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**INFORMAL REPORT**

SUPERCritical BINARY GEOTHERMAL CYCLE EXPERIMENTS  
WITH MIXED-HYDROCARBON WORKING FLUIDS AND  
A VERTICAL, IN-TUBE, COUNTERFLOW CONDENSER

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MASTER

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## ABSTRACT

The Heat Cycle Research Program, which is being conducted for the Department of Energy, has as its objective the development of the technology for effecting improved utilization of moderate temperature geothermal resources. Testing at the Heat Cycle Research Facility located at the DOE Geothermal Test Facility East Mesa, California is presently being conducted to meet this objective. Current testing involves supercritical vaporization and counterflow in-tube condensing in an organic Rankine cycle. This report presents a description of the test facility and results from a part of the program in which the condenser was oriented in a vertical attitude.

Results of the experiments for the supercritical heaters and the countercurrent, vertical, in-tube condenser are given for both pure and mixed-hydrocarbon working fluids. The heater and condenser behavior predicted by the Heat Transfer Research, Inc. computer codes used for correlation of the data was in excellent agreement with experimental results. A special series of tests, conducted with propane and up to approximately 40% isopentane concentration, indicated that a close approach to "integral" condensation was occurring in the vertically-oriented condenser. Preliminary results of tests in which the turbine expansion "passed through the two-phase region" did not indicate efficiency degradation assignable to these metastable expansion processes. A comparison of turbine efficiency for pure and mixed-hydrocarbon working fluids was made, but was based on incomplete data and was inconclusive; additional data will be obtained during the next testing period. The single test condition obtained for a mixture vaporized at supercritical pressures (to assure that no moisture was present at the heater outlet) resulted in the same turbine efficiency as for the pure fluid.

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## I. SUMMARY

### 1. Background

The overall objective of the Heat Cycle Research Program, which is being conducted for the Department of Energy (DOE), is to develop technology which will result in more effective utilization of moderate temperature geothermal resources; a major emphasis of the program has been directed toward binary cycle technology. Several concepts have been investigated analytically in earlier program efforts which have shown the potential for effecting significant performance gains for binary plants. Use of non-adjacent hydrocarbon mixtures for working fluids, which are vaporized at supercritical pressures, and a counterflow in-tube condenser to provide a close approach to integral condensation, are two such concepts. (Integral condensation refers to the maintaining of thermal equilibrium between phases during condensation, and minimizes condensing pressure for a given bubble-point temperature.) Additional performance gains were predicted through use of turbine exhaust recuperation, and through modification of turbine inlet state points to achieve supersaturated-vapor turbine-expansion processes. These advances, in total, were projected to increase present levels of net plant geofluid effectiveness (Wh/lbm geofluid) by as much as 28% using 360°F hydrothermal resources, and to double the use of moderate-temperature geothermal energy. Experiments for confirming the assumptions made in the performance projections, and for developing the technology needed to achieve counterflow integral condensation, are required to complete the technology development for utilization of these advanced-binary-plant concepts.

## 2. Experiments Conducted.

To accomplish the objective of developing technology for advanced binary geothermal plants, a number of supercritical cycle experiments were conducted using working fluids consisting of both pure and mixed hydrocarbons of the propane-isopentane and isobutane-hexane families (nominally 0, 5, 10% isopentane or hexane, by mass). Vaporization of the working fluids at supercritical pressures was investigated, as was condensing of the pure and mixed-hydrocarbon vapors in a counterflow in-tube condenser. The initial orientation of the condenser was vertical; the results presented in this report pertain to that condenser attitude. A series of tests was run with special propane-isopentane mixtures with isopentane weight fractions of up to 40% to investigate the departure from integral condensing exhibited by the condenser. Effects of mixtures on turbine efficiency was investigated, and the effect of allowing the turbine expansion processes to cross the saturation line and "pass through the two-phase region" was studied during several tests using isobutane-hexane working fluids.

The experiments were conducted in the Heat Cycle Research Facility (about 40 kW turbine power) formerly located at the Raft River test site, but now skid mounted and relocated at the DOE Geothermal Test Facility (GTF) in the Imperial Valley of Southern California. The working fluid was heated and vaporized on the shell side of a pair of counterflow heat exchangers having externally finned tubing and connected together in series. Heat was supplied by geofluid from GTF Well 6-2 at plant-inlet temperatures between 312 and 322°F. Condensing of the working fluid vapor was accomplished inside of internally-finned tubing in a counterflow, vertically-oriented shell-and-tube condenser supplied with cooling water from the GTF wet cooling tower.

### 3. Results

Properties - Early in the program working-fluid thermodynamic properties to be used in analysis of data were determined by both an INEL computer program, THERPP, which uses Starling's modified Benedict-Webb-Rubin Equation of state, and by a computer program named "EXCST," developed by J. Ely at the National Bureau of Standards (NBS), which is based on an "Extended corresponding States" theory. The NBS program resulted in more consistent energy balances, and so was used throughout the remainder of the experiments. Overall, these properties appeared satisfactory; no major deficiencies were detected for the six nominal working fluids.

Heaters - Correlation of the heater-vaporizer data was accomplished using the Heat Transfer Research, Inc. (HTRI) computer code ST-4 Mod. 5.4, the shell-and-tube code with no phase change. When used as described in the body of the report, (with an incremental analysis) excellent agreement between predicted and measured temperatures was obtained (within a few degrees F in all cases). Fouling thermal resistance on the geofluid side was calculated for each heat exchanger using the HTRI code and plotted versus time. The trends and magnitudes appeared consistent with values expected in this service, increasing with time over about a 300-day period with a total change of about  $0.0015 \text{ ft}^2\text{F hr/Btu}$ . The HTRI code predicted a required surface area which was slightly conservative (about 20% larger than the actual surface area) for the conditions of the experiments.

Condenser - Correlation of the condenser data was accomplished using the HTRI condenser computer code CST-1 Mod. 2.0. As with the heater results, excellent agreement between calculated and

measured temperatures was achieved; generally, agreement was within one or two degrees F. The temperature data were analyzed by determining the calculated condensing (bubble-point) temperature (assuming zero subcooling) minus the measured outlet temperature as a function of time. These results indicated that the HTRI code produces slightly conservative designs. On the average, the calculated condensing temperature was about 0.5°F higher than the actual condensing temperature, assuming zero subcooling. With the exception of one point the plotted temperature difference ranged from -0.6 to + 1.7°F.

The HTRI code in combination with the NBS properties was also found to result in slightly conservative designs relative to condenser pressure. The calculated condensing temperature was, on the average, 1.5°F higher than the condensing temperature corresponding to the actual condensing pressure (the standard deviation of the plotted points from this average was 1.1°F).

Three other results were obtained relative to condenser performance. First, no effects of fouling were detected for the condenser. Second, no significant departure from integral condensing (phases in thermal equilibrium) was detected for the vertical condenser tests reported here. Third, despite lower condensing heat-transfer coefficients observed for the mixtures than for pure fluids (30% lower for 0.9 propane/0.1 isopentane than for pure propane), the condensing temperatures for the mixtures approached the cooling-water inlet temperature more closely than for the pure fluids. The reason for this behavior is discussed in Section VI; the result indicates that under many conditions the mixtures may not actually be "more difficult" to condense than pure fluids, as previously feared.

Turbine - To date, because of some mechanical problems with the turbine assembly, including a lube-oil pump failure, only a fraction of the originally-planned turbine tests has been completed. The remaining turbine tests will be conducted following the condenser-attitude change, and will be reported at a later date. Accordingly, turbine results reported here should be considered as somewhat preliminary. The turbine tests were conducted with two objectives in mind to support previous analyses of advanced plant performance. The first objective was to investigate the effect of expanding mixed-hydrocarbon vapor (as opposed to single-component vapor) through the turbine on isentropic efficiency. The second was to determine the effect of utilizing supersaturated-vapor expansion processes (expanding through the two-phase region) on turbine efficiency. To date, some positive results have been indicated; degradation of turbine isentropic efficiency has not been observed due to selection of turbine inlet states which result in supersaturated expansions. The effect of mixtures on turbine efficiency was less conclusive. The single test condition (an average of three test points) obtained for a 95% isobutane-5% hexane mixture vaporized at a supercritical pressure in order to assure the absence of moisture in the vapor leaving the vaporizer, showed the same turbine efficiency as did pure isobutane. However, several boiling tests conducted with a 90% isobutane-10% hexane mixture resulted in turbine efficiencies slightly lower than for isobutane (about 2% lower), which may, or may not, be attributable to moisture entering the turbine.

#### 4: Summary of Conclusions

The results and conclusions can be summarized as follows:

1. Good agreement between predicted and observed temperature distributions for both heaters and condenser was obtained using the state-of-the-technology HTRI heat-exchanger design computer codes.
2. Use of the HTRI heater and condenser codes with NBS properties can be used for design of supercritical vaporization systems and condensers for pure and mixed-hydrocarbon binary geothermal plants; the designs will tend to be slightly conservative.
  - o The heater designs will be, on the average, about 20% larger than required if suitable fouling resistances are included.
  - o The condenser will deliver an outlet temperature on the average about  $0.5^{\circ}\text{F}$  lower than the design condensing temperature.
  - o The condenser pressure will be equal to the bubble point pressure for a temperature, which is on the average, about  $1.5^{\circ}\text{F}$  lower than the design condensing temperature.
3. Departure from integral condensation was not detected for the vertical condenser orientation.
4. Preliminary turbine results suggest that the turbine efficiency is not affected by supersaturated expansion processes, nor by use of mixed hydrocarbon working fluids. This latter result was not totally conclusive, and will be reviewed after more turbine data have been obtained during the next phase of testing.

Overall, the results presented have been very favorable. The conclusion was reached that these results support previous projections of potential performance gains approaching 28% for advanced binary plants.

## II. INTRODUCTION

### 1. General

The supercritical Rankine cycle experiments, discussed in this report, constitute the first phase of an advanced binary geothermal cycle experimental program in which the counterflow in-tube condenser being investigated was oriented in a vertical attitude. These experiments are part of the Heat Cycle Research Program which is being conducted for the Department of energy (DOE) to develop technology required to more fully utilize the moderate temperature geothermal resources for the production electrical energy. In this regard, a major concern of the program is directed toward advancing binary cycle technology for application with resources in the 350 to 400°F temperature range.

The total Heat Cycle Research Program is summarized in some detail in Reference 1. Earlier results of the supercritical cycle experiments were presented at the Third and Fourth DOE Geothermal Technology Division Program Reviews of 1984 and 1985, and are included in References 2-4.

The work was supported by the U.S. Department of Energy, Geothermal Technology Division, under Contract No. DE-AC07-76ID01570. Mr. R. LaSala is the DOE program manager.

### 2. Previous Analyses of Advanced Plants

Several advanced plant concepts have been investigated analytically, in earlier Heat Cycle Research Program efforts, for increasing the net plant geofluid effectiveness (Wh/lbm geofluid) of binary cycles utilizing a 360°F liquid dominated

hydrothermal resource. These analyses have indicated that advanced binary plants could achieve performance improvements of up to 20% and cost of electricity improvements of as much as 13% relative to present state-of-the-technology plants such as the Heber 45MW binary plant or the Raft River 5MW dual boiling plant, providing the analysis methods and assumptions are valid. Plant modifications for these improvements would consist of, for example, use of non-adjacent hydrocarbon mixtures for working fluids, a counterflow condenser providing "integral" condensation, and a turbine-exhaust recuperator. (Figure 9 in Section VI shows the range of temperatures traversed during condensation of a typical mixture at constant pressure; this behavior results in the advantage projected for counterflow "integral" condensation.) Further performance and cost-of-power improvements of up to 8 and 5.5%, respectively, were projected for utilization of modified turbine inlet state points which would result in metastable supersaturated-vapor turbine-expansion processes. An independent market-penetration analysis, conducted by Technecon Analytical Research, Inc. (Reference 5), indicates that these improvements are significant, and could result in an increased utilization of geothermal resources in the 350 to 400°F range of over 100% by the year 2000 if the required technologies can be developed. As large, or even larger, gains might be expected for lower-temperature resources.

### 3. Experimental Approach

The approach taken in the present experimental program is to develop and/or validate the technology assumed in the plant improvement analyses previously conducted, utilizing the components assembled for this purpose in the Heat Cycle Research Facility (HCRF). The HCRF is presently located at the

Department of Energy's geothermal test site in the Imperial Valley, California which provided geofluid at from 312 to 322°F at the inlet of the HCRF. More specific objectives of the testing described in this report were to investigate the vaporization of pure and mixed hydrocarbons at supercritical pressures and condensation of the vapors in a counterflow in-tube condenser (oriented in a vertical attitude for these initial tests). The effort included both the comparison of the experimental vaporization and condensation processes with predictions made using state-of-the-technology heat-exchanger design computer codes, and the observation of the capability of the National Bureau of Standards (NBS) Code EXCST (developed using DOE funding) for predicting working fluid thermodynamic and transport properties. Additionally, effects of hydrocarbon mixtures on turbine efficiency were studied for both normal (superheated) and supersaturated turbine expansion processes.

The technology required to achieve the performance and resource-utilization advantages predicted for the advanced binary plants can be judged to have been developed adequately if our experiments show that:

1. State-point thermodynamic properties of the mixed hydrocarbon fluids can be predicted satisfactorily with the NBS properties code.
2. Supercritical vaporization processes and heat-exchanger performance can be predicted using state-of-the-technology heat exchanger design codes.
3. Counterflow integral condensation can be achieved within practical limits, and the mixed hydrocarbon condensation behavior can be predicted by state-of-the-technology condenser design codes.

4. Turbine efficiencies can be achieved for mixed-hydrocarbon vapor expansions which are comparable with those obtained for single-component vapor expansions.
5. Turbine efficiency is not degraded significantly by utilization of supersaturated-vapor turbine-expansion processes.

#### 4. Scope of Present Report

The present report (considered as an interim report) presents results of a first phase of supercritical binary cycle experiments conducted with mixed hydrocarbon working fluids of the propane-isopentane and isobutane-hexane families with nominally 100, 95 and 90% by mass of the propane and isobutane components. (During later phases of the program the condenser orientation will be changed from vertical to near-horizontal ( $10^\circ$ ) and inclined ( $30^\circ$ ) attitudes). Turbine tests have been conducted for the isobutane-hexane family of fluids (to the extent permitted by the temperature of the geofluid entering the facility); turbine tests with the propane-isopentane family of fluids will be included in the next phase of experiments. Heater, condenser, and turbine test results are presented. A special series of propane-isopentane tests was run with isopentane concentrations up to 40% to amplify the effects of departure from integral condensation. The major importance of these tests is in the comparison of their results with corresponding results for other condenser attitudes; some preliminary results are presented, however.

Appendices A, B, and C include data sheets for the tests analyzed and measured temperature distributions for the vaporization system and condenser. Finally, Appendix D consists of a letter written by Heat Transfer Research, Inc. (HTRI) which presents references containing general descriptions of the methods used by HTRI in their development of the two heat-exchanger-design computer codes used in our analysis of the heat-exchanger data.

### III. DESCRIPTION OF HEAT CYCLE RESEARCH FACILITY

#### 1. Overall Facility

The Heat Cycle Research facility (HCRF) is an experimental binary-cycle facility used to investigate different concepts and/or components for generating electrical power from a geothermal resource. In the binary power cycle, the energy from the geothermal fluid is transferred to a secondary working fluid, which is in turn expanded through a turbine driving an electrical generator. The facility, which was formerly located at the Raft River geothermal site in Idaho, is now located at the DOE Geothermal Test Facility (GTF) at East Mesa in the Imperial Valley of Southern California. A photograph of this installation is included as Figure 1.

The HCRF in its current configuration is shown schematically in Figure 2. In this configuration the facility is operated as a supercritical cycle; that is, the working fluid vapor leaving the heaters is at a temperature and pressure higher than its critical point. As indicated in Figures 1 and 2, there are two supercritical heat exchangers, a preheater and a vapor generator. The energy from the geothermal fluid, which is flowing on the tube side of the units, is used to heat a hydrocarbon working fluid flowing on the shell side. (The geothermal fluid was supplied from GTF Well 6-2, and entered the HCRF at a temperature between about 312 and 322°F.) The high-pressure working fluid vapor leaving the supercritical heaters can either be expanded through a turbine which drives an electrical generator (power loop operating mode) or be expanded through a turbine bypass valve (thermal loop operating mode). The low-pressure vapor leaving the turbine or bypass valve is discharged to the condenser where it is desuperheated and

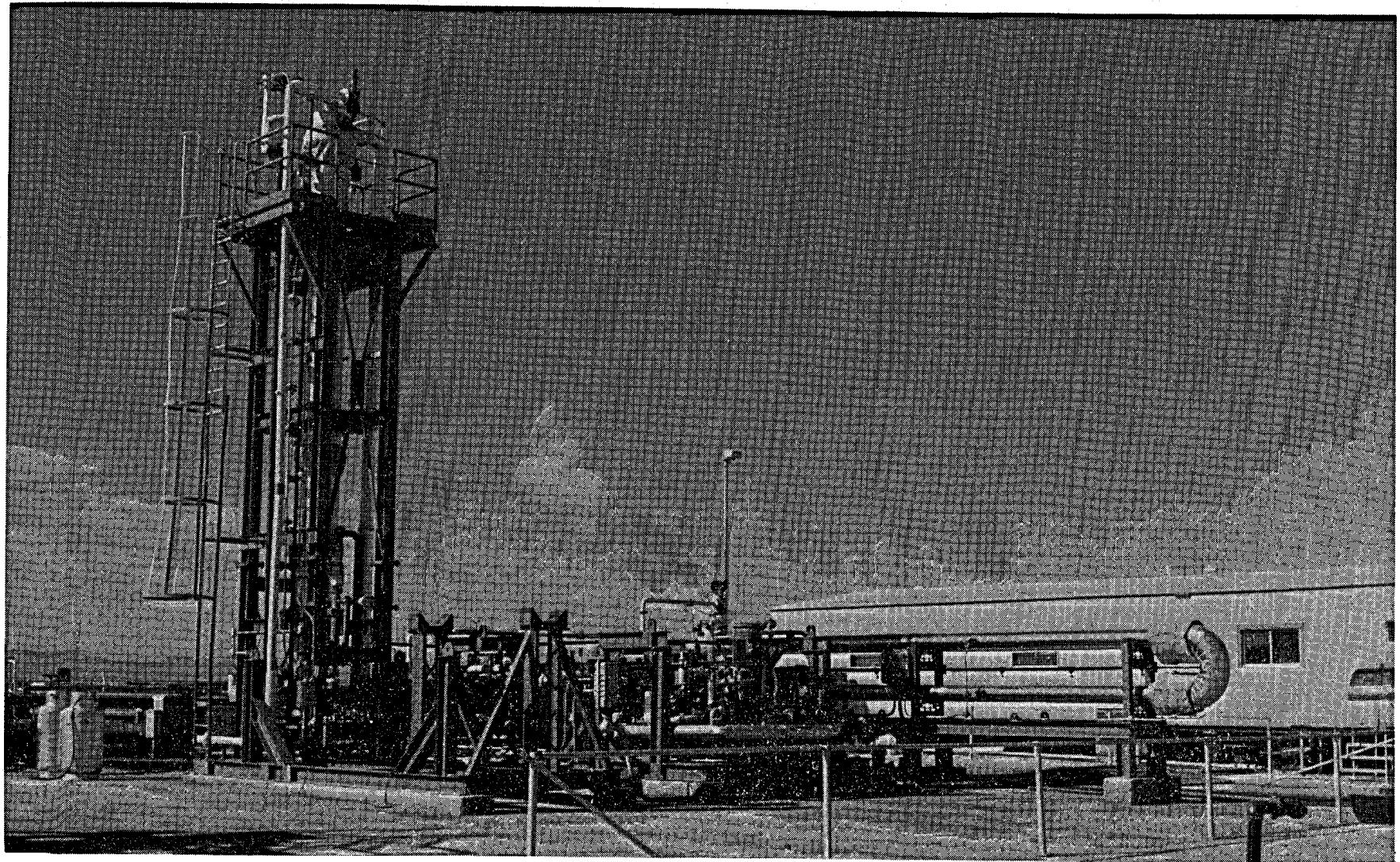
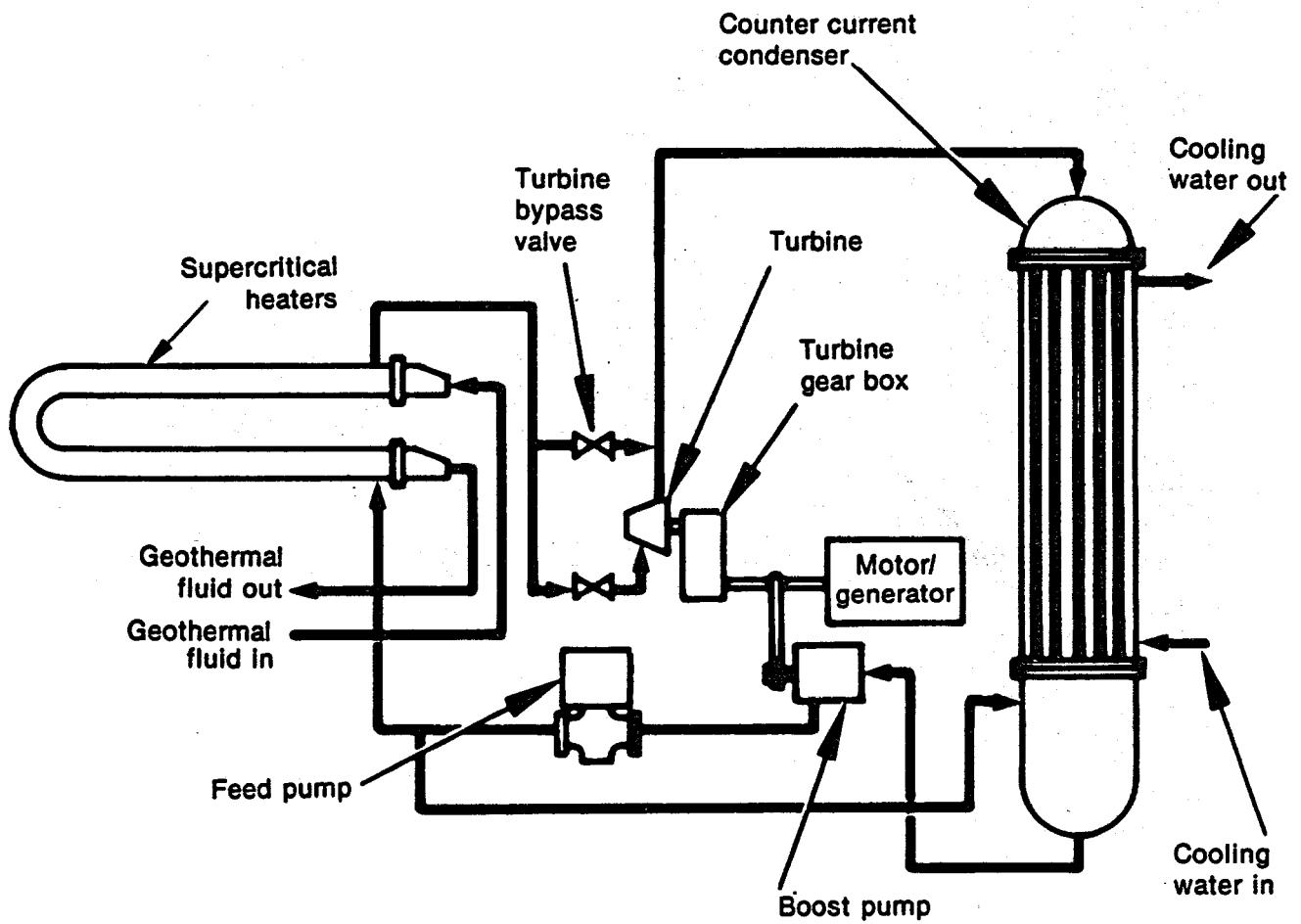


Figure 1 Heat Cycle Research Facility  
Located at the DOE Geothermal  
Test Site



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Figure 2 Schematic of the Heat Cycle Research Facility

condensed. The liquid condensate is then pumped back to the heaters, and the cycle is repeated. In the condenser, which is a counterflow in-tube condensing unit, currently in a vertical orientation, the heat rejected in condensing the working fluid vapor is transferred to cooling water on the shell-side of the unit. The cooling water is supplied from the GTF cooling-water system which includes a conventional wet cross-flow tower.

## 2. Working Fluid Vaporization System

The vaporization of the pure and mixed-hydrocarbon working fluids at supercritical pressures was accomplished in a pair of heat exchangers as indicated schematically in Figure 2 and sketched in Figure 3. The heaters are arranged in a hairpin configuration with the preheater on the bottom and vapor generator on top. The geothermal fluid and the working fluid have countercurrent flow paths through the heaters with the working fluid flow on the outside of the tubes. The preheater tube length is 28.21 feet (tubesheet face-to-face) with an outside shell diameter of 5.56 inches. It contains 27, 1/2-inch OD, 19 fins/inch, low-fin tubes made of admiralty brass having an outside-to-inside area ratio of 4.17. The vapor generator contains 39 of the same type of tube with a 29.21 foot length (tubesheet face-to-face) and an outside shell diameter of 6.63 inches. Both units were designed for a temperature and pressure of 350°F and 800 psi.

Geofluid and working-fluid temperatures entering and leaving the vaporization system were measured using RTD sensors. Iron constantan thermocouples were used to measure temperatures of both fluids between heat exchangers, and temperatures of the working fluid (shell side) at two intermediate locations in each heat exchanger as shown in Figure 3. Working-fluid flow was

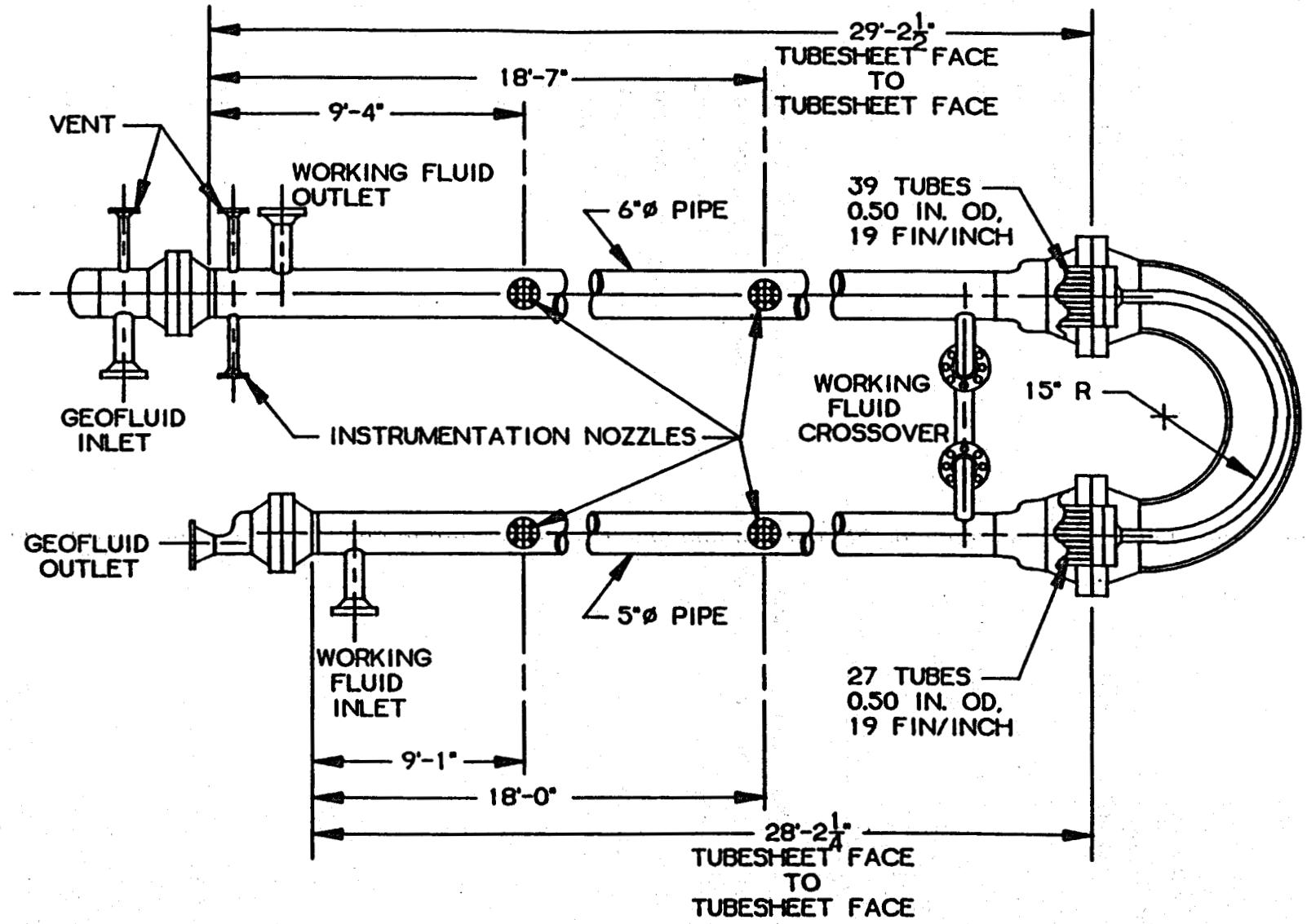


Figure 3 Sketch of the Working Fluid Vaporization System

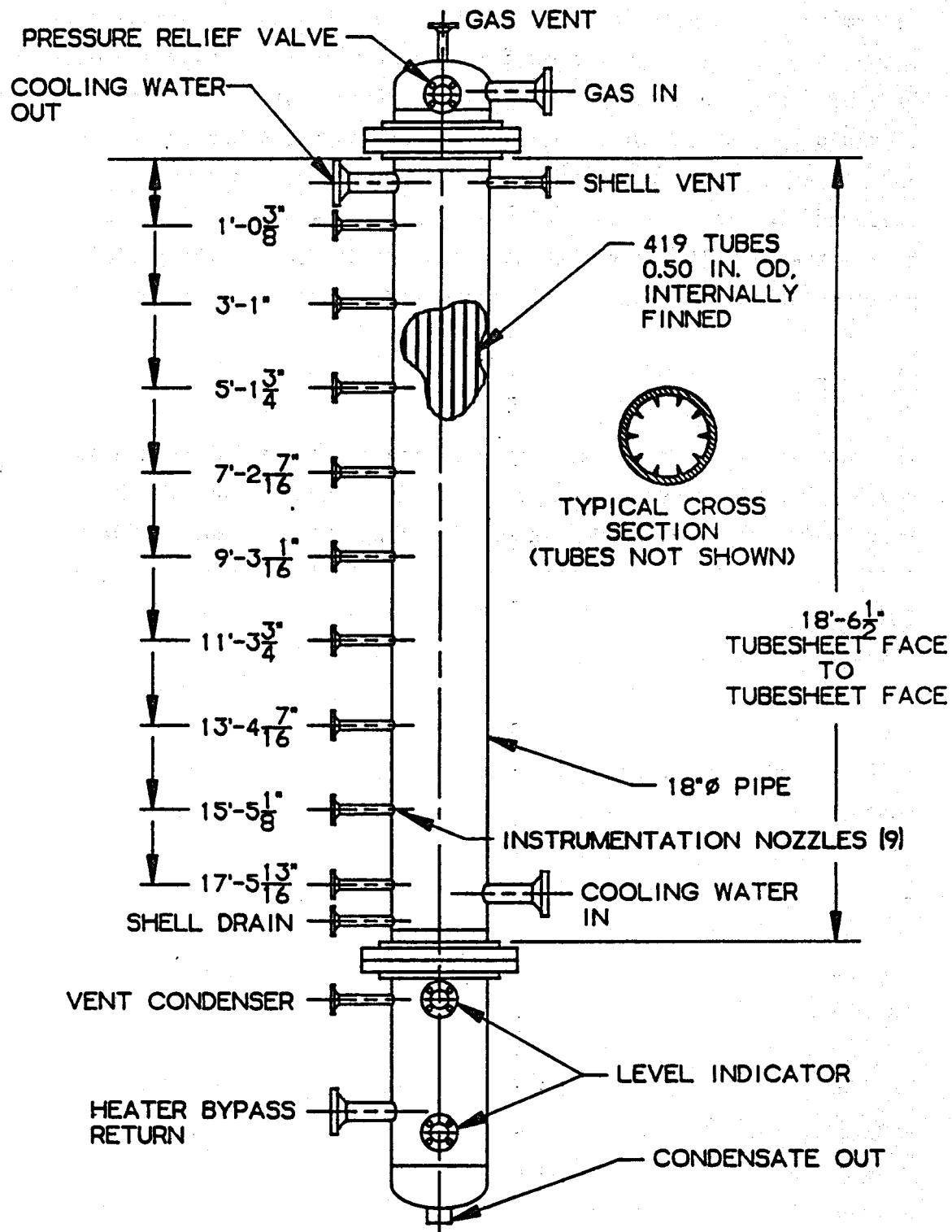
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determined by measuring the liquid flow entering the preheater using a turbine flow meter, and geofluid flow was measured leaving the preheater using an orifice-plate flow meter. Geofluid pressures were measured entering the vapor generator and leaving the preheater, and working-fluid pressure was measured leaving the vapor generator using electronic pressure transmitters. (Earlier tests had indicated working-fluid pressure drops less than 3 psi across the vaporization system.)

### 3. Condenser

The condenser in its present orientation is a vertical unit also having countercurrent flow paths. The condensation occurs on the inside of 1/2-inch OD, internally finned tubes made of 90/10 cupro-nickel (Noranda forge fin No. 6, with ten straight longitudinal fins inside each tube giving an inside-to-outside area ratio=1.3). The vessel is 18 inches in diameter and contains 419 of the tubes which have a length of 18.54 feet (tubesheet face-to-face). The design temperature for the unit is 350°F with a tubeside design pressure of 350 psi and a shell-side design pressure of 175 psi. The cooling water enters the shell-side just above the lower tubesheet and leaves the vessel just below the upper tubesheet. The working fluid condensate collects in the lower portion of the vessel (below the lower tubesheet), which acts as a hot well. A sketch of the condenser is shown in Figure 4.

Working-fluid and cooling-water temperatures were measured entering and leaving the condenser, and cooling water (shell side) temperatures were measured at nine intermediate locations within the condenser as shown in Figure 4. Iron-constantan thermocouples were used for these measurements. Working-fluid pressures were measured upstream and downstream of the condenser



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Figure 4 Sketch of the Counterflow, In-Tube, Condenser

using electronic pressure transmitters, and cooling water pressures were monitored with mechanical gauges. Working-fluid flow through the condenser was determined during steady-flow conditions from the preheater inlet flow measurement. Cooling-water flow was measured using an orifice-plate flow meter located near the condenser outlet.

#### 4. Turbine-Generator

The turbine-generator assembly was designed and built by Barber-Nichols Engineering, and consists of an axial-flow impulse turbine driving an induction motor/generator through a 6.135:1 speed-reduction gearbox; the working-fluid boost pump is driven from the generator drive shaft. The generator's rated speed is 3600 rpm, and the rated power of the assembly is about 75kW. For the present nozzle area and turbine inlet state points, the turbine power produced is on the order of 40 kW.

Turbine inlet and outlet temperatures were measured using iron-constantan thermocouples. Inlet and outlet pressures were measured using electronic pressure transmitters. Turbine flow under steady operating conditions was assumed to equal preheater inlet flow. Generator electric output power was measured directly with a commercial wattmeter.

#### IV. EXPERIMENTAL APPROACH

The emphasis during the current phase of testing has been to investigate the performance of the supercritical heaters and the counterflow, internally-finned condenser, particularly when mixed-hydrocarbon working fluids are used. First, baseline performance data was established with a single-component working fluid. Then mixtures were tested in which the primary component was the fluid used in the baseline tests with increasing amounts of a secondary fluid. Two families of nominal working fluids were tested; the isobutane/hexane family and the propane/isopentane family (the primary constituent given first, as a mass percent, for each family). The order of testing for each family was single component (primary constituent), 95%/5%, and 90%/10%. For each fluid, i.e., 95% isobutane/5% hexane, data were taken at four different heater pressures, two of which were above the critical pressure, one just below the critical pressure, and the last enough below the critical pressure to assure the heater was acting as a boiler. At each pressure, the flow rates of the working fluid, geothermal fluid, and cooling water were varied so that the heat loads, superheat levels, and temperature differences across the heat exchangers were varied. A special series of tests was conducted using the propane-isopentane family of working fluids with isopentane concentrations ranging up to 40%, in order to further investigate the approach to integral condensation being achieved. These tests were conducted at a single heater pressure (supercritical) and at several heater outlet temperatures, for each fluid composition, to vary the condenser inlet superheat. At each test condition, the composition of the working fluid was verified using a gas chromatograph analysis.

In operating the facility, generally the heater outlet vapor conditions were set along with the flow rate of the cooling water and either the working fluid or the geothermal fluid. The heater

pressure was controlled whenever the turbine was not operating. The geothermal fluid flow rate or the working fluid flow rate was varied to provide the desired heater outlet vapor temperature. If a particular condenser inlet vapor superheat was desired, the heater outlet temperature was varied until the desired condition was obtained. In general, the working-fluid vapor leaving the heater was not expanded through the "dome", or two-phase region, either with the turbine operating (isentropically) or in the thermal loop mode (isenthalpically) unless necessary to provide specific condenser inlet conditions. However, several special tests were conducted with the isobutane-hexane family of working fluids, in which the turbine inlet states were selected such that the expansion processes passed through the two-phase region in order to investigate the effect of supersaturated expansion processes on turbine efficiency. To date, because of mechanical problems with the turbine assembly, including lube-oil pump failures and gear-box distortion, only a fraction of the planned turbine tests have been completed.

For the present testing with the condenser in the vertical attitude a total of some 400 tests have been conducted. Of these, about 100 have been selected for detailed analysis to study component and cycle behavior over the range of test conditions of interest. Appendix A outlines the tests conducted, and presents data sheets for those selected for analysis of the heater and condenser. These sheets have been included to make the data available for use in formulating or validating heat-exchanger design methods for the range of working fluids tested. The turbine data obtained and analyzed, as discussed in the following section, were not considered to be of such general interest, and have not been included.

## V. METHOD OF ANALYSIS

### 1. Heat Exchangers

The analysis of the heat exchanger data from these experiments had a two-fold purpose. First, data were obtained and verified for the phenomena of supercritical heating in a finned tube heat exchanger and the condensation of hydrocarbon mixtures inside finned tubes. Second, the data were used to determine how well a heater or condenser similar to those tested could be designed using standard techniques. To achieve these purposes, it was decided to use the computer codes developed by Heat Transfer Research, Inc. (HTRI) to rate the exchangers, because these codes are commonly used for heat exchanger design, and a direct comparison between experiment and calculation will give a measure of how well the codes serve as design tools for this application. Several references containing general descriptions of methods used by HTRI in their development of the codes are included in Appendix D.

Great accuracy in the thermodynamic and transport properties is needed because the temperatures of working fluid and geofluid approach each other during heating to within less than 5°F and even closer in the condenser. Standard references such as Starling (Reference 6) for thermodynamic properties of isobutane appeared to show some inaccuracy in data near the critical point. A new computer code developed by J. F. Ely at the U.S. National Bureau of Standards (NBS) (Reference 7) was used which calculates thermodynamic and transport properties for pure fluids and mixtures using an "Extended Corresponding States Theory" (Computer Code EXCST). The results obtained using Ely's properties gave more consistent energy balances than other codes available to us for calculation of properties of mixtures; overall, no significant deficiencies in the NBS properties were

detected during the present experimental program. Some uncertainty in bubble point properties, however, was indicated by the difference in bubble point temperatures at a given pressure shown by two saturation-line property options within EXCST (differences of about 10°F).

Heaters - For the heaters the HTRE computer code ST-4 MOD 5.4, the shell-and-tube code with no phase change, was used. Previous investigators have indicated that a single-phase heat-transfer correlation is adequate to describe supercritical heating if variable fluid properties are taken into account (Reference 8). Unfortunately, this code uses average properties for a given exchanger and linear temperature profiles. At pressures slightly above the critical pressure, the thermodynamic and transport properties change quite rapidly with temperature. Very non-linear temperature distributions result within each heat exchanger along with large variations in the transport properties. In order to account for these variations, the heater was divided into six separate increments and the vaporizer into nine. The computer code assumed that each of these increments was an individual exchanger and applied end corrections to each increment, to account for the reduced heat transfer near the ends of heat exchangers relative to that in the central region. These end corrections were removed in a separate calculation. The clean overall heat transfer coefficients and temperature differences were determined, and fouling values consistent with the measured temperatures for each increment (three in each exchanger) were calculated. Fouling resistances for each heat exchanger were plotted as functions of time, and predicted temperature distributions through both heat exchangers were compared with measured temperatures for the working and geothermal fluids.

Condenser - The condenser results were analyzed using CST-1 MOD 2.0 (the HTRI condenser code). The thermodynamic properties (from the EXCST code) used in the analysis assumed completely mixed phases during the condensation (integral condensation). This code treats variable working-fluid properties by dividing the condenser into twenty "constant-property" nodes. Corrections were made, however, to account for the presence of the internal fins on the working-fluid side of the tubes; the code normally assumes circular tubes. The hydraulic radius was used to calculate Reynolds number so that the code would determine the proper flow régime, and use the corresponding heat-transfer-coefficient correlation at each location in the condenser. The correct internal surface area was then obtained by applying a correction factor to the number of tubes, and finally a second correction was applied to the external heat-transfer coefficient to compensate for the incorrect number of tubes (and the incorrect tube external surface area) assumed by the code. The shell-side heat transfer coefficient, determined by running the code with the proper shell-side geometry, was then input into the final calculations.

The relationship between measured condenser pressure and condensing temperature (bubble point temperature) contains some uncertainty in a number of items such as: pressure measurement accuracy, working fluid composition, accuracy of thermodynamic properties defining the saturation line, presence of noncondensibles, and the magnitude of condenser subcooling. Because of the combination of very close approach temperature differences between working fluid and cooling water temperatures in the condenser (as small as 1.5°F), and the uncertainties in the condensing temperature as a function of measured condenser pressure, it was found that measured temperatures rather than measured condenser pressure, had to be used as code input

quantities to best represent actual condenser conditions. The code was input assuming zero subcooling, zero pressure drop in the tubing, and with the measured working fluid inlet state-point and flow conditions. Measured cooling-water-inlet and outlet temperatures were input, and the code was used to calculate a condensing temperature for which the required condenser heat-transfer area equalled the actual surface area. As will be discussed later, this calculated condensing temperature was correlated with the measured condenser outlet working-fluid temperature. Condenser pressure was determined from a pressure measurement in the working-fluid inlet piping corrected by a small calculated pressure drop (normally between 1 and 2 psi) from the pressure transmitter to the condenser inlet plenum, and correlated separately with the condensing temperature calculated by the HTRE computer code.

## 2. Turbine

Experimental turbine performance was determined, and is presented in terms of turbine isentropic efficiency. Turbine efficiency is defined as the actual turbine work per unit mass of working fluid passing through the turbine divided by the change in enthalpy of the working fluid during an isentropic expansion process from the turbine inlet state to the turbine outlet pressure. The isentropic efficiencies were determined in two ways. For the first approach, the enthalpy change through the turbine was determined by subtracting the outlet enthalpy, which was determined from the measured outlet pressure and temperature using the NBS thermodynamic properties, from the inlet enthalpy, which was determined from an energy balance for the vaporization system. (The energy balance was "calibrated" by correcting the heat added to the working fluid by a small

amount ( $\sim 1\%$ ), relative to the heat given up by the brine, to account for errors in flow measurements and heat losses from the heat exchanger shells to the atmosphere. The correction required was determined from tests with the vaporizer outlet state well above the critical temperature.) Because of the proximity of the turbine inlet state to the critical point, and the uncertainty of properties in that region, use of pressure and temperature measurements at that point for determination of enthalpy resulted in a significant loss of accuracy. For the second approach, the actual enthalpy change was determined by correcting the generator output wattmeter reading (output power) for generator efficiency, turbine-gear-box losses, and working fluid boost pump power (the pump was driven from a gearbox shaft) to determine turbine shaft power, which was then divided by the turbine flow rate. The generator efficiency, gearbox loss, and boost pump efficiency were provided by the equipment manufacturers. These values were judged to be very repeatable because of the relatively constant values of pump head, turbine/generator speed, and gearbox oil temperature for the turbine tests being compared. Their combined uncertainties impacted the predicted uncertainty in turbine efficiency by only about 0.2%. The isentropic efficiency was determined for both methods by dividing the actual enthalpy change by the isentropic enthalpy change, again based on NBS properties.

As discussed in some detail in Reference 9, turbine efficiency calculated by the first approach results in considerable scatter because of the high sensitivity of enthalpy to small errors in temperature and pressure measurements and/or thermodynamic properties. This sensitivity is amplified in the present tests, particularly those in which the turbine expansions "pass through the two-phase region", because of the close proximity of the

turbine inlet state to the critical point and the large magnitudes of specific heat and uncertainties of properties in that region. Uncertainties in calculated efficiency, and particularly in trends of calculated efficiency, have been estimated for both calculational approaches considering both instrumentation uncertainty and uncertainty in thermodynamic properties; measurement and property uncertainties were estimated and propagated through each of the two efficiency-calculation approaches. Preliminary results, based on the repeatability of measurements, indicate that values of efficiency predicted from state-point properties could show scatter as large as  $\pm 5.6\%$ ; efficiencies determined from wattmeter readings should contain about 1/4 of that scatter ( $\pm 1.4\%$ ). Accordingly, trends shown by the efficiencies based on wattmeter readings are considered to be more reliable. Both approaches for calculating efficiency are being used in the presentation and interpretation of experimental results, however.

## VI. RESULTS

Results are presented for tests of the supercritical binary cycle for which the counterflow in-tube condenser is oriented vertically. Nominal working fluids tested consist of the isobutane-hexane family with 0, 5, 10% hexane (by mass), and the propane-isopentane family with 0, 5, 10% isopentane. For each of these fluids, heater and condenser data were analyzed for from six to ten tests, except that only one heater test was analyzed for the 90% isobutane - 10% hexane fluid. Geofluid temperatures did not permit working-fluid flows and pressures to be tested over a wide enough range for this mixture to make further analysis worth while.

For the heaters, tests at the nominal pressure (slightly supercritical for optimum thermodynamic performance) with 100, 75 and 50% of nominal working fluid flow were analyzed along with one run at a higher pressure and one at a lower (subcritical) pressure. The system operated well at slightly subcritical pressures, but there was an indication from energy balances that for some of these tests all of the liquid may not have been vaporized. Although the computer code was not set up to handle boiling heat transfer, specifically, some boiling tests were analyzed. These results are not presented nor analyzed in detail because the primary purpose of the testing was to determine heater performance at supercritical pressure.

The condenser tests analyzed include the nominal working fluid flow, with cooling water flows of 125, 100, and 75% of nominal and several tests which varied the superheat entering the condenser from its nominal value. A special series of condenser tests was run and analyzed for the propane-isopentane family of fluids with isopentane concentrations ranging up to 40%, at nominal cooling water and working flows, to investigate the departure from integral condensation for the vertical condenser orientation.

Turbine tests were analyzed for the isobutane-hexane family of turbine working fluids to investigate the effects of mixtures and supersaturated expansion processes on turbine efficiency.

### 1. Heaters

Agreement between the calculated and measured temperature distributions in the heater-vaporizer heat exchangers was quite good. A typical comparison is shown in Figure 5 for a working fluid containing 10% (by mass) isopentane and 90% propane. Flow and temperature conditions are close to the design values, and the pressure is uniform in each heat exchanger. The agreement of this curve with the experimentally measured temperatures is typical of the supercritical and boiling runs with each working fluid. Measured temperatures are within a few degrees F of the calculated values for all cases. Experimental temperatures compared with temperature distributions predicted by the HTRI computer code are presented in Appendix B for the tests analyzed; as indicated in that appendix, several temperature distributions are included for boiling tests.

Figure 6 shows the calculated fouling resistances referred to the inside area (geothermal-side), where it is expected that the major portion of the fouling will occur. The results are shown for each heat exchanger separately, and plotted with time of operation of the facility. The time at which each fluid was tested is noted across the top of the plot, progressing from isobutane to propane, then to 95/5% and 90/10% mixtures of propane and isopentane, and finally followed by the isobutane-hexane family of fluids. The boiling tests (slightly subcritical working fluid pressures) and those points with energy balances in error greater than 7% were omitted from the plot. The preheater points are shown with squares and the vapor generator with triangles. The faired line is a least-squares fit of a quadratic curve for all of the data plotted between zero and about 320 days.

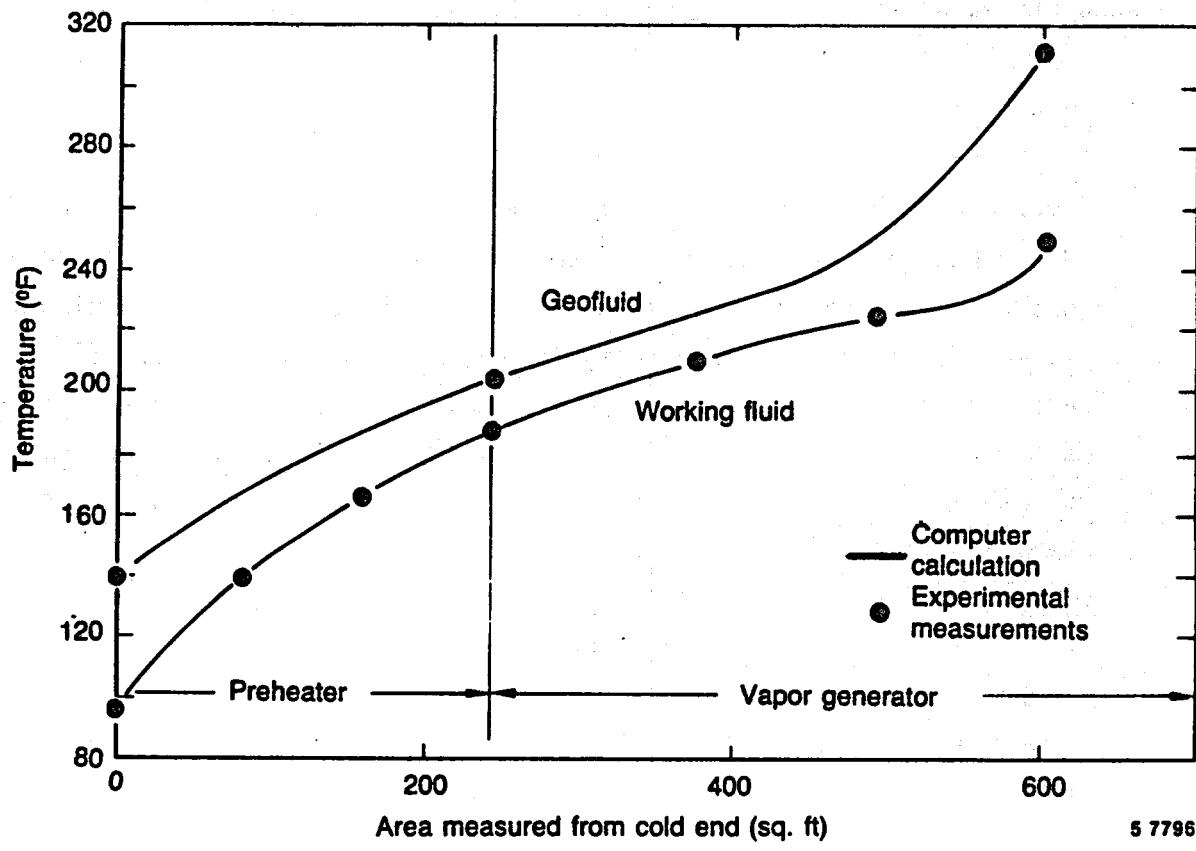


Figure 5 Temperature Distributions, Heating  
90% Propane - 10% Isopentane

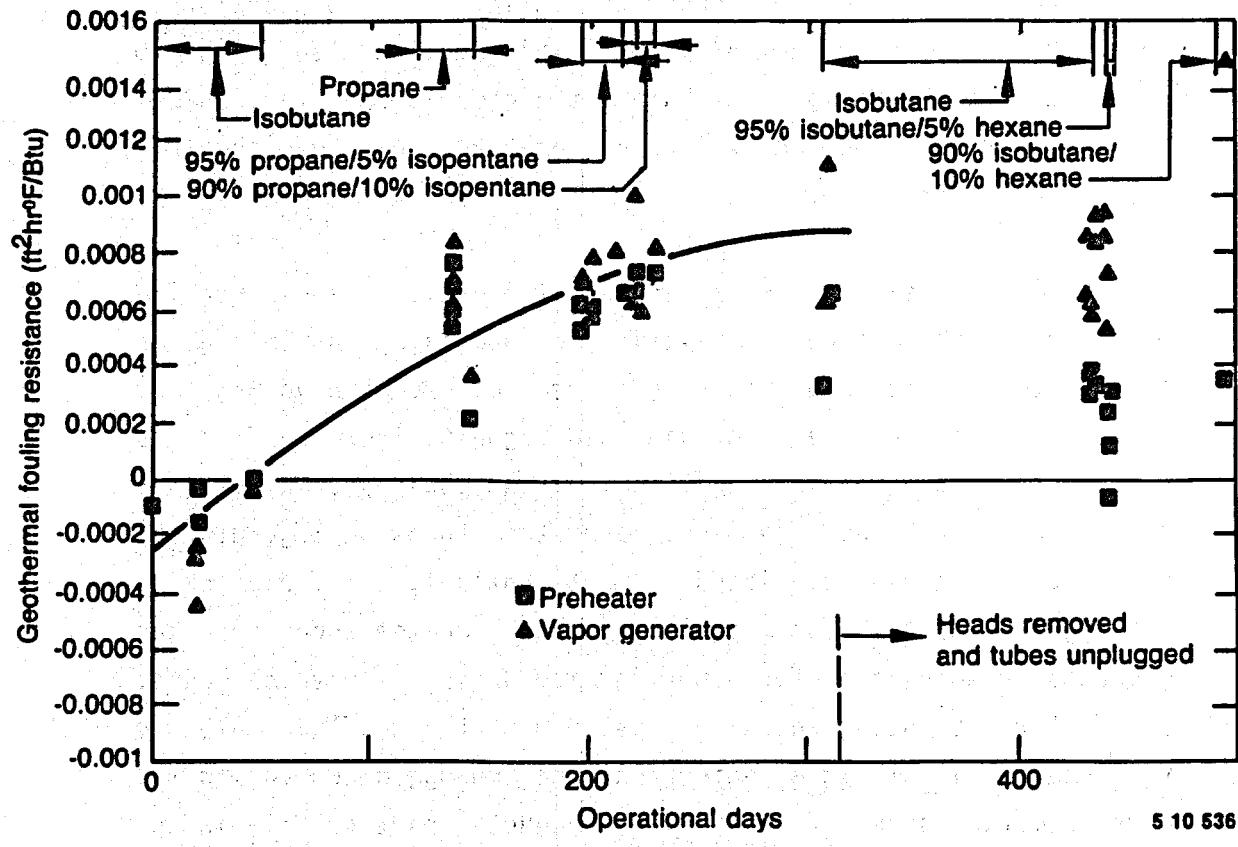


Figure 6 Fouling in Geothermal Heat Exchangers

The fact that the calculated fouling factor is negative at early times in the test series is an indication that the computer code was slightly under-predicting the heat transfer coefficient in the clean configuration. The clean overall heat transfer coefficient for these fluids at nominal conditions is between 100 and 140 Btu/hr ft<sup>2</sup>°F, based on the finned outside area. The code is, therefore, under-predicting the heat transfer by about 20% in the clean condition. This implies a conservatism with respect to design, in that if the code is used for design, the actual area needed will be about 20% less than the area calculated by the code.

The fouling resistance shown in Figure 6 exhibits an increasing magnitude with time up to a little over 300 days. At this point the heater tubes had shown evidence of some plugging (the pressure drop in the geofluid had begun to increase from its normal magnitude of about 15 psi across the heater assembly); the heads were then removed, and the tubes unplugged. The substance removed consisted almost entirely of iron oxide scaling (from the system piping) rather than the tube corrosion products responsible for the fouling observed in these tests. (A filter is being installed upstream of the geofluid inlet to the heaters.) It is expected that the unplugging operation may have removed some of the fouling products, particularly in the preheater, and disturbed the fouling trend at that time. Therefore, the faired line in Figure 6 is shown only to the time of the unplugging. Fouling is, of course very site specific, and its detailed investigation is not an objective of these experiments, except to recognize that the effect must be considered in the correlation of the heater data. Generally, the trend and magnitudes of the fouling resistances shown in the figure appear reasonable and would be expected in this type of geothermal service.

## 2. Condenser

Condensing Temperature Correlation - The condenser data were correlated by first using the HTRI condenser code to calculate the condensing (bubble-point) temperature for the actual condenser area and fluid conditions tested. Values of calculated bubble-point temperature minus measured outlet working fluid temperature were plotted versus operational time for the working fluids tested as shown in Figure 7. With the exception of one point, these temperature differences range from -0.6 to + 1.7°F. No significant trends are indicated, although the plotted differences for the pure fluids seem to be slightly more positive than for the 90% - 10% mixtures. This trend will be carefully watched as more data are correlated for the next series of condenser tests in the near-horizontal attitude. No evidence of fouling is shown or was expected to be apparent in the condenser data. The calculations assumed a clean heat exchanger. If a cooling-water fouling resistance of 0.001 hr ft<sup>2</sup>°F/Btu were added, the overall heat transfer coefficient would change approximately 2.5%, well within the experimental scatter of the data.

