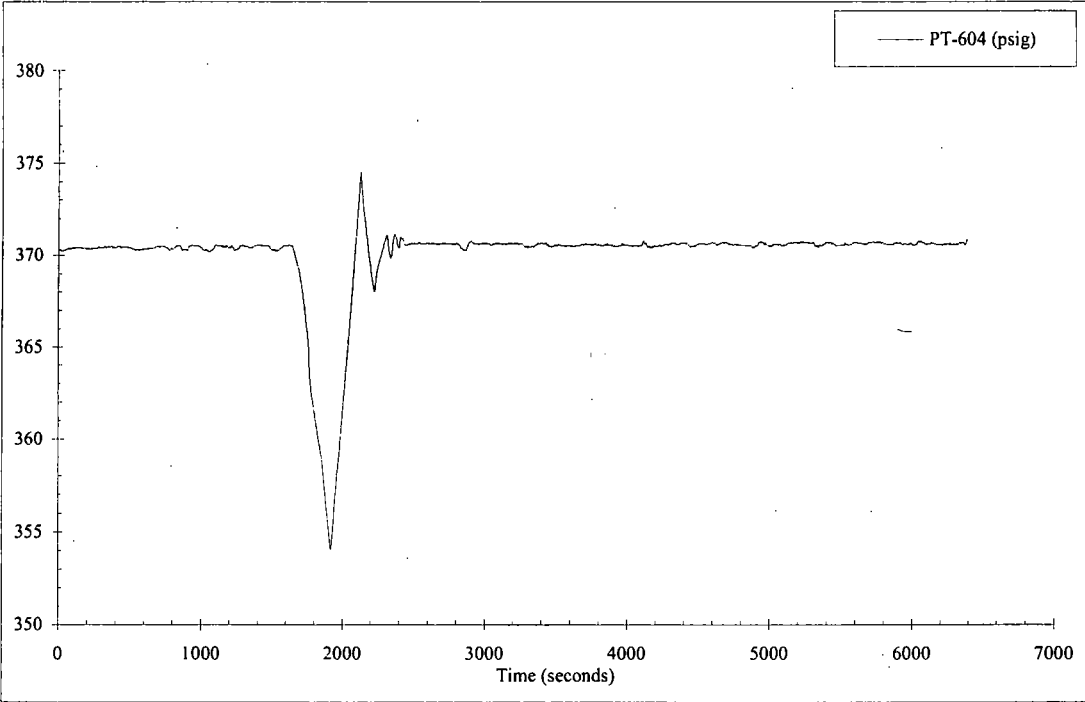
SG-1 Pressure



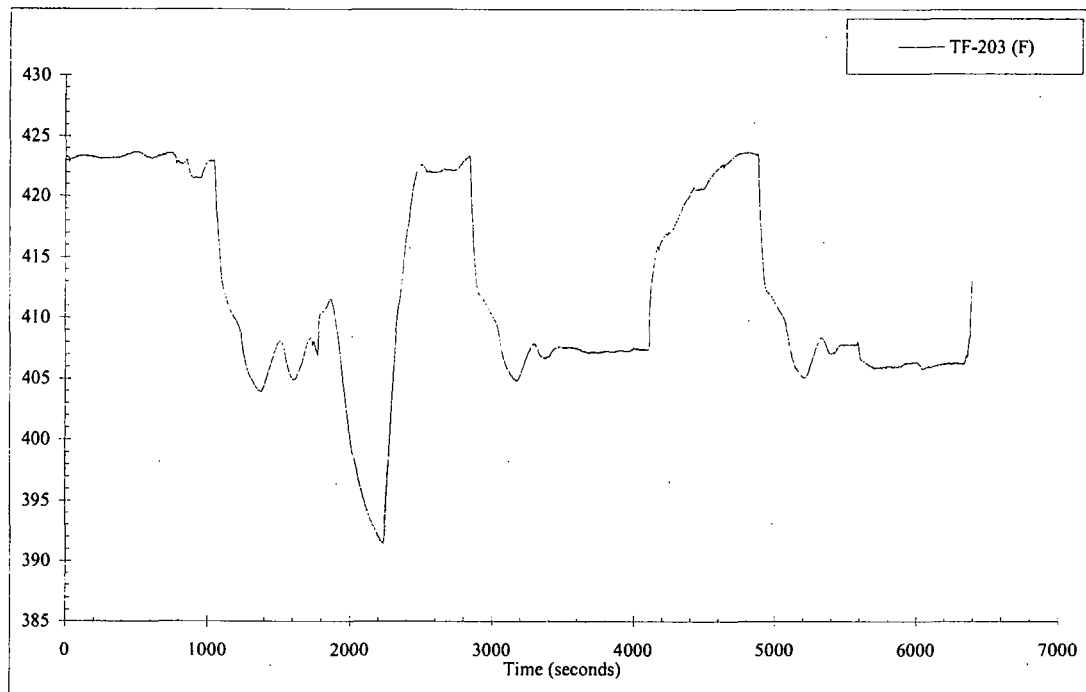
SG-2 Pressure



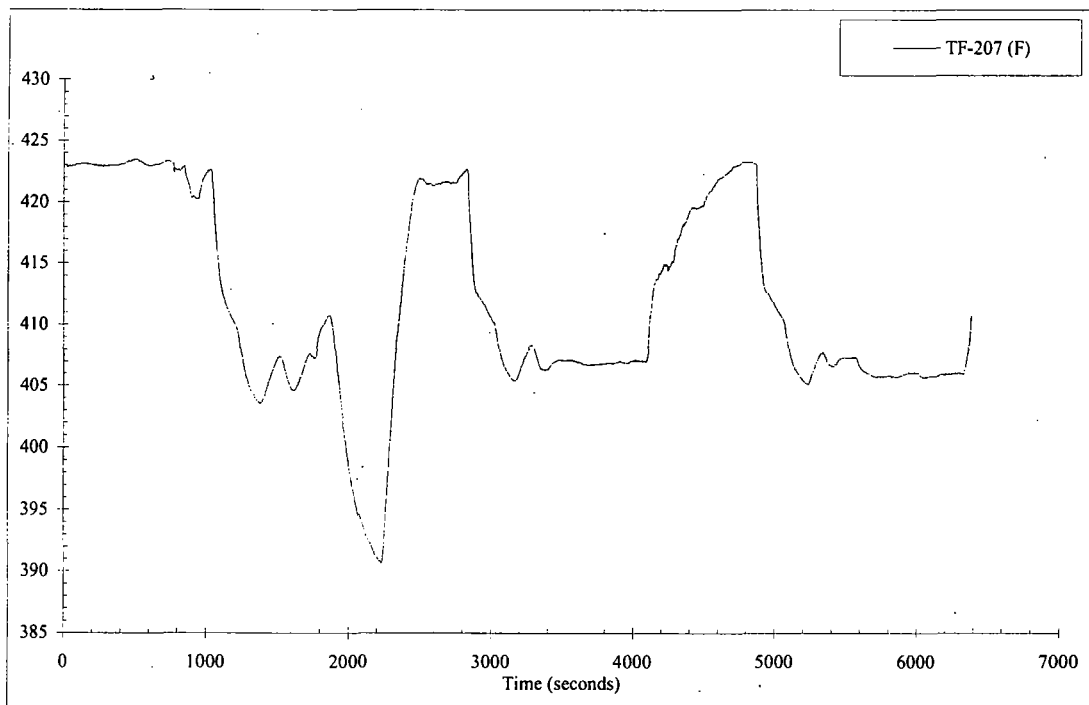
Separator Outlet Steam Pressure



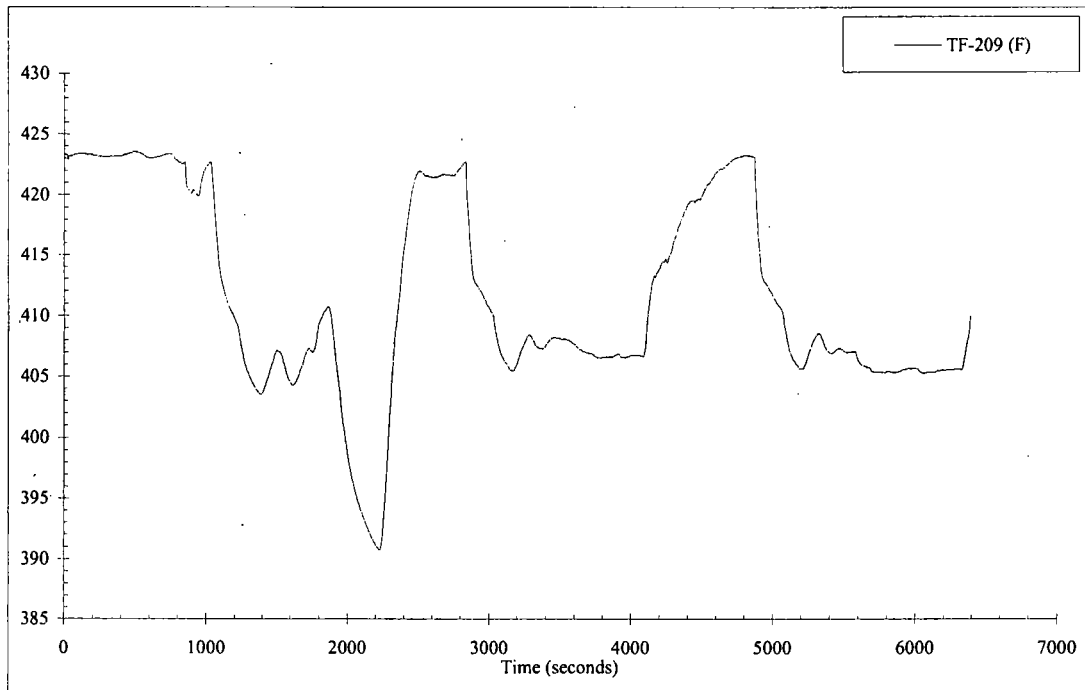
PZR WR Pressure



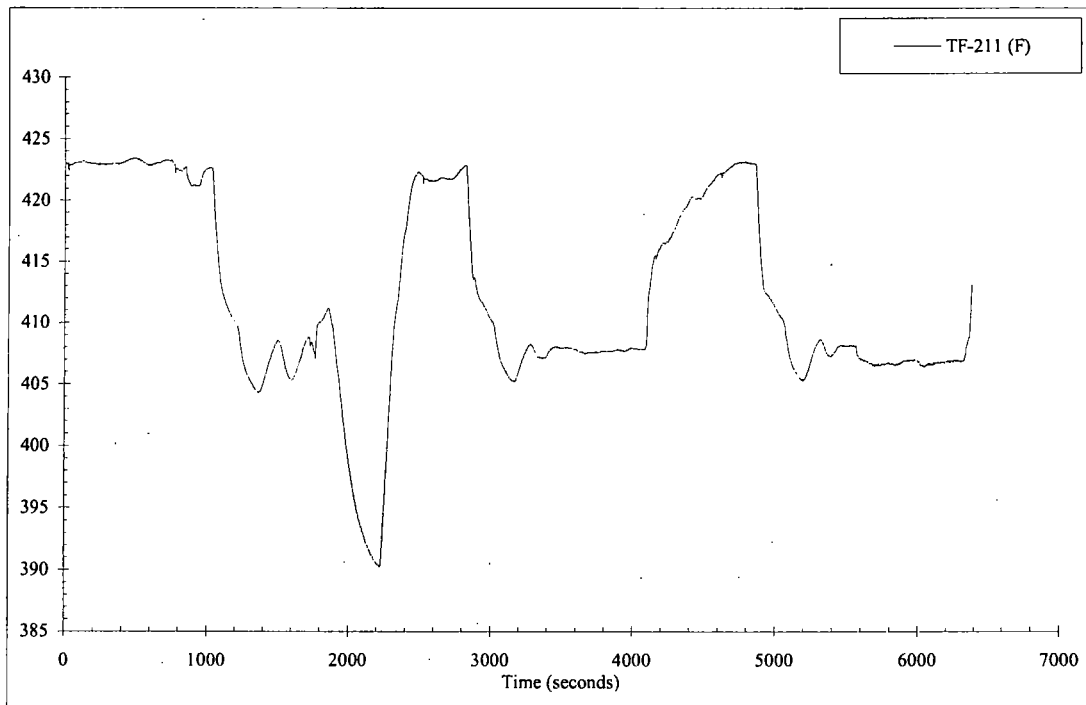
Separator Outlet Steam Temperature



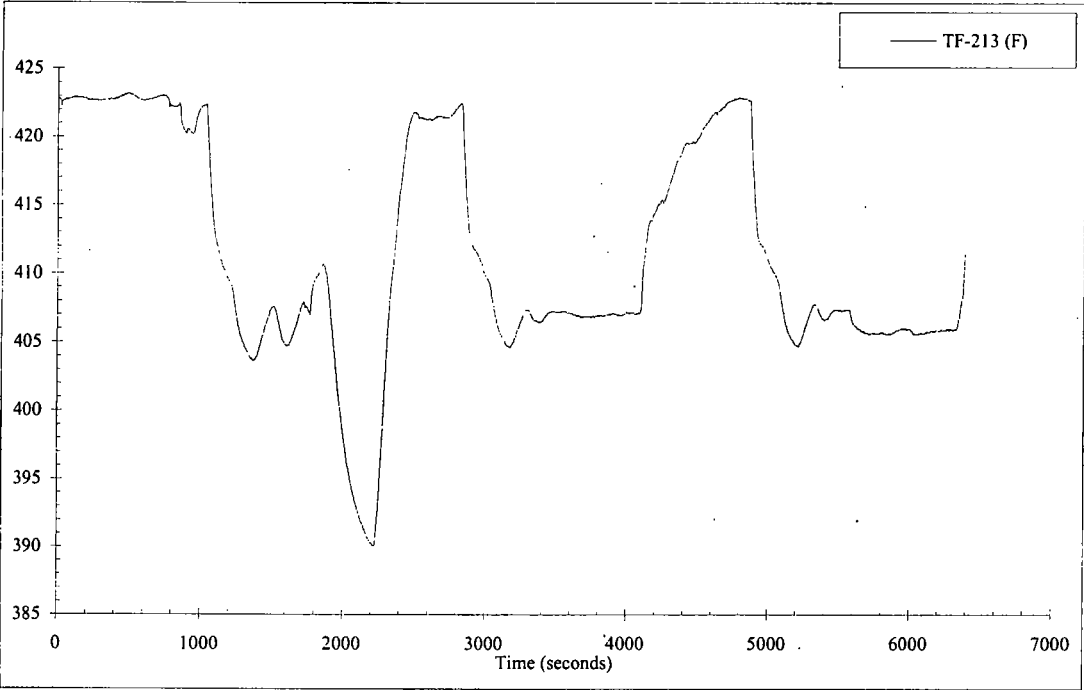
SG-1 Short Tube at Middle Outlet Side Temperature



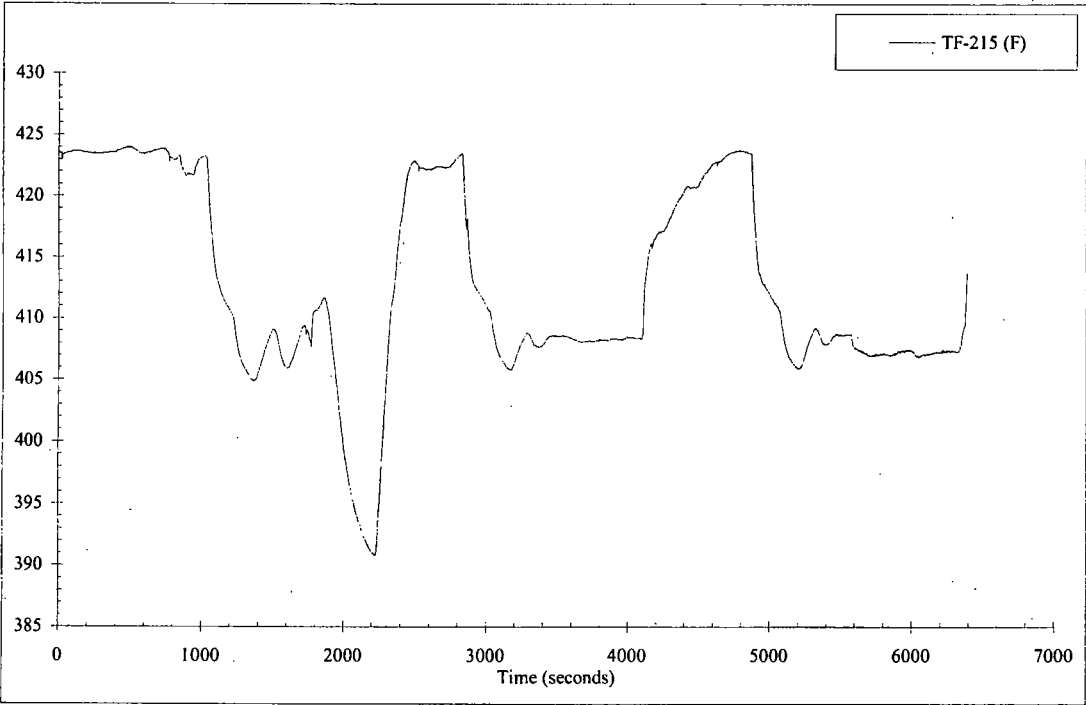
SG-1 Short Tube at Middle Inlet Side Temperature



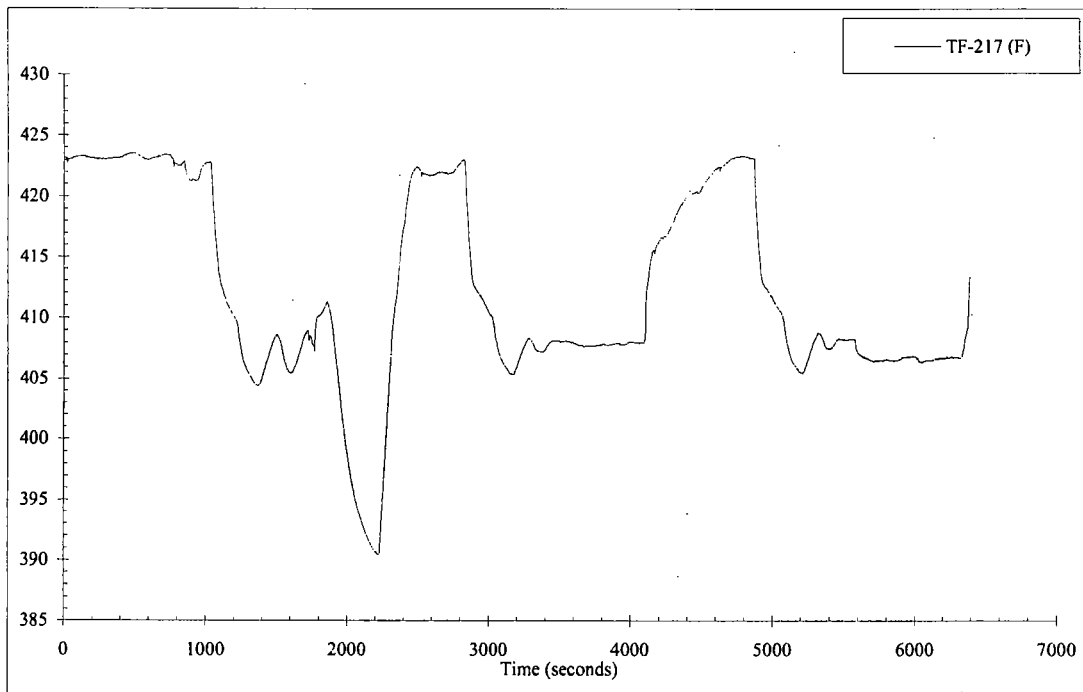
SG-1 Long Tube at Middle Outlet Temperature



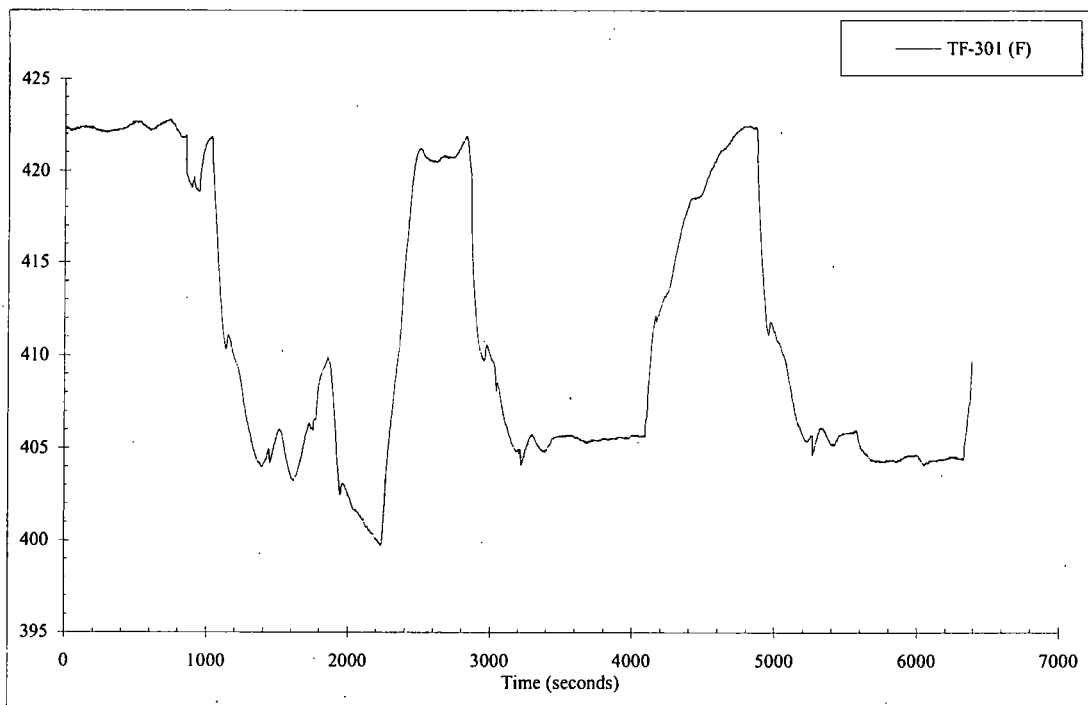
SG-1 Long Tube at Middle Inlet Temperature



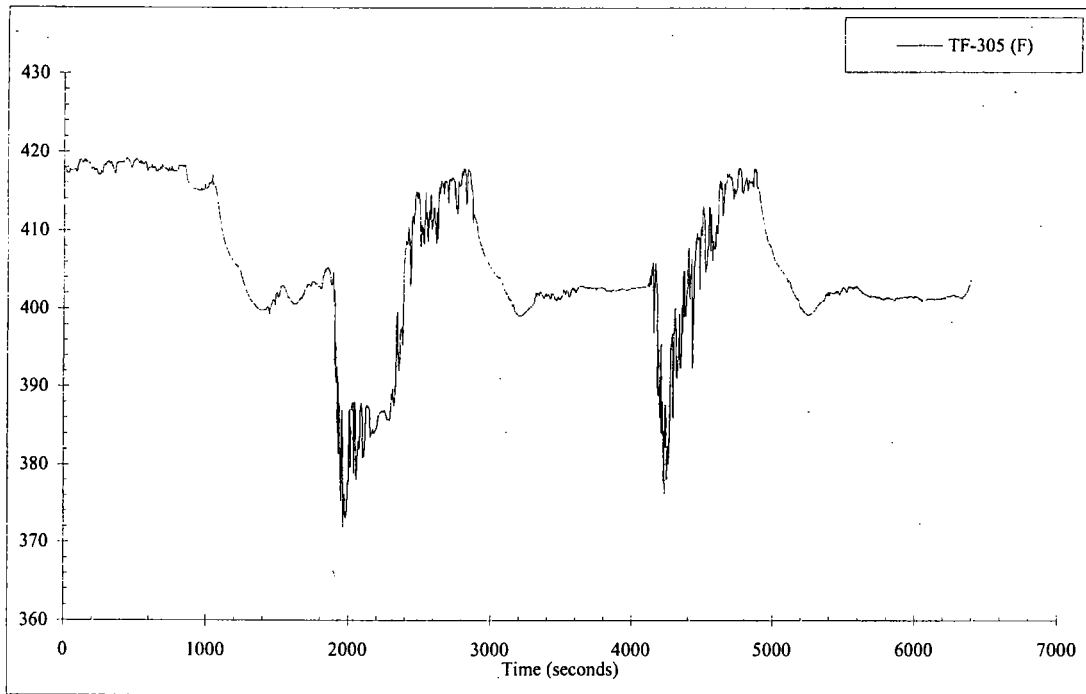
SG-1 Short Tube at Top Temperature



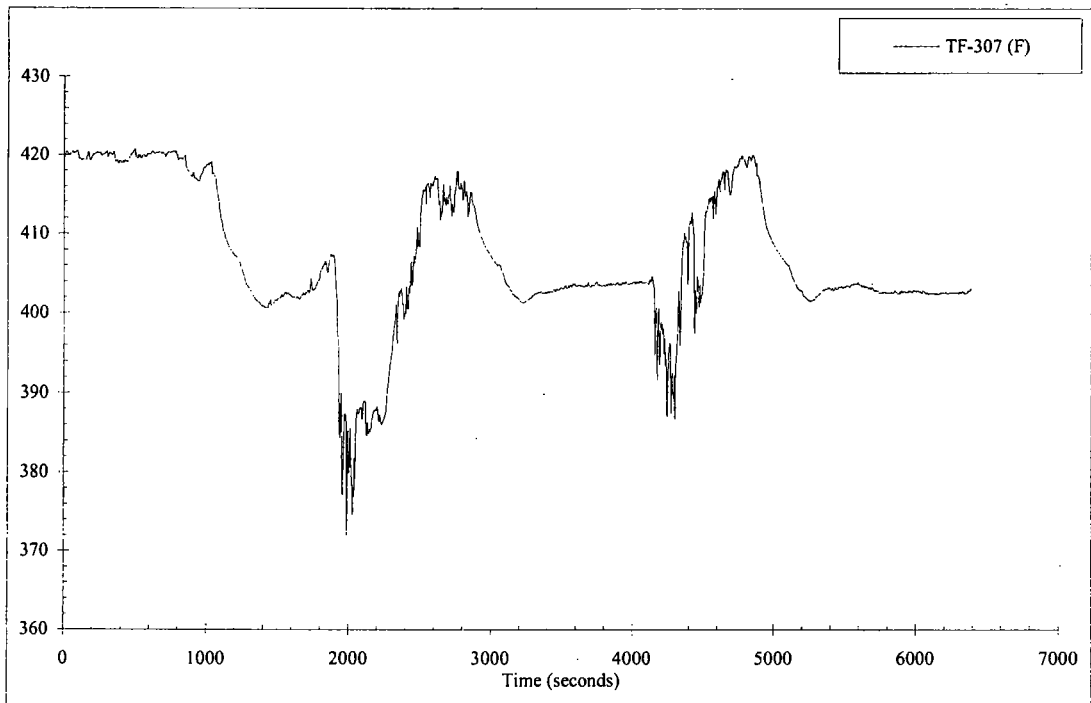
SG-1 Long Tube at Top Temperature



SG-1 Steam Temperature (SC-301)

