PILOT SCALE PRECIPITATION TEST OF AN-107 SIMULANT WITH CAUSTIC ADJUSTMENT AT 20 ^{O}C (U)

OCTOBER 31, 2002

Engineering Development Laboratory,
Engineered Equipment & Systems Department,
Savannah River Technology Center

UNCLASSIFIED
DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

ADC &
Reviewing
Official: _____
(Name and Title)

Date: _____

ADDITIONAL APPROVAL:

Official: _____
R&T Manager, RPP Hanford

Date: _____

Westinghouse Savannah River Company
Savannah River Site
Aiken, SC 29808

Prepared for the U.S. Department of Energy Under Contract Number DE-AC09-96SR18500

SRS savannah river site ™

WSRC-TR-2002-00459, Rev. 0
SRT-RPP-2002-00221

Key Words:
River Protection Project, Crossflow Filter, Envelope C Waste, Hanford Tank 241-AN-107

Retention: Permanent

Key WTP R&T References:
Test Plan SRT-RPP-2000-00050, Rev. 0
Test Scoping Statement S-51

PILOT SCALE PRECIPITATION TEST OF AN-107 SIMULANT WITH CAUSTIC ADJUSTMENT AT 20 ^{O}C (U)

Michael R. Williams, 786-5A
Timothy J. Steeper, 786-5A

Issue Date: October 31, 2002

Westinghouse Savannah River Company
Savannah River Site
Aiken, SC 29808

Prepared for the U.S. Department of Energy Under Contract Number DE-AC09-96SR18500

SRS savannah river site ™

REVIEWS AND APPROVALS

Michael R. Williams, Task Lead, EDS/EES/SRTC Date

Timothy J Steeper, Data Analysis & Report Writer, EDS/EES/SRTC Date

James C. Marra, Pretreatment Manager, RPP Date

Hector N. Guerrero, Technical Reviewer, EDS/EES/SRTC Date

Reid A. Peterson, RPP-WTP Customer Acceptance Date

Completeness of Testing

This report describes the results of work and testing specified by SRT-2000-00050. The work and any associated testing followed established quality assurance requirements and was conducted as authorized. The descriptions provided in this test report are an accurate account of both the conduct of the work and the data collected. Results required by the test plan are reported. Also reported are any unusual or anomalous occurrences that are different from starting hypotheses. The test results and this report have been reviewed and verified.

.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

ADS	Analytical Development Section
AN-102	Refers to waste in Hanford tank 241-AN-102. This waste is one of the Envelop C type wastes.
AN-107	Refers to waste in Hanford tank 241-AN-102. This waste is another of the Envelop C type wastes.
DIF	Deionized and Filtered (0.2 micron) Water
EDL	Engineering Development Laboratory, SRTC, WSRC
FBRM	Focused Beam Reflectance Measurement
HLW	High Level Waste
LAW	Low Activity Waste
RCRA	Resource Conservation and Recovery Act of 1976
RPP	River Protection Project
SRTC	Savannah River Technology Center
TMP	Transmembrane Pressure (the average pressure drop across the thickness of the filter medium – perpendicular to the slurry flow.)
TRU	Transuranic
WGI	Washington Group International
WSRC	Westinghouse Savannah River Company
WTP	Waste Treatment and Immobilization Plant

ACKNOWLEDGEMENTS

The authors would like to thank the RPP Team for their patience while we analyzed the data and prepared this report. We would like to thank all the support personnel of the Engineering Development Lab of SRTC. Michael Armstrong contributed in a major way to the successful operation of the test apparatus. Support from the other Engineering Development Laboratory personnel: Vern Bush, Andy Foreman, Mark Fowley, Gean Bridgmon, Jimmy Mills, was instrumental in keeping this test going and maintaining the readiness of the test rig, from instrument calibration to last minute changes that were needed due to unforeseen difficulties. The Lab Supervisor, Susan Hatcher, took every opportunity to reinforce safety on the job during all aspects of the testing, and was a tremendous help in handling chemical purchases disposing of wastes. We would also like to thank Charles Nash, Chris Bannochie, Bill Wilmarth, Bill King and John Steimke for their help in planning and technically reviewing this test. The management assistance of both Dan Burns and Steve Wach contributed invaluably to both procurement and execution of the plan for this test. Thanks to Hector Guerrero and Chris Bannochie for reviewing this report.