The correlation of Figure 7 indicates that if one designed a similar condenser using the HTRI code CST-1, the NBS thermo-physical properties, and with the assumption that the fluid left the condenser at the bubble point, the resulting condenser would produce a condensing temperature which is, on the average, 0.4°F lower than the design condensing temperature. (The standard deviation of the plotted points of Figure 7 from this average is 0.6°F). The code, therefore, provides a slightly conservative design method with the extent of conservatism comparable to the uncertainty in the experimental measurements.

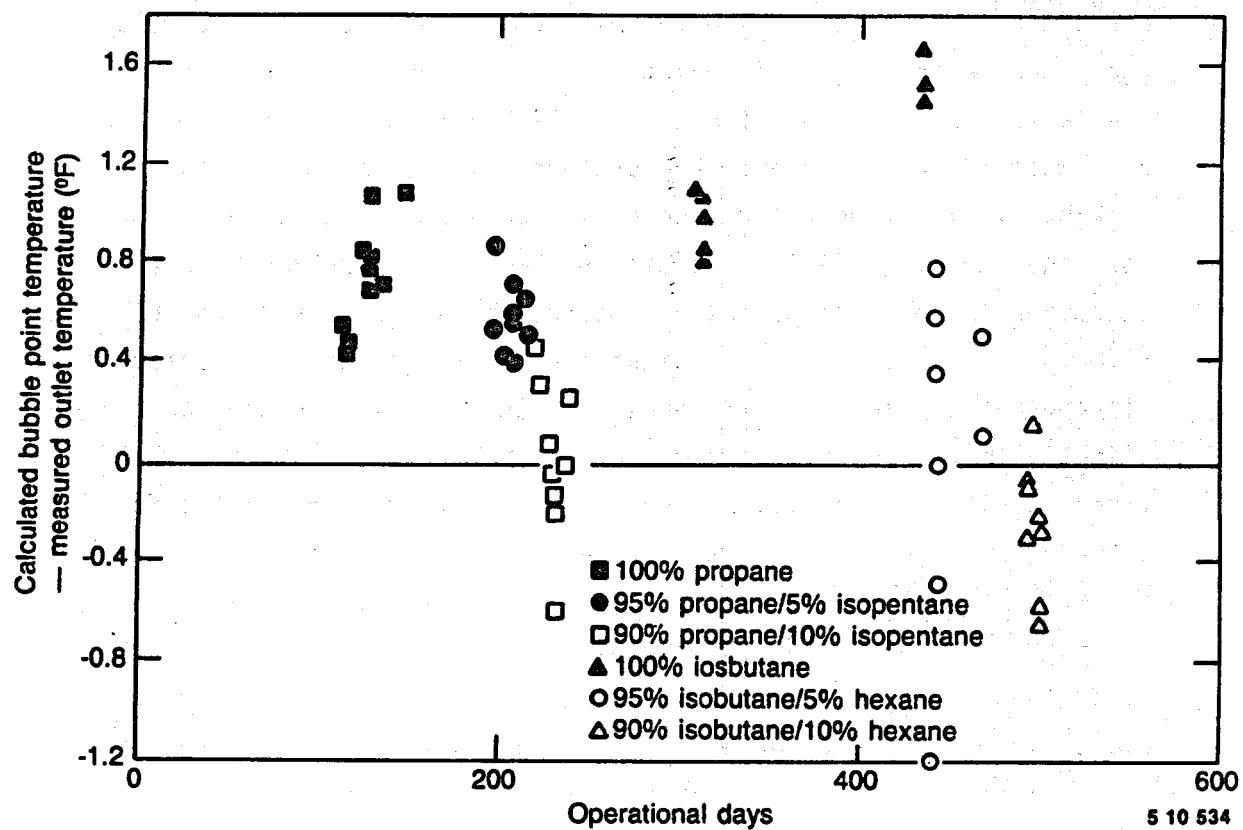


Figure 7 Correlation of Calculated Condensing Temperature

Condenser Pressure Correlation - A separate correlation for condenser pressure is shown in Figure 8 as the calculated bubble point temperature (same as in Figure 7) minus the temperature corresponding to the actual condenser pressure (determined as outlined in Section V) plotted as a function of operational time. As indicated previously, the NBS properties were used in this correlation. Again, no significant trend is apparent. The average temperature difference for these plotted points is  $+1.4^{\circ}\text{F}$  with a standard deviation from the average of  $0.7^{\circ}\text{F}$ . Therefore, a condenser designed using the HTRE code with the NBS properties would be expected to be slightly conservative relative to condenser pressure; the condenser pressure produced by the condenser would be equal to the bubble point pressure for a temperature which is, on the average,  $1.4^{\circ}\text{F}$  lower than the design condensing temperature.

Temperature Distributions - Typical temperature distributions during condensing of a mixture are presented in Figure 9, which shows calculated and measured working-fluid and cooling-water temperatures for a 90% propane-10% isopentane mixture at nominal test conditions (the same test conditions as for the typical heater temperature-distribution plot of Figure 5). The triangles indicate experimental measurements of the cooling water temperature. The curves are from the computer-code calculation. The largest difference between the measured and calculated values is approximately  $2^{\circ}\text{F}$ . The flow regimes predicted by the computer code are shown on the figure. In the desuperheating region the local overall heat transfer coefficient (based on the tube outside area) is  $39 \text{ Btu/hr ft}^{20}\text{F}$ . In the shear-controlled region it varies from 90 to 87, while in the gravity-controlled regions, between 87 and 81. The average overall heat transfer coefficient was  $81.2 \text{ Btu/hr ft}^{20}\text{F}$ , and the average mean temperature difference was  $9.2^{\circ}\text{F}$ .

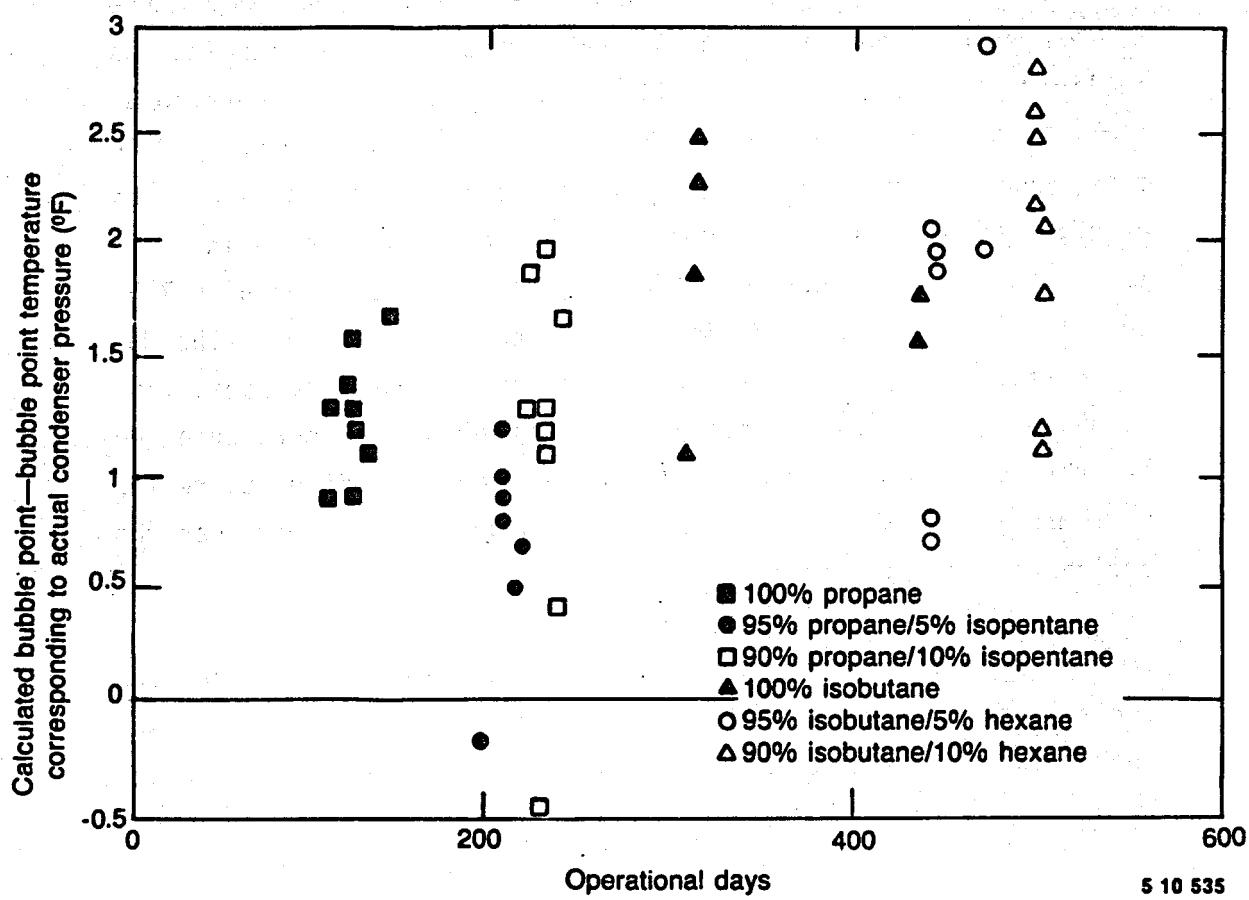


Figure 8 Correlation of Condenser Pressure

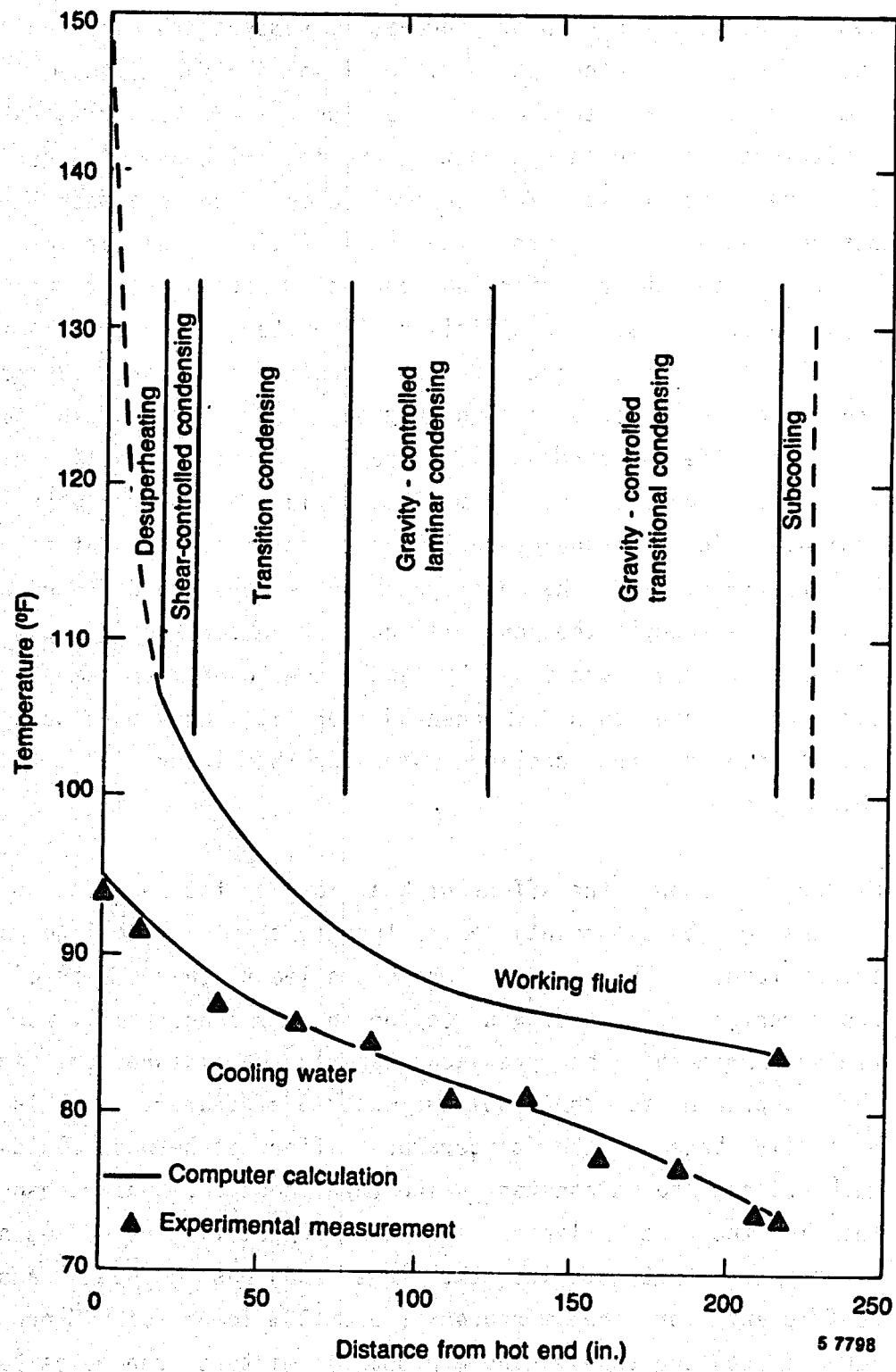


Figure 9. Temperature Distributions,  
Condensing 90% Propane -  
10% Isopentane

Figure 10 shows a similar curve for condensing pure propane. Note that the approach or pinch-point temperature difference is much closer for the pure fluid than for the mixture,  $1.5^{\circ}\text{F}$  compared to  $6^{\circ}\text{F}$ , and creates a much lower mean temperature difference in the desuperheating and initial condensing regions for the pure fluid. This behavior gives rise to a much larger desuperheating region for the pure fluid as well as low heat fluxes in the shear-controlled condensing region even though the local heat transfer coefficient is quite high in that region. The local overall heat transfer coefficients are:  $28 \text{ Btu/hr ft}^{20}\text{F}$  in the desuperheating region, from 188 to 128  $\text{Btu/hr ft}^{20}\text{F}$  in the shear-controlled region, from 124 to 103 in the transition region, and from 98 to 93 in the gravity-controlled region. The average overall heat transfer coefficient is  $92.8 \text{ Btu/hr ft}^{20}\text{F}$ , and the average mean temperature difference is  $7.4^{\circ}\text{F}$ . Although the overall heat transfer coefficient is higher for the pure fluid by 14.3%, the lower mean temperature difference more than compensated for it, and more heat was transferred to the cooling water for the mixture (9% more for this example).

Figure 11 shows the effect of heat load on the approach of the condensing (bubble point) temperature to the inlet cooling water temperature. The curves, which are least-squares fits of the experimental data, pertain to the three propane-family working fluids. Note that the more isopentane in the mixture, the closer the approach to the cooling water temperature. This is primarily because the temperature difference between fluids is much closer to a constant value throughout the heat exchanger, and in the mean, larger for the 90/10% mixture. Figure 11 illustrates that despite the lower condensing heat transfer coefficient for the mixtures (about 30% lower for 90% propane -10% isopentane than for pure propane), mixtures can be as "easy or even easier" to condense than pure fluids, depending on the specific application. This result should help allay former concerns regarding the general difficulty of condensing mixtures.

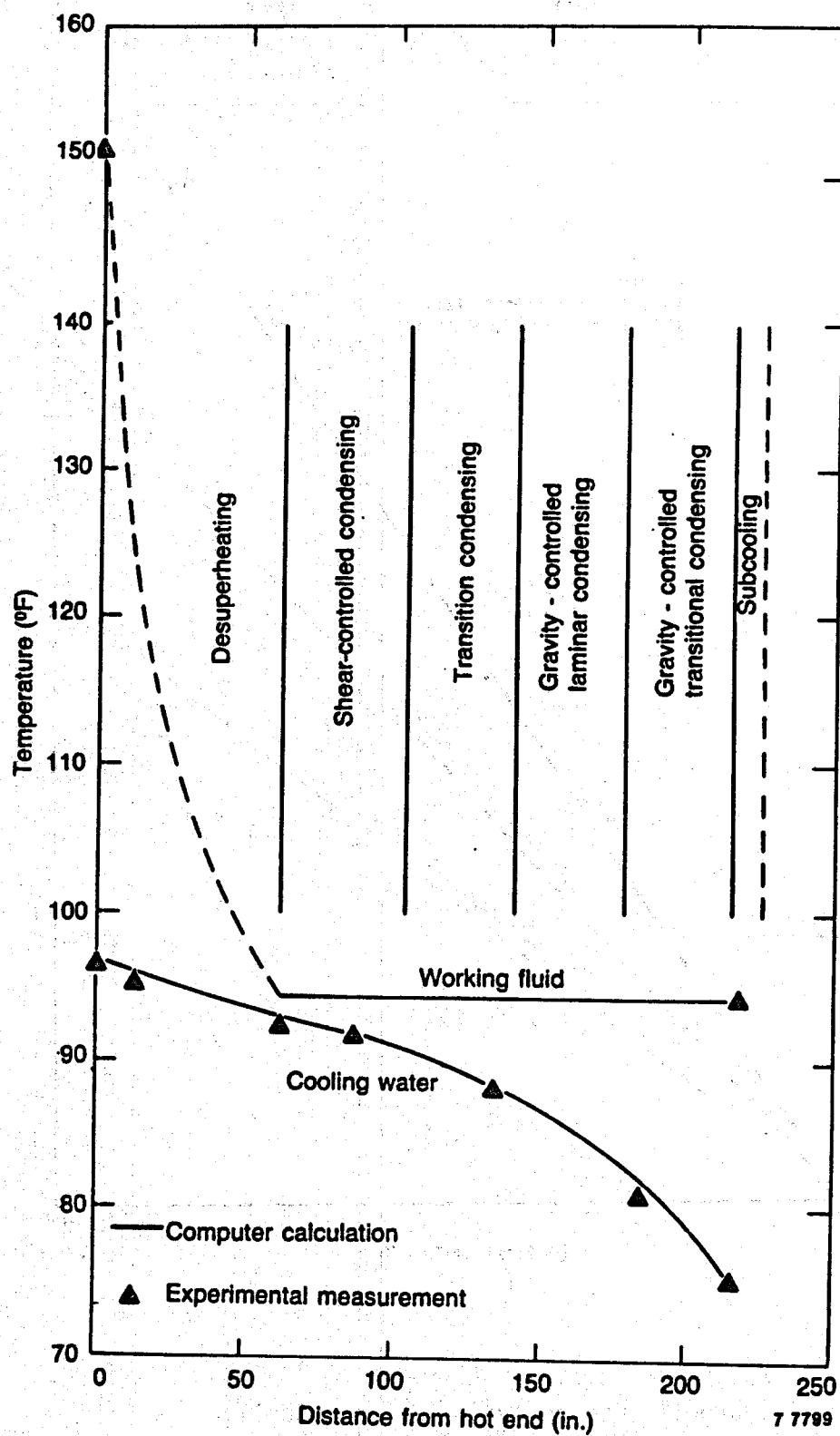


Figure 10 Temperature Distributions,  
Condensing Pure Propane

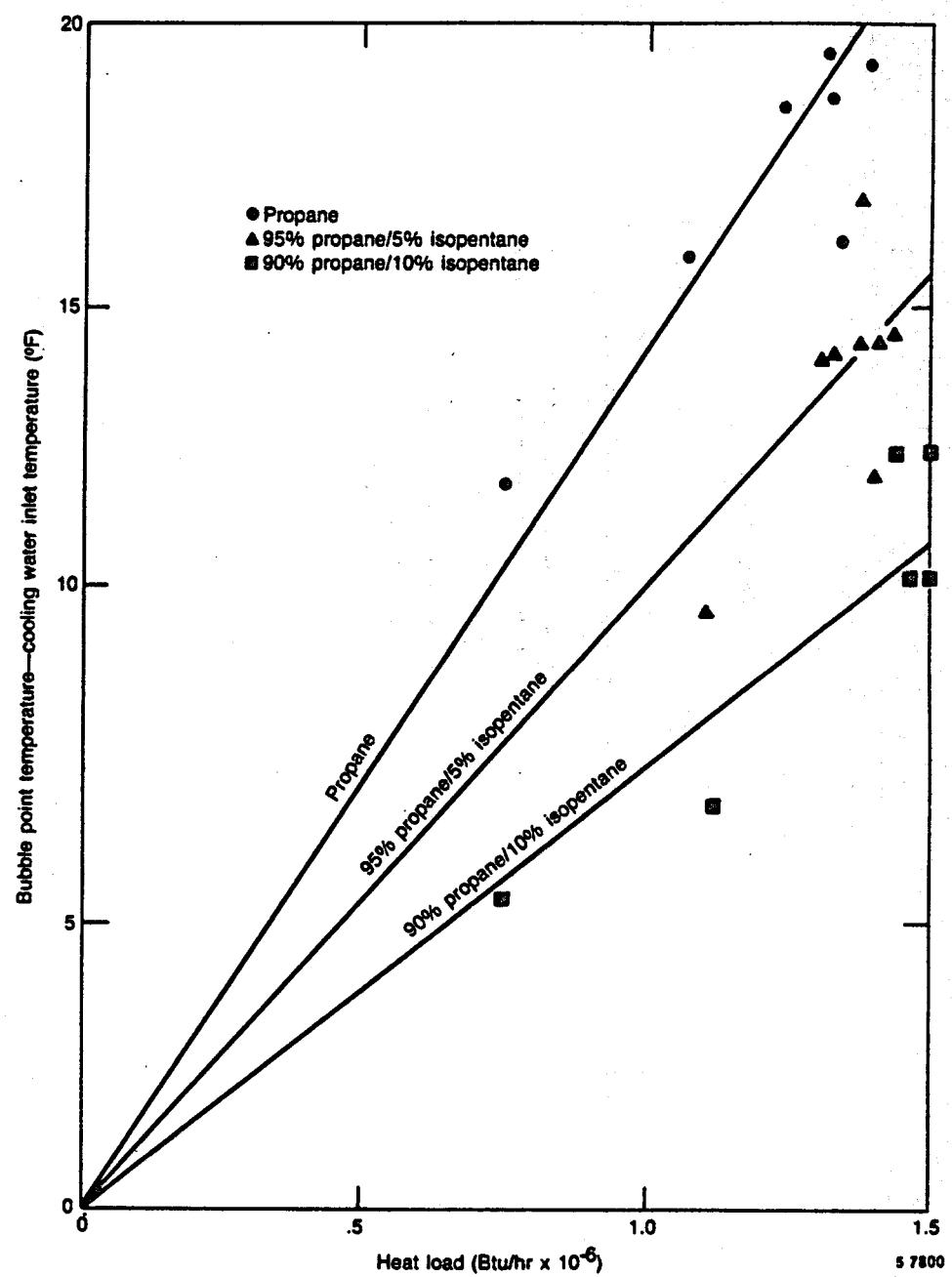


Figure 11 Condenser Approach to Cooling Water Inlet Temperature

Integral Condensation - Achieving a close approach to integral condensation is necessary for obtaining the earlier projected performance gains (mentioned in Section II) for advanced binary plants using mixed hydrocarbon working fluids. As discussed briefly, integral condensation refers to the maintaining of thermal equilibrium between phases during the condensation process. As departure from integral condensation increases, the condenser pressure increases, for a given condensing temperature, and in the limit reaches the condensing pressure of the light hydrocarbon constituent of the mixture. This limit is termed differential condensation, and would occur if the liquid condensate were continuously removed from the condensation process as soon as it formed.

The achievement of integral condensing can be judged, in part, by observing the ability of the code to calculate the actual bubble point temperature with integral condensing assumed in the calculation. The departure from integral condensation, however, is difficult to measure directly; in the HCRF condenser the direct measurement is not possible. The departure makes itself felt, first, in terms of condenser pressure obtained for given working-fluid and inlet cooling-water conditions, and second, in terms of what might be called "apparent subcooling." The influence on "apparent subcooling" is the most direct effect available to us for assessing the approach to integral condensing. For a given condenser pressure, total condensation for the mixture would be achieved at the mixture bubble point; for differential condensation, total condensation would be achieved at the condensing temperature of the light component which might range from 5 to 20 °F below the bubble point of the mixture. When the condensed fluid temperature is measured at the condenser outlet and the condensing temperature is calculated from the condenser pressure as the bubble point for

the mixture composition, departure from integral condensation results in the calculated condensing temperature being higher than the measured outlet temperature. This temperature difference would resemble subcooling and is what has been referred to here as "apparent subcooling."

One of the effects of concern in changing the condenser attitude is the potential effect on the velocity slip between phases during condensation, and, therefore, on the approach to thermal equilibrium between phases and to integral condensation. To increase the magnitude of "apparent subcooling" which might occur during differential condensation (making the effect easier to observe), a special series of working fluids was introduced which consisted of members of the propane-isopentane family having isopentane mass concentrations up to 40%. These fluids have increased temperature differences, relative to the nominal fluids, between the mixture bubble point and the bubble point of the light constituent. (The magnitude of this temperature difference for the 40% isopentane mixture is about 20°F.) The primary emphasis for these tests is to compare magnitudes of "apparent subcooling" observed at the different condenser attitudes for a given fluid. This comparison will be made in detail following tests at the near-horizontal ( $10^{\circ}$ ) and  $30^{\circ}$  attitudes, which will be conducted in subsequent phases of the Heat Cycle Research Program.

Preliminary results of these tests using the special fluids for the vertical condenser are shown in Figure 12 as values of "apparent subcooling" plotted versus isopentane content. The plot shows generally negative values of apparent subcooling with no real trend evident. Any departure from integral condensation would tend to result in positive "apparent subcooling"; therefore, these preliminary results as well as similar

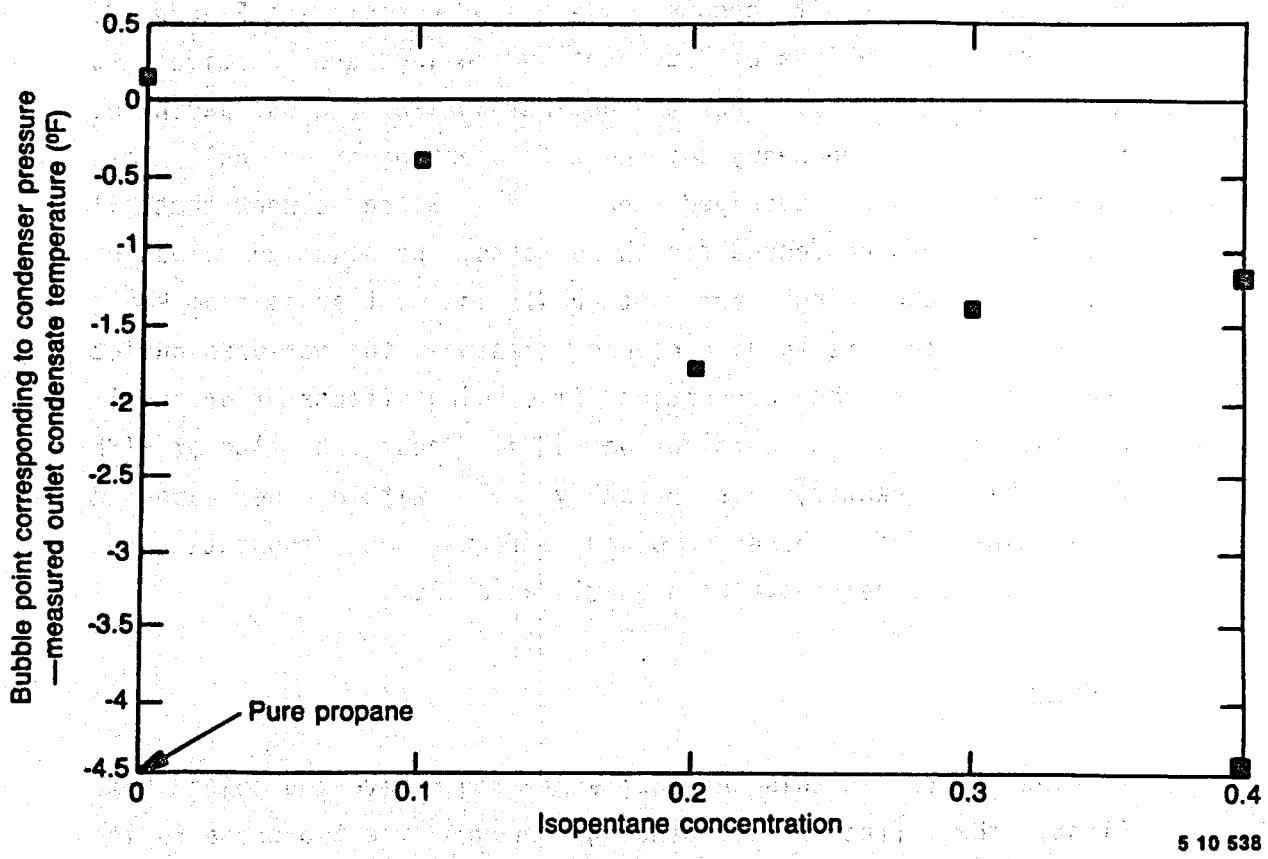


Figure 12 Apparent Subcooling for High-Isopentane Mixtures

comparisons for the nominal working fluids did not indicate departure from integral condensation for the vertical condenser attitude.

A noteworthy result becomes visible when reviewing Figure 12. As mentioned, values of "apparent subcooling" are negative, and average about  $-1^{\circ}\text{F}$ . For the nominal working fluids, having 0, 5, and 10% of the heavy component (isopentane or hexane), these values have also averaged about  $-1^{\circ}\text{F}$ . Since we know that all the fluid was condensed for these tests, the negative values of "apparent subcooling" are not real and must arise from small errors in the measured condenser pressure, the measured outlet temperature or the properties (including effects of errors in composition), or a combination of all these. A value of  $-1^{\circ}\text{F}$  for this quantity is probably well within the expected uncertainty of these combined effects, and suggests that properties are being evaluated satisfactorily.

### 3. Turbine

Turbine tests in this phase of experiments have two objectives. First, the effect of expanding through the two-phase region (supersaturated expansions) on turbine efficiency was investigated. The second objective was to determine if any differences in turbine efficiency could be detected between pure vapor and mixed hydrocarbon vapor expansions. Turbine testing with mixed hydrocarbon fluids has been limited due to mechanical problems, such as a lube-oil pump failure, and the geofluid temperature being lower than originally expected. The turbine tests with the propane family of fluids have not been run, but will be conducted following the condenser-attitude change. To date, only the zero, 5%, and a few 10% hexane concentrations in the isobutane-hexane family could be tested with the geofluid temperature available. Accordingly, the turbine efficiency results presented at this time must be viewed as preliminary.

Supersaturated - Expansion Effects - Three series of turbine-expansion tests with isobutane have been run, each at a constant pressure ratio, and have been analyzed. A fourth series of the same type was conducted with a 95% isobutane -5% isopentane mixed-hydrocarbon working fluid. For the first series of six isobutane tests, at a pressure ratio of 9.2, two of the expansions remained in pure-vapor equilibrium states throughout; during the other four expansions the turbine inlet entropy was reduced such that the isentropic nozzle flow (outside of the boundary layer) reached equilibrium moisture conditions ranging from about 7 to 22%. Figure 13 is a schematic temperature-entropy diagram for isobutane showing the six turbine expansion processes. The diagram represents the metastable isobutane state points with the equilibrium saturation line superimposed. The vertical lines through the six inlet state points (at 560 psia) represent the potential-flow regions of the nozzle expansions to the exit pressure (60 psia), which correspond to the part of the nozzle flow most likely to undergo some condensation. Since the turbine is the impulse type, pressure in the blading is approximately constant; the constant pressure lines connecting the lower end of the vertical line and the lower end of the inclined line (turbine exhaust state) for each inlet condition, represent the irreversible flows through the blading. The inclined lines, themselves, only connect the turbine inlet and outlet state points, and are not intended to illustrate actual processes in the turbine.

Turbine isentropic efficiency has been plotted as a function of turbine inlet entropy in Figure 14a for these six tests. Values of maximum equilibrium moisture reached at the temperature of maximum dew-point entropy during each of the nozzle expansions can be estimated from the vertical lines shown as an auxiliary

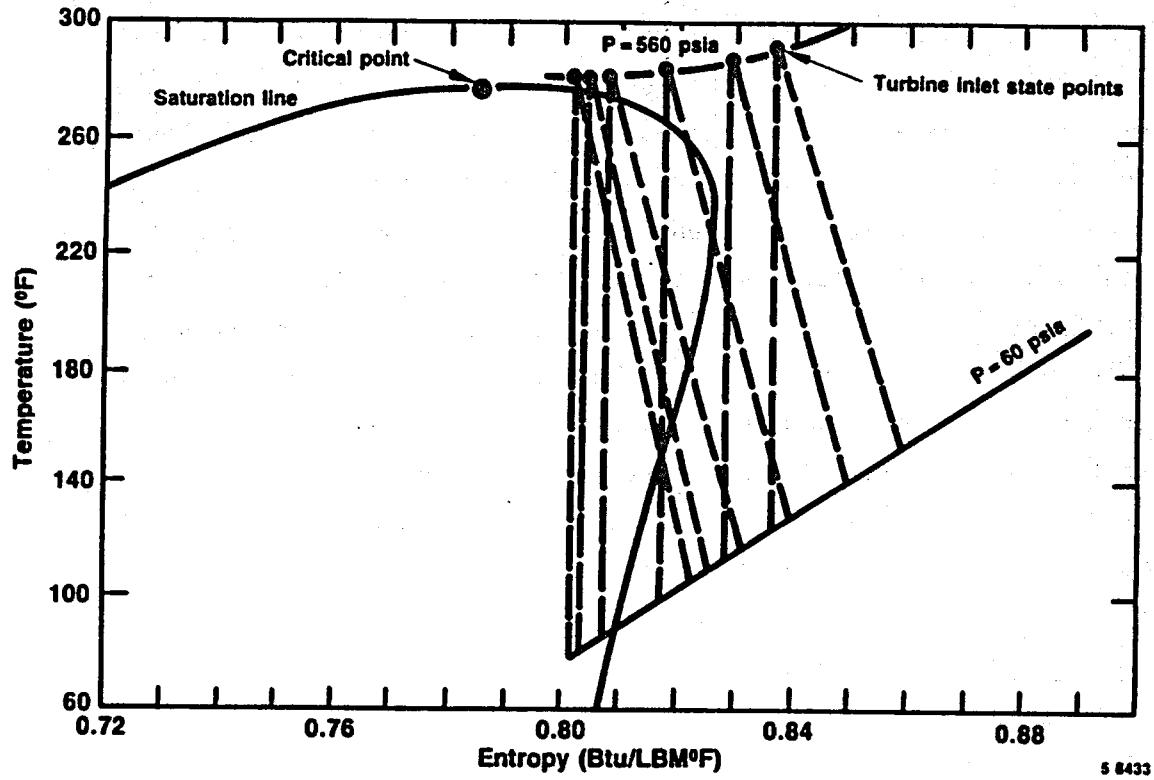
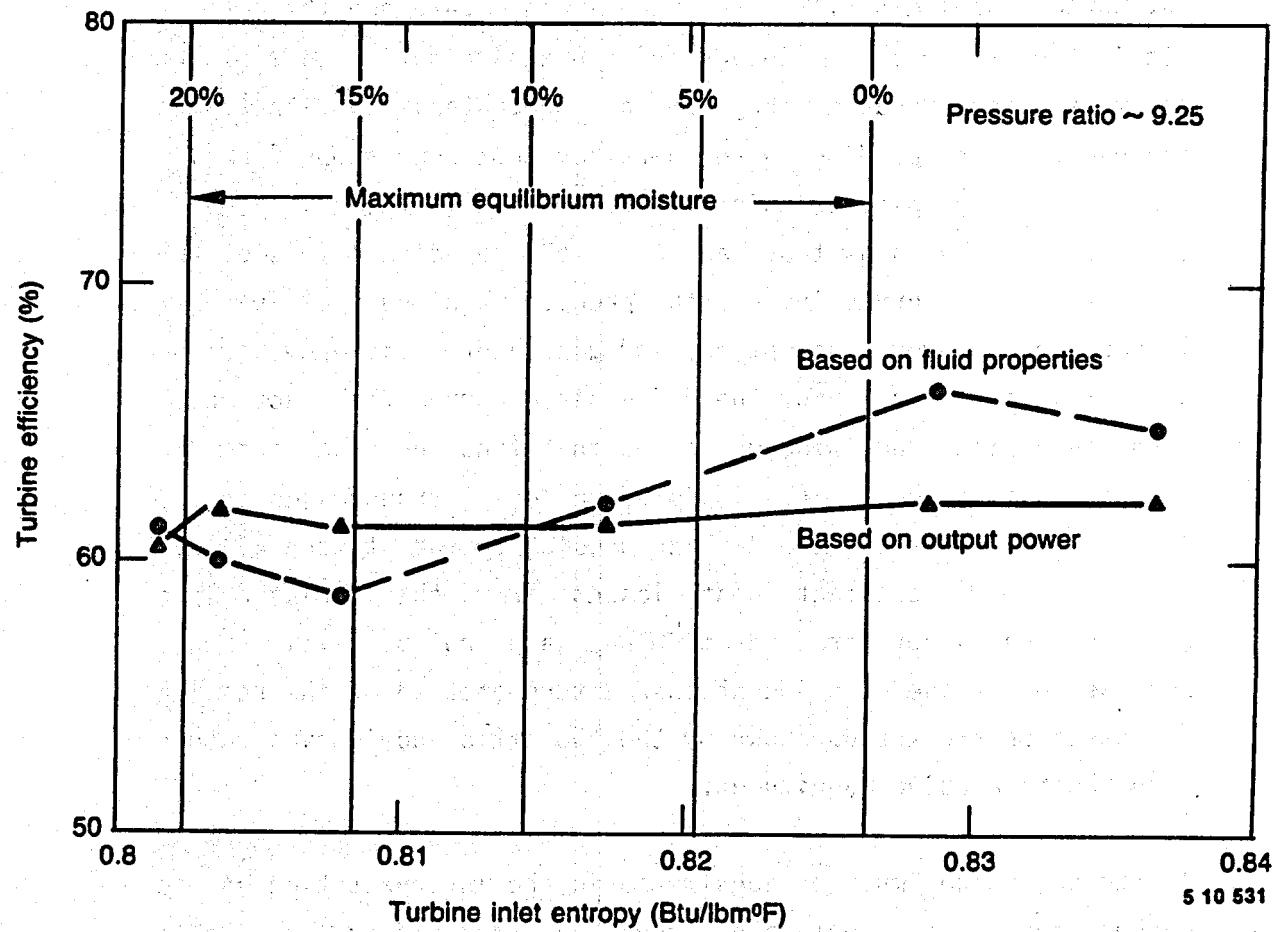


Figure 13 Supersaturated Expansion Conditions, Isobutane



**Figure 14a** Turbine Performance for Supersaturated Expansions, Isobutane

scale. Efficiencies have been calculated, as described earlier, using the wattmeter readings (solid-faired triangles), and working-fluid state-point measurements (dash-faired circles). As discussed in Section V-2 repeatability of the triangles has been estimated, preliminarily, to be within  $\pm 1.4\%$ , and the circles within about  $\pm 5.6\%$ . Because of the preliminary nature of the estimates and because they reflect repeatability rather than accuracy, corresponding error bars have not been shown formally for each of the plotted points; further visualization is left to the reader. Unknowns that can affect the relative levels of the two efficiency curves include the precise magnitudes of gear-box losses, pump power consumption, and generator efficiency for the solid-faired curve. For the dash-faired curve, the fraction of turbine-bearing and windage losses that find their way into the exhaust gas enthalpy (as opposed to losses transferred to the tube oil, and from the turbine housing to the atmosphere), as well as small constant heat losses from the insulated line between the vaporizer and turbine, are not precisely known. Because of these considerations, interpretation of the results is based on the trends shown by the two efficiency curves rather than their relative magnitudes.

A factor which must be considered in the interpretation of the dashed curve, is that the curve was calculated assuming no moisture in the turbine exhaust. Moisture present would reduce the calculated efficiency below its real value, and could result in a misleading trend on the plot. As an example, the presence of 1% moisture in the turbine exhaust for the test at 0.808 inlet-entropy would raise the circle about 5% in efficiency to the level indicated for the highest inlet-entropy test. A second factor which must be considered is the relatively large uncertainty, discussed in Section V, estimated for the

efficiencies based on fluid properties. These uncertainties are sufficiently large that the plotted circles could have resulted from an actual efficiency which is independent of turbine inlet entropy.

Therefore, two interpretations come to mind for the trend shown by the efficiencies based on fluid properties. The first is that some moisture was present for the low inlet-entropy expansions in the form of sub-micron droplets which are essentially in complete thermal and velocity equilibrium with the vapor; then no degradation of actual efficiency would have resulted due to the presence of moisture. A second interpretation is that no moisture is present, and the actual efficiency is independent of turbine inlet entropy, but the measurement uncertainties have introduced major scatter in the plotted results. The plotted triangles, based on the wattmeter readings, are seen to indicate no significant effect of inlet entropy on turbine efficiency.

Figures 14 b, c, d show substantially the same behavior for the other isobutane series, and for the 95% isobutane -5% hexane series as was discussed relative to Figure 14 a. In summary, it was found that turbine isentropic efficiencies under these test conditions are very difficult to evaluate from working-fluid state-point properties, and that trends in efficiency derived from the wattmeter readings constitute the most reliable current measure of performance. Accordingly, it was concluded that the present results do not show turbine-efficiency degradation associated with expanding through the two phase region. Future two-dimensional nozzle tests, which are planned with extensive wall pressure instrumentation and with a LASER system to illuminate condensate droplets formed, should provide a valuable supplement to these and other supersaturated-expansion turbine tests which will be conducted during the next several months.

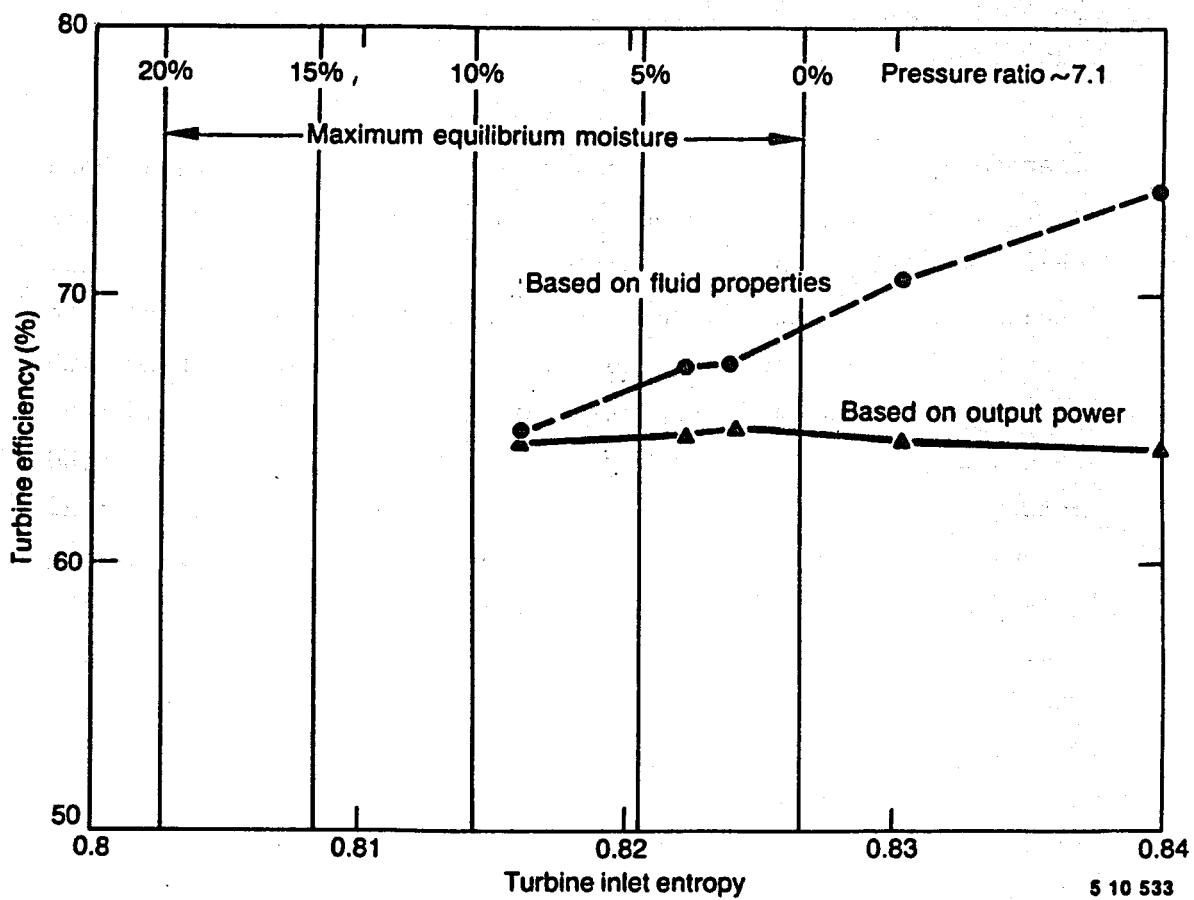
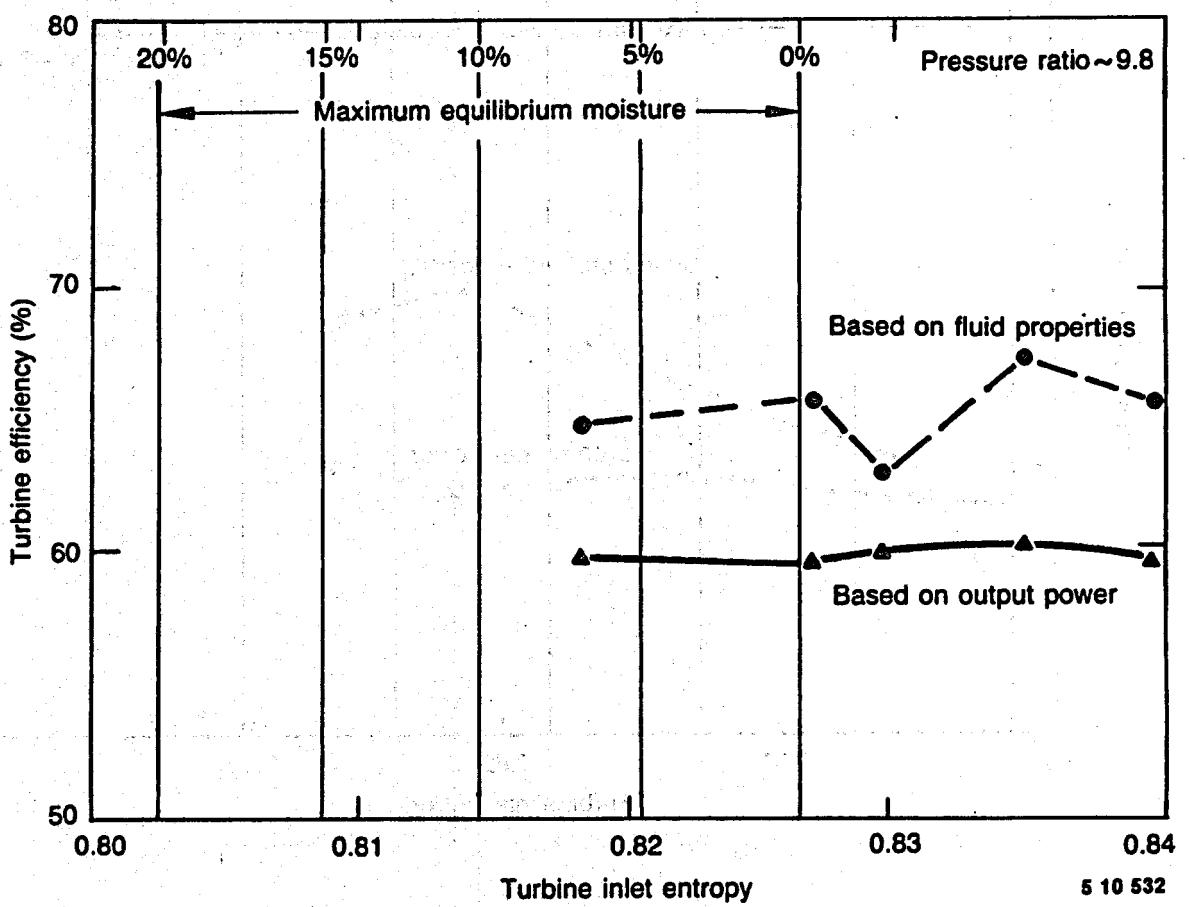


Figure 14b Turbine Performance for Supersaturated Expansions, Isobutane



**Figure 14c** Turbine Performance for Supersaturated Expansions, Isobutane

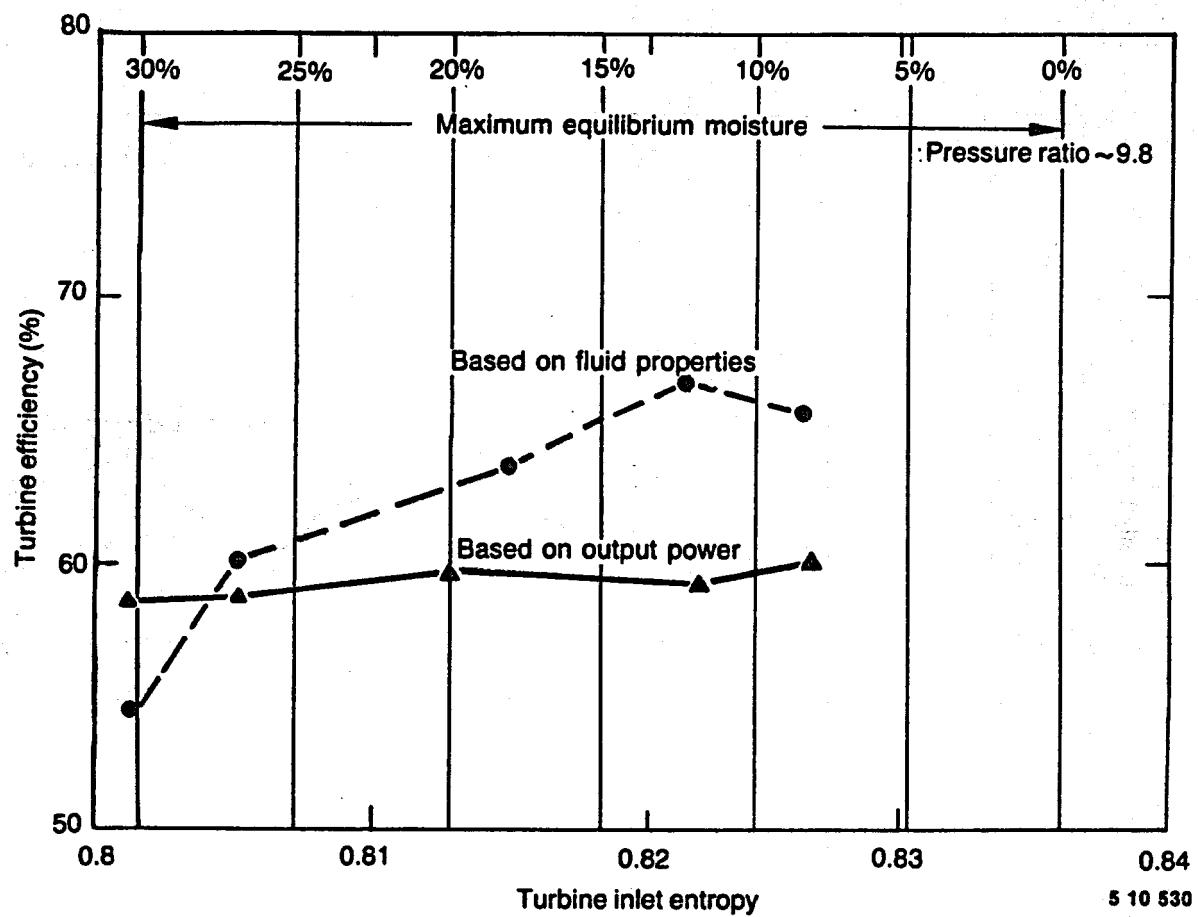


Figure 14d Turbine Performance for  
Supersaturated Expansions,  
95% Isobutane - 5% Hexane

Effects of Mixtures on Turbine Efficiency - Values of turbine efficiency for isobutane and several tests with 95% isobutane -5% hexane and 90% isobutane -10% hexane, based on the wattmeter readings, are plotted as functions of pressure ratio on Figure 15. For reference, the figure includes theoretical efficiencies for isobutane as predicted by the turbine manufacturer. As can be seen from Figure 15, the limited data points plotted for the 95% isobutane -5% hexane working fluids do not show significant deviation in efficiency from the points plotted for pure isobutane. The dash-faired band shown on the figure corresponds to the  $\pm 1.4\%$  uncertainty estimated, as discussed in Section V-2, for the turbine efficiencies calculated from the wattmeter readings. This band accomplishes the same function in the figure as would error bars on each of the plotted points, and encompasses all the points plotted for the pure isobutane and the 95% isobutane -5% hexane mixture except one which clearly appears anomalous. The 90% isopentane -10% hexane points fall below the  $\pm 1.4\%$  uncertainty band, and seem to show somewhat lower (about 2% lower) turbine efficiencies than shown for the pure fluid and the 95% - 5% mixture. The actual reason for this apparent discrepancy is not known, nor are the relative magnitudes of efficiency shown between fluids considered to be conclusive at this time.

Two additional uncertainties, beyond those included in the uncertainty band shown in Figure 15 may have influenced the results. The first has been introduced because of having to vaporize the mixtures in the boiling mode. Geofluid temperature limitations required that all of the mixture tests shown in the figure, except for the 95% isobutane - 5% hexane test condition at a pressure ratio of 10, be run at subcritical pressures at the turbine inlet, and some possibility exists that a small

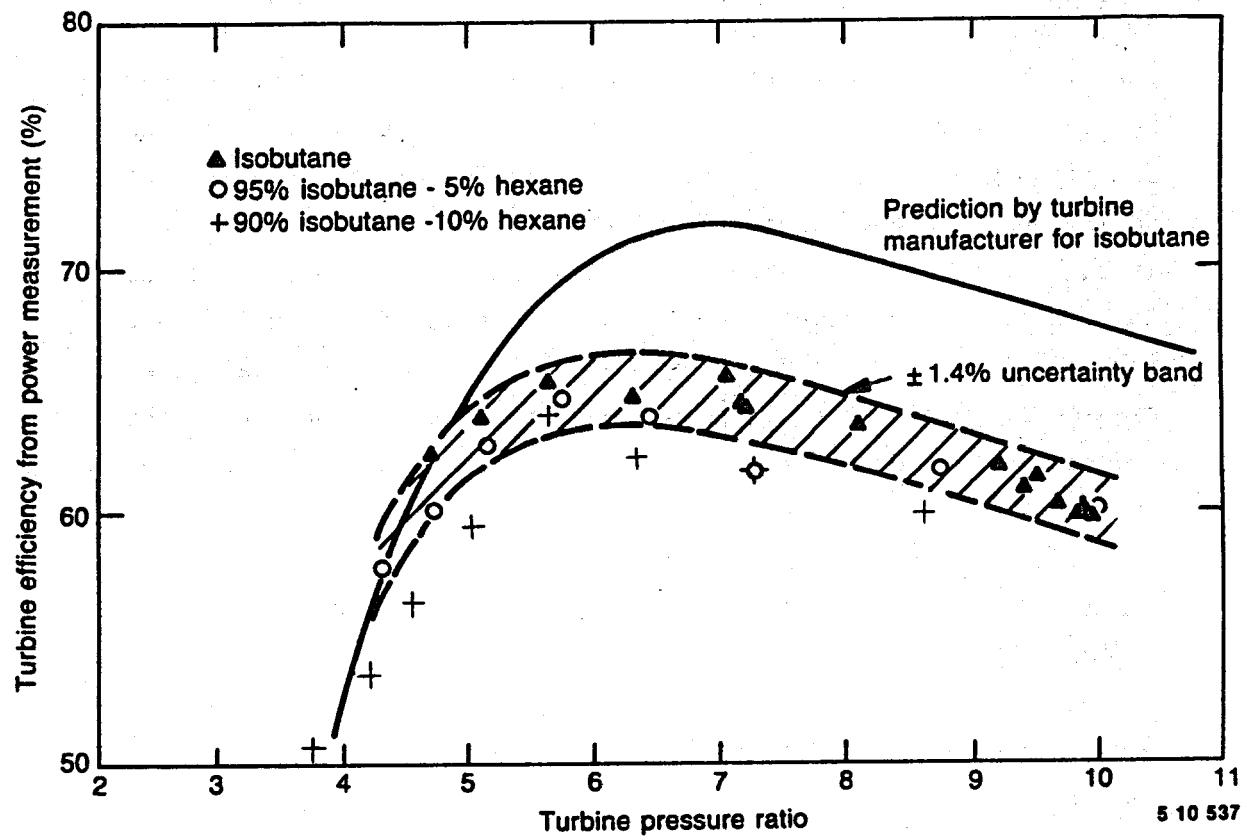


Figure 15 Effects of Mixtures on Turbine Efficiency

amount of moisture may have been present at the heater outlet for those tests. The efficiencies were calculated assuming no moisture; if, for example, 3% moisture had been present, the actual efficiency would have been about 1% higher for the mixture results than shown by the plotted points. A second uncertainty, not included in the  $\pm 1.4\%$  band, is the uncertainty in composition, which in turn, results in an uncertainty in the isentropic enthalpy change and turbine efficiency. For example, for an error of 0.01 in the concentration of hexane for the 0.9 isobutane - 0.1 hexane mixture, the resulting error in turbine efficiency could be as large as about 1%; the uncertainty is larger for the working fluids having higher concentrations of the heavy component. The compositions determined from the gas-chromatograph analyses are believed to be repeatable within about 7% of the concentration of the heavy component or within about  $\pm 0.007$  in hexane concentration for a 0.9/0.1 isobutane-hexane mixture. This situation needs further study.