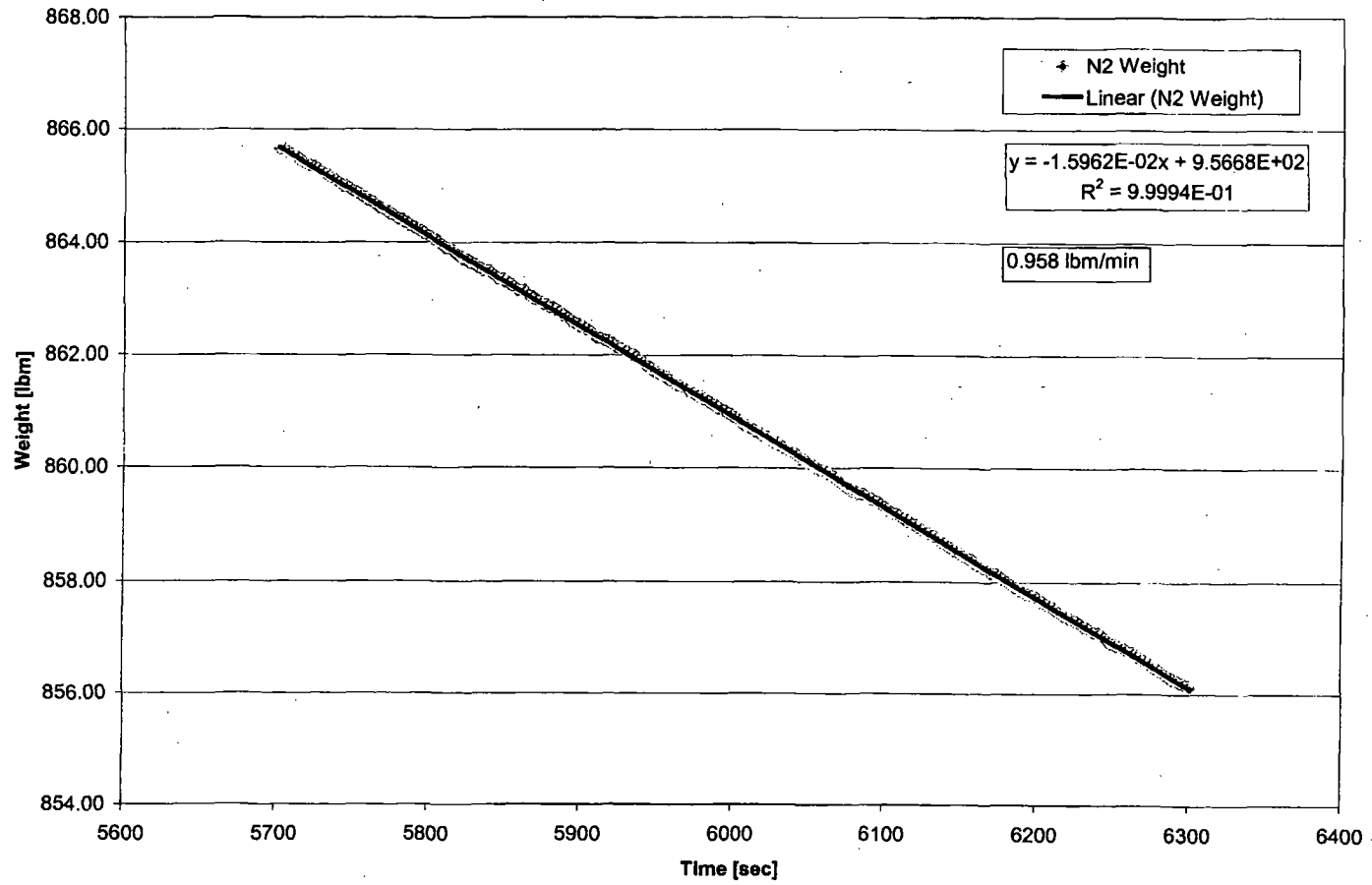


SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

NRC-COND-07 N₂ Flow



NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:28:10 | 5521 | 867.75 |
| 13:28:11 | 5522 | 867.75 |
| 13:28:12 | 5523 | 867.75 |
| 13:28:13 | 5524 | 867.75 |
| 13:28:14 | 5525 | 867.75 |
| 13:28:15 | 5526 | 867.75 |
| 13:28:16 | 5527 | 867.75 |
| 13:28:17 | 5528 | 867.75 |
| 13:28:18 | 5529 | 867.75 |
| 13:28:19 | 5530 | 867.75 |
| 13:28:20 | 5531 | 867.70 |
| 13:28:21 | 5532 | 867.70 |
| 13:28:22 | 5533 | 867.75 |
| 13:28:23 | 5534 | 867.70 |
| 13:28:25 | 5536 | 867.70 |
| 13:28:26 | 5537 | 867.70 |
| 13:28:27 | 5538 | 867.70 |
| 13:28:28 | 5539 | 867.70 |
| 13:28:29 | 5540 | 867.75 |
| 13:28:30 | 5541 | 867.75 |
| 13:28:31 | 5542 | 867.75 |
| 13:28:32 | 5543 | 867.75 |
| 13:28:33 | 5544 | 867.75 |
| 13:28:34 | 5545 | 867.75 |
| 13:28:35 | 5546 | 867.75 |
| 13:28:36 | 5547 | 867.75 |
| 13:28:37 | 5548 | 867.75 |
| 13:28:38 | 5549 | 867.75 |
| 13:28:39 | 5550 | 867.75 |
| 13:28:40 | 5551 | 867.75 |
| 13:28:41 | 5552 | 867.75 |
| 13:28:42 | 5553 | 867.75 |
| 13:28:43 | 5554 | 867.75 |
| 13:28:44 | 5555 | 867.75 |
| 13:28:45 | 5556 | 867.75 |
| 13:28:46 | 5557 | 867.75 |
| 13:28:48 | 5559 | 867.75 |
| 13:28:49 | 5560 | 867.75 |
| 13:28:50 | 5561 | 867.70 |
| 13:28:51 | 5562 | 867.70 |
| 13:28:52 | 5563 | 867.70 |
| 13:28:53 | 5564 | 867.65 |
| 13:28:54 | 5565 | 867.65 |
| 13:28:55 | 5566 | 867.65 |
| 13:28:56 | 5567 | 867.60 |
| 13:28:57 | 5568 | 867.60 |
| 13:28:58 | 5569 | 867.60 |
| 13:28:59 | 5570 | 867.55 |
| 13:29:00 | 5571 | 867.55 |
| 13:29:01 | 5572 | 867.55 |
| 13:29:02 | 5573 | 867.55 |
| 13:29:03 | 5574 | 867.50 |
| 13:29:04 | 5575 | 867.50 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:29:05 | 5576 | 867.50 |
| 13:29:06 | 5577 | 867.45 |
| 13:29:07 | 5578 | 867.45 |
| 13:29:08 | 5579 | 867.45 |
| 13:29:10 | 5581 | 867.40 |
| 13:29:11 | 5582 | 867.40 |
| 13:29:12 | 5583 | 867.40 |
| 13:29:13 | 5584 | 867.35 |
| 13:29:14 | 5585 | 867.35 |
| 13:29:15 | 5586 | 867.35 |
| 13:29:16 | 5587 | 867.35 |
| 13:29:17 | 5588 | 867.30 |
| 13:29:18 | 5589 | 867.30 |
| 13:29:19 | 5590 | 867.30 |
| 13:29:20 | 5591 | 867.25 |
| 13:29:21 | 5592 | 867.25 |
| 13:29:22 | 5593 | 867.25 |
| 13:29:23 | 5594 | 867.20 |
| 13:29:24 | 5595 | 867.20 |
| 13:29:25 | 5596 | 867.20 |
| 13:29:26 | 5597 | 867.15 |
| 13:29:27 | 5598 | 867.15 |
| 13:29:28 | 5599 | 867.15 |
| 13:29:29 | 5600 | 867.10 |
| 13:29:30 | 5601 | 867.10 |
| 13:29:32 | 5603 | 867.10 |
| 13:29:33 | 5604 | 867.05 |
| 13:29:34 | 5605 | 867.05 |
| 13:29:35 | 5606 | 867.00 |
| 13:29:36 | 5607 | 867.00 |
| 13:29:37 | 5608 | 867.00 |
| 13:29:38 | 5609 | 867.00 |
| 13:29:39 | 5610 | 866.95 |
| 13:29:40 | 5611 | 866.95 |
| 13:29:41 | 5612 | 866.95 |
| 13:29:42 | 5613 | 866.90 |
| 13:29:43 | 5614 | 866.90 |
| 13:29:44 | 5615 | 866.90 |
| 13:29:45 | 5616 | 866.90 |
| 13:29:46 | 5617 | 866.85 |
| 13:29:47 | 5618 | 866.85 |
| 13:29:48 | 5619 | 866.80 |
| 13:29:49 | 5620 | 866.80 |
| 13:29:50 | 5621 | 866.80 |
| 13:29:51 | 5622 | 866.80 |
| 13:29:52 | 5623 | 866.75 |
| 13:29:53 | 5624 | 866.75 |
| 13:29:55 | 5626 | 866.70 |
| 13:29:56 | 5627 | 866.70 |
| 13:29:57 | 5628 | 866.70 |
| 13:29:58 | 5629 | 866.65 |
| 13:29:59 | 5630 | 866.65 |
| 13:30:00 | 5631 | 866.65 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:30:01 | 5632 | 866.65 |
| 13:30:02 | 5633 | 866.60 |
| 13:30:03 | 5634 | 866.60 |
| 13:30:04 | 5635 | 866.60 |
| 13:30:05 | 5636 | 866.55 |
| 13:30:06 | 5637 | 866.55 |
| 13:30:07 | 5638 | 866.55 |
| 13:30:08 | 5639 | 866.50 |
| 13:30:09 | 5640 | 866.50 |
| 13:30:10 | 5641 | 866.45 |
| 13:30:11 | 5642 | 866.45 |
| 13:30:12 | 5643 | 866.45 |
| 13:30:13 | 5644 | 866.45 |
| 13:30:14 | 5645 | 866.40 |
| 13:30:15 | 5646 | 866.40 |
| 13:30:17 | 5648 | 866.40 |
| 13:30:18 | 5649 | 866.35 |
| 13:30:19 | 5650 | 866.35 |
| 13:30:20 | 5651 | 866.35 |
| 13:30:21 | 5652 | 866.30 |
| 13:30:22 | 5653 | 866.30 |
| 13:30:23 | 5654 | 866.25 |
| 13:30:24 | 5655 | 866.25 |
| 13:30:25 | 5656 | 866.25 |
| 13:30:26 | 5657 | 866.25 |
| 13:30:27 | 5658 | 866.20 |
| 13:30:28 | 5659 | 866.20 |
| 13:30:29 | 5660 | 866.20 |
| 13:30:30 | 5661 | 866.15 |
| 13:30:31 | 5662 | 866.15 |
| 13:30:32 | 5663 | 866.15 |
| 13:30:33 | 5664 | 866.10 |
| 13:30:34 | 5665 | 866.10 |
| 13:30:35 | 5666 | 866.10 |
| 13:30:36 | 5667 | 866.10 |
| 13:30:37 | 5668 | 866.10 |
| 13:30:38 | 5669 | 866.05 |
| 13:30:40 | 5671 | 866.05 |
| 13:30:41 | 5672 | 866.00 |
| 13:30:42 | 5673 | 866.00 |
| 13:30:43 | 5674 | 865.95 |
| 13:30:44 | 5675 | 865.95 |
| 13:30:45 | 5676 | 865.90 |
| 13:30:46 | 5677 | 865.90 |
| 13:30:47 | 5678 | 865.90 |
| 13:30:48 | 5679 | 865.85 |
| 13:30:49 | 5680 | 865.85 |
| 13:30:50 | 5681 | 865.80 |
| 13:30:51 | 5682 | 865.80 |
| 13:30:52 | 5683 | 865.80 |
| 13:30:53 | 5684 | 865.75 |
| 13:30:54 | 5685 | 865.75 |
| 13:30:55 | 5686 | 865.75 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:30:56 | 5687 | 865.75 |
| 13:30:57 | 5688 | 865.75 |
| 13:30:58 | 5689 | 865.70 |
| 13:30:59 | 5690 | 865.70 |
| 13:31:00 | 5691 | 865.65 |
| 13:31:02 | 5693 | 865.65 |
| 13:31:03 | 5694 | 865.65 |
| 13:31:04 | 5695 | 865.60 |
| 13:31:05 | 5696 | 865.60 |
| 13:31:06 | 5697 | 865.60 |
| 13:31:07 | 5698 | 865.55 |
| 13:31:08 | 5699 | 865.55 |
| 13:31:09 | 5700 | 865.55 |
| 13:31:10 | 5701 | 865.50 |
| 13:31:11 | 5702 | 865.50 |
| 13:31:12 | 5703 | 865.50 |
| 13:31:13 | 5704 | 865.45 |
| 13:31:14 | 5705 | 865.45 |
| 13:31:15 | 5706 | 865.45 |
| 13:31:16 | 5707 | 865.40 |
| 13:31:17 | 5708 | 865.40 |
| 13:31:18 | 5709 | 865.40 |
| 13:31:19 | 5710 | 865.40 |
| 13:31:20 | 5711 | 865.35 |
| 13:31:21 | 5712 | 865.35 |
| 13:31:22 | 5713 | 865.35 |
| 13:31:24 | 5715 | 865.35 |
| 13:31:25 | 5716 | 865.30 |
| 13:31:26 | 5717 | 865.30 |
| 13:31:27 | 5718 | 865.25 |
| 13:31:28 | 5719 | 865.25 |
| 13:31:29 | 5720 | 865.25 |
| 13:31:30 | 5721 | 865.20 |
| 13:31:31 | 5722 | 865.20 |
| 13:31:32 | 5723 | 865.20 |
| 13:31:33 | 5724 | 865.15 |
| 13:31:34 | 5725 | 865.15 |
| 13:31:35 | 5726 | 865.15 |
| 13:31:36 | 5727 | 865.15 |
| 13:31:37 | 5728 | 865.10 |
| 13:31:38 | 5729 | 865.10 |
| 13:31:39 | 5730 | 865.05 |
| 13:31:40 | 5731 | 865.05 |
| 13:31:41 | 5732 | 865.00 |
| 13:31:42 | 5733 | 865.00 |
| 13:31:43 | 5734 | 865.00 |
| 13:31:44 | 5735 | 865.00 |
| 13:31:45 | 5736 | 864.95 |
| 13:31:47 | 5738 | 864.95 |
| 13:31:48 | 5739 | 864.90 |
| 13:31:49 | 5740 | 864.90 |
| 13:31:50 | 5741 | 864.90 |
| 13:31:51 | 5742 | 864.85 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:31:52 | 5743 | 864.85 |
| 13:31:53 | 5744 | 864.85 |
| 13:31:54 | 5745 | 864.80 |
| 13:31:55 | 5746 | 864.80 |
| 13:31:56 | 5747 | 864.80 |
| 13:31:57 | 5748 | 864.75 |
| 13:31:58 | 5749 | 864.75 |
| 13:31:59 | 5750 | 864.75 |
| 13:32:00 | 5751 | 864.70 |
| 13:32:01 | 5752 | 864.70 |
| 13:32:02 | 5753 | 864.70 |
| 13:32:03 | 5754 | 864.65 |
| 13:32:04 | 5755 | 864.65 |
| 13:32:05 | 5756 | 864.60 |
| 13:32:06 | 5757 | 864.60 |
| 13:32:07 | 5758 | 864.60 |
| 13:32:09 | 5760 | 864.55 |
| 13:32:10 | 5761 | 864.55 |
| 13:32:11 | 5762 | 864.55 |
| 13:32:12 | 5763 | 864.50 |
| 13:32:13 | 5764 | 864.50 |
| 13:32:14 | 5765 | 864.50 |
| 13:32:15 | 5766 | 864.45 |
| 13:32:16 | 5767 | 864.45 |
| 13:32:17 | 5768 | 864.45 |
| 13:32:18 | 5769 | 864.40 |
| 13:32:19 | 5770 | 864.40 |
| 13:32:20 | 5771 | 864.40 |
| 13:32:21 | 5772 | 864.40 |
| 13:32:22 | 5773 | 864.35 |
| 13:32:23 | 5774 | 864.35 |
| 13:32:24 | 5775 | 864.35 |
| 13:32:25 | 5776 | 864.30 |
| 13:32:26 | 5777 | 864.30 |
| 13:32:27 | 5778 | 864.30 |
| 13:32:28 | 5779 | 864.25 |
| 13:32:29 | 5780 | 864.25 |
| 13:32:30 | 5781 | 864.25 |
| 13:32:32 | 5783 | 864.20 |
| 13:32:33 | 5784 | 864.20 |
| 13:32:34 | 5785 | 864.20 |
| 13:32:35 | 5786 | 864.15 |
| 13:32:36 | 5787 | 864.15 |
| 13:32:37 | 5788 | 864.15 |
| 13:32:38 | 5789 | 864.10 |
| 13:32:39 | 5790 | 864.10 |
| 13:32:40 | 5791 | 864.10 |
| 13:32:41 | 5792 | 864.05 |
| 13:32:42 | 5793 | 864.05 |
| 13:32:43 | 5794 | 864.05 |
| 13:32:44 | 5795 | 864.05 |
| 13:32:45 | 5796 | 864.00 |
| 13:32:46 | 5797 | 864.00 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:32:47 | 5798 | 863.95 |
| 13:32:48 | 5799 | 863.95 |
| 13:32:49 | 5800 | 863.90 |
| 13:32:50 | 5801 | 863.90 |
| 13:32:51 | 5802 | 863.90 |
| 13:32:52 | 5803 | 863.90 |
| 13:32:54 | 5805 | 863.85 |
| 13:32:55 | 5806 | 863.85 |
| 13:32:56 | 5807 | 863.80 |
| 13:32:57 | 5808 | 863.80 |
| 13:32:58 | 5809 | 863.75 |
| 13:32:59 | 5810 | 863.75 |
| 13:33:00 | 5811 | 863.75 |
| 13:33:01 | 5812 | 863.70 |
| 13:33:02 | 5813 | 863.70 |
| 13:33:03 | 5814 | 863.70 |
| 13:33:04 | 5815 | 863.70 |
| 13:33:05 | 5816 | 863.65 |
| 13:33:06 | 5817 | 863.65 |
| 13:33:07 | 5818 | 863.65 |
| 13:33:08 | 5819 | 863.60 |
| 13:33:09 | 5820 | 863.60 |
| 13:33:10 | 5821 | 863.60 |
| 13:33:11 | 5822 | 863.55 |
| 13:33:12 | 5823 | 863.55 |
| 13:33:13 | 5824 | 863.55 |
| 13:33:14 | 5825 | 863.50 |
| 13:33:15 | 5826 | 863.50 |
| 13:33:17 | 5828 | 863.50 |
| 13:33:18 | 5829 | 863.50 |
| 13:33:19 | 5830 | 863.50 |
| 13:33:20 | 5831 | 863.45 |
| 13:33:21 | 5832 | 863.45 |
| 13:33:22 | 5833 | 863.40 |
| 13:33:23 | 5834 | 863.40 |
| 13:33:24 | 5835 | 863.35 |
| 13:33:25 | 5836 | 863.35 |
| 13:33:26 | 5837 | 863.35 |
| 13:33:27 | 5838 | 863.35 |
| 13:33:28 | 5839 | 863.35 |
| 13:33:29 | 5840 | 863.30 |
| 13:33:30 | 5841 | 863.30 |
| 13:33:31 | 5842 | 863.30 |
| 13:33:32 | 5843 | 863.25 |
| 13:33:33 | 5844 | 863.25 |
| 13:33:34 | 5845 | 863.25 |
| 13:33:35 | 5846 | 863.20 |
| 13:33:36 | 5847 | 863.20 |
| 13:33:37 | 5848 | 863.15 |
| 13:33:39 | 5850 | 863.15 |
| 13:33:40 | 5851 | 863.15 |
| 13:33:41 | 5852 | 863.15 |
| 13:33:42 | 5853 | 863.15 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:33:43 | 5854 | 863.10 |
| 13:33:44 | 5855 | 863.10 |
| 13:33:45 | 5856 | 863.05 |
| 13:33:46 | 5857 | 863.05 |
| 13:33:47 | 5858 | 863.05 |
| 13:33:48 | 5859 | 863.00 |
| 13:33:49 | 5860 | 863.00 |
| 13:33:50 | 5861 | 863.00 |
| 13:33:51 | 5862 | 862.95 |
| 13:33:52 | 5863 | 862.95 |
| 13:33:53 | 5864 | 862.95 |
| 13:33:54 | 5865 | 862.90 |
| 13:33:55 | 5866 | 862.90 |
| 13:33:56 | 5867 | 862.90 |
| 13:33:57 | 5868 | 862.90 |
| 13:33:58 | 5869 | 862.85 |
| 13:33:59 | 5870 | 862.85 |
| 13:34:01 | 5872 | 862.85 |
| 13:34:02 | 5873 | 862.80 |
| 13:34:03 | 5874 | 862.80 |
| 13:34:04 | 5875 | 862.80 |
| 13:34:05 | 5876 | 862.75 |
| 13:34:06 | 5877 | 862.75 |
| 13:34:07 | 5878 | 862.70 |
| 13:34:08 | 5879 | 862.70 |
| 13:34:09 | 5880 | 862.70 |
| 13:34:10 | 5881 | 862.65 |
| 13:34:11 | 5882 | 862.65 |
| 13:34:12 | 5883 | 862.60 |
| 13:34:13 | 5884 | 862.60 |
| 13:34:14 | 5885 | 862.60 |
| 13:34:15 | 5886 | 862.55 |
| 13:34:16 | 5887 | 862.55 |
| 13:34:17 | 5888 | 862.55 |
| 13:34:18 | 5889 | 862.50 |
| 13:34:19 | 5890 | 862.50 |
| 13:34:20 | 5891 | 862.50 |
| 13:34:21 | 5892 | 862.50 |
| 13:34:22 | 5893 | 862.45 |
| 13:34:24 | 5895 | 862.45 |
| 13:34:25 | 5896 | 862.40 |
| 13:34:26 | 5897 | 862.40 |
| 13:34:27 | 5898 | 862.35 |
| 13:34:28 | 5899 | 862.35 |
| 13:34:29 | 5900 | 862.30 |
| 13:34:30 | 5901 | 862.30 |
| 13:34:31 | 5902 | 862.30 |
| 13:34:32 | 5903 | 862.30 |
| 13:34:33 | 5904 | 862.30 |
| 13:34:34 | 5905 | 862.25 |
| 13:34:35 | 5906 | 862.25 |
| 13:34:36 | 5907 | 862.25 |
| 13:34:37 | 5908 | 862.25 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:34:38 | 5909 | 862.20 |
| 13:34:39 | 5910 | 862.20 |
| 13:34:40 | 5911 | 862.20 |
| 13:34:41 | 5912 | 862.15 |
| 13:34:42 | 5913 | 862.15 |
| 13:34:43 | 5914 | 862.15 |
| 13:34:44 | 5915 | 862.10 |
| 13:34:46 | 5917 | 862.10 |
| 13:34:47 | 5918 | 862.10 |
| 13:34:48 | 5919 | 862.10 |
| 13:34:49 | 5920 | 862.05 |
| 13:34:50 | 5921 | 862.05 |
| 13:34:51 | 5922 | 862.05 |
| 13:34:52 | 5923 | 862.00 |
| 13:34:53 | 5924 | 862.00 |
| 13:34:54 | 5925 | 862.00 |
| 13:34:55 | 5926 | 861.95 |
| 13:34:56 | 5927 | 861.95 |
| 13:34:57 | 5928 | 861.90 |
| 13:34:58 | 5929 | 861.90 |
| 13:34:59 | 5930 | 861.90 |
| 13:35:00 | 5931 | 861.85 |
| 13:35:01 | 5932 | 861.85 |
| 13:35:02 | 5933 | 861.80 |
| 13:35:03 | 5934 | 861.80 |
| 13:35:04 | 5935 | 861.80 |
| 13:35:05 | 5936 | 861.75 |
| 13:35:06 | 5937 | 861.75 |
| 13:35:07 | 5938 | 861.70 |
| 13:35:09 | 5940 | 861.70 |
| 13:35:10 | 5941 | 861.70 |
| 13:35:11 | 5942 | 861.65 |
| 13:35:12 | 5943 | 861.65 |
| 13:35:13 | 5944 | 861.65 |
| 13:35:14 | 5945 | 861.60 |
| 13:35:15 | 5946 | 861.60 |
| 13:35:16 | 5947 | 861.60 |
| 13:35:17 | 5948 | 861.55 |
| 13:35:18 | 5949 | 861.55 |
| 13:35:19 | 5950 | 861.55 |
| 13:35:20 | 5951 | 861.50 |
| 13:35:21 | 5952 | 861.50 |
| 13:35:22 | 5953 | 861.45 |
| 13:35:23 | 5954 | 861.45 |
| 13:35:24 | 5955 | 861.45 |
| 13:35:25 | 5956 | 861.45 |
| 13:35:26 | 5957 | 861.45 |
| 13:35:27 | 5958 | 861.40 |
| 13:35:28 | 5959 | 861.40 |
| 13:35:29 | 5960 | 861.35 |
| 13:35:31 | 5962 | 861.35 |
| 13:35:32 | 5963 | 861.35 |
| 13:35:33 | 5964 | 861.30 |

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Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:35:34 | 5965 | 861.30 |
| 13:35:35 | 5966 | 861.30 |
| 13:35:36 | 5967 | 861.25 |
| 13:35:37 | 5968 | 861.25 |
| 13:35:38 | 5969 | 861.25 |
| 13:35:39 | 5970 | 861.25 |
| 13:35:40 | 5971 | 861.20 |
| 13:35:41 | 5972 | 861.20 |
| 13:35:42 | 5973 | 861.20 |
| 13:35:43 | 5974 | 861.15 |
| 13:35:44 | 5975 | 861.15 |
| 13:35:45 | 5976 | 861.15 |
| 13:35:46 | 5977 | 861.10 |
| 13:35:47 | 5978 | 861.10 |
| 13:35:48 | 5979 | 861.10 |
| 13:35:49 | 5980 | 861.05 |
| 13:35:50 | 5981 | 861.05 |
| 13:35:51 | 5982 | 861.05 |
| 13:35:53 | 5984 | 861.00 |
| 13:35:54 | 5985 | 861.00 |
| 13:35:55 | 5986 | 861.00 |
| 13:35:56 | 5987 | 860.95 |
| 13:35:57 | 5988 | 860.95 |
| 13:35:58 | 5989 | 860.95 |
| 13:35:59 | 5990 | 860.90 |
| 13:36:00 | 5991 | 860.90 |
| 13:36:01 | 5992 | 860.90 |
| 13:36:02 | 5993 | 860.85 |
| 13:36:03 | 5994 | 860.85 |
| 13:36:04 | 5995 | 860.80 |
| 13:36:05 | 5996 | 860.80 |
| 13:36:06 | 5997 | 860.75 |
| 13:36:07 | 5998 | 860.75 |
| 13:36:08 | 5999 | 860.75 |
| 13:36:09 | 6000 | 860.75 |
| 13:36:10 | 6001 | 860.70 |
| 13:36:11 | 6002 | 860.70 |
| 13:36:12 | 6003 | 860.70 |
| 13:36:13 | 6004 | 860.65 |
| 13:36:14 | 6005 | 860.65 |
| 13:36:16 | 6007 | 860.60 |
| 13:36:17 | 6008 | 860.60 |
| 13:36:18 | 6009 | 860.60 |
| 13:36:19 | 6010 | 860.55 |
| 13:36:20 | 6011 | 860.55 |
| 13:36:21 | 6012 | 860.55 |
| 13:36:22 | 6013 | 860.55 |
| 13:36:23 | 6014 | 860.50 |
| 13:36:24 | 6015 | 860.50 |
| 13:36:25 | 6016 | 860.45 |
| 13:36:26 | 6017 | 860.45 |
| 13:36:27 | 6018 | 860.45 |
| 13:36:28 | 6019 | 860.45 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:36:29 | 6020 | 860.40 |
| 13:36:30 | 6021 | 860.40 |
| 13:36:31 | 6022 | 860.40 |
| 13:36:32 | 6023 | 860.35 |
| 13:36:33 | 6024 | 860.35 |
| 13:36:34 | 6025 | 860.35 |
| 13:36:35 | 6026 | 860.30 |
| 13:36:36 | 6027 | 860.30 |
| 13:36:38 | 6029 | 860.30 |
| 13:36:39 | 6030 | 860.25 |
| 13:36:40 | 6031 | 860.25 |
| 13:36:41 | 6032 | 860.25 |
| 13:36:42 | 6033 | 860.20 |
| 13:36:43 | 6034 | 860.15 |
| 13:36:44 | 6035 | 860.15 |
| 13:36:45 | 6036 | 860.15 |
| 13:36:46 | 6037 | 860.15 |
| 13:36:47 | 6038 | 860.10 |
| 13:36:48 | 6039 | 860.10 |
| 13:36:49 | 6040 | 860.10 |
| 13:36:50 | 6041 | 860.05 |
| 13:36:51 | 6042 | 860.05 |
| 13:36:52 | 6043 | 860.05 |
| 13:36:53 | 6044 | 860.00 |
| 13:36:54 | 6045 | 860.00 |
| 13:36:55 | 6046 | 860.00 |
| 13:36:56 | 6047 | 859.95 |
| 13:36:57 | 6048 | 859.95 |
| 13:36:58 | 6049 | 859.95 |
| 13:37:00 | 6051 | 859.95 |
| 13:37:01 | 6052 | 859.90 |
| 13:37:02 | 6053 | 859.90 |
| 13:37:03 | 6054 | 859.90 |
| 13:37:04 | 6055 | 859.85 |
| 13:37:05 | 6056 | 859.85 |
| 13:37:06 | 6057 | 859.85 |
| 13:37:07 | 6058 | 859.80 |
| 13:37:08 | 6059 | 859.80 |
| 13:37:09 | 6060 | 859.75 |
| 13:37:10 | 6061 | 859.75 |
| 13:37:11 | 6062 | 859.70 |
| 13:37:12 | 6063 | 859.70 |
| 13:37:13 | 6064 | 859.70 |
| 13:37:14 | 6065 | 859.65 |
| 13:37:15 | 6066 | 859.65 |
| 13:37:16 | 6067 | 859.65 |
| 13:37:17 | 6068 | 859.60 |
| 13:37:18 | 6069 | 859.60 |
| 13:37:19 | 6070 | 859.60 |
| 13:37:20 | 6071 | 859.60 |
| 13:37:21 | 6072 | 859.55 |
| 13:37:23 | 6074 | 859.55 |
| 13:37:24 | 6075 | 859.55 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:37:25 | 6076 | 859.55 |
| 13:37:26 | 6077 | 859.50 |
| 13:37:27 | 6078 | 859.50 |
| 13:37:28 | 6079 | 859.50 |
| 13:37:29 | 6080 | 859.50 |
| 13:37:30 | 6081 | 859.45 |
| 13:37:31 | 6082 | 859.45 |
| 13:37:32 | 6083 | 859.45 |
| 13:37:33 | 6084 | 859.40 |
| 13:37:34 | 6085 | 859.40 |
| 13:37:35 | 6086 | 859.40 |
| 13:37:36 | 6087 | 859.40 |
| 13:37:37 | 6088 | 859.35 |
| 13:37:38 | 6089 | 859.35 |
| 13:37:39 | 6090 | 859.30 |
| 13:37:40 | 6091 | 859.30 |
| 13:37:41 | 6092 | 859.25 |
| 13:37:42 | 6093 | 859.25 |
| 13:37:43 | 6094 | 859.25 |
| 13:37:45 | 6096 | 859.20 |
| 13:37:46 | 6097 | 859.20 |
| 13:37:47 | 6098 | 859.20 |
| 13:37:48 | 6099 | 859.20 |
| 13:37:49 | 6100 | 859.15 |
| 13:37:50 | 6101 | 859.15 |
| 13:37:51 | 6102 | 859.15 |
| 13:37:52 | 6103 | 859.10 |
| 13:37:53 | 6104 | 859.10 |
| 13:37:54 | 6105 | 859.10 |
| 13:37:55 | 6106 | 859.05 |
| 13:37:56 | 6107 | 859.05 |
| 13:37:57 | 6108 | 859.05 |
| 13:37:58 | 6109 | 859.00 |
| 13:37:59 | 6110 | 859.00 |
| 13:38:00 | 6111 | 859.00 |
| 13:38:01 | 6112 | 858.95 |
| 13:38:02 | 6113 | 858.95 |
| 13:38:03 | 6114 | 858.95 |
| 13:38:04 | 6115 | 858.90 |
| 13:38:05 | 6116 | 858.90 |
| 13:38:06 | 6117 | 858.90 |
| 13:38:08 | 6119 | 858.85 |
| 13:38:09 | 6120 | 858.85 |
| 13:38:10 | 6121 | 858.85 |
| 13:38:11 | 6122 | 858.80 |
| 13:38:12 | 6123 | 858.80 |
| 13:38:13 | 6124 | 858.80 |
| 13:38:14 | 6125 | 858.75 |
| 13:38:15 | 6126 | 858.75 |
| 13:38:16 | 6127 | 858.70 |
| 13:38:17 | 6128 | 858.70 |
| 13:38:18 | 6129 | 858.70 |
| 13:38:19 | 6130 | 858.65 |

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Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:38:20 | 6131 | 858.65 |
| 13:38:21 | 6132 | 858.65 |
| 13:38:22 | 6133 | 858.60 |
| 13:38:23 | 6134 | 858.60 |
| 13:38:24 | 6135 | 858.60 |
| 13:38:25 | 6136 | 858.55 |
| 13:38:26 | 6137 | 858.55 |
| 13:38:27 | 6138 | 858.55 |
| 13:38:28 | 6139 | 858.50 |
| 13:38:30 | 6141 | 858.50 |
| 13:38:31 | 6142 | 858.45 |
| 13:38:32 | 6143 | 858.45 |
| 13:38:33 | 6144 | 858.45 |
| 13:38:34 | 6145 | 858.45 |
| 13:38:35 | 6146 | 858.40 |
| 13:38:36 | 6147 | 858.40 |
| 13:38:37 | 6148 | 858.40 |
| 13:38:38 | 6149 | 858.35 |
| 13:38:39 | 6150 | 858.35 |
| 13:38:40 | 6151 | 858.30 |
| 13:38:41 | 6152 | 858.30 |
| 13:38:42 | 6153 | 858.30 |
| 13:38:43 | 6154 | 858.30 |
| 13:38:44 | 6155 | 858.25 |
| 13:38:45 | 6156 | 858.25 |
| 13:38:46 | 6157 | 858.25 |
| 13:38:47 | 6158 | 858.25 |
| 13:38:48 | 6159 | 858.20 |
| 13:38:49 | 6160 | 858.20 |
| 13:38:50 | 6161 | 858.15 |
| 13:38:51 | 6162 | 858.15 |
| 13:38:53 | 6164 | 858.15 |
| 13:38:54 | 6165 | 858.15 |
| 13:38:55 | 6166 | 858.10 |
| 13:38:56 | 6167 | 858.10 |
| 13:38:57 | 6168 | 858.05 |
| 13:38:58 | 6169 | 858.05 |
| 13:38:59 | 6170 | 858.05 |
| 13:39:00 | 6171 | 858.00 |
| 13:39:01 | 6172 | 858.00 |
| 13:39:02 | 6173 | 857.95 |
| 13:39:03 | 6174 | 857.95 |
| 13:39:04 | 6175 | 857.95 |
| 13:39:05 | 6176 | 857.90 |
| 13:39:06 | 6177 | 857.90 |
| 13:39:07 | 6178 | 857.90 |
| 13:39:08 | 6179 | 857.85 |
| 13:39:09 | 6180 | 857.85 |
| 13:39:10 | 6181 | 857.85 |
| 13:39:11 | 6182 | 857.80 |
| 13:39:12 | 6183 | 857.80 |
| 13:39:13 | 6184 | 857.80 |
| 13:39:15 | 6186 | 857.80 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:39:16 | 6187 | 857.75 |
| 13:39:17 | 6188 | 857.75 |
| 13:39:18 | 6189 | 857.75 |
| 13:39:19 | 6190 | 857.75 |
| 13:39:20 | 6191 | 857.70 |
| 13:39:21 | 6192 | 857.70 |
| 13:39:22 | 6193 | 857.65 |
| 13:39:23 | 6194 | 857.65 |
| 13:39:24 | 6195 | 857.65 |
| 13:39:25 | 6196 | 857.60 |
| 13:39:26 | 6197 | 857.60 |
| 13:39:27 | 6198 | 857.60 |
| 13:39:28 | 6199 | 857.60 |
| 13:39:29 | 6200 | 857.55 |
| 13:39:30 | 6201 | 857.55 |
| 13:39:31 | 6202 | 857.55 |
| 13:39:32 | 6203 | 857.50 |
| 13:39:33 | 6204 | 857.50 |
| 13:39:34 | 6205 | 857.45 |
| 13:39:35 | 6206 | 857.45 |
| 13:39:37 | 6208 | 857.40 |
| 13:39:38 | 6209 | 857.40 |
| 13:39:39 | 6210 | 857.40 |
| 13:39:40 | 6211 | 857.35 |
| 13:39:41 | 6212 | 857.35 |
| 13:39:42 | 6213 | 857.35 |
| 13:39:43 | 6214 | 857.35 |
| 13:39:44 | 6215 | 857.30 |
| 13:39:45 | 6216 | 857.30 |
| 13:39:46 | 6217 | 857.30 |
| 13:39:47 | 6218 | 857.30 |
| 13:39:48 | 6219 | 857.25 |
| 13:39:49 | 6220 | 857.25 |
| 13:39:50 | 6221 | 857.20 |
| 13:39:51 | 6222 | 857.20 |
| 13:39:52 | 6223 | 857.20 |
| 13:39:53 | 6224 | 857.20 |
| 13:39:54 | 6225 | 857.15 |
| 13:39:55 | 6226 | 857.15 |
| 13:39:56 | 6227 | 857.15 |
| 13:39:57 | 6228 | 857.10 |
| 13:39:58 | 6229 | 857.10 |
| 13:40:00 | 6231 | 857.10 |
| 13:40:01 | 6232 | 857.05 |
| 13:40:02 | 6233 | 857.05 |
| 13:40:03 | 6234 | 857.05 |
| 13:40:04 | 6235 | 857.00 |
| 13:40:05 | 6236 | 857.00 |
| 13:40:06 | 6237 | 856.95 |
| 13:40:07 | 6238 | 856.95 |
| 13:40:08 | 6239 | 856.90 |
| 13:40:09 | 6240 | 856.90 |
| 13:40:10 | 6241 | 856.90 |

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Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:40:11 | 6242 | 856.90 |
| 13:40:12 | 6243 | 856.85 |
| 13:40:13 | 6244 | 856.85 |
| 13:40:14 | 6245 | 856.85 |
| 13:40:15 | 6246 | 856.85 |
| 13:40:16 | 6247 | 856.85 |
| 13:40:17 | 6248 | 856.80 |
| 13:40:18 | 6249 | 856.80 |
| 13:40:19 | 6250 | 856.75 |
| 13:40:20 | 6251 | 856.75 |
| 13:40:22 | 6253 | 856.75 |
| 13:40:23 | 6254 | 856.75 |
| 13:40:24 | 6255 | 856.70 |
| 13:40:25 | 6256 | 856.70 |
| 13:40:26 | 6257 | 856.65 |
| 13:40:27 | 6258 | 856.65 |
| 13:40:28 | 6259 | 856.65 |
| 13:40:29 | 6260 | 856.60 |
| 13:40:30 | 6261 | 856.60 |
| 13:40:31 | 6262 | 856.60 |
| 13:40:32 | 6263 | 856.55 |
| 13:40:33 | 6264 | 856.55 |
| 13:40:34 | 6265 | 856.55 |
| 13:40:35 | 6266 | 856.50 |
| 13:40:36 | 6267 | 856.50 |
| 13:40:37 | 6268 | 856.45 |
| 13:40:38 | 6269 | 856.45 |
| 13:40:39 | 6270 | 856.45 |
| 13:40:40 | 6271 | 856.40 |
| 13:40:41 | 6272 | 856.40 |
| 13:40:42 | 6273 | 856.40 |
| 13:40:43 | 6274 | 856.35 |
| 13:40:45 | 6276 | 856.35 |
| 13:40:46 | 6277 | 856.30 |
| 13:40:47 | 6278 | 856.30 |
| 13:40:48 | 6279 | 856.30 |
| 13:40:49 | 6280 | 856.25 |
| 13:40:50 | 6281 | 856.25 |
| 13:40:51 | 6282 | 856.25 |
| 13:40:52 | 6283 | 856.25 |
| 13:40:53 | 6284 | 856.20 |
| 13:40:54 | 6285 | 856.20 |
| 13:40:55 | 6286 | 856.20 |
| 13:40:56 | 6287 | 856.20 |
| 13:40:57 | 6288 | 856.15 |
| 13:40:58 | 6289 | 856.15 |
| 13:40:59 | 6290 | 856.15 |
| 13:41:00 | 6291 | 856.10 |
| 13:41:01 | 6292 | 856.10 |
| 13:41:02 | 6293 | 856.10 |
| 13:41:03 | 6294 | 856.10 |
| 13:41:04 | 6295 | 856.05 |
| 13:41:05 | 6296 | 856.05 |

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Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:41:07 | 6298 | 856.00 |
| 13:41:08 | 6299 | 856.00 |
| 13:41:09 | 6300 | 856.00 |
| 13:41:10 | 6301 | 855.95 |
| 13:41:11 | 6302 | 855.95 |
| 13:41:12 | 6303 | 855.90 |
| 13:41:13 | 6304 | 855.90 |
| 13:41:14 | 6305 | 855.90 |
| 13:41:15 | 6306 | 855.85 |
| 13:41:16 | 6307 | 855.85 |
| 13:41:17 | 6308 | 855.85 |
| 13:41:18 | 6309 | 855.80 |
| 13:41:19 | 6310 | 855.80 |
| 13:41:20 | 6311 | 855.80 |
| 13:41:21 | 6312 | 855.75 |
| 13:41:22 | 6313 | 855.75 |
| 13:41:23 | 6314 | 855.75 |
| 13:41:24 | 6315 | 855.75 |
| 13:41:25 | 6316 | 855.70 |
| 13:41:26 | 6317 | 855.70 |
| 13:41:27 | 6318 | 855.70 |
| 13:41:29 | 6320 | 855.65 |
| 13:41:30 | 6321 | 855.65 |
| 13:41:31 | 6322 | 855.60 |
| 13:41:32 | 6323 | 855.60 |
| 13:41:33 | 6324 | 855.60 |
| 13:41:34 | 6325 | 855.55 |
| 13:41:35 | 6326 | 855.55 |
| 13:41:36 | 6327 | 855.55 |
| 13:41:37 | 6328 | 855.50 |
| 13:41:38 | 6329 | 855.50 |
| 13:41:39 | 6330 | 855.45 |
| 13:41:40 | 6331 | 855.45 |
| 13:41:41 | 6332 | 855.45 |
| 13:41:42 | 6333 | 855.45 |
| 13:41:43 | 6334 | 855.50 |
| 13:41:44 | 6335 | 855.50 |
| 13:41:45 | 6336 | 855.50 |
| 13:41:46 | 6337 | 855.45 |
| 13:41:47 | 6338 | 855.45 |
| 13:41:48 | 6339 | 855.45 |
| 13:41:49 | 6340 | 855.50 |
| 13:41:50 | 6341 | 855.50 |
| 13:41:52 | 6343 | 855.50 |
| 13:41:53 | 6344 | 855.50 |
| 13:41:54 | 6345 | 855.50 |
| 13:41:55 | 6346 | 855.50 |
| 13:41:56 | 6347 | 855.45 |
| 13:41:57 | 6348 | 855.50 |
| 13:41:58 | 6349 | 855.50 |
| 13:41:59 | 6350 | 855.50 |
| 13:42:00 | 6351 | 855.50 |
| 13:42:01 | 6352 | 855.50 |

NRC-COND-07

Nitrogen Precision Scale Data

| Timestamp | Time (sec) | Weight (lbm.) |
|-----------|---------------|------------------|
| 13:42:02 | 6353 | 855.50 |
| 13:42:03 | 6354 | 855.45 |
| 13:42:04 | 6355 | 855.50 |
| 13:42:05 | 6356 | 855.50 |
| 13:42:06 | 6357 | 855.50 |
| 13:42:07 | 6358 | 855.50 |
| 13:42:08 | 6359 | 855.45 |
| 13:42:09 | 6360 | 855.45 |
| 13:42:10 | 6361 | 855.50 |
| 13:42:11 | 6362 | 855.50 |
| 13:42:12 | 6363 | 855.50 |
| 13:42:14 | 6365 | 855.50 |
| 13:42:15 | 6366 | 855.50 |
| 13:42:16 | 6367 | 855.50 |
| 13:42:17 | 6368 | 855.50 |
| 13:42:18 | 6369 | 855.50 |
| 13:42:19 | 6370 | 855.50 |
| 13:42:20 | 6371 | 855.50 |
| 13:42:21 | 6372 | 855.50 |
| 13:42:22 | 6373 | 855.50 |
| 13:42:23 | 6374 | 855.50 |
| 13:42:24 | 6375 | 855.50 |
| 13:42:25 | 6376 | 855.50 |
| 13:42:26 | 6377 | 855.50 |
| 13:42:27 | 6378 | 855.50 |
| 13:42:28 | 6379 | 855.50 |
| 13:42:29 | 6380 | 855.50 |
| 13:42:30 | 6381 | 855.50 |
| 13:42:31 | 6382 | 855.50 |
| 13:42:32 | 6383 | 855.50 |
| 13:42:33 | 6384 | 855.50 |
| 13:42:34 | 6385 | 855.50 |

NRC-COND-07: Steam Generator U-Tube Condensation Test @ 300 psig w/ 2.5% Nitrogen