ABSTRACT

This report discusses the results of the coupled operation of the Pilot Scale Precipitation Test Facility and Crossflow Test Facility conducted for the Hanford River Protection Project. These test facilities were constructed and operated by the Engineering Development Laboratory of the Savannah River Technology Center, Westinghouse Savannah River Company. The Pilot Scale Precipitation Test Facility coupled with the Crossflow Test Facility mimics the Hanford Waste Treatment and Immobilization Plant Pretreatment Ultrafiltration System. This system will remove entrained and precipitated solids, complexed strontium (Sr), and transuranic elements (TRU) from an Envelope C waste stream. Envelope C waste streams include the contents of Hanford waste tanks 241-AN-107 and 241-AN-102.

This report deals specifically with a non-radioactive AN-107 simulant and precipitating reagents of strontium nitrate and sodium permanganate to determine decontamination factors and operability of the process coupled with crossflow filter operation. The experiment precipitated a 634-liter batch of AN-107 simulant with caustic adjustment (Batch #2) at a reaction temperature of 20 ^{o}C. The results of the Batch #1 test, with similar conditions except no caustic was added and the reaction temperature was 50 ^{o}C, were reported previously (20). The processing of other batches for the study of the precipitation reaction will be the subject of future reports.

The liquid, solid and gaseous products of the reaction sampled over a period of eight hours were analyzed to determine the concentration of elements removed from the initial feed as solids by the process. About 85% of the reduction in concentration of lanthanides in the AN-107 simulant occurred within 7.5 minutes of the completion of the addition of the precipitating reagents. Lanthanide elements cerium, lanthanum, and neodymium in the simulated waste were used as non-radioactive surrogates for the radioactive actinide elements (including plutonium, americium, and uranium) in the real waste.

To show the removal efficiency, the initial mass of the element in the feed is divided by the final mass in the treated solution; this measure is called the decontamination factor. For the precipitation reaction in Batch #2, the decontamination factors four hours after reagent addition were 9.4 for cerium, 11.1 for lanthanum, and 7.5 for neodymium. These decontamination factors demonstrate that the precipitation reaction is effective in reducing the concentration of lanthanide surrogates for TRU elements and supports the conclusion that application of this process to the real waste would meet the immobilization regulatory requirements.

The decontamination factor for strontium after four hours, based on the relative concentrations alone, was 0.02. For the radioactive strontium in real waste, the addition of non-radioactive strontium nitrate prior to precipitation serves to make the radioactive strontium only a small percentage of the total strontium. The removal of radioactive strontium would include an isotopic dilution factor as well as the conventional DF. For a non-radioactive simulant, as used in this experiment, it is not possible to evaluate this dilution factor. The maximum possible isotopic dilution factor can be calculated based on the relative amounts of strontium in the feed and the reagents; for the process used in this experiment this maximum isotopic dilution factor is 1834. If complete isotopic mixing throughout the simulant is assumed prior to filtration, then

this process should result in a decontamination factor for strontium-90 in real waste of (0.02)*(1834) = 37. This DF is significantly higher than required to meet the immobilization regulatory requirements.

Four hours after reagent addition was completed some of the contents of the precipitation tank were transferred to the Crossflow Test Facility and filtered under various conditions. Filtration production in about 3 wt% slurry varied between 0.026 gpm/ft^2 at an axial velocity of 10 ft/sec and transmembrane pressure of 50 psid, and 0.038 gpm/ft^2 at a slurry velocity of 18 ft/sec and transmembrane pressure of 45 psid. (There was no test specification detailing a filtration test matrix for this work, and the approved test plan simply stated that crossflow filtration would be performed to demonstrate filterability. Hindsight shows that the filtration conditions chosen by the task leader were not the best to obtain definitive data in the ranges matching current planned plant operation.)