To complete this aspect of the program the effect of mixed-vapor turbine expansions on turbine efficiency, relative to the expansion of single-component vapors, will be investigated in more detail during the next phase of testing. Tests will be conducted for propane-isopentane mixtures, additional data will be obtained for isobutane-hexane mixtures, and procedures for determining working-fluid composition will be checked. Further, the turbine manufacturer, Barber-Nichols Engineering, will be asked to predict curves of turbine efficiency versus turbine pressure ratio for the 90% isobutane - 10% hexane, pure propane, and 90% propane - 10% isopentane working fluids, for comparison with the experimental trends.

## VII. CONCLUSIONS

The conclusions reached from the results presented here are discussed below in the same order as, and following the criteria listed in the introduction (Section II-3) for judging the success of the experimental effort.

1. State-point thermodynamic properties of the mixed-hydrocarbon fluids can be predicted satisfactorily with the NBS properties code. Overall, no significant deficiencies in NBS properties were detected for the working fluids tested in the propane-isopentane and isobutane-hexane families.
2. Supercritical vaporization processes and heat-exchanger performance can be predicted using state-of-the-technology heat exchanger design codes. The HTRI single-phase shell-and-tube heat-exchanger design code ST-4 Mod. 5.4 (applied incrementally to account for variable working-fluid properties) predicted temperature distributions using NBS fluid properties which were in excellent agreement with measured temperatures. The code calculated surface areas required to produce the experimental results which were slightly larger than the actual area (about 20%) when suitable fouling resistances on the geofluid side were included. The fouling resistances calculated showed reasonable trends with time, and had the magnitudes expected for geothermal fouling in this service.
3. Counterflow integral condensation can be achieved within practical limits, and the mixed hydrocarbon condensation behavior can be predicted by state-of-the-technology condenser design codes. The HTRI condenser design code, CST-1 Mod 2.0 (with modified input to account for the internal fins), using NBS thermophysical properties computed condenser temperature distributions which were in excellent agreement with measured temperatures. Results showed that this code

is slightly conservative when used for design, and should result in a condenser which will deliver a condensing temperature about 0.5°F lower than the design condensing temperature, on the average. The condenser pressure produced should be equal to the bubble-point pressure for a temperature which is about 1.5°F lower, on the average, than the design condensing temperature. No measurable departure from integral condensation was detected during the present vertical-condenser tests.

Two additional results and/or conclusions of interest were noted pertaining to the condenser data: First, no effects of fouling were detected. Second, although the condensing heat-transfer coefficients were about 30% lower for the 90% propane - 10% isopentane mixture than for pure propane, the approach of the condensing (bubble-point) temperature to the cooling water inlet temperature was closer for the mixture than for the pure fluid; this result helps to allay previous fears relative to the difficulty of condensing mixed-hydrocarbon vapors.

4. Turbine efficiencies can be achieved for mixed-hydrocarbon vapor expansions which are comparable with those obtained for single-component vapor expansions. Preliminary results include one series of turbine expansions with 95% isobutane - 5% hexane which were compared with a number of pure isobutane turbine expansions; these results did not show significant difference from values obtained for isobutane. Slightly lower turbine efficiencies (2% lower than for isobutane) were plotted for 90% isobutane - 10% hexane but those are not considered conclusive at this time. Further investigation is planned during the next test phase.
5. Turbine efficiency is not degraded significantly by utilization of supersaturated-vapor turbine-expansion processes. Preliminary results suggest that no significant degradation in turbine

efficiency has occurred for either single-component (pure vapor) or mixed-hydrocarbon vapor expansions during the several series of turbine expansion tests conducted with the condenser in the vertical attitude. This conclusion will be reexamined after more data have been obtained during the next phase of the program.

Overall, it is concluded that the results presented here are very favorable and support previous projections of potential performance gains approaching 28% for advanced binary plants. The corroboration of the earlier performance projections is being achieved on a component-by-component basis.

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## APPENDIX A

### EXPERIMENTS CONDUCTED AND SELECTED DATA

The following describes the parameters tested during the phase of testing being reported. Specific test conditions are not given for each of the individual tests; rather the different parameters that were varied are identified. Unless otherwise stated, the conditions listed are for the working fluid heater outlet vapor stream or the working fluid condenser vapor inlet stream. Those conditions which were limited by the temperature of the geothermal resource are so indicated with an "\*".

## HEATER EXPERIMENTS CONDUCTED

### Isobutane Working Fluid Family:

-FLUIDS:      isobutane  
                  95% isobutane, 5% hexane  
                  90% isobutane, 10% hexane

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-PRESSURE:      470 psia (boiling)  
                  500 psia (just below critical pressure)  
                  550 psia (just above critical pressure)  
                  600 psia (super critical)

For each of the working fluids, the heater was to have been operated at four pressures; boiling, just below and just above the critical pressure, and at a supercritical pressure. For the isobutane family of fluids it was possible to operate at these pressures with all of the fluids except the 90% isobutane, 10% hexane fluid. It was not possible to operate at the higher heater pressure with this fluid because of the limitation of the brine resource temperature.

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-TEMPERATURE:    265 F-310 F (isobutane)  
                  275 F-312 F\* (95% isobutane, 5% hexane)  
                  285 F-304 F\* (90% isobutane, 10% hexane)

For each of the heater pressures the working fluid outlet temperature was varied from a condition from where if an isentropic expansion occurred from the heater outlet to the condenser inlet (a turbine expansion), the expansion process would just clear the "dome" or two-phase region. From the heater outlet temperature defined by this expansion process, the working fluid temperature was decreased by 5 F and increased by 5 and 10 F. Again because of the limitations imposed by the brine resource temperature, it was not possible to obtain all of the desired temperature variations with the 95% isobutane, 5% hexane and the 90% isobutane, 10% hexane fluids.

---

**-FLOW RATES:**    3700-11000 lb/hr (isobutane)  
                    3700-9500\* lb/hr (95% isobutane, 5% hexane)  
                    3700-7000\* lb/hr (90% isobutane, 10% hexane)

For each of the heater pressures, the working fluid flow rate was varied +/- 25% from the predicted flow rate through the HCRF turbine at that heater pressure. In addition for selected test runs data was collected at 50, 75, and 100% of the specified flow rate. Because of the brine temperature limitations at the time the particular test series were being conducted, it was not possible to obtain data on all of the desired conditions, particularly with the 90% isobutane, 10% hexane fluid.

---

#### HEATER EXPERIMENTS CONDUCTED

##### Propane Working Fluid Family:

**-FLUIDS:**       propane  
                    95% propane, 5% isopentane  
                    90% propane, 10% isopentane

---

**-PRESSURE:**      570 psia (boiling)  
                    600 psia (just below critical pressure)  
                    650 psia (just above critical pressure)  
                    700 psia (super critical)

For each of the working fluids, the heater was to have been operated at four pressures; boiling, just below and just above the critical pressure, and at a super critical pressure.

**-TEMPERATURE:**    210 F-250 F (propane)  
                    220 F-260 F (95% propane, 5% isopentane)  
                    230 F-270 F (90% propane, 10% isopentane)

---

For each of the heater pressures the working fluid outlet temperature was varied from a condition from where if an isentropic expansion occurred from the heater outlet to the condenser inlet (a turbine expansion), the expansion process would just clear the "dome" or two-phase region. From the heater outlet temperature defined by this expansion process, the working fluid temperature was decreased by 5 F and increased by 5 and 10 F.

**-FLOW RATES:**    3700-11600 lb/hr (propane)  
                    3700-11400 lb/hr (95% propane, 5% isopentane)  
                    3700-11000 lb/hr (90% propane, 10% isopentane)

---

For each of the heater pressures, the working fluid flow rate was varied +/- 25% from the predicted flow rate through the HCRF turbine at that heater pressure. In addition for selected test runs data was collected at 50, 75, and 100% of the specified flow rate.

---

## COUNTERCURRENT CONDENSER TESTS

### Isobutane Working Fluid Family:

-FLUIDS:      isobutane  
                  95% isobutane, 5% hexane  
                  90% isobutane, 10% hexane

---

### -COOLING WATER

FLOW RATE:      50000 lb/hr  
                  67000 lb/hr  
                  75000 lb/hr

For each of the working fluids, tests were conducted at three cooling water flow rates; 50000, 67000, and 75000 lb/hr. The nominal flow rate for most of the tests was 67000 lb/hr. For selected conditions, tests were conducted with all the parameters held constant except the cooling water flow which was varied.

---

### -WORKING FLUID

FLOW RATE:      3700-11000 lb/hr (isobutane)  
                  3700-9500\* lb/hr (95% isobutane, 5% hexane)  
                  3700-7000\* lb/hr (90% isobutane, 10% hexane)

For each of the working fluids, the working fluid flow rate was varied +/- 25% from the predicted flow rate through the HCRF turbine at that heater pressure. For selected test runs data was also collected at 50, 75, and 100% of the specified flow rate. Data for both the condenser and heater were taken during these tests. In addition specific tests, unique to the condenser were run with each fluid. These condenser tests were run from 6600 to 9800 lb/hr. Because of the brine temperature limitations at the time the particular test series were being conducted, it was not possible to obtain data on all of the desired conditions, particularly with the 90% isobutane, 10% hexane fluid.

---

-INLET  
SUPERHEAT:      80 F  
                  60F  
                  40F  
                  20F  
                  10F

The condenser test data taken in conjunction with the heater testing did not attempt to maintain the level of the superheat entering the condenser. The tests unique to the condenser however did control the level of superheat in the working fluid entering the condenser to the values indicated for each of the fluids tested (with the exception of the 90% isobutane, 10% hexane for which testing was limited due to the brine temperature).

---

## COUNTERCURRENT CONDENSER TESTS

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### Propane Working Fluid Family:

-FLUIDS: propane

95% propane, 5% isopentane

90% propane, 10% isopentane

---

### -COOLING WATER

FLOW RATE: 50000 lb/hr

67000 lb/hr

75000 lb/hr

For each of the working fluids, tests were conducted at three cooling water flow rates; 50000, 67000, and 75000 lb/hr. The nominal flow rate for most of the tests was 67000 lb/hr. For selected conditions, tests were conducted with all the parameters held constant except the cooling water flow which was varied.

---

### -WORKING FLUID

FLOW RATE: 3700-11600 lb/hr (propane)

3700-11400 lb/hr (95% propane, 5% isopentane)

3700-11000 lb/hr (90% propane, 10% isopentane)

For each of the working fluids, the working fluid flow rate was varied +/- 25% from the predicted flow rate through the HCRF turbine at that heater pressure. For selected test runs data was also collected at 50, 75, and 100% of the specified flow rate. Data for both the condenser and heater were taken during these tests. In addition, specific tests unique to the condenser were run with each fluid. These condenser tests were run from 6000 to 9000 lb/hr.

---

### -INLET

SUPERHEAT: 40 F

30 F

20 F

10 F

5 F

The condenser test data taken in conjunction with the heater testing did not attempt to maintain the level of the superheat entering the condenser. The tests unique to the condenser however did control the level of superheat in the working fluid entering the condenser to the values indicated for each of the fluids tested.

---

## TURBINE TESTS CONDUCTED

-FLUIDS:      isobutane  
                  95% isobutane, 5% hexane  
                  90% isobutane, 10% hexane

The majority of the testing with the HCRF turbine was done with the isobutane working fluid. Some limited testing was also done with the 95% isobutane, 5% hexane and the 90% isobutane, 10% hexane working fluids. (The turbine was operated with the propane family of working fluids, however, this was done primarily in a checkout mode and no performance data was generated.)

---

-PRESSURE @  
INLET:      510 psia (isobutane)  
                  550 psia (isobutane)  
                  560 psia (isobutane)  
                  550 psia (95% isobutane, 5% hexane)  
                  510 psia (95% isobutane, 5% hexane)  
                  480 psia (90% isobutane, 10% hexane)

Testing was done with the heaters operating in both a supercritical mode and in a boiling mode with the turbine operating. Testing in the supercritical mode with both the 95% isobutane, 5% hexane and the 90% isobutane, 10% hexane working fluids was limited or not possible because of the low brine temperatures.

---

-PRESSURE @  
EXHAUST:      55 psia  
                  65 psia  
                  75 psia  
                  85 psia  
                  95 psia  
                  105 psia  
                  115 psia  
                  125 psia

The turbine exhaust pressure was not controlled except for those test conditions where data was collected on the turbine performance at different pressure ratios. These tests (varying pressure ratio) were collected for each of the fluids in the working fluid family. It was not possible to run the 95% isobutane, 5% hexane or the 90% isobutane, 10% hexane fluids with varying pressure ratios and the heater (turbine inlet) in a supercritical mode; in order to get performance data at different pressure ratios with these fluids the unit had to operate as a boiling cycle. (A limitation imposed by the brine temperature.)

---

-SUPERHEAT @

EXHAUST:

- 40 F (isobutane)
- 30 F (isobutane and 95 isobutane, 5 hexane)
- 25 F (isobutane and 95 isobutane, 5 hexane)
- 20 F (isobutane and 95 isobutane, 5 hexane)
- 15 F (95 isobutane, 5 hexane)
- 5 F (95 isobutane, 5 hexane)

A series of tests was run with both the isobutane and the 95% isobutane, 5% hexane working fluids where the amount of superheat in the turbine exhaust was controlled. The exhaust temperature was controlled by adjusting the working fluid vapor temperature leaving the heater (entering the turbine) by changing the brine flow rate. The purpose of these tests was to obtain performance data as the isentropic expansion process in the turbine nozzles went through the "two phase" region at varying magnitudes of equilibrium moisture level. Because of the limitations imposed by the low brine temperatures, the 95% isobutane, 5% hexane fluid tests could not be conducted at a condition where the isentropic expansion process completely missed the "dome".

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## INTEGRAL CONDENSATION TESTS

-FLUIDS:	propane
	90% propane, 10% isopentane
	80% propane, 20% isopentane
	75% propane, 25% isopentane
	70% propane, 30% isopentane
	65% propane, 35% isopentane
	60% propane, 40% isopentane

Fluids used for this test series ranged in composition from a pure (technical grade) propane fluid to a mixture of 60% propane, 40% isopentane for the purpose of attempting to identify the deviation from the assumption of integral condensation in the condenser performance model. Testing to examine the performance of fluids with higher levels of isopentane was limited due to the low brine temperatures.

---

### -WORKING FLUID

FLOW RATE:	6400 lb/hr
	7700 lb/hr
	9000 lb/hr

Performance data was collected for each of the fluids tested at working fluid flow rates of 6400 to 9000 lb/hr.

---

### -COOLING WATER

FLOW RATES:	50000 lb/hr
	67000 lb/hr
	75000 lb/hr

At a nominal working fluid flow rate ( 7700 lb/hr) for each fluid, the cooling water flow rate was varied from 50000 to 75000 lb/hr.

---

### -INLET

SUPERHEAT:	30 F
	10 F

The amount of superheat in the working fluid vapor entering the condenser was varied from 30 to 10 F at each of the working fluid and cooling water flow rates tested for all of the working fluids used in this test series.

Initially approximately 600 tests were identified for testing with the facility; 417 tests were conducted. Of those tests not run, some were postponed because the turbine was not available for operation when some of the fluids were tested and in some instances, the temperature of the geothermal fluid was not high enough to obtain the desired heater outlet conditions. For the initial analysis of the data, a common series of tests were selected for analysis for each of the working fluids. If the analysis of the data did not fit the performance predicted by the models, and/or appeared questionable, the remaining data would have been analyzed as necessary. For the tests selected for the analysis of the heater performance, three different heater pressures were selected; one just below the critical pressure (a boiling cycle), one just above the critical pressure, and one farther above the critical pressure (both supercritical cycles). For one of the tests (just above the critical pressure), performance was analyzed for different working fluid flow rates. These common heater test conditions were analyzed for each of the working fluids except the 90% isobutane, 10% hexane and the 95% isobutane, 5% hexane working fluids, where the testing was limited due to the brine temperature.

The condenser tests analyzed initially, like the heater tests, were common for all of the fluids tested, except the 90% isobutane, 10% hexane. The condenser tests analyzed were run at supercritical heater pressures, with different working fluid flow rates, cooling water flow rates, and degrees of superheat. The different flow rates evaluated were kept as similar as possible, particularly within the same working fluid family. The same condition was applied with the levels of superheat. The tests with the 90% isobutane, 10% hexane working fluid were limited because of the low brine temperatures. In general these tests were run at lower than desired working fluid flow rates.

The following two tables identify the fluids tested (nominal chemistry) and the test conditions that were initially evaluated. Note the alpha-numeric designation given to each of the test conditions; the alpha designation identifies the nominal chemistry of the fluid being tested. The second table (giving test conditions) lists the approximate values of the controlled parameters for the heater and condenser tests initially evaluated. Also included in this appendix are the data sheets for the tests which were evaluated.

The alpha-numeric file name identifies the test condition and the working fluid (see the first of the following tables). The description of the channels on the data sheets provides an adequate identification of the location of the sensors with the following exceptions. The "SCHX WF TEMP" are the intermediate working fluid temperatures on the heater. The PHx and the VAPx designate whether the sensor is on the preheater or the vaporizer. The working fluid temperature profile is from the inlet or cold end to the outlet or hot end. The "CONDENSER CW TEMP: CC1-CC7" are the cooling water temperature sensors that were added after the initial installation. The cooling water temperature sensors are listed on the data sheets from the bottom (cold end) to the top (hot end) of the vessel. Note that for some of these cooling water temperature sensors the value listed on the data sheets is one third of the actual value. This resulted from the lack of spare instrumentation leads when the sensors were installed which necessitated taking the cooling water temperature profile with three distinct sets of readings. These three sets were then averaged to provide the data used for analysis.

**A1. SUPERCRITICAL CYCLE FLUIDS TESTED**

Fluid	Test No.	Critical Temperature	Critical Pressure
isobutane	Axxx	274.9 F	529.2 psia
95 isobutane, 5 hexane	Bxxx	283.5 F	533.9 psia
90 isobutane, 10 hexane	Cxxx	292.1 F	538.3 psia
propane	Dxxx	205.95 F	615.9 psia
95 propane, 5 isopentane	Exxx	213.4 F	622.5 psia
90 propane, 10 isopentane	Fxxx	220.9 F	628.9 psia
80 propane, 20 isopentane	Hxxx	236.2 F	640.1 psia
75 propane, 25 isopentane	Ixxx	244 F	644.4 psia
70 propane, 30 isopentane	Jxxx	251.8 F	647.5 psia
65 propane, 35 isopentane	Kxxx	259.7 F	649.1 psia
60 propane, 40 isopentane	Lxxx	267.7 F	648.9 psia

**A2a. SUPERCRITICAL CYCLE DATA ANALYZED  
HEATER TESTS**

Test No.	Heater Pressure	Heater Outlet Temperature	Working Fluid Flow Rate
A15	500 psia	280 F	7200 lb/hr
A28	550 psia	290 F	8200 lb/hr
A28	" "	" "	6150 lb/hr
A28	" "	" "	4100 lb/hr
A33	550 psia	300 F	8200 lb/hr
A41	600 psia	300 F	9200 lb/hr
B15	500 psia	288 F	7100 lb/hr
B28	550 psia	298 F	8100 lb/hr
B28	" "	" "	6075 lb/hr
B28	" "	" "	4050 lb/hr
C113	550 psia	294 F	8600 lb/hr
D15	600 psia	220 F	8000 lb/hr
D28	650 psia	230 F	8600 lb/hr
D28	" "	" "	6450 lb/hr
D28	" "	" "	4300 lb/hr
D33	650 psia	240 F	8600 lb/hr
D41	700 psia	239 F	9400 lb/hr
E15	600 psia	231 F	7900 lb/hr
E28	650 psia	241 F	8600 lb/hr
E28	" "	" "	6450 lb/hr
E28	" "	" "	4300 lb/hr
E33	650 psia	251 F	8600 lb/hr
E41	700 psia	250 F	9300 lb/hr
F15	600 psia	240 F	7900 lb/hr
F28	650 psia	250 F	8600 lb/hr
F28	" "	" "	6450 lb/hr
F28	" "	" "	4300 lb/hr
F33	650 psia	260 F	8600 lb/hr
F41	700 psia	259 F	9300 lb/hr

A2a. SUPERCRITICAL CYCLE DATA ANALYZED  
CONDENSER TESTS

Test No.	Heater Pressure	Working Fluid Flow Rate	Cooling Water Flow Rate	Superheat@ Condenser In
A28	550 psia	8200 lb/hr	67000 lb/hr	—
A28	" "	6150 lb/hr	" "	—
A28	" "	4100 lb/hr	" "	—
A53	550 psia	6600 lb/hr	67000 lb/hr	—
A61	" "	9250 lb/hr	" "	60 F
A66	" "	" "	" "	40 F
A71	" "	" "	" "	20 F
A76	" "	" "	" "	10 F
B28	550 psia	8200 lb/hr	67000 lb/hr	—
B28	" "	6150 lb/hr	" "	—
B28	" "	4100 lb/hr	" "	—
B55	550 psia	9250 lb/hr	67000 lb/hr	—
B61	" "	9250 lb/hr	" "	60 F
B66	" "	" "	" "	40 F
B71	" "	" "	" "	20 F
B76	" "	" "	" "	10 F
C100	550 psia	4900 lb/hr	67000 lb/hr	60 F
C101	" "	6100 lb/hr	" "	40 F
C102	" "	7900 lb/hr	" "	25 F
C103	" "	8650 lb/hr	" "	20 F
C110	" "	4900 lb/hr	50000 lb/hr	—
C111	" "	6500 lb/hr	" "	70 F
C112	" "	7700 lb/hr	" "	60 F
C113	" "	8600 lb/hr	" "	40 F
D28	650 psia	8600 lb/hr	67000 lb/hr	—
D28	" "	6450 lb/hr	" "	—
D28	" "	4300 lb/hr	" "	—
D35	" "	8600 lb/hr	75000 lb/hr	—
D37	" "	" "	50000 lb/hr	—
D55	650 psia	9250 lb/hr	67000 lb/hr	—
D62	" "	" "	" "	30 F
D65	" "	" "	" "	20 F
D71	" "	" "	" "	10 F
D77	" "	" "	" "	5 F
E28	650 psia	8600 lb/hr	67000 lb/hr	—
E28	" "	6450 lb/hr	" "	—
E28	" "	4300 lb/hr	" "	—
E35	" "	8600 lb/hr	75000 lb/hr	—
E37	" "	" "	50000 lb/hr	—
E55	650 psia	9250 lb/hr	67000 lb/hr	—
E61	" "	" "	" "	30 F
E66	" "	" "	" "	20 F
E71	" "	" "	" "	10 F
E76	" "	" "	" "	5 F

A2a. SUPERCRITICAL CYCLE DATA ANALYZED  
CONDENSER TESTS (cont'd)

F28	650 psia	8600 1b/hr	67000 1b/hr	—
F28	" "	6450 1b/hr	" "	—
F28	" "	4300 1b/hr	" "	—
F35	" "	8600 1b/hr	75000 1b/hr	—
F37	" "	" "	50000 1b/hr	—
F55	650 psia	9250 1b/hr	67000 1b/hr	—
F61	" "	" "	" "	30 F
F66	" "	" "	" "	20 F
F71	" "	" "	" "	10 F
D103	660 psia	8200 1b/hr	67000 1b/hr	—
F103	" "	" "	" "	—
H103	" "	" "	" "	—
L103	660 psia	8200 1b/hr	67000 1b/hr	—
L105	" "	" "	" "	10 F

File: A15av:C12  
 Trial: 0  
 Time: 07/28/13/42  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	17.9145	GPM
2 TE-GF-3, PLANT INLET GF TEMP	321.6000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	316.2800	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	252.9500	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	177.4500	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	180.3500	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	22.1750	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	51.2900	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	92.7500	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	643.9500	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	24.6630	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	9.4530	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	33.6950	GPM
14 PT-WF-100, SCHX WF INLET PRESS	484.6000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	110.8100	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	190.3000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	226.1000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	245.7000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	259.9500	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	268.5000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	278.1150	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	485.6500	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	14.5255	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	281.6500	DEG F
25 TE-WF-52, TURBINE INLET TEMP	116.8500	DEG F
26 PT-WF-10, TURBINE INLET PRESS	- .5700	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	112.2500	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	- .1050	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	202.9000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	52.4200	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	303.1000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	137.5400	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.8000	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	87.5000	DEG F
CONDENSER CW TEMP:CC5	0.0000	DEG F
CONDENSER CW TEMP:CC5	0.0000	DEG F
CONDENSER CW TEMP:CC4	0.0000	DEG F
CONDENSER CW TEMP:CC3	-100.5000	DEG F
TE-CW-100, UPPER COND CW TEMP	94.6500	DEG F
CONDENSER CW TEMP:CC2	0.0000	DEG F
CONDENSER CW TEMP:CC1	0.0000	DEG F
TE-CW-5, CONDENSER OUTLET CW TEMP	99.7500	DEG F
SPARE:	0.0000	SPARE
SPARE:	0.0000	SPARE

File: A28-1:C12  
 Trial: 0  
 Time: 08/17/11/37  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	10.7200	GPM
2 TE-GF-3, PLANT INLET GF TEMP	320.4000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	314.3000	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	264.1000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	184.1500	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	186.4000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	15.9000	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	44.3400	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	85.9000	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	646.2000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	12.0600	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	24.2160	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.7600	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.5000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	100.7700	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	216.2000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	247.8000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	261.3000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	272.0000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	279.8000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	289.2200	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	535.9000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	7.5130	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	290.3000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	96.3000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	3.5600	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	84.8000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1200	PSIG
29 TE-WF-13, CONDENEER INLET WF TEMP	193.1000	DEG F
30 PT-WF-52, CONDENEER INLET WF PRESS	43.3900	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	349.6000	GPM
32 FE-CW-22, CONDENEER OUTLET CW FLOW	136.4000	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	79.0000	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	82.5000	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	0.0000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	86.2000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	86.6000	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	0.0000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.8000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A28-2:C12  
 Trial: 0  
 Time: 08/07/12/06  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	18.3200	GPM
2 TE-GF-3, PLANT INLET GF TEMP	320.2000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	315.2000	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	267.1000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	187.8700	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	190.7000	DEG F
7 LT-WF-15, CONDENSER -IQ LEVEL	15.4100	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	49.8300	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	91.4000	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	636.4000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	21.9240	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	15.3480	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	36.8800	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.8000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	105.3700	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	207.3000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	243.0000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	260.2000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	272.9000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	280.3000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	288.7500	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	534.6000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.4270	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	290.7000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	96.7000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	-3.8000	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	86.6000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1500	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	199.0000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	49.8600	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	350.9000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	135.6700	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	79.9000	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	85.9000	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	0.0000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	85.7000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	92.4000	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	0.0000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	96.2000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A28-3:C12  
 Trial: 0  
 Time: 08/17/12/30  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	25.0060	GPM
2 TE-GF-3, PLANT INLET GF TEMP	320.8000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	315.4500	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	267.6000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	191.5700	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	194.8000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	14.9230	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	54.3400	RSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	96.2000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	633.0000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.1980	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	7.4340	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	37.3000	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.9000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	109.5700	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	202.7000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	240.6000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	259.9000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	273.3000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	280.6000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	288.3600	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	532.4000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.8180	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	290.6000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	95.5000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	-3.8000	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	87.7000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1500	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	201.4000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	55.7300	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	352.1000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	136.2800	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.3000	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	88.1000	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	0.0000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	85.2000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	96.9000	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	0.0000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	102.4000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A28Rav:C12  
 Trial: 0  
 Time: 85/04/16/13/24  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.1297	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.2333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.3222	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	274.6333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	207.4133	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	208.2889	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.3104	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	36.5733	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.2222	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	713.3778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	15.0480	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	14.5489	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.9556	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	98.0178	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	221.2889	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	256.2111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	269.7333	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	278.0111	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	281.7222	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	290.6467	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	529.5444	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	8.4840	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	290.2222	DEG F
25 TE-WF-52, TURBINE INLET TEMP	116.4667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	46.0722	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	111.4333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	38.1011	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	194.4222	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	38.2167	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	340.7000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.5233	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	70.7778	DEG F
CONDENSER CW TEMP:CC7	23.7111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	73.5556	DEG F
36 CONDENSER CW TEMP:CC5	25.1111	DEG F
37 CONDENSER CW TEMP:CC5	77.0778	DEG F
38 CONDENSER CW TEMP:CC4	26.0111	DEG F
39 CONDENSER CW TEMP:CC3	30.5333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	79.3444	DEG F
41 CONDENSER CW TEMP:CC2	26.4222	DEG F
42 CONDENSER CW TEMP:CC1	27.2111	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	83.2444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A28Bav:C12  
 Trial: 0  
 Time: 85/04/16/12/32  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	23.5589	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.4111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.1778	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	276.6333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	215.8056	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	216.9222	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.3199	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	40.2744	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.6667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	722.6778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	22.3940	GPM
12 FE-WF-61, SCHX WF BY-PASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	22.0167	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.1333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	103.7411	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	216.5667	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	254.4111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	269.7111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	279.2444	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	282.0889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	291.0356	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	528.6111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.2479	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	291.1000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	118.2889	DEG F
26 PT-WF-10, TURBINE INLET PRESS	50.6333	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	111.8889	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	42.6878	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	198.8778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	42.9667	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	341.3444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.7367	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	71.4556	DEG F
34 CONDENSER CW TEMP:CC7	24.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	75.3333	DEG F
36 CONDENSER CW TEMP:CC5	25.8889	DEG F
37 CONDENSER CW TEMP:CC5	80.0000	DEG F
38 CONDENSER CW TEMP:CC4	27.1222	DEG F
39 CONDENSER CW TEMP:CC3	30.4333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	83.5778	DEG F
41 CONDENSER CW TEMP:CC2	27.8222	DEG F
42 CONDENSER CW TEMP:CC1	28.8889	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.7444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: R28@av:C12  
 Trial: 0  
 Time: 85/04/16/11/42  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	37.3433	GPM
2 TE-GF-3, PLANT INLET GF TEMP	310.1889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	307.8467	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	279.4556	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	227.0900	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	228.6556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	17.7986	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	44.3067	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.8778	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	664.2111	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.0840	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.8111	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.1556	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	103.6367	DEG F
16 TE-WF-106, SCHX WF TEMP:PH1	215.4333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	255.5333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	271.7778	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	280.4556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	282.8222	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	291.4633	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.0444	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.3989	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	291.6333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	119.2333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	56.0178	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	110.4556	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	48.2256	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	202.7667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	48.3833	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	340.4000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.6956	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	71.2444	DEG F
CONDENSER CW TEMP:CC7	23.9222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	76.2444	DEG F
36 CONDENSER CW TEMP:CC5	26.4444	DEG F
37 CONDENSER CW TEMP:CC3	82.7111	DEG F
38 CONDENSER CW TEMP:CC4	28.1222	DEG F
39 CONDENSER CW TEMP:CC3	30.3333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	87.5333	DEG F
CONDENSER CW TEMP:CC2	29.8444	DEG F
42 CONDENSER CW TEMP:CC1	30.6222	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	93.9778	DEG F
SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A33ave:C12  
 Trial: 0  
 Time: 08/18/10/02  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	29.6070	GPM
2 TE-GF-3, PLANT INLET GF TEMP	321.5500	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	315.8600	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	274.0000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	202.2000	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	205.9500	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	14.4050	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	51.8550	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	93.6000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	639.0000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.0300	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	7.6260	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	36.9650	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.5000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	106.3750	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	213.0500	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	250.1500	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	267.2000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	277.8000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	282.6000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	298.3700	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	530.8500	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.7975	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	300.9500	DEG F
25 TE-WF-52, TURBINE INLET TEMP	89.3000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	-3.3100	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	86.1500	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1350	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	224.1000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	53.2850	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	353.1000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	139.5750	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	77.7500	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	85.0000	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC3	0.0000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC6	82.4500	DEG F
40 TE-CW-100, UPPER COND CW TEMP	94.3000	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	0.0000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	101.5500	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A41Dav:C12  
 Trial: 0  
 Time: 09/12/15/45  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	32.5700	GPM
2 TE-GF-3, PLANT INLET GF TEMP	320.1667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	318.1550	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	281.1833	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	214.4350	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	215.0333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	10.8258	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	62.2883	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	103.6667	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	642.5833	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.0267	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	5.3830	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	39.2417	GPM
14 PT-WF-100, SCHX WF INLET PRESS	584.6833	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	116.1600	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	216.6333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	254.5333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	273.2167	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	285.2500	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	291.4667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	301.6917	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	585.0667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.5270	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	300.9333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	115.4833	DEG F
26 PT-WF-10, TURBINE INLET PRESS	-3.1900	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	113.0333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1000	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	203.5500	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	64.0800	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	333.7000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	134.0617	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	85.4833	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	93.7500	DEG F
CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	0.0000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	105.7833	DEG F
40 TE-CW-100, UPPER COND CW TEMP	104.2533	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	0.0000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	110.9000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: RA41Ra:C12  
 Trial: 0  
 Time: 85/04/18/13/29  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	18.2607	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.9333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	313.7933	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	284.4889	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	216.2089	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	217.3667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	13.2436	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	32.8011	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	74.2889	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	719.2667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	16.5353	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	16.0467	GPM
14 PT-WF-100, SCHX WF INLET PRESS	583.6889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	90.8867	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	226.7333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	264.8333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	279.3111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	287.5444	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	292.4111	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	300.7778	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	577.7111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	8.8619	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	300.5556	DEG F
25 TE-WF-52, TURBINE INLET TEMP	138.2444	DEG F
26 PT-WF-10, TURBINE INLET PRESS	61.1911	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	103.5111	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	34.0100	PSIG
29 TE-WF-13, CONDENSEER INLET WF TEMP	195.8889	DEG F
30 PT-WF-52, CONDENSEER INLET WF PRESS	34.1489	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	338.9444	GPM
32 FE-CW-22, CONDENSEER OUTLET CW FLOW	135.6167	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	64.6889	DEG F
CONDENSER CW TEMF:CC7	23.3444	DEG F
35 TE-CW-101, LOWER COND CW TEMP	67.5778	DEG F
36 CONDENSER CW TEMF:CC5	24.3333	DEG F
37 CONDENSER CW TEMF:CC5	71.4556	DEG F
38 CONDENSER CW TEMF:CC4	24.5778	DEG F
39 CONDENSER CW TEMF:CC3	25.1444	DEG F
40 TE-CW-100, UPPER COND CW TEMP	74.3667	DEG F
41 CONDENSER CW TEMF:CC2	26.9111	DEG F
42 CONDENSER CW TEMF:CC1	26.6000	DEG F
43 TE-CW-5, CONDENSER OJLET CW TEMP	78.5000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: RA41Ba:C12  
 Trial: 0  
 Time: 85/04/18/12/53  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	31.5078	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.0778	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.9056	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	287.9889	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	230.0478	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	231.3333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	13.4152	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	38.5433	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.5222	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	726.9889	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	25.1807	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	24.8189	GPM
14 PT-WF-100, SCHX WF INLET PRESS	583.9333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	97.1178	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	224.0556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	265.1556	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	281.0000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	289.4222	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	294.2667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	301.4933	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	576.3667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	13.1152	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	301.5222	DEG F
25 TE-WF-52, TURBINE INLET TEMP	145.3222	DEG F
26 PT-WF-10, TURBINE INLET PRESS	60.8944	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	116.9667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	40.1622	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	201.2556	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	40.1878	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	252.9667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	135.0922	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	65.5889	DEG F
CONDENSER CW TEMP:CC7	22.4889	DEG F
35 TE-CW-101, LOWER COND CW TEMP	69.7889	DEG F
36 CONDENSER CW TEMP:CC5	24.3667	DEG F
37 CONDENSER CW TEMP:CC5	75.4111	DEG F
38 CONDENSER CW TEMP:CC4	25.8222	DEG F
39 CONDENSER CW TEMP:CC3	113.6444	DEG F
40 TE-CW-100, UPPER COND CW TEMP	79.4556	DEG F
CONDENSER CW TEMP:CC2	26.8889	DEG F
42 CONDENSER CW TEMP:CC1	27.9778	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	85.1000	DEG F
44 SPARE:	0.0000	SPARE
45 SPARE:	0.0000	SPARE

File: WA410a:C12  
 Trial: 0  
 Time: 85/04/16/10/55  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	44.9044	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.1778	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.7211	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	288.8556	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	236.4856	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	237.9778	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	12.7414	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	42.9533	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	84.4222	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	691.7222	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	33.4678	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	33.2200	GPM
14 PT-WF-100, SCHX WF INLET PRESS	585.4778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	98.2933	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	217.6667	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	262.7889	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	280.4000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	289.6000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	294.2000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	300.1444	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	575.7778	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.9432	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	300.1222	DEG F
25 TE-WF-52, TURBINE INLET TEMP	92.3889	DEG F
26 PT-WF-10, TURBINE INLET PRESS	50.8444	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	90.7333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	46.1178	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	199.4333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	46.1800	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	349.2222	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	135.1900	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	65.6444	DEG F
CONDENSER CW TEMP:CC7	22.2778	DEG F
35 TE-CW-101, LOWER COND CW TEMP	71.1889	DEG F
36 CONDENSER CW TEMP:CC5	24.7778	DEG F
37 CONDENSER CW TEMP:CC5	77.9444	DEG F
38 CONDENSER CW TEMP:CC4	26.6111	DEG F
39 CONDENSER CW TEMP:CC3	24.8222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	83.8889	DEG F
41 CONDENSER CW TEMP:CC2	28.1778	DEG F
42 CONDENSER CW TEMP:CC1	30.7889	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	90.7444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A53ave:C12  
 Trial: 0  
 Time: 08-31-07:08/84  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	29.1167	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.1444	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.7811	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	277.3889	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	225.3344	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	226.1778	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.3258	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	51.0033	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	94.0889	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	705.6778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	24.9080	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	24.6200	GPM
14 PT-WF-100, SCHX WF INLET PRESS	532.7889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	109.7422	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	219.2111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	252.8778	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	270.8556	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	278.2667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	280.8333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	290.5867	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	532.5444	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	13.3634	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	289.2333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	97.4333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	50.6856	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	97.0222	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	53.4889	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	208.0889	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	50.5622	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	313.9889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.0778	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	88.6778	DEG F
34 CONDENSER CW TEMP:CC7	26.6000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	85.0556	DEG F
36 CONDENSER CW TEMP:CC5	28.9222	DEG F
37 CONDENSER CW TEMP:CC5	90.7444	DEG F
38 CONDENSER CW TEMP:CC4	30.7444	DEG F
39 CONDENSER CW TEMP:CC3	61.0889	DEG F
40 TE-CW-100, UPPER COND CW TEMP	94.0889	DEG F
41 CONDENSER CW TEMP:CC2	31.0556	DEG F
42 CONDENSER CW TEMP:CC1	32.1667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	98.8000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A61ave:C12  
 Trial: 0  
 Time: 09-04-13:40/84  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	29.3622	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.8778	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.3122	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	271.0000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	208.9478	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	210.2556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	23.0232	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	55.7867	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	100.5000	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	659.7333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.9300	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.8278	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.0667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	107.5767	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	195.7444	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	237.7556	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	259.6444	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	274.2556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	280.3444	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	279.7211	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	535.6000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	15.7448	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	280.1889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	134.1667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	58.0500	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	123.6111	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	60.2922	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	159.3000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	56.9900	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	329.1444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.7656	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.9222	DEG F
CONDENSER CW TEMP:CC7	27.4444	DEG F
35 TE-CW-101, LOWER COND CW TEMP	87.1222	DEG F
36 CONDENSER CW TEMP:CC5	30.4556	DEG F
37 CONDENSER CW TEMP:CC5	95.0778	DEG F
38 CONDENSER CW TEMP:CC4	32.4444	DEG F
39 CONDENSER CW TEMP:CC3	36.3333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	99.7556	DEG F
41 CONDENSER CW TEMP:CC2	33.1667	DEG F
42 CONDENSER CW TEMP:CC1	34.2222	DEG F
43 TE-CW-5, CONDENSER OJLET CW TEMP	104.0444	DEG F
SPARE:	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A66Mav:C12  
 Trial: 0  
 Time: 09/04/11/32  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	25.1100	GPM
2 TE-GF-3, PLANT INLET GF TEMP	307.1333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	304.8544	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	264.6111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	197.2033	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	198.1556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	21.1127	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	55.7789	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	100.2000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	668.1778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.9378	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.8378	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.0889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	109.1589	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	186.5556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	228.0222	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	251.7333	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	269.5333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	277.8778	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	278.7822	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	536.2111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	14.5028	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	279.2333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	124.2667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	57.8622	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	109.1778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	60.2189	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	139.7556	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	56.7400	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	329.4111	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.9544	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.7111	DEG F
34 CONDENSER CW TEMP:CC7	27.4333	DEG F
35 TE-CW-101, LOWER COND CW TEMP	86.8000	DEG F
36 CONDENSER CW TEMP:CC5	30.3222	DEG F
37 CONDENSER CW TEMP:CC5	95.1667	DEG F
38 CONDENSER CW TEMP:CC4	32.0222	DEG F
39 CONDENSER CW TEMP:CC3	35.1222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	99.5333	DEG F
41 CONDENSER CW TEMP:CC2	33.2222	DEG F
42 CONDENSER CW TEMP:CC1	33.6333	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	102.6889	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: A71Nav:C12  
 Trial: 0  
 Time: 09/04/08/48  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	21.1078	GPM
2	TE-GF-3, PLANT INLET GF TEMP	304.1667	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	302.6111	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	253.9333	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	184.7767	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	181.9222	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	18.5081	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	53.8367	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	97.7000	DEG F
10	PT-WF-19, FEED PUMP DISC PRESS	659.0333	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	35.0633	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	34.9533	GPM
14	PT-WF-100, SCHX WF INLET PRESS	534.0889	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	108.4689	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	172.9778	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	213.3556	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	239.2222	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	261.2778	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	272.5333	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	278.0367	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	534.6778	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	13.2789	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	278.2667	DEG F
25	TE-WF-52, TURBINE INLET TEMP	110.4000	DEG F
26	PT-WF-10, TURBINE INLET PRESS	54.6144	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	102.0556	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	58.2978	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	117.8778	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	54.5844	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	327.0000	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	134.8111	GPM
33	CONDENSER INLET CW TEMP	78.9556	DEG F
34	CONDENSER CW TEMP:CC7	26.7111	DEG F
35	TE-CW-101, LOWER COND CW TEMP	84.8444	DEG F
36	CONDENSER CW TEMP:CC5	29.5000	DEG F
37	CONDENSER CW TEMP:CC5	92.5556	DEG F
38	CONDENSER CW TEMP:CC4	30.8222	DEG F
39	CONDENSER CW TEMP:CC3	34.7667	DEG F
40	TE-CW-100, UPPER COND CW TEMP	97.1889	DEG F
41	CONDENSER CW TEMP:CC2	32.4556	DEG F
42	CONDENSER CW TEMP:CC1	33.5222	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	99.0333	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: A76Nav:C12  
 Trial: 0  
 Time: 09/04/09/38  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	19.0497	GPM
2 TE-GF-3, PLANT INLET GF TEMP	272.6716	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	302.5367	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	253.2400	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	181.1700	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	173.5300	DEG F
7 LT-WF-15, CONDENEER LIQ LEVEL	33.7430	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	50.4880	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	93.9878	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	597.1444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	104.3489	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	3.8900	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.0489	GPM
14 PT-WF-100, SCHX WF INLET PRESS	478.6811	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	155.9589	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	160.1689	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	200.5111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	228.5111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	253.1667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	267.2333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	276.4756	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	507.0078	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	70.7551	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	248.3332	DEG F
25 TE-WF-52, TURBINE INLET TEMP	133.9778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	62.9233	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	103.0733	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	64.6211	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	101.9589	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	61.2689	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	298.8722	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	153.3367	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	85.7633	DEG F
CONDENSER CW TEMP:CC7	35.8333	DEG F
35 TE-CW-101, LOWER COND CW TEMP	76.5778	DEG F
36 CONDENSER CW TEMP:CC5	29.7444	DEG F
37 CONDENSER CW TEMP:CC5	93.7222	DEG F
38 CONDENSER CW TEMP:CC4	42.3111	DEG F
39 CONDENSER CW TEMP:CC3	35.6222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	87.4222	DEG F
41 CONDENSER CW TEMP:CC2	32.8889	DEG F
42 CONDENSER CW TEMP:CC1	44.9111	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.7444	DEG F
44 SPARE	11.1000	SPARE
45 SPARE	0.0000	SPARE

File: B1500:012  
 Trial: 0  
 Time: 85/04/25/09/14  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	32.1300	GPM
2 TE-GF-3, PLANT INLET GF TEMP	309.8556	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	308.2467	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	276.7333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	221.0033	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	222.0222	DEG F
7 LT-WF-15, CONDENSEER LIQ LEVEL	14.6524	INCH
8 PT-WF-16, CONDENSEER OUTLET PRESS	32.3456	PSIG
9 TE-WF-58, CONDENSEER OUTLET TEMP	75.0333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	721.1111	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	25.9280	GPM
12 FE-WF-61, SCHX WF BY-PASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	25.5511	GPM
14 PT-WF-100, SCHX WF INLET PRESS	485.5556	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	93.0089	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	214.7222	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	255.0444	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	270.0556	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	276.6111	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	279.4000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	288.7967	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	476.0333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	15.5340	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	288.0889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	124.4778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	39.5578	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	99.3222	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	35.5544	PSIG
29 TE-WF-13, CONDENSEER INLET WF TEMP	205.0111	DEG F
30 PT-WF-52, CONDENSEER INLET WF PRESS	35.6611	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	335.6667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.8500	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	63.2778	DEG F
34 CONDENSER CW TEMP:CC7	21.6778	DEG F
35 TE-CW-101, LOWER COND CW TEMP	66.4444	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	70.0000	DEG F
38 CONDENSER CW TEMP:CC4	24.3444	DEG F
39 CONDENSER CW TEMP:CC3	26.9000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	76.2556	DEG F
41 CONDENSER CW TEMP:CC2	25.8222	DEG F
42 CONDENSER CW TEMP:CC1	27.8778	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	84.5444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: B28Rev:C12  
 Trial: 0  
 Time: 85/04/24/14:10  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	18.8146	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.0111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.3278	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	285.6000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	223.5700	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	224.8889	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	20.1964	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	32.7256	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	76.8111	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	710.4667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	15.0341	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	14.5133	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.3556	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	93.3178	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	236.7222	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	270.5556	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	281.7778	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	287.0889	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	290.1111	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	298.6856	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	530.5889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	8.6147	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	298.7556	DEG F
25 TE-WF-52, TURBINE INLET TEMP	155.8333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	39.5578	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	120.5000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	34.2644	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	203.2111	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	33.9400	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	332.3444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.8633	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	69.6444	DEG F
34 CONDENSER CW TEMP:CC7	23.5222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	70.4222	DEG F
36 CONDENSER CW TEMP:CC5	23.6444	DEG F
37 CONDENSER CW TEMP:CC5	72.6556	DEG F
38 CONDENSER CW TEMP:CC4	24.5444	DEG F
39 CONDENSER CW TEMP:CC3	29.9222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	76.7667	DEG F
41 CONDENSER CW TEMP:CC2	25.6000	DEG F
42 CONDENSER CW TEMP:CC1	27.0444	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	83.0667	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: B20Bav:C12  
 Trial: 0  
 Time: 85/04/24/13:30  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	29.6778	GPM
2	TE-GF-3, PLANT INLET GF TEMP	313.8778	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	311.3311	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	287.3222	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	232.2667	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	233.7333	DEG F
7	LT-WF-15, CONDENEER LIQ LEVEL	20.3713	INCH
8	PT-WF-16, CONDENEER OUTLET PRESS	35.5900	PSIG
9	TE-WF-58, CONDENEER OUTLET TEMP	79.6444	DEG F
10	PT-WF-19, FEED PLMP DISC PRESS	734.0889	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	22.2400	GPM
12	FE-WF-61, SCHX WF BY-PASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	21.8122	GPM
14	PT-WF-100, SCHX WF INLET PRESS	534.5222	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	99.8978	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	232.0222	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	268.8778	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	281.9667	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	287.8444	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	290.9667	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	298.9911	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	529.6000	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	12.3197	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	299.4333	DEG F
25	TE-WF-52, TURBINE INLET TEMP	158.5000	DEG F
26	PT-WF-10, TURBINE INLET PRESS	43.6689	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	127.2889	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	38.3756	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	206.8778	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	38.8422	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	333.4444	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	131.9333	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	70.6222	DEG F
34	CONDENSER CW TEMP:CC7	24.0778	DEG F
35	TE-CW-101, LOWER COND CW TEMP	73.1444	DEG F
36	CONDENSER CW TEMP:CC5	27.0889	DEG F
37	CONDENSER CW TEMP:CC5	76.5111	DEG F
38	CONDENSER CW TEMP:CC4	28.9556	DEG F
39	CONDENSER CW TEMP:CC3	30.5000	DEG F
40	TE-CW-100, UPPER COND CW TEMP	80.9556	DEG F
41	CONDENSER CW TEMP:CC2	30.2444	DEG F
42	CONDENSER CW TEMP:CC1	29.0111	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	88.8444	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: B28@av:C12  
 Trial: 0  
 Time: 85/04/24/11:07  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	39.5567	GPM
2 TE-GF-3, PLANT INLET GF TEMP	314.0444	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.0022	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	287.2444	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	234.5778	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	236.0444	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	19.9921	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	39.6133	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	84.3000	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	709.4444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	29.4053	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.0400	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.2667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	100.5100	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	222.3778	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	264.5778	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	280.2889	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	287.5111	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	290.5222	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	297.5411	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.2333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.0476	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	297.8556	DEG F
25 TE-WF-52, TURBINE INLET TEMP	115.0556	DEG F
26 PT-WF-10, TURBINE INLET PRESS	50.7389	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	108.6778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	43.2111	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	205.8444	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	42.8000	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	334.9778	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.9856	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	71.3000	DEG F
34 CONDENSER CW TEMP:CC7	23.9222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	74.9778	DEG F
36 CONDENSER CW TEMP:CC5	25.2222	DEG F
37 CONDENSER CW TEMP:CC5	78.7778	DEG F
38 CONDENSER CW TEMP:CC4	27.1000	DEG F
39 CONDENSER CW TEMP:CC3	29.3111	DEG F
40 TE-CW-100, UPPER COND CW TEMP	85.7000	DEG F
41 CONDENSER CW TEMP:CC2	28.8889	DEG F
42 CONDENSER CW TEMP:CC1	31.1000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	94.5556	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: 855ave:C12  
 Trial: 0  
 Time: 85/04/26/10:13  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	42.5289	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.6444	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.9578	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	285.5333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	230.4489	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	231.8333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	14.2001	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	33.0856	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	76.0333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	692.8444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	32.2453	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	32.0122	GPM
14 PT-WF-100, SCHX WF INLET PRESS	535.7111	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	90.3478	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	212.6778	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	258.5667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	276.8000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	266.6556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	289.7222	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	293.0744	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	525.0000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.0193	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	292.9667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	103.7222	DEG F
26 PT-WF-10, TURBINE INLET PRESS	42.2500	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	86.4778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	38.0200	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	188.8222	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	37.3878	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	338.9222	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.3489	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	68.4889	DEG F
34 CONDENSER CW TEMP:CC7	20.9000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	64.6889	DEG F
36 CONDENSER CW TEMP:CC5	22.4667	DEG F
37 CONDENSER CW TEMP:CC5	69.7667	DEG F
38 CONDENSER CW TEMP:CC4	24.2889	DEG F
39 CONDENSER CW TEMP:CC3	23.9333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	77.0667	DEG F
41 CONDENSER CW TEMP:CC2	26.3333	DEG F
42 CONDENSER CW TEMP:CC1	28.2778	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	85.8667	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: B61Bav:C12  
 Trial: 0  
 Time: 85/04/26/11/45  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	29.1811	GPM
2	TE-GF-3, PLANT INLET GF TEMP	312.4778	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	310.5289	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	276.0667	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	205.2156	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	206.2222	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	7.4351	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	33.6433	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	76.9000	DEG F
10	PT-WF-19, FEED PUMP DISC PRESS	694.3000	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	32.3533	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	32.0744	GPM
14	PT-WF-100, SCHX WF INLET PRESS	535.7111	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	91.3378	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	193.2778	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	241.5556	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	264.5667	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	280.3000	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	286.6111	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	287.3656	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	526.5333	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	14.7599	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	288.1222	DEG F
25	TE-WF-52, TURBINE INLET TEMP	107.0444	DEG F
26	PT-WF-10, TURBINE INLET PRESS	42.3978	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	90.8889	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	38.1278	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	154.8556	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	37.4711	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	338.3444	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	133.4011	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	61.7778	DEG F
34	CONDENSER CW TEMP:CC7	13.9222	DEG F
35	TE-CW-101, LOWER COND CW TEMP	65.9222	DEG F
36	CONDENSER CW TEMP:CC5	22.9667	DEG F
37	CONDENSER CW TEMP:CC5	71.3667	DEG F
38	CONDENSER CW TEMP:CC4	32.8889	DEG F
39	CONDENSER CW TEMP:CC3	16.2556	DEG F
40	TE-CW-100, UPPER COND CW TEMP	77.6556	DEG F
41	CONDENSER CW TEMP:CC2	26.7556	DEG F
42	CONDENSER CW TEMP:CC1	37.3333	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	84.9556	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: B66\av:C12  
 Trial: 0  
 Time: 85/04/26/12/46  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	23.5089	GPM
2	TE-GF-3, PLANT INLET GF TEMP	312.7222	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	310.8100	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	279.4333	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	188.9356	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	189.7556	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	3.9626	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	33.4356	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	76.7889	DEG F
10	PT-WF-19, FEED PUMP DISC PRESS	691.7333	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	32.0347	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	31.7500	GPM
14	PT-WF-100, SCHX WF INLET PRESS	535.7111	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	91.3822	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	180.6333	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	229.1000	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	248.5000	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	274.8222	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	283.1111	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	286.3267	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	527.2556	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	13.6043	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	287.3778	DEG F
25	TE-WF-52, TURBINE INLET TEMP	108.2778	DEG F
26	PT-WF-10, TURBINE INLET PRESS	42.1233	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	93.1889	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	37.7822	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	138.2667	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	37.1044	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	336.7667	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	133.4344	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	62.0667	DEG F
34	CONDENSER CW TEMP:CC7	21.3000	DEG F
35	TE-CW-101, LOWER COND CW TEMP	66.1000	DEG F
36	CONDENSER CW TEMP:CC5	22.8778	DEG F
37	CONDENSER CW TEMP:CC5	71.4000	DEG F
38	CONDENSER CW TEMP:CC4	24.5778	DEG F
39	CONDENSER CW TEMP:CC3	25.3000	DEG F
40	TE-CW-100, UPPER COND CW TEMP	77.5111	DEG F
41	CONDENSER CW TEMP:CC2	26.4222	DEG F
42	CONDENSER CW TEMP:CC1	27.7889	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	84.2667	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: B71Bav:C12  
 Trial: 0  
 Time: 85/05/22/10/36  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	25.1011	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.9000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	307.0767	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	272.7667	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	200.6200	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	201.5222	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.2981	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	42.0900	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.8778	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	693.6444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	31.9280	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.6078	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.9444	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	102.3189	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	188.6111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	234.9667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	259.6222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	277.4556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	284.7667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	287.3789	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	526.3889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	13.0481	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	288.3889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	119.7333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	59.7811	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	101.0222	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	45.7522	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	132.4444	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	44.9667	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	327.2556	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.2056	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	74.5000	DEG F
34 CONDENSER CW TEMP:CC7	24.8222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	78.5000	DEG F
36 CONDENSER CW TEMP:CC5	26.4556	DEG F
37 CONDENSER CW TEMP:CC5	83.5111	DEG F
38 CONDENSER CW TEMP:CC4	29.0444	DEG F
39 CONDENSER CW TEMP:CC3	28.7000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	88.8333	DEG F
41 CONDENSER CW TEMP:CC2	29.7889	DEG F
42 CONDENSER CW TEMP:CC1	31.3000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	95.2111	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: B76av:C12  
 Trial: 0  
 Time: 05/05/22/11/31  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	21.4067	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.4111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.8156	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	264.5333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	186.9033	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	187.6000	DEG F
7 LT-WF-15, CONDENSER _IQ LEVEL	15.2801	INCH
8 PT-WF-16, CONDENSER DUTLET PRESS	42.3189	PSIG
9 TE-WF-58, CONDENSER DUTLET TEMP	88.1778	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	693.7111	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	31.9427	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.6367	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.9778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	102.7211	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	177.5556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	222.8778	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	249.8111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	271.3222	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	280.6889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	286.4356	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.3111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.2804	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	287.6111	DEG F
25 TE-WF-52, TURBINE INLET TEMP	123.7778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	59.9456	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	101.5333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	45.9878	PSIG
29 TE-WF-13, CONDENSEER INLET WF TEMP	119.6778	DEG F
30 PT-WF-52, CONDENSEER INLET WF PRESS	45.0911	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	331.6667	GPM
32 FE-CW-22, CONDENSEER DUTLET CW FLOW	133.0344	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	74.9222	DEG F
34 CONDENSER CW TEMF:CC7	25.0222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	70.8111	DEG F
36 CONDENSER CW TEMF:CC5	26.8556	DEG F
37 CONDENSER CW TEMF:CC5	83.4333	DEG F
38 CONDENSER CW TEMF:CC4	28.0000	DEG F
39 CONDENSER CW TEMF:CC3	29.8556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	89.0000	DEG F
41 CONDENSER CW TEMF:CC2	29.3889	DEG F
42 CONDENSER CW TEMF:CC1	30.8333	DEG F
43 TE-CW-5, CONDENSER DUTLET CW TEMP	94.9000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C100a:C12  
 Trial: 0  
 Time: 85/06/19/10/59  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	35.5078	GPM
2 TE-GF-3, PLANT INLET GF TEMP	307.0333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	304.3811	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	295.2222	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	254.5400	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	255.7000	DEG F
7 LT-WF-15, CONDENSER _IQ LEVEL	15.1742	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	38.0767	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	85.6222	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	737.3444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	18.2853	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	17.8156	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.2667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	108.9656	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	251.7444	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	282.6444	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	291.6222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	295.0667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	297.3556	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	296.8478	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.4667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	8.9877	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	297.5889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	159.0333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	538.7333	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	99.5667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	3.6956	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	171.0556	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	38.9433	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	331.7778	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.1878	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.2889	DEG F
CONDENSER CW TEMP:CC7	26.6000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	81.7222	DEG F
CONDENSER CW TEMP:CC5	27.4000	DEG F
CONDENSER CW TEMP:CC5	84.1333	DEG F
CONDENSER CW TEMP:CC4	28.0444	DEG F
CONDENSER CW TEMP:CC3	29.5111	DEG F
TE-CW-100, UPPER COND CW TEMP	87.1222	DEG F
CONDENSER CW TEMP:CC2	29.3667	DEG F
CONDENSER CW TEMP:CC1	30.9444	DEG F
TE-CW-5, CONDENSER OUTLET CW TEMP	93.8778	DEG F
SPARE	0.0000	SPARE
SPARE	0.0000	SPARE