Oregon State University

Start time = 05/10/2007 11:55:59

End time = 05/10/2007 13:42:29

File created on 05/10/2007 14:07:10

| Timestamp | Interval (sec) | Tagname | Description | Area | Value |
|-----------------|----------------|----------------|-------------------------------|----------|---------|
| 5/10/2007 11:53 | -119 | TEST_SW | Facility Test Switch | Switches | In Test |
| 5/10/2007 11:53 | -119 | dMuteSCR_Alarm | SCR Signal loss audible alarm | Status | ON |
| 5/10/2007 12:00 | 292 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 12:03 | 459 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 12:10 | 850 | M001_HS_O | SG-1 Strm Stop HS | Switches | Open |
| 5/10/2007 12:10 | 850 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 5/10/2007 12:11 | 945 | M001_HS_O | SG-1 Strm Stop HS | Switches | Close |
| 5/10/2007 12:11 | 946 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 5/10/2007 12:13 | 1035 | M001_HS_O | SG-1 Strm Stop HS | Switches | Open |
| 5/10/2007 12:13 | 1035 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 5/10/2007 12:21 | 1527 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 12:25 | 1753 | M001_HS_O | SG-1 Strm Stop HS | Switches | Close |
| 5/10/2007 12:25 | 1753 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 5/10/2007 12:26 | 1820 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 12:27 | 1863 | dMuteSCR_Alarm | SCR Signal loss audible alarm | Status | OFF |
| 5/10/2007 12:27 | 1909 | CVSP_HS_R | CVS Pump HS | Switches | Run |
| 5/10/2007 12:27 | 1909 | CVSP_X | CVS Pump | Pumps | Running |
| 5/10/2007 12:29 | 2028 | MFP_HS_R | Main Feed Pump HS | Switches | Off |
| 5/10/2007 12:29 | 2028 | MFP_X | Main Feed Pump | Pumps | Off |
| 5/10/2007 12:31 | 2125 | CVSP_HS_R | CVS Pump HS | Switches | Off |
| 5/10/2007 12:31 | 2125 | CVSP_X | CVS Pump | Pumps | Off |
| 5/10/2007 12:37 | 2469 | MFP_HS_R | Main Feed Pump HS | Switches | Run |
| 5/10/2007 12:37 | 2469 | MFP_X | Main Feed Pump | Pumps | Running |
| 5/10/2007 12:41 | 2706 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 12:43 | 2860 | M001_HS_O | SG-1 Strm Stop HS | Switches | Open |
| 5/10/2007 12:43 | 2860 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 5/10/2007 12:43 | 2869 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 12:51 | 3355 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 12:55 | 3600 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 13:03 | 4042 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 13:04 | 4090 | M001_HS_O | SG-1 Strm Stop HS | Switches | Close |
| 5/10/2007 13:04 | 4090 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 5/10/2007 13:08 | 4336 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 13:17 | 4871 | M001_HS_O | SG-1 Strm Stop HS | Switches | Open |
| 5/10/2007 13:17 | 4871 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 5/10/2007 13:24 | 5305 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 13:28 | 5552 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 13:36 | 6015 | MF_001 | FST Fill Valve | Valves | Open |
| 5/10/2007 13:40 | 6258 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/10/2007 13:41 | 6331 | M001_HS_O | SG-1 Strm Stop HS | Switches | Close |
| 5/10/2007 13:41 | 6331 | M001_STAT | SG-1 Steam Stop | Valves | Closed |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|--------------------------------|
| DP-111 | DP across Upper Core Plate | 4.9931 | 0.9963 | 30 | -30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 4.9796 | 0.9934 | 375 | -375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 4.9563 | 0.989 | 25 | -25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 4.9591 | 0.9931 | 25 | -25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 4.9743 | 0.9957 | 25 | -25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 4.9561 | 0.9924 | 25 | -25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 4.97 | 0.9951 | 30 | 0 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 4.9707 | 0.9949 | 30 | 0 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 4.9709 | 0.9959 | 25 | -25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 4.9736 | 0.9958 | 25 | -25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 4.9622 | 0.9941 | 50 | -50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 4.9689 | 0.9939 | 25 | -25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 4.9588 | 0.9916 | 200 | 0 | Differential Pressure (in h2o) |
| DP-203 | RCP-1 Differential Pressure | 4.9692 | 0.9946 | 27 | 0 | Differential Pressure (psid) |
| DP-204 | CL-2 Differential Pressure | 4.9814 | 0.9969 | 25 | -25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 4.978 | 0.995 | 200 | 0 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 4.984 | 0.9959 | 200 | 0 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 4.9817 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 4.9905 | 0.9984 | 25 | -25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 4.9858 | 0.998 | 25 | -25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 4.9649 | 0.9933 | 25 | -25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 4.9849 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 4.9838 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 4.9788 | 0.9965 | 15 | -15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 4.981 | 0.9973 | 15 | 0 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 4.9807 | 0.9981 | 500 | 0 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 4.9729 | 0.9964 | 500 | 0 | Differential Pressure (psid) |
| DP-217 | HL-1 to CL1 Differential Pressure at SG1 | 4.9835 | 0.9981 | 46.83 | 0 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 4.9889 | 0.9992 | 150 | 0 | Differential Pressure (in h2o) |
| DP-219 | HL-1 to CL3 Differential Pressure at SG1 | 4.9686 | 0.9949 | 30.95 | 0 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 4.9627 | 0.9936 | 150 | 0 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 4.9677 | 0.9951 | 150 | 0 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 4.983 | 0.9975 | 150 | 0 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 4.9915 | 0.9987 | 150 | 0 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 4.9665 | 0.9944 | 150 | 0 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 4.979 | 0.9975 | 400 | 0 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 4.9736 | 0.9958 | 400 | 0 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 4.9675 | 0.9948 | 150 | -150 | Differential Pressure (in h2o) |
| DP-502 | CMT-2 Injection Differential Pressure | 4.9645 | 0.9947 | 150 | -150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 4.9858 | 0.998 | 150 | -150 | Differential Pressure (in h2o) |
| DP-504 | CMT-2 Balance Line Differential Pressure | 4.9955 | 1.0007 | 100 | -100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 4.9969 | 1.0008 | 10 | 0 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 4.967 | 0.9948 | 10 | 0 | Differential Pressure (psid) |
| DP-603 | ADS4-1 Venturi | 4.9847 | 0.9985 | 100 | 0 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 4.964 | 0.9941 | 100 | 0 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 4.9881 | 0.9993 | 50 | 0 | Differential Pressure (in h2o) |
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 4.9857 | 0.9991 | 50 | 0 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 4.9773 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-701 | IRWST-1 Injection Differential Pressure | 4.9872 | 0.9982 | 30 | 0 | Differential Pressure (psid) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|-------------------|-------------------|-------------------|-------------------|------------------------------|
| DP-702 | IRWST-2 Injection Differential Pressure | 4.9871 | 0.9981 | 30 | 0 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 4.9905 | 0.9994 | 100 | 0 | Differential Pressure (psid) |
| DP-604 | ADS-2 Flow Differential Pressure | 4.9738 | 0.9961 | 100 | 0 | Differential Pressure (psid) |
| DP-605 | ADS-1 Flow Differential Pressure | 4.9896 | 0.9993 | 250 | 0 | Differential Pressure (psid) |
| DP-606 | ADS-3 Flow Differential Pressure | 5.0051 | 1.0023 | 100 | 0 | Differential Pressure (psid) |
| MM-001 | SG-1 Feed Flow | 4.9838 | 0.9961 | 6 | 0 | Volumetric Flow Rate (gpm) |
| MM-002 | SG-2 Feed Flow | 4.9642 | 0.9925 | 6 | 0 | Volumetric Flow Rate (gpm) |
| MM-201 | CL-1 Loop Flow | 4.9607 | 0.9921 | 100 | -100 | Volumetric Flow Rate (gpm) |
| MM-202 | CL-2 Loop Flow | 4.9754 | 0.9943 | 100 | -100 | Volumetric Flow Rate (gpm) |
| MM-203 | CL-3 Loop Flow | 4.9853 | 0.9974 | 100 | -100 | Volumetric Flow Rate (gpm) |
| MM-204 | CL-4 Loop Flow | 4.9729 | 0.9936 | 100 | -100 | Volumetric Flow Rate (gpm) |
| MM-205 | DVI-1 Flow | 4.9706 | 0.996 | 75 | 0 | Volumetric Flow Rate (gpm) |
| MM-206 | DVI-2 Flow | 4.9767 | 0.9969 | 75 | 0 | Volumetric Flow Rate (gpm) |
| MM-401 | ACC-1 Injection Flow | 4.9516 | 0.9932 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-402 | ACC-2 Injection Flow | 4.9772 | 0.9965 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-501 | CMT-1 Injection Flow | 4.9959 | 1.0006 | 75 | 0 | Volumetric Flow Rate (gpm) |
| MM-502 | CMT-2 CL Balance Line Flow | 4.9742 | 0.9994 | 70 | 0 | Volumetric Flow Rate (gpm) |
| MM-503 | CMT-1 CL Balance Line Flow | 4.9717 | 0.9985 | 75 | 0 | Volumetric Flow Rate (gpm) |
| MM-504 | CMT-2 Injection Flow | 4.9523 | 0.9925 | 20 | 0 | Volumetric Flow Rate (gpm) |
| MM-601 | ADS1-3 Loop Seal Flow | 5.0168 | 1.004 | 200 | 0 | Volumetric Flow Rate (gpm) |
| MM-602 | ADS4-2 Loop Seal Flow | 5.0507 | 1.0117 | 60 | 0 | Volumetric Flow Rate (gpm) |
| MM-603 | ADS4-1 Loop Seal Flow | 5.0571 | 1.0129 | 60 | 0 | Volumetric Flow Rate (gpm) |
| MM-701 | IRWST/DVI-1 Injection Flow | 4.9738 | 0.9954 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-702 | IRWST/DVI-2 Injection Flow | 4.9724 | 0.9955 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-703 | IRWST Overflow | 4.9663 | 0.9966 | 10 | 0 | Volumetric Flow Rate (gpm) |
| MM-801 | CVSP Discharge Flow | 4.9876 | 0.9998 | 8 | 0 | Volumetric Flow Rate (gpm) |
| MM-802 | PRHR Inlet Flow | 4.9656 | 0.9966 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-803 | RNSP to DVI-2 Flow | 4.9629 | 0.9942 | 30 | 0 | Volumetric Flow Rate (gpm) |
| MM-804 | PRHR Outlet Flow | 4.9612 | 0.9963 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-805 | RNSP Discharge Flow | 4.9711 | 0.9936 | 40 | 0 | Volumetric Flow Rate (gpm) |
| MM-901 | Primary Sump-1 Recirculation Injection Flow | 4.9673 | 0.9936 | 40 | -40 | Volumetric Flow Rate (gpm) |
| MM-902 | Primary Sump-2 Recirculation Injection Flow | 4.9726 | 0.9948 | 40 | -40 | Volumetric Flow Rate (gpm) |
| MM-905 | Break Separator Loop Seal Flow | 5.1224 | 1.0902 | 90 | -90 | Volumetric Flow Rate (gpm) |
| VM-001 | SG-1 Main Steam Flow | 5.0223 | 1.005 | 200 | 0 | Steam Flow Rate (cfm) |
| VM-002 | SG-2 Main Steam Flow | 4.9878 | 0.9982 | 200 | 0 | Steam Flow Rate (cfm) |
| VM-003 | Main Steam Total Flow | 4.9815 | 0.9978 | 70 | 0 | Steam Flow Rate (cfm) |
| VM-009 | SG-1 PORV Blowdown Steam Flow | 4.9836 | 0.9967 | 381 | 0 | Steam Flow Rate (cfm) |
| VM-010 | SG-2 PORV Blowdown Steam Flow | 4.9817 | 0.9971 | 381 | 0 | Steam Flow Rate (cfm) |
| VM-601 | ADS1-3 Separator Steam Flow | 4.9995 | 1.0017 | 2000 | 0 | Steam Flow Rate (cfm) |
| VM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 5.006 | 1.0018 | 2000 | 0 | Steam Flow Rate (cfm) |
| VM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 5.0062 | 1.0024 | 1600 | 0 | Steam Flow Rate (cfm) |
| VM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 5.0034 | 1.0026 | 348 | 0 | Steam Flow Rate (cfm) |
| VM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 5.0037 | 1.0028 | 348 | 0 | Steam Flow Rate (cfm) |
| VM-901 | BAMS HDR 6-inch Line Steam Flow | 5.0021 | 1.0023 | 5000 | 0 | Steam Flow Rate (cfm) |
| VM-902 | BAMS HDR 10-inch Line Steam Flow | 5.01 | 1.0027 | 12500 | 0 | Steam Flow Rate (cfm) |
| VM-903 | Primary Sump Steam Exhaust Flow | 4.9879 | 0.9949 | 22 | 0 | Steam Flow Rate (cfm) |
| VM-904 | Break Separator 3-inch Line Steam Flow | 4.9986 | 0.9979 | 400 | 0 | Steam Flow Rate (cfm) |
| VM-905 | Break Separator 6-inch Line Steam Flow | 5.0036 | 1.004 | 6000 | 0 | Steam Flow Rate (cfm) |
| VM-906 | Break Separator 8-inch Line Steam Flow | 5.0048 | 1.0025 | 4000 | 0 | Steam Flow Rate (cfm) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|------------|---|-------------------|-------------------|-------------------|-------------------|------------------|
| -IPS-201-1 | CL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-201-2 | CL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-201-3 | CL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-202-1 | CL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-202-2 | CL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-202-3 | CL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-203-1 | CL-3 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-203-2 | CL-3 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-203-3 | CL-3 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-204-1 | CL-4 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-204-2 | CL-4 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-204-3 | CL-4 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-205-1 | HL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-205-2 | HL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-205-3 | HL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-206-1 | HL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-206-2 | HL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-206-3 | HL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-509-1 | CMT-1 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-509-2 | CMT-1 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-509-3 | CMT-1 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-512-1 | CMT-2 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-512-2 | CMT-2 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-512-3 | CMT-2 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-604-1 | Lower PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-604-2 | Lower PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-604-3 | Lower PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-606-1 | ADS1-3 Common Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-606-2 | ADS1-3 Common Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-606-3 | ADS1-3 Common Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-607-1 | Upper PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-607-2 | Upper PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-607-3 | Upper PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-801-1 | PRHR HX Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-801-2 | PRHR HX Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| -IPS-801-3 | PRHR HX Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| W-101 | Rx Heater Group 1 Power | 4.3222 | 1.1171 | 472 | 0 | Power (kW) |
| W-102 | Rx Heater Group 2 Power | 4.1621 | 1.0045 | 486 | 0 | Power (kW) |
| W-103 | Rx Heater Group 1 Power | 4.8931 | 0.9786 | 496 | 0 | Power (kW) |
| W-104 | Rx Heater Group 2 Power | 4.912 | 0.9946 | 492 | 0 | Power (kW) |
| W-601 | PZR Heater Power | 4.9435 | 0.982 | 24.3 | 0 | Power (kW) |
| CT-701 | IRWST Weight | 4.9831 | 0.9976 | 40000 | 0 | Mass (lbm) |
| CT-901 | Primary Sump Weight | 4.977 | 0.9969 | 28800 | 0 | Mass (lbm) |
| CT-902 | Secondary Sump Weight | 4.9845 | 0.9983 | 16700 | 0 | Mass (lbm) |
| DP-001 | FST Uncompensated Water Level | 5.0056 | 1.0017 | 91.88 | 0 | Water Level (in) |
| DP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 4.9645 | 0.9945 | 5.561 | 0 | Water Level (in) |
| DP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 4.9725 | 0.9963 | 5.938 | 0 | Water Level (in) |
| DP-103 | DVI to CL Uncompensated Water Level (270) | 4.9807 | 0.9982 | 11.692 | 0 | Water Level (in) |
| DP-104 | DVI to CL Uncompensated Water Level (180) | 4.9748 | 0.9992 | 12.376 | 0 | Water Level (in) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|-------------------|-------------------|-------------------|-------------------|------------------|
| .DP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 5.0076 | 1.0058 | 11.929 | 0 | Water Level (in) |
| .DP-106 | Bottom of Core to Lower Core Plate Uncompensated Water Level (180) | 4.9732 | 0.9985 | 8.198 | 0 | Water Level (in) |
| .DP-107 | Bottom of Core to Lower Core Plate Uncompensated Water Level (270) | 4.9713 | 0.9958 | 8.223 | 0 | Water Level (in) |
| .DP-108 | Bottom of Core to Lower Core Plate Uncompensated Water Level (0) | 4.9683 | 0.9953 | 8.562 | 0 | Water Level (in) |
| .DP-109 | Lower Core Plate to Mid-Core Spacer Grid Uncompensated Water Level (0) | 4.984 | 0.9988 | 19.763 | 0 | Water Level (in) |
| .DP-110 | Mid-Core Spacer Grid to Upper-Core Spacer Grid Uncompensated Water Level (0) | 4.9909 | 0.9991 | 20.02 | 0 | Water Level (in) |
| .DP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 4.9755 | 0.9963 | 4.896 | 0 | Water Level (in) |
| .DP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 4.9849 | 0.9986 | 15.614 | 0 | Water Level (in) |
| .DP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 4.9896 | 0.9996 | 24.28 | 0 | Water Level (in) |
| .DP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 4.9638 | 0.9949 | 77.59 | 0 | Water Level (in) |
| .DP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 4.9838 | 0.9983 | 11.383 | 0 | Water Level (in) |
| .DP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 4.9848 | 0.9988 | 39.98 | 0 | Water Level (in) |
| .DP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 4.988 | 0.9996 | 40.26 | 0 | Water Level (in) |
| .DP-127 | Rx Wide Range Uncompensated Water Level | 4.999 | 1.0007 | 98.97 | 0 | Water Level (in) |
| .DP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 4.9639 | 0.9946 | 39.3 | 0 | Water Level (in) |
| .DP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 4.9837 | 0.9982 | 24.166 | 0 | Water Level (in) |
| .DP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 4.9981 | 1.0014 | 78.02 | 0 | Water Level (in) |
| .DP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 4.9843 | 0.9994 | 20.135 | 0 | Water Level (in) |
| .DP-201 | CL-1 Uncompensated Water Level | 4.9961 | 1.0002 | 2.496 | 0 | Water Level (in) |
| .DP-202 | CL-2 Uncompensated Water Level | 4.9924 | 0.9994 | 2.223 | 0 | Water Level (in) |
| .DP-203 | CL-3 Uncompensated Water Level | 4.9923 | 0.9994 | 2.532 | 0 | Water Level (in) |
| .DP-204 | CL-4 Uncompensated Water Level | 4.9594 | 0.9927 | 2.47 | 0 | Water Level (in) |
| .DP-205 | HL-1 Uncompensated Water Level | 4.9663 | 0.9945 | 4.415 | 0 | Water Level (in) |
| .DP-206 | HL-2 Uncompensated Water Level | 4.9653 | 0.9944 | 4.013 | 0 | Water Level (in) |
| .DP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 4.9779 | 0.9972 | 18.3 | 0 | Water Level (in) |
| .DP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 4.9825 | 0.9969 | 19.247 | 0 | Water Level (in) |
| .DP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 4.9954 | 1.0002 | 10.939 | 0 | Water Level (in) |
| .DP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 4.9677 | 0.9943 | 16.988 | 0 | Water Level (in) |
| .DP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 4.9613 | 0.993 | 16.793 | 0 | Water Level (in) |
| .DP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 4.9836 | 0.9982 | 16.772 | 0 | Water Level (in) |
| .DP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 4.9864 | 0.9978 | 16.747 | 0 | Water Level (in) |
| .DP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 4.9953 | 1.0002 | 11.571 | 0 | Water Level (in) |
| .DP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 4.99 | 0.9992 | 102.06 | 0 | Water Level (in) |
| .DP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 4.9717 | 0.9955 | 95.55 | 0 | Water Level (in) |
| .DP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 4.9618 | 0.9932 | 96.25 | 0 | Water Level (in) |
| .DP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 4.9658 | 0.9943 | 103.14 | 0 | Water Level (in) |
| .DP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 4.9867 | 0.9992 | 102.45 | 0 | Water Level (in) |
| .DP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 4.9786 | 0.9971 | 96 | 0 | Water Level (in) |
| .DP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 4.985 | 0.9986 | 95.98 | 0 | Water Level (in) |
| .DP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 4.9628 | 0.9947 | 102.71 | 0 | Water Level (in) |
| .DP-301 | SG-1 WR Uncompensated Water Level | 5.0022 | 1.0006 | 119.25 | 0 | Water Level (in) |
| .DP-302 | SG-2 WR Uncompensated Water Level | 4.9995 | 1.0003 | 119.02 | 0 | Water Level (in) |
| .DP-303 | SG-1 NR Uncompensated Water Level | 4.9699 | 0.9934 | 31.81 | 0 | Water Level (in) |
| .DP-304 | SG-2 NR Uncompensated Water Level | 4.9748 | 0.995 | 31.52 | 0 | Water Level (in) |
| .DP-401 | ACC-1 Uncompensated Water Level | 4.987 | 0.9951 | 38.26 | 0 | Water Level (in) |
| .DP-402 | ACC-2 Uncompensated Water Level | 5.166 | 1.0332 | 38.34 | 0 | Water Level (in) |
| .DP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 4.9834 | 0.9986 | 5.31 | 0 | Water Level (in) |
| .DP-502 | CMT-2 WR Uncompensated Water Level | 5.1958 | 1.0396 | 57.5 | 0 | Water Level (in) |
| .DP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 4.984 | 0.9979 | 46.77 | 0 | Water Level (in) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|------------------|
| .DP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 4.9793 | 0.9972 | 5.226 | 0 | Water Level (in) |
| .DP-505 | CMT-1 NR Uncompensated Water Level (Top) | 4.994 | 1 | 5.486 | 0 | Water Level (in) |
| .DP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 4.9823 | 0.9975 | 46.96 | 0 | Water Level (in) |
| .DP-507 | CMT-1 WR Uncompensated Water Level | 5.1887 | 1.0383 | 57.5 | 0 | Water Level (in) |
| .DP-508 | CMT-2 NR Uncompensated Water Level (Top) | 4.9913 | 0.9994 | 5.309 | 0 | Water Level (in) |
| .DP-509 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 4.9772 | 0.9968 | 78.84 | 0 | Water Level (in) |
| .DP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 4.9653 | 0.9942 | 78.28 | 0 | Water Level (in) |
| .DP-601 | PZR WR Uncompensated Water Level | 5.0006 | 0.9991 | 140.47 | 0 | Water Level (in) |
| .DP-602 | PZR Surge Line Uncompensated Water Level | 4.9777 | 0.997 | 47.5 | 0 | Water Level (in) |
| .DP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 4.9735 | 0.9963 | 3.533 | 0 | Water Level (in) |
| .DP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 4.9724 | 0.9958 | 18.696 | 0 | Water Level (in) |
| .DP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 4.9737 | 0.996 | 4.127 | 0 | Water Level (in) |
| .DP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 4.9731 | 0.9964 | 3.82 | 0 | Water Level (in) |
| .DP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 4.996 | 1.0011 | 14.717 | 0 | Water Level (in) |
| .DP-610 | ADS1-3 Separator Uncompensated Water Level | 5.193 | 1.0399 | 45.24 | 0 | Water Level (in) |
| .DP-611 | ADS4-1 Separator Uncompensated Water Level | 5.1628 | 1.0342 | 55.97 | 0 | Water Level (in) |
| .DP-612 | ADS4-2 Separator Uncompensated Water Level | 5.1859 | 1.0386 | 56.6 | 0 | Water Level (in) |
| .DP-701 | IRWST Uncompensated Water Level | 5.0202 | 1.0048 | 115.8 | 0 | Water Level (in) |
| .DP-801 | PRHR HX Inlet Head Uncompensated Water Level | 4.9945 | 1.0013 | 6.971 | 0 | Water Level (in) |
| .DP-802 | PRHR HX WR Uncompensated Water Level | 4.9871 | 0.9998 | 57.08 | 0 | Water Level (in) |
| .DP-901 | Primary Sump Uncompensated Water Level | 5.0016 | 1.0015 | 104.36 | 0 | Water Level (in) |
| .DP-902 | Secondary Sump Uncompensated Water Level | 5.0018 | 1.0007 | 102.56 | 0 | Water Level (in) |
| .DP-903 | CRT Uncompensated Water Level | 5.1669 | 1.0346 | 32.358 | 0 | Water Level (in) |
| .DP-905 | Break Separator Uncompensated Water Level | 5.1788 | 1.0378 | 130.68 | 0 | Water Level (in) |
| .T-120 | Rx Vessel Capacitance Probe Water Level | 5.0053 | 1.0042 | 99 | 50 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 5.0658 | 1.0121 | 600 | 0 | Pressure (psig) |
| PT-002 | MS Header Pressure | 4.9759 | 0.9962 | 500 | 0 | Pressure (psig) |
| PT-003 | Lab Barometer | 4.9656 | 0.9944 | 20 | 10 | Pressure (psia) |
| PT-009 | SG-1 PORV Blowdown Pressure | 4.9816 | 0.9983 | 300 | 0 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 4.9924 | 1.0004 | 300 | 0 | Pressure (psig) |
| PT-101 | CL-1 Pressure at Rx Flange | 4.9877 | 0.9986 | 500 | 0 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 4.9706 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 4.9646 | 0.9946 | 10 | 0 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 4.9882 | 0.9988 | 500 | 0 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 5.0478 | 1.0096 | 500 | 0 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 4.9637 | 0.9938 | 500 | 0 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 4.9874 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 4.9825 | 0.9984 | 10 | 0 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 4.9886 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 4.977 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 4.9616 | 0.9921 | 500 | 0 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 4.9935 | 1.0008 | 500 | 0 | Pressure (psig) |
| PT-202 | HL-2 Pressure at SG-2 Flange | 4.9841 | 0.9978 | 500 | 0 | Pressure (psig) |
| PT-203 | CL Break Pressure at Break Valve | 4.988 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-204 | SG-2 Long Tube Pressure (Top) | 4.9974 | 1.0005 | 500 | 0 | Pressure (psig) |
| PT-205 | HL-1 Pressure at SG-1 Flange | 4.9838 | 0.9988 | 400 | 0 | Pressure (psig) |
| PT-206 | HL Break Pressure at Break Valve | 4.9869 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-301 | SG-1 Pressure | 5.0617 | 1.0123 | 500 | 0 | Pressure (psig) |
| PT-302 | SG-2 Pressure | 5.1023 | 1.0219 | 500 | 0 | Pressure (psig) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|----------------|----------------|----------------|----------------|-----------------------|
| PT-401 | ACC-1 Pressure | 4.9908 | 0.9993 | 300 | 0 | Pressure (psig) |
| PT-402 | ACC-2 Pressure | 4.9802 | 0.9975 | 300 | 0 | Pressure (psig) |
| PT-501 | CMT-1 Pressure | 4.982 | 0.9979 | 300 | 0 | Pressure (psig) |
| PT-502 | CMT-2 Pressure | 4.9869 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-602 | PZR NR Pressure | 4.9747 | 0.9988 | 400 | 300 | Pressure (psig) |
| PT-603 | PZR NR Pressure | 4.9616 | 0.9944 | 10 | 0 | Pressure (psig) |
| PT-604 | PZR WR Pressure | 4.9794 | 0.9942 | 500 | 0 | Pressure (psig) |
| PT-605 | ADS1-3 Separator Pressure | 4.9725 | 0.9966 | 100 | 0 | Pressure (psig) |
| PT-606 | IRWST Sparger Line Pressure | 4.9653 | 0.995 | 100 | 0 | Pressure (psig) |
| PT-610 | ADS4-2 Separator Pressure | 4.9845 | 0.9983 | 10 | 0 | Pressure (psig) |
| PT-611 | ADS4-1 Separator Pressure | 4.9806 | 0.9977 | 10 | 0 | Pressure (psig) |
| PT-701 | IRWST Pressure | 5.0436 | 1.0087 | 15 | 0 | Pressure (psig) |
| PT-801 | CVSP Discharge Pressure | 4.9909 | 0.9993 | 500 | 0 | Pressure (psig) |
| PT-802 | RNSP Discharge Pressure | 4.9768 | 0.9962 | 250 | 0 | Pressure (psig) |
| PT-901 | Primary Sump Pressure | 4.9659 | 0.9947 | 10 | 0 | Pressure (psig) |
| PT-902 | BAMS Header Pressure | 4.9988 | 1.0013 | 16 | 0 | Pressure (psig) |
| PT-905 | Break Separator Pressure | 5.0265 | 1.0067 | 20 | 0 | Pressure (psig) |
| TF-005 | Lab Ambient Temperature at Ground Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-006 | Lab Ambient Temperature at Second Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-007 | Lab Ambient Temperature at Third Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-009 | SG-1 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-010 | SG-2 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101 | CL-3 Temperature (SC-101) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-101-1.3D-2 | CL-1 Downcomer Temperature at 1.3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-1 | CL-1 Downcomer Temperature at 2D, 120 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-2 | CL-1 Downcomer Temperature at 2D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-3 | CL-1 Downcomer Temperature at 2D, 150 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-1 | CL-1 Downcomer Temperature at 3D, 104 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-2 | CL-1 Downcomer Temperature at 3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-3 | CL-1 Downcomer Temperature at 3D, 166 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-1 | CL-1 Downcomer Temperature at 4D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-2 | CL-1 Downcomer Temperature at 4D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-1 | CL-1 Downcomer Temperature at 8D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-2 | CL-1 Downcomer Temperature at 8D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102 | CL-4 Temperature (SC-102) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-102-1.3D-2 | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-1 | CL-2 Downcomer Temperature at 2D, 210 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-2 | CL-2 Downcomer Temperature at 2D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-3 | CL-2 Downcomer Temperature at 2D, 240 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-1 | CL-2 Downcomer Temperature at 3D, 194 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-2 | CL-2 Downcomer Temperature at 3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|-------------------|-------------------|-------------------|-------------------|-----------------------|
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-105 | CL-1 Temperature (SC-105) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-106 | CL-2 Temperature (SC-106) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-108 | CL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-113 | DVI-1/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-114 | DVI-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-116 | DVI-2/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-126 | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|-------------------|-------------------|-------------------|-------------------|-----------------------|
| TF-142 | HL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-143 | HL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-167 | Rx Heater Rod B2-319 at 40.13 Inches | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-170 | Upper Rx Vessel Layer M-M at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-171 | Top of Rx Down to within 0.50 inches of Upper Support Plate Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-172 | Lower Rx Vessel Layer AA-AA at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-201 | CL-1 at RCP-1 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-202 | CL-2 at RCP-2 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-203 | CL-3 at RCP-3 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-204 | CL-4 at RCP-4 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-211 | SG-1 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-212 | SG-2 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-221 | CL-3 T/C Rod at 3.25 Inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 Inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-311 | SG-1 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-312 | SG-2 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-502 | CMT-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-509 | CMT-1 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-512 | CMT-2 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-526 | CMT-2 SPARGER 2/3 TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-528 | CMT 2/3 HEAD TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-530 | CMT-2 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-546 | CMT-2 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

B-262

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|-------------------|-------------------|-------------------|-------------------|-----------------------|
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-719 | IRWST Sparger Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|-------------------|-------------------|-------------------|-------------------|------------------------------|
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-903 | Primary Sump Temperature (SC-903) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-911 | CRP Discharge to IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 200 | 40 | 200 | 40 | Fluid Temperature (F) |
| TF-915 | Break Separator 6-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-602 | PZR Heater Rod #2 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-001-1 | Core Thermocouple Rod D-001 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| IR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |

NRC-COND-07 DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|-------------------|-------------------|-------------------|-------------------|------------------------------|
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-201 | SG-1 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-202 | SG-2 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-203 | SG-1 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-204 | SG-2 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-205 | SG-1 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-206 | SG-2 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-208 | SG-2 Long Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-209 | SG-1 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-210 | SG-2 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-601 | ADS1-3 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-602 | ADS4-2 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-603 | ADS4-1 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-801 | PRHR HX Long Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-802 | PRHR HX Short Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-803 | PRHR HX Long Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-804 | PRHR HX Short Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-805 | PRHR HX Short Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-806 | PRHR HX Long Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-807 | PRHR HX Short Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-808 | PRHR HX Long Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-905 | Break Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| DASRunning | DSC Engine is running, but not necessarily logging data | N/A | N/A | N/A | N/A | |
| DASLogging | DSC Engine is logging data to the Citadel database | N/A | N/A | N/A | N/A | |
| FVM-004 | Catch Tank Steam Flow Rate | 4.9885 | 1.001 | 70 | 0 | Steam Flow Rate (cfm) |
| PT-004 | Temp Steam Pressure for FVM-002 | 5.0026 | 1.0016 | 400 | 0 | Pressure (psig) |

N/A
N/A




DEPARTMENT OF NUCLEAR ENGINEERING &
RADIATION HEALTH PHYSICS


**ADVANCED THERMAL HYDRAULIC
RESEARCH LABORATORY**

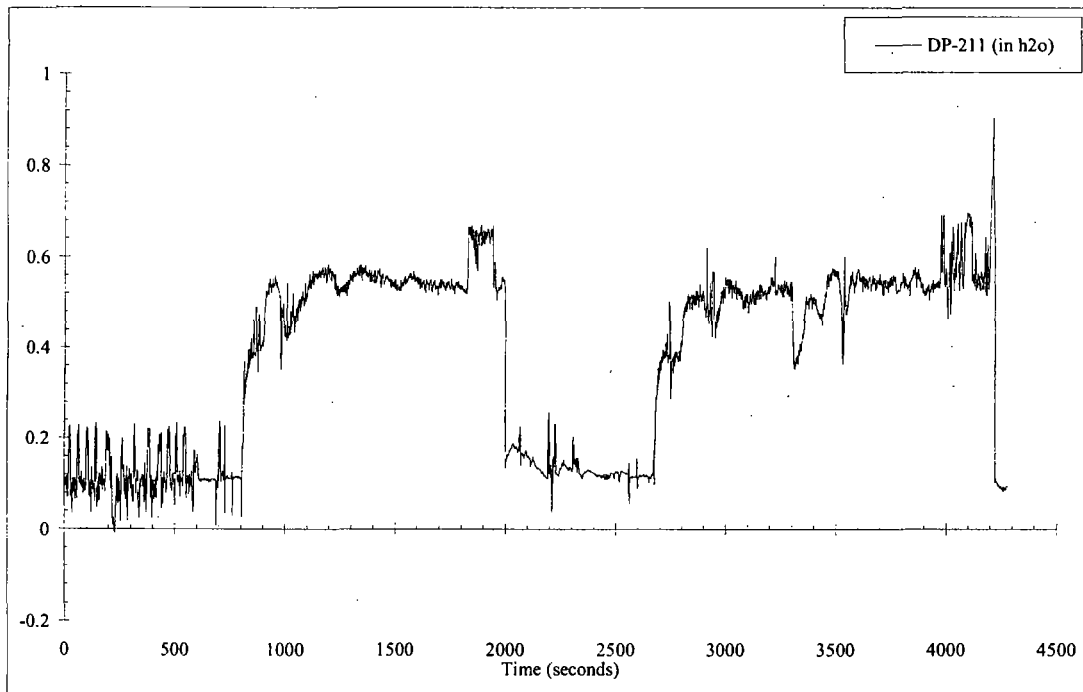
**STEAM GENERATOR U-TUBE CONDENSATION
TEST @ 300 PSIG WITH 10% NITROGEN**

NRC-COND-08

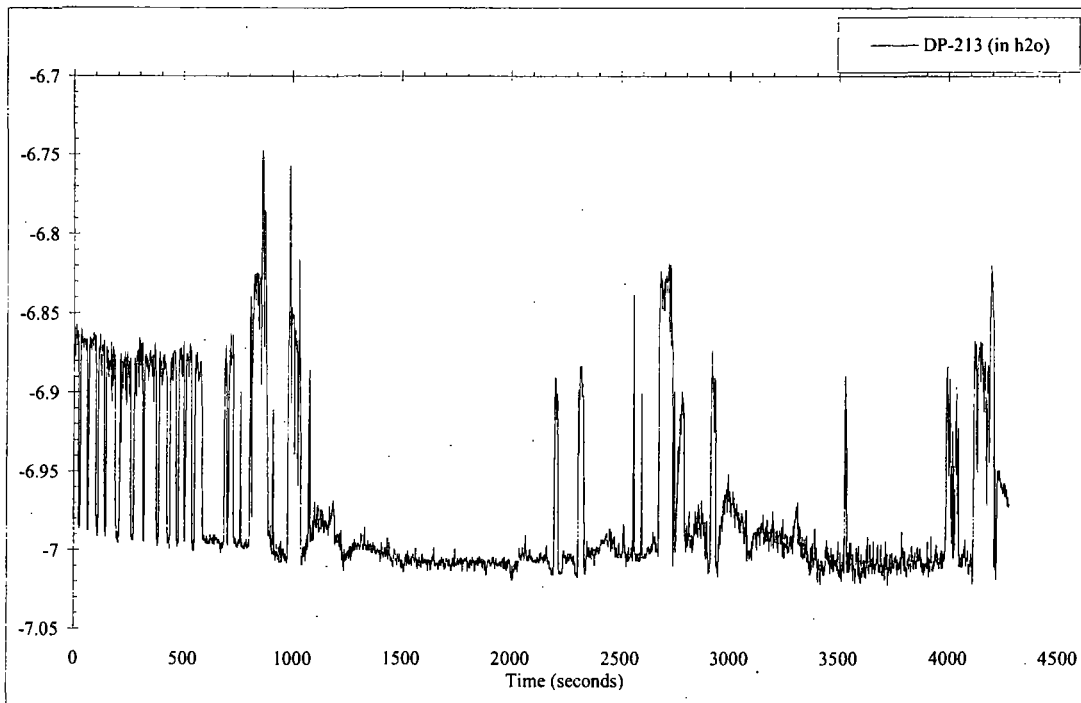
Revision 0

 5/17/2007
John Groome, Originator Date
Facility Operations Manager
Research Assistant

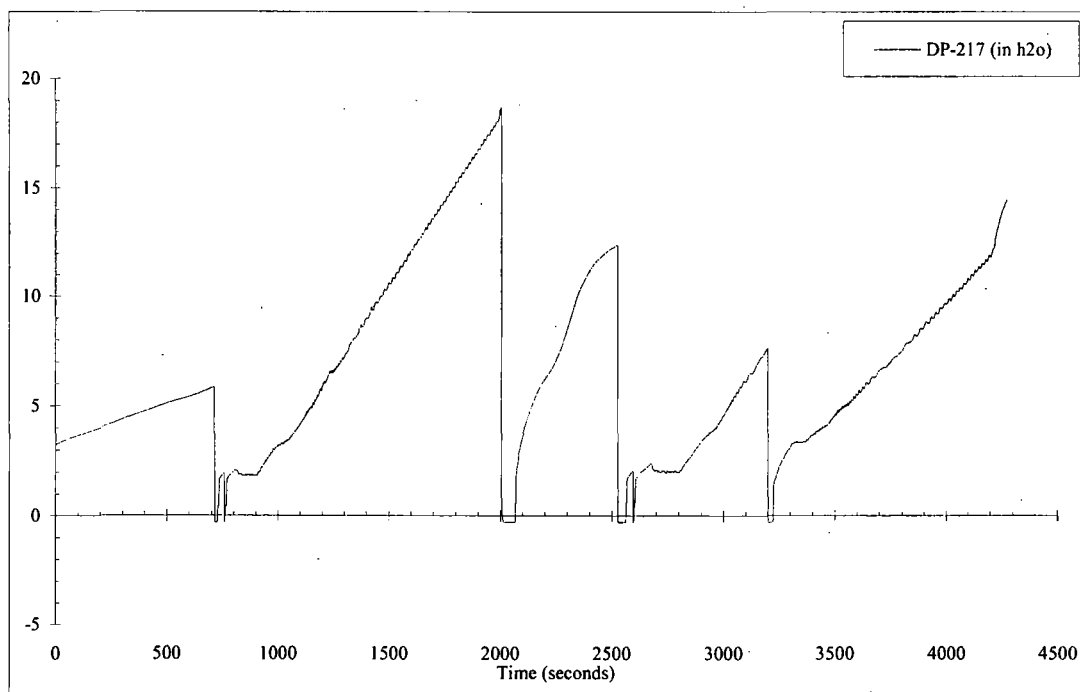
 5/17/2007
Brian Woods, Approval Date
Program Manager
Assistant Professor