After the filtration data was collected with dilute slurry, the slurry was dewatered continuously for several days. The inventory in the crossflow filter slurry loop was maintained between 70 and 90 liters by transferring from the precipitation tank whenever necessary. The filtrate production rate after about 10 hours of dewatering was about 0.033 gpm/ft^2 of filter area at a slurry loop velocity of 16 ft/sec and a transmembrane pressure of 45 psid. Dewatering continued until the slurry volume was reduced from 764 liters to about 70. The filtrate production rate was about 0.018 gpm/ft^2 at V = 15.4 ft/sec and TMP = 49.0 psid with the concentrated slurry. (Note: all flowrates are corrected to a filtration temperature of 25 ^oC.)

The filtrate collected from slurry precipitated with this process appeared to be fairly stable. After several months of storage some solids were formed, but there were very little solids formed in filtrate allowed to stand a day or two.

1.0 SUMMARY OF TESTING

1.1 Objectives

The Task Plan (1) states the objectives of this Pilot Scale Test Program as follows:

- Design, fabricate and install in building 786-A Pilot Scale components for the RPP Ultrafiltration System capable of processing envelope C waste simulant batches of about 650 liters through the precipitation reaction and coupled crossflow filter operations under varying reaction conditions.
- Precipitate and filter a series of batches at varying conditions to examine the effect of feed material, reaction temperature, degree of mixing, and amount and timing of reagent addition. The pilot scale work was intended to provide data that could be compared to the very small, well mixed actual waste precipitation experiments, and to the slightly larger actual waste and simulant filtration studies.
- Specifically, test Batch #2 (AN-107 waste simulant with caustic addition) under the following reaction conditions:
  1. Reaction Temperature of $20 \pm 2^{o}C$,
  2. Maximum mechanical agitator speed to ensure uniform mixing in Precipitate Tank,
  3. Addition of Sodium Hydroxide to make a 1M increase in the OH^- concentration,
  4. Addition of 1M Strontium Nitrate to reach a 0.075 M concentration in the treated slurry, followed by the addition of 1M Sodium Permanganate to reach a 0.05 M concentration in the treated slurry (most of the strontium and manganese will form solids during the precipitation reaction),
  5. Ten minutes time between reagent additions,
  6. Reagent addition at a rate of 8 liters per minute,
  7. Four hours reaction time before filtration in the Crossflow Test Rig.
- Analyze liquid, solid and Precipitate Tank vapor samples to determine:
  1. Decontamination factors (DF) for strontium and each of the lanthanide surrogates added,
  2. If volatile/flammable gases are produced by the precipitation reaction,
  3. Filterability of the precipitated waste simulant slurry,
  4. If post-filtration precipitation occurs.

1.2 Conduct of Testing

The size of Batch #2 at 634 liters is approximately 1/300 scale of the full size RPP Ultrafiltration Feed Vessel batch to be precipitated by the Waste Treatment and Immobilization Plant Pretreatment Ultrafiltration System. The plant plans to use pulse jet mixers that will not require maintenance for the life of the plant, but also may not provide the vigorous mixing provided by a mechanical agitator. Since it is not possible to conduct the small real waste experiments with pulse jet mixing, they were done under well mixed conditions. A mechanical agitator was mounted vertically inside the baffled Pilot Scale Precipitate Tank to provide uniform and vigorous mixing for Batch #2. A future batch will be run with with a pulse jet mixer to help evaluate the effect of mixing on the precipitation. The AN-107 simulant used in Batch #2 was a

non-radioactive recipe of metal salts, organic compounds, entrained solids, and lanthanide surrogates (15).