File: C101Ma:C12  
 Trial: 0  
 Time: 85/06/19/11/42  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	36.4144	GPM
2 TE-GF-3, PLANT INLET GF TEMP	307.3556	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	304.5856	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	293.6444	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	247.7156	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	248.7556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	11.6046	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	39.7911	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.8667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	729.9222	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	22.4680	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	22.0322	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.3667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	107.8189	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	240.2000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	276.4000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	288.6556	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	293.9889	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	296.4778	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	295.6200	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.7111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	10.2966	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	296.7000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	161.8444	DEG F
26 PT-WF-10, TURBINE INLET PRESS	539.1667	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	102.3444	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.0633	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	160.7444	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	41.2067	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	329.8778	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.2100	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.6000	DEG F
34 CONDENSER CW TEMP:CC7	26.9333	DEG F
35 TE-CW-101, LOWER COND CW TEMP	82.4889	DEG F
36 CONDENSER CW TEMP:CC5	27.8444	DEG F
37 CONDENSER CW TEMP:CC5	85.5333	DEG F
38 CONDENSER CW TEMP:CC4	28.9444	DEG F
39 CONDENSER CW TEMP:CC3	30.1778	DEG F
40 TE-CW-100, UPPER COND CW TEMP	89.3444	DEG F
41 CONDENSER CW TEMP:CC2	30.2444	DEG F
42 CONDENSER CW TEMP:CC1	31.4667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	96.6111	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C102a:C12  
 Trial: 0  
 Time: 85/06/19/13/05  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	37.2022	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.2111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	305.4311	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	290.5667	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	236.3222	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	237.2889	DEG F
7 LT-WF-15, CONDENSER _IQ LEVEL	6.8380	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	42.0256	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	90.5333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	706.1000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	28.8947	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	28.5522	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.3667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	107.2767	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	221.7333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	264.7889	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	282.4000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	291.2778	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	295.0667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	294.3833	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.8556	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.3700	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	295.5667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	163.8667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	533.6111	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	107.6778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.5622	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	145.9333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	44.5000	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	330.5667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.2422	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.2778	DEG F
CONDENSER CW TEMP:CC7	26.8444	DEG F
35 TE-CW-101, LOWER COND CW TEMP	83.0111	DEG F
36 CONDENSER CW TEMP:CC5	29.0667	DEG F
37 CONDENSER CW TEMP:CC5	87.3444	DEG F
38 CONDENSER CW TEMP:CC4	29.6778	DEG F
39 CONDENSER CW TEMP:CC3	31.2556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	92.2556	DEG F
41 CONDENSER CW TEMP:CC2	31.2111	DEG F
42 CONDENSER CW TEMP:CC1	33.1000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	100.0556	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C103av:C12  
 Trial: 0  
 Time: 85/06/19/14:30  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	37.3478	GPM
2 TE-GF-3, PLANT INLET GF TEMP	309.5889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	307.2233	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	289.1222	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	251.8900	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	232.5111	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	4.2294	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	42.3367	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	90.8778	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	691.8333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	31.8260	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.5222	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.5000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	106.4056	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	213.7222	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	259.5889	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	279.4889	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	291.4333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	294.9778	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	294.1478	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	528.5333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	13.4816	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	295.6778	DEG F
25 TE-WF-52, TURBINE INLET TEMP	171.9000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	531.1556	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	113.5556	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.3189	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	145.2778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	45.4256	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	330.5000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.1589	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	79.1444	DEG F
CONDENSER CW TEMP:CC7	26.6111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	82.3222	DEG F
CONDENSER CW TEMP:CC5	27.7333	DEG F
37 CONDENSER CW TEMP:CC3	86.6444	DEG F
38 CONDENSER CW TEMP:CC4	29.1889	DEG F
39 CONDENSER CW TEMP:CC3	31.2444	DEG F
40 TE-CW-100, UPPER COND CW TEMP	92.6444	DEG F
41 CONDENSER CW TEMP:CC2	30.7778	DEG F
42 CONDENSER CW TEMP:CC1	32.7556	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	100.8111	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C1100a:C12  
 Trial: 0  
 Time: 85/06/25/12/00  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	35.3189	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.8667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.0067	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	296.5000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	255.9478	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	257.2556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	26.2509	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	33.4167	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.5222	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	739.0667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	17.9753	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	17.4944	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.8778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	103.9122	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	255.6000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	285.2000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	293.6667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	296.6778	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	300.6778	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	304.5067	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	528.3000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	9.9307	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	305.1000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	167.3222	DEG F
26 PT-WF-10, TURBINE INLET PRESS	538.0778	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	100.1000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.2556	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	209.5778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	34.3667	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	332.3667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	101.8489	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	72.2222	DEG F
CONDENSER CW TEMP:CC7	24.0444	DEG F
35 TE-CW-101, LOWER COND CW TEMP	74.6556	DEG F
CONDENSER CW TEMP:CC5	24.8667	DEG F
CONDENSER CW TEMP:CC5	76.8778	DEG F
CONDENSER CW TEMP:CC4	25.6333	DEG F
CONDENSER CW TEMP:CC3	26.8556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	82.0889	DEG F
CONDENSER CW TEMP:CC2	26.8778	DEG F
CONDENSER CW TEMP:CC1	28.7556	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	91.5333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C1110a:C12  
 Trial: 0  
 Time: 85/06/25/12/52  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	37.2578	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.8889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.2478	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	293.5778	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	245.8511	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	246.8667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	19.4687	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	36.6233	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.4333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	727.5222	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	23.9233	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	23.4822	GPM
14 PT-WF-100, SCHX WF INLET PRESS	533.9778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	102.8967	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	237.8111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	275.6333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	288.4222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	294.1222	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	296.7444	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	298.3133	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	527.9444	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.2394	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	299.5333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	168.3000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	538.1111	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	102.4111	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.4178	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	191.3889	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	38.4844	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	332.3444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	102.0222	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	72.6667	DEG F
CONDENSER CW TEMP:CC7	24.7556	DEG F
35 TE-CW-101, LOWER COND CW TEMP	76.2000	DEG F
36 CONDENSER CW TEMP:CC5	25.8333	DEG F
37 CONDENSER CW TEMP:CC5	80.8333	DEG F
38 CONDENSER CW TEMP:CC4	27.3667	DEG F
39 CONDENSER CW TEMP:CC3	29.9556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	86.5444	DEG F
41 CONDENSER CW TEMP:CC2	29.3333	DEG F
42 CONDENSER CW TEMP:CC1	31.5333	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	96.8778	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C112a:C12  
 Trial: 0  
 Time: 85/06/25/13/21  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	38.3267	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.5222	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.1300	DEG F
4 TE-GF-108, SCHX INTER GF TEMP	291.1111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	238.3356	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	239.2667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	15.3987	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	39.9644	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.4444	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	709.3222	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	28.2153	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	27.8478	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.0000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	104.0667	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	224.9444	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	267.2111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	283.8111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	292.3667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	295.5444	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	295.1289	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	527.4111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	13.7017	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	296.4667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	167.0444	DEG F
26 PT-WF-10, TURBINE INLET PRESS	537.5889	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	103.5556	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.3889	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	175.1111	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	42.7267	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	332.9556	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	102.2278	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	73.6556	DEG F
34 CONDENSER CW TEMP:CC7	24.8333	DEG F
35 TE-CW-101, LOWER COND CW TEMP	78.2111	DEG F
36 CONDENSER CW TEMP:CC5	26.7111	DEG F
37 CONDENSER CW TEMP:CC5	84.0889	DEG F
38 CONDENSER CW TEMP:CC4	28.7000	DEG F
39 CONDENSER CW TEMP:CC3	29.7889	DEG F
40 TE-CW-100, UPPER COND CW TEMP	90.7889	DEG F
41 CONDENSER CW TEMP:CC2	30.6222	DEG F
42 CONDENSER CW TEMP:CC1	32.9111	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	101.3778	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: C113av:C12  
 Trial: 0  
 Time: 85/06/25/14:23  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	38.6633	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.5778	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	308.9189	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	288.8111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	232.9067	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	233.9222	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	12.0928	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	42.9800	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	91.0333	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	690.6444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	32.1873	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.8667	GPM
14 PT-WF-100, SCHX WF INLET PRESS	534.0556	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	106.1156	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	215.9778	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	260.8778	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	279.8222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	290.7333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	294.8667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	293.9622	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	527.7667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	14.7468	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	295.5444	DEG F
25 TE-WF-52, TURBINE INLET TEMP	164.1667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	539.4222	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	104.7889	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	4.0300	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	163.2444	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	46.3033	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	332.8333	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	102.2689	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	74.9444	DEG F
34 CONDENSER CW TEMP:CC7	25.2444	DEG F
35 TE-CW-101, LOWER COND CW TEMP	80.1778	DEG F
36 CONDENSER CW TEMP:CC5	27.6667	DEG F
37 CONDENSER CW TEMP:CC3	86.1222	DEG F
38 CONDENSER CW TEMP:CC4	29.9556	DEG F
39 CONDENSER CW TEMP:CC3	30.7333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	94.4333	DEG F
41 CONDENSER CW TEMP:CC2	32.3333	DEG F
42 CONDENSER CW TEMP:CC1	34.4556	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	104.8889	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D15ave  
 Trial: 0  
 Time: 02/24/10/25  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	13.6245	GPM
2	TE-GF-3, PLANT INLET GF TEMP	305.6500	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	299.5400	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	175.6750	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	117.3775	DEG F
6	TE-GF-6, PLANT OLTLET GF TEMP	118.7750	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	14.4245	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	111.7400	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	71.7000	DEG F
10	PT-WF-19, FEED PLMP DISC PRESS	694.3750	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	32.2515	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	-0.0195	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	32.1125	GPM
14	PT-WF-100, SCHX WF INLET PRESS	584.8000	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	88.5600	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	119.3250	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	143.5000	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	163.6250	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	186.2500	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	201.6500	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	225.0300	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	579.2750	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	17.7260	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	221.6750	DEG F
25	TE-WF-52, TURBINE INLET TEMP	76.7000	DEG F
26	PT-WF-10, TURBINE INLET PRESS	37.3050	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	66.4750	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	-0.7725	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	138.8750	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	113.6300	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	335.9750	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	26.4725	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	54.3500	DEG F
34	CONDENSER CW TEMP:CC7	0.0000	DEG F
35	TE-CW-101, LOWER COND CW TEMP	60.7000	DEG F
36	CONDENSER CW TEMP:CC5	0.0000	DEG F
37	CONDENSER CW TEMP:CC5	66.8500	DEG F
38	CONDENSER CW TEMP:CC4	0.0000	DEG F
39	CONDENSER CW TEMP:CC3	73.1500	DEG F
40	TE-CW-100, UPPER COND CW TEMP	71.4250	DEG F
41	CONDENSER CW TEMP:CC2	0.0000	DEG F
42	CONDENSER CW TEMP:CC1	72.9500	DEG F
43	TE-CW-5, CONDENSER OJLET CW TEMP	74.9250	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: D28Av:C12  
 Trial: 0  
 Time: 02/16/11/44  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	8.0700	GPM
2 TE-GF-3, PLANT INLET GF TEMP	307.9750	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	305.8050	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	174.0500	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	113.9600	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	114.0750	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	10.8865	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	112.7175	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	72.2500	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	681.5250	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	17.3265	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-0.0968	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	22.4225	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.6000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	87.7850	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	119.7000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	136.2000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	163.6750	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	187.2000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	203.6000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	229.0425	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	631.5000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	11.3095	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	228.4000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	88.2500	DEG F
26 PT-WF-10, TURBINE INLET PRESS	8.6925	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	75.8250	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.5750	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	132.9500	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	113.7775	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	327.7250	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	143.0300	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	61.3750	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	65.2500	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	69.4000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	73.0000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	72.3250	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	73.1000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	74.6000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D2EBav:C12  
 Trial: 0  
 Time: 02/16/12/36  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	11.7880	GPM
2 TE-GF-3, PLANT INLET GF TEMP	309.4500	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.5425	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	180.4750	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	122.0150	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	122.4000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	11.8475	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	124.2925	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	78.3250	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	688.1000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	24.9075	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-.0300	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.0050	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.7500	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	93.4350	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	124.7750	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	148.9500	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	168.6500	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	191.7750	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	206.7250	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	231.2825	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	628.9750	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	15.8018	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	230.6500	DEG F
25 TE-WF-52, TURBINE INLET TEMP	84.0000	DEG F
26 PT-WF-18, TURBINE INLET PRESS	4.9625	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	78.1250	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.5825	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	141.8500	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	125.8875	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	327.5000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	142.4875	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	63.5000	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	68.7500	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	74.7000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	78.2500	DEG F
40 TE-CW-100, UPPER COND CW TEMP	78.1500	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	79.7000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	81.1750	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D28Cav:C12  
 Trial: 0  
 Time: 02/16/13/16  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.1383	GPM
2 TE-GF-3, PLANT INLET GF TEMP	310.2500	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	307.0125	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	183.0750	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	126.5825	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	127.0250	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	10.9080	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	134.6075	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.6750	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	674.1000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	31.9245	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-.0225	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	38.9200	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.7250	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	97.4950	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	127.2000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	150.8000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	170.3000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	193.2000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	208.4000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	230.1850	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	626.7000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	19.8813	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	229.6250	DEG F
25 TE-WF-52, TURBINE INLET TEMP	85.6000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	6.3275	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	80.6000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.5575	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	142.3000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	135.9175	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	328.3250	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	142.9500	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	65.1000	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	71.4750	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	78.7000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	82.4500	DEG F
40 TE-CW-100, UPPER COND CW TEMP	83.0500	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	84.9500	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	86.7500	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D28Dav:C12  
 Trial: 0  
 Time: 02/16/13/47  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	18.4938	GPM
2 TE-GF-3, PLANT INLET GF TEMP	309.3500	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.8100	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	185.0500	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	129.0475	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	129.5500	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	10.0385	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	139.0625	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	85.9750	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	654.9000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.4925	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-0.0120	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	41.9150	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.7250	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	98.9250	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	128.9250	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	152.4250	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	171.9000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	194.4750	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	209.3750	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	230.7925	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	625.4750	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	21.8830	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	230.1250	DEG F
25 TE-WF-52, TURBINE INLET TEMP	85.3250	DEG F
26 PT-WF-10, TURBINE INLET PRESS	6.8900	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	81.3250	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.5475	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	145.1000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	142.4775	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	326.0500	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	142.6000	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	65.9750	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.8500	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	80.4250	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	84.1750	DEG F
40 TE-CW-100, UPPER COND CW TEMP	84.9750	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	87.4500	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	89.5250	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D28rRa:C12  
 Trial: 0  
 Time: 03/13/09:33/84  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	7.7720	GPM
2 TE-GF-3, PLANT INLET GF TEMP	309.6000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	308.7467	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	170.6000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	111.2567	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	111.2000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	23.8117	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	106.6967	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	69.1667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	692.9000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	17.2340	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	12.9480	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.6767	GPM
14 PT-WF-100, SCHX WF INLET PRESS	634.8333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	83.9367	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	117.2333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	140.6667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	160.8000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	184.6000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	202.0000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	230.8067	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	635.8333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	9.6080	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	229.5667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	76.0000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	16.9067	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	74.0000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-7.000	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	134.3000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	107.7333	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	364.3667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.7733	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	59.4667	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	63.3333	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	66.0667	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	81.0000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	69.0667	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	68.2000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	71.1000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D28rBa:C12  
 Trial: 0  
 Time: 03/13/89:57/84  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	11.0607	GPM
2 TE-GF-3, PLANT INLET GF TEMP	310.7333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.5900	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	174.7333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	118.6700	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	118.6667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	23.8203	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	115.0167	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	73.6667	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	719.4667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	24.7280	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	24.3233	GPM
14 PT-WF-100, SCHX WF INLET PRESS	634.4667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	91.4967	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	121.8000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	144.2667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	163.5000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	187.5333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	204.2667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	231.2733	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	634.6000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.9323	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	230.1333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	77.7000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	18.7933	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	75.7667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-4600	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	136.3000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	116.5333	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	364.5000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.8333	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	60.8667	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	65.9333	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	69.6667	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	79.7333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	73.4333	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	73.4000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	76.0667	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D28rCa:C12  
 Trial: 0  
 Time: 03/13/10:39/84  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	13.5233	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.8000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.8933	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	177.4000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	122.2967	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	122.4667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	23.6657	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	126.1867	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.5333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	703.5667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	31.1500	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	30.7533	GPM
14 PT-WF-100, SCHX WF INLET PRESS	634.9333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	95.0467	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	123.3000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	145.2667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	164.8667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	188.9333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	205.3667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	229.7900	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	633.6667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.2080	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	229.1333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	84.0000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	23.3900	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	79.7000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-3033	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	138.0667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	128.0700	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	365.5667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	134.0867	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	63.4667	DEG F
CONDENSER CW TEMF:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	69.3333	DEG F
CONDENSER CW TEMF:CC5	0.0000	DEG F
37 CONDENSER CW TEMF:CC5	74.5667	DEG F
38 CONDENSER CW TEMF:CC4	0.0000	DEG F
39 CONDENSER CW TEMF:CC3	79.7000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	79.1000	DEG F
CONDENSER CW TEMF:CC2	0.0000	DEG F
42 CONDENSER CW TEMF:CC1	79.8333	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	82.2667	DEG F
SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D28rXa:C12  
 Trial: 0  
 Time: 03/13/12:04/84  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	14.8313	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.4000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.6333	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	179.7000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	125.7733	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	126.0667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	23.5233	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	134.3833	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.4667	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	691.6000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.2700	GPM
12 FE-WF-61, SCHX WF BY-PASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.9300	GPM
14 PT-WF-100, SCHX WF INLET PRESS	635.0333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	98.1967	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	125.5333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	147.3667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	166.8000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	190.3333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	206.6000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	230.4300	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	633.2667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.8380	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	229.7000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	94.6333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	25.1933	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	88.4667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.0667	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	141.8333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	136.4933	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	365.5667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	134.1167	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	66.0667	DEG F
CONDENSER CW TEMF:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.4667	DEG F
CONDENSER CW TEMF:CC5	0.0000	DEG F
CONDENSER CW TEMF:CC5	78.1000	DEG F
CONDENSER CW TEMF:CC4	0.0000	DEG F
CONDENSER CW TEMF:CC3	82.3333	DEG F
TE-CW-100, UPPER COND CW TEMP	82.9333	DEG F
CONDENSER CW TEMF:CC2	0.0000	DEG F
CONDENSER CW TEMF:CC1	84.2000	DEG F
TE-CW-5, CONDENSER OUTLET CW TEMP	86.5667	DEG F
SPARE	0.0000	SPARE
SPARE	0.0000	SPARE

File: D33sav:C12  
 Trial: 0  
 Time: 03/14/13/52  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.6417	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.4333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	307.0967	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	187.6333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	133.8000	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	134.0667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.9157	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	140.1167	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	86.3667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	694.6667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.0300	GPM
12 FE-WF-61, SCHX WF BY-PASS FLOW	-0.0200	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.7667	GPM
14 PT-WF-100, SCHX WF INLET PRESS	635.0000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	97.2967	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	133.4000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	156.4333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	175.2333	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	196.9000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	210.7000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	239.0733	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	631.9000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	18.3883	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	237.4667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	88.0333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	20.6800	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	88.8667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.3367	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	625.0000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	142.9333	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	366.2667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.8433	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	69.3000	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	75.7000	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	82.2000	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	81.8000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	85.8667	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	87.7000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	90.4000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D350av:C12  
 Trial: 0  
 Time: 03/20/13/26  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	14.7567	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.5667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.5200	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	178.9333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	124.9900	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	125.4000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	23.9203	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	131.0700	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	82.1333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	691.2333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.8367	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-.0120	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.4633	GPM
14 PT-WF-100, SCHX WF INLET PRESS	631.9333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	97.1900	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	124.5333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	146.3000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	165.7000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	190.0667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	206.4000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	229.4667	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	631.0000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.7127	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	228.8667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	98.7667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	42.8467	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	96.7333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.0500	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	140.1700	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	133.5567	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	352.8333	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	149.7333	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	66.2000	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	71.8667	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	77.8333	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	86.1667	DEG F
40 TE-CW-100, UPPER COND CW TEMP	81.3667	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	82.7000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	84.6667	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D37Bav:C12  
 Trial: 0  
 Time: 03/08/13/19  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	12.4187	GPM
2 TE-GF-3, PLANT INLET GF TEMP	316.3333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	313.8667	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	178.8333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	125.6867	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	125.8333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	26.5553	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	137.6100	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	85.4000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	697.6667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.6700	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-0.0160	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.4433	GPM
14 PT-WF-100, SCHX WF INLET PRESS	635.0000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	101.0967	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	125.8667	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	146.5333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	165.9333	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	189.7333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	206.1333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	229.9000	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	635.0667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.4117	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	229.3667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	95.4333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	59.2667	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	91.2667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.1433	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	141.2333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	139.9767	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	328.3333	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	100.6933	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	63.2333	DEG F
34 CONDENSER CW TEMP:CC7	2.6667	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.3667	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	81.8667	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	84.5000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	85.0000	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	86.8667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	89.2667	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D41ave  
 Trial: 0  
 Time: 03/21/11/12  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.3767	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.6667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.8833	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	184.9667	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	127.8900	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	128.2333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.7427	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	134.5067	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.3000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	688.9333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.7700	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	.2000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.5167	GPM
14 PT-WF-100, SCHX WF INLET PRESS	683.6667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	101.9300	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	128.3000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	152.0667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	172.4667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	197.1667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	213.4000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	239.8633	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	684.1667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.2823	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	239.0333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	99.6000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	18.6267	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	89.1333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.3067	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	145.4333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	137.0400	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	350.8667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.9033	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	65.6333	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.4333	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	78.7333	DEG F
38 CONDENSER CW TEMP:CC4	0.0000	DEG F
39 CONDENSER CW TEMP:CC3	85.5667	DEG F
40 TE-CW-100, UPPER COND CW TEMP	83.0667	DEG F
CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	84.5000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	86.9000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D55ave:C12  
 Trial: 0  
 Time: 02:27:10:38  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.8936	GPM
2 TE-GF-3, PLANT INLET GF TEMP	300.6583	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	295.1900	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	186.5250	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	125.2217	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	126.4917	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	20.9331	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	114.0942	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	73.0833	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	680.8417	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	36.3583	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-0.0130	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	36.9017	GPM
14 PT-WF-100, SCHX WF INLET PRESS	635.8250	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	89.0617	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	126.4000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	153.2833	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	174.1083	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	196.2917	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	209.9917	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	229.9483	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	631.9500	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	18.5450	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	232.2250	DEG F
25 TE-WF-52, TURBINE INLET TEMP	79.3667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	50.5033	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	69.8750	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.7375	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	142.7000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	116.5817	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	331.0833	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	134.2767	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	54.5083	DEG F
34 CONDENSER CW TEMP:CC7	18.9500	DEG F
35 TE-CW-101, LOWER COND CW TEMP	61.1000	DEG F
36 CONDENSER CW TEMP:CC5	21.8917	DEG F
37 CONDENSER CW TEMP:CC5	68.7167	DEG F
38 CONDENSER CW TEMP:CC4	23.9917	DEG F
39 CONDENSER CW TEMP:CC3	24.7917	DEG F
40 TE-CW-100, UPPER COND CW TEMP	72.5417	DEG F
41 CONDENSER CW TEMP:CC2	24.6500	DEG F
42 CONDENSER CW TEMP:CC1	24.9333	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	76.5583	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D62av:C12  
 Trial: 0  
 Time: 02/29/14/02  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	11.6719	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.6583	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.9158	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	168.1083	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	116.8583	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	117.1500	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	12.7035	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	129.4350	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	81.3500	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	681.3000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.5150	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-.0200	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	36.0958	GPM
14 PT-WF-100, SCHX WF INLET PRESS	635.4917	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	96.9567	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	116.8500	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	136.0333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	155.0000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	181.4500	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	199.4500	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	218.9483	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	635.0917	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.8917	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	218.7000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	91.5250	DEG F
26 PT-WF-10, TURBINE INLET PRESS	56.9892	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	87.3333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.1833	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	110.3667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	131.8150	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	311.4917	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.3708	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	63.3167	DEG F
CONDENSER CW TEMP:CC7	21.7750	DEG F
35 TE-CW-101, LOWER COND CW TEMP	69.7917	DEG F
36 CONDENSER CW TEMP:CC5	24.5750	DEG F
37 CONDENSER CW TEMP:CC5	76.4167	DEG F
38 CONDENSER CW TEMP:CC4	26.5250	DEG F
39 CONDENSER CW TEMP:CC3	27.2083	DEG F
40 TE-CW-100, UPPER COND CW TEMP	80.6167	DEG F
CONDENSER CW TEMP:CC2	27.0917	DEG F
42 CONDENSER CW TEMP:CC1	27.1250	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	82.8833	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D65Wav:C12  
 Trial: 0  
 Time: 03/01/11/01  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	11.7566	GPM
2 TE-GF-3, PLANT INLET GF TEMP	307.8083	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.3617	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	167.4917	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	115.7675	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	115.5500	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	19.8951	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	125.7442	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	78.5000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	684.9833	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	36.2767	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-0.0195	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	36.0150	GPM
14 PT-WF-100, SCHX WF INLET PRESS	634.7750	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	95.4917	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	115.1917	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	134.8667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	154.2167	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	179.7917	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	198.4167	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	217.7625	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	633.4417	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.6203	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	216.8000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	86.8833	DEG F
26 PT-WF-10, TURBINE INLET PRESS	54.4650	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	73.5583	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.4300	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	104.5167	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	127.8275	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	310.7167	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	134.7742	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	60.9833	DEG F
34 CONDENSER CW TEMP:CC7	21.0250	DEG F
35 TE-CW-101, LOWER COND CW TEMP	67.4583	DEG F
36 CONDENSER CW TEMP:CC5	23.6083	DEG F
37 CONDENSER CW TEMP:CC6	74.1917	DEG F
38 CONDENSER CW TEMP:CC4	25.2583	DEG F
39 CONDENSER CW TEMP:CC3	25.2417	DEG F
40 TE-CW-100, UPPER COND CW TEMP	78.1500	DEG F
41 CONDENSER CW TEMP:CC2	25.8583	DEG F
42 CONDENSER CW TEMP:CC1	25.9750	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	79.9083	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D71sav:C12  
 Trial: 0  
 Time: 03/01/11/53  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	10.7584	GPM
2 TE-GF-3, PLANT INLET GF TEMP	310.2667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	308.6792	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	161.6917	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	113.8442	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	113.1583	DEG F
7 LT-WF-15, CONDENEER LIQ LEVEL	18.2048	INCH
8 PT-WF-16, CONDENEER OUTLET PRESS	127.9942	PSIG
9 TE-WF-58, CONDENEER OUTLET TEMP	80.2083	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	687.0500	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	36.1733	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	-.0205	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.9150	GPM
14 PT-WF-100, SCHX WF INLET PRESS	634.9500	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	97.0242	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	112.9333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	130.1583	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	148.4583	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	174.4667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	194.4667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	214.9625	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	634.7583	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	15.8623	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	214.5833	DEG F
25 TE-WF-52, TURBINE INLET TEMP	91.3250	DEG F
26 PT-WF-10, TURBINE INLET PRESS	53.2150	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	80.5333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.1975	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	93.1667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	129.9717	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	311.3667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	134.5617	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	62.7500	DEG F
34 CONDENSER CW TEMP:CC7	21.4333	DEG F
35 TE-CW-101, LOWER COND CW TEMP	69.0917	DEG F
36 CONDENSER CW TEMP:CCS	23.8000	DEG F
37 CONDENSER CW TEMP:CC5	76.1750	DEG F
38 CONDENSER CW TEMP:CC4	25.4750	DEG F
39 CONDENSER CW TEMP:CC3	26.2667	DEG F
40 TE-CW-100, UPPER COND CW TEMP	79.5000	DEG F
41 CONDENSER CW TEMP:CC2	26.3333	DEG F
42 CONDENSER CW TEMP:CC1	26.3667	DEG F
43 TE-CW-5, CONDENSER OJLET CW TEMP	81.0333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: D770av:C12  
 Trial: 0  
 Time: 03/01/12/51  
 Fluid:

D770av:C12  
0  
03/01/12/51

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	10.5147	GPM
2	TE-GF-3, PLANT INLET GF TEMP	312.3667	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	310.0608	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	158.8333	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	111.9017	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	112.0667	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	17.2351	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	128.9975	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	80.9083	DEG F
10	PT-WF-19, FEED PLMP DISC PRESS	687.4333	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	36.2158	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	-0.0205	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	35.9467	GPM
14	PT-WF-100, SCHX WF INLET PRESS	635.0000	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	96.8775	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	111.7917	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	128.0750	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	145.7333	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	171.9667	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	192.5667	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	214.0525	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	635.3583	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	15.6388	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	214.0083	DEG F
25	TE-WF-52, TURBINE INLET TEMP	95.8333	DEG F
26	PT-WF-10, TURBINE INLET PRESS	56.3108	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	86.0500	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	-0.1892	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	88.3583	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	131.2558	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	310.8250	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	134.6050	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	63.5417	DEG F
34	CONDENSER CW TEMP:CC7	21.6917	DEG F
35	TE-CW-101, LOWER COND CW TEMP	69.7500	DEG F
36	CONDENSER CW TEMP:CC5	24.2833	DEG F
37	CONDENSER CW TEMP:CC5	76.8083	DEG F
38	CONDENSER CW TEMP:CC4	26.1083	DEG F
39	CONDENSER CW TEMP:CC3	26.8583	DEG F
40	TE-CW-100, UPPER COND CW TEMP	80.2750	DEG F
41	CONDENSER CW TEMP:CC2	26.8417	DEG F
42	CONDENSER CW TEMP:CC1	26.8000	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	81.6250	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: D103av:C12  
 Trial: 0  
 Time: 85/07/12/11:20  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	12.6476	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.0167	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.6528	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	185.3167	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	133.3189	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	133.2722	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	11.4943	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	33.5900	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	92.9833	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	725.7278	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.5643	GPM
12 FE-WF-61, SCHX WF BY-PASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	30.2633	GPM
14 PT-WF-100, SCHX WF INLET PRESS	660.6778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	108.8050	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	131.9278	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	153.8444	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	172.9222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	196.7667	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	211.6833	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	230.3156	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	655.8889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	14.6547	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	230.2722	DEG F
25 TE-WF-52, TURBINE INLET TEMP	146.4056	DEG F
26 PT-WF-10, TURBINE INLET PRESS	644.5500	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	108.2778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1167	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	134.4444	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	158.3428	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	326.5833	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.9261	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	78.5556	DEG F
34 CONDENSER CW TEMP:CC7	26.2500	DEG F
35 TE-CW-101, LOWER COND CW TEMP	82.9667	DEG F
36 CONDENSER CW TEMP:CC5	28.1667	DEG F
37 CONDENSER CW TEMP:CC5	89.4611	DEG F
38 CONDENSER CW TEMP:CC4	30.2556	DEG F
39 CONDENSER CW TEMP:CC3	31.0833	DEG F
40 TE-CW-100, UPPER COND CW TEMP	93.1222	DEG F
41 CONDENSER CW TEMP:CC2	30.9444	DEG F
42 CONDENSER CW TEMP:CC1	31.6778	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	95.8833	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E15ave:C12  
 Trial: 0  
 Time: 05:15:09:40  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	14.6040	GPM
2	TE-GF-3, PLANT INLET GF TEMP	311.4667	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	309.4233	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	183.1778	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	124.0700	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	124.3222	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	19.3589	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	111.5733	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	74.6111	DEG F
10	PT-WF-19, FEED PLMP DISC PRESS	700.1889	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	30.4880	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	59.7567	GPM
14	PT-WF-100, SCHX WF INLET PRESS	584.1778	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	88.4822	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	124.6667	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	150.0667	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	170.9667	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	194.8667	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	209.6667	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	231.4367	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	582.9889	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	17.0816	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	230.0333	DEG F
25	TE-WF-52, TURBINE INLET TEMP	84.8667	DEG F
26	PT-WF-10, TURBINE INLET PRESS	84.5778	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	84.1111	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	-5122	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	146.9000	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	113.8400	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	357.6222	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	130.4511	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	62.5556	DEG F
34	CONDENSER CW TEMF:CC7	22.0111	DEG F
35	TE-CW-101, LOWER COND CW TEMP	66.8000	DEG F
36	CONDENSER CW TEMF:CC5	23.1000	DEG F
37	CONDENSER CW TEMF:CC5	71.4778	DEG F
38	CONDENSER CW TEMF:CC4	24.3556	DEG F
39	CONDENSER CW TEMF:CC3	25.9667	DEG F
40	TE-CW-100, UPPER COND CW TEMP	76.6111	DEG F
41	CONDENSER CW TEMF:CC2	25.9333	DEG F
42	CONDENSER CW TEMF:CC1	26.8222	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	82.9111	DEG F
44	SPARE:	0.0000	SPARE
45	SPARE:	0.0000	SPARE

File: E28Rav:C12  
 Trial: 0  
 Time: 05/14/13/48  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	7.3737	GPM
2 TE-GF-3, PLANT INLET GF TEMP	316.6000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	314.2633	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	181.8000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	120.3300	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	120.9333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	10.0623	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	114.0367	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	76.7333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	702.8333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	16.2260	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	14.2083	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.9000	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.8333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	90.6133	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	127.8000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	152.0667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	172.3667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	196.2000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	212.7667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	241.5867	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	641.5000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	9.0417	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	241.2000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	107.7000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	40.3200	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	106.4667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.7267	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	151.6333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	154.1900	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	353.0000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	127.6400	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	70.6000	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.5667	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	75.4000	DEG F
38 CONDENSER CW TEMP:CC4	76.0000	DEG F
39 CONDENSER CW TEMP:CC3	0.0000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	77.0000	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	81.6000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	82.9333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E28Bav:C12  
 Trial: 0  
 Time: 05/14/13/17  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	11.1120	GPM
2 TE-GF-3, PLANT INLET GF TEMP	316.5000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	314.1067	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	187.4333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	128.3733	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	128.7667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	11.3510	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	119.3967	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.3667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	726.1667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	24.6040	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	24.1700	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.7333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	96.0167	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	132.0000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	156.3000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	176.4667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	200.5333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	216.3333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	242.8667	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	640.0000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.9887	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	242.5333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	107.6667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	55.4133	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	104.7667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.8200	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	156.5667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	148.7767	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	358.8000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	129.4733	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	70.7333	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	74.0333	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	77.7333	DEG F
38 CONDENSER CW TEMP:CC4	78.6667	DEG F
39 CONDENSER CW TEMP:CC3	0.0000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	81.2333	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	85.6000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	87.1667	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E28ave:C12  
 Trial: 0  
 Time: 05:11:11:50  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.0058	GPM
2 TE-GF-3, PLANT INLET GF TEMP	316.9667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	314.5956	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	190.0444	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	131.8622	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	132.2778	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	12.1339	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	128.9044	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.9444	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	700.1889	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	32.9300	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	32.5456	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.7111	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	97.5111	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	132.2222	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	156.8111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	177.7444	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	202.3889	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	217.7556	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	241.8522	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	637.1889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.0952	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	241.4778	DEG F
25 TE-WF-52, TURBINE INLET TEMP	106.6000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	59.4822	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	100.9111	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.6922	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	156.3667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	134.9456	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	358.5111	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	128.3056	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	71.5222	DEG F
34 CONDENSER CW TEMP:CC7	23.9889	DEG F
35 TE-CW-101, LOWER COND CW TEMP	76.1889	DEG F
36 CONDENSER CW TEMP:CC5	25.8111	DEG F
37 CONDENSER CW TEMP:CC5	80.3556	DEG F
38 CONDENSER CW TEMP:CC4	27.3111	DEG F
39 CONDENSER CW TEMP:CC3	31.6222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	85.9444	DEG F
41 CONDENSER CW TEMP:CC2	28.4333	DEG F
42 CONDENSER CW TEMP:CC1	30.2778	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	92.8333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E33ave:C12  
 Trial: 0  
 Time: 05:16:09:55  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.7277	GPM
2 TE-GF-3, PLANT INLET GF TEMP	316.0889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	313.9389	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	196.3000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	135.5156	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	135.8111	DEG F
7 LT-WF-15, CONDENEER LIQ LEVEL	15.9081	INCH
8 PT-WF-16, CONDENEER OUTLET PRESS	123.0244	PSIG
9 TE-WF-58, CONDENEER OUTLET TEMP	81.0556	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	693.5889	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	32.7251	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	32.2967	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.7000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	94.2256	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	135.1111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	162.2000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	183.6333	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	206.9556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	219.3889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	249.7633	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	633.0000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	18.0519	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	248.7889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	85.8000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	8.5167	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	84.4889	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.2833	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	171.2778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	125.7489	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	336.8333	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.7700	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	67.7556	DEG F
34 CONDENSER CW TEMF:CC7	22.8222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.6778	DEG F
36 CONDENSER CW TEMF:CC5	24.7222	DEG F
37 CONDENSER CW TEMF:CC5	77.7222	DEG F
38 CONDENSER CW TEMF:CC4	26.4444	DEG F
39 CONDENSER CW TEMF:CC3	27.1556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	82.9444	DEG F
41 CONDENSER CW TEMF:CC2	28.4667	DEG F
42 CONDENSER CW TEMF:CC1	28.9667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	90.4111	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E3Save:C12  
 Trial: 0  
 Time: 05:31:12:14  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.6168	GPM
2 TE-GF-3, PLANT INLET GF TEMP	314.8000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.6261	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	191.9278	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	136.9289	DEG F
6 TE-GF-6, PLANT OLTLET GF TEMP	137.3722	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	12.4162	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	139.5083	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	89.1833	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	702.7056	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	32.7280	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	32.3128	GPM
14 PT-WF-100, SCHX WF INLET PRESS	630.5889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	102.1756	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	135.7556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	159.2833	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	179.3444	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	203.9444	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	217.6889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	241.2678	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	635.7667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.2856	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	240.8278	DEG F
25 TE-WF-52, TURBINE INLET TEMP	116.9667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	6.7733	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	112.0389	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.5200	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	157.6722	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	141.5000	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	346.9389	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	149.7589	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	78.1167	DEG F
CONDENSER CW TEMP:CC7	26.0667	DEG F
35 TE-CW-101, LOWER COND CW TEMP	81.6333	DEG F
CONDENSER CW TEMP:CC5	27.9444	DEG F
37 CONDENSER CW TEMP:CC5	85.9889	DEG F
38 CONDENSER CW TEMP:CC4	28.4333	DEG F
39 CONDENSER CW TEMP:CC3	34.4000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	90.4500	DEG F
CONDENSER CW TEMP:CC2	29.7111	DEG F
CONDENSER CW TEMP:CC1	30.8667	DEG F
43 TE-CW-5, CONDENSER OJLET CW TEMP	96.7000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E37ave:C12  
 Trial: 0  
 Time: 05:29:10:13  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.3360	GPM
2 TE-GF-3, PLANT INLET GF TEMP	308.4111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	306.4022	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	195.5111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	141.4711	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	141.8444	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	25.5698	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	145.7567	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	91.7222	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	707.6889	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	32.8656	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	32.6000	GPM
14 PT-WF-100, SCHX WF INLET PRESS	631.8111	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	106.8889	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	140.3889	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	164.2111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	183.8778	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	205.6444	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	218.6778	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	242.0322	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	635.9778	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.1074	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	241.2889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	113.2444	DEG F
26 PT-WF-10, TURBINE INLET PRESS	5.2733	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	109.8111	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.2711	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	159.8778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	147.7067	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	347.6111	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	99.9900	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	76.0333	DEG F
34 CONDENSER CW TEMP:CC7	25.4667	DEG F
35 TE-CW-101, LOWER COND CW TEMP	82.2556	DEG F
36 CONDENSER CW TEMP:CC5	27.9333	DEG F
37 CONDENSER CW TEMP:CC5	88.7778	DEG F
38 CONDENSER CW TEMP:CC4	30.2111	DEG F
39 CONDENSER CW TEMP:CC3	34.3111	DEG F
40 TE-CW-100, UPPER COND CW TEMP	95.0444	DEG F
41 CONDENSER CW TEMP:CC2	32.1111	DEG F
42 CONDENSER CW TEMP:CC1	33.3000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	102.5444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E41ave:C12  
 Trial: 0  
 Time: 05:30:12:04  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	17.1879	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.0556	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.7822	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	200.5111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	143.1867	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	143.7889	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	19.2897	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	145.2711	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	91.8333	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	694.6778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	34.8156	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	34.4478	GPM
14 PT-WF-100, SCHX WF INLET PRESS	683.4333	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	104.4667	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	141.5667	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	166.5889	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	187.5222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	211.2000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	225.2667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	250.0856	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	689.9333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.3199	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	249.5889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	119.0000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	26.4122	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	111.7000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.4889	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	160.6667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	147.2711	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	341.7444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.4122	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	78.3889	DEG F
CONDENSER CW TEMP:CC7	26.4222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	83.1667	DEG F
36 CONDENSER CW TEMP:CC5	28.3222	DEG F
37 CONDENSER CW TEMP:CC5	88.2778	DEG F
38 CONDENSER CW TEMP:CC4	29.8778	DEG F
39 CONDENSER CW TEMP:CC3	34.9556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	93.1778	DEG F
CONDENSER CW TEMP:CC2	31.2556	DEG F
CONDENSER CW TEMP:CC1	32.6889	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	100.6333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E5Save:C12  
 Trial: 0  
 Time: 05:17:07:17  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	17.1846	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.2333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.8711	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	191.9111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	134.1333	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	133.9333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	8.1369	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	132.8456	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	84.2778	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	680.5556	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	36.1000	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.7222	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.8111	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	96.8467	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	132.3444	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	157.7667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	178.6111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	202.4778	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	217.7333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	240.9178	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	630.1000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	18.9561	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	239.0556	DEG F
25 TE-WF-52, TURBINE INLET TEMP	74.5333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	57.3344	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	72.7444	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.8756	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	153.0222	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	134.0378	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	358.9222	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	114.0789	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	70.3444	DEG F
CONDENSER CW TEMP:CC7	23.3111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	75.5778	DEG F
36 CONDENSER CW TEMP:CCS	25.3333	DEG F
37 CONDENSER CW TEMP:CC5	81.2889	DEG F
38 CONDENSER CW TEMP:CC4	27.7889	DEG F
39 CONDENSER CW TEMP:CC3	24.6444	DEG F
40 TE-CW-100, UPPER COND CW TEMP	86.3333	DEG F
41 CONDENSER CW TEMP:CC2	29.3000	DEG F
42 CONDENSER CW TEMP:CC1	30.4444	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	92.9444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E61ave:C12  
 Trial: 0  
 Time: 05:22:10:30  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.3739	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.0444	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.2556	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	185.1778	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	131.4833	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	131.8333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	28.4376	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	140.6789	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	89.7111	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	687.9444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	36.3322	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.9689	GPM
14 PT-WF-100, SCHX WF INLET PRESS	633.4667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	101.7422	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	130.7111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	152.2333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	172.0556	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	196.5556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	213.5000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	230.1189	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	636.0667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.3419	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	229.3778	DEG F
25 TE-WF-52, TURBINE INLET TEMP	99.7889	DEG F
26 PT-WF-10, TURBINE INLET PRESS	10.3900	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	87.6833	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	14.4033	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	131.0511	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	142.7156	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	332.9900	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.2367	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	76.3444	DEG F
CONDENSER CW TEMP:CC7	26.3778	DEG F
35 TE-CW-101, LOWER COND CW TEMP	80.6556	DEG F
36 CONDENSER CW TEMP:CC5	27.2444	DEG F
37 CONDENSER CW TEMP:CC5	116.5889	DEG F
38 CONDENSER CW TEMP:CC4	29.1333	DEG F
39 CONDENSER CW TEMP:CC3	29.5111	DEG F
40 TE-CW-100, UPPER COND CW TEMP	91.4333	DEG F
41 CONDENSER CW TEMP:CC2	30.1889	DEG F
42 CONDENSER CW TEMP:CC1	31.8667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	97.3333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E66ave  
 Trial: 0  
 Time: 05:22:11:13  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	14.7390	GPM
2 TE-GF-3, PLANT INLET GF TEMP	310.9889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.3322	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	180.7111	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	127.6856	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	128.0222	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	28.3609	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	136.8056	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.9556	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	685.5333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	36.4056	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	36.0089	GPM
14 PT-WF-100, SCHX WF INLET PRESS	633.5222	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	100.4400	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	126.9111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	147.5333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	167.3667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	192.9556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	211.0111	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	227.0756	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	637.0667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.9258	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	226.7333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	103.5333	DEG F
26 PT-WF-10, TURBINE INLET PRESS	10.3611	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	98.6667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.2467	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	118.8222	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	138.8144	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	359.3889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.8589	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	74.4111	DEG F
34 CONDENSER CW TEMP:CC7	24.5222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	79.1778	DEG F
36 CONDENSER CW TEMP:CC5	26.4444	DEG F
37 CONDENSER CW TEMP:CC5	84.3333	DEG F
38 CONDENSER CW TEMP:CC4	28.4000	DEG F
39 CONDENSER CW TEMP:CC3	30.6667	DEG F
40 TE-CW-100, UPPER COND CW TEMP	89.4111	DEG F
41 CONDENSER CW TEMP:CC2	29.6556	DEG F
42 CONDENSER CW TEMP:CC1	31.0222	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	95.0778	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E71ave:C12  
 Trial: 0  
 Time: 05:22:12:11  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	13.6134	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.1111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.6578	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	174.6556	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	123.5322	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	123.8556	DEG F
7 LT-WF-15, CONDENSER _IQ LEVEL	26.7853	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	135.0244	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.1556	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	686.2111	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.9033	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.5578	GPM
14 PT-WF-100, SCHX WF INLET PRESS	633.4778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	99.7822	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	122.9778	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	141.8889	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	161.3556	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	187.7333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	207.1556	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	224.2978	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	638.1667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.1229	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	224.1667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	108.3778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	8.8722	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	101.7333	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.5011	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	107.2778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	137.0167	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	358.8000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.3978	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	74.0111	DEG F
34 CONDENSER CW TEMP:CC7	24.6444	DEG F
35 TE-CW-101, LOWER COND CW TEMP	78.6333	DEG F
36 CONDENSER CW TEMP:CC5	26.5667	DEG F
37 CONDENSER CW TEMP:CC5	83.9444	DEG F
38 CONDENSER CW TEMP:CC4	28.1667	DEG F
39 CONDENSER CW TEMP:CC3	31.4667	DEG F
40 TE-CW-100, UPPER COND CW TEMP	88.6444	DEG F
41 CONDENSER CW TEMP:CC2	29.6667	DEG F
42 CONDENSER CW TEMP:CC1	30.6222	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	94.0000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: E76ave:C12  
 Trial: 0  
 Time: 05:22:12:58  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	13.0553	GPM
2	TE-GF-3, PLANT INLET GF TEMP	312.4000	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	310.5856	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	170.9667	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	121.5967	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	122.0444	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	25.3620	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	135.5400	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	87.4556	DEG F
10	PT-WF-19, FEED PUMP DISC PRESS	686.2556	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	36.0522	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	35.6856	GPM
14	PT-WF-100, SCHX WF INLET PRESS	633.4778	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	99.6089	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	121.0333	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	138.7667	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	157.6667	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	184.2667	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	204.5111	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	222.8011	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	638.6000	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	15.6671	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	222.8444	DEG F
25	TE-WF-52, TURBINE INLET TEMP	111.3556	DEG F
26	PT-WF-10, TURBINE INLET PRESS	7.8300	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	105.1222	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	.5722	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	102.6444	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	137.7089	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	359.0333	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	130.3656	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	74.3444	DEG F
34	CONDENSER CW TEMP:CC7	24.8667	DEG F
35	TE-CW-101, LOWER COND CW TEMP	78.9778	DEG F
36	CONDENSER CW TEMP:CC5	26.8889	DEG F
37	CONDENSER CW TEMP:CC5	84.1333	DEG F
38	CONDENSER CW TEMP:CC4	28.2889	DEG F
39	CONDENSER CW TEMP:CC3	32.3222	DEG F
40	TE-CW-100, UPPER COND CW TEMP	68.7667	DEG F
41	CONDENSER CW TEMP:CC2	29.7222	DEG F
42	CONDENSER CW TEMP:CC1	30.2111	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	93.7222	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: F15Nav:C12  
 Trial: 0  
 Time: 06:07:11:57  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.6431	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.2444	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	309.1544	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	194.4222	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	135.4344	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	135.8000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.0082	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	112.5622	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	78.6556	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	707.0111	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.0633	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.6556	GPM
14 PT-WF-100, SCHX WF INLET PRESS	584.4000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	92.4222	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	134.1556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	161.2111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	182.1889	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	204.9556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	217.8667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	241.9089	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	584.9556	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.8488	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	240.8778	DEG F
25 TE-WF-52, TURBINE INLET TEMP	94.3000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	8.2433	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	90.1667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.0467	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	160.5111	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	113.9889	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	344.4444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.8533	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	69.1556	DEG F
CONDENSER CW TEMP:CC7	23.3000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	72.4889	DEG F
CONDENSER CW TEMP:CC5	24.8556	DEG F
CONDENSER CW TEMP:CC5	76.0778	DEG F
CONDENSER CW TEMP:CC4	25.9444	DEG F
CONDENSER CW TEMP:CC3	27.9333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	81.3889	DEG F
CONDENSER CW TEMP:CC2	27.7778	DEG F
CONDENSER CW TEMP:CC1	29.2889	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	89.7222	DEG F
SPARE:	0.0000	SPARE
45 SPARE:	0.0000	SPARE

File: F28Raw:C12  
 Trial: 0  
 Time: 06:05:12:55  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	8.0790	GPM
2 TE-GF-3, PLANT INLET GF TEMP	314.8000	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.3633	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	193.1667	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	128.9200	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	129.3000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	26.1520	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	109.6767	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	77.2667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	720.3667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	15.9620	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	15.4567	GPM
14 PT-WF-100, SCHX WF INLET PRESS	630.8667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	92.7067	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	136.7333	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	163.6333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	183.9667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	206.7333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	221.9333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	250.5233	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	638.3333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	8.9827	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	249.5333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	96.3000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	9.5600	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	95.6000	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.0400	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	159.5667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	110.1133	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	349.6667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.4433	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	72.7667	DEG F
34 CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	74.0667	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	76.2000	DEG F
38 CONDENSER CW TEMP:CC4	76.7000	DEG F
39 CONDENSER CW TEMP:CC3	0.0000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	78.5333	DEG F
41 CONDENSER CW TEMP:CC2	0.0000	DEG F
42 CONDENSER CW TEMP:CC1	83.3000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	84.5333	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: F28Bav  
 Trial: 0  
 Time: 06:05:12:25  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	11.9587	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.5333	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.6433	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	197.2333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	135.8133	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	136.1333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	26.4220	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	114.5633	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.7667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	731.7667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	24.1020	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	23.6367	GPM
14 PT-WF-100, SCHX WF INLET PRESS	631.1667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	96.3900	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	138.3000	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	165.0000	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	185.9667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	209.5000	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	224.5333	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	249.7800	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	637.2000	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.7063	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	249.1000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	97.4000	DEG F
26 PT-WF-10, TURBINE INLET PRESS	9.6400	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	94.3667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.0700	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	161.4667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	115.5033	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	350.2667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.3300	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	73.4000	DEG F
CONDENSER CW TEMP:CC7	0.0000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	75.7000	DEG F
36 CONDENSER CW TEMP:CC5	0.0000	DEG F
37 CONDENSER CW TEMP:CC5	78.8333	DEG F
38 CONDENSER CW TEMP:CC4	78.7333	DEG F
39 CONDENSER CW TEMP:CC3	0.0000	DEG F
40 TE-CW-100, UPPER COND CW TEMP	82.3667	DEG F
CONDENSER CW TEMP:CC2	0.0000	DEG F
CONDENSER CW TEMP:CC1	87.5000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	89.7333	DEG F
SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: F28ave:C12  
 Trial: 0  
 Time: 06:05:11:52  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.4872	GPM
2 TE-GF-3, PLANT INLET GF TEMP	314.0667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.7144	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	200.5333	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	139.9567	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	140.3667	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	26.8509	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	121.3356	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	83.0667	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	705.8778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	31.9753	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	31.6222	GPM
14 PT-WF-100, SCHX WF INLET PRESS	631.1889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	96.1767	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	138.2667	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	165.7444	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	187.4222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	211.7222	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	225.7556	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	249.6222	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	634.5667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.8037	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	248.9111	DEG F
25 TE-WF-52, TURBINE INLET TEMP	96.5667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	9.6400	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	92.2889	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-1.1556	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	163.0667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	122.9433	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	350.5444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	132.7722	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	73.4778	DEG F
34 CONDENSER CW TEMP:CC7	24.6111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	77.0000	DEG F
36 CONDENSER CW TEMP:CC6	25.8889	DEG F
37 CONDENSER CW TEMP:CC5	81.4222	DEG F
38 CONDENSER CW TEMP:CC4	27.1333	DEG F
39 CONDENSER CW TEMP:CC3	28.3333	DEG F
40 TE-CW-100, UPPER COND CW TEMP	86.2889	DEG F
41 CONDENSER CW TEMP:CC2	29.1333	DEG F
42 CONDENSER CW TEMP:CC1	30.4444	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	94.5444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: F33ave:C12  
 Trial: 0  
 Time: 06/06/09/10  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	20.0692	GPM
2 TE-GF-3, PLANT INLET GF TEMP	312.0556	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.2300	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	209.6222	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	148.4578	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	148.9111	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	25.8109	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	119.6822	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	81.3889	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	693.9667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	33.4078	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	33.1056	GPM
14 PT-WF-100, SCHX WF INLET PRESS	631.5778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	93.5811	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	144.8556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	174.7444	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	196.7778	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	218.7889	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	228.5444	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	261.3078	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	631.9222	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	18.7922	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	260.0444	DEG F
25 TE-WF-52, TURBINE INLET TEMP	86.0222	DEG F
26 PT-WF-10, TURBINE INLET PRESS	12.6411	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	87.3556	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.4189	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	183.8444	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	120.6022	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	342.7889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	133.0522	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	70.4667	DEG F
34 CONDENSER CW TEMP:CC7	24.0889	DEG F
35 TE-CW-101, LOWER COND CW TEMP	74.2111	DEG F
36 CONDENSER CW TEMP:CC5	22.4667	DEG F
37 CONDENSER CW TEMP:CC5	79.2667	DEG F
38 CONDENSER CW TEMP:CC4	27.2778	DEG F
39 CONDENSER CW TEMP:CC3	27.5222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	65.8667	DEG F
41 CONDENSER CW TEMP:CC2	27.9778	DEG F
42 CONDENSER CW TEMP:CC1	29.5222	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	94.1778	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File:  
Trial:  
Time:  
Fluid:

F354av:C12

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06/22/12/22

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	17.0145	GPM
2	TE-GF-3, PLANT INLET GF TEMP	318.1333	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	315.7133	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	199.2667	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	137.5350	DEG F
6	TE-GF-6, PLANT OUTLET GF TEMP	137.9667	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	18.3152	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	115.5933	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	80.4833	DEG F
10	PT-WF-19, FEED PUMP DISC PRESS	692.8500	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	33.3283	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	32.9683	GPM
14	PT-WF-100, SCHX WF INLET PRESS	630.8500	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	93.0067	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	135.0500	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	162.8000	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	185.5000	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	211.2000	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	226.1000	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	250.1183	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	635.1667	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	17.9255	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	249.6833	DEG F
25	TE-WF-52, TURBINE INLET TEMP	110.2500	DEG F
26	PT-WF-10, TURBINE INLET PRESS	75.1483	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	105.8500	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	.5517	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	164.3833	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	117.4600	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	342.5500	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	150.0467	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	70.4667	DEG F
34	CONDENSER CW TEMF:CC7	35.3333	DEG F
35	TE-CW-101, LOWER COND CW TEMP	73.5167	DEG F
36	CONDENSER CW TEMF:CC5	0.0000	DEG F
37	CONDENSER CW TEMF:CC5	78.0000	DEG F
38	CONDENSER CW TEMF:CC4	38.7500	DEG F
39	CONDENSER CW TEMF:CC3	48.9167	DEG F
40	TE-CW-100, UPPER COND CW TEMP	82.7167	DEG F
41	CONDENSER CW TEMF:CC2	0.0000	DEG F
42	CONDENSER CW TEMF:CC1	43.9833	DEG F
43	TE-CW-5, CONDENSER OUTLET CW TEMP	90.8500	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File:  
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F37Zav:C12  
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06/22/07/01