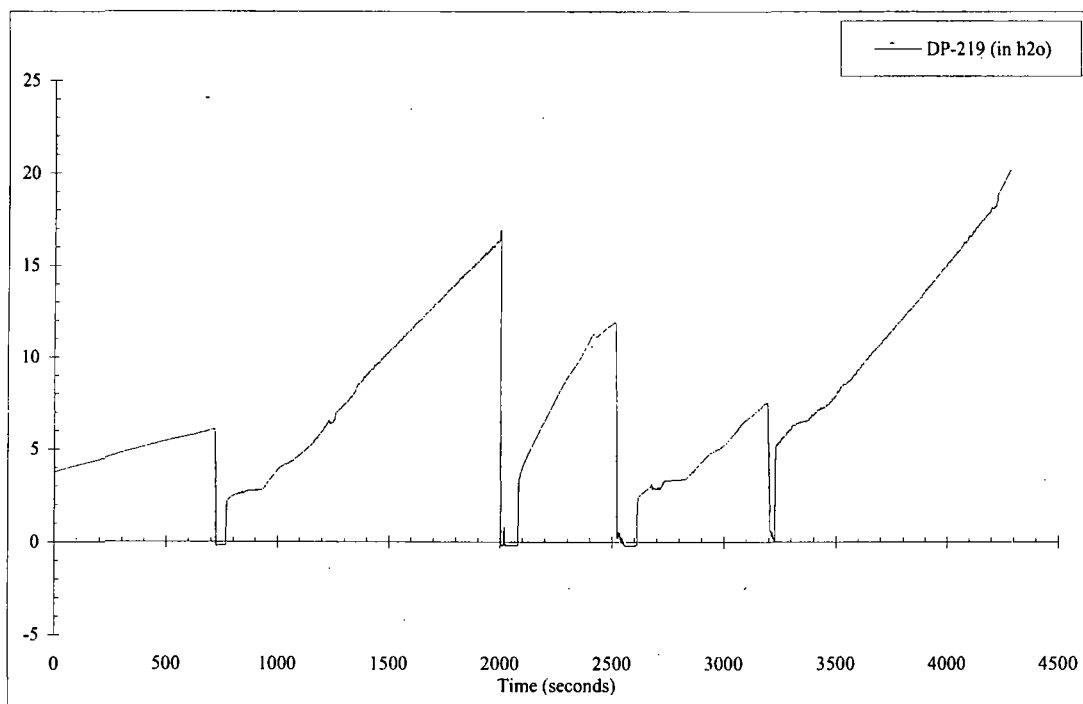
SG-1 Short Tube Entrance Losses



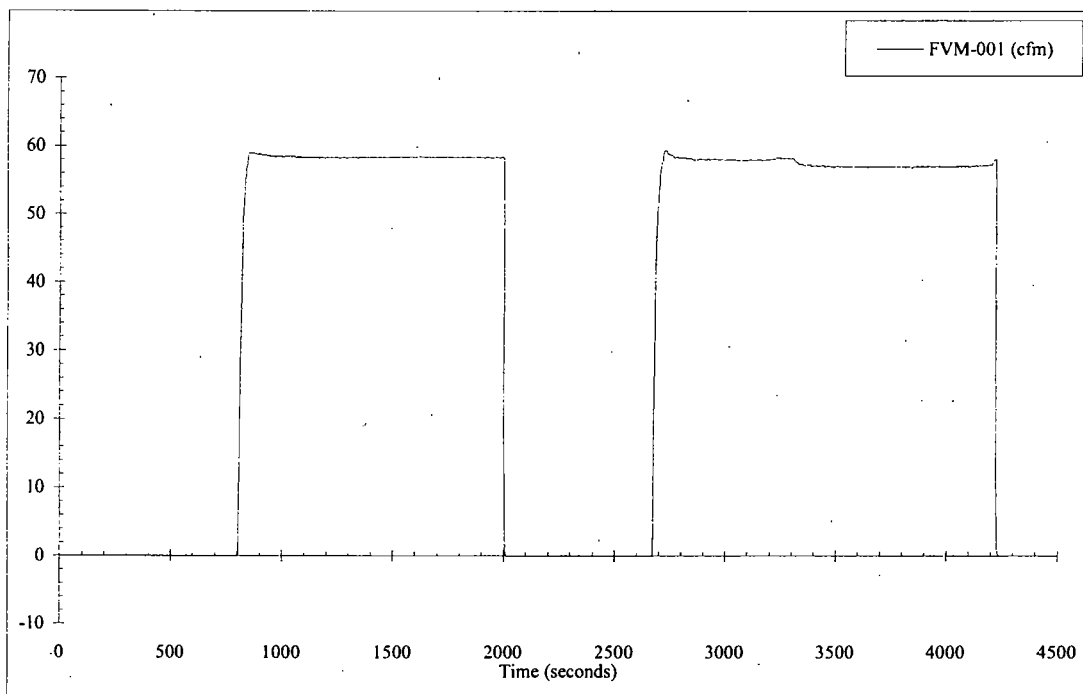
SG-1 Long Tube Exit Losses



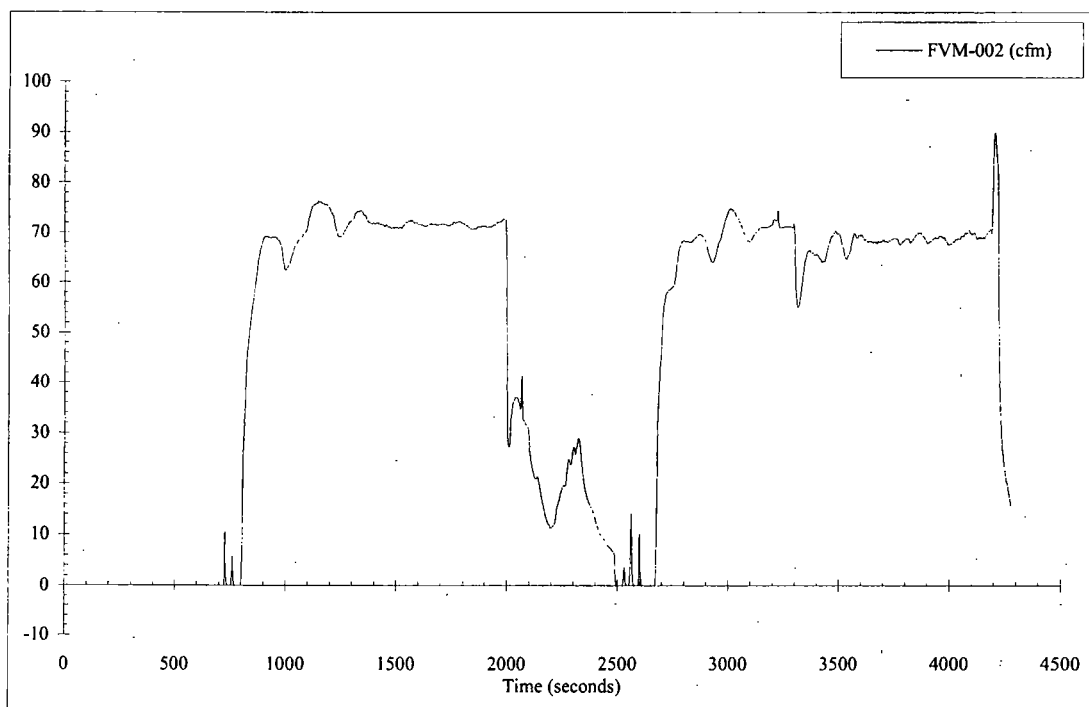
Separator Uncompensated Water Level



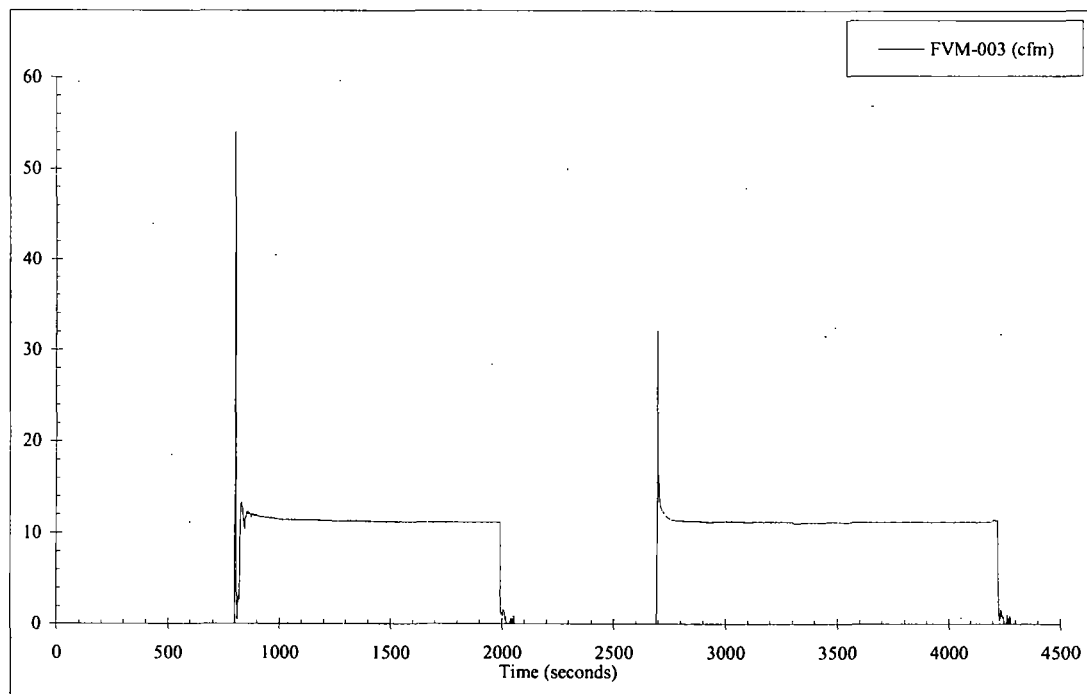
Catch Tank Uncompensated Water Level



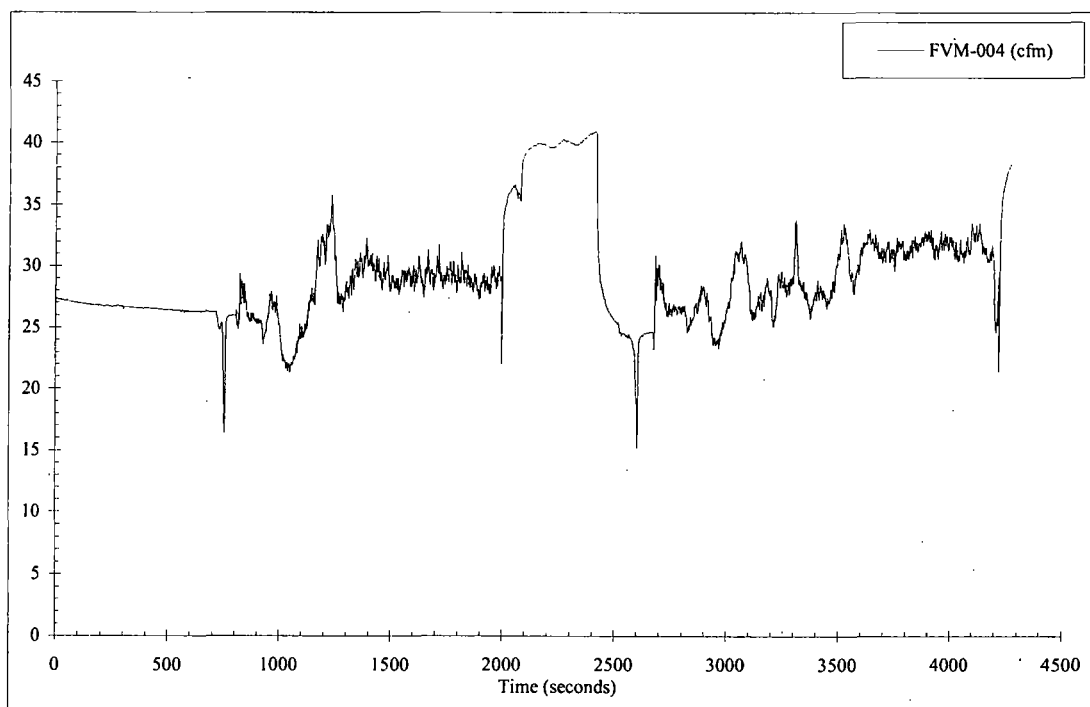
Separator Outlet Steam Flowrate



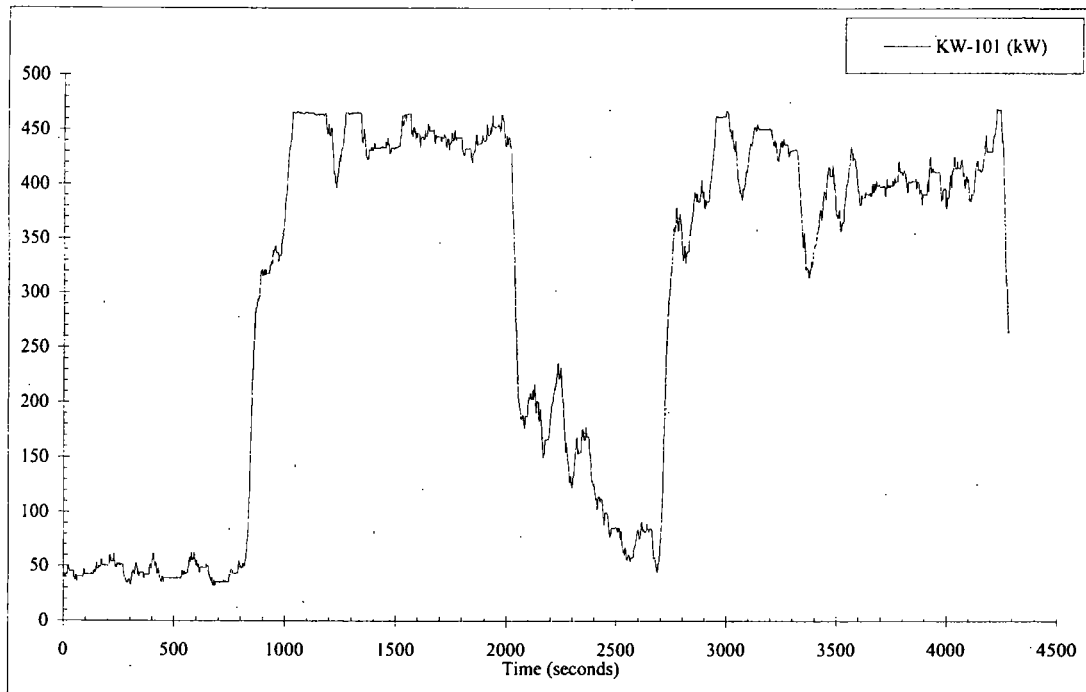
SG-2 Main Steam Flow



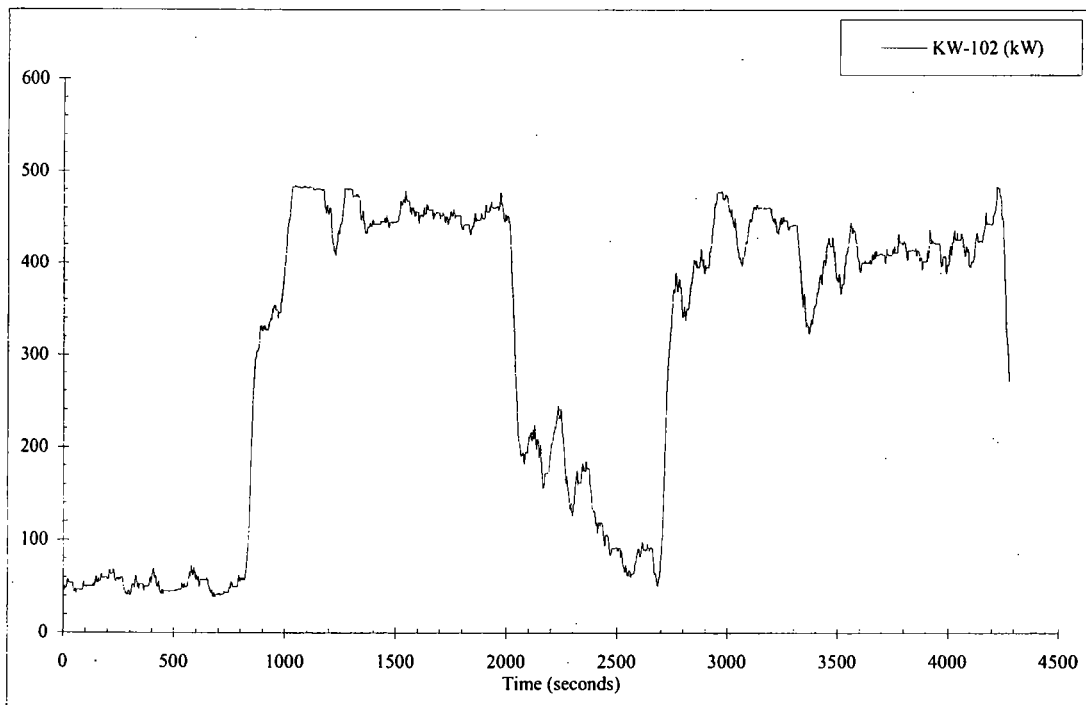
Main Steam Total Flow



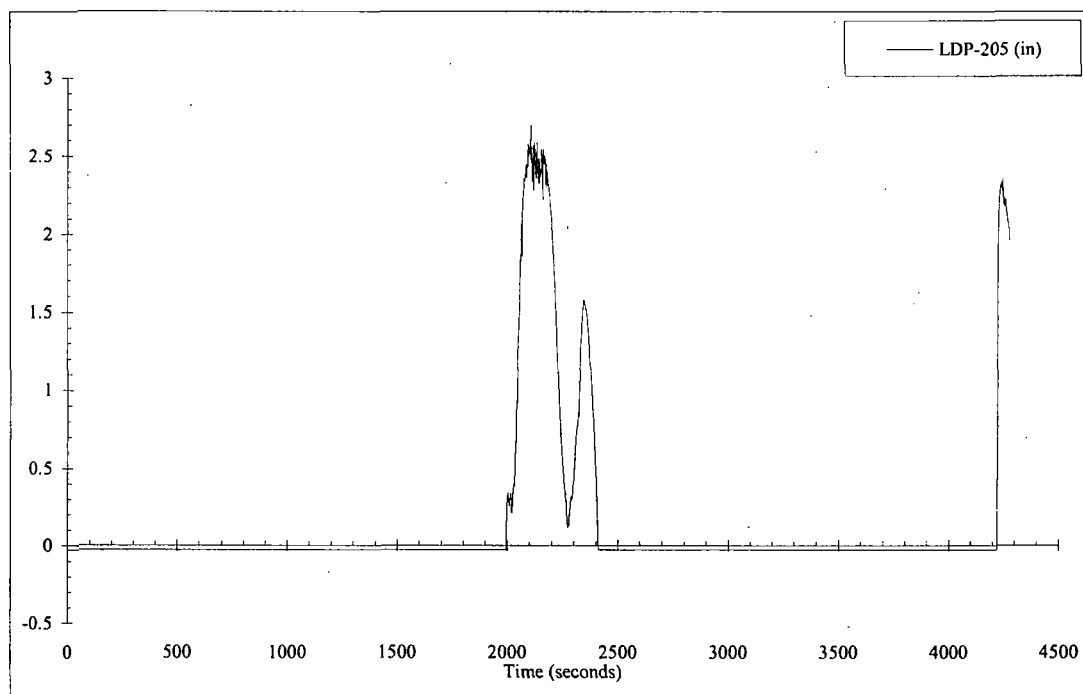
Catch Tank Steam Flow Rate



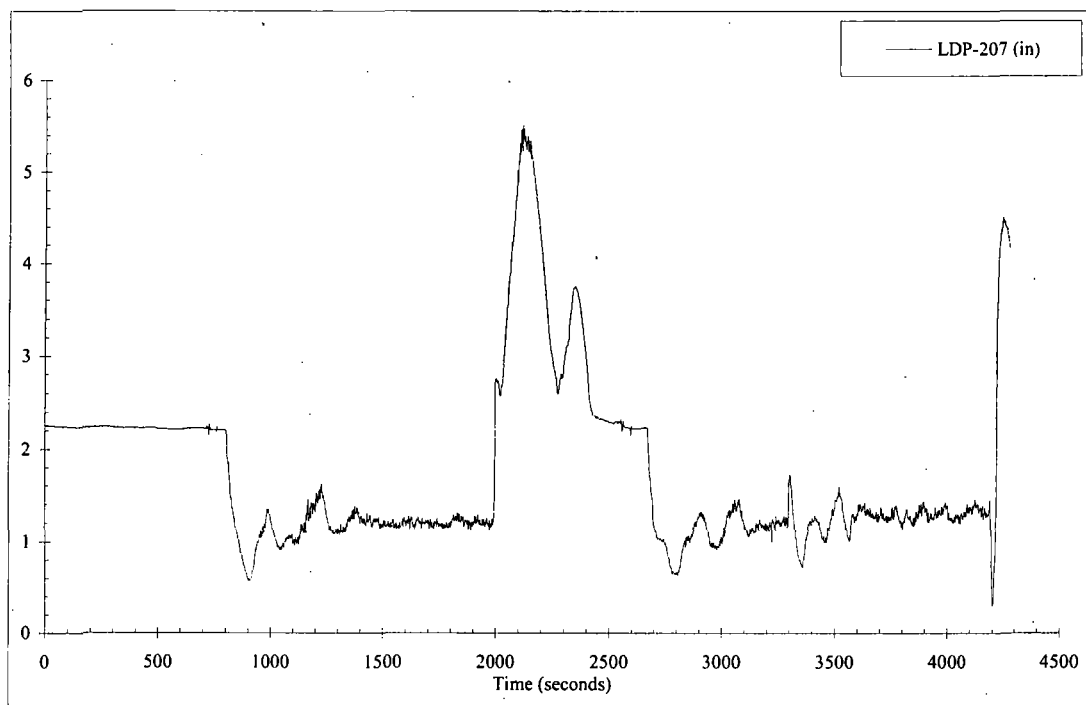
Rx Heater Group 1 Power



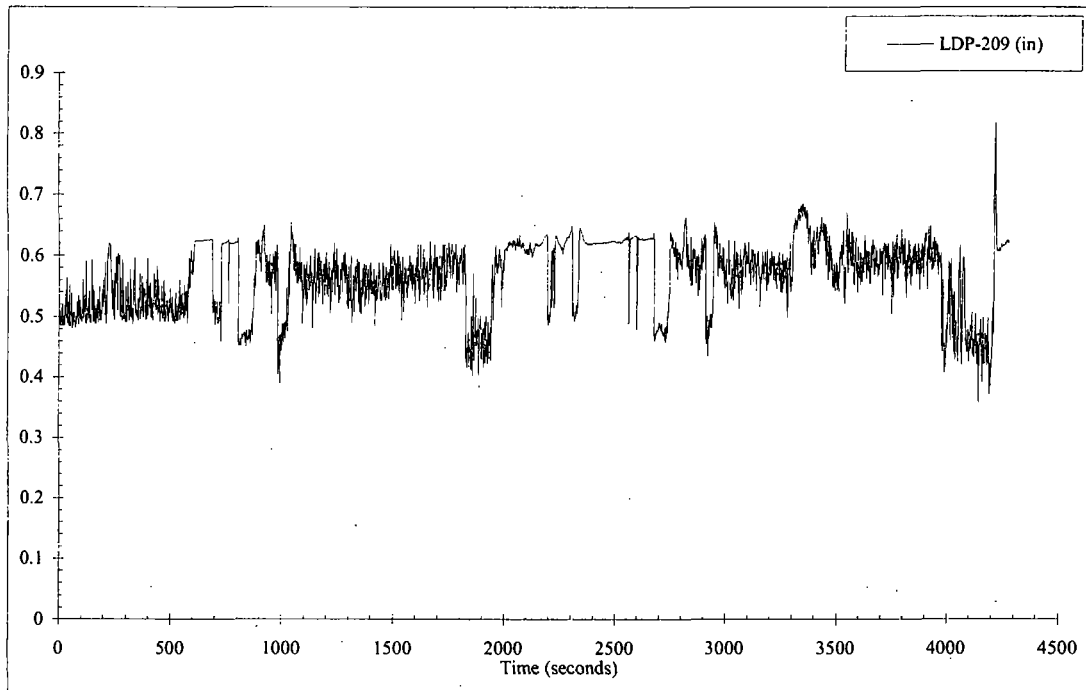
Rx Heater Group 2 Power



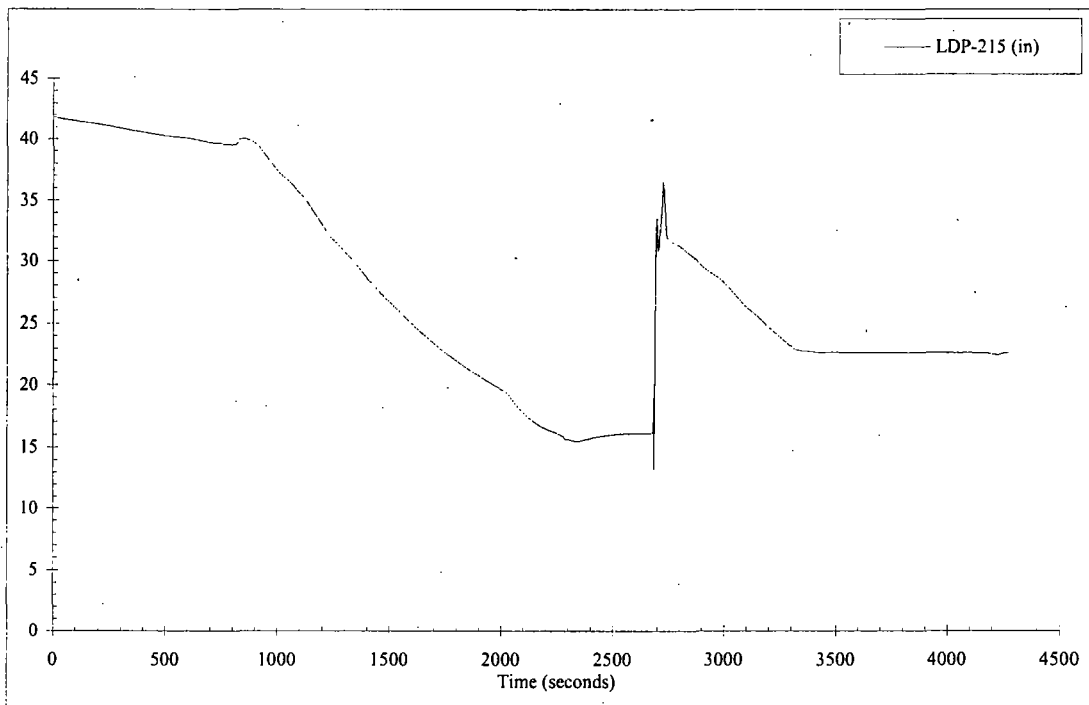
HL-1 Uncompensated Water Level



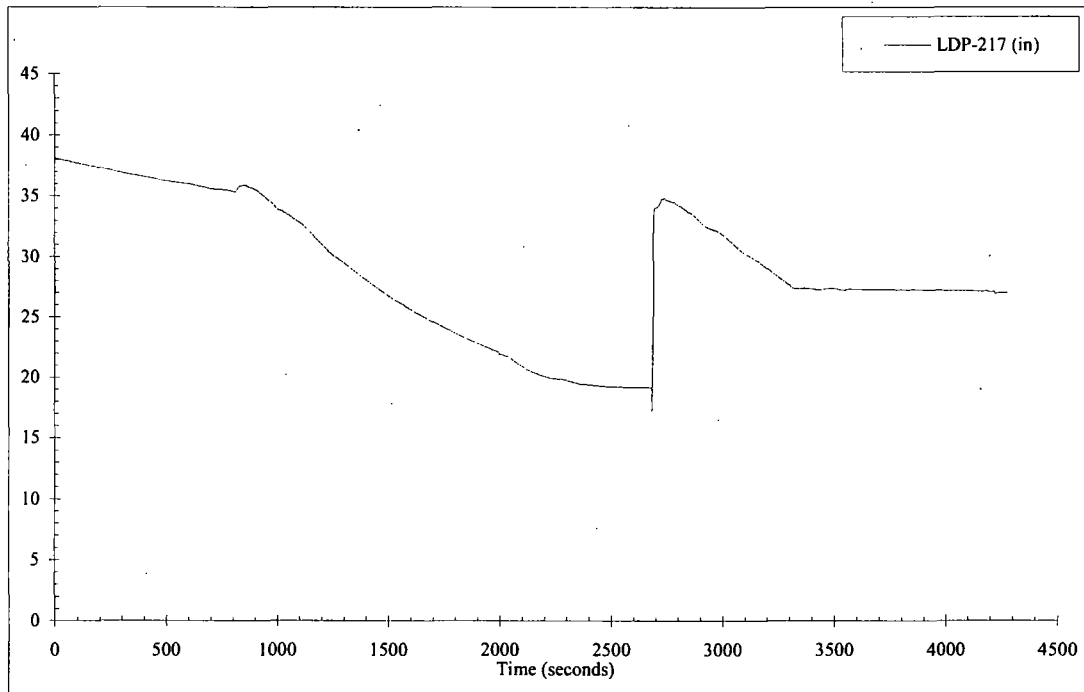
SG-1 to HL-1 Elbow Plenum Uncompensated Water Level



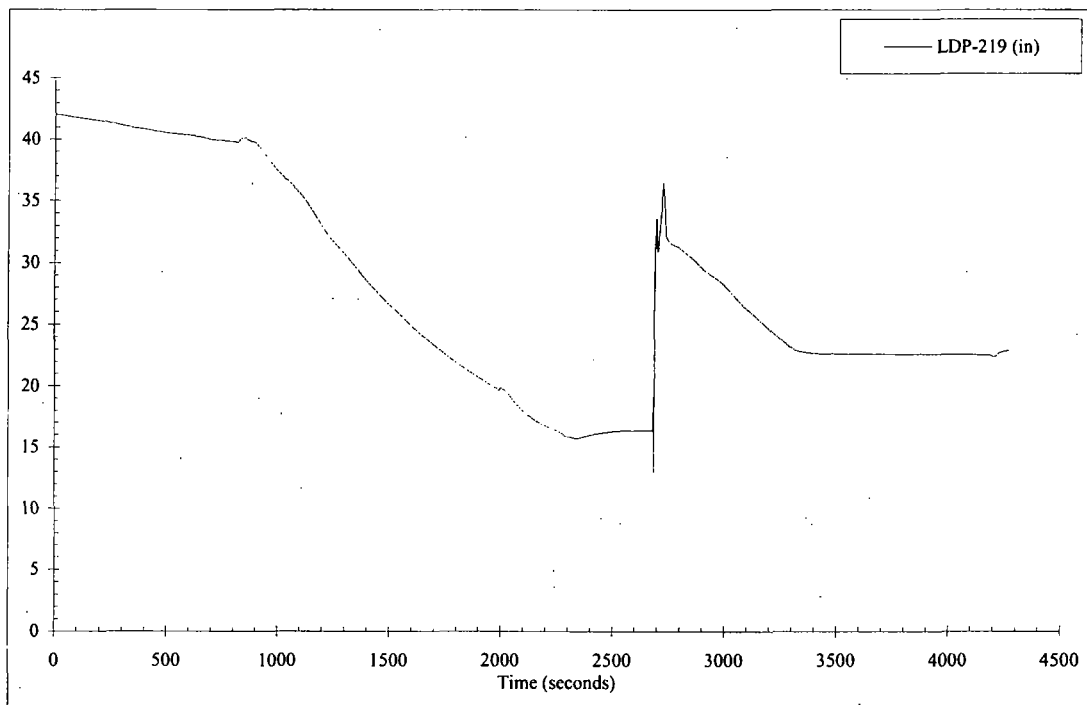
SG-1 to HL-1 Plenum Uncompensated Water Level



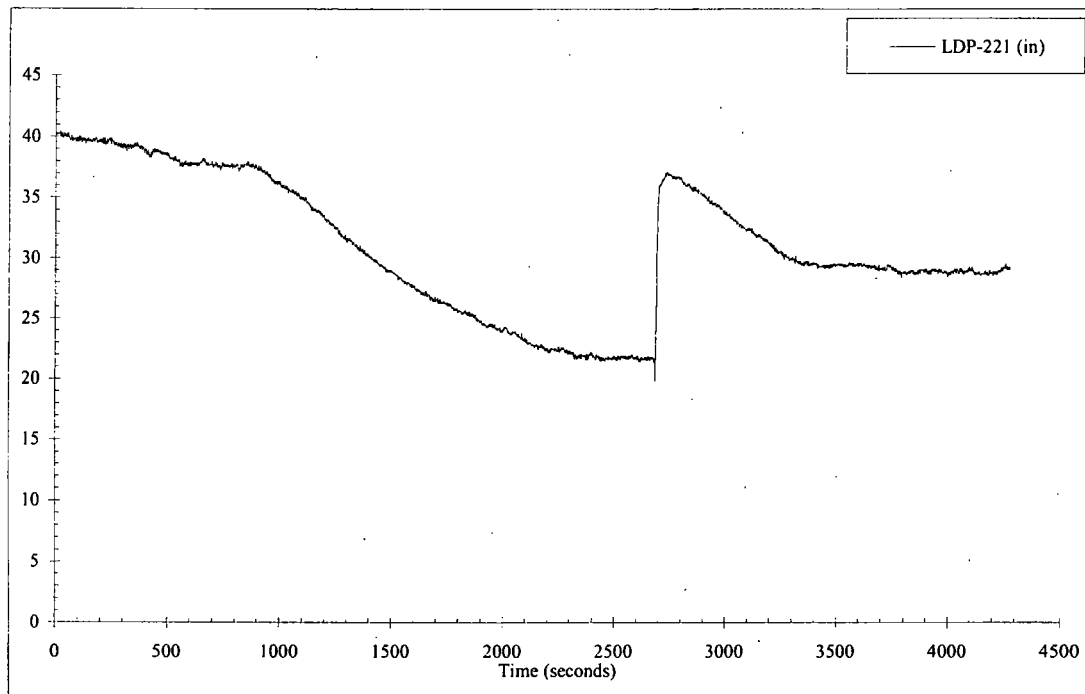
SG-1 Long Tube to HL Uncompensated Water Level



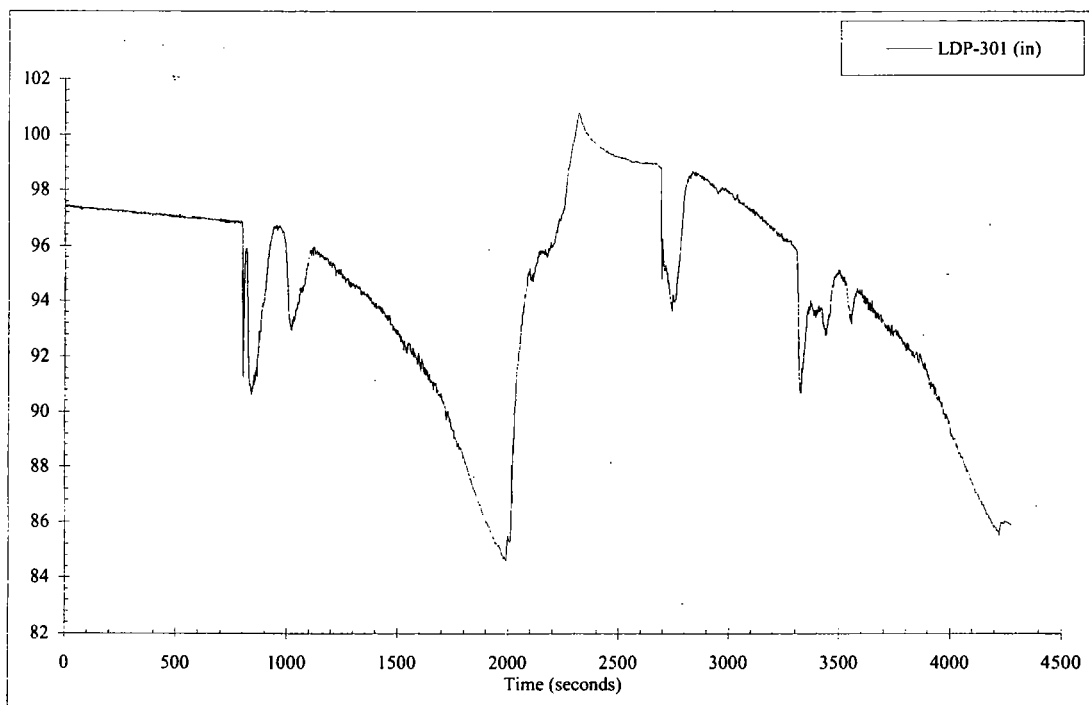
SG-1 Short Tube to HL Uncompensated Water Level



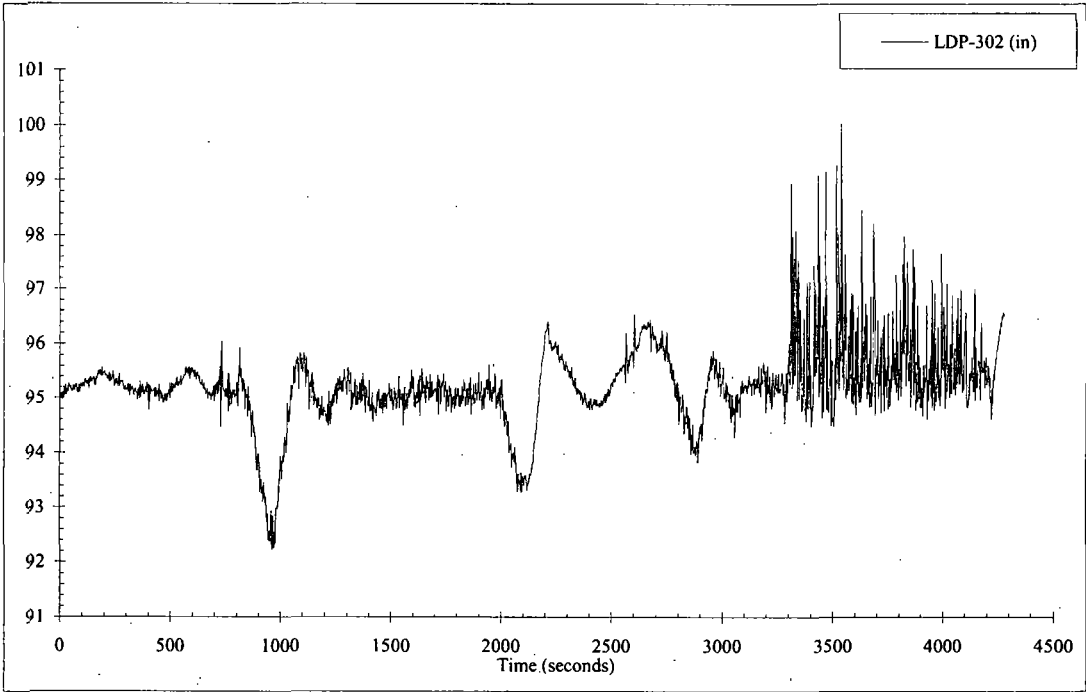
SG-1 Long Tube to CL Uncompensated Water Level