The AN-107 simulant in the Precipitate Tank was maintained at the reaction temperature of 20 ^{o}C with the maximum agitation possible without splashing or vortex formation. Nineteen molar (50 wt%) sodium hydroxide (caustic) was added in sufficient quantity to raise the free hydroxide concentration to 1 M in the resultant mixture. One molar strontium nitrate was added at eight liters/minute, followed ten minutes later by the addition of one molar sodium permanganate at eight liters/min. Sufficient reagents were added to increase the concentration in the precipitation tank mathematically to 0.075 M in strontium and 0.05 M in manganese. Several one-liter slurry samples were taken throughout an eight-hour period. Vapor samples were taken six inches above the liquid surface during the reaction. These samples were analyzed to determine the concentration of analytes in the liquids, solids and gases produced by the precipitate reaction. Filterability of the precipitated slurry was determined by measuring the filtrate production rates while operating the crossflow filter under varying conditions of slurry flow and filter transmembrane pressure. One-liter filtrate samples were taken from the Filtrate Loop on the Crossflow Filter Test Rig to be analyzed by Lasentec particle analysis for evidence of post-filtration solids formation.

1.3 Results and Performance Against Objectives

The Pilot Scale Precipitation Test Facility established the test conditions and processed the AN-107 simulant to produce the samples required to determine the DF values for strontium and each of the lanthanide surrogates and to determine if volatile gases were produced by the precipitation reaction. The Crossflow Filter was operated at various flows and filter pressures to demonstrate filterability and to obtain samples for evaluation of post-filtration solid formation.

The solids filtered out of one-liter samples of the precipitation tank contents increased from 4.0 grams before precipitation to about 45 grams after precipitation, about an 11-fold increase. The crossflow filter was able to dewater the slurry at the rate of 0.033 gpm/ft^2 of filter area with a 16 ft/sec axial velocity and 45 psid transmembrane pressure when the solids content was about 3 wt%. The filtrate production dropped off to about 0.018 gpm/ft^2 with a 15.4 ft/sec axial velocity and 49 psid transmembrane pressure after the slurry had been concentrated from 762 liters to about 70 liters.

The analysis of samples taken before and after the precipitation reaction of the AN-107 simulant in Batch #2 indicate a significant reduction in the amount of dissolved transuranic surrogate elements in the solution. The addition of a substantial amount of aqueous strontium during the processing raised the slurry up to the saturation point, but most of the added strontium was converted to a solid that could be filtered out. Prior work by Nash et al. (11) indicates that complete isotopic mixing occurs even though the strontium carbonate precipitates very rapidly. This implies a very rapid dynamic equilibrium allowing the strontium atoms in solution and the precipitated strontium atoms to exchange. This is the desired result since the removal of radioactive strontium is accomplished by isotopic dilution with the non-radioactive strontium added during processing.

These results from the Sr/TRU precipitation of AN-107 simulant in Batch #2 are within the range achieved with actual AN-102 waste. The Sr/TRU removal system performed as expected to remove aqueous strontium and transuranic surrogate elements as solids from the AN-107 simulant. The addition of strong caustic to increase the simulant concentration by 1 M NaOH before the addition of precipitating reagents reduced the removal of strontium slightly but increased the removal of cerium and lanthanum as compared to the Batch #1 results (20).

Vapor samples were also collected and analyzed for volatile gases evolving near the liquid surface. No trace of volatile gases was found.

Filtration was started about three hours after all reagents were added. Samples of filtrate were collected at various times during the filtration of the slurry and allowed to stand for about 20 hours before being examined with a particle size analyzer. The filtrate collected from slurry precipitated with this process appeared to be fairly stable. After several months of storage some solids were formed, but there were very few solids formed in filtrate allowed to stand a day or two. The purpose of the particle size analysis was to determine if post-filtration solid formation occurred or not. Since the shape of the particles was unknown and no standard for calibration existed, the analysis could not provide quantitative data regarding wt% solids.

1.4 Quality Assurance Requirements

A Test Specification was not written specifically for the pilot precipitation work. The approved Task Technical and Quality Assurance Plan (1) specified the WSRC QA requirements that would be applied. These requirements were followed.