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	17.1950	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.6222	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	314.3633	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	198.5000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	136.4144	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	136.2222	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	20.3971	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	117.9222	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	77.6000	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	692.1222	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	33.3356	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	33.0222	GPM
14 PT-WF-100, SCHX WF INLET PRESS	632.0000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	90.8756	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	133.7444	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	161.9556	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	184.5889	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	210.3444	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	225.3667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	250.3222	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	630.2111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.9037	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	248.7222	DEG F
25 TE-WF-52, TURBINE INLET TEMP	75.1444	DEG F
26 PT-WF-10, TURBINE INLET PRESS	8.9011	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	75.2778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-1.1122	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	161.7111	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	114.3011	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	343.3889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	99.8756	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	62.6889	DEG F
34 CONDENSER CW TEMP:CC7	20.9667	DEG F
35 TE-CW-101, LOWER COND CW TEMP	68.3667	DEG F
36 CONDENSER CW TEMP:CC5	23.5556	DEG F
37 CONDENSER CW TEMP:CC3	76.2111	DEG F
38 CONDENSER CW TEMP:CC4	25.1222	DEG F
39 CONDENSER CW TEMP:CC3	28.8222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	82.3889	DEG F
41 CONDENSER CW TEMP:CC2	27.5556	DEG F
42 CONDENSER CW TEMP:CC1	29.8333	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	92.3889	DEG F
44 SPARE:	0.0000	SPARE
45 SPARE:	0.0000	SPARE

File: F41ave:C12  
 Trial: 0  
 Time: 06/14/12/57  
 Fluid:

CHANNEL	DESCRIPTION	VALUE	UNITS
*****			
1	FE-GF-1, GF FLOW RATE	18.6050	GPM
2	TE-GF-3, PLANT INLET GF TEMP	314.9222	DEG F
3	TE-GF-102, SCHX INLET GF TEMP	312.6900	DEG F
4	TE-GF-100, SCHX INTER GF TEMP	210.6000	DEG F
5	TE-GF-103, SCHX CUTLET TEMP	147.3300	DEG F
6	TE-GF-6, PLANT OLTLET GF TEMP	147.7556	DEG F
7	LT-WF-15, CONDENSER LIQ LEVEL	25.6376	INCH
8	PT-WF-16, CONDENSER OUTLET PRESS	122.4411	PSIG
9	TE-WF-58, CONDENSER OUTLET TEMP	83.6222	DEG F
10	PT-WF-19, FEED PLMP DISC PRESS	693.9667	PSIG
11	FE-WF-1, SCHX WF FEED FLOW	33.6533	GPM
12	FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13	FE-WF-1/61, TOTAL WF PUMP FLOW	33.2889	GPM
14	PT-WF-100, SCHX WF INLET PRESS	682.6778	PSIG
15	TE-WF-101, SCHX WF INLET TEMP	95.6678	DEG F
16	TE-WF-108, SCHX WF TEMP:PH1	143.6889	DEG F
17	TE-WF-109, SCHX WF TEMP:PH2	173.4667	DEG F
18	TE-WF-102, SCHX INTER WF TEMP	196.6667	DEG F
19	TE-WF-111, SCHX WF TEMP:VAP1	221.0111	DEG F
20	TE-WF-110, SCHX WF TEMP:VAP2	234.2889	DEG F
21	TE-WF-104, SCHX CUTLET WF TEMP	260.5056	DEG F
22	PT-WF-74, WF VAPCR FLOW PRESS	688.6889	PSIG
23	FE-WF-7, SCHX OUTLET VAPOR FLOW	17.3464	ACFM
24	TE-WF-3, WF VAPOR FLOW TEMP	260.0222	DEG F
25	TE-WF-52, TURBINE INLET TEMP	105.4222	DEG F
26	PT-WF-10, TURBINE INLET PRESS	35.8978	PSIG
27	TE-WF-53, TURBINE OUTLET TEMP	100.8444	DEG F
28	PT-WF-12, TURBINE OUTLET PRESS	.3567	PSIG
29	TE-WF-13, CONDENSER INLET WF TEMP	170.5000	DEG F
30	PT-WF-52, CONDENSER INLET WF PRESS	124.3378	PSIG
31	FE-CW-1, PLANT INLET CW FLOW	349.5556	GPM
32	FE-CW-22, CONDENSER OUTLET CW FLOW	131.4522	GPM
33	TE-CW-4, CONDENSER INLET CW TEMP	72.1667	DEG F
34	CONDENSER CW TEMP:CC7	24.4889	DEG F
35	TE-CW-101, LOWER COND CW TEMP	75.9889	DEG F
36	CONDENSER CW TEMP:CC5	26.0778	DEG F
37	CONDENSER CW TEMP:CC5	80.9333	DEG F
38	CONDENSER CW TEMP:CC4	27.3111	DEG F
39	CONDENSER CW TEMP:CC3	30.7889	DEG F
40	TE-CW-100, UPPER COND CW TEMP	86.4778	DEG F
41	CONDENSER CW TEMP:CC2	29.6111	DEG F
42	CONDENSER CW TEMP:CC1	31.1889	DEG F
43	TE-CW-5, CONDENSER OJLET CW TEMP	95.5000	DEG F
44	SPARE	0.0000	SPARE
45	SPARE	0.0000	SPARE

File: F55ave:C12  
 Trial: 0  
 Time: 06/15/06/59  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	19.9088	GPM
2 TE-GF-3, PLANT INLET GF TEMP	311.9889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.9056	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	202.6444	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	140.6167	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	140.4111	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	14.1372	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	110.9156	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	76.6889	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	673.8222	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.9856	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.5556	GPM
14 PT-WF-100, SCHX WF INLET PRESS	630.9111	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	88.8689	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	135.0444	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	164.9111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	188.1444	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	212.5222	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	225.1667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	250.9033	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	628.2889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	19.5982	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	248.8667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	71.4556	DEG F
26 PT-WF-10, TURBINE INLET PRESS	33.6144	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	72.9111	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-1.1756	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	163.7000	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	113.4222	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	348.5889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	123.6111	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	63.4111	DEG F
CONDENSER CW TEMP:CC7	21.5111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	67.5889	DEG F
36 CONDENSER CW TEMP:CC5	23.5667	DEG F
37 CONDENSER CW TEMP:CC5	73.0889	DEG F
38 CONDENSER CW TEMP:CC4	25.0778	DEG F
39 CONDENSER CW TEMP:CC3	24.4667	DEG F
40 TE-CW-100, UPPER COND CW TEMP	79.3222	DEG F
41 CONDENSER CW TEMP:CC2	27.2667	DEG F
42 CONDENSER CW TEMP:CC1	28.9000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.3444	DEG F
44 SPARE:	0.0000	SPARE
45 SPARE:	0.0000	SPARE

File: F61ave:C12  
 Trial: 0  
 Time: 06/15/08/37  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	16.5704	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.2111	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.7156	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	190.5222	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	129.0622	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	129.1889	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	12.2488	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	111.7078	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	78.0667	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	676.1333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.9522	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.5789	GPM
14 PT-WF-100, SCHX WF INLET PRESS	633.2889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	89.8467	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	125.5111	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	151.7111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	175.2444	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	203.0111	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	220.4889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	237.3744	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	633.0667	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.6279	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	236.2778	DEG F
25 TE-WF-52, TURBINE INLET TEMP	78.6778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	41.0378	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	82.8778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.6922	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	129.0333	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	113.7233	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	349.5000	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.3800	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	65.5444	DEG F
34 CONDENSER CW TEMP:CC7	21.5556	DEG F
35 TE-CW-101, LOWER COND CW TEMP	69.4444	DEG F
36 CONDENSER CW TEMP:CC5	24.0000	DEG F
37 CONDENSER CW TEMP:CC5	74.6222	DEG F
38 CONDENSER CW TEMP:CC4	26.2667	DEG F
39 CONDENSER CW TEMP:CC3	26.6889	DEG F
40 TE-CW-100, UPPER COND CW TEMP	80.3000	DEG F
41 CONDENSER CW TEMP:CC2	27.6444	DEG F
42 CONDENSER CW TEMP:CC1	28.3000	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.3444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: F66ave:C12  
 Trial: 0  
 Time: 06/15/09/29  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.7354	GPM
2 TE-GF-3, PLANT INLET GF TEMP	314.4889	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.7211	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	186.5889	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	126.0944	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	126.3778	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	10.9877	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	113.3122	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	78.4556	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	676.8333	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.8489	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.5011	GPM
14 PT-WF-100, SCHX WF INLET PRESS	633.2778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	90.3844	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	122.9556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	147.9111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	171.1556	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	199.7889	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	218.2889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	235.0411	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	633.9111	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	17.1697	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	234.2000	DEG F
25 TE-WF-52, TURBINE INLET TEMP	85.9889	DEG F
26 PT-WF-10, TURBINE INLET PRESS	44.3911	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	87.2778	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-.4300	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	121.6667	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	114.3456	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	349.0889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.3389	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	66.1000	DEG F
34 CONDENSER CW TEMP:CC7	22.9222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	70.0778	DEG F
36 CONDENSER CW TEMP:CC5	24.4333	DEG F
37 CONDENSER CW TEMP:CC5	75.0000	DEG F
38 CONDENSER CW TEMP:CC4	25.7333	DEG F
39 CONDENSER CW TEMP:CC3	27.3111	DEG F
40 TE-CW-100, UPPER COND CW TEMP	80.7556	DEG F
41 CONDENSER CW TEMP:CC2	28.2889	DEG F
42 CONDENSER CW TEMP:CC1	29.6667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.3778	DEG F
44 SPARE:	0.0000	SPARE
45 SPARE:	0.0000	SPARE

File: F71ave:C12  
 Trial: 0  
 Time: 06/15/10/11  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	14.6068	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.6778	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	313.7367	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	180.0000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	121.9378	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	122.1556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	9.1278	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	114.1711	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	79.2444	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	678.5000	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	35.8333	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	35.4933	GPM
14 PT-WF-100, SCHX WF INLET PRESS	633.3556	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	91.0011	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	119.4756	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	142.1222	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	164.7667	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	194.1333	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	214.3222	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	232.0922	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	634.8889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	16.4653	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	231.6556	DEG F
25 TE-WF-52, TURBINE INLET TEMP	91.8889	DEG F
26 PT-WF-10, TURBINE INLET PRESS	59.7589	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	90.8889	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	-0.2400	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	109.2889	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	115.4022	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	348.6667	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	131.3900	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	67.1000	DEG F
34 CONDENSER CW TEMP:CC7	22.8222	DEG F
35 TE-CW-101, LOWER COND CW TEMP	71.0889	DEG F
36 CONDENSER CW TEMP:CC5	24.5556	DEG F
37 CONDENSER CW TEMP:CC5	76.1667	DEG F
38 CONDENSER CW TEMP:CC4	22.8778	DEG F
39 CONDENSER CW TEMP:CC3	28.4556	DEG F
40 TE-CW-100, UPPER COND CW TEMP	81.4111	DEG F
41 CONDENSER CW TEMP:CC2	27.6222	DEG F
42 CONDENSER CW TEMP:CC1	28.3111	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	88.5778	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: F103av:C12  
 Trial: 0  
 Time: 85/08/06/12:50  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	15.8476	GPM
2 TE-GF-3, PLANT INLET GF TEMP	310.9222	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	307.9489	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	210.8889	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	150.6689	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	150.6222	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	14.5128	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	138.8689	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	92.6000	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	724.1444	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.5427	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	30.2733	GPM
14 PT-WF-100, SCHX WF INLET PRESS	645.6778	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	108.1278	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	146.7889	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	176.5667	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	197.9778	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	220.0556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	230.4889	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	249.4889	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	640.8556	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	15.5747	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	249.3778	DEG F
25 TE-WF-52, TURBINE INLET TEMP	153.6667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	628.8889	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	108.5667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1700	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	160.4778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	141.0800	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	331.6111	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.3533	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	83.1000	DEG F
34 CONDENSER CW TEMP:CC7	27.7556	DEG F
35 TE-CW-101, LOWER COND CW TEMP	86.2222	DEG F
36 CONDENSER CW TEMP:CC5	37.9333	DEG F
37 CONDENSER CW TEMP:CC5	89.9000	DEG F
38 CONDENSER CW TEMP:CC4	30.4778	DEG F
39 CONDENSER CW TEMP:CC3	31.2889	DEG F
40 TE-CW-100, UPPER COND CW TEMP	95.3667	DEG F
41 CONDENSER CW TEMP:CC2	32.1111	DEG F
42 CONDENSER CW TEMP:CC1	33.9222	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	102.8111	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: H103av:C12  
 Trial: 0  
 Time: 85/08/08/11:36  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	18.1414	GPM
2 TE-GF-3, PLANT INLET GF TEMP	313.0444	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	310.5533	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	230.5889	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	163.5800	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	163.8333	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	21.8784	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	115.8411	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	87.3556	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	726.7556	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	29.5580	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.3289	GPM
14 PT-WF-100, SCHX WF INLET PRESS	645.3667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	103.2400	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	158.2778	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	194.5556	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	217.7000	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	238.1556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	247.2000	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	265.5356	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	640.5556	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	15.3562	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	265.3667	DEG F
25 TE-WF-52, TURBINE INLET TEMP	155.7778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	614.6111	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	102.9444	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.1344	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	172.4778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	118.0800	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	327.1111	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	130.2500	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	80.4889	DEG F
CONDENSER CW TEMP:CC?	26.1000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	82.5000	DEG F
CONDENSER CW TEMP:CCS	27.6556	DEG F
37 CONDENSER CW TEMP:CC5	85.6889	DEG F
38 CONDENSER CW TEMP:CC4	28.9000	DEG F
39 CONDENSER CW TEMP:CC3	28.7778	DEG F
40 TE-CW-100, UPPER COND CW TEMP	91.3778	DEG F
41 CONDENSER CW TEMP:CC2	30.7222	DEG F
42 CONDENSER CW TEMP:CC1	33.5111	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	101.8111	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: J103av:C12  
 Trial: 0  
 Time: 85/08/16/10:47  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	22.4244	GPM
2 TE-GF-3, PLANT INLET GF TEMP	314.4667	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	311.4633	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	255.3000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	187.3844	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	187.6111	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	16.4404	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	102.4222	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	88.5778	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	729.3667	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	29.4760	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.1878	GPM
14 PT-WF-100, SCHX WF INLET PRESS	645.5667	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	104.5944	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	178.6556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	220.2111	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	243.2111	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	260.8556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	268.7778	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	280.8033	DEG F
22 PT-WF-74, WF VAPOR FLOW PRESS	639.4889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	14.9622	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	280.6889	DEG F
25 TE-WF-52, TURBINE INLET TEMP	157.5778	DEG F
26 PT-WF-10, TURBINE INLET PRESS	636.6333	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	102.4667	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.0422	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	177.6778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	105.6889	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	346.1444	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	129.8978	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	84.0111	DEG F
34 CONDENSER CW TEMP:CC7	27.6000	DEG F
35 TE-CW-101, LOWER COND CW TEMP	85.3556	DEG F
36 CONDENSER CW TEMP:CC5	28.4667	DEG F
37 CONDENSER CW TEMP:CC5	87.5889	DEG F
38 CONDENSER CW TEMP:CC4	29.5889	DEG F
39 CONDENSER CW TEMP:CC3	30.3222	DEG F
40 TE-CW-100, UPPER COND CW TEMP	93.9778	DEG F
41 CONDENSER CW TEMP:CC2	31.6667	DEG F
42 CONDENSER CW TEMP:CC1	34.8667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	106.1889	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: L103av:C12  
 Trial: 0  
 Time: 85/08/21/12:21  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	28.2900	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.7222	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	313.3933	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	275.8000	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	211.0956	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	211.5000	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	31.6587	INCH
8 PT-WF-16, CONDENSER DUTLET PRESS	86.3178	PSIG
9 TE-WF-58, CONDENSER DUTLET TEMP	85.6667	DEG F
10 PT-WF-19, FEED PLMP DISC PRESS	731.8778	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	29.7747	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.5689	GPM
14 PT-WF-100, SCHX WF INLET PRESS	645.4889	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	102.1611	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	197.8667	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	243.3444	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	265.2778	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	279.6222	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	286.8667	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	294.4089	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	640.5333	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	26.7186	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	294.5333	DEG F
25 TE-WF-52, TURBINE INLET TEMP	168.1889	DEG F
26 PT-WF-10, TURBINE INLET PRESS	633.2667	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	108.0889	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	0.0944	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	183.2778	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	89.0311	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	335.2778	GPM
32 FE-CW-22, CONDENSER DUTLET CW FLOW	130.1433	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	82.5778	DEG F
34 CONDENSER CW TEMP:CC7	27.0111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	83.6889	DEG F
36 CONDENSER CW TEMP:CC5	27.7333	DEG F
37 CONDENSER CW TEMP:CC5	85.3222	DEG F
38 CONDENSER CW TEMP:CC4	28.2222	DEG F
39 CONDENSER CW TEMP:CC3	29.2111	DEG F
40 TE-CW-100, UPPER COND CW TEMP	91.4556	DEG F
41 CONDENSER CW TEMP:CC2	30.7111	DEG F
42 CONDENSER CW TEMP:CC1	34.3444	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	105.9444	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

File: L105av:C12  
 Trial: 0  
 Time: 85/08/21/14:29  
 Fluid:

CHANNEL DESCRIPTION	VALUE	UNITS
*****		
1 FE-GF-1, GF FLOW RATE	19.4529	GPM
2 TE-GF-3, PLANT INLET GF TEMP	315.4222	DEG F
3 TE-GF-102, SCHX INLET GF TEMP	312.9922	DEG F
4 TE-GF-100, SCHX INTER GF TEMP	257.7556	DEG F
5 TE-GF-103, SCHX CUTLET TEMP	180.0244	DEG F
6 TE-GF-6, PLANT OUTLET GF TEMP	180.2556	DEG F
7 LT-WF-15, CONDENSER LIQ LEVEL	26.2542	INCH
8 PT-WF-16, CONDENSER OUTLET PRESS	87.6011	PSIG
9 TE-WF-58, CONDENSER OUTLET TEMP	86.6778	DEG F
10 PT-WF-19, FEED PUMP DISC PRESS	731.5889	PSIG
11 FE-WF-1, SCHX WF FEED FLOW	30.2333	GPM
12 FE-WF-61, SCHX WF BYPASS FLOW	0.0000	GPM
13 FE-WF-1/61, TOTAL WF PUMP FLOW	29.9656	GPM
14 PT-WF-100, SCHX WF INLET PRESS	645.6000	PSIG
15 TE-WF-101, SCHX WF INLET TEMP	103.2622	DEG F
16 TE-WF-108, SCHX WF TEMP:PH1	172.6556	DEG F
17 TE-WF-109, SCHX WF TEMP:PH2	216.8333	DEG F
18 TE-WF-102, SCHX INTER WF TEMP	243.8222	DEG F
19 TE-WF-111, SCHX WF TEMP:VAP1	266.4556	DEG F
20 TE-WF-110, SCHX WF TEMP:VAP2	277.0111	DEG F
21 TE-WF-104, SCHX CUTLET WF TEMP	284.7767	DEG F
22 PT-WF-74, WF VAPCR FLOW PRESS	642.0889	PSIG
23 FE-WF-7, SCHX OUTLET VAPOR FLOW	12.7262	ACFM
24 TE-WF-3, WF VAPOR FLOW TEMP	285.3111	DEG F
25 TE-WF-52, TURBINE INLET TEMP	168.4667	DEG F
26 PT-WF-10, TURBINE INLET PRESS	633.7000	PSIG
27 TE-WF-53, TURBINE OUTLET TEMP	111.9222	DEG F
28 PT-WF-12, TURBINE OUTLET PRESS	.0489	PSIG
29 TE-WF-13, CONDENSER INLET WF TEMP	145.6222	DEG F
30 PT-WF-52, CONDENSER INLET WF PRESS	90.2889	PSIG
31 FE-CW-1, PLANT INLET CW FLOW	335.5889	GPM
32 FE-CW-22, CONDENSER OUTLET CW FLOW	129.9778	GPM
33 TE-CW-4, CONDENSER INLET CW TEMP	83.7111	DEG F
34 CONDENSER CW TEMP:CC7	27.9111	DEG F
35 TE-CW-101, LOWER COND CW TEMP	84.7889	DEG F
36 CONDENSER CW TEMP:CC5	28.1889	DEG F
37 CONDENSER CW TEMP:CC3	91.0333	DEG F
38 CONDENSER CW TEMP:CC4	28.9889	DEG F
39 CONDENSER CW TEMP:CC3	31.9111	DEG F
40 TE-CW-100, UPPER COND CW TEMP	91.8556	DEG F
41 CONDENSER CW TEMP:CC2	34.0778	DEG F
42 CONDENSER CW TEMP:CC1	36.9667	DEG F
43 TE-CW-5, CONDENSER OUTLET CW TEMP	104.8000	DEG F
44 SPARE	0.0000	SPARE
45 SPARE	0.0000	SPARE

## APPENDIX B

### CALCULATED AND EXPERIMENTAL TEMPERATURE DISTRIBUTIONS FOR THE PREHEATER AND VAPOR GENERATOR

Appendix B contains a table of the significant test parameters and plotted temperature distributions for the heater-vaporizer data analyzed to date.

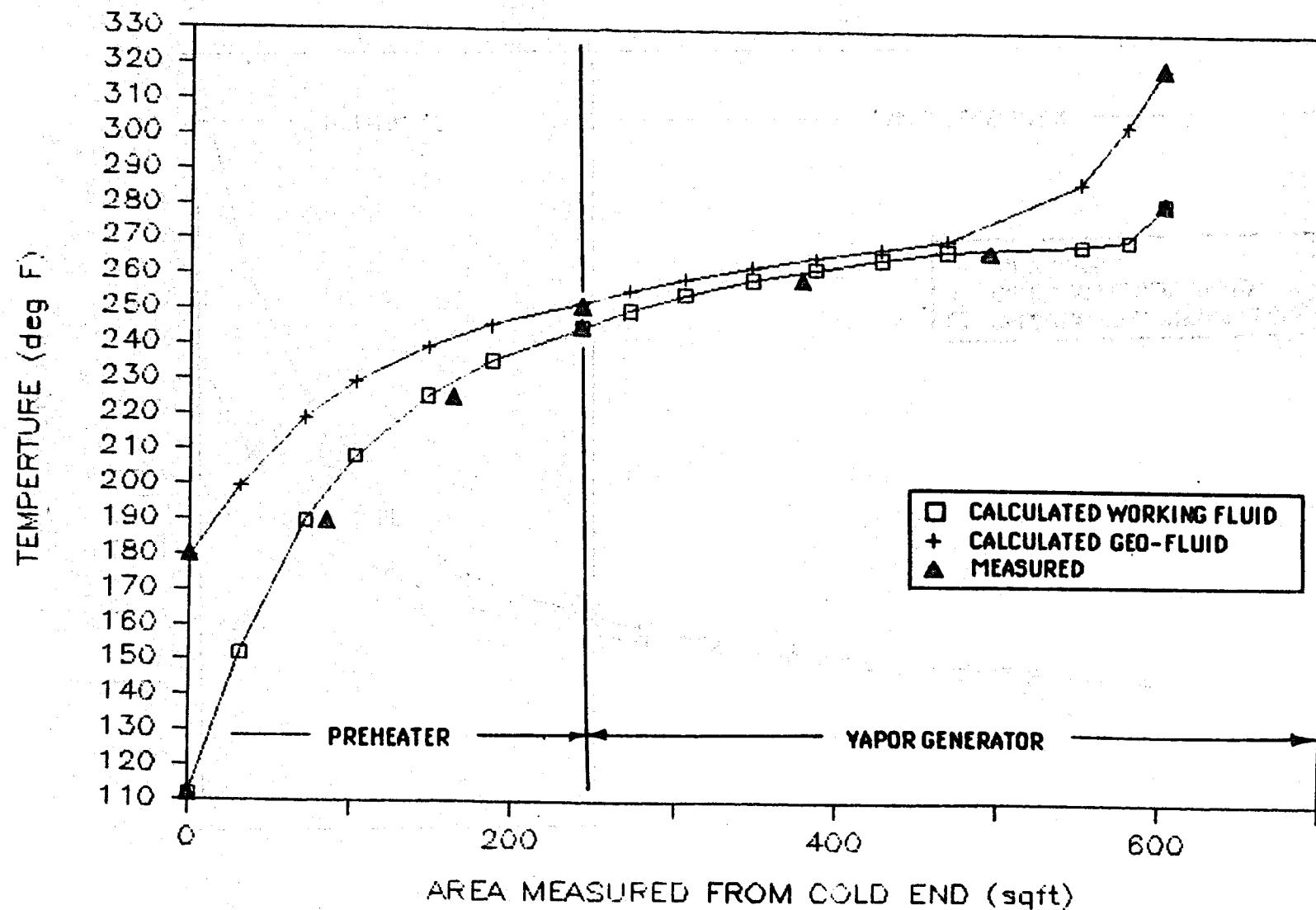
**B1. SUPERCRITICAL CYCLE TEST PARAMETERS FOR  
HEATER TEMPERATURE-DISTRIBUTION PLOTS**

TEST NO.	DATE	NOMINAL CHEMISTRY	CRITICAL PRESS (PSIA)	WORKING FLUID				FLOW RATE (LB/HR)	GEO-FLUID TEMP (IN) (F)
				HEATER PRESS (PSIA)	Critical Temp (F)	Heater Temp (Out) (F)	Heater Temp (In) (F)		
A15Dav	7/28/83	1.0 isobutane	529.2	499.5	274.9	281.5	6621.3	320.2	
A28-1	8/17/83	1.0 isobutane	529.2	549.4	274.9	292.8	3283.6	318.3	
A28-2	8/17/83	1.0 isobutane	529.2	549.7	274.9	292.3	5923.1	319.1	
A28-3	8/17/83	1.0 isobutane	529.2	549.8	274.9	291.9	8128.2	319.4	
A28Aav	4/16/85	1.0 isobutane	529.2	548.7	274.9	290.6	4126.8	310.3	
A28Bav	4/16/85	1.0 isobutane	529.2	548.8	274.9	291.0	6110.0	310.2	
A28Cav	4/16/85	1.0 isobutane	529.2	548.9	274.9	291.5	8208.5	307.8	
A33ave	8/18/83	1.0 isobutane	529.2	549.4	274.9	302.1	8124.6	319.7	
A41Dav	9/12/83	1.0 isobutane	529.2	599.6	274.9	301.7	9105.0	318.2	
RA41Aav	4/18/85	1.0 isobutane	529.2	598.4	274.9	300.8	4586.1	313.8	
RA41Bav	4/18/85	1.0 isobutane	529.2	598.6	274.9	301.5	6931.9	312.9	
RA41Cav	4/16/85	1.0 isobutane	529.2	600.2	274.9	300.1	9192.6	312.7	
B28RAV	4/24/85	.95 isobutane, .05 hexane	533.9	549.1	283.5	298.7	4183.5	311.3	
B28BAV	4/24/85	.95 isobutane, .05 hexane	533.9	549.2	283.5	299.0	6145.0	311.3	
B28CAV	4/24/85	.95 isobutane, .05 hexane	533.9	549.0	283.5	297.5	8103.3	312.0	
C113AV	6/25/85	.90 isobutane, .10 hexane	538.3	548.8	292.1	295.5	8890.1	308.9	
D15ave	3/24/84	1.0 propane	615.9	599.6	205.95	227.7	7928.8	303.3	
D28rAa	3/13/84	1.0 propane	615.9	649.7	205.95	230.4	4289.9	308.7	
D28rBa	3/13/84	1.0 propane	615.9	649.4	205.95	230.9	6090.3	309.1	
D28rCa	3/13/84	1.0 propane	615.9	649.8	205.95	229.4	7619.4	310.4	
D28rXa	3/13/84	1.0 propane	615.9	649.9	205.95	230.0	8567.5	311.1	
D33ave	3/14/84	1.0 propane	615.9	649.8	205.95	238.7	8409.8	306.6	
D41ave	3/21/84	1.0 propane	615.9	698.5	205.95	239.5	8564.3	310.4	

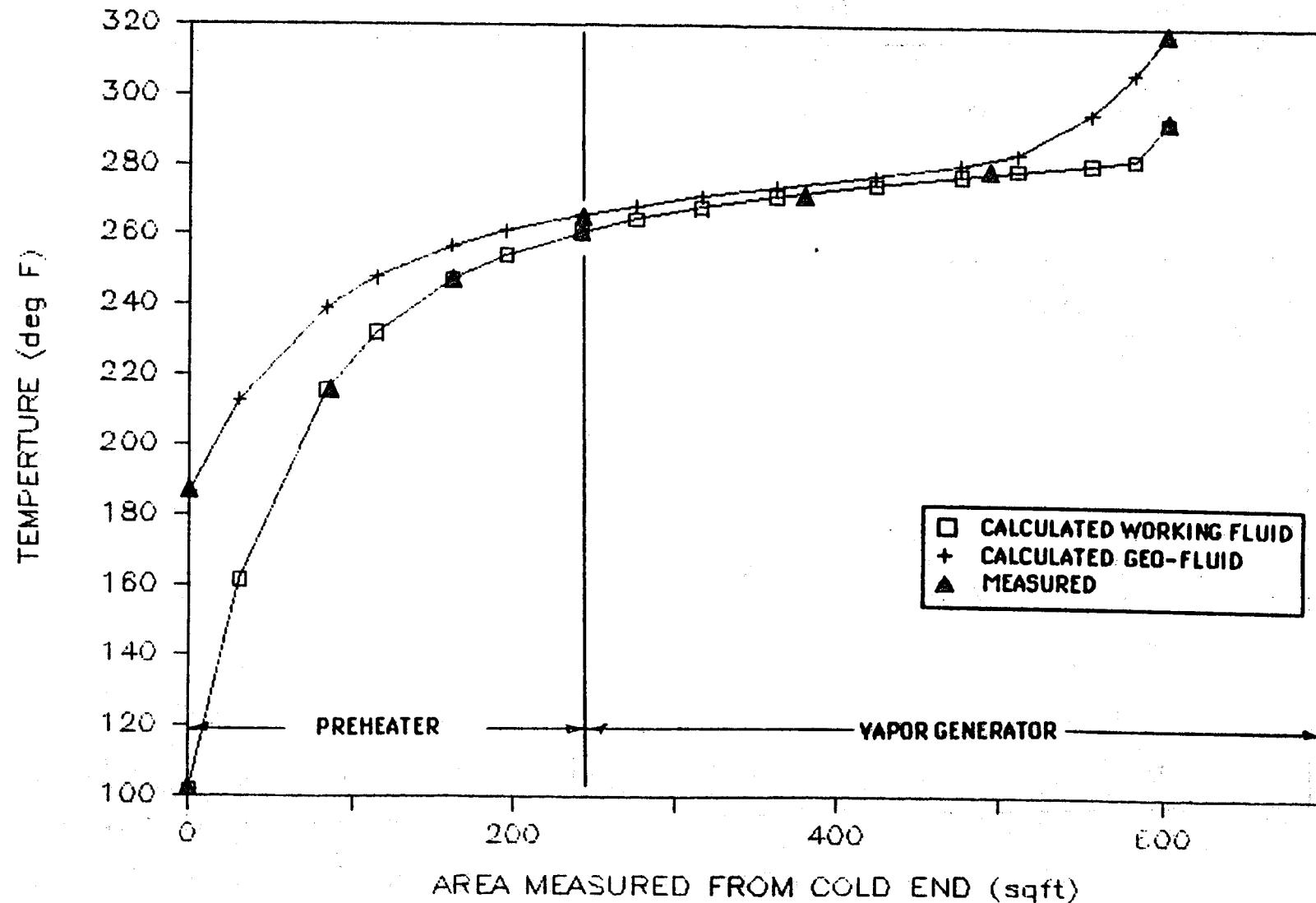
B1. SUPERCRITICAL CYCLE TEST PARAMETERS FOR  
HEATER TEMPERATURE-DISTRIBUTION PLOTS (continued)

TEST NO.	DATE	NOMINAL CHEMISTRY	WORKING FLUID				GEO-FLUID TEMP (IN)	
			CRITICAL PRESS (PSIA)	HEATER PRESS (PSIA)	Critical Temp (F)	Heater Temp (OUT) (F)		
E13ave	5/15/84	.95 propane, .05 isopentane	622.5	599.0	213.4	231.0	7628.9	308.9
E28ave	5/11/84	.95 propane, .05 isopentane	622.5	647.5	213.4	241.5	8149.9	314.1
E28hav	5/11/84	.95 propane, .05 isopentane	622.5	647.5	213.4	241.2	4055.5	313.8
E28Bav	5/11/84	.95 propane, .05 isopentane	622.5	647.5	213.4	242.5	6106.9	313.6
E33ave	5/16/84	.95 propane, .05 isopentane	622.5	647.5	213.4	249.4	8125.1	313.5
E41ave	5/30/84	.95 propane, .05 isopentane	622.5	698.2	213.4	249.7	8517.7	310.3
F15ave	6/7/84	.90 propane, .10 isopentane	628.9	599.2	220.9	241.5	7566.7	308.7
F28hav	6/5/84	.90 propane, .10 isopentane	628.9	645.7	220.9	250.1	4024.6	311.9
F28Bav	6/5/84	.90 propane, .10 isopentane	628.9	646.0	220.9	249.4	6038.6	311.1
F28ave	6/5/84	.90 propane, .10 isopentane	628.9	646.0	220.9	249.2	8013.0	311.2
F33ave	6/6/84	.90 propane, .10 isopentane	628.9	646.4	220.9	260.9	8424.9	309.7
F41ave	6/14/84	.90 propane, .10 isopentane	628.9	697.5	220.9	260.1	8475.2	312.2

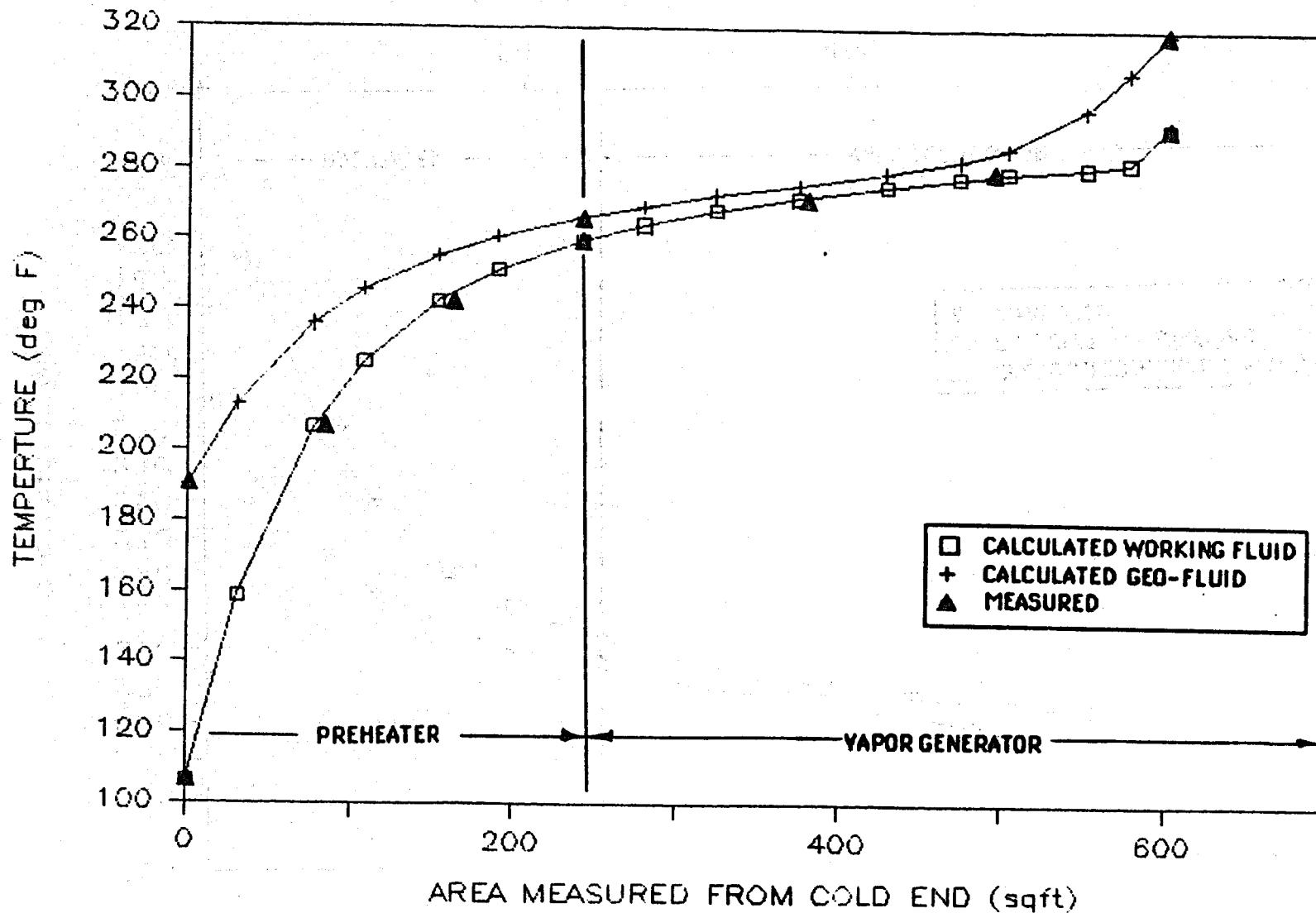
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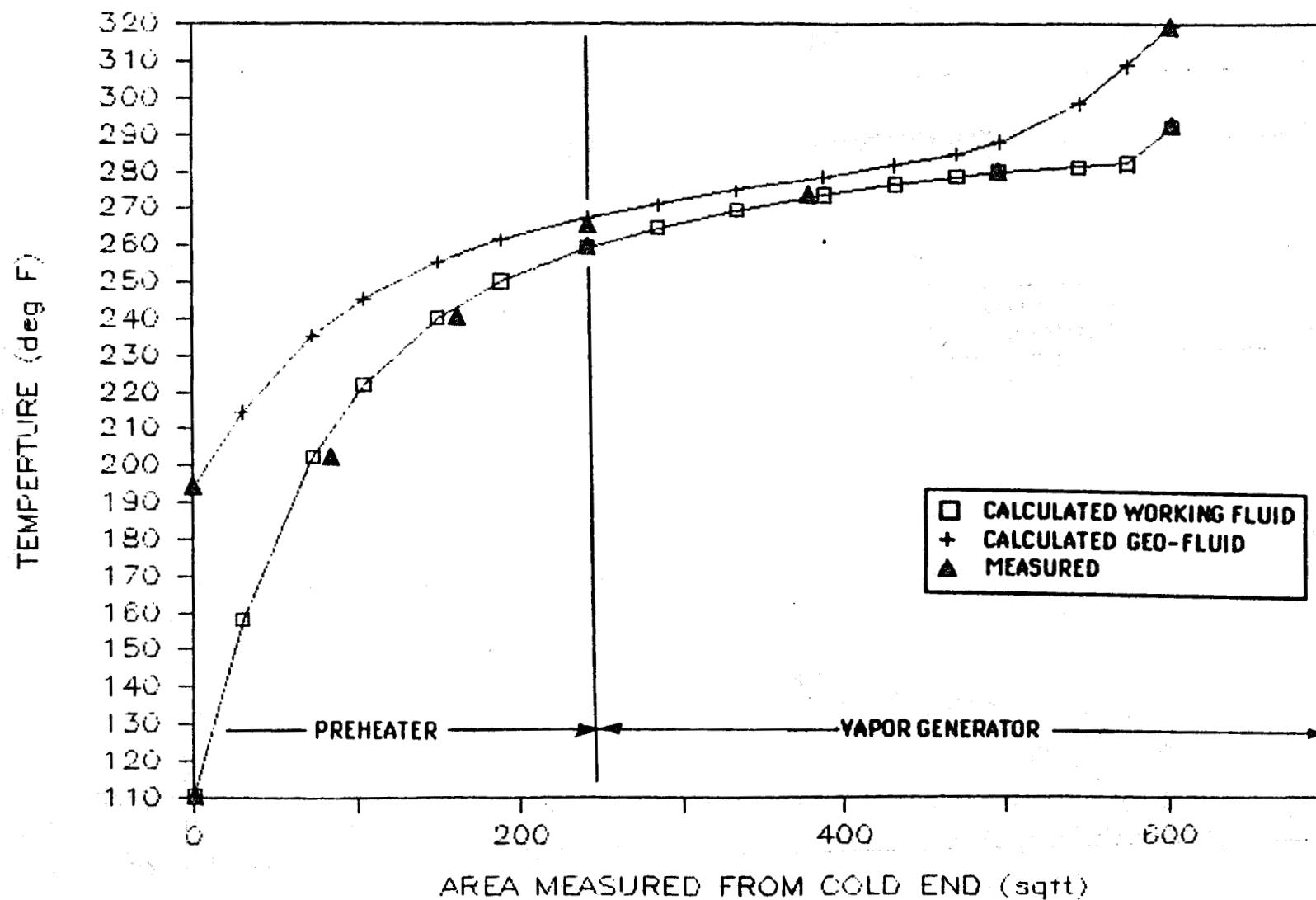
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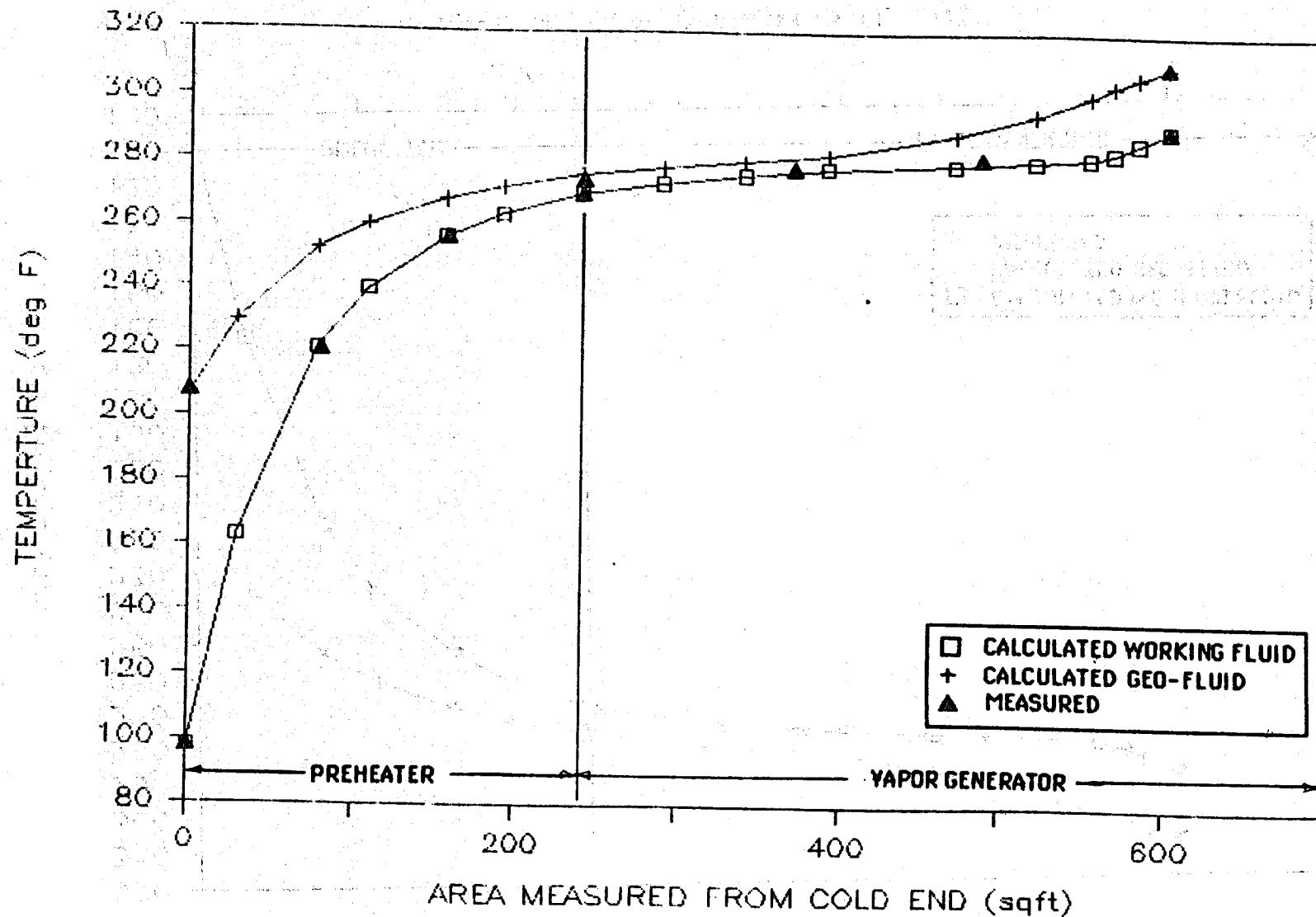
A28-2