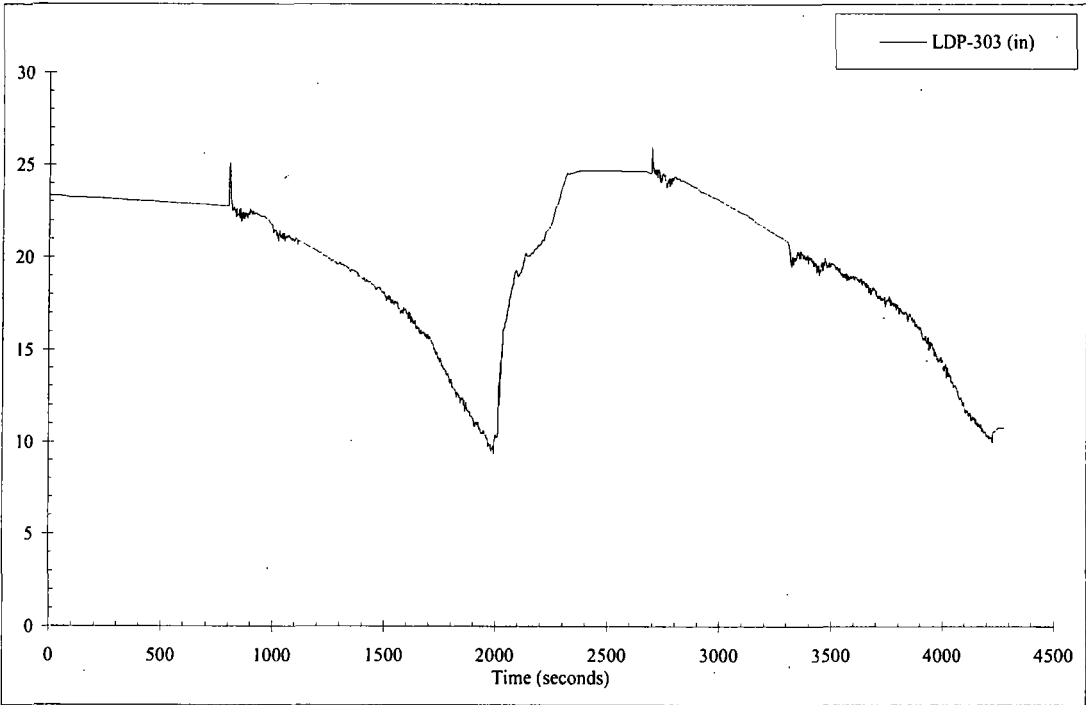
SG-1 Short Tube to CL Uncompensated Water Level



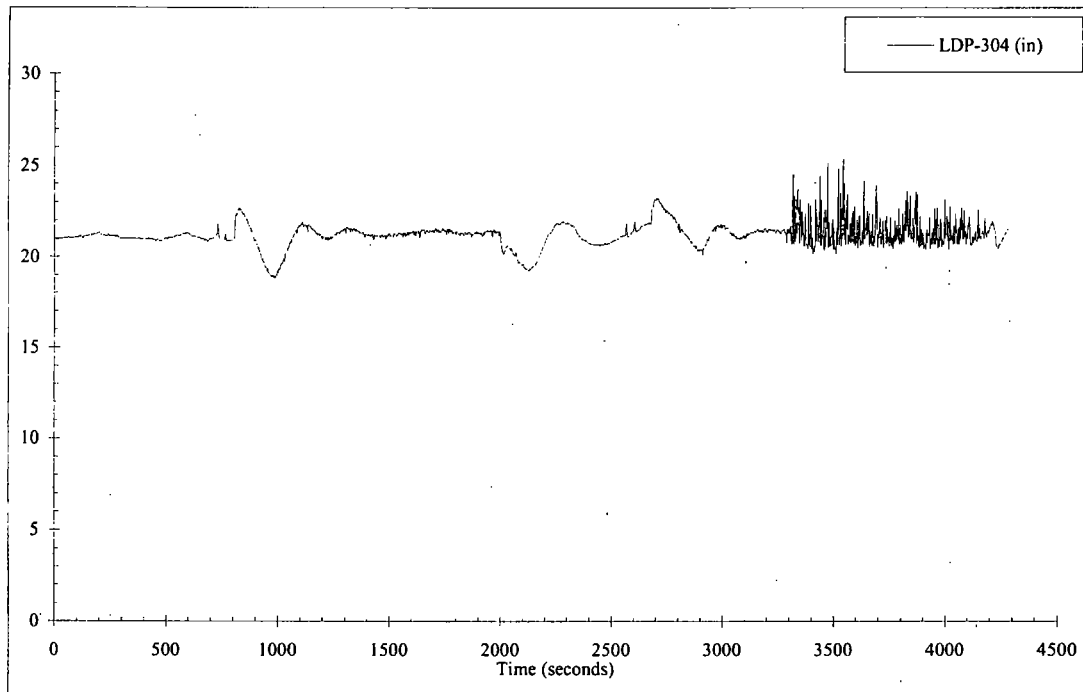
SG-1 WR Uncompensated Water Level



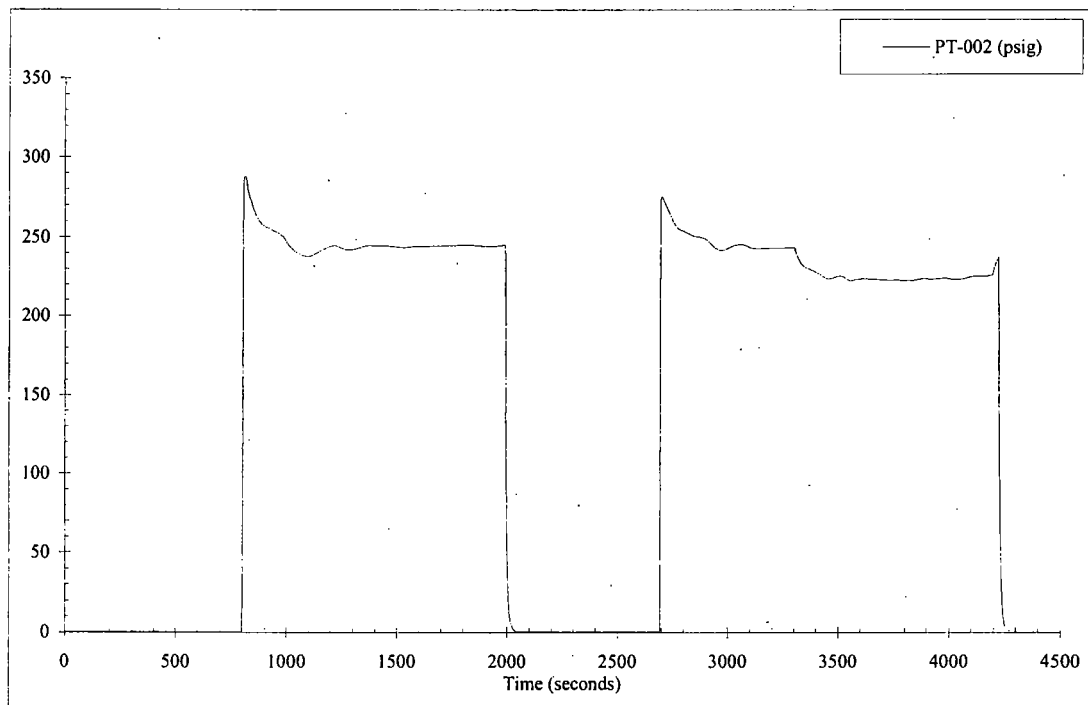
SG-2 WR Uncompensated Water Level



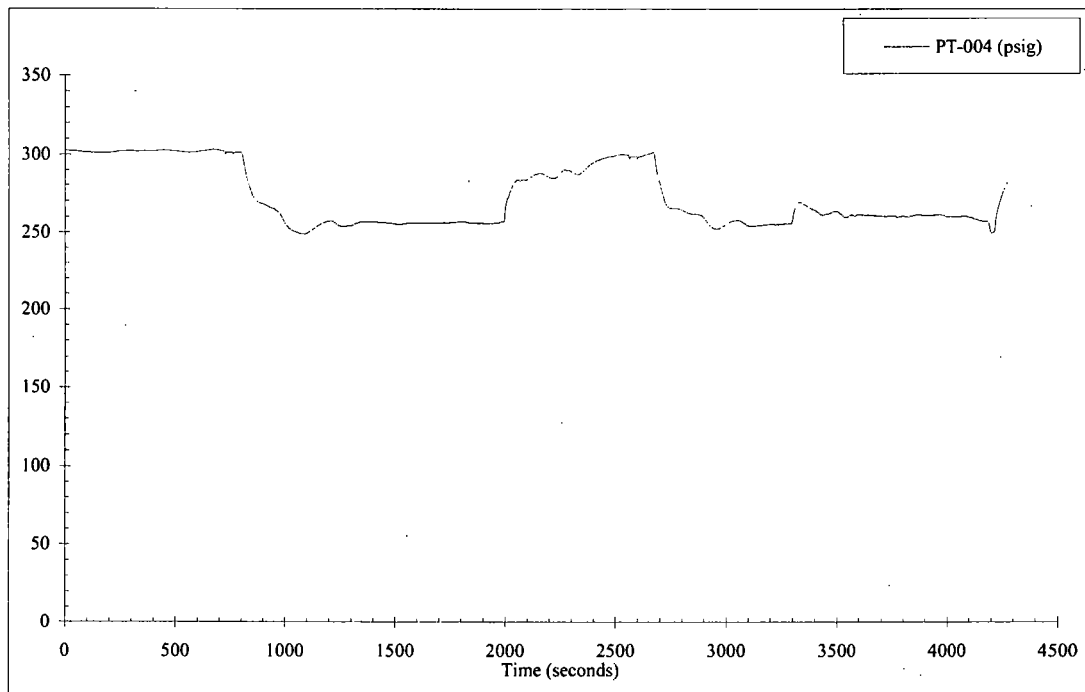
SG-1 NR Uncompensated Water Level



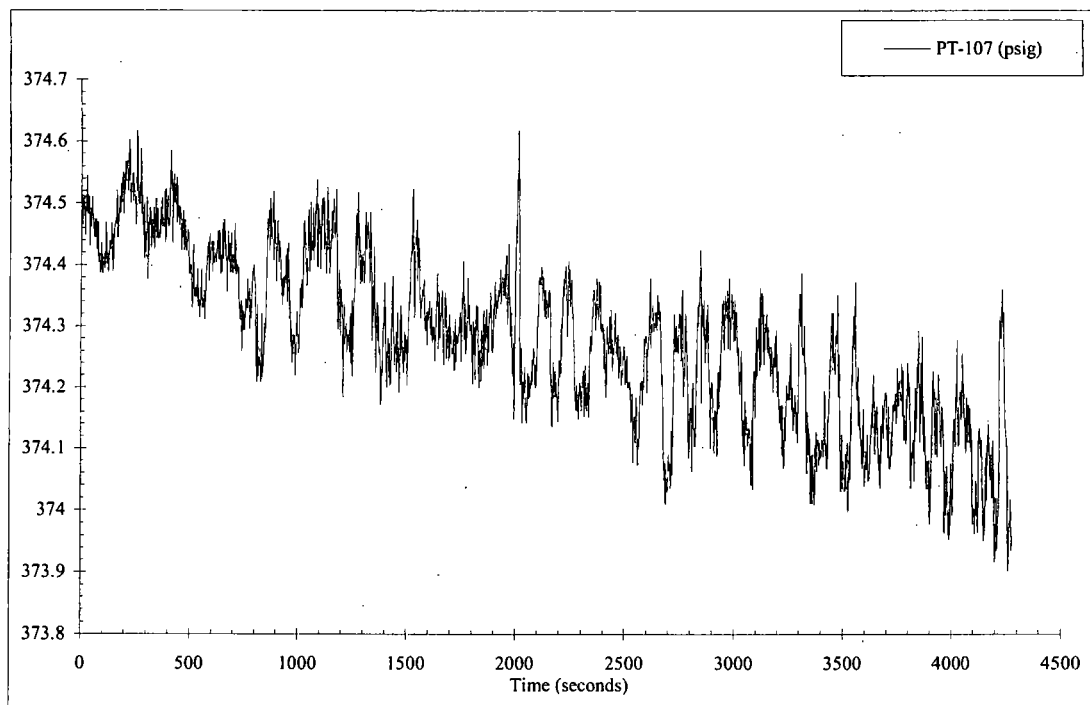
SG-2 NR Uncompensated Water Level



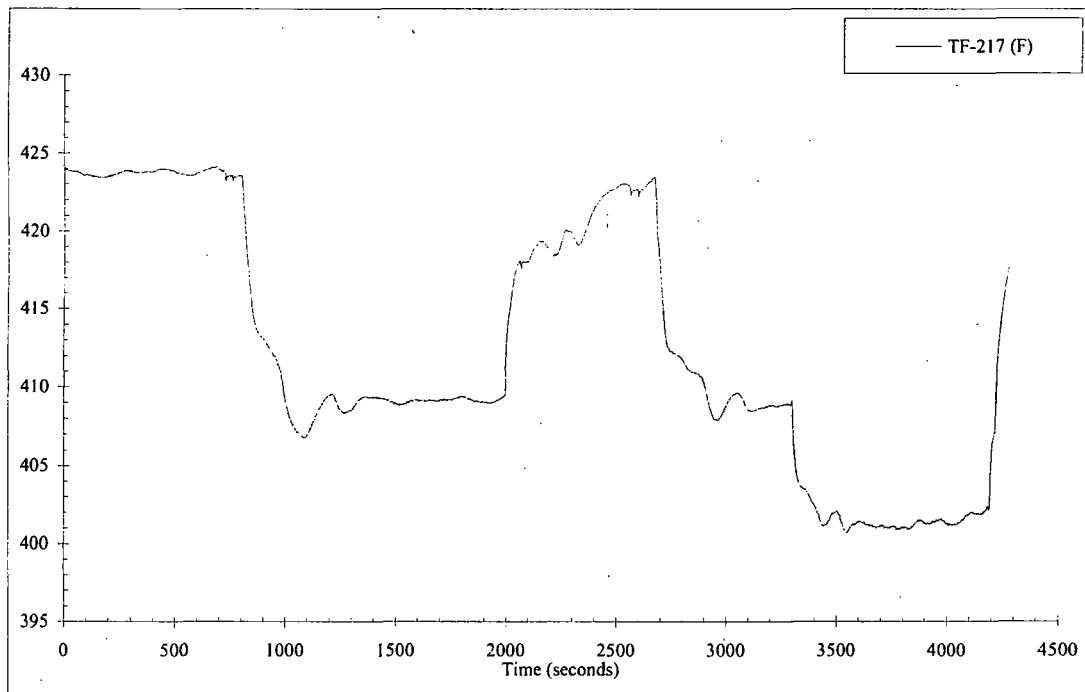
MS Header Pressure



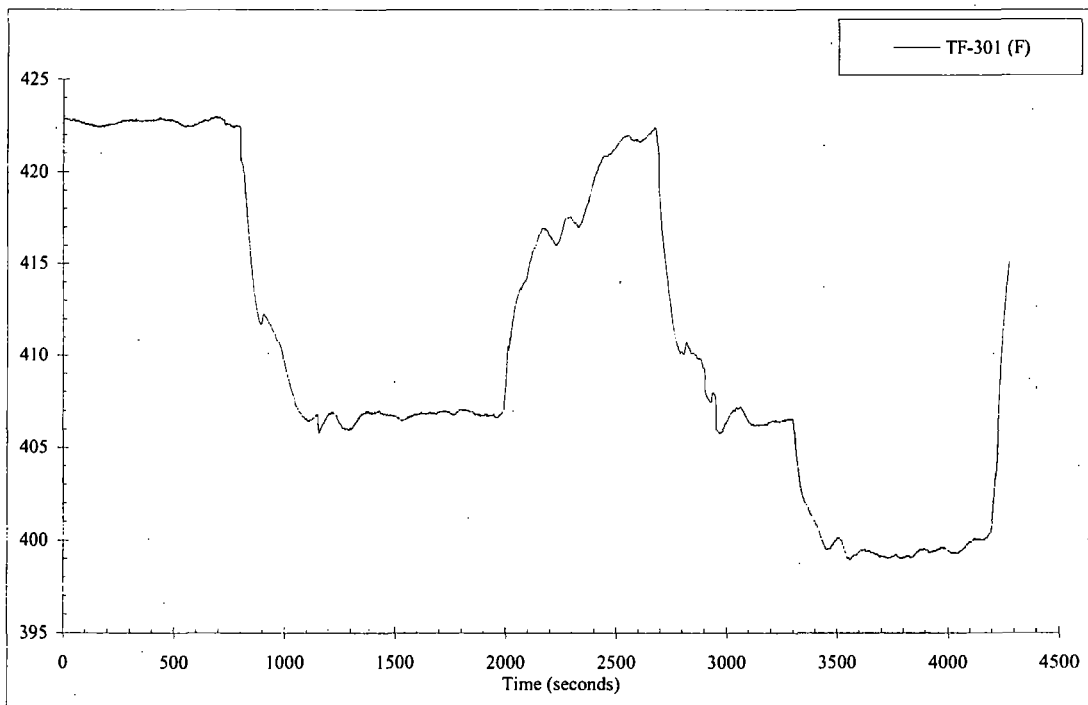
Temp Steam Pressure for FVM-002



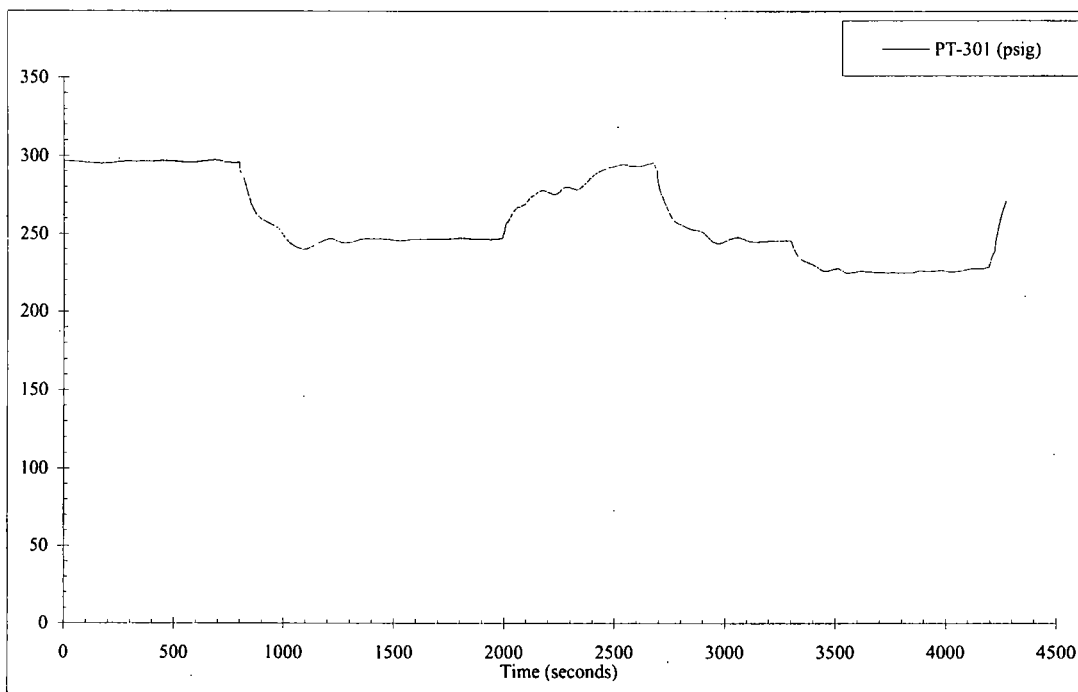
Rx Upper Head Pressure



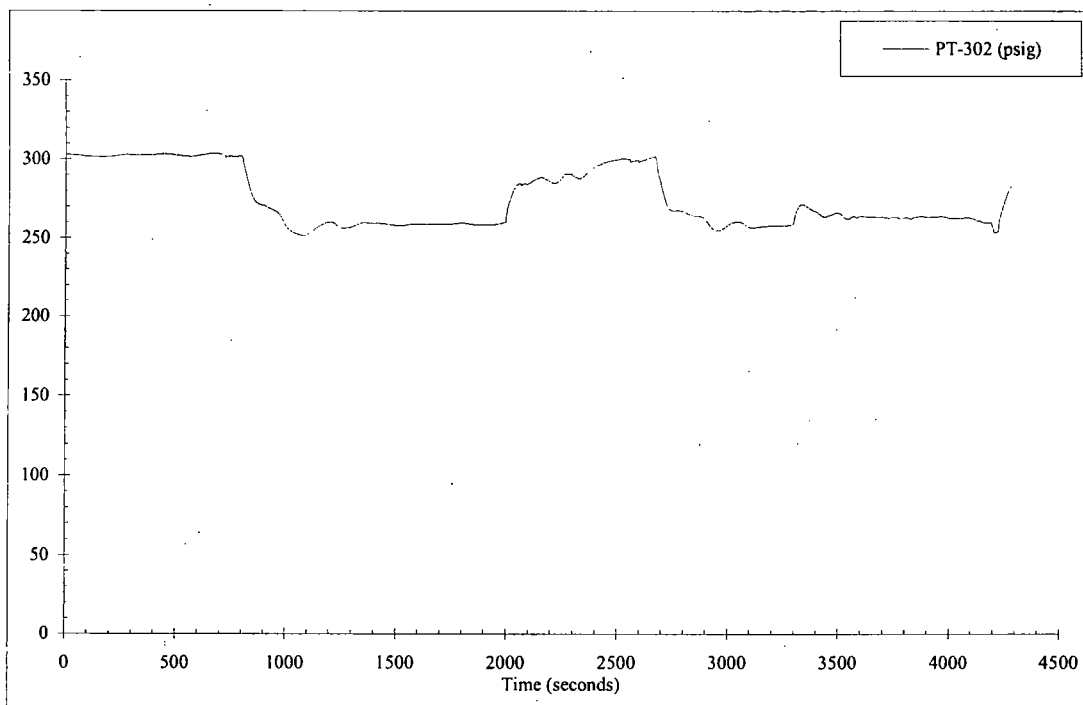
SG-1 Long Tube at Top Temperature



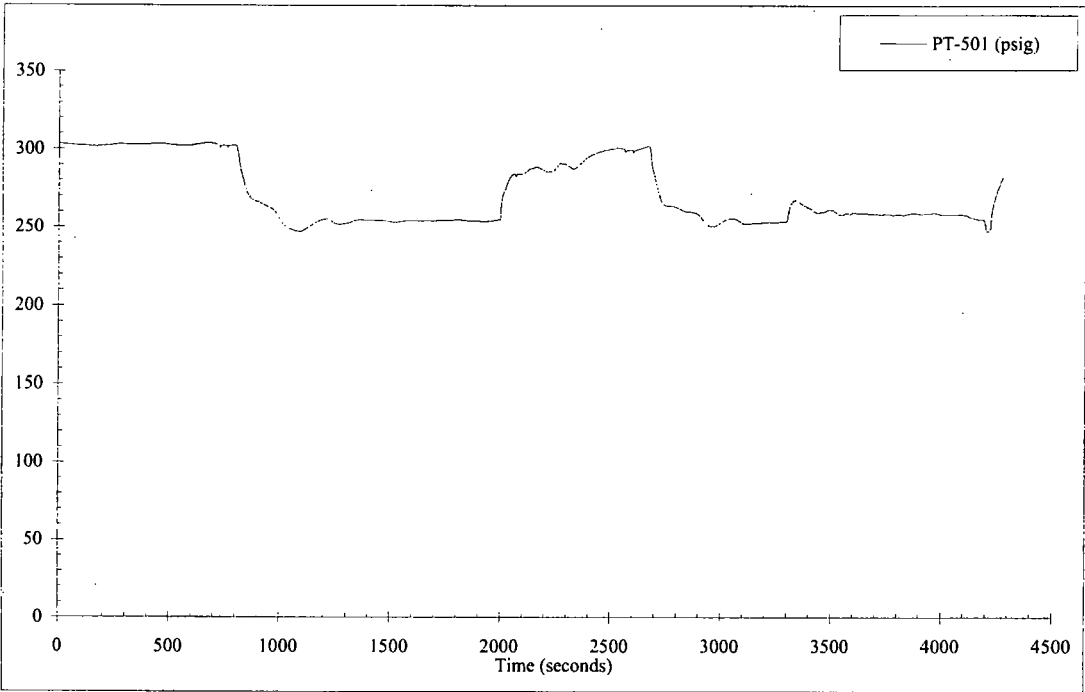
SG-1 Steam Temperature (SC-301)



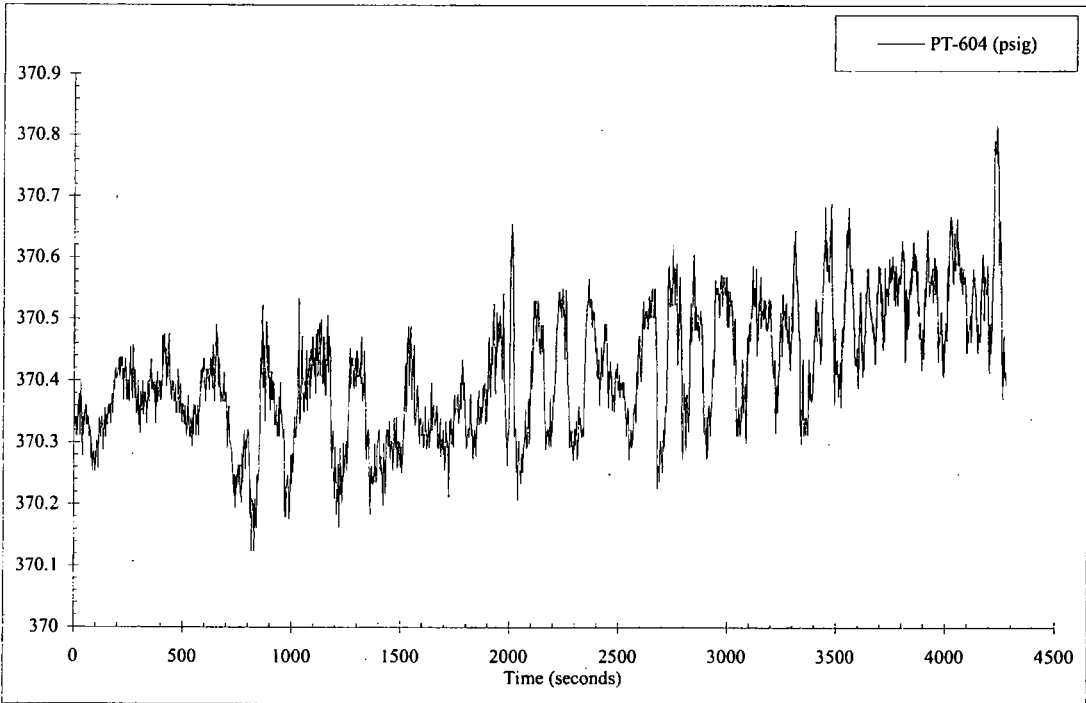
SG-1 Pressure



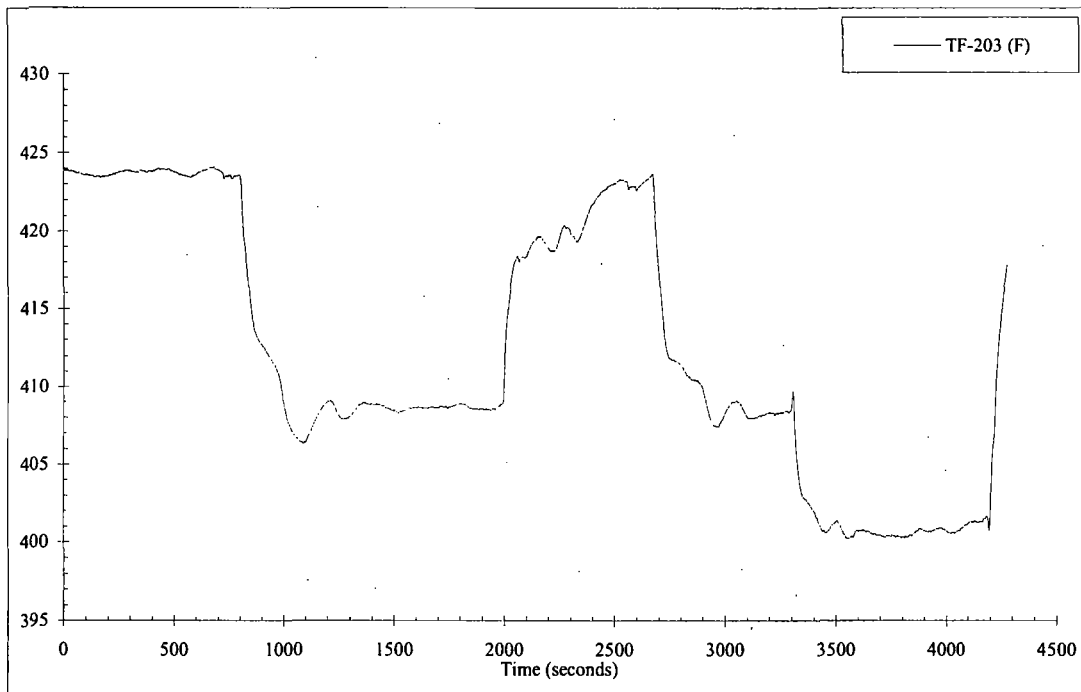
SG-2 Pressure



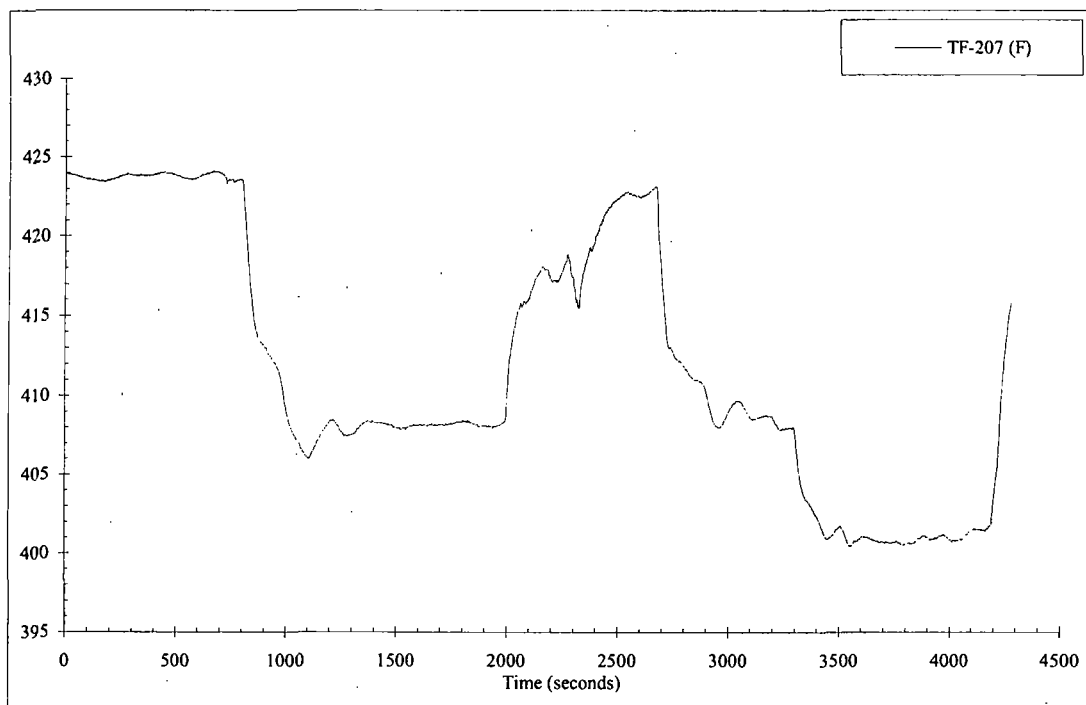
Separator Outlet Steam Pressure



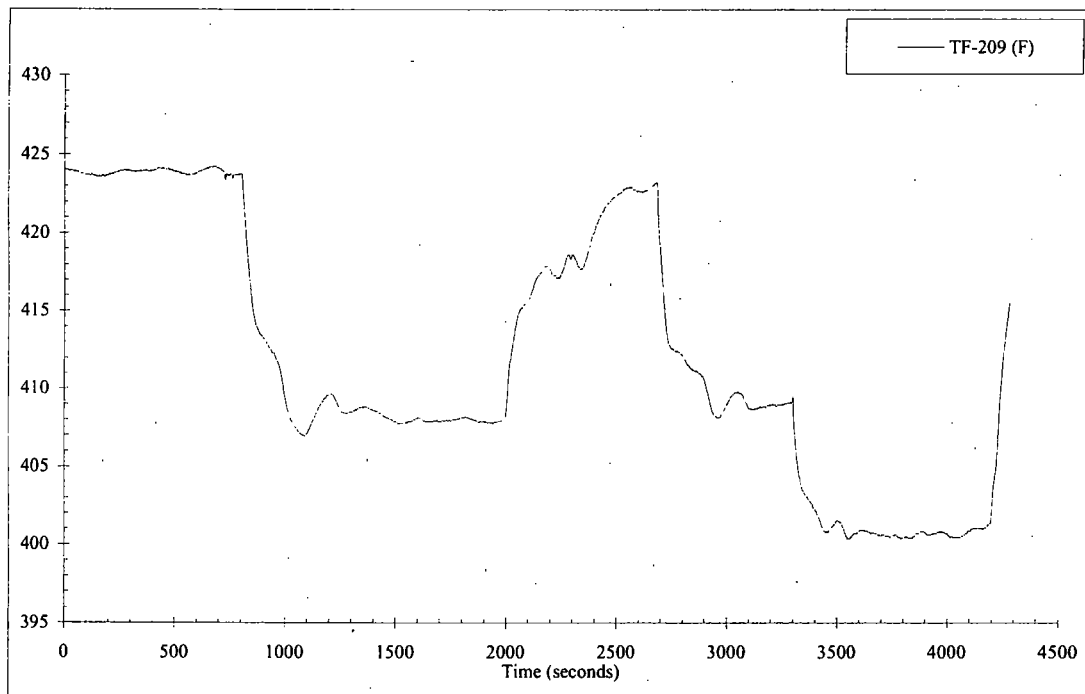
PZR WR Pressure



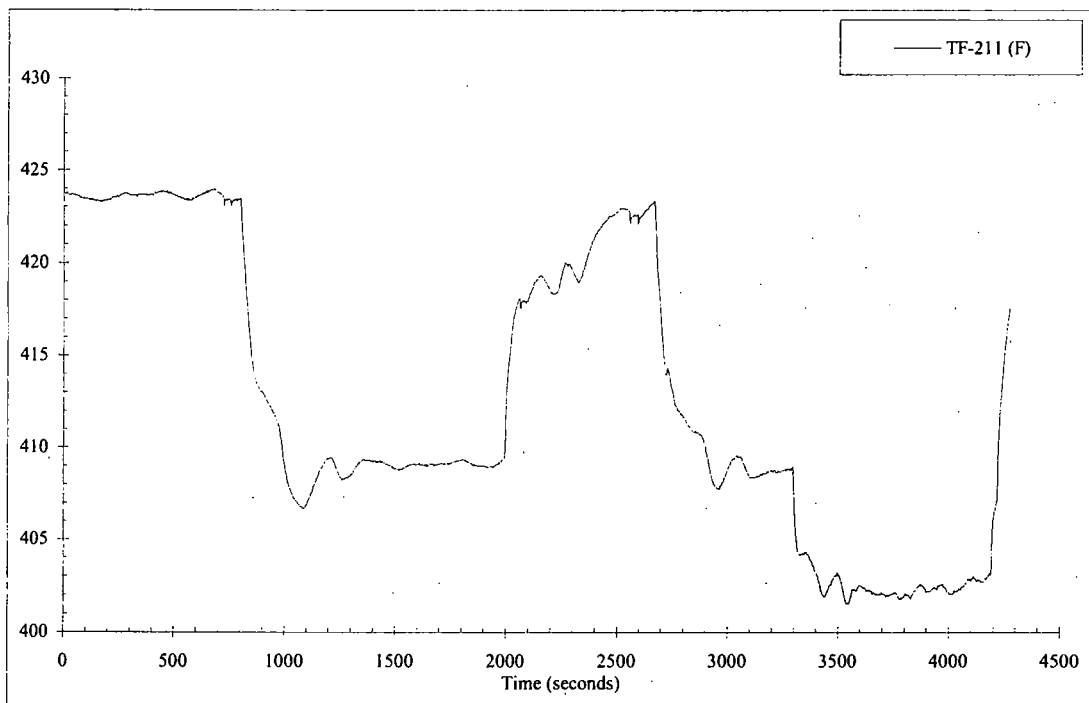
Separator Outlet Steam Temperature



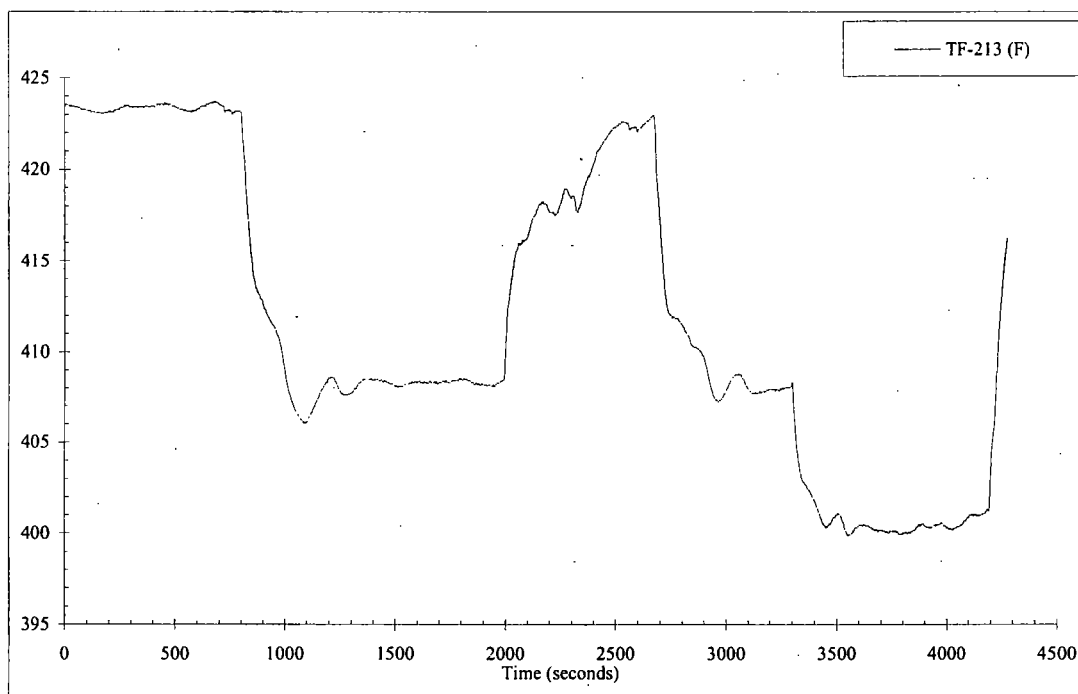
SG-1 Short Tube at Middle Outlet Side Temperature