1.5 Issues

1.5.1 Excess EDTA in simulant

The calculations used in the formulation sheet submitted to the vendor for preparation of the AN-107 supernatant simulant presumed use of disodium ethylenediaminetetraacetic (EDTA) acid dihydrate, but the chemical formula specified on the sheet did not include the two waters of hydration. The compound in question is only available as the dihydrate. The vendor made the appropriate adjustment to use the dihydrate material based upon the specified chemical formula and hence the shipped material appeared to meet the requested recipe, but it actually contained 12% additional EDTA. The error was an internal one made when the simulant recipe sheet was prepared, it should have included the two waters of hydration in the reagent formula because this is what was used in the calculations and included in the approved recipe.

The vendor was given a recipe to follow that included the mass and order of addition of each reagent in the simulant recipe, including the chemical formula of the reagent to use. It did not include the molecular weights of the reagents used in the calculations.

The simulant received was not analyzed because it represented only a portion of the final recipe. The remaining reagents and entrained solids were added to the simulant in the precipitate reactor prior to the start of the pilot run. Following completion of the additions, a final simulant sample was taken and submitted for analysis. Since the EDTA method is one of the more difficult

analyses, it was not received for some time following the pilot experiments. This analysis is only good to ± 10%, thus the preparation error was within the combined experimental and reagent purity uncertainty ($Na_2EDTA{\cdot}2H_2O$ is not a primary standard material) and would not have been detected had the measurement been received prior to the start of precipitation.

The increased level of EDTA would result in greater Sr solubility in the simulant and potentially a lower decontamination factor. Since the EDTA measurements in the actual waste samples used to prepare the simulant recipe differ by ±20%(one standard deviation), the uncertainty in what the actual value should be exceeds the discrepancy found in the simulant preparation. The experimentally calculated Sr DF exceeds the process requirements, so the impact appears to be negligible.

2.0 CD-ROM ENCLOSURES

No CD-ROM enclosures are planned for this report.

3.0 INTRODUCTION

3.1 Background & Test Objectives

The River Protection Project (RPP) is an effort by DOE to process approximately 190 million curies in 54 million gallons of highly radioactive and mixed hazardous waste stored in underground storage tanks at the Hanford site. The tank waste includes solids (sludge), liquids (supernate), and salt cake (dried salts that will dissolve in water forming supernate). The waste tanks will be remediated through treatment and immobilization to protect the environment and meet regulatory requirements. DOE determined that the preferred alternative to remediate the Hanford Tank Waste is to:

- Pretreat the waste to separate it into two fractions, Low-Activity Waste (LAW) and High-Level Waste (HLW);
- Immobilize the LAW for on-site disposal; and
- Immobilize the HLW for ultimate disposal in a National repository.

LAW is a mixed, characteristic, and listed waste regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), and must meet certain treatment standards and performance standards for on-site disposal of the waste form. LAW is comprised of the tank waste liquids (and dissolved salt cake) containing the bulk of the tank waste chemicals and certain radionuclides (e.g., cesium, technetium, strontium and transuranics) that must be at least partially removed prior to immobilizing the waste. The Sr/TRU is precipitated by the addition of strontium nitrate and sodium permanganate. The Sr/TRU precipitate and entrained solids are collected by filtration with the concentrated product routed to high level waste (HLW) for vitrification.

HLW is comprised of the long half-life elements contained in the tank waste solids and high activity radionuclides separated from the LAW fraction. HLW is a mixed, characteristic, and listed waste regulated under RCRA, and must meet specific treatment and performance standards for storage and repository disposal of the final waste form.

The scope of SRTC pilot scale precipitation testing per Test Scoping Statement S-51 is to demonstrate operability and determine throughput for the Sr/TRU precipitation process by investigating the precipitation process with strontium nitrate and sodium permanganate on a significantly larger scale than has been done previously. Eight batches of simulated waste were orginally scheduled for processing through the Pilot Scale Precipitation Test Facility and coupled Crossflow Filter Test Rig under various process parameters including those of temperature, reagent addition rate, and mixing rates. Non-radioactive simulants of Hanford tank AN-102 and AN-107 wastes will be used. Results from this testing will be compared to bench-scale testing previously performed with real and simulated wastes. This report deals solely with Batch #2 which utilizes AN-107 simulant.