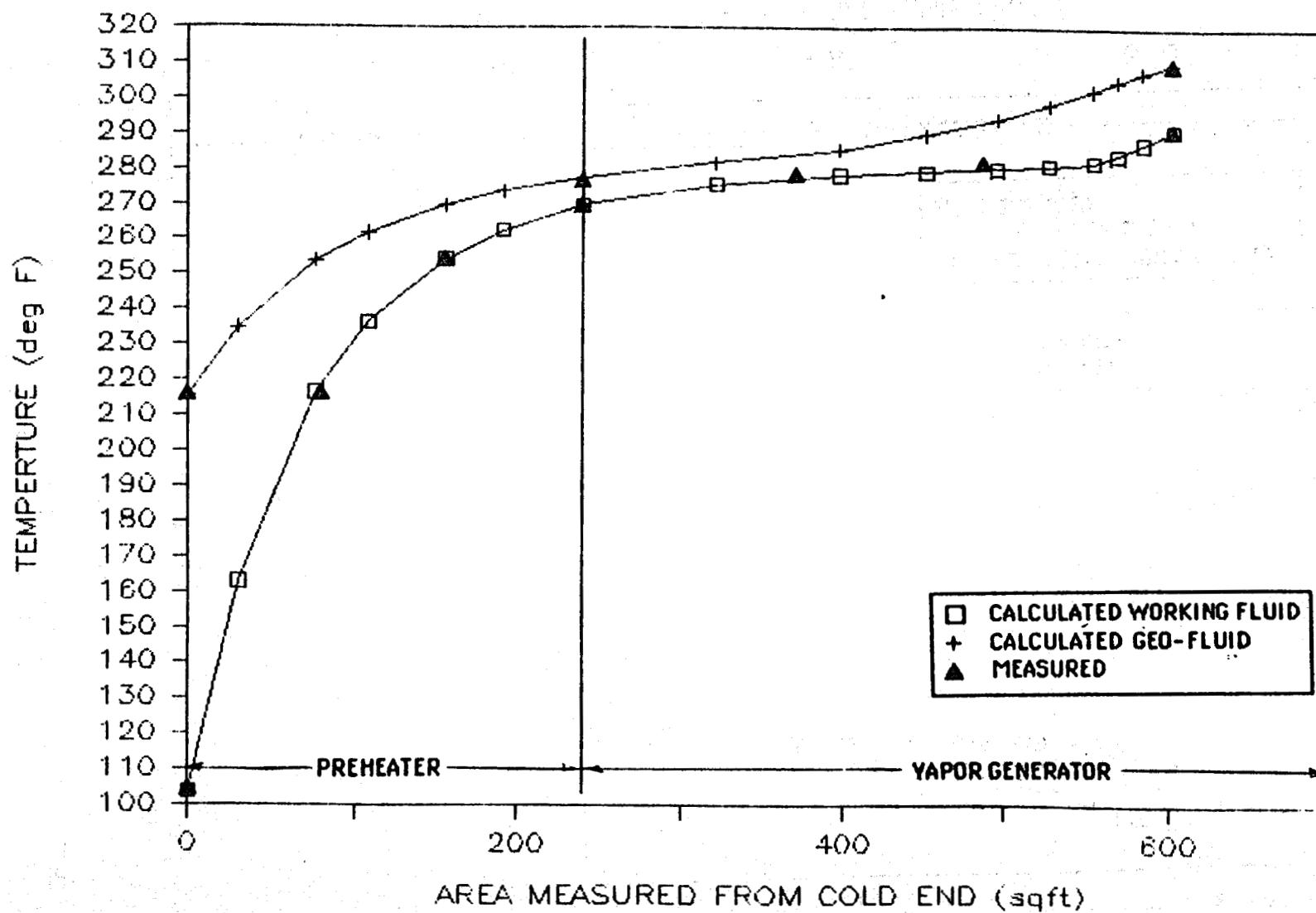
A28-3



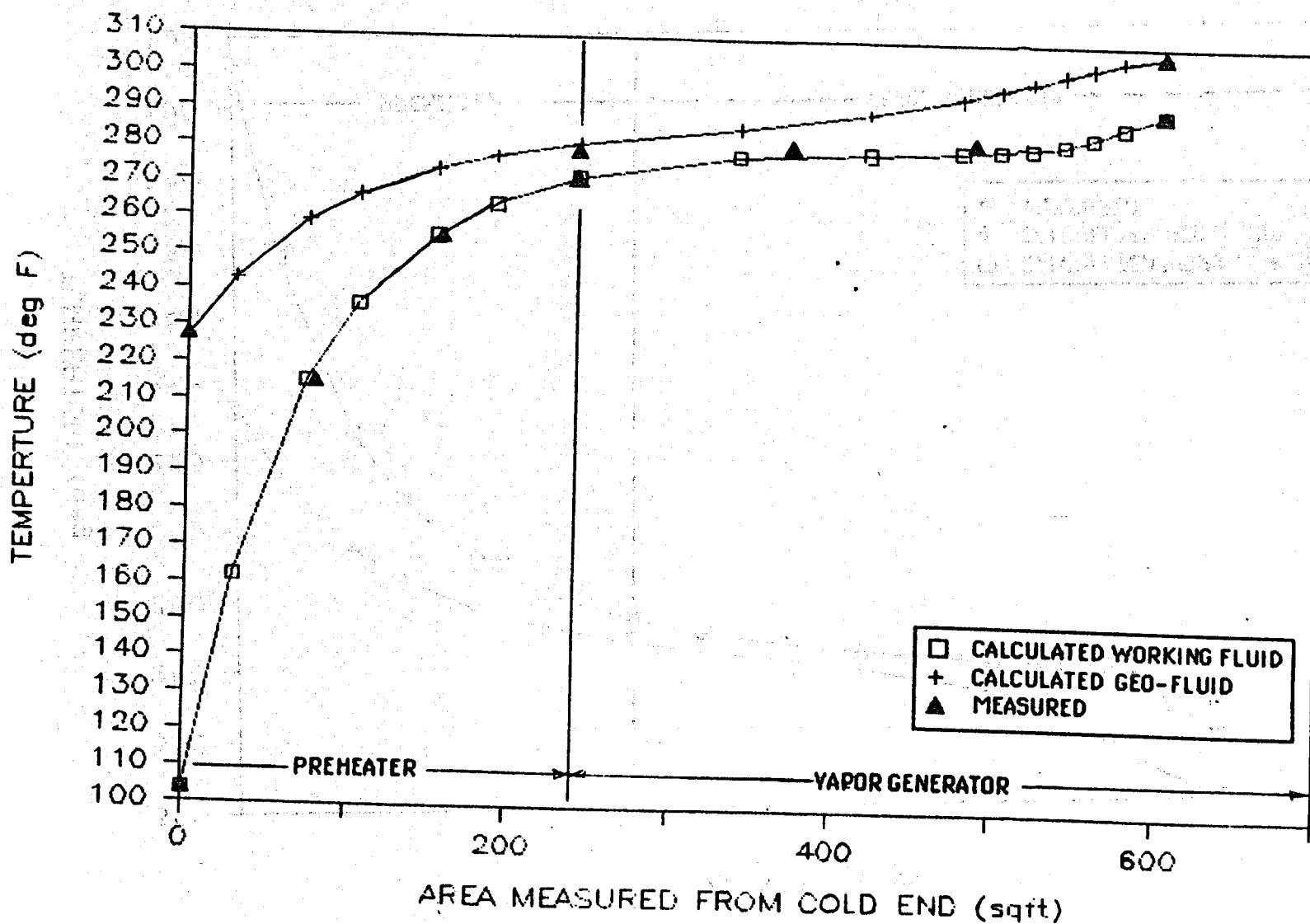
A28Aav



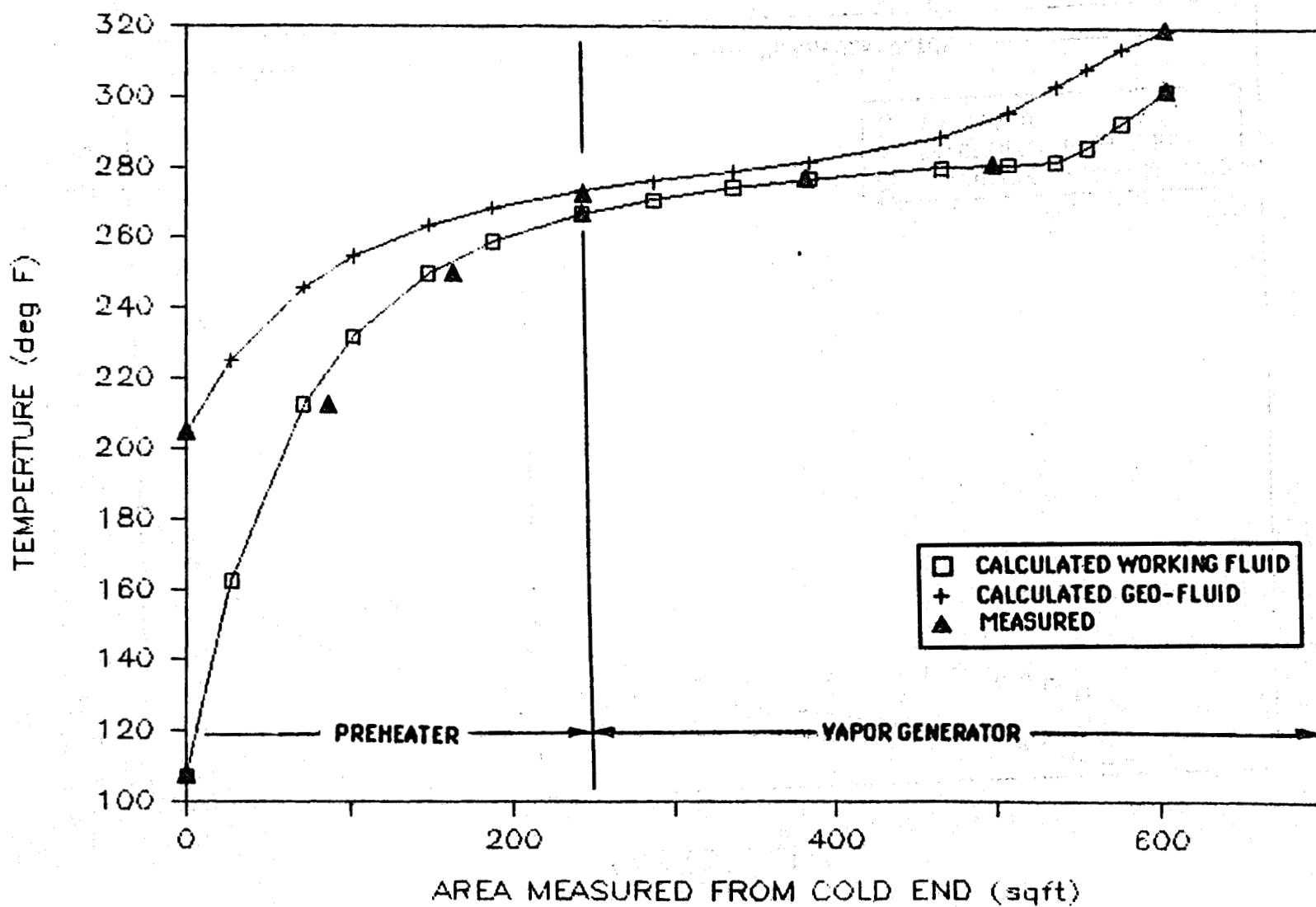
A28Bav



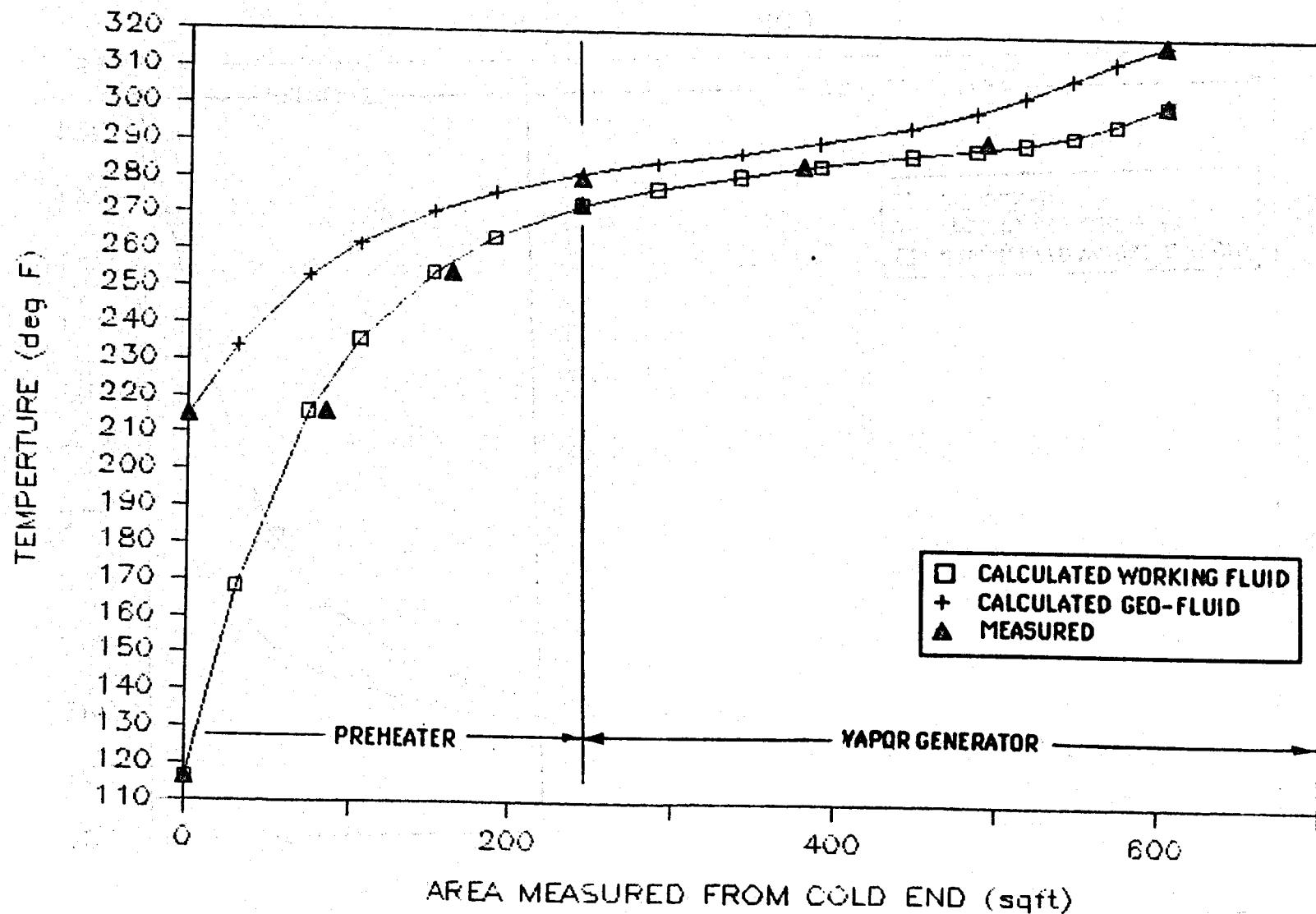
A28Cav



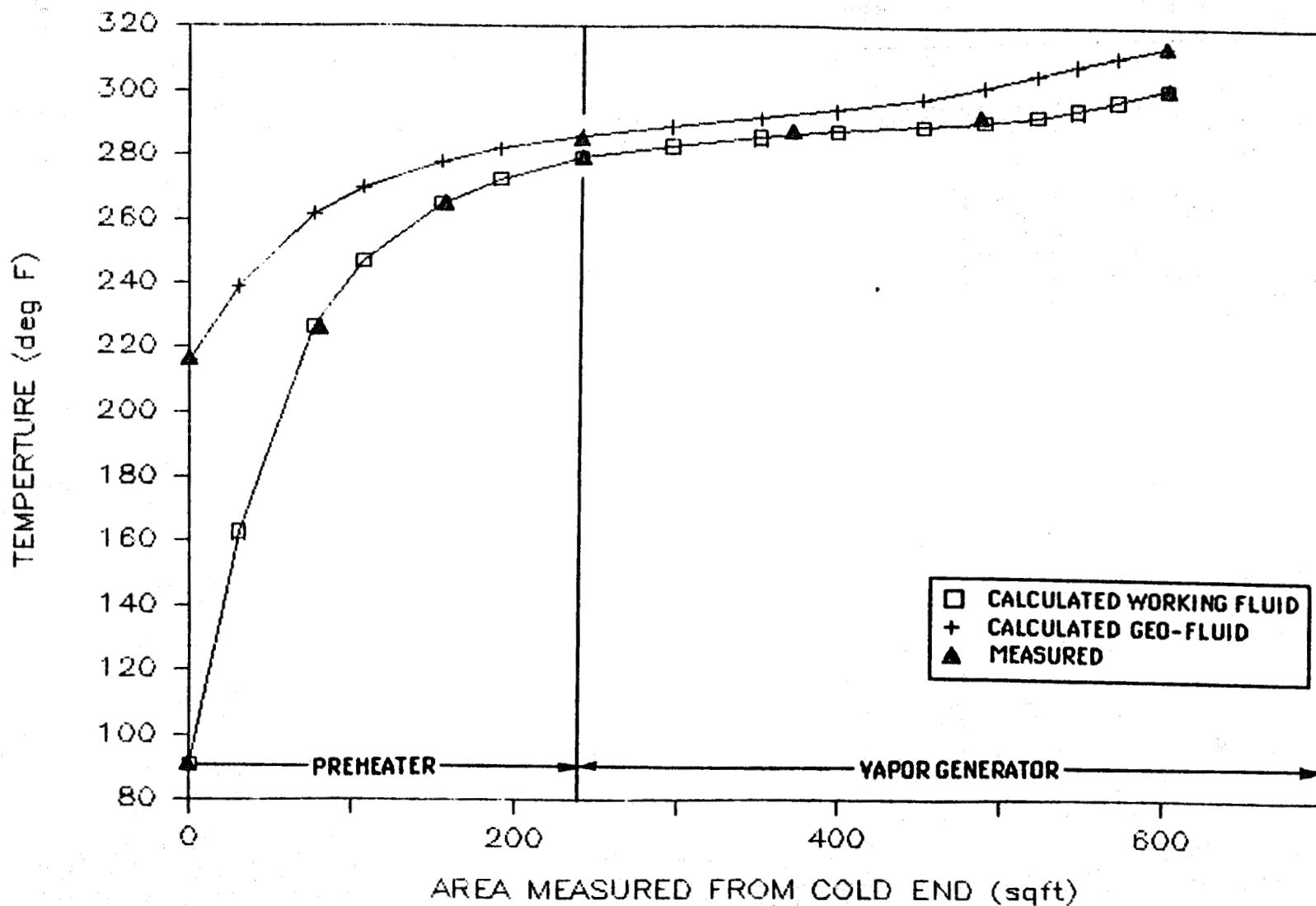
A33ave



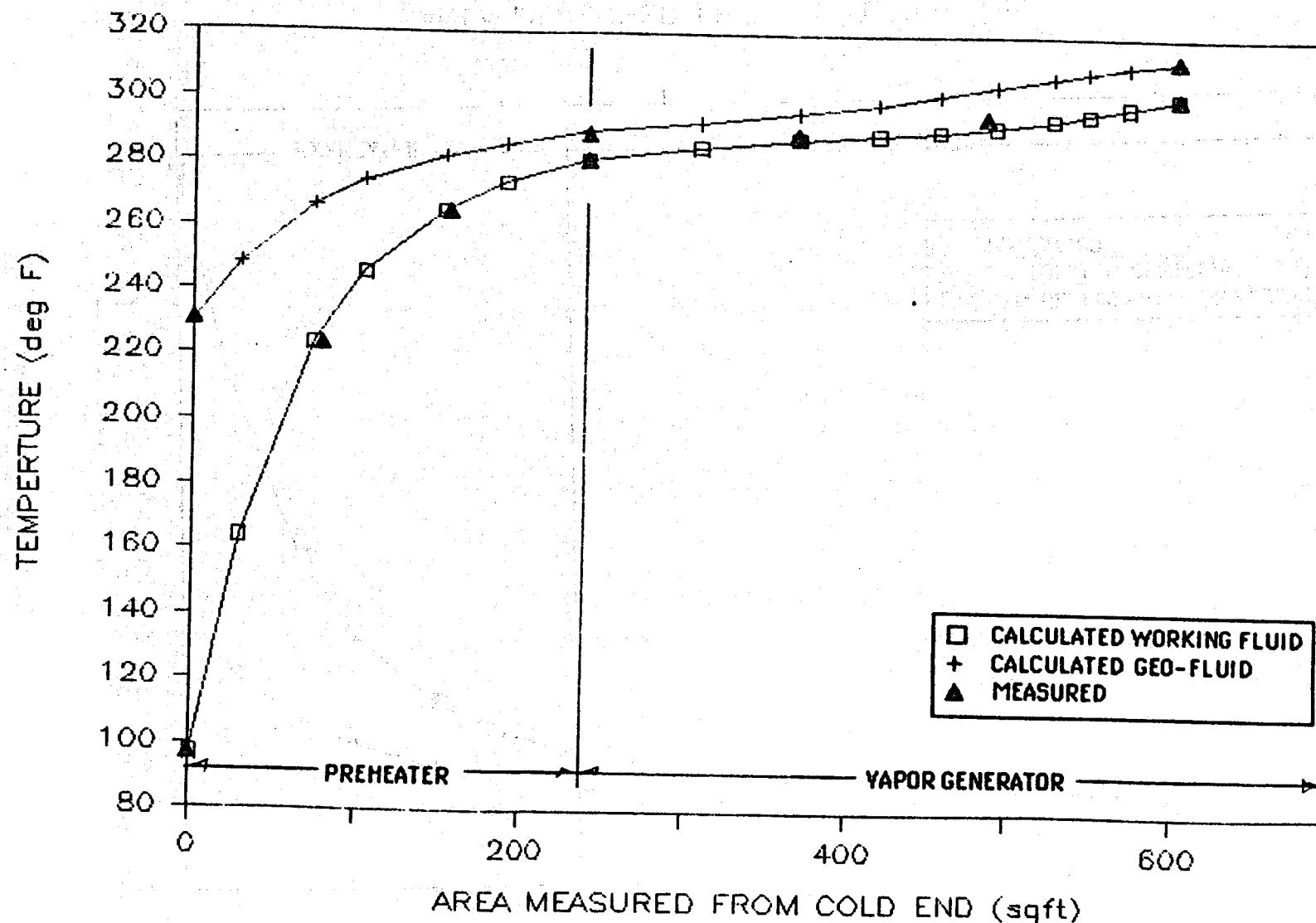
A41 Day



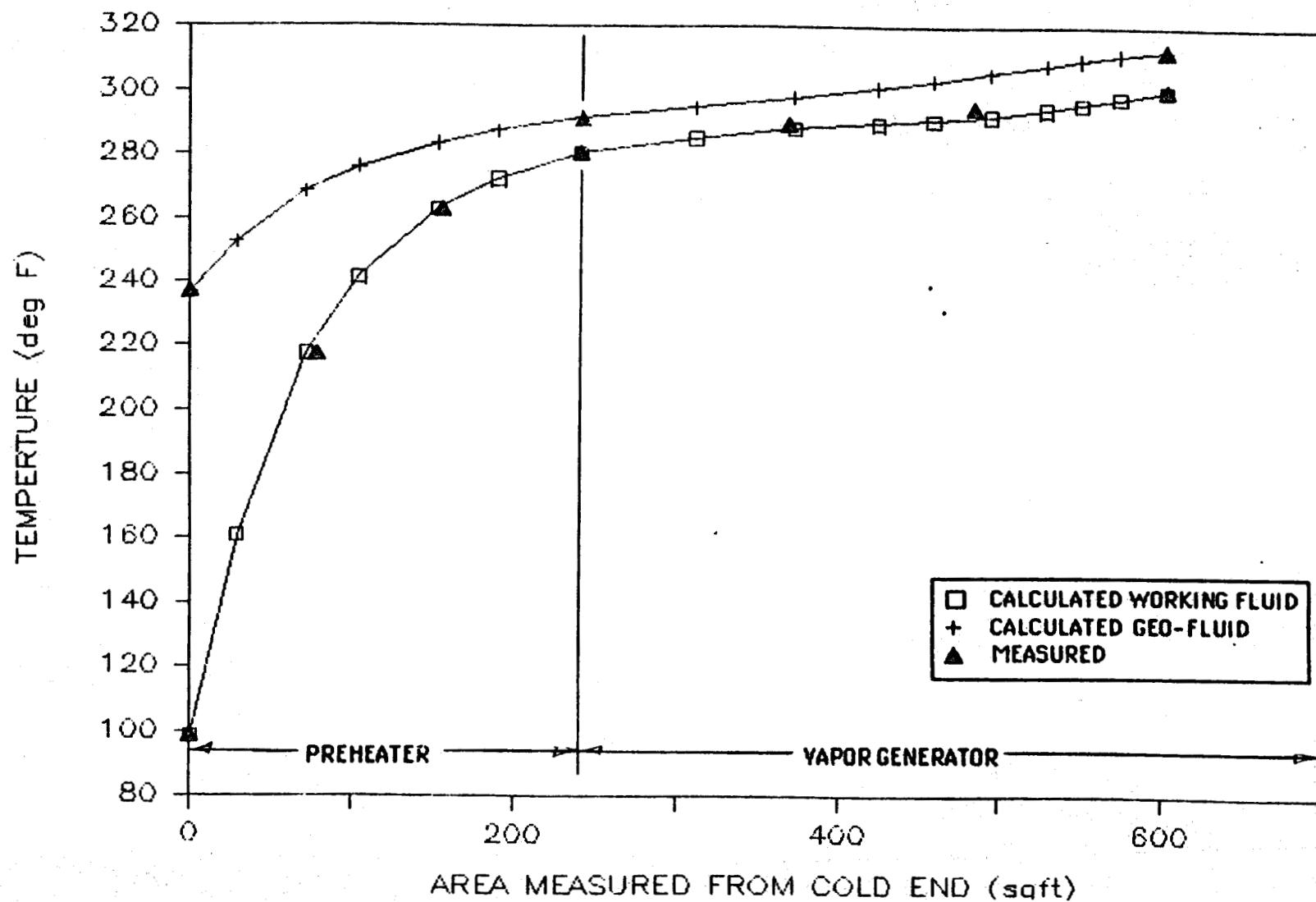
# RA41Aav



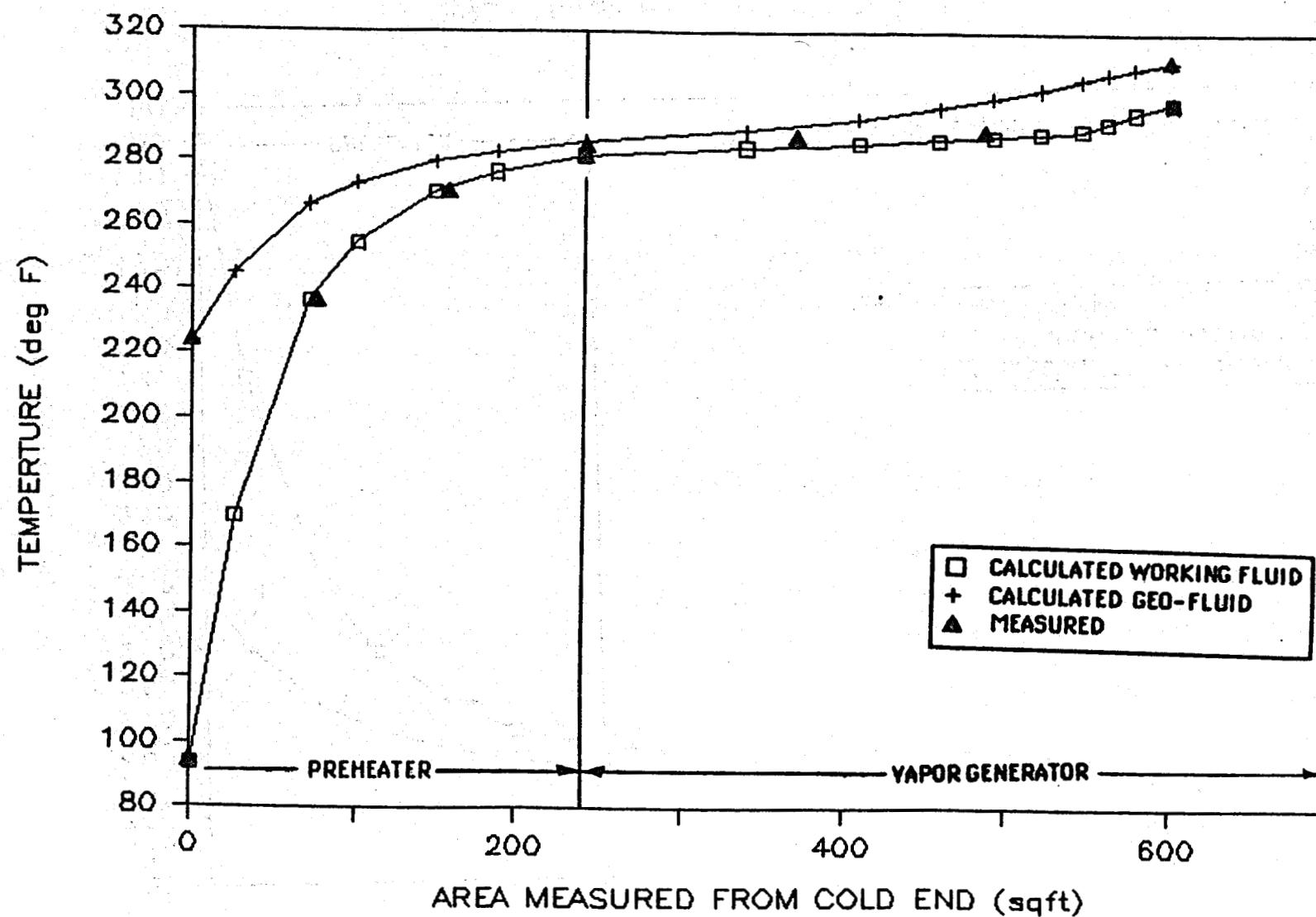
RA41 Bav



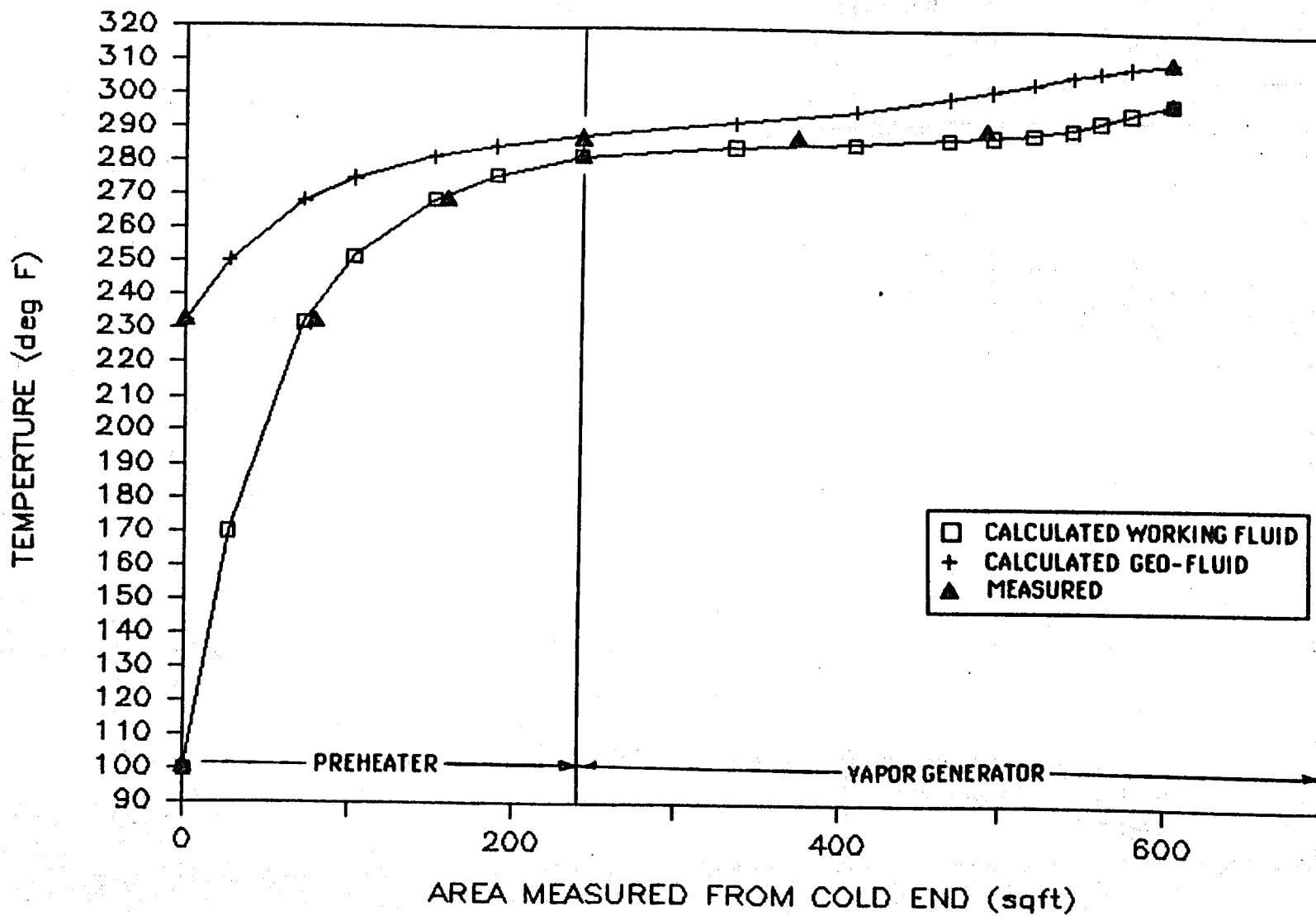
# RA41 Cav



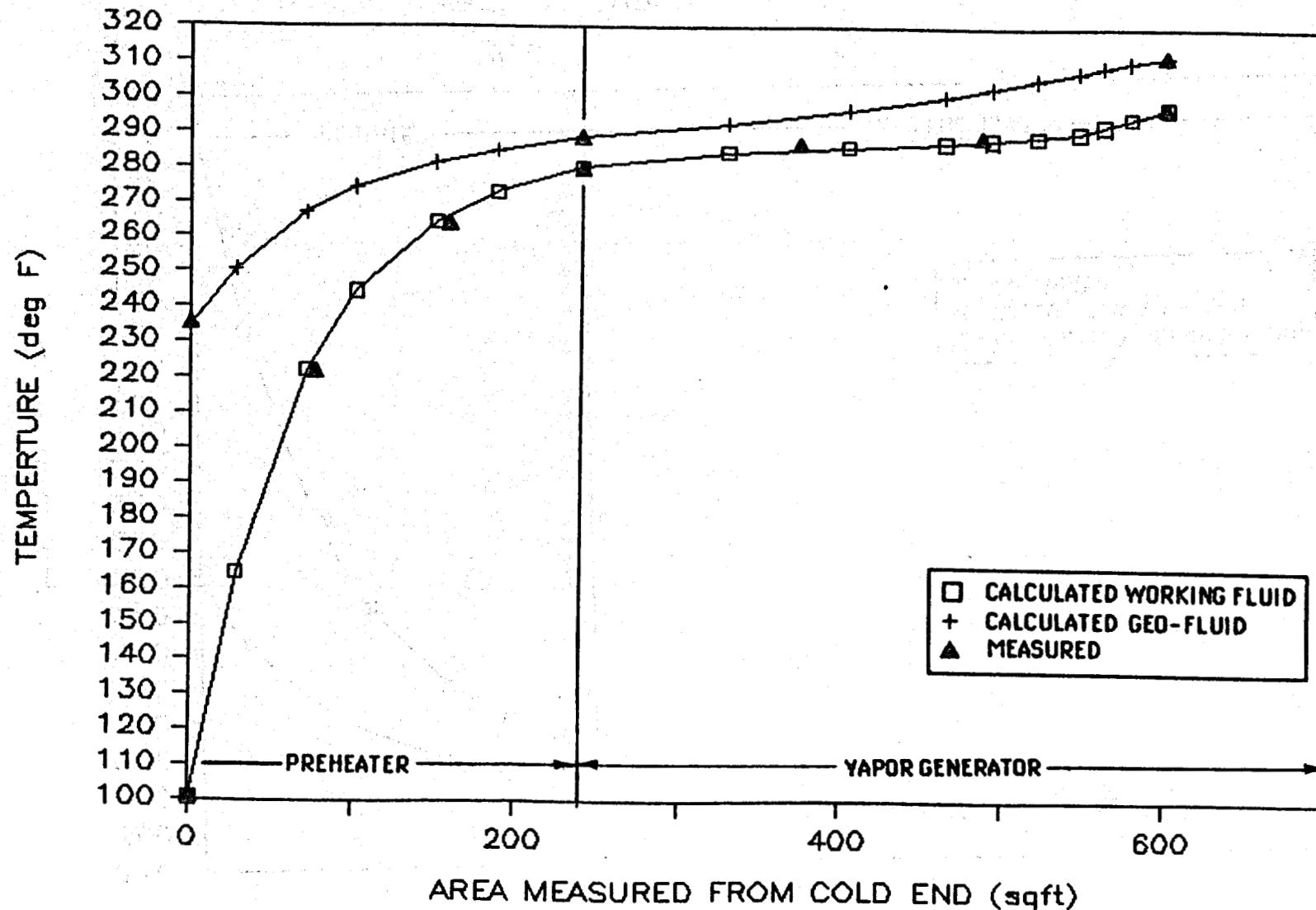
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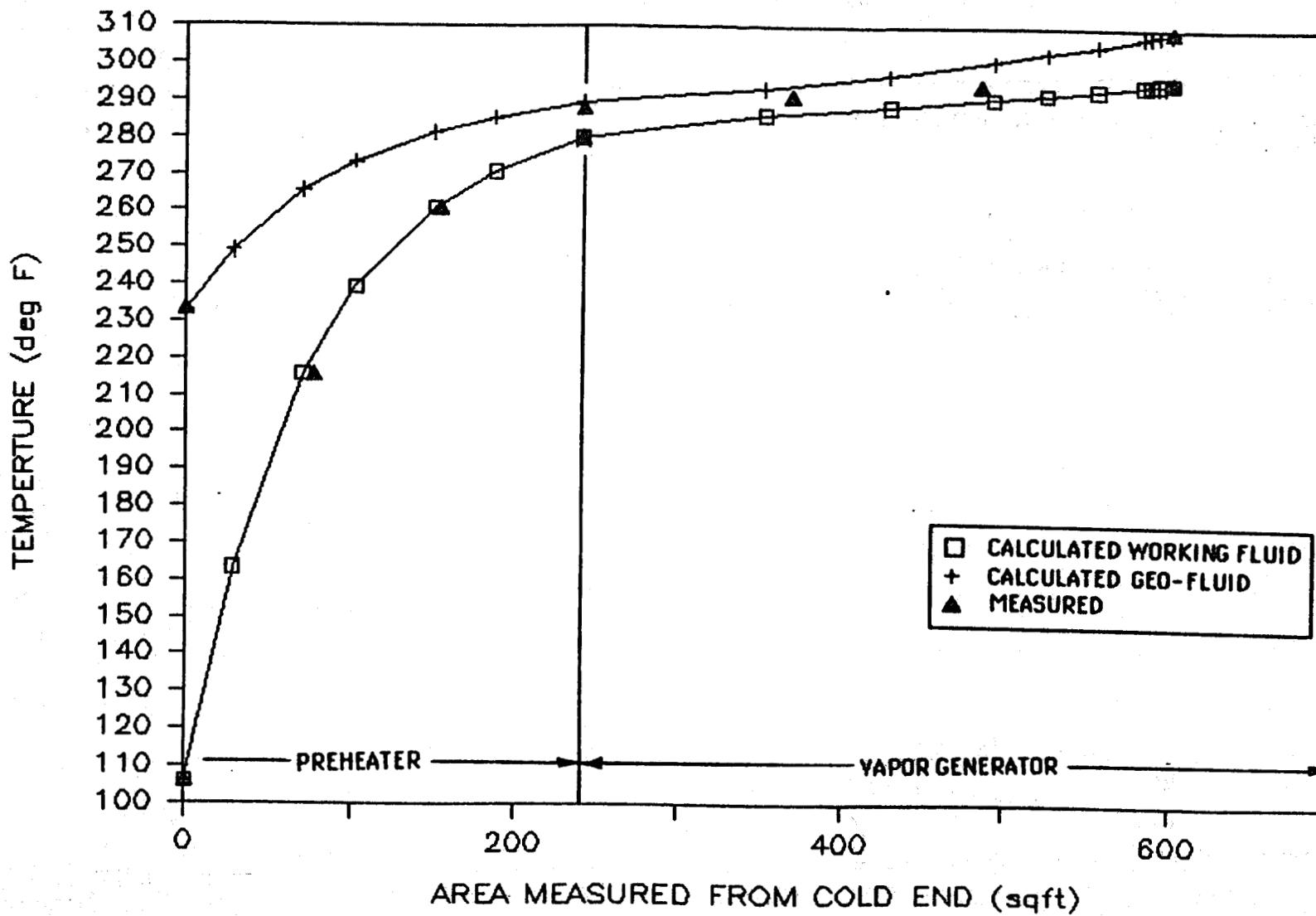


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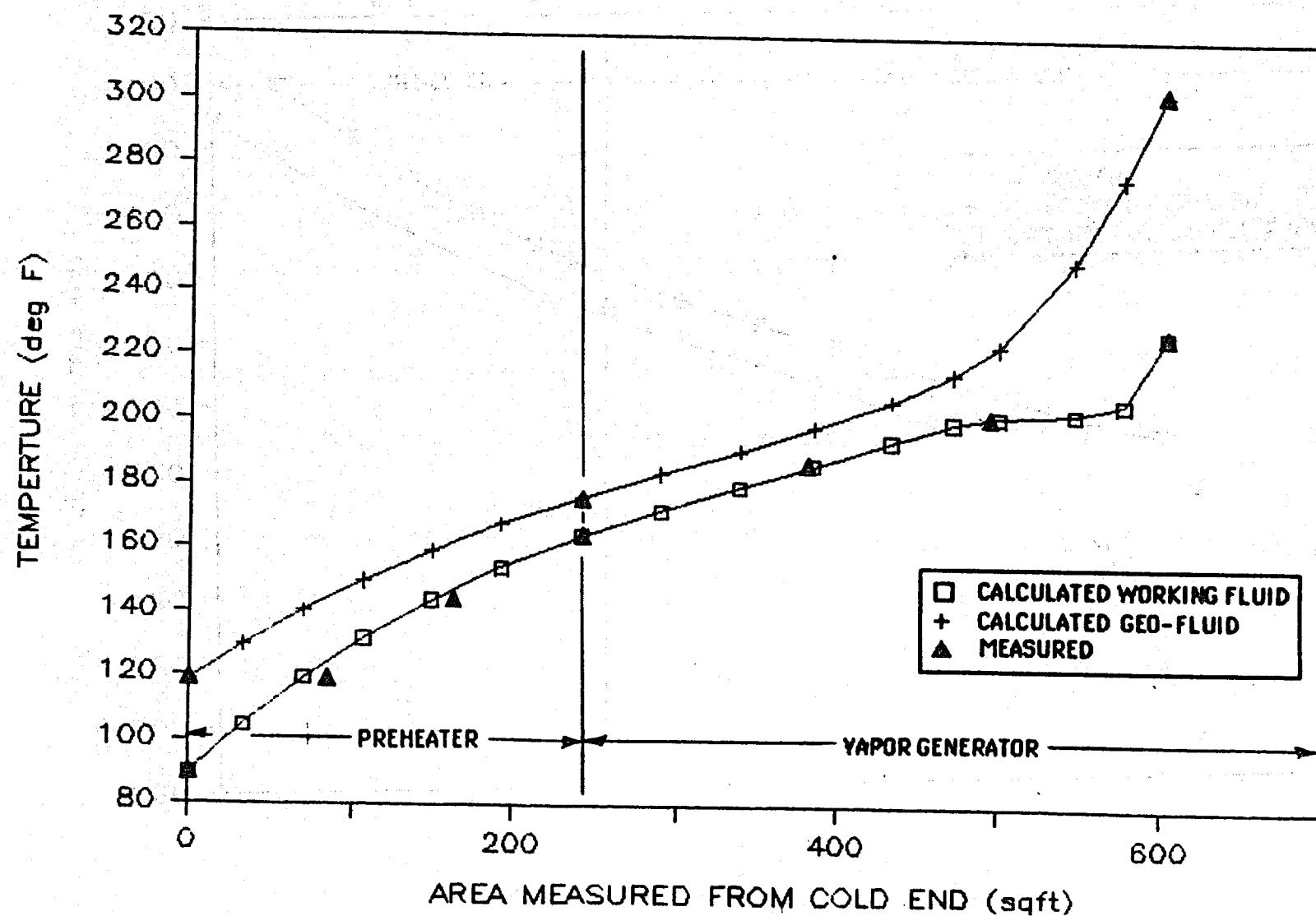