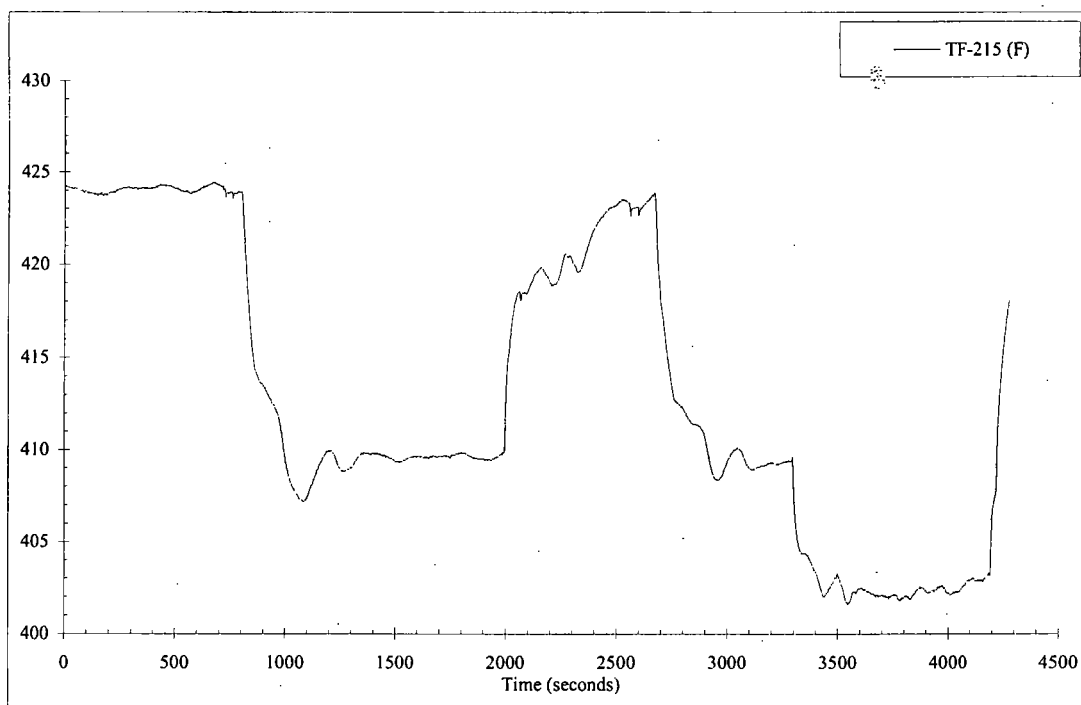
SG-1 Short Tube at Middle Inlet Side Temperature



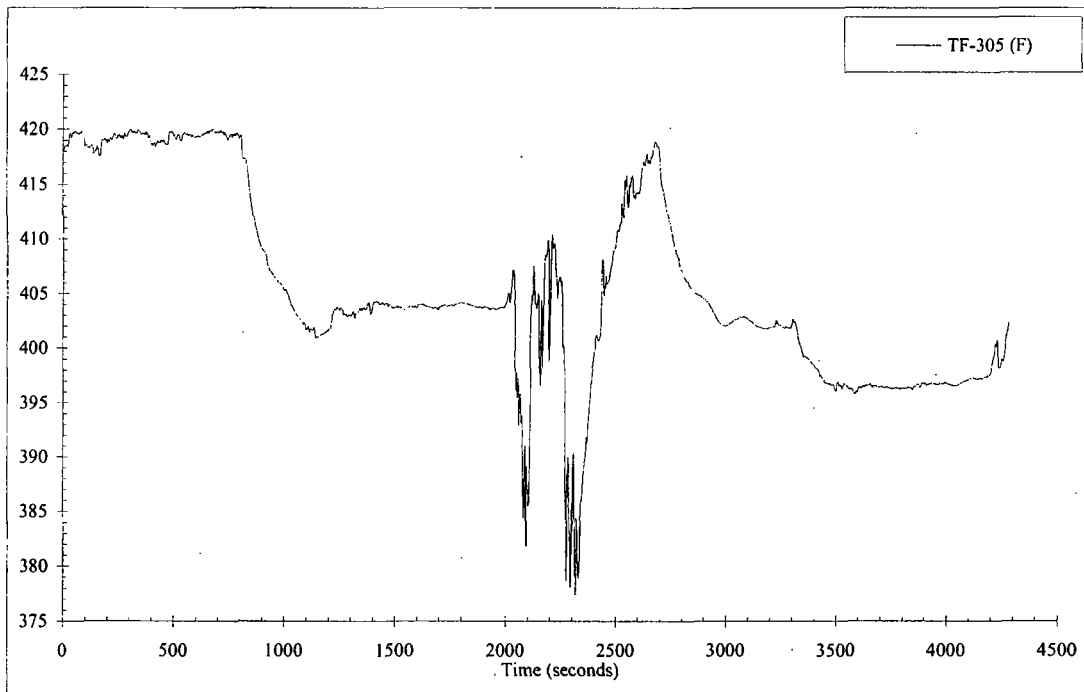
SG-1 Long Tube at Middle Outlet Temperature



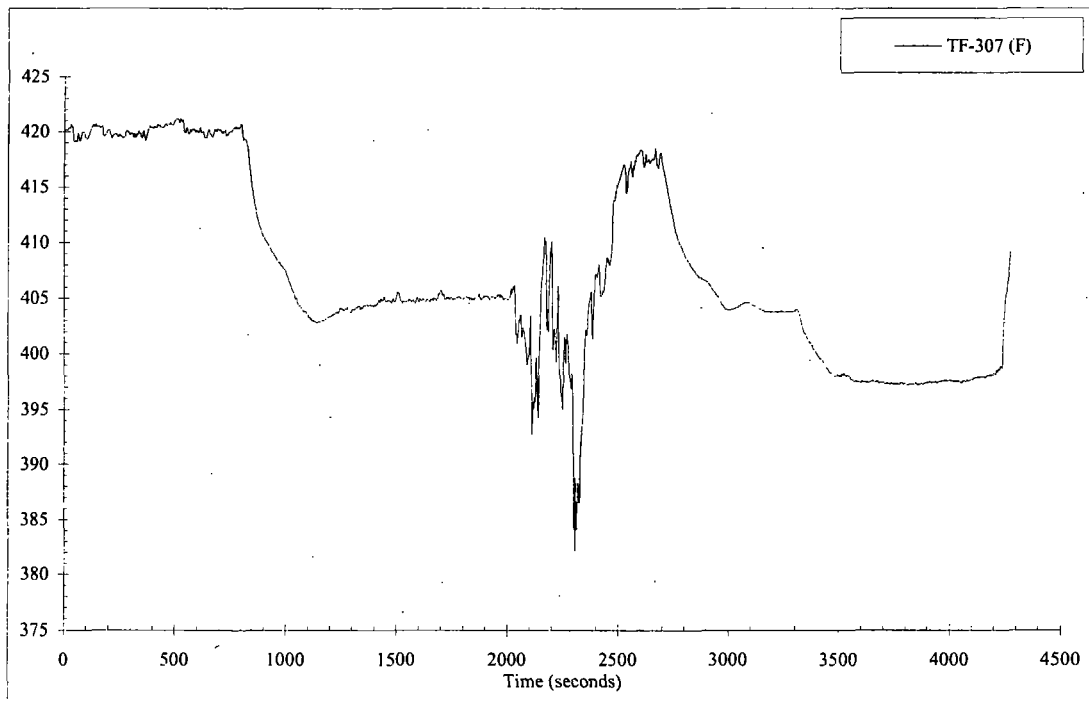
SG-1 Long Tube at Middle Inlet Temperature



SG-1 Short Tube at Top Temperature

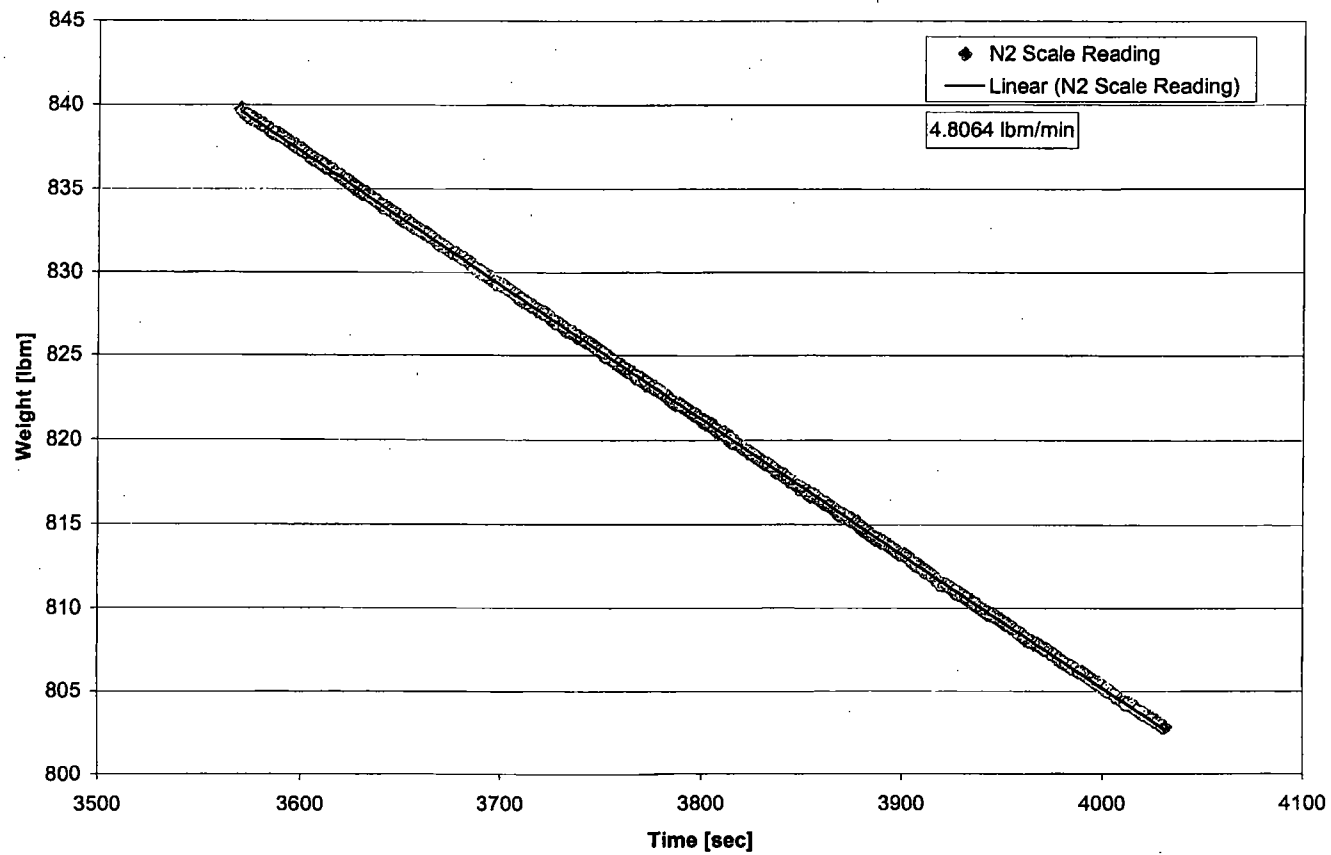


SG-1 Downcomer HL Side Temperature



SG-1 Downcomer CL Side Temperature

NRC-COND-08 Nitrogen Mass Flowrate



NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:21:23 | 3263 | 848.55 |
| 13:21:24 | 3264 | 848.55 |
| 13:21:25 | 3265 | 848.55 |
| 13:21:26 | 3266 | 848.55 |
| 13:21:27 | 3267 | 848.55 |
| 13:21:28 | 3268 | 848.55 |
| 13:21:29 | 3269 | 848.55 |
| 13:21:30 | 3270 | 848.55 |
| 13:21:31 | 3271 | 848.55 |
| 13:21:33 | 3273 | 848.55 |
| 13:21:34 | 3274 | 848.55 |
| 13:21:35 | 3275 | 848.55 |
| 13:21:36 | 3276 | 848.55 |
| 13:21:37 | 3277 | 848.55 |
| 13:21:38 | 3278 | 848.55 |
| 13:21:39 | 3279 | 848.55 |
| 13:21:40 | 3280 | 848.55 |
| 13:21:41 | 3281 | 848.55 |
| 13:21:42 | 3282 | 848.55 |
| 13:21:43 | 3283 | 848.55 |
| 13:21:44 | 3284 | 848.55 |
| 13:21:45 | 3285 | 848.55 |
| 13:21:46 | 3286 | 848.55 |
| 13:21:47 | 3287 | 848.55 |
| 13:21:48 | 3288 | 848.55 |
| 13:21:49 | 3289 | 848.55 |
| 13:21:50 | 3290 | 848.55 |
| 13:21:51 | 3291 | 848.55 |
| 13:21:52 | 3292 | 848.55 |
| 13:21:53 | 3293 | 848.55 |
| 13:21:54 | 3294 | 848.55 |
| 13:21:56 | 3296 | 848.55 |
| 13:21:57 | 3297 | 848.55 |
| 13:21:58 | 3298 | 848.55 |
| 13:21:59 | 3299 | 848.55 |
| 13:22:00 | 3300 | 848.55 |
| 13:22:01 | 3301 | 848.55 |
| 13:22:02 | 3302 | 848.55 |
| 13:22:03 | 3303 | 848.55 |
| 13:22:04 | 3304 | 848.55 |
| 13:22:05 | 3305 | 848.55 |
| 13:22:06 | 3306 | 848.55 |
| 13:22:07 | 3307 | 848.55 |
| 13:22:08 | 3308 | 848.55 |
| 13:22:09 | 3309 | 848.55 |
| 13:22:10 | 3310 | 848.55 |
| 13:22:11 | 3311 | 848.55 |
| 13:22:12 | 3312 | 848.55 |
| 13:22:13 | 3313 | 848.55 |
| 13:22:14 | 3314 | 848.55 |
| 13:22:15 | 3315 | 848.55 |
| 13:22:16 | 3316 | 848.55 |
| 13:22:18 | 3318 | 848.55 |
| 13:22:19 | 3319 | 848.55 |
| 13:22:20 | 3320 | 848.55 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:22:21 | 3321 | 848.55 |
| 13:22:22 | 3322 | 848.60 |
| 13:22:23 | 3323 | 848.60 |
| 13:22:24 | 3324 | 848.60 |
| 13:22:25 | 3325 | 848.60 |
| 13:22:26 | 3326 | 848.60 |
| 13:22:27 | 3327 | 848.60 |
| 13:22:28 | 3328 | 848.60 |
| 13:22:29 | 3329 | 848.60 |
| 13:22:30 | 3330 | 848.60 |
| 13:22:31 | 3331 | 848.60 |
| 13:22:32 | 3332 | 848.55 |
| 13:22:33 | 3333 | 848.55 |
| 13:22:34 | 3334 | 848.55 |
| 13:22:35 | 3335 | 848.55 |
| 13:22:36 | 3336 | 848.55 |
| 13:22:37 | 3337 | 848.55 |
| 13:22:38 | 3338 | 848.55 |
| 13:22:39 | 3339 | 848.55 |
| 13:22:41 | 3341 | 848.55 |
| 13:22:42 | 3342 | 848.55 |
| 13:22:43 | 3343 | 848.55 |
| 13:22:44 | 3344 | 848.55 |
| 13:22:45 | 3345 | 848.55 |
| 13:22:46 | 3346 | 848.55 |
| 13:22:47 | 3347 | 848.55 |
| 13:22:48 | 3348 | 848.55 |
| 13:22:49 | 3349 | 848.60 |
| 13:22:50 | 3350 | 848.60 |
| 13:22:51 | 3351 | 848.60 |
| 13:22:52 | 3352 | 848.60 |
| 13:22:53 | 3353 | 848.60 |
| 13:22:54 | 3354 | 848.60 |
| 13:22:55 | 3355 | 848.60 |
| 13:22:56 | 3356 | 848.60 |
| 13:22:57 | 3357 | 848.60 |
| 13:22:58 | 3358 | 848.60 |
| 13:22:59 | 3359 | 848.60 |
| 13:23:00 | 3360 | 848.60 |
| 13:23:01 | 3361 | 848.60 |
| 13:23:03 | 3363 | 848.55 |
| 13:23:04 | 3364 | 848.55 |
| 13:23:05 | 3365 | 848.55 |
| 13:23:06 | 3366 | 848.55 |
| 13:23:07 | 3367 | 848.55 |
| 13:23:08 | 3368 | 848.55 |
| 13:23:09 | 3369 | 848.55 |
| 13:23:10 | 3370 | 848.55 |
| 13:23:11 | 3371 | 848.55 |
| 13:23:12 | 3372 | 848.60 |
| 13:23:13 | 3373 | 848.60 |
| 13:23:14 | 3374 | 848.60 |
| 13:23:15 | 3375 | 848.60 |
| 13:23:16 | 3376 | 848.55 |
| 13:23:17 | 3377 | 848.55 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:23:18 | 3378 | 848.55 |
| 13:23:19 | 3379 | 848.55 |
| 13:23:20 | 3380 | 848.55 |
| 13:23:21 | 3381 | 848.55 |
| 13:23:22 | 3382 | 848.55 |
| 13:23:23 | 3383 | 848.55 |
| 13:23:24 | 3384 | 848.55 |
| 13:23:26 | 3386 | 848.60 |
| 13:23:27 | 3387 | 848.60 |
| 13:23:28 | 3388 | 848.60 |
| 13:23:29 | 3389 | 848.55 |
| 13:23:30 | 3390 | 848.60 |
| 13:23:31 | 3391 | 848.55 |
| 13:23:32 | 3392 | 848.55 |
| 13:23:33 | 3393 | 848.60 |
| 13:23:34 | 3394 | 848.55 |
| 13:23:35 | 3395 | 848.60 |
| 13:23:36 | 3396 | 848.55 |
| 13:23:37 | 3397 | 848.55 |
| 13:23:38 | 3398 | 848.55 |
| 13:23:39 | 3399 | 848.55 |
| 13:23:40 | 3400 | 848.55 |
| 13:23:41 | 3401 | 848.55 |
| 13:23:42 | 3402 | 848.55 |
| 13:23:43 | 3403 | 848.55 |
| 13:23:44 | 3404 | 848.55 |
| 13:23:45 | 3405 | 848.55 |
| 13:23:46 | 3406 | 848.60 |
| 13:23:48 | 3408 | 848.60 |
| 13:23:49 | 3409 | 848.60 |
| 13:23:50 | 3410 | 848.60 |
| 13:23:51 | 3411 | 848.55 |
| 13:23:52 | 3412 | 848.55 |
| 13:23:53 | 3413 | 848.55 |
| 13:23:54 | 3414 | 848.55 |
| 13:23:55 | 3415 | 848.55 |
| 13:23:56 | 3416 | 848.55 |
| 13:23:57 | 3417 | 848.55 |
| 13:23:58 | 3418 | 848.55 |
| 13:23:59 | 3419 | 848.55 |
| 13:24:00 | 3420 | 848.55 |
| 13:24:01 | 3421 | 848.55 |
| 13:24:02 | 3422 | 848.55 |
| 13:24:03 | 3423 | 848.55 |
| 13:24:04 | 3424 | 848.55 |
| 13:24:05 | 3425 | 848.55 |
| 13:24:06 | 3426 | 848.55 |
| 13:24:07 | 3427 | 848.55 |
| 13:24:08 | 3428 | 848.55 |
| 13:24:10 | 3430 | 848.55 |
| 13:24:11 | 3431 | 848.55 |
| 13:24:12 | 3432 | 848.55 |
| 13:24:13 | 3433 | 848.55 |
| 13:24:14 | 3434 | 848.55 |
| 13:24:15 | 3435 | 848.55 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:24:16 | 3436 | 848.55 |
| 13:24:17 | 3437 | 848.55 |
| 13:24:18 | 3438 | 848.55 |
| 13:24:19 | 3439 | 848.55 |
| 13:24:20 | 3440 | 848.55 |
| 13:24:21 | 3441 | 848.60 |
| 13:24:22 | 3442 | 848.55 |
| 13:24:23 | 3443 | 848.60 |
| 13:24:24 | 3444 | 848.60 |
| 13:24:25 | 3445 | 848.55 |
| 13:24:26 | 3446 | 848.55 |
| 13:24:27 | 3447 | 848.55 |
| 13:24:28 | 3448 | 848.55 |
| 13:24:29 | 3449 | 848.55 |
| 13:24:30 | 3450 | 848.55 |
| 13:24:31 | 3451 | 848.60 |
| 13:24:33 | 3453 | 849.10 |
| 13:24:34 | 3454 | 850.40 |
| 13:24:35 | 3455 | 852.95 |
| 13:24:36 | 3456 | 854.10 |
| 13:24:37 | 3457 | 850.60 |
| 13:24:38 | 3458 | 851.70 |
| 13:24:39 | 3459 | 850.95 |
| 13:24:40 | 3460 | 849.95 |
| 13:24:41 | 3461 | 848.40 |
| 13:24:42 | 3462 | 848.35 |
| 13:24:43 | 3463 | 848.30 |
| 13:24:44 | 3464 | 848.25 |
| 13:24:45 | 3465 | 848.05 |
| 13:24:46 | 3466 | 848.00 |
| 13:24:47 | 3467 | 847.95 |
| 13:24:48 | 3468 | 847.90 |
| 13:24:49 | 3469 | 847.85 |
| 13:24:50 | 3470 | 847.60 |
| 13:24:51 | 3471 | 847.55 |
| 13:24:52 | 3472 | 847.55 |
| 13:24:53 | 3473 | 847.50 |
| 13:24:54 | 3474 | 847.30 |
| 13:24:56 | 3476 | 847.25 |
| 13:24:57 | 3477 | 847.20 |
| 13:24:58 | 3478 | 847.15 |
| 13:24:59 | 3479 | 847.05 |
| 13:25:00 | 3480 | 847.00 |
| 13:25:01 | 3481 | 846.90 |
| 13:25:02 | 3482 | 846.80 |
| 13:25:03 | 3483 | 846.70 |
| 13:25:04 | 3484 | 846.65 |
| 13:25:05 | 3485 | 846.45 |
| 13:25:06 | 3486 | 846.35 |
| 13:25:07 | 3487 | 846.30 |
| 13:25:08 | 3488 | 846.25 |
| 13:25:09 | 3489 | 846.20 |
| 13:25:10 | 3490 | 846.10 |
| 13:25:11 | 3491 | 846.05 |
| 13:25:12 | 3492 | 845.95 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:25:13 | 3493 | 845.85 |
| 13:25:14 | 3494 | 845.80 |
| 13:25:15 | 3495 | 845.70 |
| 13:25:16 | 3496 | 845.50 |
| 13:25:18 | 3498 | 845.45 |
| 13:25:19 | 3499 | 845.40 |
| 13:25:20 | 3500 | 845.35 |
| 13:25:21 | 3501 | 845.25 |
| 13:25:22 | 3502 | 845.05 |
| 13:25:23 | 3503 | 845.05 |
| 13:25:24 | 3504 | 845.00 |
| 13:25:25 | 3505 | 844.90 |
| 13:25:26 | 3506 | 844.85 |
| 13:25:27 | 3507 | 844.75 |
| 13:25:28 | 3508 | 844.65 |
| 13:25:29 | 3509 | 844.60 |
| 13:25:30 | 3510 | 844.50 |
| 13:25:31 | 3511 | 844.40 |
| 13:25:32 | 3512 | 844.30 |
| 13:25:33 | 3513 | 844.25 |
| 13:25:34 | 3514 | 844.15 |
| 13:25:35 | 3515 | 844.10 |
| 13:25:36 | 3516 | 844.00 |
| 13:25:37 | 3517 | 843.90 |
| 13:25:38 | 3518 | 843.75 |
| 13:25:40 | 3520 | 843.70 |
| 13:25:41 | 3521 | 843.65 |
| 13:25:42 | 3522 | 843.60 |
| 13:25:43 | 3523 | 843.50 |
| 13:25:44 | 3524 | 843.40 |
| 13:25:45 | 3525 | 843.35 |
| 13:25:46 | 3526 | 843.25 |
| 13:25:47 | 3527 | 843.20 |
| 13:25:48 | 3528 | 843.10 |
| 13:25:49 | 3529 | 842.90 |
| 13:25:50 | 3530 | 842.85 |
| 13:25:51 | 3531 | 842.80 |
| 13:25:52 | 3532 | 842.75 |
| 13:25:53 | 3533 | 842.65 |
| 13:25:54 | 3534 | 842.60 |
| 13:25:55 | 3535 | 842.50 |
| 13:25:56 | 3536 | 842.45 |
| 13:25:57 | 3537 | 842.35 |
| 13:25:58 | 3538 | 842.25 |
| 13:25:59 | 3539 | 842.05 |
| 13:26:00 | 3540 | 842.00 |
| 13:26:02 | 3542 | 842.00 |
| 13:26:03 | 3543 | 841.90 |
| 13:26:04 | 3544 | 841.80 |
| 13:26:05 | 3545 | 841.60 |
| 13:26:06 | 3546 | 841.55 |
| 13:26:07 | 3547 | 841.50 |
| 13:26:08 | 3548 | 841.45 |
| 13:26:09 | 3549 | 841.40 |
| 13:26:10 | 3550 | 841.30 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:26:11 | 3551 | 841.25 |
| 13:26:12 | 3552 | 841.15 |
| 13:26:13 | 3553 | 840.95 |
| 13:26:14 | 3554 | 840.90 |
| 13:26:15 | 3555 | 840.85 |
| 13:26:16 | 3556 | 840.80 |
| 13:26:17 | 3557 | 840.75 |
| 13:26:18 | 3558 | 840.65 |
| 13:26:19 | 3559 | 840.55 |
| 13:26:20 | 3560 | 840.45 |
| 13:26:21 | 3561 | 840.40 |
| 13:26:22 | 3562 | 840.20 |
| 13:26:23 | 3563 | 840.15 |
| 13:26:25 | 3565 | 840.10 |
| 13:26:26 | 3566 | 839.90 |
| 13:26:27 | 3567 | 839.85 |
| 13:26:28 | 3568 | 839.80 |
| 13:26:29 | 3569 | 839.75 |
| 13:26:30 | 3570 | 839.70 |
| 13:26:31 | 3571 | 839.60 |
| 13:26:32 | 3572 | 839.50 |
| 13:26:33 | 3573 | 839.30 |
| 13:26:34 | 3574 | 839.25 |
| 13:26:35 | 3575 | 839.20 |
| 13:26:36 | 3576 | 839.15 |
| 13:26:37 | 3577 | 839.10 |
| 13:26:38 | 3578 | 839.00 |
| 13:26:39 | 3579 | 838.95 |
| 13:26:40 | 3580 | 838.85 |
| 13:26:41 | 3581 | 838.80 |
| 13:26:42 | 3582 | 838.70 |
| 13:26:43 | 3583 | 838.60 |
| 13:26:44 | 3584 | 838.55 |
| 13:26:45 | 3585 | 838.35 |
| 13:26:47 | 3587 | 838.30 |
| 13:26:48 | 3588 | 838.25 |
| 13:26:49 | 3589 | 838.20 |
| 13:26:50 | 3590 | 838.10 |
| 13:26:51 | 3591 | 838.05 |
| 13:26:52 | 3592 | 837.95 |
| 13:26:53 | 3593 | 837.85 |
| 13:26:54 | 3594 | 837.80 |
| 13:26:55 | 3595 | 837.70 |
| 13:26:56 | 3596 | 837.60 |
| 13:26:57 | 3597 | 837.55 |
| 13:26:58 | 3598 | 837.45 |
| 13:26:59 | 3599 | 837.35 |
| 13:27:00 | 3600 | 837.30 |
| 13:27:01 | 3601 | 837.20 |
| 13:27:02 | 3602 | 837.15 |
| 13:27:03 | 3603 | 837.05 |
| 13:27:04 | 3604 | 836.85 |
| 13:27:05 | 3605 | 836.80 |
| 13:27:06 | 3606 | 836.75 |
| 13:27:07 | 3607 | 836.70 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:27:08 | 3608 | 836.60 |
| 13:27:10 | 3610 | 836.55 |
| 13:27:11 | 3611 | 836.30 |
| 13:27:12 | 3612 | 836.30 |
| 13:27:13 | 3613 | 836.25 |
| 13:27:14 | 3614 | 836.20 |
| 13:27:15 | 3615 | 836.10 |
| 13:27:16 | 3616 | 836.05 |
| 13:27:17 | 3617 | 835.85 |
| 13:27:18 | 3618 | 835.80 |
| 13:27:19 | 3619 | 835.75 |
| 13:27:20 | 3620 | 835.70 |
| 13:27:21 | 3621 | 835.50 |
| 13:27:22 | 3622 | 835.45 |
| 13:27:23 | 3623 | 835.45 |
| 13:27:24 | 3624 | 835.35 |
| 13:27:25 | 3625 | 835.30 |
| 13:27:26 | 3626 | 835.05 |
| 13:27:27 | 3627 | 835.00 |
| 13:27:28 | 3628 | 834.95 |
| 13:27:29 | 3629 | 834.95 |
| 13:27:30 | 3630 | 834.75 |
| 13:27:32 | 3632 | 834.70 |
| 13:27:33 | 3633 | 834.65 |
| 13:27:34 | 3634 | 834.55 |
| 13:27:35 | 3635 | 834.45 |
| 13:27:36 | 3636 | 834.40 |
| 13:27:37 | 3637 | 834.30 |
| 13:27:38 | 3638 | 834.25 |
| 13:27:39 | 3639 | 834.15 |
| 13:27:40 | 3640 | 833.95 |
| 13:27:41 | 3641 | 833.95 |
| 13:27:42 | 3642 | 833.90 |
| 13:27:43 | 3643 | 833.80 |
| 13:27:44 | 3644 | 833.75 |
| 13:27:45 | 3645 | 833.65 |
| 13:27:46 | 3646 | 833.55 |
| 13:27:47 | 3647 | 833.50 |
| 13:27:48 | 3648 | 833.40 |
| 13:27:49 | 3649 | 833.35 |
| 13:27:50 | 3650 | 833.10 |
| 13:27:51 | 3651 | 833.10 |
| 13:27:52 | 3652 | 833.05 |
| 13:27:54 | 3654 | 833.00 |
| 13:27:55 | 3655 | 832.75 |
| 13:27:56 | 3656 | 832.70 |
| 13:27:57 | 3657 | 832.65 |
| 13:27:58 | 3658 | 832.60 |
| 13:27:59 | 3659 | 832.55 |
| 13:28:00 | 3660 | 832.45 |
| 13:28:01 | 3661 | 832.35 |
| 13:28:02 | 3662 | 832.30 |
| 13:28:03 | 3663 | 832.20 |
| 13:28:04 | 3664 | 832.15 |
| 13:28:05 | 3665 | 832.05 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:28:06 | 3666 | 832.00 |
| 13:28:07 | 3667 | 831.90 |
| 13:28:08 | 3668 | 831.70 |
| 13:28:09 | 3669 | 831.65 |
| 13:28:10 | 3670 | 831.60 |
| 13:28:11 | 3671 | 831.55 |
| 13:28:12 | 3672 | 831.45 |
| 13:28:13 | 3673 | 831.40 |
| 13:28:14 | 3674 | 831.30 |
| 13:28:15 | 3675 | 831.20 |
| 13:28:17 | 3677 | 831.10 |
| 13:28:18 | 3678 | 831.05 |
| 13:28:19 | 3679 | 830.95 |
| 13:28:20 | 3680 | 830.85 |
| 13:28:21 | 3681 | 830.80 |
| 13:28:22 | 3682 | 830.70 |
| 13:28:23 | 3683 | 830.60 |
| 13:28:24 | 3684 | 830.55 |
| 13:28:25 | 3685 | 830.45 |
| 13:28:26 | 3686 | 830.35 |
| 13:28:27 | 3687 | 830.15 |
| 13:28:28 | 3688 | 830.10 |
| 13:28:29 | 3689 | 830.05 |
| 13:28:30 | 3690 | 830.05 |
| 13:28:31 | 3691 | 829.95 |
| 13:28:32 | 3692 | 829.85 |
| 13:28:33 | 3693 | 829.80 |
| 13:28:34 | 3694 | 829.70 |
| 13:28:35 | 3695 | 829.65 |
| 13:28:36 | 3696 | 829.55 |
| 13:28:37 | 3697 | 829.35 |
| 13:28:39 | 3699 | 829.30 |
| 13:28:40 | 3700 | 829.25 |
| 13:28:41 | 3701 | 829.20 |
| 13:28:42 | 3702 | 829.10 |
| 13:28:43 | 3703 | 829.05 |
| 13:28:44 | 3704 | 828.95 |
| 13:28:45 | 3705 | 828.85 |
| 13:28:46 | 3706 | 828.80 |
| 13:28:47 | 3707 | 828.70 |
| 13:28:48 | 3708 | 828.60 |
| 13:28:49 | 3709 | 828.55 |
| 13:28:50 | 3710 | 828.30 |
| 13:28:51 | 3711 | 828.30 |
| 13:28:52 | 3712 | 828.25 |
| 13:28:53 | 3713 | 828.20 |
| 13:28:54 | 3714 | 828.10 |
| 13:28:55 | 3715 | 828.00 |
| 13:28:56 | 3716 | 827.95 |
| 13:28:57 | 3717 | 827.85 |
| 13:28:58 | 3718 | 827.75 |
| 13:28:59 | 3719 | 827.70 |
| 13:29:00 | 3720 | 827.60 |
| 13:29:02 | 3722 | 827.55 |
| 13:29:03 | 3723 | 827.45 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:29:04 | 3724 | 827.35 |
| 13:29:05 | 3725 | 827.25 |
| 13:29:06 | 3726 | 827.05 |
| 13:29:07 | 3727 | 827.00 |
| 13:29:08 | 3728 | 827.00 |
| 13:29:09 | 3729 | 826.95 |
| 13:29:10 | 3730 | 826.85 |
| 13:29:11 | 3731 | 826.75 |
| 13:29:12 | 3732 | 826.55 |
| 13:29:13 | 3733 | 826.50 |
| 13:29:14 | 3734 | 826.45 |
| 13:29:15 | 3735 | 826.40 |
| 13:29:16 | 3736 | 826.35 |
| 13:29:17 | 3737 | 826.25 |
| 13:29:18 | 3738 | 826.15 |
| 13:29:19 | 3739 | 826.10 |
| 13:29:20 | 3740 | 826.00 |
| 13:29:21 | 3741 | 825.90 |
| 13:29:22 | 3742 | 825.85 |
| 13:29:24 | 3744 | 825.75 |
| 13:29:25 | 3745 | 825.65 |
| 13:29:26 | 3746 | 825.60 |
| 13:29:27 | 3747 | 825.50 |
| 13:29:28 | 3748 | 825.40 |
| 13:29:29 | 3749 | 825.35 |
| 13:29:30 | 3750 | 825.25 |
| 13:29:31 | 3751 | 825.05 |
| 13:29:32 | 3752 | 825.00 |
| 13:29:33 | 3753 | 824.95 |
| 13:29:34 | 3754 | 824.90 |
| 13:29:35 | 3755 | 824.80 |
| 13:29:36 | 3756 | 824.65 |
| 13:29:37 | 3757 | 824.60 |
| 13:29:38 | 3758 | 824.55 |
| 13:29:39 | 3759 | 824.45 |
| 13:29:40 | 3760 | 824.40 |
| 13:29:41 | 3761 | 824.20 |
| 13:29:42 | 3762 | 824.15 |
| 13:29:43 | 3763 | 824.10 |
| 13:29:44 | 3764 | 824.05 |
| 13:29:46 | 3766 | 823.95 |
| 13:29:47 | 3767 | 823.70 |
| 13:29:48 | 3768 | 823.70 |
| 13:29:49 | 3769 | 823.65 |
| 13:29:50 | 3770 | 823.60 |
| 13:29:51 | 3771 | 823.55 |
| 13:29:52 | 3772 | 823.30 |
| 13:29:53 | 3773 | 823.30 |
| 13:29:54 | 3774 | 823.25 |
| 13:29:55 | 3775 | 823.20 |
| 13:29:56 | 3776 | 823.10 |
| 13:29:57 | 3777 | 823.05 |
| 13:29:58 | 3778 | 822.95 |
| 13:29:59 | 3779 | 822.90 |
| 13:30:00 | 3780 | 822.80 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:30:01 | 3781 | 822.70 |
| 13:30:02 | 3782 | 822.60 |
| 13:30:03 | 3783 | 822.55 |
| 13:30:04 | 3784 | 822.45 |
| 13:30:05 | 3785 | 822.25 |
| 13:30:06 | 3786 | 822.20 |
| 13:30:07 | 3787 | 822.15 |
| 13:30:09 | 3789 | 822.10 |
| 13:30:10 | 3790 | 822.00 |
| 13:30:11 | 3791 | 821.90 |
| 13:30:12 | 3792 | 821.85 |
| 13:30:13 | 3793 | 821.75 |
| 13:30:14 | 3794 | 821.65 |
| 13:30:15 | 3795 | 821.60 |
| 13:30:16 | 3796 | 821.50 |
| 13:30:17 | 3797 | 821.45 |
| 13:30:18 | 3798 | 821.35 |
| 13:30:19 | 3799 | 821.25 |
| 13:30:20 | 3800 | 821.15 |
| 13:30:21 | 3801 | 821.10 |
| 13:30:22 | 3802 | 821.00 |
| 13:30:23 | 3803 | 820.95 |
| 13:30:24 | 3804 | 820.90 |
| 13:30:25 | 3805 | 820.85 |
| 13:30:26 | 3806 | 820.75 |
| 13:30:27 | 3807 | 820.55 |
| 13:30:28 | 3808 | 820.50 |
| 13:30:29 | 3809 | 820.45 |
| 13:30:31 | 3811 | 820.40 |
| 13:30:32 | 3812 | 820.35 |
| 13:30:33 | 3813 | 820.25 |
| 13:30:34 | 3814 | 819.95 |
| 13:30:35 | 3815 | 819.90 |
| 13:30:36 | 3816 | 819.85 |
| 13:30:37 | 3817 | 819.85 |
| 13:30:38 | 3818 | 819.75 |
| 13:30:39 | 3819 | 819.65 |
| 13:30:40 | 3820 | 819.55 |
| 13:30:41 | 3821 | 819.50 |
| 13:30:42 | 3822 | 819.40 |
| 13:30:43 | 3823 | 819.30 |
| 13:30:44 | 3824 | 819.25 |
| 13:30:45 | 3825 | 819.15 |
| 13:30:46 | 3826 | 819.05 |
| 13:30:47 | 3827 | 819.00 |
| 13:30:48 | 3828 | 818.90 |
| 13:30:49 | 3829 | 818.80 |
| 13:30:50 | 3830 | 818.75 |
| 13:30:51 | 3831 | 818.65 |
| 13:30:53 | 3833 | 818.55 |
| 13:30:54 | 3834 | 818.45 |
| 13:30:55 | 3835 | 818.40 |
| 13:30:56 | 3836 | 818.20 |
| 13:30:57 | 3837 | 818.15 |
| 13:30:58 | 3838 | 818.10 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:30:59 | 3839 | 818.05 |
| 13:31:00 | 3840 | 817.95 |
| 13:31:01 | 3841 | 817.90 |
| 13:31:02 | 3842 | 817.80 |
| 13:31:03 | 3843 | 817.60 |
| 13:31:04 | 3844 | 817.55 |
| 13:31:05 | 3845 | 817.50 |
| 13:31:06 | 3846 | 817.45 |
| 13:31:07 | 3847 | 817.35 |
| 13:31:08 | 3848 | 817.15 |
| 13:31:09 | 3849 | 817.15 |
| 13:31:10 | 3850 | 817.10 |
| 13:31:11 | 3851 | 817.05 |
| 13:31:12 | 3852 | 817.00 |
| 13:31:13 | 3853 | 816.90 |
| 13:31:14 | 3854 | 816.65 |
| 13:31:16 | 3856 | 816.65 |
| 13:31:17 | 3857 | 816.60 |
| 13:31:18 | 3858 | 816.55 |
| 13:31:19 | 3859 | 816.45 |
| 13:31:20 | 3860 | 816.30 |
| 13:31:21 | 3861 | 816.25 |
| 13:31:22 | 3862 | 816.20 |
| 13:31:23 | 3863 | 816.15 |
| 13:31:24 | 3864 | 816.05 |
| 13:31:25 | 3865 | 816.00 |
| 13:31:26 | 3866 | 815.90 |
| 13:31:27 | 3867 | 815.80 |
| 13:31:28 | 3868 | 815.60 |
| 13:31:29 | 3869 | 815.60 |
| 13:31:30 | 3870 | 815.55 |
| 13:31:31 | 3871 | 815.50 |
| 13:31:32 | 3872 | 815.45 |
| 13:31:33 | 3873 | 815.35 |
| 13:31:34 | 3874 | 815.30 |
| 13:31:35 | 3875 | 815.25 |
| 13:31:36 | 3876 | 815.15 |
| 13:31:38 | 3878 | 815.05 |
| 13:31:39 | 3879 | 814.95 |
| 13:31:40 | 3880 | 814.70 |
| 13:31:41 | 3881 | 814.65 |
| 13:31:42 | 3882 | 814.60 |
| 13:31:43 | 3883 | 814.55 |
| 13:31:44 | 3884 | 814.45 |
| 13:31:45 | 3885 | 814.25 |
| 13:31:46 | 3886 | 814.20 |
| 13:31:47 | 3887 | 814.15 |
| 13:31:48 | 3888 | 814.10 |
| 13:31:49 | 3889 | 814.05 |
| 13:31:50 | 3890 | 813.95 |
| 13:31:51 | 3891 | 813.90 |
| 13:31:52 | 3892 | 813.85 |
| 13:31:53 | 3893 | 813.75 |
| 13:31:54 | 3894 | 813.70 |
| 13:31:55 | 3895 | 813.60 |