3.2 Prior Work

Previous bench scale work by Nash et al. (10) used AN-107 simulant with additional caustic added and precipitated with 0.075 M strontium nitrate and 0.04 M sodium permanganate to produce decontamination factors of 91 for strontium, 2.8 for cerium, >4.2 for lanthanum, and 3.4 for neodymium.

Previous Sr/TRU precipitation reactions performed by Nash et al. (11) on 16.5 liters of Tank 241-AN-102 "Large C" supernatant liquid containing entrained solids indicated that strontium levels are reduced by simple isotopic dilution and strontium decontamination factors can be predicted *a priori.* Strontium decontamination factors ranging from 40 to 50 were achieved in this study. Transuranic elements including plutonium, curium, and americium were reported to have decontamination factors between 2.9 and 12.4. Some discoloration of the high sodium filtrate bottles was seen after several days, which could be attributed to trace amounts of post-filtration solid formation. Free solids were observed in the lower sodium content filtrate from washing operations after the filtrate was allowed to stand for two days.

A 1.2 liter "Small" Envelope C sample from Tank 241-AN-102 was caustic adjusted, and strontium and permanganate precipitated, as reported by Nash et al (13) to produce a filtrate product decontamination factor of 30 for Sr-90, 9.2 for Am-241, and 7.2 for Cm-244.

Previous pilot scale precipitation of an AN-107 simulant by Duignan (17) reported filtrate production rates of: 0.03 gpm/ft^2 at 8.9 ft/sec axial velocity and 32.1 psid transmembrane pressure, 0.04 gpm/ft^2 at 12.3 ft/sec and 51.1 psid, and 0.07 gpm/ft^2 at 15.4 ft/sec and 30.0 psid. He found the filtrate flux was strongly affected by the slurry velocity but only weakly by the transmembrane pressure in the 30 to 55 psid range. During dewatering of his slurry, the filtrate rate gradually decreased from about 0.07 gpm/ft^2 at 2wt% to 0.01 gpm/ft^2 at 22 wt% insoluble solids. Although not the major focus of Duignan's work, decontamination factors were calculated as follows: 69 for Sr, 20 for La, 22 for Fe, 2 for Cu and Ca, and approximately 1 for P, S, Ni, and Al.

Hallen et al (18) treated a 1.4 liter sample of diluted actual AN-107 tank waste by adding sodium hydroxide, strontium nitrate, and sodium permanganate. Target concentrations for the final treated waste were 6.0 M sodium, 1.0 M hydroxide, 0.075 M strontium, and 0.05 M permanganate. The waste was thoroughly mixed between each reagent addition. After adding the permanganate, the waste was mixed for 30 minutes at ambient conditions, then heated for 4

hours at 50 ^{o}C. Filtration was carried out in a Cell Unit Filtration (CUF) system equipped with a 0.1-μm filter element. Their filtrate sample number DF-11 had decontamination factors of 82 for Sr-90, 28 for Am-241, and 22 for Cm-242. Their composite filtration sample DF-20 supernate had decontamination factors of 78 for Sr-90, 38 for Am-241, 32 for Cm-242, and 24 for Pu-239. They reported that 74% of the neodymium was removed based on their DF-20 filtrate composite sample. Filtration was first conducted with the filtrate returned to the slurry feed tank to maintain a constant concentration. The plot of the first CUF run at 12.2 ft/sec axial velocity and 49 psid transmembrane pressure showed the filtrate flux starting at about 0.07 gpm/ft^2, rapidly dropping to 0.037 gpm/ft^2 within 10 minutes, then gradually falling off to about 0.025 gpm/ft^2 after an hour of filtration. Although they were unable to operate at 15.2 ft/sec and 50 psid because of pump wear, they concluded there would be little improvement in filtrate flux by increasing the velocity from 12.2 ft/sec to 15.2 ft/sec based on the flux increases at lower velocities. During dewatering, the flux averaged 0.021 gpm/ft^2.