C113AV

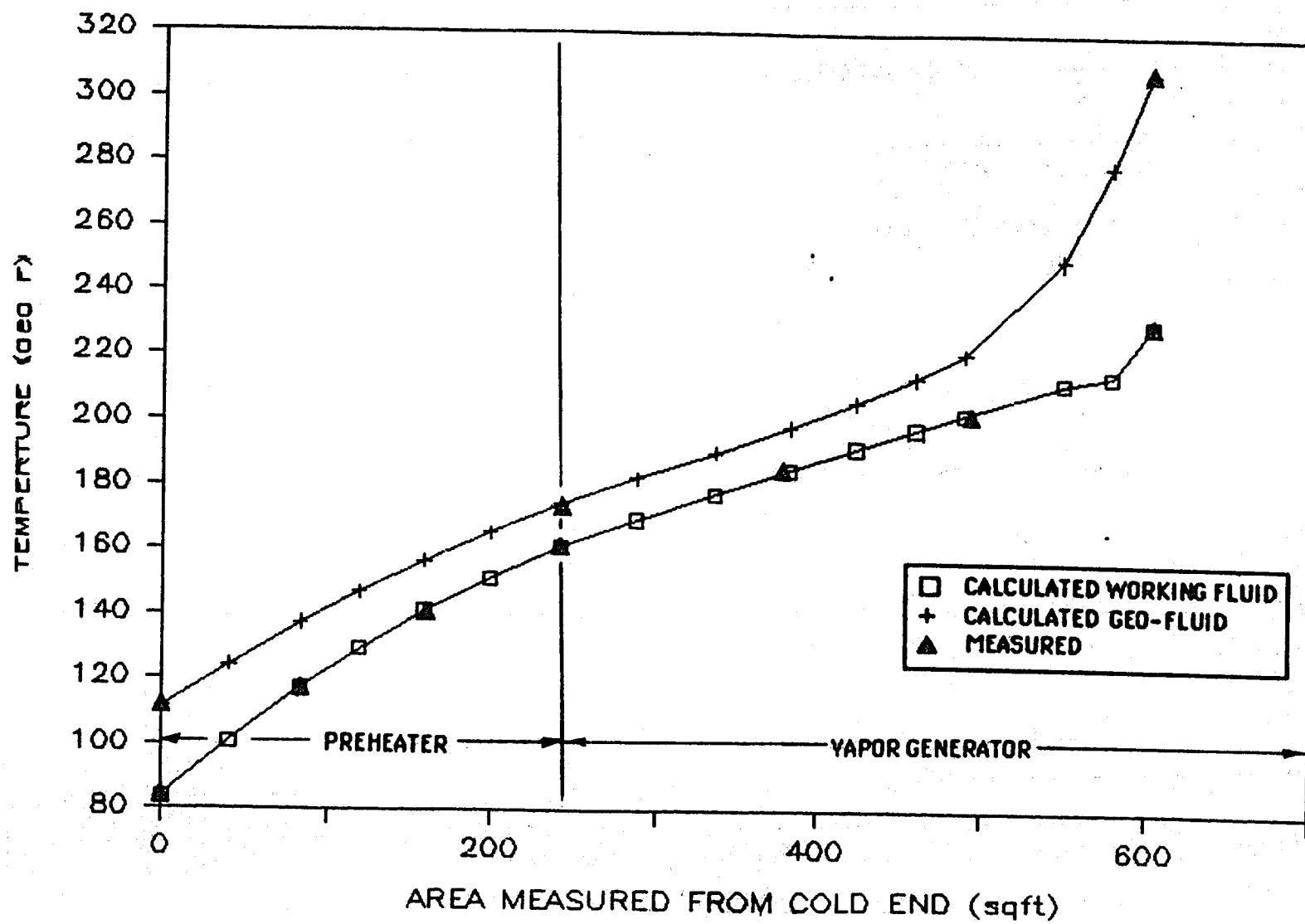
B-20



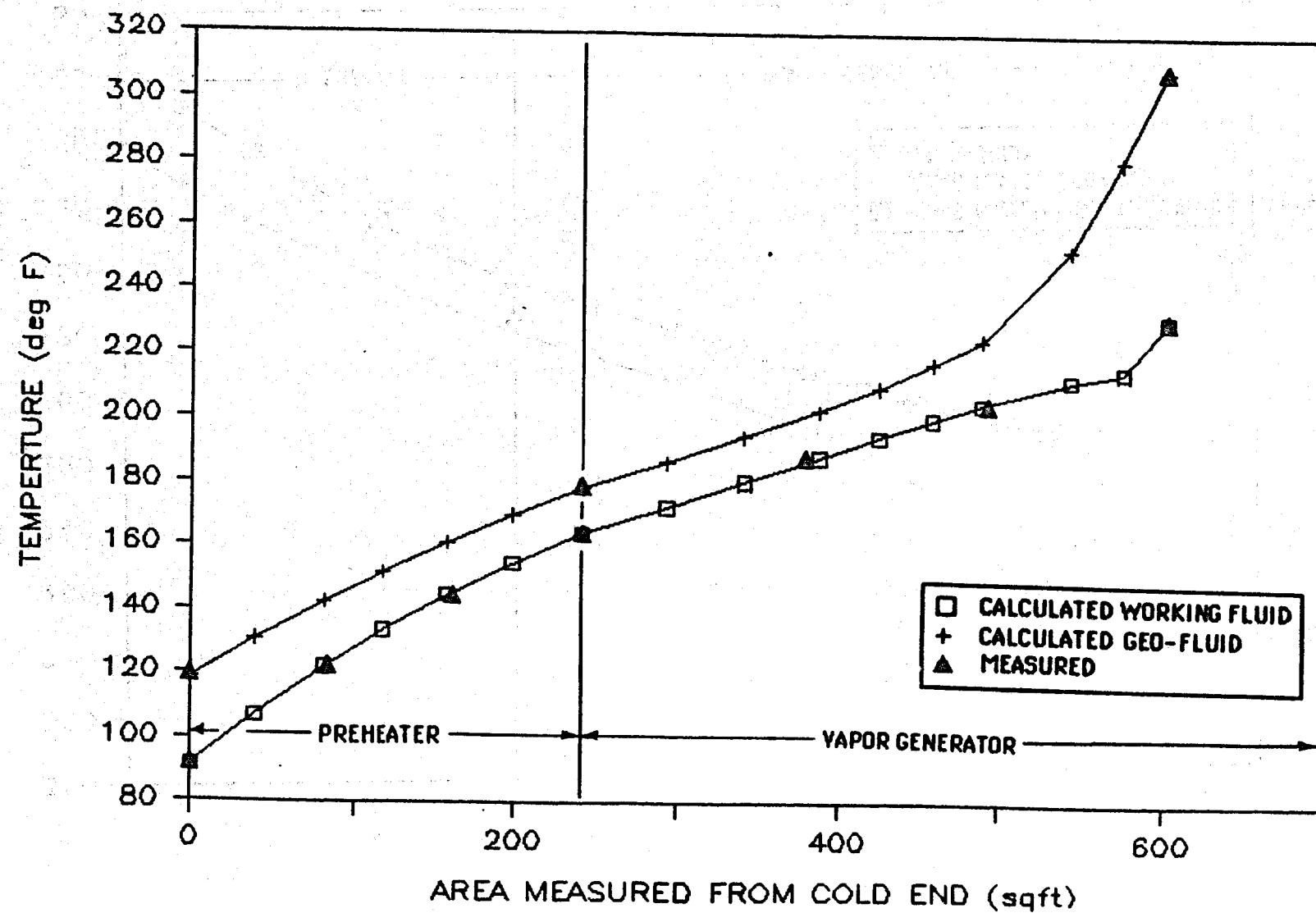
D15ave



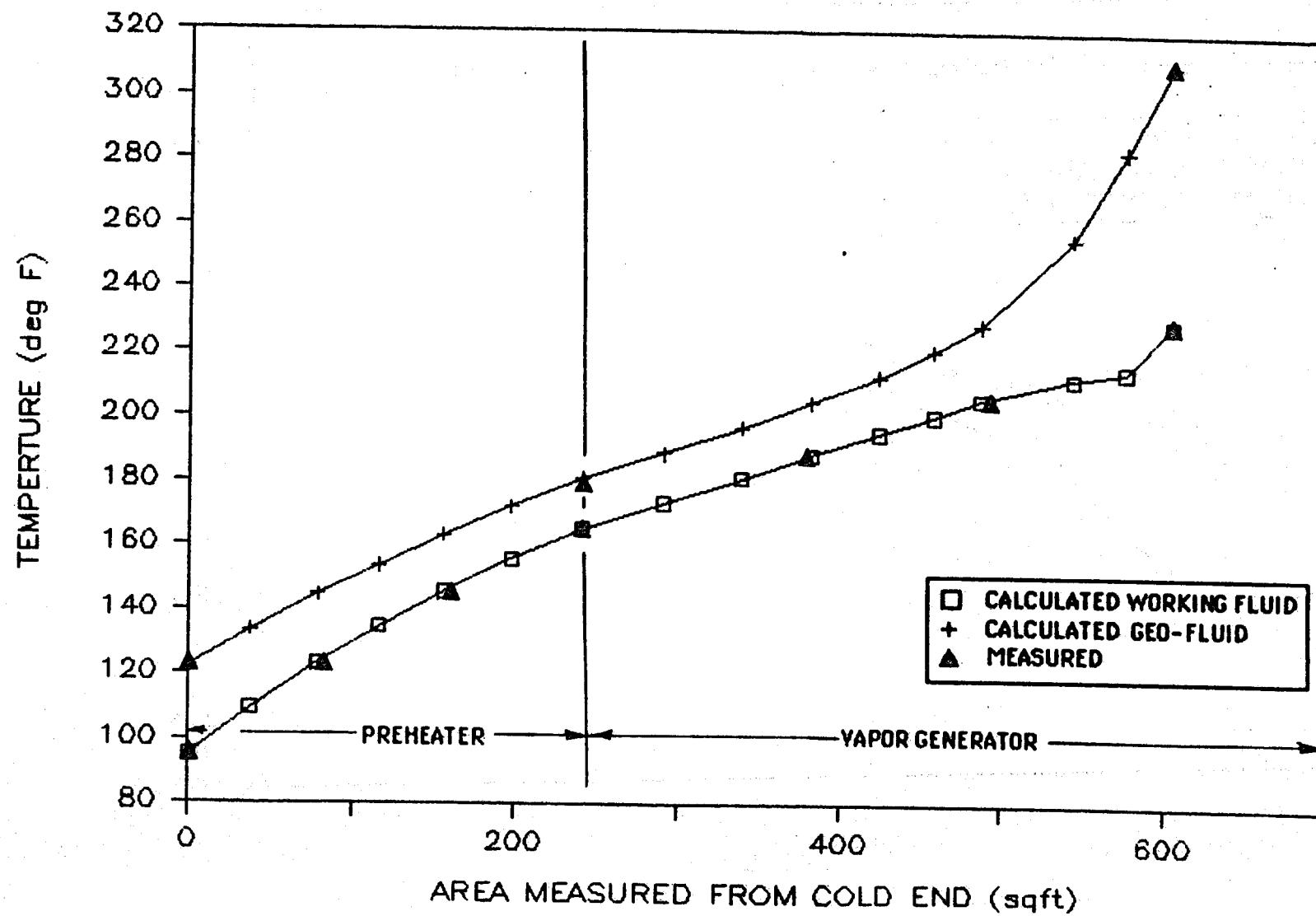
D28rAa



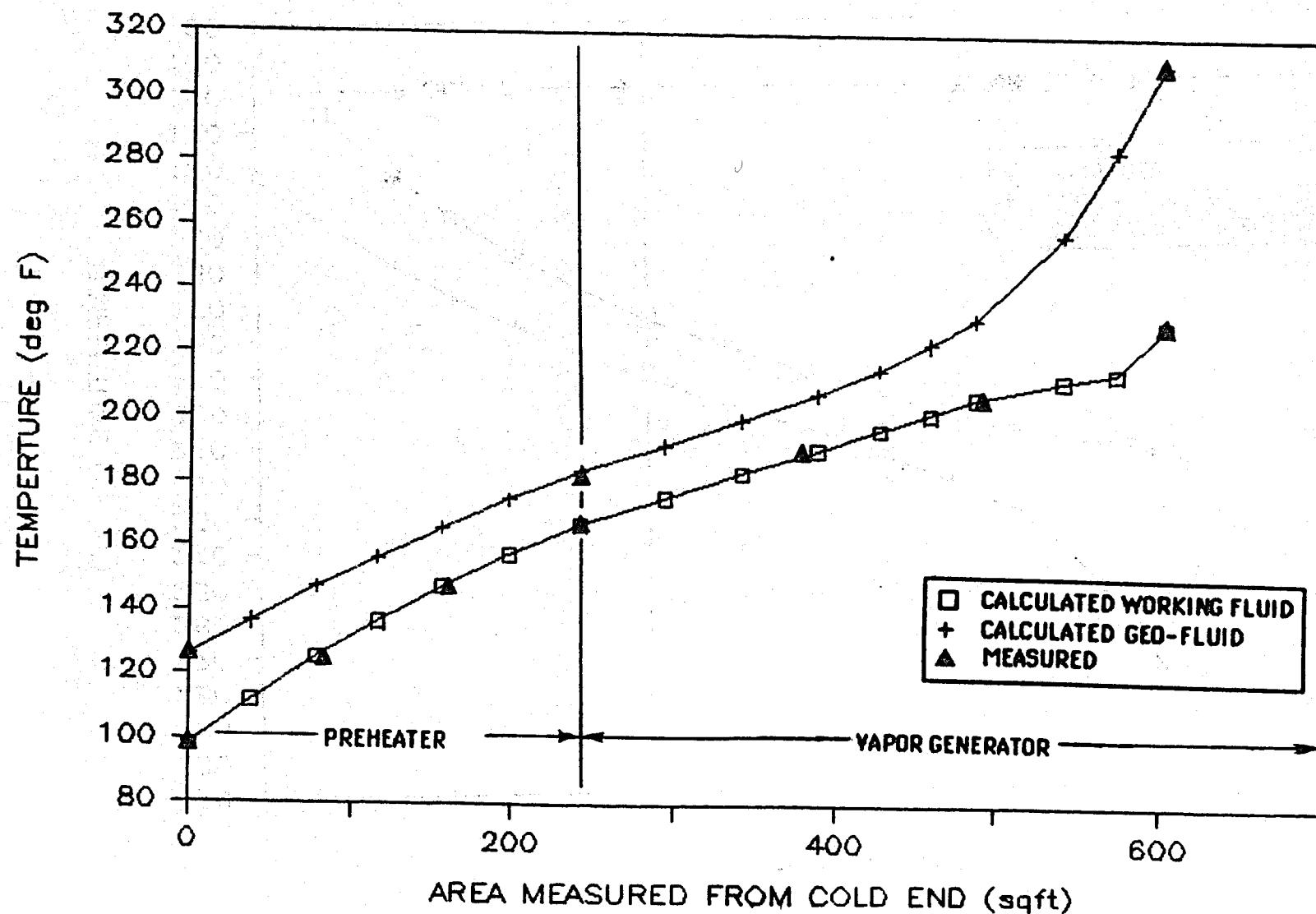
D28rBa



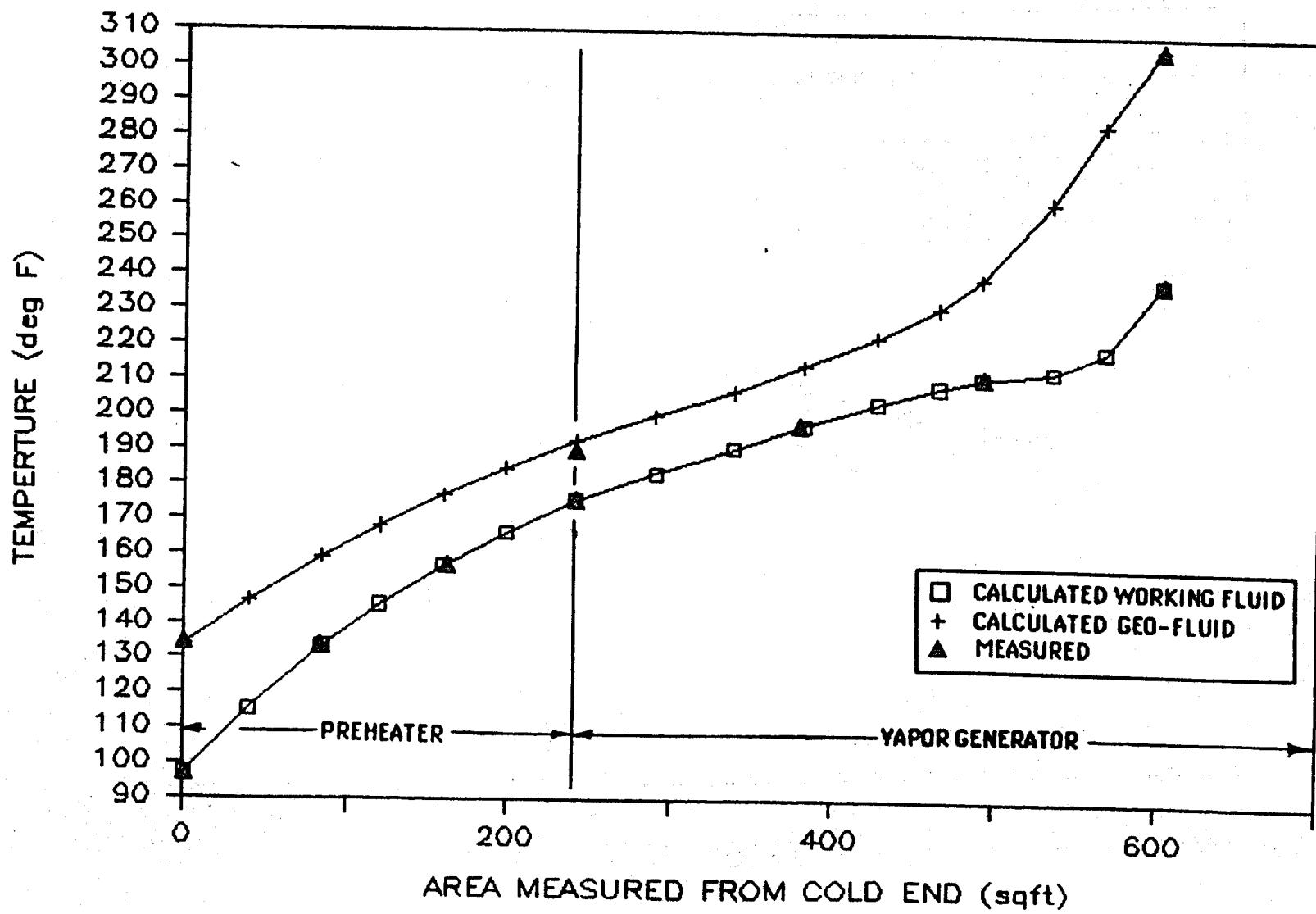
D28rCa



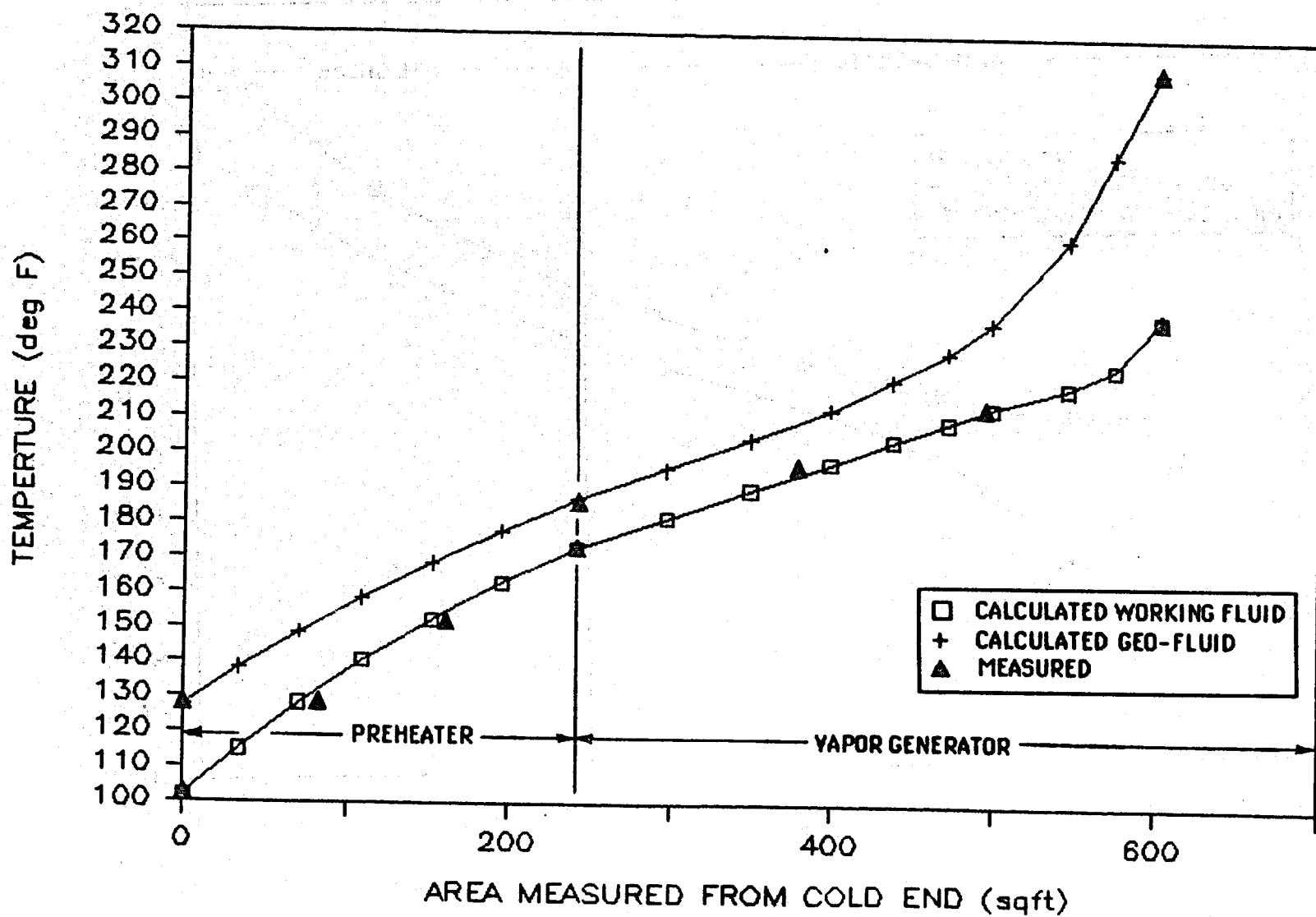
D28rxa



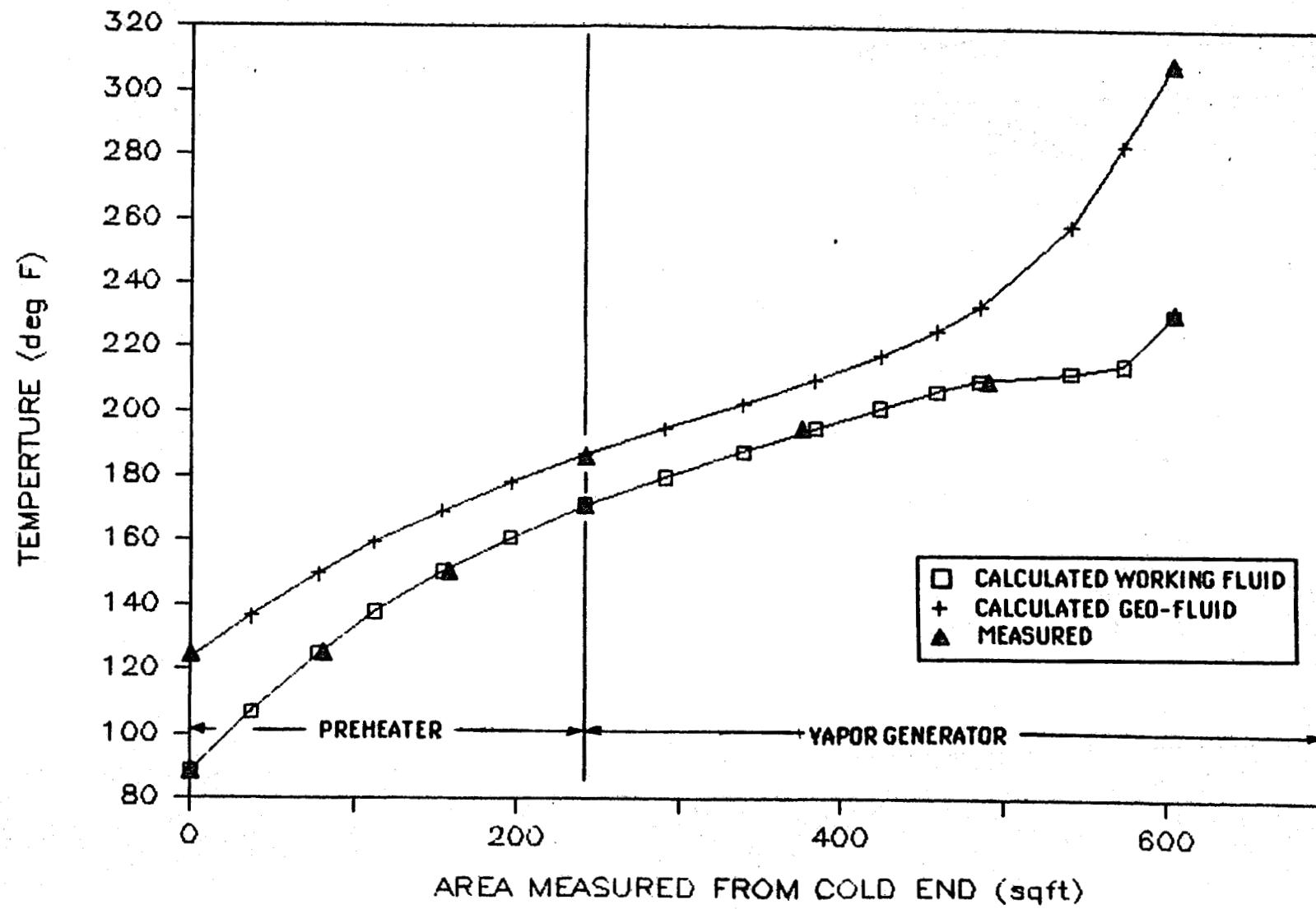
D33ave



D41 ave

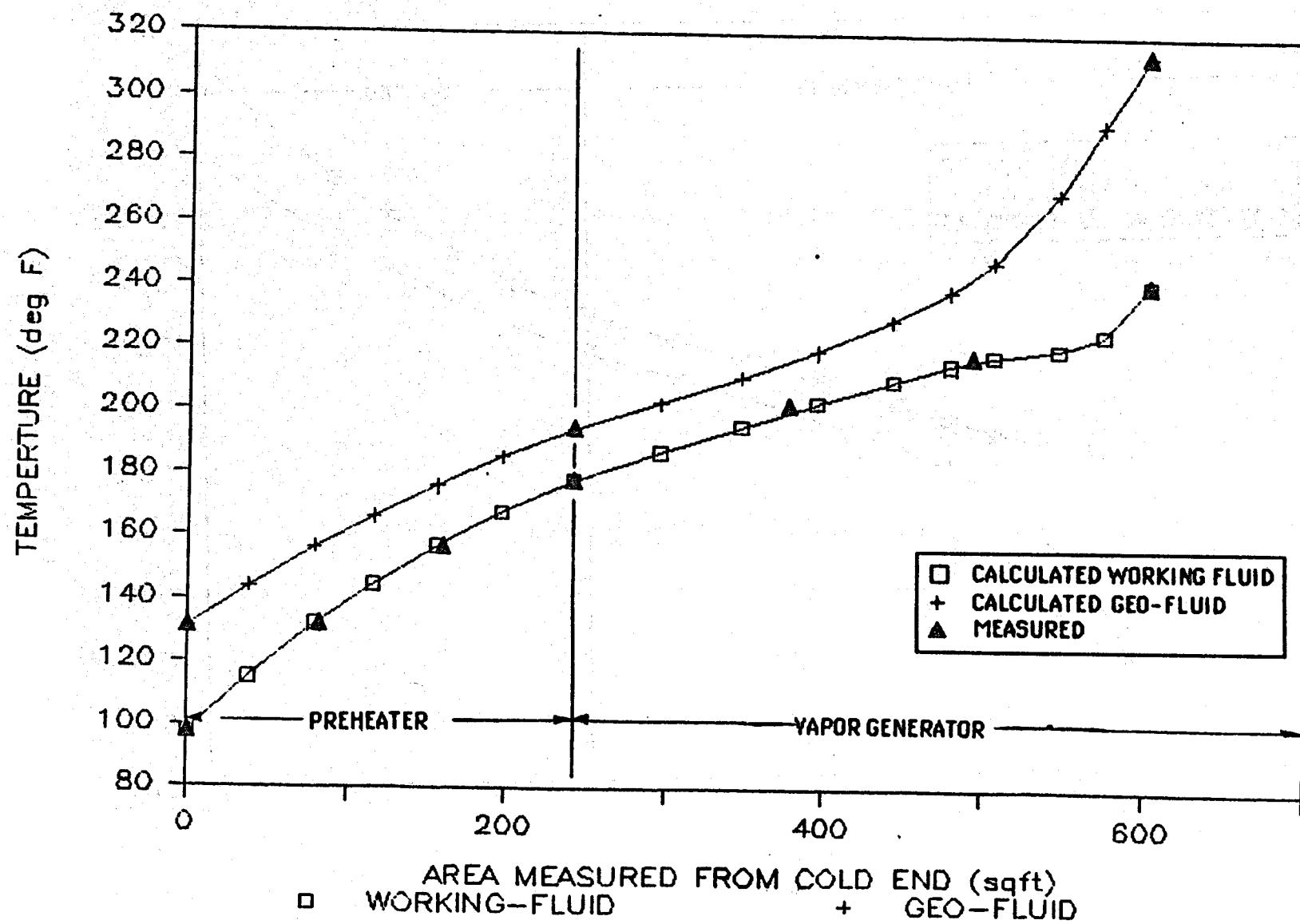


E15ave

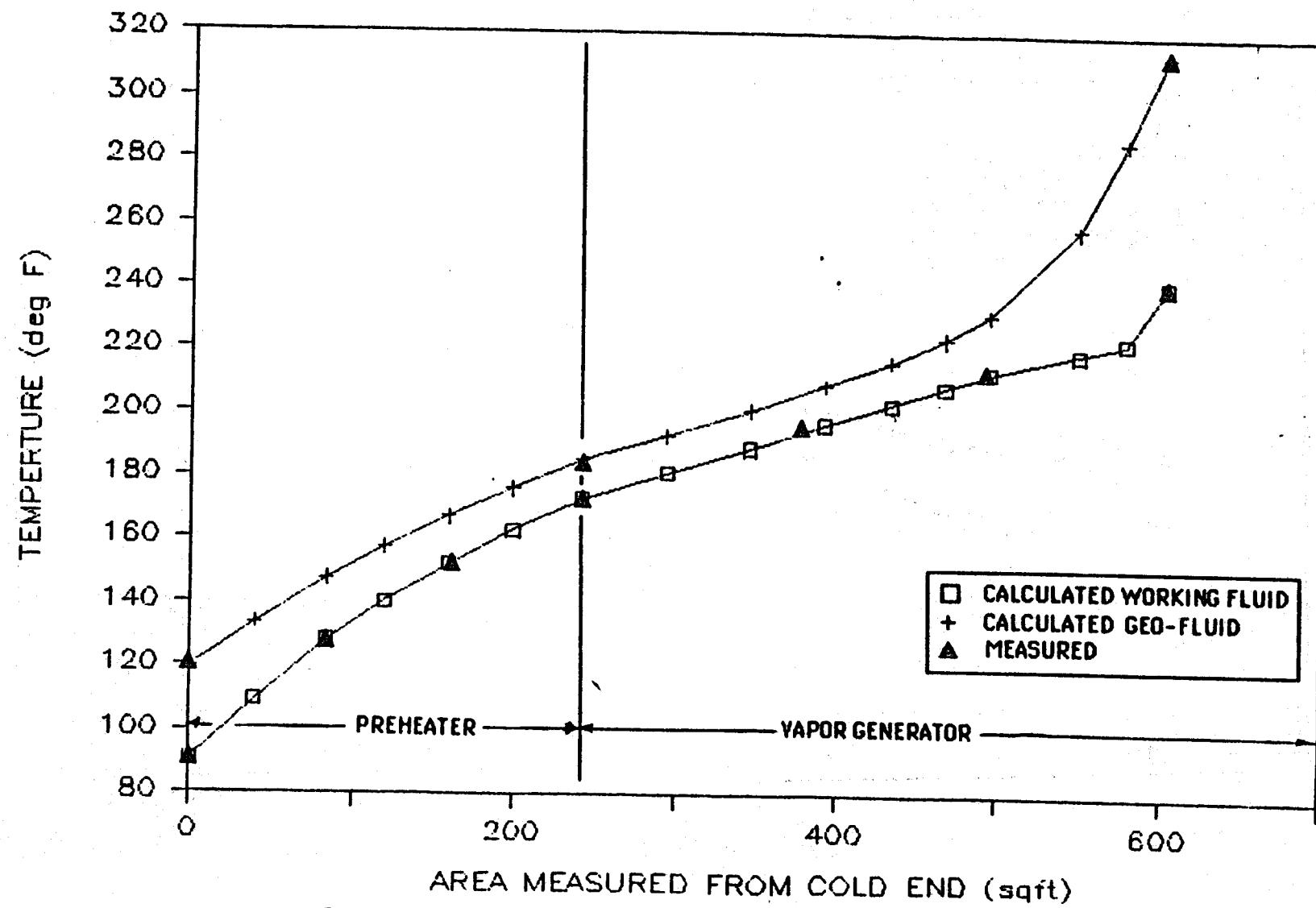


E28ave

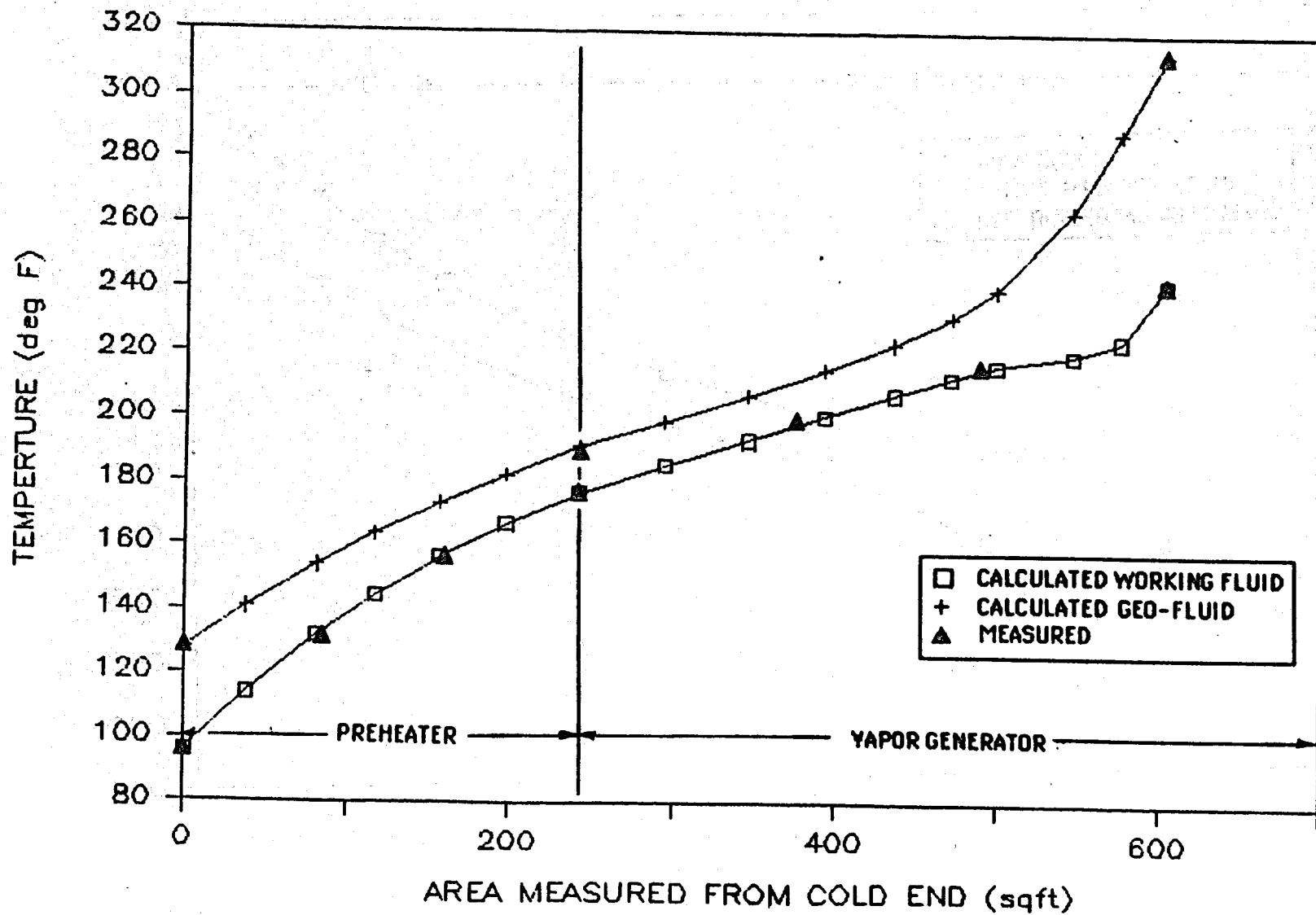
62-8



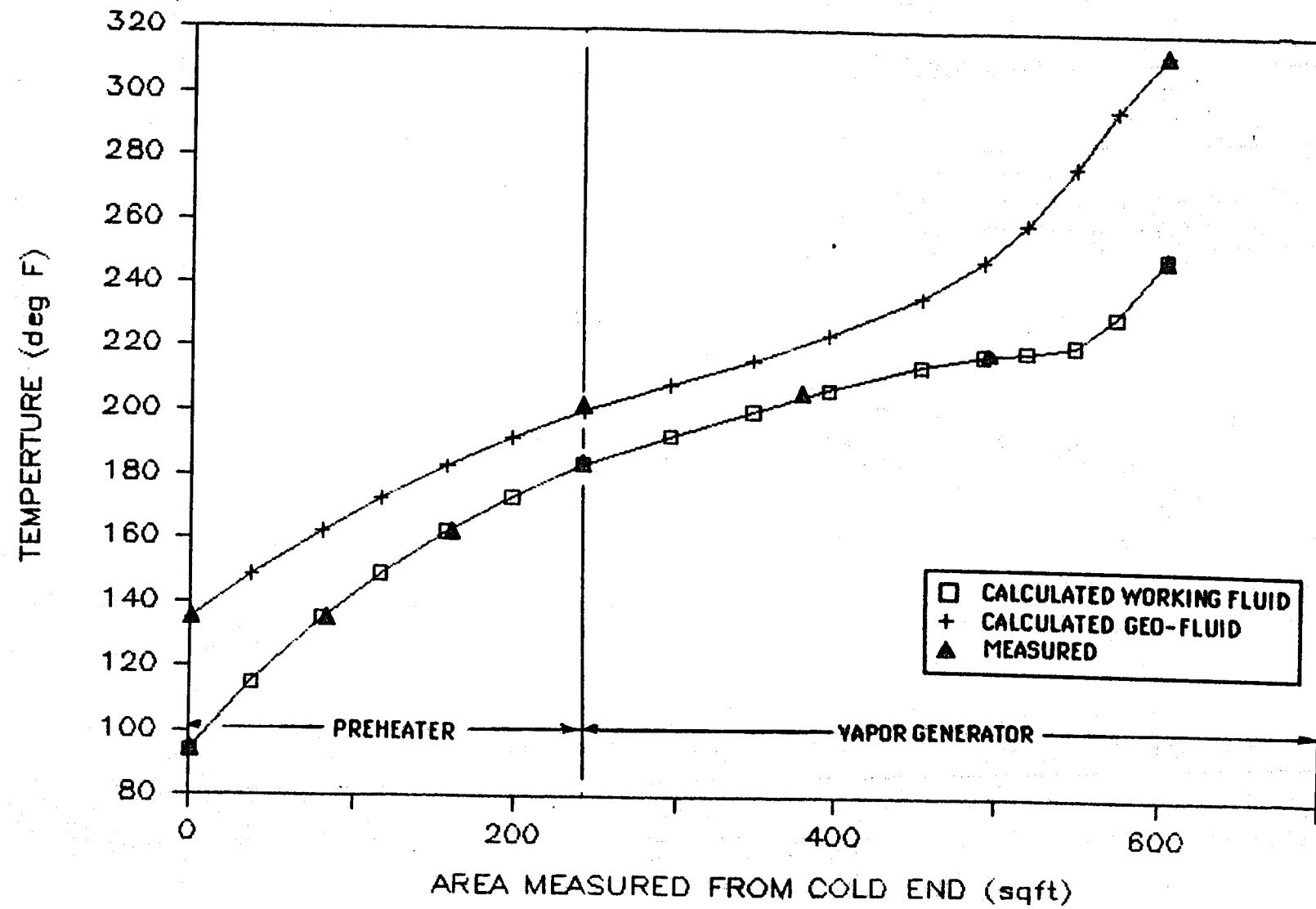
E28Aav



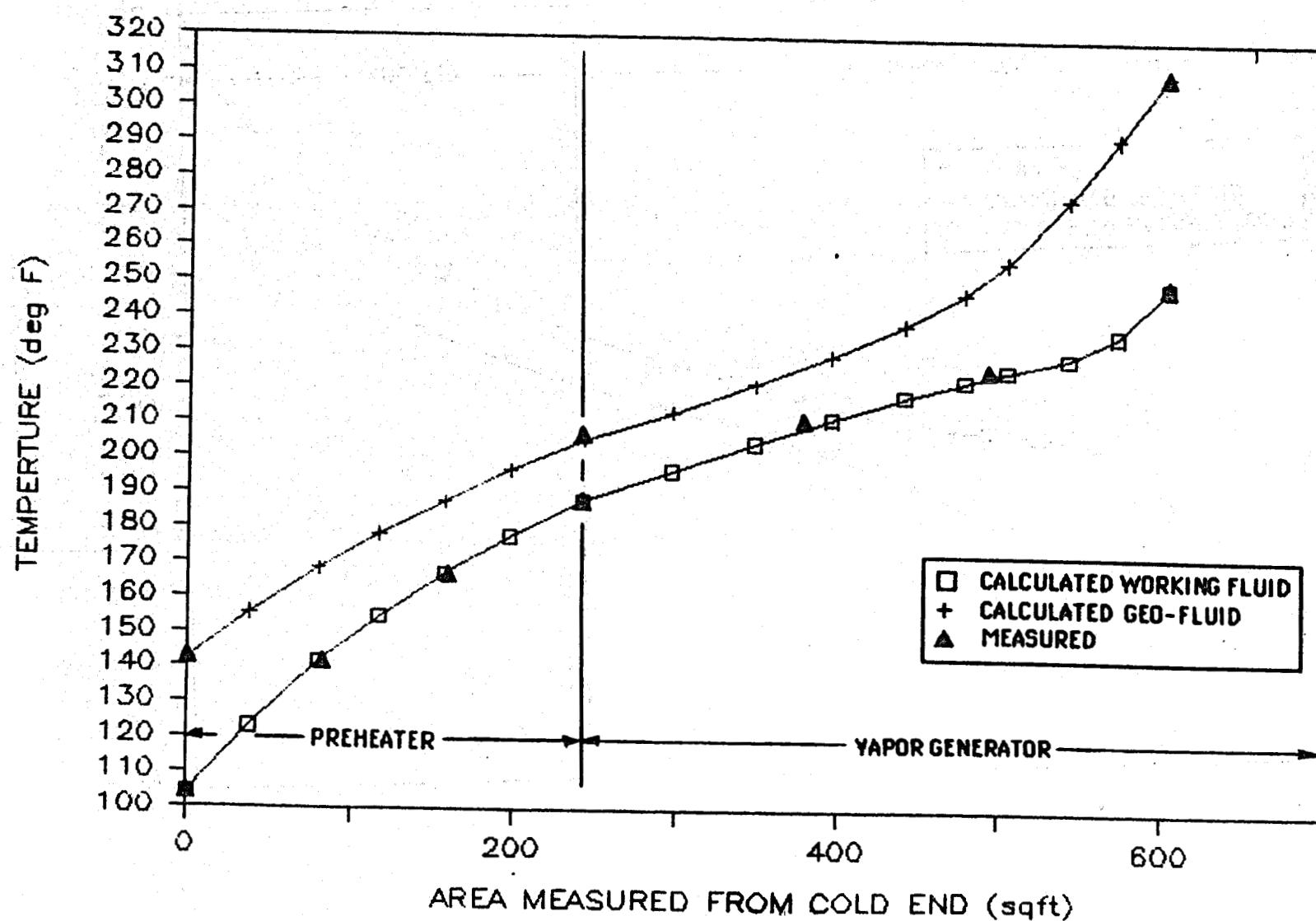
E28Bav



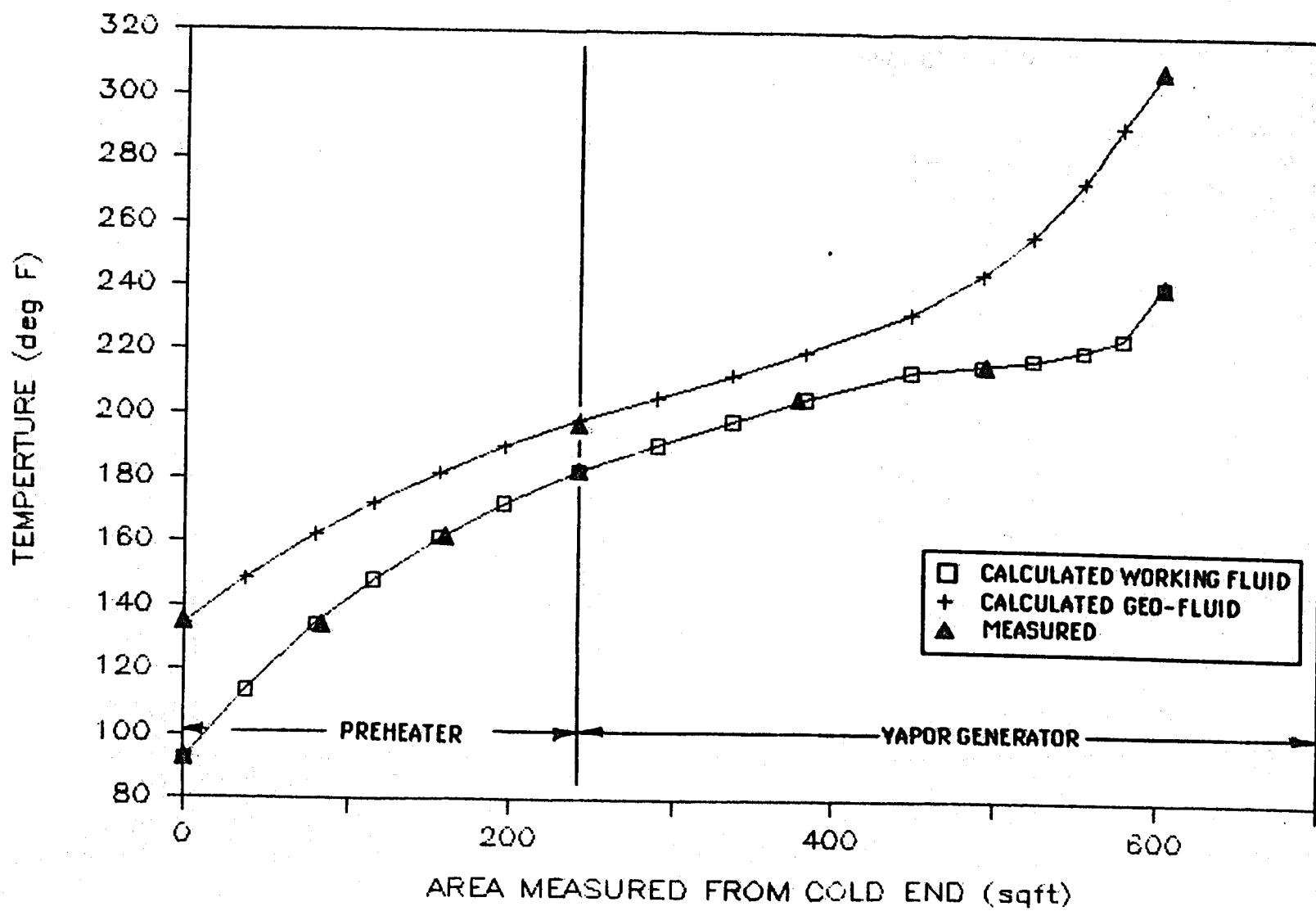
E33ave



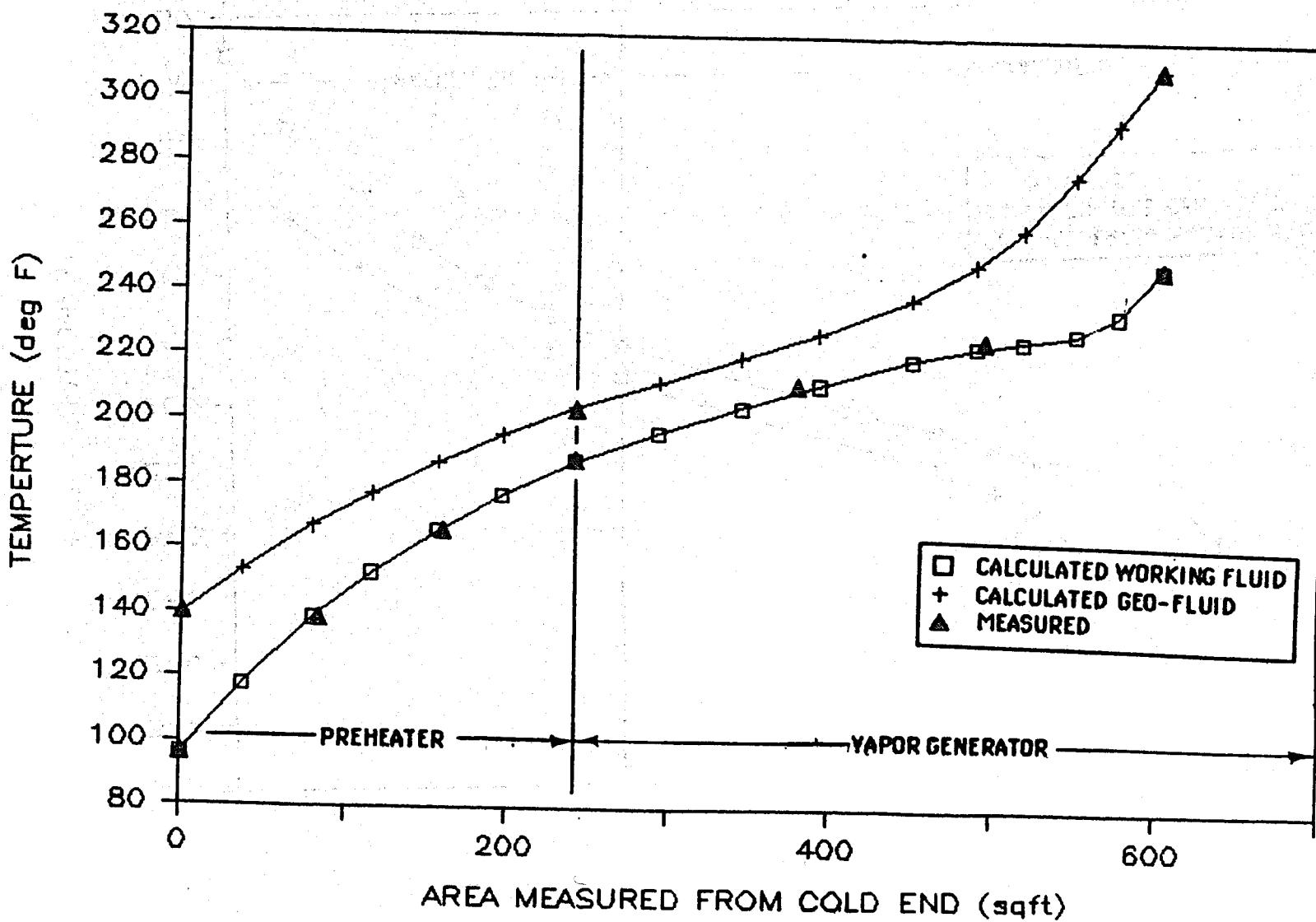
E41 ave



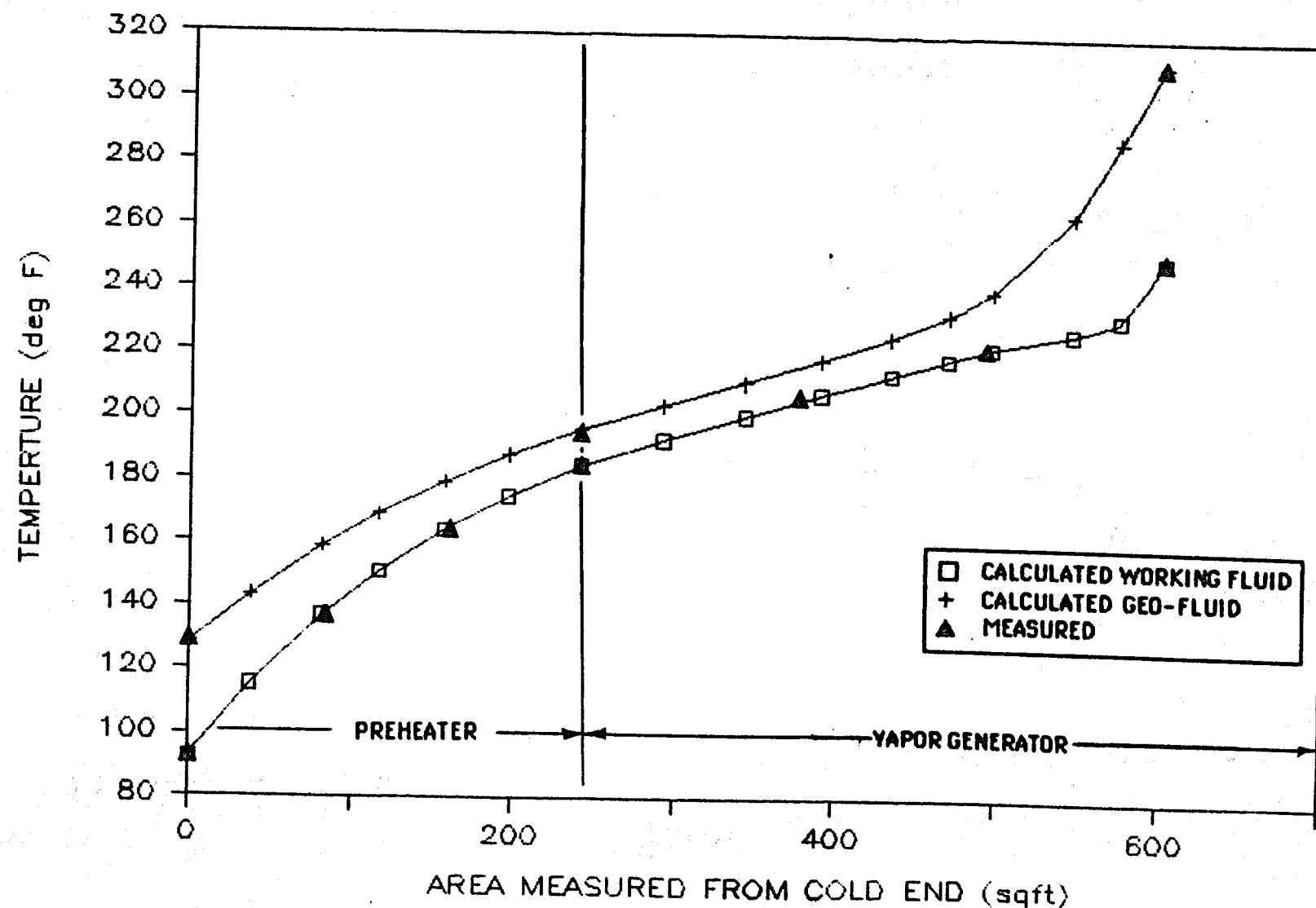
F15ave



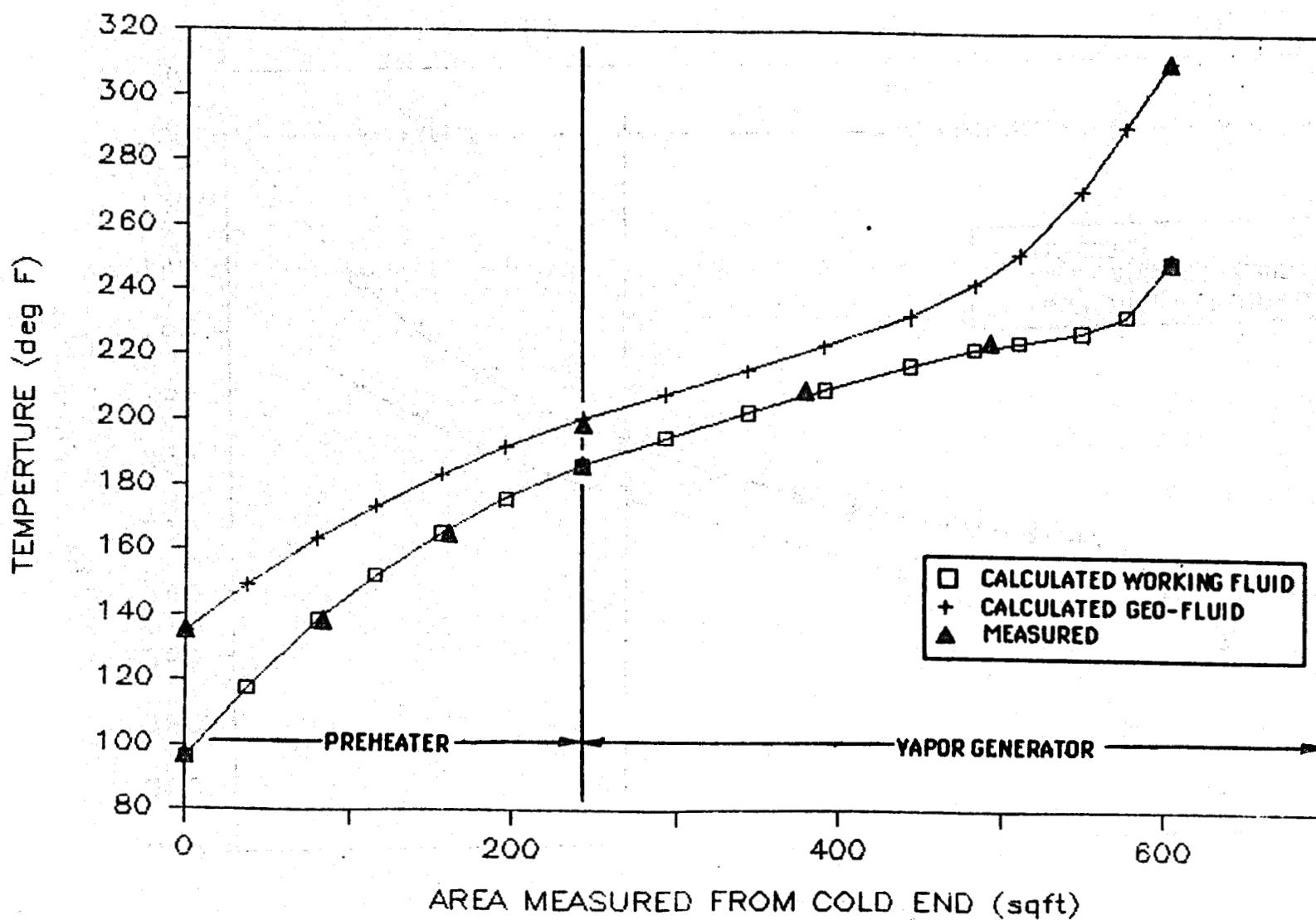
F28ave



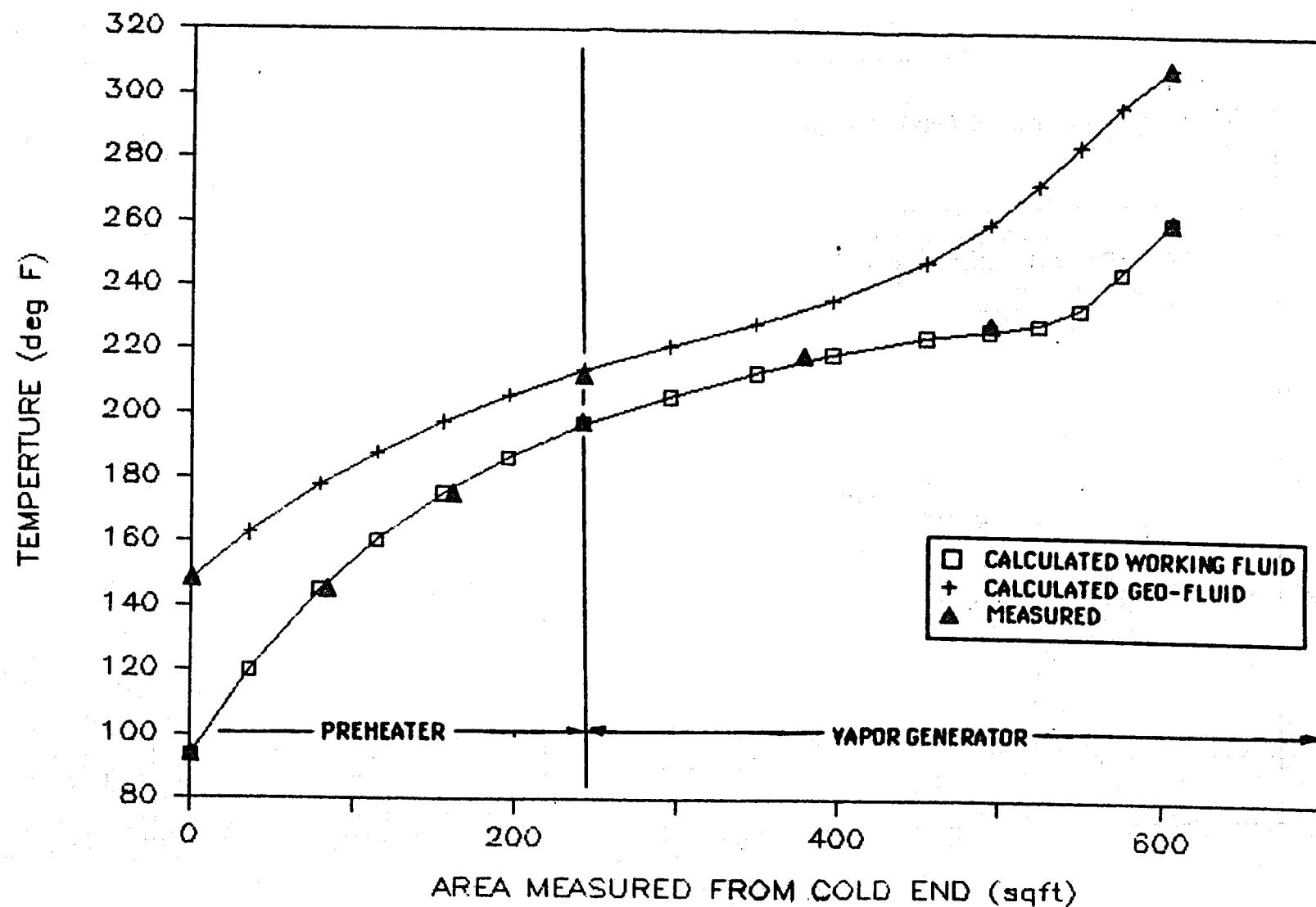
F28Aav



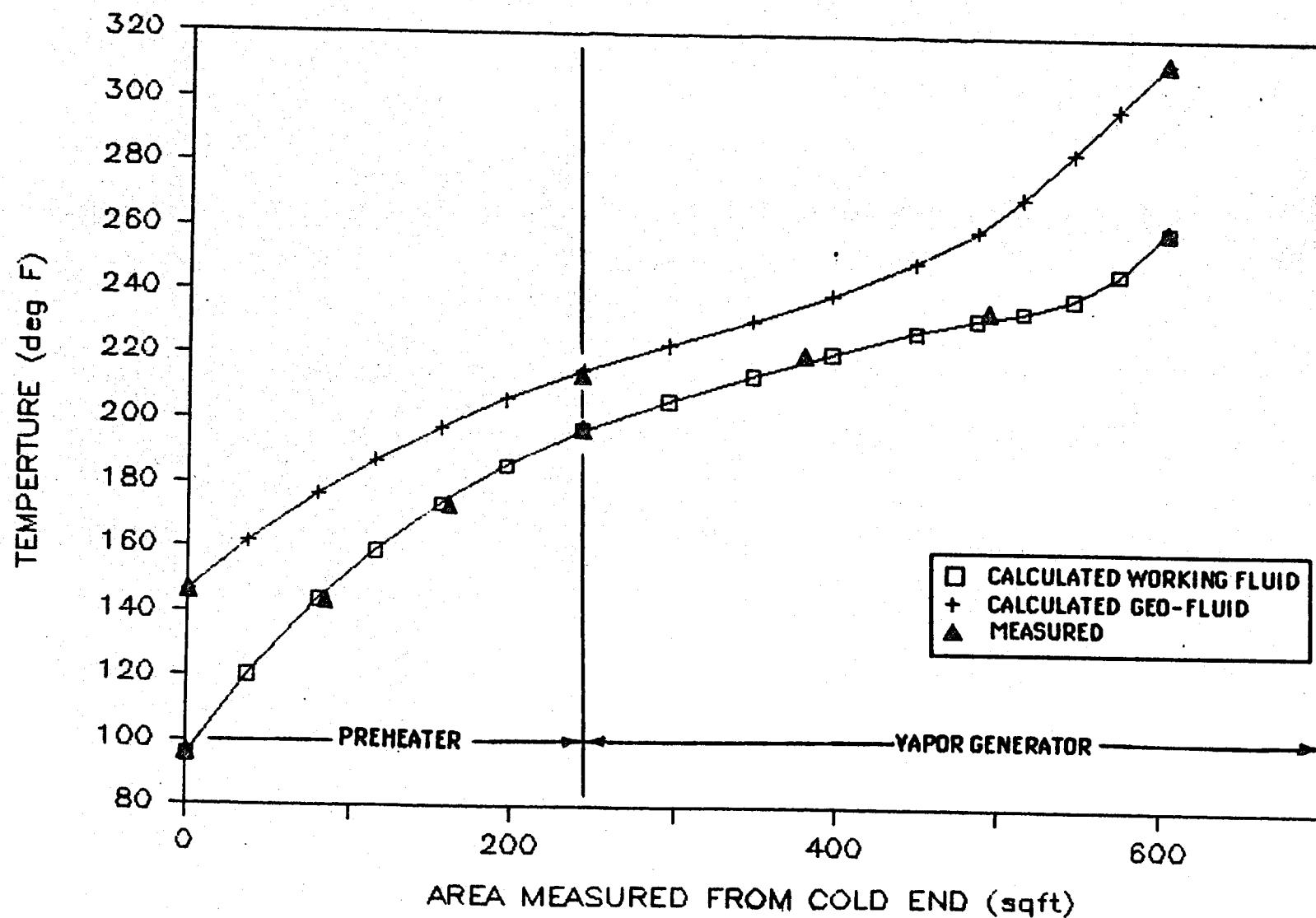
F28Bav



F33ave



F41ave



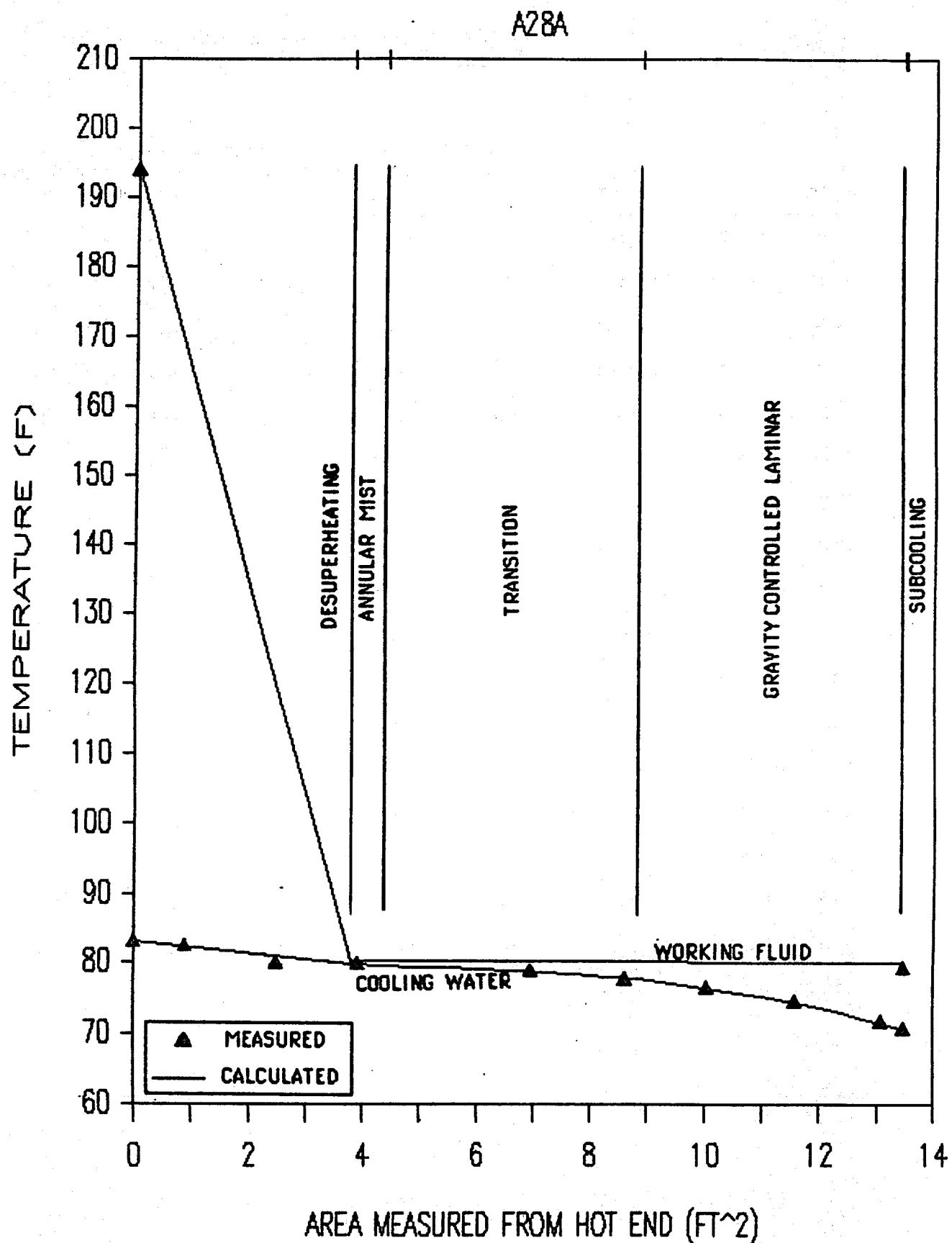
**APPENDIX C**

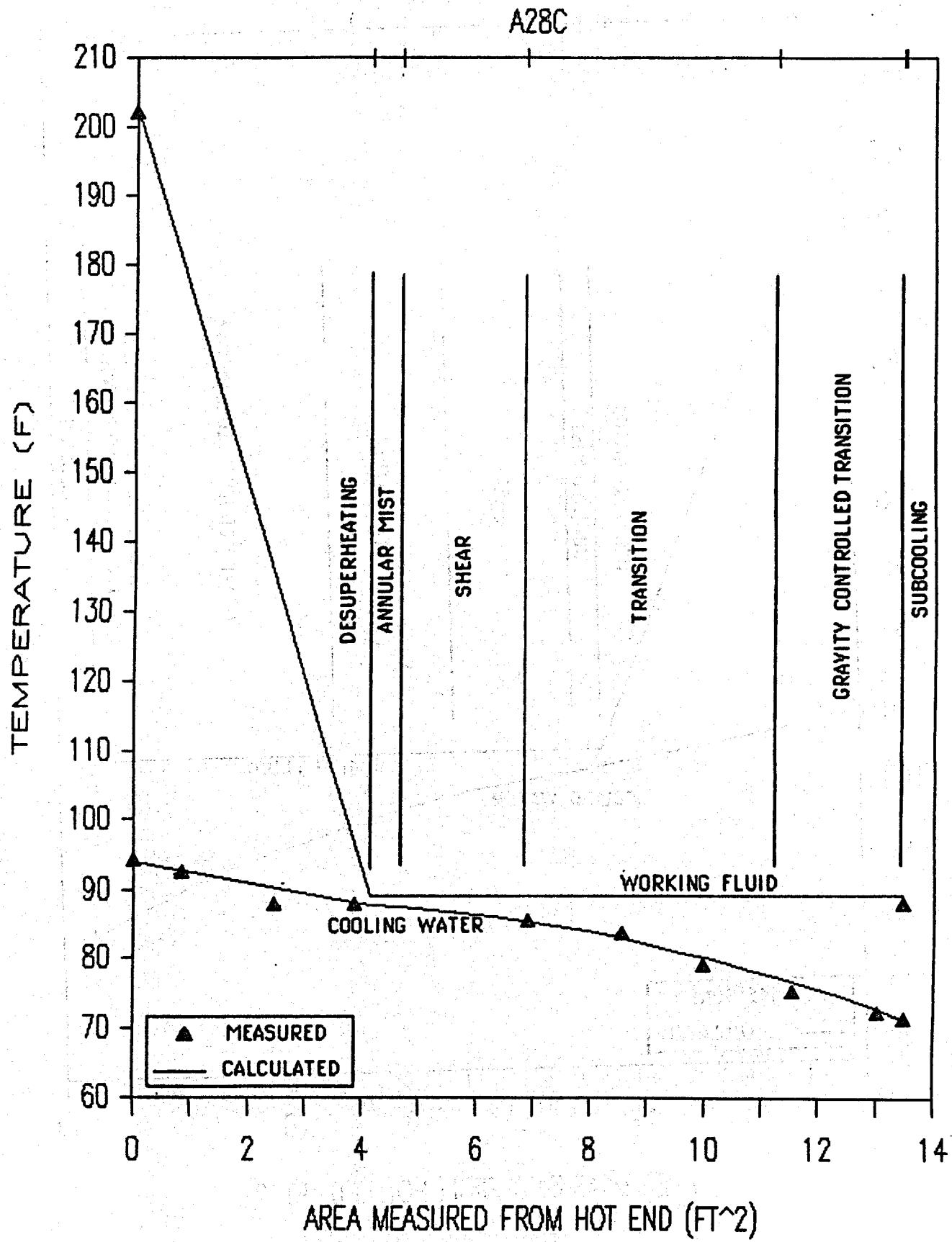
**CALCULATED AND EXPERIMENTAL  
TEMPERATURE DISTRIBUTIONS FOR THE CONDENSER**

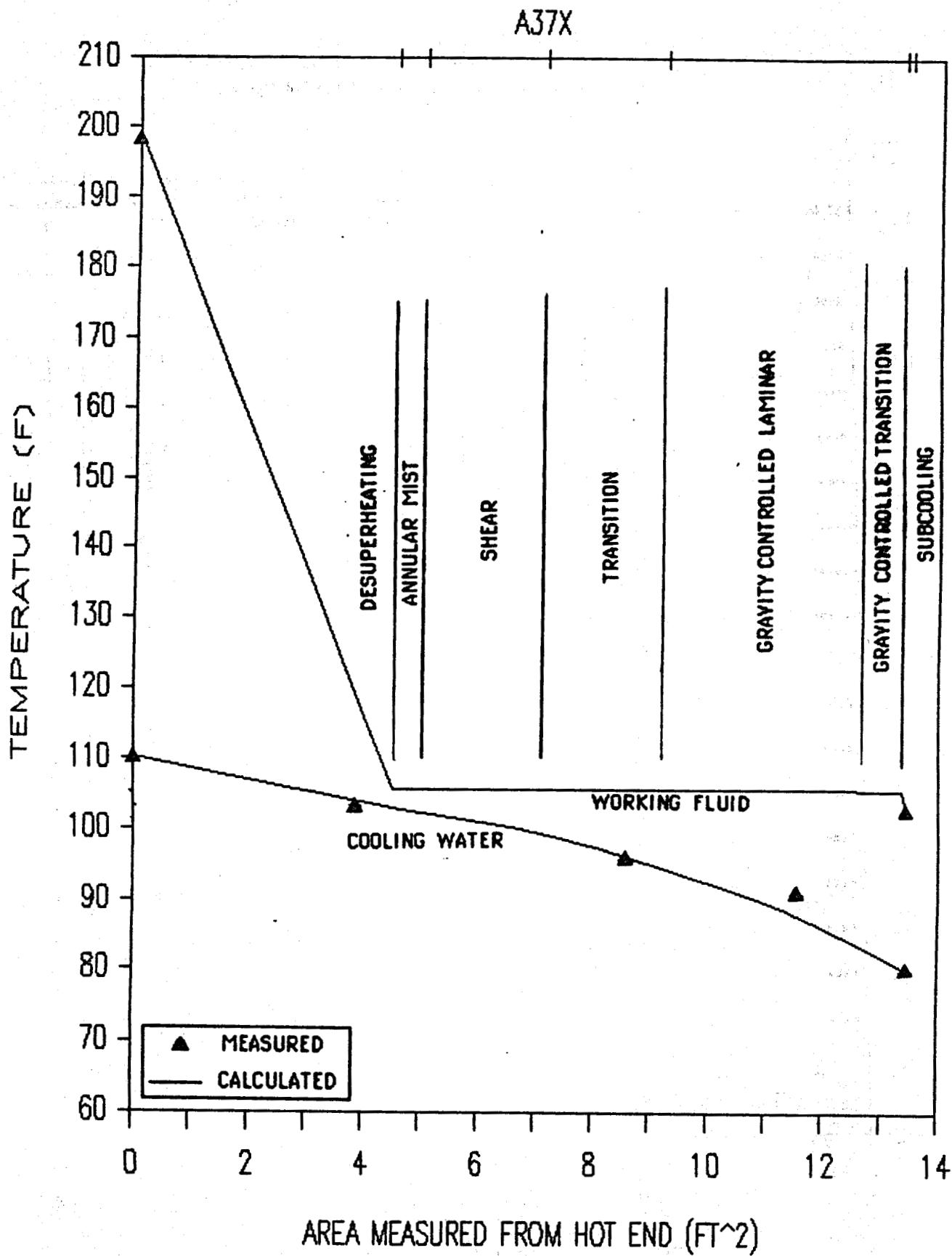
**Appendix C contains a table of the significant test parameters  
and plotted temperature distributions for the vertical condenser  
data analyzed to date.**

C1. SUPERCRITICAL CYCLE TEST PARAMETERS FOR  
CONDENSER TEMPERATURE-DISTRIBUTION PLOTS

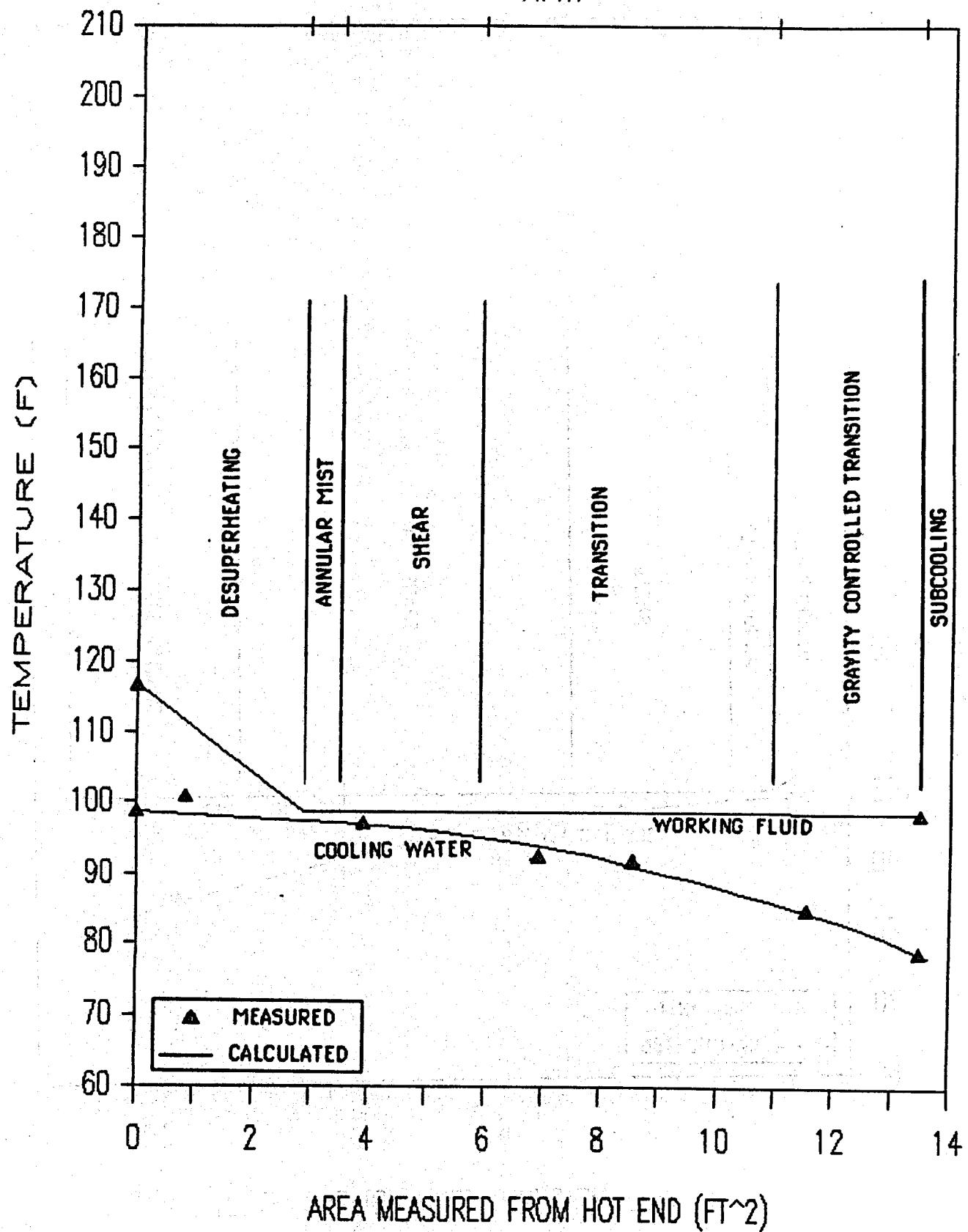
TEST NO.	DATE	NOMINAL CHEMISTRY	WORKING FLUID		COOLING WATER		SUPERHEAT @ CONDENSER INLET (F)
			FLOW RATE (LB/HR)	CONDENSER PRESS (PSIA)	FLOW RATE (LB/HR)	TEMP (IN) (F)	
A28A	4/16/85	1.0 isobutane	4167	52.2	65588	70.8	115.2
A28C	4/16/85	1.0 isobutane	8237	59.9	66675	71.2	114.9
A37X	8/24/83	1.0 isobutane	8100	74.9	45724	79.9	96.8
A71X	9/4/84	1.0 isobutane	9498	69.5	67238	78.6	19.3
A76X	9/4/84	1.0 isobutane	9478	71.0	65675	79.8	7.8
B28CAV	4/16/85	.95 isobutane, .05 hexane	8153	55.3	66321	71.3	102.6
B71AV	5/22/85	.95 isobutane, .05 hexane	8629	58.2	66431	74.5	23.8
C101AV	6/19/85	.90 isobutane, .10 hexane	6262	56.4	65932	80.6	40.4
C110AV	6/25/85	.90 isobutane, .10 hexane	5060	49.4	50792	72.2	97.3
C113AV	6/25/85	.90 isobutane, .10 hexane	8933	59.1	51001	74.9	40.7
D28C	2/16/84	1.0 propane	7773	151.8	71361	65.0	57.4
E28X	5/11/84	.95 propane, .05 isopentane	8140	145.4	64464	71.5	58.3
E66X	5/22/84	.95 propane, .05 isopentane	8917	153.7	65196	74.4	16.9
F28A	6/5/84	.90 propane, .10 isopentane	4026	124.9	66128	72.7	57.8
F28X	6/5/84	.90 propane, .10 isopentane	8012	138.8	66124	73.5	56.4
F37X	6/22/84	.90 propane, .10 isopentane	8447	128.3	49862	62.4	59.4
F66X	6/15/84	.90 propane, .10 isopentane	9082	130.0	65490	66.0	18.6
F71X	6/15/84	.90 propane, .10 isopentane	9069	131.5	65607	67.0	5.5