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Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:31:56 | 3896 | 813.50 |
| 13:31:57 | 3897 | 813.40 |
| 13:31:58 | 3898 | 813.35 |
| 13:31:59 | 3899 | 813.25 |
| 13:32:01 | 3901 | 813.20 |
| 13:32:02 | 3902 | 813.10 |
| 13:32:03 | 3903 | 813.00 |
| 13:32:04 | 3904 | 812.95 |
| 13:32:05 | 3905 | 812.85 |
| 13:32:06 | 3906 | 812.65 |
| 13:32:07 | 3907 | 812.60 |
| 13:32:08 | 3908 | 812.55 |
| 13:32:09 | 3909 | 812.50 |
| 13:32:10 | 3910 | 812.40 |
| 13:32:11 | 3911 | 812.25 |
| 13:32:12 | 3912 | 812.20 |
| 13:32:13 | 3913 | 812.15 |
| 13:32:14 | 3914 | 812.05 |
| 13:32:15 | 3915 | 812.00 |
| 13:32:16 | 3916 | 811.90 |
| 13:32:17 | 3917 | 811.80 |
| 13:32:18 | 3918 | 811.60 |
| 13:32:19 | 3919 | 811.45 |
| 13:32:20 | 3920 | 811.40 |
| 13:32:21 | 3921 | 811.40 |
| 13:32:23 | 3923 | 811.35 |
| 13:32:24 | 3924 | 811.25 |
| 13:32:25 | 3925 | 811.20 |
| 13:32:26 | 3926 | 811.10 |
| 13:32:27 | 3927 | 810.90 |
| 13:32:28 | 3928 | 810.90 |
| 13:32:29 | 3929 | 810.85 |
| 13:32:30 | 3930 | 810.80 |
| 13:32:31 | 3931 | 810.70 |
| 13:32:32 | 3932 | 810.65 |
| 13:32:33 | 3933 | 810.55 |
| 13:32:34 | 3934 | 810.45 |
| 13:32:35 | 3935 | 810.40 |
| 13:32:36 | 3936 | 810.30 |
| 13:32:37 | 3937 | 810.20 |
| 13:32:38 | 3938 | 810.15 |
| 13:32:39 | 3939 | 810.05 |
| 13:32:40 | 3940 | 809.95 |
| 13:32:41 | 3941 | 809.85 |
| 13:32:42 | 3942 | 809.80 |
| 13:32:43 | 3943 | 809.70 |
| 13:32:44 | 3944 | 809.65 |
| 13:32:46 | 3946 | 809.55 |
| 13:32:47 | 3947 | 809.45 |
| 13:32:48 | 3948 | 809.40 |
| 13:32:49 | 3949 | 809.30 |
| 13:32:50 | 3950 | 809.25 |
| 13:32:51 | 3951 | 809.15 |
| 13:32:52 | 3952 | 809.05 |
| 13:32:53 | 3953 | 809.00 |

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Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:32:54 | 3954 | 808.90 |
| 13:32:55 | 3955 | 808.80 |
| 13:32:56 | 3956 | 808.75 |
| 13:32:57 | 3957 | 808.65 |
| 13:32:58 | 3958 | 808.50 |
| 13:32:59 | 3959 | 808.45 |
| 13:33:00 | 3960 | 808.40 |
| 13:33:01 | 3961 | 808.30 |
| 13:33:02 | 3962 | 808.10 |
| 13:33:03 | 3963 | 808.05 |
| 13:33:04 | 3964 | 808.00 |
| 13:33:05 | 3965 | 807.95 |
| 13:33:06 | 3966 | 807.85 |
| 13:33:08 | 3968 | 807.80 |
| 13:33:09 | 3969 | 807.70 |
| 13:33:10 | 3970 | 807.65 |
| 13:33:11 | 3971 | 807.55 |
| 13:33:12 | 3972 | 807.50 |
| 13:33:13 | 3973 | 807.40 |
| 13:33:14 | 3974 | 807.30 |
| 13:33:15 | 3975 | 807.25 |
| 13:33:16 | 3976 | 807.15 |
| 13:33:17 | 3977 | 807.05 |
| 13:33:18 | 3978 | 807.00 |
| 13:33:19 | 3979 | 806.80 |
| 13:33:20 | 3980 | 806.75 |
| 13:33:21 | 3981 | 806.70 |
| 13:33:22 | 3982 | 806.65 |
| 13:33:23 | 3983 | 806.55 |
| 13:33:24 | 3984 | 806.50 |
| 13:33:25 | 3985 | 806.40 |
| 13:33:26 | 3986 | 806.35 |
| 13:33:27 | 3987 | 806.25 |
| 13:33:28 | 3988 | 806.20 |
| 13:33:30 | 3990 | 806.10 |
| 13:33:31 | 3991 | 806.00 |
| 13:33:32 | 3992 | 805.90 |
| 13:33:33 | 3993 | 805.85 |
| 13:33:34 | 3994 | 805.75 |
| 13:33:35 | 3995 | 805.65 |
| 13:33:36 | 3996 | 805.60 |
| 13:33:37 | 3997 | 805.50 |
| 13:33:38 | 3998 | 805.45 |
| 13:33:39 | 3999 | 805.35 |
| 13:33:40 | 4000 | 805.25 |
| 13:33:41 | 4001 | 805.20 |
| 13:33:42 | 4002 | 805.05 |
| 13:33:43 | 4003 | 805.00 |
| 13:33:44 | 4004 | 804.95 |
| 13:33:45 | 4005 | 804.85 |
| 13:33:46 | 4006 | 804.70 |
| 13:33:47 | 4007 | 804.65 |
| 13:33:48 | 4008 | 804.60 |
| 13:33:49 | 4009 | 804.55 |
| 13:33:50 | 4010 | 804.45 |

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Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:33:51 | 4011 | 804.25 |
| 13:33:53 | 4013 | 804.20 |
| 13:33:54 | 4014 | 804.20 |
| 13:33:55 | 4015 | 804.10 |
| 13:33:56 | 4016 | 804.05 |
| 13:33:57 | 4017 | 803.95 |
| 13:33:58 | 4018 | 803.75 |
| 13:33:59 | 4019 | 803.70 |
| 13:34:00 | 4020 | 803.65 |
| 13:34:01 | 4021 | 803.60 |
| 13:34:02 | 4022 | 803.55 |
| 13:34:03 | 4023 | 803.45 |
| 13:34:04 | 4024 | 803.40 |
| 13:34:05 | 4025 | 803.30 |
| 13:34:06 | 4026 | 803.20 |
| 13:34:07 | 4027 | 803.15 |
| 13:34:08 | 4028 | 803.05 |
| 13:34:09 | 4029 | 802.95 |
| 13:34:10 | 4030 | 802.85 |
| 13:34:11 | 4031 | 802.80 |
| 13:34:12 | 4032 | 802.75 |
| 13:34:13 | 4033 | 802.65 |
| 13:34:15 | 4035 | 802.60 |
| 13:34:16 | 4036 | 802.50 |
| 13:34:17 | 4037 | 802.40 |
| 13:34:18 | 4038 | 802.35 |
| 13:34:19 | 4039 | 802.25 |
| 13:34:20 | 4040 | 802.20 |
| 13:34:21 | 4041 | 802.10 |
| 13:34:22 | 4042 | 802.00 |
| 13:34:23 | 4043 | 801.95 |
| 13:34:24 | 4044 | 801.85 |
| 13:34:25 | 4045 | 801.80 |
| 13:34:26 | 4046 | 801.70 |
| 13:34:27 | 4047 | 801.60 |
| 13:34:28 | 4048 | 801.55 |
| 13:34:29 | 4049 | 801.45 |
| 13:34:30 | 4050 | 801.35 |
| 13:34:31 | 4051 | 801.25 |
| 13:34:32 | 4052 | 801.20 |
| 13:34:33 | 4053 | 801.10 |
| 13:34:34 | 4054 | 801.05 |
| 13:34:35 | 4055 | 800.95 |
| 13:34:36 | 4056 | 800.90 |
| 13:34:38 | 4058 | 800.80 |
| 13:34:39 | 4059 | 800.75 |
| 13:34:40 | 4060 | 800.65 |
| 13:34:41 | 4061 | 800.55 |
| 13:34:42 | 4062 | 800.50 |
| 13:34:43 | 4063 | 800.40 |
| 13:34:44 | 4064 | 800.30 |
| 13:34:45 | 4065 | 800.25 |
| 13:34:46 | 4066 | 800.15 |
| 13:34:47 | 4067 | 800.05 |
| 13:34:48 | 4068 | 800.00 |

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Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:34:49 | 4069 | 799.90 |
| 13:34:50 | 4070 | 799.85 |
| 13:34:51 | 4071 | 799.75 |
| 13:34:52 | 4072 | 799.70 |
| 13:34:53 | 4073 | 799.60 |
| 13:34:54 | 4074 | 799.55 |
| 13:34:55 | 4075 | 799.45 |
| 13:34:56 | 4076 | 799.35 |
| 13:34:57 | 4077 | 799.30 |
| 13:34:58 | 4078 | 799.20 |
| 13:35:00 | 4080 | 799.15 |
| 13:35:01 | 4081 | 799.05 |
| 13:35:02 | 4082 | 799.00 |
| 13:35:03 | 4083 | 798.80 |
| 13:35:04 | 4084 | 798.75 |
| 13:35:05 | 4085 | 798.70 |
| 13:35:06 | 4086 | 798.70 |
| 13:35:07 | 4087 | 798.50 |
| 13:35:08 | 4088 | 798.45 |
| 13:35:09 | 4089 | 798.40 |
| 13:35:10 | 4090 | 798.40 |
| 13:35:11 | 4091 | 798.30 |
| 13:35:12 | 4092 | 798.25 |
| 13:35:13 | 4093 | 798.15 |
| 13:35:14 | 4094 | 798.10 |
| 13:35:15 | 4095 | 798.00 |
| 13:35:16 | 4096 | 797.95 |
| 13:35:17 | 4097 | 797.85 |
| 13:35:18 | 4098 | 797.75 |
| 13:35:19 | 4099 | 797.70 |
| 13:35:20 | 4100 | 797.65 |
| 13:35:22 | 4102 | 797.55 |
| 13:35:23 | 4103 | 797.50 |
| 13:35:24 | 4104 | 797.40 |
| 13:35:25 | 4105 | 797.35 |
| 13:35:26 | 4106 | 797.25 |
| 13:35:27 | 4107 | 797.20 |
| 13:35:28 | 4108 | 797.10 |
| 13:35:29 | 4109 | 797.05 |
| 13:35:30 | 4110 | 796.95 |
| 13:35:31 | 4111 | 796.90 |
| 13:35:32 | 4112 | 796.80 |
| 13:35:33 | 4113 | 796.75 |
| 13:35:34 | 4114 | 796.65 |
| 13:35:35 | 4115 | 796.60 |
| 13:35:36 | 4116 | 796.50 |
| 13:35:37 | 4117 | 796.45 |
| 13:35:38 | 4118 | 796.35 |
| 13:35:39 | 4119 | 796.30 |
| 13:35:40 | 4120 | 796.25 |
| 13:35:41 | 4121 | 796.20 |
| 13:35:42 | 4122 | 796.10 |
| 13:35:43 | 4123 | 796.05 |
| 13:35:45 | 4125 | 795.95 |
| 13:35:46 | 4126 | 795.90 |

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Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:35:47 | 4127 | 795.85 |
| 13:35:48 | 4128 | 795.75 |
| 13:35:49 | 4129 | 795.70 |
| 13:35:50 | 4130 | 795.65 |
| 13:35:51 | 4131 | 795.55 |
| 13:35:52 | 4132 | 795.50 |
| 13:35:53 | 4133 | 795.40 |
| 13:35:54 | 4134 | 795.35 |
| 13:35:55 | 4135 | 795.25 |
| 13:35:56 | 4136 | 795.20 |
| 13:35:57 | 4137 | 795.10 |
| 13:35:58 | 4138 | 795.05 |
| 13:35:59 | 4139 | 794.95 |
| 13:36:00 | 4140 | 794.90 |
| 13:36:01 | 4141 | 794.85 |
| 13:36:02 | 4142 | 794.80 |
| 13:36:03 | 4143 | 794.70 |
| 13:36:04 | 4144 | 794.65 |
| 13:36:05 | 4145 | 794.60 |
| 13:36:07 | 4147 | 794.50 |
| 13:36:08 | 4148 | 794.45 |
| 13:36:09 | 4149 | 794.40 |
| 13:36:10 | 4150 | 794.30 |
| 13:36:11 | 4151 | 794.25 |
| 13:36:12 | 4152 | 794.20 |
| 13:36:13 | 4153 | 794.15 |
| 13:36:14 | 4154 | 794.05 |
| 13:36:15 | 4155 | 794.00 |
| 13:36:16 | 4156 | 793.90 |
| 13:36:17 | 4157 | 793.80 |
| 13:36:18 | 4158 | 793.75 |
| 13:36:19 | 4159 | 793.70 |
| 13:36:20 | 4160 | 793.60 |
| 13:36:21 | 4161 | 793.55 |
| 13:36:22 | 4162 | 793.50 |
| 13:36:23 | 4163 | 793.45 |
| 13:36:24 | 4164 | 793.25 |
| 13:36:25 | 4165 | 793.20 |
| 13:36:26 | 4166 | 793.20 |
| 13:36:27 | 4167 | 793.15 |
| 13:36:28 | 4168 | 793.10 |
| 13:36:30 | 4170 | 793.05 |
| 13:36:31 | 4171 | 793.00 |
| 13:36:32 | 4172 | 792.90 |
| 13:36:33 | 4173 | 792.85 |
| 13:36:34 | 4174 | 792.80 |
| 13:36:35 | 4175 | 792.75 |
| 13:36:36 | 4176 | 792.65 |
| 13:36:37 | 4177 | 792.60 |
| 13:36:38 | 4178 | 792.55 |
| 13:36:39 | 4179 | 792.45 |
| 13:36:40 | 4180 | 792.40 |
| 13:36:41 | 4181 | 792.35 |
| 13:36:42 | 4182 | 792.30 |
| 13:36:43 | 4183 | 792.25 |

NRC-COND-08

Nitrogen Weight Data

| Timestamp | Interval (sec) | Mass (lbm) |
|-----------|-------------------|---------------|
| 13:36:44 | 4184 | 792.15 |
| 13:36:45 | 4185 | 792.10 |
| 13:36:46 | 4186 | 792.05 |
| 13:36:47 | 4187 | 792.00 |
| 13:36:48 | 4188 | 791.95 |
| 13:36:49 | 4189 | 791.95 |
| 13:36:50 | 4190 | 791.95 |
| 13:36:52 | 4192 | 791.95 |
| 13:36:53 | 4193 | 791.95 |
| 13:36:54 | 4194 | 792.00 |
| 13:36:55 | 4195 | 792.00 |
| 13:36:56 | 4196 | 792.00 |
| 13:36:57 | 4197 | 792.00 |
| 13:36:58 | 4198 | 792.00 |
| 13:36:59 | 4199 | 792.00 |
| 13:37:00 | 4200 | 791.95 |
| 13:37:01 | 4201 | 791.95 |
| 13:37:02 | 4202 | 791.95 |
| 13:37:03 | 4203 | 791.95 |
| 13:37:04 | 4204 | 791.95 |
| 13:37:05 | 4205 | 791.95 |
| 13:37:06 | 4206 | 791.95 |
| 13:37:07 | 4207 | 792.00 |
| 13:37:08 | 4208 | 792.00 |
| 13:37:09 | 4209 | 792.00 |
| 13:37:10 | 4210 | 792.00 |
| 13:37:11 | 4211 | 792.00 |
| 13:37:12 | 4212 | 792.00 |
| 13:37:13 | 4213 | 792.00 |
| 13:37:15 | 4215 | 792.00 |
| 13:37:16 | 4216 | 792.00 |
| 13:37:17 | 4217 | 792.00 |
| 13:37:18 | 4218 | 792.00 |
| 13:37:19 | 4219 | 791.95 |
| 13:37:20 | 4220 | 791.95 |
| 13:37:21 | 4221 | 791.95 |
| 13:37:22 | 4222 | 791.95 |
| 13:37:23 | 4223 | 791.95 |
| 13:37:24 | 4224 | 791.95 |
| 13:37:25 | 4225 | 791.95 |
| 13:37:26 | 4226 | 791.95 |
| 13:37:27 | 4227 | 791.95 |
| 13:37:28 | 4228 | 791.95 |
| 13:37:29 | 4229 | 791.95 |
| 13:37:30 | 4230 | 791.95 |
| 13:37:31 | 4231 | 791.95 |
| 13:37:32 | 4232 | 791.95 |
| 13:37:33 | 4233 | 791.95 |

NRC-COND-08: Steam Generator U-Tube Condensation Test @ 300 psig w/ 10% Nitrogen

Oregon State University

Start time = 05/17/2007 12:27:00

End time = 05/17/2007 13:38:18

File created on 05/17/2007 13:54:20

| Timestamp | Interval (sec) | Tagname | Description | Area | Value |
|--------------------|----------------|-------------|------------------------------|----------|---------|
| 5/17/2007 12:16.01 | -658 | dDASLogging | DSCEngine historical logging | Status | Logging |
| 5/17/2007 12:25.00 | -119 | TEST_SW | Facility Test Switch | Switches | In Test |
| 5/17/2007 12:40.18 | 798 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 5/17/2007 12:40.18 | 798 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 5/17/2007 12:44.49 | 1069 | MF_001 | FST Fill Valve | Valves | Open |
| 5/17/2007 12:51.30 | 1470 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/17/2007 12:58.54 | 1914 | MF_001 | FST Fill Valve | Valves | Open |
| 5/17/2007 13:00.10 | 1990 | M001_HS_O | SG-1 Stm Stop HS | Switches | Close |
| 5/17/2007 13:00.10 | 1990 | M001_STAT | SG-1 Steam Stop | Valves | Closed |
| 5/17/2007 13:06.23 | 2363 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/17/2007 13:11.51 | 2691 | M001_HS_O | SG-1 Stm Stop HS | Switches | Open |
| 5/17/2007 13:11.51 | 2691 | M001_STAT | SG-1 Steam Stop | Valves | Open |
| 5/17/2007 13:19.22 | 3142 | MF_001 | FST Fill Valve | Valves | Open |
| 5/17/2007 13:25.23 | 3503 | MF_001 | FST Fill Valve | Valves | Closed |
| 5/17/2007 13:33.31 | 3991 | MF_001 | FST Fill Valve | Valves | Open |
| 5/17/2007 13:37.21 | 4221 | M001_HS_O | SG-1 Stm Stop HS | Switches | Close |
| 5/17/2007 13:37.21 | 4221 | M001_STAT | SG-1 Steam Stop | Valves | Closed |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|--------------------------------|
| DP-111 | DP across Upper Core Plate | 4.9931 | 0.9963 | 30 | -30 | Differential Pressure (in h2o) |
| DP-114 | DP across Upper Support Plate | 4.9796 | 0.9934 | 375 | -375 | Differential Pressure (in h2o) |
| DP-121 | DVI-1/CL-1 Differential Pressure | 4.9563 | 0.989 | 25 | -25 | Differential Pressure (in h2o) |
| DP-122 | DVI-2/CL-2 Differential Pressure | 4.9591 | 0.9931 | 25 | -25 | Differential Pressure (in h2o) |
| DP-123 | DVI-1/CL-3 Differential Pressure | 4.9743 | 0.9957 | 25 | -25 | Differential Pressure (in h2o) |
| DP-124 | DVI-2/CL-4 Differential Pressure | 4.9561 | 0.9924 | 25 | -25 | Differential Pressure (in h2o) |
| DP-125 | HL-1 entrance losses | 4.97 | 0.9951 | 30 | 0 | Differential Pressure (in h2o) |
| DP-126 | HL-2 entrance losses | 4.9707 | 0.9949 | 30 | 0 | Differential Pressure (in h2o) |
| DP-128 | DVI-1 entrance losses | 4.9709 | 0.9959 | 25 | -25 | Differential Pressure (in h2o) |
| DP-129 | DVI-2 entrance losses | 4.9736 | 0.9958 | 25 | -25 | Differential Pressure (in h2o) |
| DP-130 | Upper Head Differential Pressure | 4.9622 | 0.9941 | 50 | -50 | Differential Pressure (in h2o) |
| DP-201 | CL-1 Differential Pressure | 4.9689 | 0.9939 | 25 | -25 | Differential Pressure (in h2o) |
| DP-202 | RCP-2 Differential Pressure | 4.9588 | 0.9916 | 200 | 0 | Differential Pressure (in h2o) |
| DP-203 | RCP-1 Differential Pressure | 4.9692 | 0.9946 | 27 | 0 | Differential Pressure (psid) |
| DP-204 | CL-2 Differential Pressure | 4.9814 | 0.9969 | 25 | -25 | Differential Pressure (in h2o) |
| DP-205 | RCP-3 Differential Pressure | 4.978 | 0.995 | 200 | 0 | Differential Pressure (in h2o) |
| DP-206 | RCP-4 Differential Pressure | 4.984 | 0.9959 | 200 | 0 | Differential Pressure (in h2o) |
| DP-207 | CL-3 Differential Pressure | 4.9817 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-208 | CL-4 Differential Pressure | 4.9905 | 0.9984 | 25 | -25 | Differential Pressure (in h2o) |
| DP-209 | HL-1 Differential Pressure | 4.9858 | 0.998 | 25 | -25 | Differential Pressure (in h2o) |
| DP-210 | HL-2 Differential Pressure | 4.9649 | 0.9933 | 25 | -25 | Differential Pressure (in h2o) |
| DP-211 | SG-1 Short Tube Entrance Losses | 4.9849 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-212 | SG-2 Long Tube Exit Losses | 4.9838 | 0.9979 | 25 | 0 | Differential Pressure (in h2o) |
| DP-213 | SG-1 Long Tube Exit Losses | 4.9788 | 0.9965 | 15 | -15 | Differential Pressure (in h2o) |
| DP-214 | SG-2 Long Tube Entrance Losses | 4.981 | 0.9973 | 15 | 0 | Differential Pressure (in h2o) |
| DP-215 | Break Differential Pressure | 4.9807 | 0.9981 | 500 | 0 | Differential Pressure (psid) |
| DP-216 | Break Differential Pressure | 4.9729 | 0.9964 | 500 | 0 | Differential Pressure (psid) |
| DP-217 | HL-1 to CL1 Differential Pressure at SG1 | 4.9835 | 0.9981 | 46.83 | 0 | Differential Pressure (in h2o) |
| DP-218 | HL-2 to CL2 Differential Pressure at SG2 | 4.9889 | 0.9992 | 150 | 0 | Differential Pressure (in h2o) |
| DP-219 | HL-1 to CL3 Differential Pressure at SG1 | 4.9686 | 0.9949 | 30.95 | 0 | Differential Pressure (in h2o) |
| DP-220 | HL-2 to CL4 Differential Pressure at SG2 | 4.9627 | 0.9936 | 150 | 0 | Differential Pressure (in h2o) |
| DP-221 | HL-1 to CL1 Differential Pressure at Rx | 4.9677 | 0.9951 | 150 | 0 | Differential Pressure (in h2o) |
| DP-222 | HL-2 to CL2 Differential Pressure at Rx | 4.983 | 0.9975 | 150 | 0 | Differential Pressure (in h2o) |
| DP-223 | HL-1 to CL3 Differential Pressure at Rx | 4.9915 | 0.9987 | 150 | 0 | Differential Pressure (in h2o) |
| DP-224 | HL-2 to CL4 Differential Pressure at Rx | 4.9665 | 0.9944 | 150 | 0 | Differential Pressure (in h2o) |
| DP-401 | ACC-1 Injection Differential Pressure | 4.979 | 0.9975 | 400 | 0 | Differential Pressure (in h2o) |
| DP-402 | ACC-2 Injection Differential Pressure | 4.9736 | 0.9958 | 400 | 0 | Differential Pressure (in h2o) |
| DP-501 | CMT-1 Injection Differential Pressure | 4.9675 | 0.9948 | 150 | -150 | Differential Pressure (in h2o) |
| DP-502 | CMT-2 Injection Differential Pressure | 4.9645 | 0.9947 | 150 | -150 | Differential Pressure (in h2o) |
| DP-503 | CMT-1 Balance Line Differential Pressure | 4.9858 | 0.998 | 150 | -150 | Differential Pressure (in h2o) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|--------------------------------|
| DP-504 | CMT-2 Balance Line Differential Pressure | 4.9955 | 1.0007 | 100 | -100 | Differential Pressure (in h2o) |
| DP-601 | HL-1 to ADS4-1 Differential Pressure | 4.9969 | 1.0008 | 10 | 0 | Differential Pressure (psid) |
| DP-602 | HL-2 to ADS4-2 Differential Pressure | 4.967 | 0.9948 | 10 | 0 | Differential Pressure (psid) |
| DP-603 | ADS4-1 Venturi | 4.9847 | 0.9985 | 100 | 0 | Differential Pressure (in h2o) |
| DP-604 | ADS4-2 Venturi | 4.964 | 0.9941 | 100 | 0 | Differential Pressure (in h2o) |
| DP-605 | ADS4-1 Venturi outlet to Enlarger inlet | 4.9881 | 0.9993 | 50 | 0 | Differential Pressure (in h2o) |
| DP-606 | ADS4-2 Venturi outlet to Enlarger inlet | 4.9857 | 0.9991 | 50 | 0 | Differential Pressure (in h2o) |
| DP-611 | PZR Surge Line Differential Pressure | 4.9773 | 0.9967 | 25 | -25 | Differential Pressure (in h2o) |
| DP-701 | IRWST-1 Injection Differential Pressure | 4.9872 | 0.9982 | 30 | 0 | Differential Pressure (psid) |
| DP-702 | IRWST-2 Injection Differential Pressure | 4.9871 | 0.9981 | 30 | 0 | Differential Pressure (psid) |
| DP-905 | Break Separator Entrance Differential Pressure | 4.9905 | 0.9994 | 100 | 0 | Differential Pressure (psid) |
| FDP-604 | ADS-2 Flow Differential Pressure | 4.9738 | 0.9961 | 100 | 0 | Differential Pressure (psid) |
| FDP-605 | ADS-1 Flow Differential Pressure | 4.9896 | 0.9993 | 250 | 0 | Differential Pressure (psid) |
| FDP-606 | ADS-3 Flow Differential Pressure | 5.0051 | 1.0023 | 100 | 0 | Differential Pressure (psid) |
| FMM-001 | SG-1 Feed Flow | 4.9838 | 0.9961 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-002 | SG-2 Feed Flow | 4.9642 | 0.9925 | 6 | 0 | Volumetric Flow Rate (gpm) |
| FMM-201 | CL-1 Loop Flow | 4.9607 | 0.9921 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-202 | CL-2 Loop Flow | 4.9754 | 0.9943 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-203 | CL-3 Loop Flow | 4.9853 | 0.9974 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-204 | CL-4 Loop Flow | 4.9729 | 0.9936 | 100 | -100 | Volumetric Flow Rate (gpm) |
| FMM-205 | DVI-1 Flow | 4.9706 | 0.996 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-206 | DVI-2 Flow | 4.9767 | 0.9969 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-401 | ACC-1 Injection Flow | 4.9516 | 0.9932 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-402 | ACC-2 Injection Flow | 4.9772 | 0.9965 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-501 | CMT-1 Injection Flow | 4.9959 | 1.0006 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-502 | CMT-2 CL Balance Line Flow | 4.9742 | 0.9994 | 70 | 0 | Volumetric Flow Rate (gpm) |
| FMM-503 | CMT-1 CL Balance Line Flow | 4.9717 | 0.9985 | 75 | 0 | Volumetric Flow Rate (gpm) |
| FMM-504 | CMT-2 Injection Flow | 4.9523 | 0.9925 | 20 | 0 | Volumetric Flow Rate (gpm) |
| FMM-601 | ADS1-3 Loop Seal Flow | 5.0168 | 1.004 | 200 | 0 | Volumetric Flow Rate (gpm) |
| FMM-602 | ADS4-2 Loop Seal Flow | 5.0507 | 1.0117 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-603 | ADS4-1 Loop Seal Flow | 5.0571 | 1.0129 | 60 | 0 | Volumetric Flow Rate (gpm) |
| FMM-701 | IRWST/DVI-1 Injection Flow | 4.9738 | 0.9954 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-702 | IRWST/DVI-2 Injection Flow | 4.9724 | 0.9955 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-703 | IRWST Overflow | 4.9663 | 0.9966 | 10 | 0 | Volumetric Flow Rate (gpm) |
| FMM-801 | CVSP Discharge Flow | 4.9876 | 0.9998 | 8 | 0 | Volumetric Flow Rate (gpm) |
| FMM-802 | PRHR Inlet Flow | 4.9656 | 0.9966 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-803 | RNSP to DVI-2 Flow | 4.9629 | 0.9942 | 30 | 0 | Volumetric Flow Rate (gpm) |
| FMM-804 | PRHR Outlet Flow | 4.9612 | 0.9963 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-805 | RNSP Discharge Flow | 4.9711 | 0.9936 | 40 | 0 | Volumetric Flow Rate (gpm) |
| FMM-901 | Primary Sump-1 Recirculation Injection Flow | 4.9673 | 0.9936 | 40 | -40 | Volumetric Flow Rate (gpm) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|-----------|---|----------------|----------------|----------------|----------------|----------------------------|
| FMM-902 | Primary Sump-2 Recirculation Injection Flow | 4.9726 | 0.9948 | 40 | -40 | Volumetric Flow Rate (gpm) |
| FMM-905 | Break Separator Loop Seal Flow | 5.1224 | 1.0902 | 90 | -90 | Volumetric Flow Rate (gpm) |
| FVM-001 | SG-1 Main Steam Flow | 5.0223 | 1.005 | 200 | 0 | Steam Flow Rate (cfm) |
| FVM-002 | SG-2 Main Steam Flow | 4.9878 | 0.9982 | 200 | 0 | Steam Flow Rate (cfm) |
| FVM-003 | Main Steam Total Flow | 4.9815 | 0.9978 | 70 | 0 | Steam Flow Rate (cfm) |
| FVM-009 | SG-1 PORV Blowdown Steam Flow | 4.9836 | 0.9967 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-010 | SG-2 PORV Blowdown Steam Flow | 4.9817 | 0.9971 | 381 | 0 | Steam Flow Rate (cfm) |
| FVM-601 | ADS1-3 Separator Steam Flow | 4.9995 | 1.0017 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-602 | ADS4-2 Separator 6-inch Line Steam Flow | 5.006 | 1.0018 | 2000 | 0 | Steam Flow Rate (cfm) |
| FVM-603 | ADS4-1 Separator 6-inch Line Steam Flow | 5.0062 | 1.0024 | 1600 | 0 | Steam Flow Rate (cfm) |
| FVM-604 | ADS4-2 Separator 2-inch Line Steam Flow | 5.0034 | 1.0026 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-605 | ADS4-1 Separator 2-inch Line Steam Flow | 5.0037 | 1.0028 | 348 | 0 | Steam Flow Rate (cfm) |
| FVM-901 | BAMS HDR 6-inch Line Steam Flow | 5.0021 | 1.0023 | 5000 | 0 | Steam Flow Rate (cfm) |
| FVM-902 | BAMS HDR 10-inch Line Steam Flow | 5.01 | 1.0027 | 12500 | 0 | Steam Flow Rate (cfm) |
| FVM-903 | Primary Sump Steam Exhaust Flow | 4.9879 | 0.9949 | 22 | 0 | Steam Flow Rate (cfm) |
| FVM-904 | Break Separator 3-inch Line Steam Flow | 4.9986 | 0.9979 | 400 | 0 | Steam Flow Rate (cfm) |
| FVM-905 | Break Separator 6-inch Line Steam Flow | 5.0036 | 1.004 | 6000 | 0 | Steam Flow Rate (cfm) |
| FVM-906 | Break Separator 8-inch Line Steam Flow | 5.0048 | 1.0025 | 4000 | 0 | Steam Flow Rate (cfm) |
| HPS-201-1 | CL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-2 | CL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-201-3 | CL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-1 | CL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-2 | CL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-202-3 | CL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-1 | CL-3 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-2 | CL-3 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-203-3 | CL-3 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-1 | CL-4 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-2 | CL-4 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-204-3 | CL-4 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-1 | HL-1 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-2 | HL-1 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-205-3 | HL-1 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-1 | HL-2 Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-2 | HL-2 Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-206-3 | HL-2 Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-1 | CMT-1 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-2 | CMT-1 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-509-3 | CMT-1 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-1 | CMT-2 CL Balance Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|-----------|---|----------------|----------------|----------------|----------------|------------------|
| HPS-512-2 | CMT-2 CL Balance Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-512-3 | CMT-2 CL Balance Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-1 | Lower PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-2 | Lower PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-604-3 | Lower PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-1 | ADS1-3 Common Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-2 | ADS1-3 Common Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-606-3 | ADS1-3 Common Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-1 | Upper PZR Surge Line Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-2 | Upper PZR Surge Line Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-607-3 | Upper PZR Surge Line Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-1 | PRHR HX Inlet Heat Transfer Coefficient | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-2 | PRHR HX Inlet Heater dT above fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| HPS-801-3 | PRHR HX Inlet Fluid temperature | 10 | 0 | 10 | 0 | Voltage (V) |
| KW-101 | Rx Heater Group 1 Power | 4.3222 | 1.1171 | 472 | 0 | Power (kW) |
| KW-102 | Rx Heater Group 2 Power | 4.1621 | 1.0045 | 486 | 0 | Power (kW) |
| KW-103 | Rx Heater Group 1 Power | 4.8931 | 0.9786 | 496 | 0 | Power (kW) |
| KW-104 | Rx Heater Group 2 Power | 4.912 | 0.9946 | 492 | 0 | Power (kW) |
| KW-601 | PZR Heater Power | 4.9435 | 0.982 | 24.3 | 0 | Power (kW) |
| LCT-701 | IRWST Weight | 4.9831 | 0.9976 | 40000 | 0 | Mass (lbm) |
| LCT-901 | Primary Sump Weight | 4.977 | 0.9969 | 28800 | 0 | Mass (lbm) |
| LCT-902 | Secondary Sump Weight | 4.9845 | 0.9983 | 16700 | 0 | Mass (lbm) |
| LDP-001 | FST Uncompensated Water Level | 5.0056 | 1.0017 | 91.88 | 0 | Water Level (in) |
| LDP-101 | CL to Bypass Holes Uncompensated Water Level (270) | 4.9645 | 0.9945 | 5.561 | 0 | Water Level (in) |
| LDP-102 | CL to Bypass Holes Uncompensated Water Level (180) | 4.9725 | 0.9963 | 5.938 | 0 | Water Level (in) |
| LDP-103 | DVI to CL Uncompensated Water Level (270) | 4.9807 | 0.9982 | 11.692 | 0 | Water Level (in) |
| LDP-104 | DVI to CL Uncompensated Water Level (180) | 4.9748 | 0.9992 | 12.376 | 0 | Water Level (in) |
| LDP-105 | Upper Core Plate to DVI Uncompensated Water Level (270) | 5.0076 | 1.0058 | 11.929 | 0 | Water Level (in) |
| | Bottom of Core to Lower Core Plate Uncompensated Water | | | | | |
| LDP-106 | Level (180) | 4.9732 | 0.9985 | 8.198 | 0 | Water Level (in) |
| | Bottom of Core to Lower Core Plate Uncompensated Water | | | | | |
| LDP-107 | Level (270) | 4.9713 | 0.9958 | 8.223 | 0 | Water Level (in) |
| | Bottom of Core to Lower Core Plate Uncompensated Water | | | | | |
| LDP-108 | Level (0) | 4.9683 | 0.9953 | 8.562 | 0 | Water Level (in) |
| | Lower Core Plate to Mid-Core Spacer Grid Uncompensated | | | | | |
| LDP-109 | Water Level (0) | 4.984 | 0.9988 | 19.763 | 0 | Water Level (in) |
| | Mid-Core Spacer Grid to Upper-Core Spacer Grid | | | | | |
| LDP-110 | Uncompensated Water Level (0) | 4.9909 | 0.9991 | 20.02 | 0 | Water Level (in) |
| LDP-112 | Upper Core Plate to DVI Uncompensated Water Level (0) | 4.9755 | 0.9963 | 4.696 | 0 | Water Level (in) |

NRC-COND-08

DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|------------------|
| LDP-113 | DVI to Bottom of Upper Support Plate Uncompensated Water Level (0) | 4.9849 | 0.9986 | 15.614 | 0 | Water Level (in) |
| LDP-115 | Upper Support Plate to Top of Rx Uncompensated Water Level (0) | 4.9896 | 0.9996 | 24.28 | 0 | Water Level (in) |
| LDP-116 | Bottom of Rx to Bottom of Bypass Holes Uncompensated Water Level (270) | 4.9638 | 0.9949 | 77.59 | 0 | Water Level (in) |
| LDP-117 | Upper Core Spacer Grid to DVI Uncompensated Water Level (180) | 4.9838 | 0.9983 | 11.383 | 0 | Water Level (in) |
| LDP-118 | Lower Core Plate to Upper Core Plate Uncompensated Water Level (270) | 4.9848 | 0.9988 | 39.98 | 0 | Water Level (in) |
| LDP-119 | Lower Core Plate to Upper Core Support Grid Uncompensated Water Level (180) | 4.988 | 0.9996 | 40.26 | 0 | Water Level (in) |
| LDP-127 | Rx Wide Range Uncompensated Water Level | 4.999 | 1.0007 | 98.97 | 0 | Water Level (in) |
| LDP-138 | Upper Core Spacer Grid to Bottom of Upper Support Plate Uncompensated Water Level (180) | 4.9639 | 0.9946 | 39.3 | 0 | Water Level (in) |
| LDP-139 | Top of Lower Core Plate to Upper Core Spacer Grid Uncompensated Water Level | 4.9837 | 0.9982 | 24.166 | 0 | Water Level (in) |
| LDP-140 | Bottom of Rx to Bottom of Flow Holes (180) Uncompensated Water Level | 4.9981 | 1.0014 | 78.02 | 0 | Water Level (in) |
| LDP-141 | Upper Core Plate to Lower Support Plate Uncompensated Water Level | 4.9843 | 0.9994 | 20.135 | 0 | Water Level (in) |
| LDP-201 | CL-1 Uncompensated Water Level | 4.9961 | 1.0002 | 2.496 | 0 | Water Level (in) |
| LDP-202 | CL-2 Uncompensated Water Level | 4.9924 | 0.9994 | 2.223 | 0 | Water Level (in) |
| LDP-203 | CL-3 Uncompensated Water Level | 4.9923 | 0.9994 | 2.532 | 0 | Water Level (in) |
| LDP-204 | CL-4 Uncompensated Water Level | 4.9594 | 0.9927 | 2.47 | 0 | Water Level (in) |
| LDP-205 | HL-1 Uncompensated Water Level | 4.9663 | 0.9945 | 4.415 | 0 | Water Level (in) |
| LDP-206 | HL-2 Uncompensated Water Level | 4.9653 | 0.9944 | 4.013 | 0 | Water Level (in) |
| LDP-207 | SG-1 to HL-1 Elbow Plenum Uncompensated Water Level | 4.9779 | 0.9972 | 18.3 | 0 | Water Level (in) |
| LDP-208 | SG-2 to HL-2 Elbow Plenum Uncompensated Water Level | 4.9825 | 0.9969 | 19.247 | 0 | Water Level (in) |
| LDP-209 | SG-1 to HL-1 Plenum Uncompensated Water Level | 4.9954 | 1.0002 | 10.939 | 0 | Water Level (in) |
| LDP-210 | SG-2 to CL-4 Plenum Uncompensated Water Level | 4.9677 | 0.9943 | 16.988 | 0 | Water Level (in) |
| LDP-211 | SG-1 to CL-3 Plenum Uncompensated Water Level | 4.9613 | 0.993 | 16.793 | 0 | Water Level (in) |
| LDP-212 | SG-2 to CL-2 Plenum Uncompensated Water Level | 4.9836 | 0.9982 | 16.772 | 0 | Water Level (in) |
| LDP-213 | SG-1 to CL-1 Plenum Uncompensated Water Level | 4.9864 | 0.9978 | 16.747 | 0 | Water Level (in) |
| LDP-214 | SG-2 to HL-2 Plenum Uncompensated Water Level | 4.9953 | 1.0002 | 11.571 | 0 | Water Level (in) |
| LDP-215 | SG-1 Long Tube to HL Uncompensated Water Level | 4.99 | 0.9992 | 102.06 | 0 | Water Level (in) |
| LDP-216 | SG-2 Short Tube to HL Uncompensated Water Level | 4.9717 | 0.9955 | 95.55 | 0 | Water Level (in) |
| LDP-217 | SG-1 Short Tube to HL Uncompensated Water Level | 4.9618 | 0.9932 | 96.25 | 0 | Water Level (in) |
| LDP-218 | SG-2 Long Tube to HL Uncompensated Water Level | 4.9658 | 0.9943 | 103.14 | 0 | Water Level (in) |
| LDP-219 | SG-1 Long Tube to CL Uncompensated Water Level | 4.9867 | 0.9992 | 102.45 | 0 | Water Level (in) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|------------------|
| LDP-220 | SG-2 Short Tube to CL Uncompensated Water Level | 4.9786 | 0.9971 | 96 | 0 | Water Level (in) |
| LDP-221 | SG-1 Short Tube to CL Uncompensated Water Level | 4.985 | 0.9986 | 95.98 | 0 | Water Level (in) |
| LDP-222 | SG-2 Long Tube to CL Uncompensated Water Level | 4.9628 | 0.9947 | 102.71 | 0 | Water Level (in) |
| LDP-301 | SG-1 WR Uncompensated Water Level | 5.0022 | 1.0006 | 119.25 | 0 | Water Level (in) |
| LDP-302 | SG-2 WR Uncompensated Water Level | 4.9995 | 1.0003 | 119.02 | 0 | Water Level (in) |
| LDP-303 | SG-1 NR Uncompensated Water Level | 4.9699 | 0.9934 | 31.81 | 0 | Water Level (in) |
| LDP-304 | SG-2 NR Uncompensated Water Level | 4.9748 | 0.995 | 31.52 | 0 | Water Level (in) |
| LDP-401 | ACC-1 Uncompensated Water Level | 4.987 | 0.9951 | 38.26 | 0 | Water Level (in) |
| LDP-402 | ACC-2 Uncompensated Water Level | 5.166 | 1.0332 | 38.34 | 0 | Water Level (in) |
| LDP-501 | CMT-1 NR Uncompensated Water Level (Bottom) | 4.9834 | 0.9986 | 5.31 | 0 | Water Level (in) |
| LDP-502 | CMT-2 WR Uncompensated Water Level | 5.1958 | 1.0396 | 57.5 | 0 | Water Level (in) |
| LDP-503 | CMT-1 NR Uncompensated Water Level (Middle) | 4.984 | 0.9979 | 46.77 | 0 | Water Level (in) |
| LDP-504 | CMT-2 NR Uncompensated Water Level (Bottom) | 4.9793 | 0.9972 | 5.226 | 0 | Water Level (in) |
| LDP-505 | CMT-1 NR Uncompensated Water Level (Top) | 4.994 | 1 | 5.486 | 0 | Water Level (in) |
| LDP-506 | CMT-2 NR Uncompensated Water Level (Middle) | 4.9823 | 0.9975 | 46.96 | 0 | Water Level (in) |
| LDP-507 | CMT-1 WR Uncompensated Water Level | 5.1887 | 1.0383 | 57.5 | 0 | Water Level (in) |
| LDP-508 | CMT-2 NR Uncompensated Water Level (Top) | 4.9913 | 0.9994 | 5.309 | 0 | Water Level (in) |
| LDP-509 | CL-3 to CMT-1 Balance Line Uncompensated Water Level | 4.9772 | 0.9968 | 78.84 | 0 | Water Level (in) |
| LDP-510 | CL-1 to CMT-2 Balance Line Uncompensated Water Level | 4.9653 | 0.9942 | 78.28 | 0 | Water Level (in) |
| LDP-601 | PZR WR Uncompensated Water Level | 5.0006 | 0.9991 | 140.47 | 0 | Water Level (in) |
| LDP-602 | PZR Surge Line Uncompensated Water Level | 4.9777 | 0.997 | 47.5 | 0 | Water Level (in) |
| LDP-605 | PZR Upper Surge Line Pipe Uncompensated Water Level | 4.9735 | 0.9963 | 3.533 | 0 | Water Level (in) |
| LDP-606 | PZR Surge Line Pipe Level at PZR Inlet Uncompensated Water Level | 4.9724 | 0.9958 | 18.696 | 0 | Water Level (in) |
| LDP-607 | PZR Middle Surge Line Pipe Uncompensated Water Level | 4.9737 | 0.996 | 4.127 | 0 | Water Level (in) |
| LDP-608 | PZR Lower Surge Line Pipe Uncompensated Water Level | 4.9731 | 0.9964 | 3.82 | 0 | Water Level (in) |
| LDP-609 | PZR Surge Line Pipe Uncompensated Water Level at HL-2 | 4.996 | 1.0011 | 14.717 | 0 | Water Level (in) |
| LDP-610 | ADS1-3 Separator Uncompensated Water Level | 5.193 | 1.0399 | 45.24 | 0 | Water Level (in) |
| LDP-611 | ADS4-1 Separator Uncompensated Water Level | 5.1628 | 1.0342 | 55.97 | 0 | Water Level (in) |
| LDP-612 | ADS4-2 Separator Uncompensated Water Level | 5.1859 | 1.0386 | 56.6 | 0 | Water Level (in) |
| LDP-701 | IRWST Uncompensated Water Level | 5.0202 | 1.0048 | 115.8 | 0 | Water Level (in) |
| LDP-801 | PRHR HX Inlet Head Uncompensated Water Level | 4.9945 | 1.0013 | 6.971 | 0 | Water Level (in) |
| LDP-802 | PRHR HX WR Uncompensated Water Level | 4.9871 | 0.9998 | 57.08 | 0 | Water Level (in) |
| LDP-901 | Primary Sump Uncompensated Water Level | 5.0016 | 1.0015 | 104.36 | 0 | Water Level (in) |
| LDP-902 | Secondary Sump Uncompensated Water Level | 5.0018 | 1.0007 | 102.56 | 0 | Water Level (in) |
| LDP-903 | CRT Uncompensated Water Level | 5.1669 | 1.0346 | 32.358 | 0 | Water Level (in) |
| LDP-905 | Break Separator Uncompensated Water Level | 5.1788 | 1.0378 | 130.68 | 0 | Water Level (in) |
| LT-120 | Rx Vessel Capacitance Probe Water Level | 5.0053 | 1.0042 | 99 | 50 | Water Level (in) |
| PT-001 | MFP Discharge Pressure | 5.0658 | 1.0121 | 600 | 0 | Pressure (psig) |
| PT-002 | MS Header Pressure | 4.9759 | 0.9962 | 500 | 0 | Pressure (psig) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|-----------------------|
| PT-003 | Lab Barometer | 4.9656 | 0.9944 | 20 | 10 | Pressure (psia) |
| PT-009 | SG-1 PORV Blowdown Pressure | 4.9816 | 0.9983 | 300 | 0 | Pressure (psig) |
| PT-010 | SG-2 PORV Blowdown Pressure | 4.9924 | 1.0004 | 300 | 0 | Pressure (psig) |
| PT-101 | CL-1 Pressure at Rx Flange | 4.9877 | 0.9986 | 500 | 0 | Pressure (psig) |
| PT-102 | CL-2 Pressure at Rx Flange | 4.9706 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-103 | CL-3 Pressure at Rx Flange | 4.9646 | 0.9946 | 10 | 0 | Pressure (psig) |
| PT-104 | CL-4 Pressure at Rx Flange | 4.9882 | 0.9988 | 500 | 0 | Pressure (psig) |
| PT-107 | Rx Upper Head Pressure | 5.0478 | 1.0096 | 500 | 0 | Pressure (psig) |
| PT-108 | Bottom of Rx Pressure | 4.9637 | 0.9938 | 500 | 0 | Pressure (psig) |
| PT-109 | DVI-1 Pressure at Rx Flange | 4.9874 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-110 | DVI-2 Pressure at Rx Flange | 4.9825 | 0.9984 | 10 | 0 | Pressure (psig) |
| PT-111 | Rx Annular Pressure at Flow Bypass Holes | 4.9886 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-112 | Rx Annular Pressure at Bottom of Rx | 4.977 | 0.9958 | 10 | 0 | Pressure (psig) |
| PT-113 | Rx Pressure Below Mid-Core Spacer Grid | 4.9616 | 0.9921 | 500 | 0 | Pressure (psig) |
| PT-201 | SG-1 Long Tube Pressure (Top) | 4.9935 | 1.0008 | 500 | 0 | Pressure (psig) |
| PT-202 | HL-2 Pressure at SG-2 Flange | 4.9841 | 0.9978 | 500 | 0 | Pressure (psig) |
| PT-203 | CL Break Pressure at Break Valve | 4.988 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-204 | SG-2 Long Tube Pressure (Top) | 4.9974 | 1.0005 | 500 | 0 | Pressure (psig) |
| PT-205 | HL-1 Pressure at SG-1 Flange | 4.9838 | 0.9988 | 400 | 0 | Pressure (psig) |
| PT-206 | HL Break Pressure at Break Valve | 4.9869 | 0.9982 | 500 | 0 | Pressure (psig) |
| PT-301 | SG-1 Pressure | 5.0617 | 1.0123 | 500 | 0 | Pressure (psig) |
| PT-302 | SG-2 Pressure | 5.1023 | 1.0219 | 500 | 0 | Pressure (psig) |
| PT-401 | ACC-1 Pressure | 4.9908 | 0.9993 | 300 | 0 | Pressure (psig) |
| PT-402 | ACC-2 Pressure | 4.9802 | 0.9975 | 300 | 0 | Pressure (psig) |
| PT-501 | CMT-1 Pressure | 4.982 | 0.9979 | 300 | 0 | Pressure (psig) |
| PT-502 | CMT-2 Pressure | 4.9869 | 0.998 | 500 | 0 | Pressure (psig) |
| PT-602 | PZR NR Pressure | 4.9747 | 0.9988 | 400 | 300 | Pressure (psig) |
| PT-603 | PZR NR Pressure | 4.9616 | 0.9944 | 10 | 0 | Pressure (psig) |
| PT-604 | PZR WR Pressure | 4.9794 | 0.9942 | 500 | 0 | Pressure (psig) |
| PT-605 | ADS1-3 Separator Pressure | 4.9725 | 0.9966 | 100 | 0 | Pressure (psig) |
| PT-606 | IRWST Sparger Line Pressure | 4.9653 | 0.995 | 100 | 0 | Pressure (psig) |
| PT-610 | ADS4-2 Separator Pressure | 4.9845 | 0.9983 | 10 | 0 | Pressure (psig) |
| PT-611 | ADS4-1 Separator Pressure | 4.9806 | 0.9977 | 10 | 0 | Pressure (psig) |
| PT-701 | IRWST Pressure | 5.0436 | 1.0087 | 15 | 0 | Pressure (psig) |
| PT-801 | CVSP Discharge Pressure | 4.9909 | 0.9993 | 500 | 0 | Pressure (psig) |
| PT-802 | RNSP Discharge Pressure | 4.9768 | 0.9962 | 250 | 0 | Pressure (psig) |
| PT-901 | Primary Sump Pressure | 4.9659 | 0.9947 | 10 | 0 | Pressure (psig) |
| PT-902 | BAMS Header Pressure | 4.9988 | 1.0013 | 16 | 0 | Pressure (psig) |
| PT-905 | Break Separator Pressure | 5.0265 | 1.0067 | 20 | 0 | Pressure (psig) |
| TF-005 | Lab Ambient Temperature at Ground Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-006 | Lab Ambient Temperature at Second Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-007 | Lab Ambient Temperature at Third Level | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-009 | SG-1 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-010 | SG-2 PORV Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101 | CL-3 Temperature (SC-101) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-101-1.3D-2 | CL-1 Downcomer Temperature at 1.3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-1 | CL-1 Downcomer Temperature at 2D, 120 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-2 | CL-1 Downcomer Temperature at 2D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-2D-3 | CL-1 Downcomer Temperature at 2D, 150 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-1 | CL-1 Downcomer Temperature at 3D, 104 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-2 | CL-1 Downcomer Temperature at 3D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-3D-3 | CL-1 Downcomer Temperature at 3D, 166 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-1 | CL-1 Downcomer Temperature at 4D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-4D-2 | CL-1 Downcomer Temperature at 4D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-1 | CL-1 Downcomer Temperature at 8D, 90 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-101-8D-2 | CL-1 Downcomer Temperature at 8D, 135 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102 | CL-4 Temperature (SC-102) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-102-1.3D-2 | CL-2 Downcomer Temperature at 1.3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-1 | CL-2 Downcomer Temperature at 2D, 210 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-2 | CL-2 Downcomer Temperature at 2D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-2D-3 | CL-2 Downcomer Temperature at 2D, 240 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-1 | CL-2 Downcomer Temperature at 3D, 194 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-2 | CL-2 Downcomer Temperature at 3D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-3D-3 | CL-2 Downcomer Temperature at 3D, 256 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-4D-2 | CL-2 Downcomer Temperature at 4D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-1 | CL-2 Downcomer Temperature at 8D, 180 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-102-8D-2 | CL-2 Downcomer Temperature at 8D, 225 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-1.3D-2 | CL-3 Downcomer Temperature at 1.3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-1 | CL-3 Downcomer Temperature at 2D, 30 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-2 | CL-3 Downcomer Temperature at 2D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-2D-3 | CL-3 Downcomer Temperature at 2D, 60 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-1 | CL-3 Downcomer Temperature at 3D, 14 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-2 | CL-3 Downcomer Temperature at 3D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-3D-3 | CL-3 Downcomer Temperature at 3D, 76 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-4D-2 | CL-3 Downcomer Temperature at 4D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-1 | CL-3 Downcomer Temperature at 8D, 0 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-103-8D-2 | CL-3 Downcomer Temperature at 8D, 45 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-1.3D-2 | CL-4 Downcomer Temperature at 1.3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-1 | CL-4 Downcomer Temperature at 2D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-2D-2 | CL-4 Downcomer Temperature at 2D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-104-2D-3 | CL-4 Downcomer Temperature at 2D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1 | CL-4 Downcomer Temperature at 3D, 284 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-1.5 | CL-4 Downcomer Temperature at 3D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2 | CL-4 Downcomer Temperature at 3D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-2.5 | CL-4 Downcomer Temperature at 3D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-3D-3 | CL-4 Downcomer Temperature at 3D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1 | CL-4 Downcomer Temperature at 4D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.3 | CL-4 Downcomer Temperature at 4D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-1.6 | CL-4 Downcomer Temperature at 4D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2 | CL-4 Downcomer Temperature at 4D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.3 | CL-4 Downcomer Temperature at 4D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-4D-2.6 | CL-4 Downcomer Temperature at 4D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1 | CL-4 Downcomer Temperature at 8D, 270 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.3 | CL-4 Downcomer Temperature at 8D, 285 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-1.6 | CL-4 Downcomer Temperature at 8D, 300 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2 | CL-4 Downcomer Temperature at 8D, 315 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.3 | CL-4 Downcomer Temperature at 8D, 330 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-104-8D-2.6 | CL-4 Downcomer Temperature at 8D, 345 degrees | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-105 | CL-1 Temperature (SC-105) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-106 | CL-2 Temperature (SC-106) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-107 | CL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-108 | CL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-113 | DVI-1/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-114 | DVI-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-115 | DVI-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-116 | DVI-2/Rx Flange at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-118 | Lower Rx Vessel Layer Y-Y at 30 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-120 | Top of Rx at 8.5 inches & 350 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-126 | Lower Rx Vessel Layer A-A at 225 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-127 | Lower Rx Vessel Layer A-A at 315 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-128 | Lower Rx Vessel Layer C-C at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-129 | Lower Rx Vessel Layer C-C at 32 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-130 | Lower Rx Vessel Layer G-G at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-131 | Lower Rx Vessel Layer G-G at 11.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-132 | Upper Rx Vessel Layer F-F at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-133 | Upper Rx Vessel Layer F-F at 8 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-134 | Upper Rx Vessel Layer E-E at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-135 | Upper Rx Vessel Layer E-E at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-140 | HL-2 Temperature at Rx Flange (SC-140) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-141 | HL-1 Temperature at Rx Flange (SC-141) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-142 | HL-2/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-143 | HL-1/Rx Flange at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-147 | Upper Rx Vessel Layer I-I at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-148 | Upper Rx Vessel Layer I-I at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-149 | Upper Rx Vessel Layer H-H at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-150 | Upper Rx Vessel Layer H-H at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-151 | Upper Rx Vessel Layer E-E at 186.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-152 | Upper Rx Vessel Layer E-E at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-153 | Upper Rx Vessel Layer F-F at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-154 | Upper Rx Vessel Layer F-F at 188 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-155 | Lower Rx Vessel Layer G-G at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-156 | Lower Rx Vessel Layer G-G at 191.3 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-157 | Lower Rx Vessel Layer C-C at 212 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-158 | Lower Rx Vessel Layer C-C at 180 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-162 | Lower Rx Vessel Layer A-A at 45 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-163 | Lower Rx Vessel Layer A-A at 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-164 | Upper Rx Vessel Layer H-H at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-165 | Upper Rx Vessel Layer H-H at 6.2 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-166 | Upper Rx Vessel Layer I-I at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-167 | Rx Heater Rod B2-319 at 40.13 inches | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-168 | Upper Rx Vessel Layer K-K at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-169 | Upper Rx Vessel Layer M-M at 90 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-170 | Upper Rx Vessel Layer M-M at 270 degrees Temperature Top of Rx Down to within 0.50 inches of Upper Support | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-171 | Plate Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-172 | Lower Rx Vessel Layer AA-AA at 0 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-173 | Lower Rx Vessel Layer AA-AA at 270 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-201 | CL-1 at RCP-1 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-202 | CL-2 at RCP-2 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-203 | CL-3 at RCP-3 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-204 | CL-4 at RCP-4 Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-205 | HL-1 Temperature at SG-1 Head (SC-205) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-206 | HL-2 Temperature at SG-2 Head (SC-206) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-207 | SG-1 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-208 | SG-2 Short Tube at Middle Outlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-209 | SG-1 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-210 | SG-2 Short Tube at Middle Inlet Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-211 | SG-1 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-212 | SG-2 Long Tube at Middle Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-213 | SG-1 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|-----------------------|
| TF-214 | SG-2 Long Tube at Middle Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-215 | SG-1 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-216 | SG-2 Short Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-217 | SG-1 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-218 | SG-2 Long Tube at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-221 | CL-3 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-222 | CL-4 T/C Rod at 3.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-223 | CL-3 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-224 | CL-4 T/C Rod at 2.50 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-225 | CL-3 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-226 | CL-4 T/C Rod at 1.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-227 | CL-3 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-228 | CL-4 T/C Rod at 1.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-229 | CL-3 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-230 | CL-4 T/C Rod at 0.75 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-231 | CL-3 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-232 | CL-4 T/C Rod at 0.25 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-1 | CL-1 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-2 | CL-1 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-251-3 | CL-1 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-1 | CL-2 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-2 | CL-2 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-252-3 | CL-2 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-1 | CL-3 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-2 | CL-3 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-253-3 | CL-3 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-1 | CL-4 Loop Seal Upper Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-2 | CL-4 Loop Seal Middle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-254-3 | CL-4 Loop Seal Lower Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-255 | CL-1 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-256 | CL-2 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-257 | CL-3 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-258 | CL-4 Safety Injection Nozzle Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-301 | SG-1 Steam Temperature (SC-301) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-305 | SG-1 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-306 | SG-2 Downcomer HL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-307 | SG-1 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-308 | SG-2 Downcomer CL Side Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-310 | SG-2 Steam Temperature (SC-310) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-311 | SG-1 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-312 | SG-2 Feed Header Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-401 | ACC-1 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-402 | ACC-2 Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-403 | ACC-1 N2Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-404 | ACC-2 N2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-405 | ACC-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-406 | ACC-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-501 | CMT-1 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-502 | CMT-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-503 | CMT-1 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-504 | CMT-2 Long T/C Rod at 0.30 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-505 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-506 | CMT-2 at 1/2 Lower Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-507 | CMT-1 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-508 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-509 | CMT-1 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-510 | CMT-2 Long T/C Rod at 20.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-511 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-512 | CMT-2 Long T/C Rod at 36.89 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-513 | CMT-1 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-514 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-515 | CMT-1 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-516 | CMT-2 Long T/C Rod at 40.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-517 | CMT-1 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-518 | CMT-2 Long T/C Rod at 43.41 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-519 | CMT-1 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-520 | CMT-2 at 75% Volume-Height minus 3.7 inches 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-521 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-522 | CMT-2 Long T/C Rod at 46.23 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-523 | CMT-1 Long T/C Rod at 49.05 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-524 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-525 | CMT-1 at 1/2 Upper-Head Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-526 | CMT-2 SPARGER 2\3 TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-527 | CMT-1 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-528 | CMT 2\3 HEAD TEMP | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-529 | CMT-1 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-530 | CMT-2 Long T/C Rod at 51.87 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-531 | CMT-1 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-532 | CMT-2 Long T/C Rod at 56.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-533 | CMT-1 CL Balance Line at CL-3 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-535 | CMT-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-536 | CMT-2 CL Balance Line at CL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-537 | CMT-1 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-538 | CMT-2 at 20% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-539 | CMT-1 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-540 | CMT-2 at 50% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-541 | CMT-1 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-542 | CMT-2 at 60% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-543 | CMT-1 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-544 | CMT-2 at 75% Volume-Height, 135 degrees Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-546 | CMT-2 Balance Line at CMT Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-547 | CMT-1 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-548 | CMT-2 Long T/C Rod at 54.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-549 | CMT-1 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-550 | CMT-2 Discharge Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-551 | CMT-1 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-552 | CMT-2 Short T/C Rod (225 degrees) 5.5 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-553 | CMT-1 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-554 | CMT-2 Short T/C Rod (225 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-555 | CMT-1 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-556 | CMT-2 Short T/C Rod (225 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-557 | CMT-1 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-558 | CMT-2 Short T/C Rod (315 degrees) 5.9 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-559 | CMT-1 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-560 | CMT-2 Short T/C Rod (315 degrees) 8.69 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-561 | CMT-1 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |

NRC-COND-08

DAS Configuration

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|---|----------------|----------------|----------------|----------------|-----------------------|
| TF-562 | CMT-2 Short T/C Rod (315 degrees) 11.44 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-563 | CMT-1 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-564 | CMT-2 Short T/C Rod (315 degrees) 14.19 inches from top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-601 | PZR Surge Line at PZR Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-602 | ADS1-3 Common Line at PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-603 | PZR Surge Line at HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-605 | PZR Water Space Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-608 | PZR Temperature (SC-608) | 450 | 40 | 450 | 40 | Fluid Temperature (F) |
| TF-609 | ADS4-1 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-610 | ADS4-2 Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-614 | PZR Steam Vent Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-615 | ADS1-3 Common Line From PZR Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-616 | ADS1-3 Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-617 | ADS1-3 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-618 | ADS4-2 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-619 | ADS4-1 Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-620 | ADS4-2 Inlet From HL-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-621 | ADS4-1 Inlet From HL-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-622 | ADS4-2 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-623 | ADS4-1 Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-701 | IRWST/PRHR T/C Rod at Bottom Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-702 | IRWST/PRHR T/C Rod at 7.98 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-703 | IRWST/PRHR T/C Rod at 15.97 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-704 | IRWST/PRHR T/C Rod at 25.85 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-705 | IRWST/PRHR T/C Rod at 35.73 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-706 | IRWST/PRHR T/C Rod at 45.61 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-707 | IRWST/PRHR T/C Rod at 55.49 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-708 | IRWST/PRHR T/C Rod at 65.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-709 | IRWST/PRHR T/C Rod at 75.24 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-710 | IRWST/PRHR T/C Rod at 86.36 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-711 | IRWST/PRHR T/C Rod at 97.47 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-712 | IRWST/PRHR T/C Rod at 108.59 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-713 | IRWST Discharge to DVI-01 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-714 | IRWST Discharge to DVI-02 at IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-715 | IRWST Sparger T/C Rod at 8.97 inches Temperature (SC-715) | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-716 | IRWST Sparger T/C Rod at 36.63 inches Temperature | 240 | 40 | 240 | 40 | Fluid Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|----------|--|----------------|----------------|----------------|----------------|------------------------------|
| TF-717 | IRWST Sparger T/C Rod at 66.34 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-718 | IRWST Sparger T/C Rod at 98.45 inches Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-719 | IRWST Sparger Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-720 | IRWST/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-721 | IRWST/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-722 | IRWST Steam Exhaust Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-723 | IRWST/Primary Sump Overflow Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-801 | CVSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-802 | RNSP Discharge Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-803 | PRHR HX Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-804 | PRHR HX Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-805 | PRHR HX Long Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-806 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-808 | PRHR HX Short Tube Outlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-809 | PRHR HX Long Tube at Center Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-810 | PRHR HX Short Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-811 | PRHR HX Long Tube Inlet at Bend Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-812 | PRHR HX Outlet Head Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-813 | RNSP Discharge to DVI-1 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-814 | RNSP Discharge to DVI-2 Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-901 | Primary Sump Inlet from Fill Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-902 | Secondary Sump Temperature (SC-902) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-903 | Primary Sump Temperature (SC-903) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-904 | Primary Sump/DVI-2 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-905 | Primary Sump at Secondary Sump Crossover Level Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-906 | Primary Sump Exhaust Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-907 | Primary Sump at Top Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-908 | Break Separator Inlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-909 | Primary Sump/DVI-1 Injection Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-910 | CRP Discharge to Primary Sump Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-911 | CRP Discharge to IRWST Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-912 | Break Separator Loop Seal Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-913 | Break Separator Steam Outlet Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-914 | Condensate Return Tank Temperature (SC-914) | 200 | 40 | 200 | 40 | Fluid Temperature (F) |
| TF-915 | Break Separator 6-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-916 | BAMS Header 10-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TF-917 | BAMS Header Temperature (SC-917) | 240 | 40 | 240 | 40 | Fluid Temperature (F) |
| TF-918 | Break Separator 8-inch Steam Line Temperature | 1000 | 0 | 1000 | 0 | Fluid Temperature (F) |
| TH-103 | Rx Heater Rod Temperature (SCTH-101-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|--|----------------|----------------|----------------|----------------|------------------------------|
| TH-211 | Rx Heater Rod Temperature (SCTH-103-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-305 | Rx Heater Rod Temperature (SCTH-304-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-309 | Rx Heater Rod Temperature (SCTH-102-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-401 | Rx Heater Rod Temperature (SCTH-104-4) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-507 | Rx Heater Rod Temperature (SCTH-314-3) | 1000 | 40 | 1000 | 40 | Internal Rod Temperature (F) |
| TH-601 | PZR Heater Rod #1 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-602 | PZR Heater Rod #2 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-603 | PZR Heater Rod #3 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TH-604 | PZR Heater Rod #4 | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-1 | Core Thermocouple Rod D-001 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-2 | Core Thermocouple Rod D-001 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-3 | Core Thermocouple Rod D-001 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-4 | Core Thermocouple Rod D-001 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-5 | Core Thermocouple Rod D-001 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-001-6 | Core Thermocouple Rod D-001 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-1 | Core Thermocouple Rod D-303 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-2 | Core Thermocouple Rod D-303 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-3 | Core Thermocouple Rod D-303 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-4 | Core Thermocouple Rod D-303 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-5 | Core Thermocouple Rod D-303 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-303-6 | Core Thermocouple Rod D-303 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-1 | Core Thermocouple Rod E-308 at 22.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-2 | Core Thermocouple Rod E-308 at 34.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-3 | Core Thermocouple Rod E-308 at 46.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-4 | Core Thermocouple Rod D-001 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-5 | Core Thermocouple Rod D-001 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-308-6 | Core Thermocouple Rod D-303 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-1 | Core Thermocouple Rod D-313 at 10.50 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-2 | Core Thermocouple Rod D-313 at 19.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-3 | Core Thermocouple Rod D-313 at 25.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-4 | Core Thermocouple Rod D-313 at 31.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-5 | Core Thermocouple Rod D-313 at 37.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-313-6 | Core Thermocouple Rod D-313 at 43.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-1 | Core Thermocouple Rod F-318 at 28.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-2 | Core Thermocouple Rod F-318 at 40.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-3 | Core Thermocouple Rod F-318 at 51.86 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-4 | Core Thermocouple Rod D-303 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-5 | Core Thermocouple Rod D-313 at 49.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TR-318-6 | Core Thermocouple Rod D-313 at 51.13 inches | 1000 | 0 | 1000 | 0 | Internal Rod Temperature (F) |
| TW-104-1.5D-2 | CL-4 Downcomer Wall Temperature at 1.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |

| Tag Name | Tag Description | Raw Full Scale | Raw Zero Scale | Eng Full Scale | Eng Zero Scale | Units |
|---------------|---|----------------|----------------|----------------|----------------|-----------------------|
| TW-104-3.5D-2 | CL-4 Downcomer Wall Temperature at 3.5D, 315 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-104-3.5D-3 | CL-4 Downcomer Wall Temperature at 3.5D, 345 degrees | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-201 | SG-1 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-202 | SG-2 Short Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-203 | SG-1 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-204 | SG-2 Short Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-205 | SG-1 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-206 | SG-2 Long Tube Bottom Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-208 | SG-2 Long Tube Bottom Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-209 | SG-1 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-210 | SG-2 Short Tube Top Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-601 | ADS1-3 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-602 | ADS4-2 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-603 | ADS4-1 Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-801 | PRHR HX Long Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-802 | PRHR HX Short Tube Outlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-803 | PRHR HX Long Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-804 | PRHR HX Short Tube Lower Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-805 | PRHR HX Short Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-806 | PRHR HX Long Tube Upper Mid-piece | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-807 | PRHR HX Short Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-808 | PRHR HX Long Tube Inlet | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| TW-905 | Break Separator Wall Temperature | 1000 | 0 | 1000 | 0 | Wall Temperature (F) |
| DASRunning | DSC Engine is running, but not necessarily logging data | N/A | N/A | N/A | N/A | N/A |
| DASLogging | DSC Engine is logging data to the Citadel database | N/A | N/A | N/A | N/A | N/A |
| FVM-004 | Catch Tank Steam Flow Rate | 4.9885 | 1.001 | 70 | 0 | Steam Flow Rate (cfm) |
| PT-004 | Temp Steam Pressure for FVM-002 | 5.0026 | 1.0016 | 400 | 0 | Pressure (psig) |

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| 10. SUPPLEMENTARY NOTES G. S. Rhee / W. Krotiuk, Project Manager | | | | | |
| 11. ABSTRACT (200 words or less) A series of eight tests have been conducted at the Oregon State University Advanced Plant Experiment (APEX) Facility in order to provide data for TRACE code assessment in the area of reflux condensation in U-tube steam generators. The APEX steam generators contain 133 tubes of prorotypical diameter but a quarter length of full size steam generator tubes. The data covers the pressure range of 0.37 MPa to 2.19 MPa and the inlet steam flow Reynolds number of 2,000 to 12,000. The overall heat transfer coefficient varies from 544 to 2062 W/(M^2-K). The steam condensation rate is found to be the same in both the up-flow side and the down-flow side of the U-tubes. A small amount of nitrogen gas is injected into the steam flows used for two tests. The effect of nitrogen gas on steam condensation is found to be not significant for the test conditions investigated. | | | | | |
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