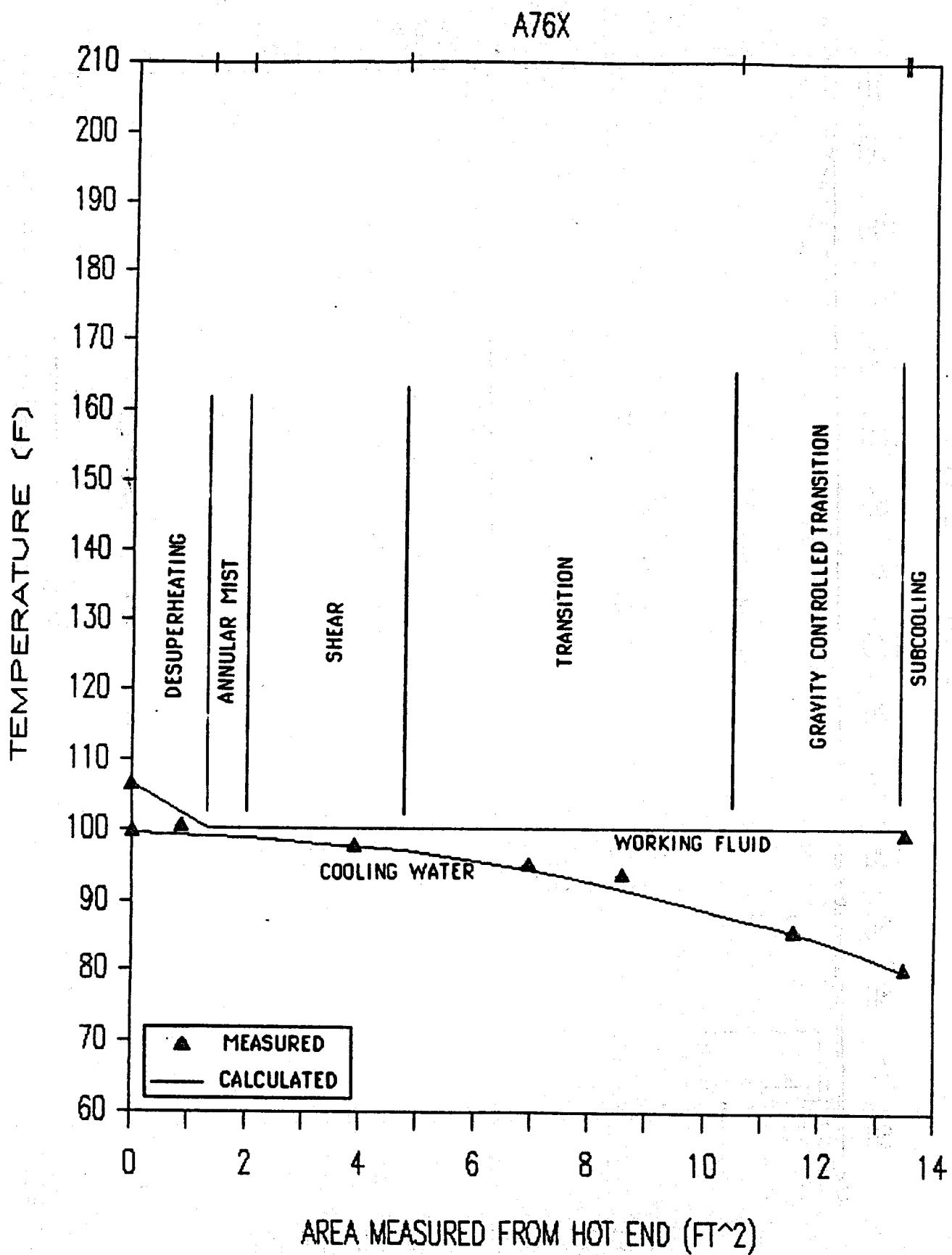




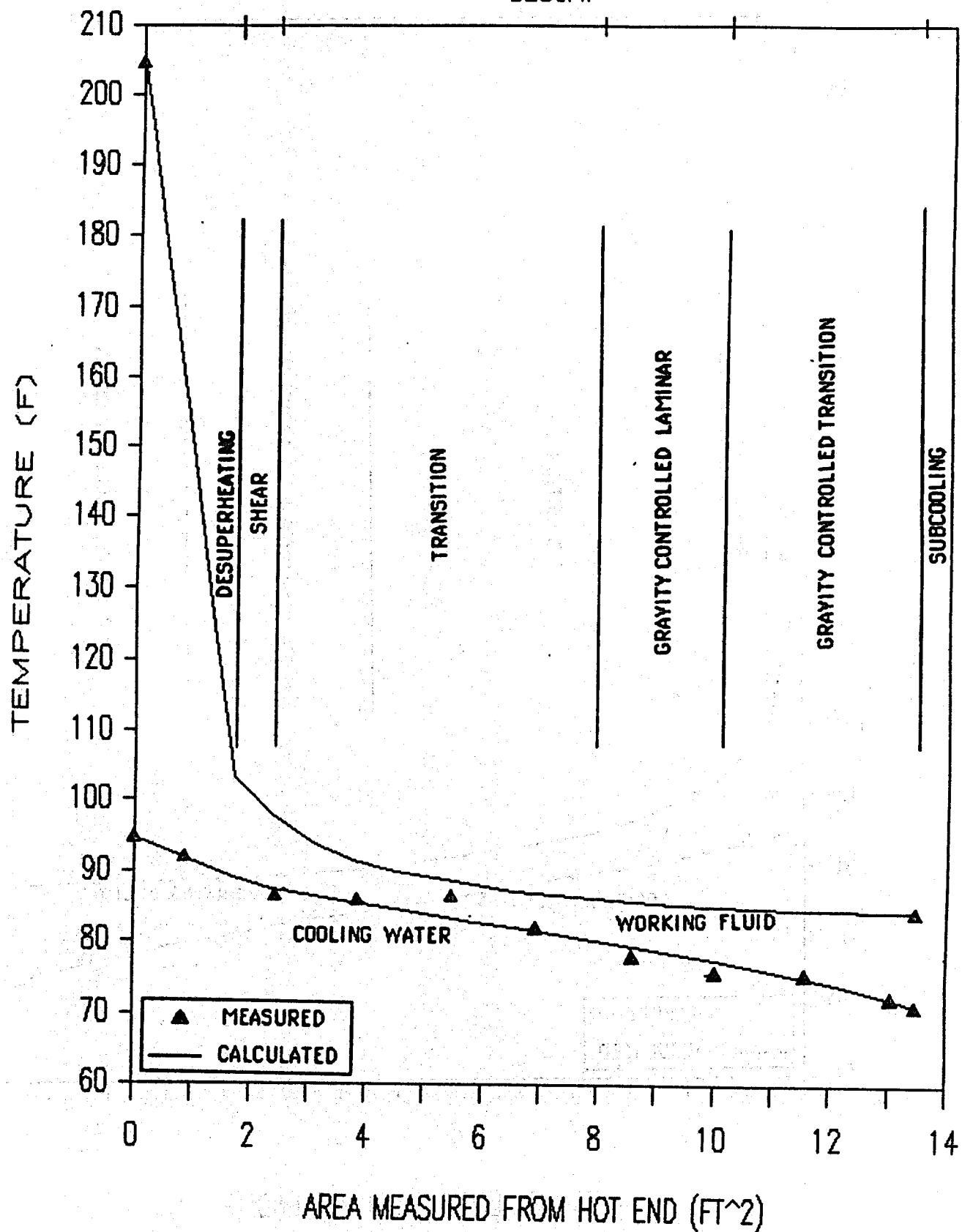


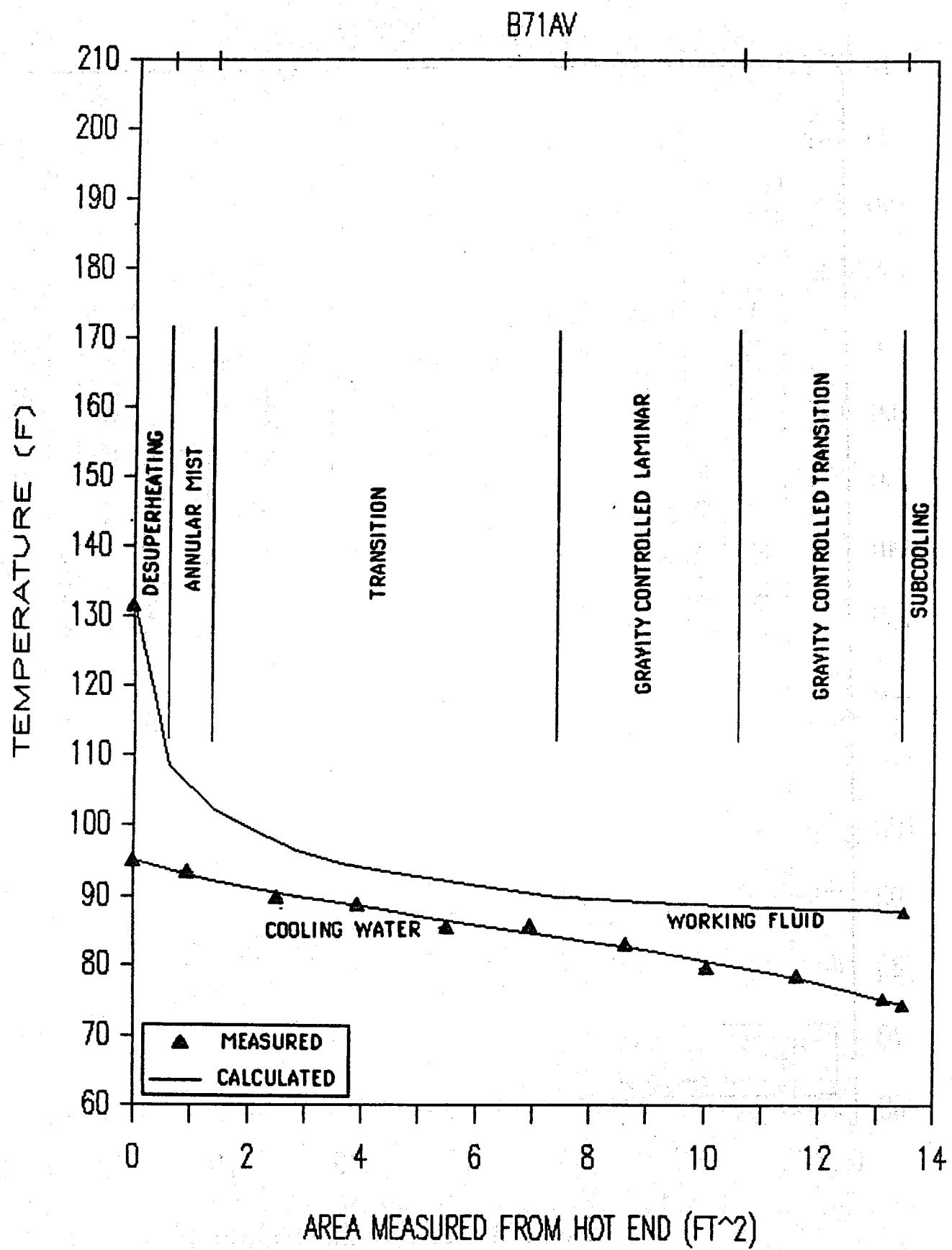
A71X



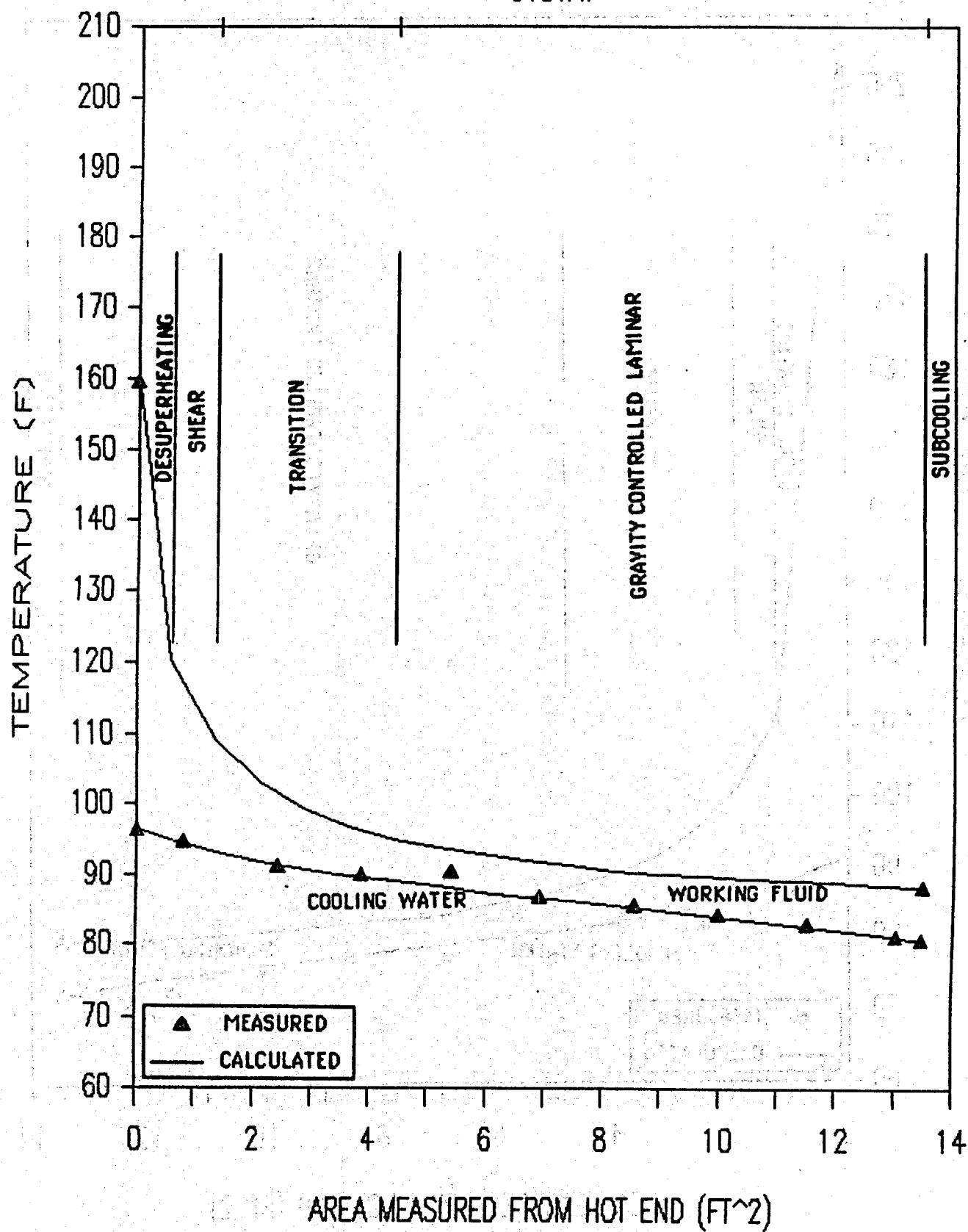


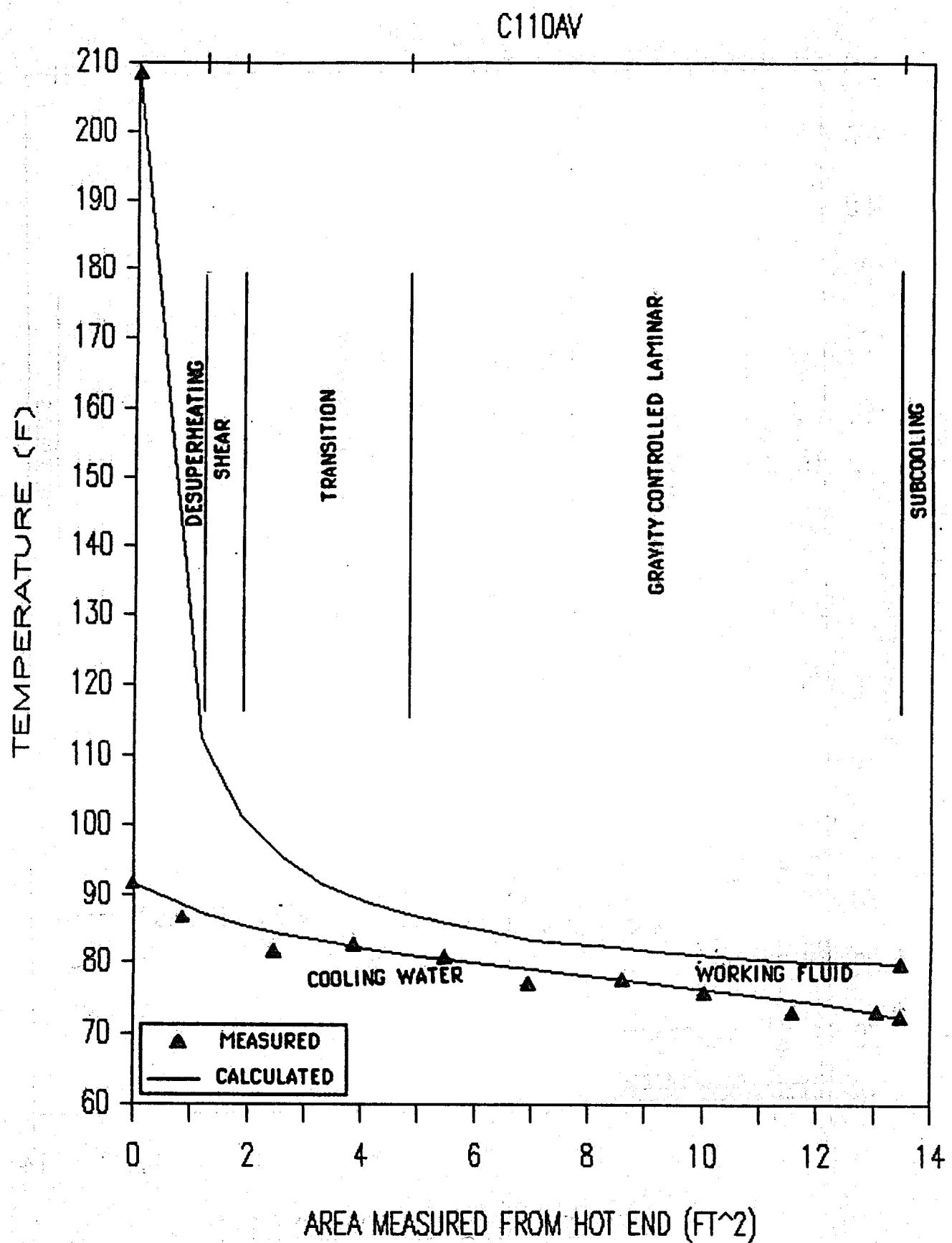
B28CAV



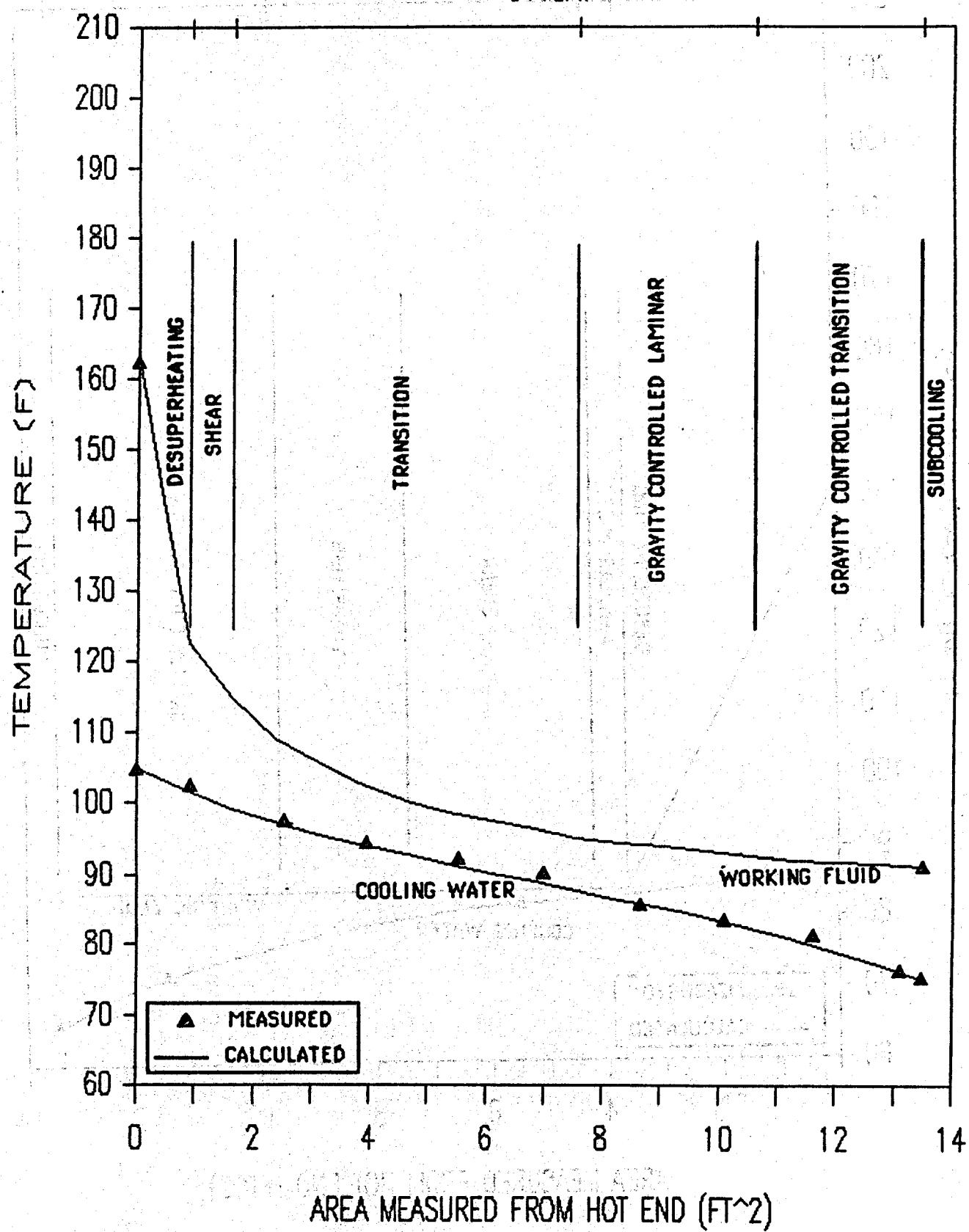


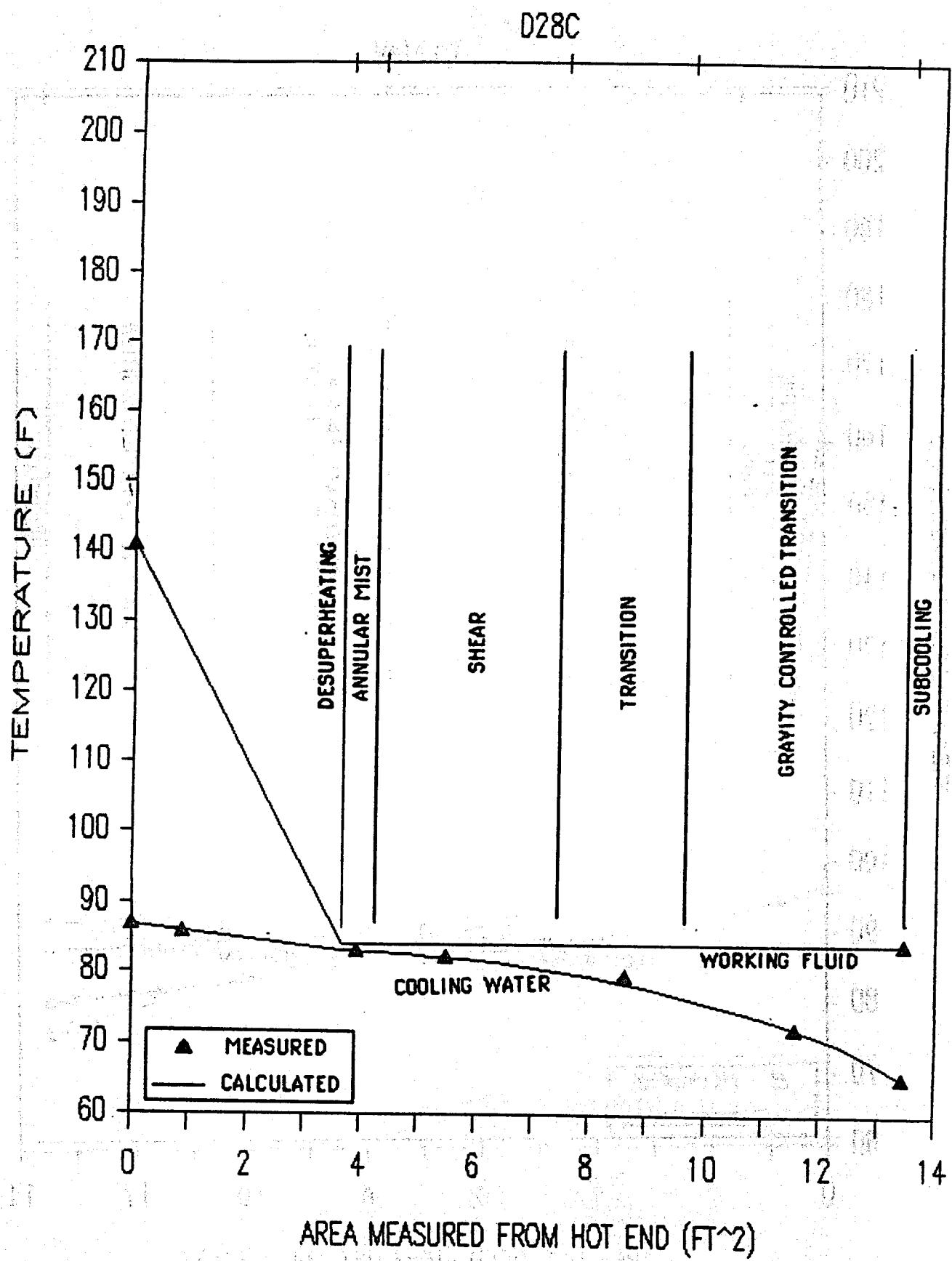
C101AV



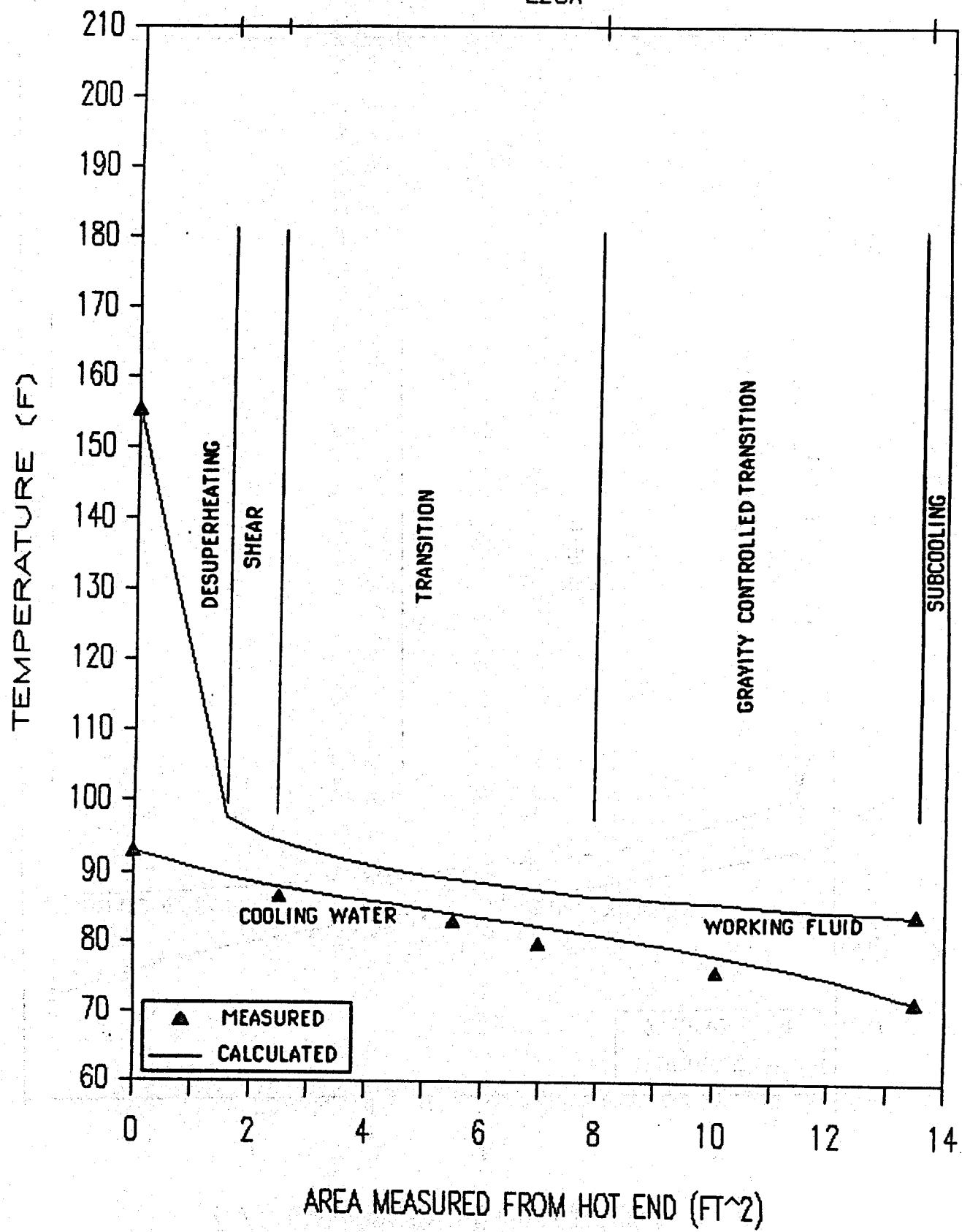


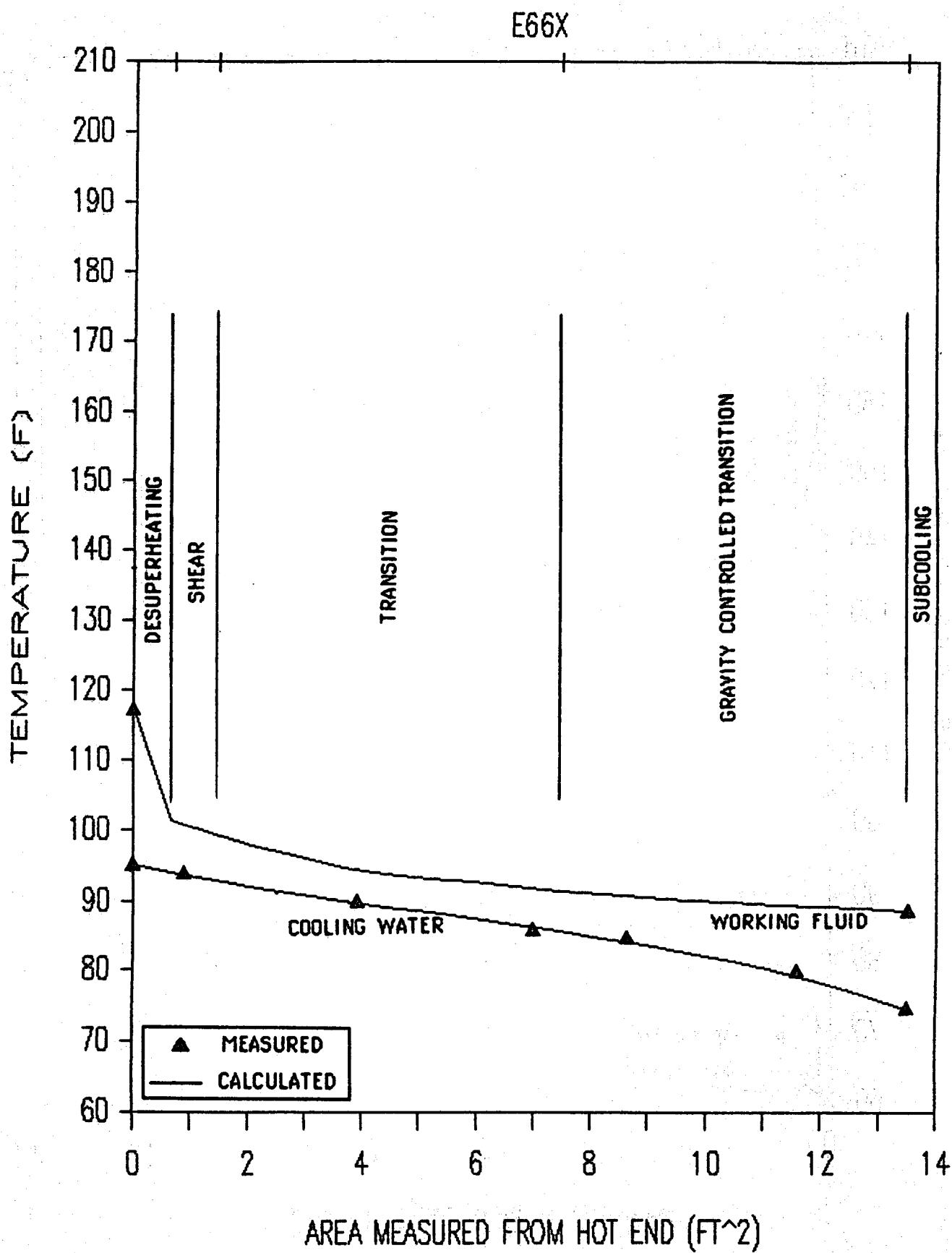
C113AV



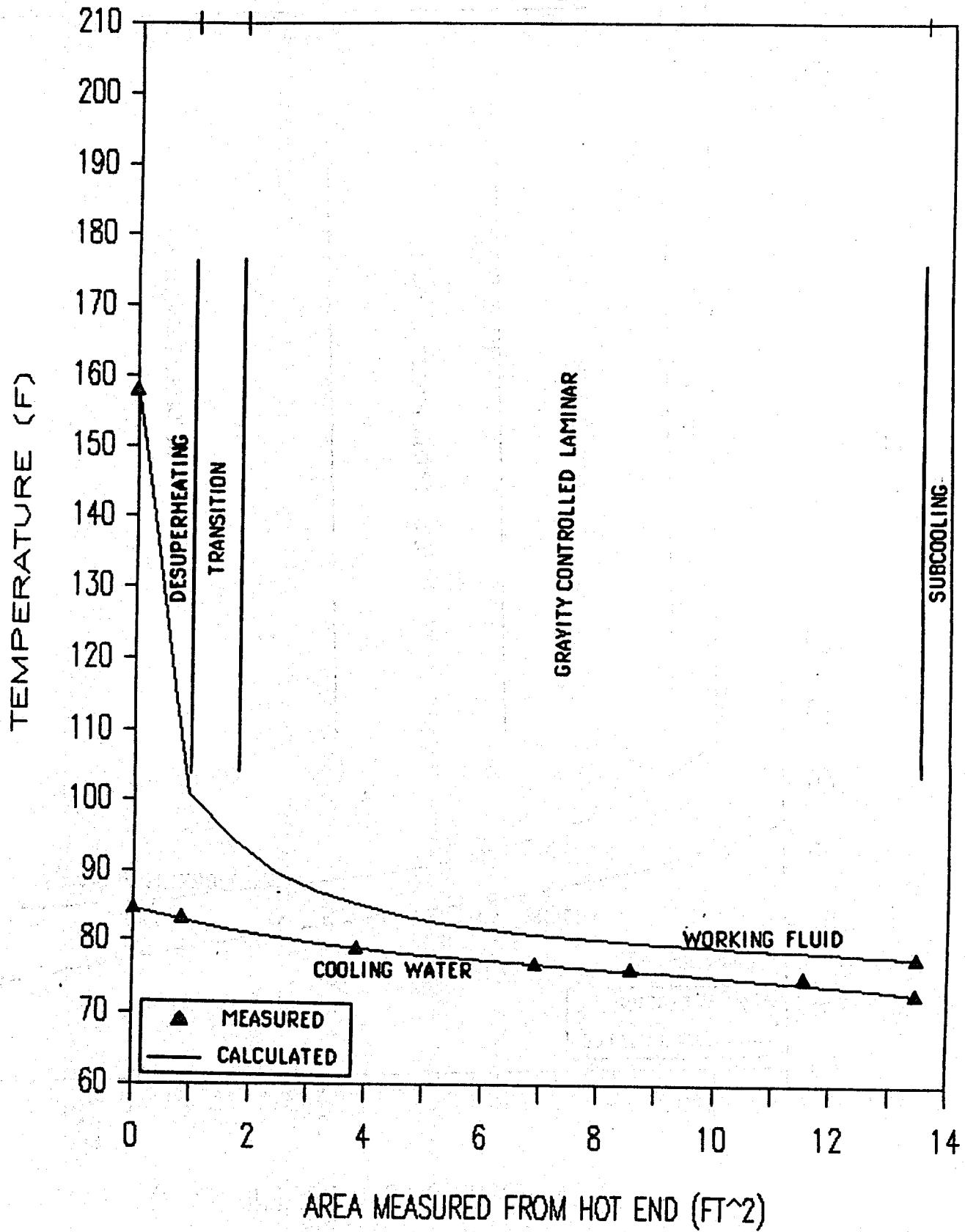


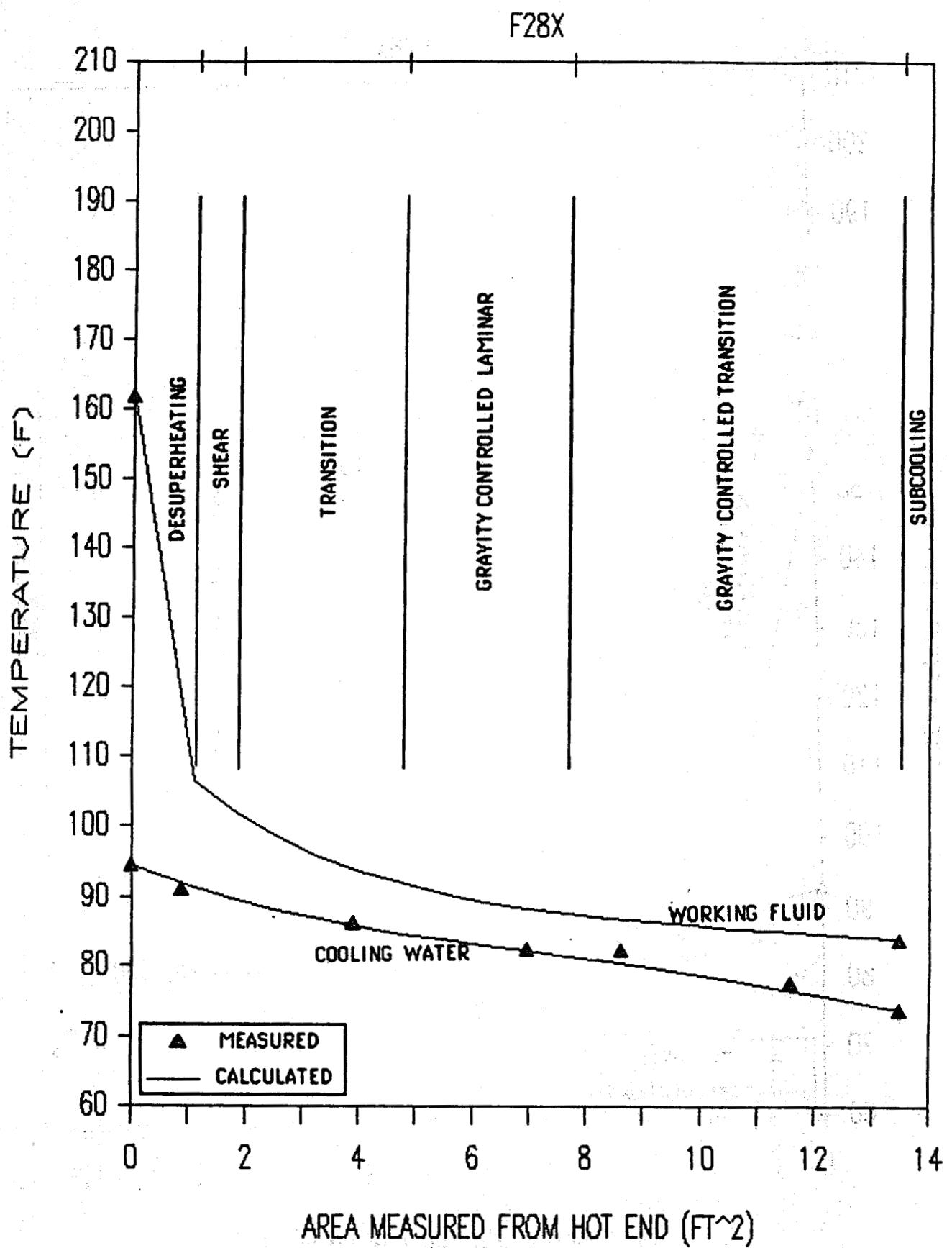
E28X

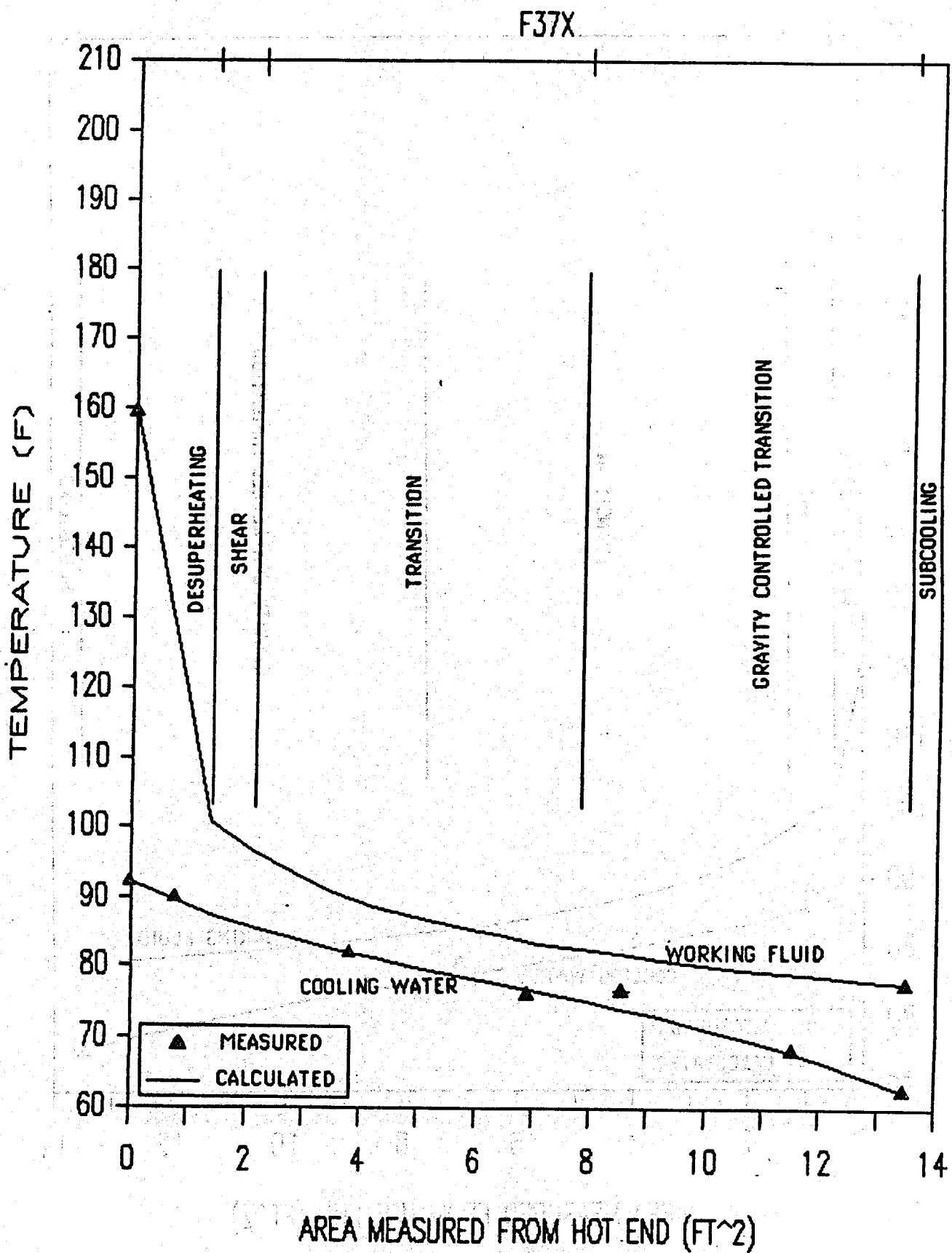


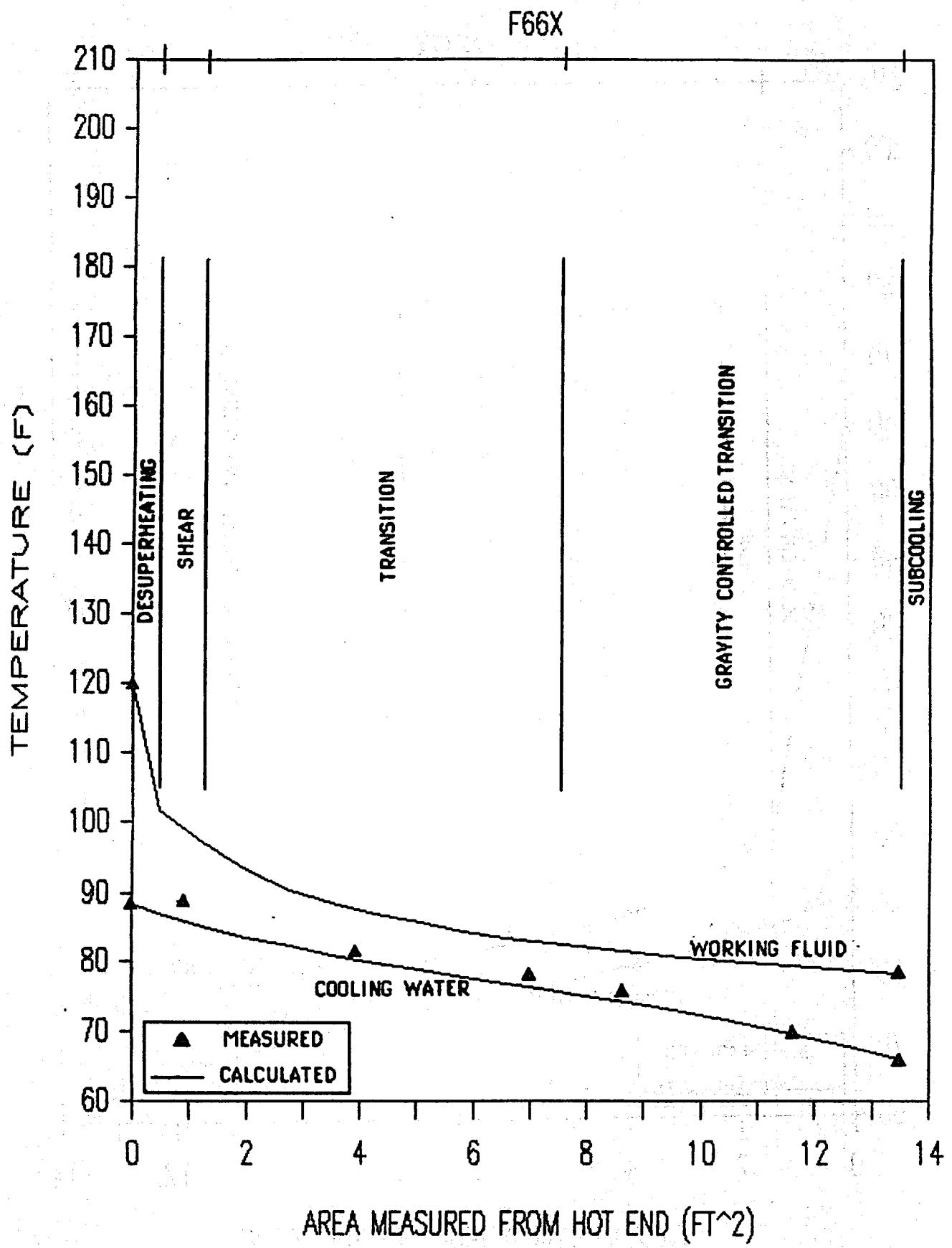


F28A

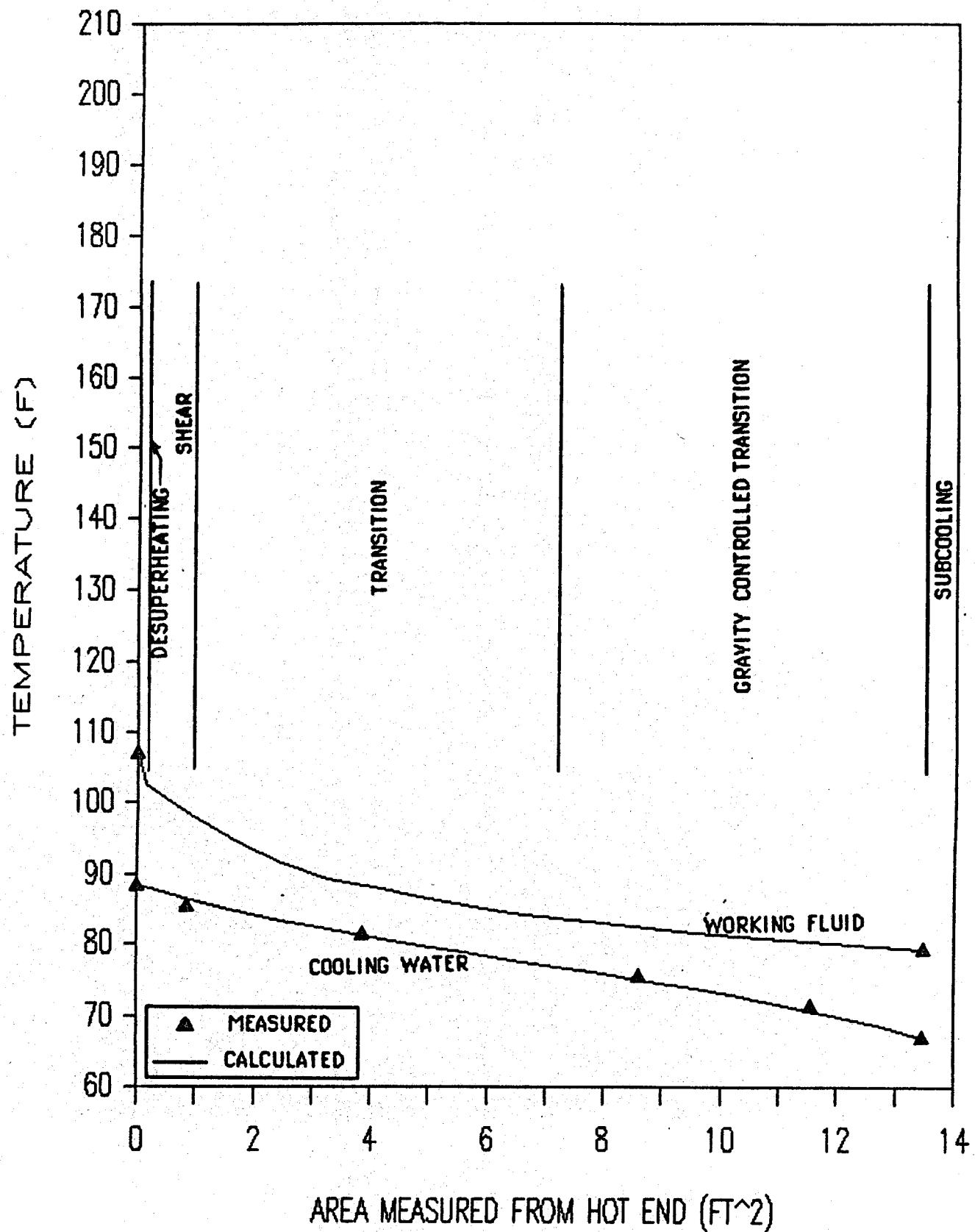








F71X



## **APPENDIX D**

### **HTRI LETTER CONTAINING REFERENCES TO METHODS USED IN HEAT-EXCHANGER-DESIGN CODES**

Dear Sirs:

I am enclosing herewith a copy of a letter from the Heat Transfer Research Inc. (HTRI) containing references to methods used in heat-exchanger design codes. This letter was written in response to your letter of January 10, 1969.

Enclosed also is a copy of the HTRI letter to the American Society of Mechanical Engineers (ASME) regarding the ASME code for heat-exchangers.

It is my hope that you will find the enclosed information helpful in your work. If you have any questions concerning the enclosed material, please do not hesitate to contact me.

Very truly yours,

John W. Johnson  
Project Manager



January 20, 1986

1000 South Fremont Avenue  
Alhambra, California 91802-3900

Telephone (818) 300-4950  
Telex 67-4888 (CFBRAUN)

Faxsimile 818-300-2766  
TWX 910-589-3377

Mr. O. J. Demuth  
EG&G Idaho, Inc.  
P. O. Box 1625  
Idaho Falls, Idaho 83415

Subject: Report EGG-EP-7076

JWP-017-jsl-86

Dear Mr. Demuth:

This is in answer to your letter of December 9, 1985. As we have discussed on the phone with Dr. Carl Bliem, we at HTRI believe that this is a very worthwhile project and are very pleased to obtain the heat transfer data. We have read the Report EGG-EP-7076 with interest and believe that you have used considerable ingenuity in applying our programs to your cases. It is gratifying to see that the results agree with your data and are useful to you. Field data checks such as these are of great value in establishing the general validity of our computer codes for industrial design use. We plan eventually to modify the programs to make such calculations as you have done easier for the user, and these data will be valuable for confirmation.

We basically agree with the approaches taken. A finding especially interesting for us was that for narrow condensing range mixtures at low delta-T, the improvement in MTD overcomes the mixture penalty on the heat transfer coefficient and produces better overall performance than for pure components. Although this does not seem unreasonable, we had not seen evidence of it before. This phenomenon may not be general, however, and should be reevaluated for every case, since the effect would be a function of both the delta-T and the condensing range of the mixture.

Regarding a description of the HTRI codes; this information is available in complete detail, as you know, to all HTRI members, which include virtually all major U.S. engineering contractors. The exact algorithms used cost the member companies a considerable amount of money to develop and cannot be published in the open literature. However, the HTRI Technical Committee has from time to time approved release of general descriptions of HTRI methods used. The following references are recommended:

ST Program:

Palen, J. W. and Taborek, J., "Solution of the Shell Side Flow Pressure Drop and Heat Transfer by Stream Analysis Method," CEP Symp. Series, 65, No. 92 (1969)

Mr. O. J. Demuth

-2-

January 20, 1986

CST Program:

Breber, G., Palen, J. W., and Taborek, J., "Prediction of Horizontal Tubeside Condensation of Pure Components Using Flow Regime Criteria," ASME J. Heat Transfer, 102, No. 3, (1980) (note: the general concepts apply also to vertical tubes)

Sardesai, R. G., Palen, J. W., and Taborek, J., "Modified Resistance Proration Method for Condensation of Vapor Mixtures," AIChE Symp. Series, Heat Transfer Seattle, 79, No. 225 (1983)

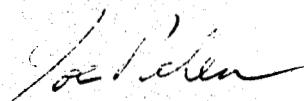
General Features of HTRI Programs:

Chenoweth, J. M., and Kistler, R. S., "The Computer Program as a Tool for Heat Exchanger Rating and Design," ASME Paper No. 76-WA/HT-4 (1976)

Chenoweth, J. M., Kistler, R. S., and Taborek, J., "Computer-Aided Rating and Design of Shell-and-Tube Heat Exchangers," Computer Aided Process Plant Design, M. E. Leesley, ed., pp.806-832, Gulf Publishing Co., Houston (1982)

I hope this will sufficiently fulfill the requirements stated in your letter. Please let us know if we can be of further help.

Sincerely yours,



Joe W. Palen  
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cc: C. J. Bliem  
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