Steeper and Williams (20) reported on the Batch #1 precipitation of 647 liters of AN-107 simulant without caustic adjustment at 50 ^{o}C with an addition of 1 M strontium nitrate followed 10 minutes later by an addition of 1 M sodium permanagate. Sufficient reagents were added to bring the final concentrations in the resultant slurry to 0.075 M strontium and 0.05 M manganese. Decontamination factors four hours after reagent addition were 5.2 for cerium, 8.4 for lanthanum, and 7.1 for neodymium. If complete isotopic mixing were assumed, the process would result in a decontamination factor of 1000 for strontium. Crossflow filtration achieved fluxes as high as 0.05 gpm/ft^2 with tube axial velocity of 20.8 ft/sec and a transmembrane pressure of 29.2 psid. During initial dewatering, a steady flux of 0.02 gpm/ft^2 was obtained at a velocity of about 16 ft/sec and a transmembrane pressure of about 42 psid.

4.0 EXPERIMENTAL DESCRIPTION

4.1 Pilot Scale Precipitation Test Rig

Figure 4-1 is a schematic of the Pilot Scale Precipitation Test Rig assembled in the rear of the Engineering Development Laboratory, Building 786-A. The Precipitation Test Rig was fabricated utilizing PVC and CPVC plastic pipe with tubing made of stainless steel and polypropylene. A 938 liter polypropylene Precipitate Tank with baffles is provided for the addition of the precipitating reagents. (As discussed previously, the plant is planning to precipitate in an unbaffled tank with pulse jet mixers. Our baffled tank is intended to enhance mixing to match smaller scale studies. A later batch is planned with a pulse jet mixer to evaluate the mixing issue.) The pilot scale 650 liter batch approximates a 1/300 scale of the full size batch, 48383 gallons per Bergman (16), precipitated in the Ultrafiltration Feed Vessel by the WTP Ultrafiltration System. The temperature of the batch can be controlled by pumping the Precipitate Tank contents through a recirculation loop containing an electric heater and a chilled water heat exchanger. A vertically mounted Lightnin agitator with 12 inch diameter A-310 style impeller can provide vigorous uniform mixing of the simulant in the Precipitate Tank without splashing. Both the agitator and recirculation pump have speed controllers to vary the mixing conditions.

An individual addition system including a tank, recirculation pump, and flowmeter is provided for each of the reagents. The sodium permanganate tank is opaque because the reagent is light sensitive. Typically, the reagents are mixed in the tanks by recirculating the solution at the

desired flow rate, and then the aqueous solution is valved over to the precipitation tank for addition. The strontium nitrate is added first and allowed to mix throughout the tank before adding the sodium permanganate. For Batch #2 the strontium nitrate was allowed to mix in the precipitation tank for 10 minutes prior to adding the sodium permanganate. The sodium permanganate was not standardized, but was prepared from new, sealed regent stock immediately prior to use.

A sample of the precipitation tank contents can be drawn off with a pump connected to the main recirculation loop. The take-off from the recirculation line is a thin wall, small diameter tube about a foot long installed concentrically inside the recirculation pipe and pointing into the flow. The tube and recirculation pipe are sized to have identical flow velocities at a recirculation flowrate of 9.64 gpm and a sample rate of one liter every 20 seconds. Typically, flow is established through the sample pump and returned to the recirculation loop to ensure the line is full and flushed with fresh material. The flow is then quickly valved to the collection container, then valved back to the recirculation loop when approximately one liter of sample is collected. Samples are dead-end filtered to separate the solids from the liquid portion. The solid samples are not washed before drying at 100 ^{o}C for at least eight hours or longer until the solids freely crumble.

The Precipitation Test Rig is made up of a precipitation tank and several flow loops as detailed below. It is connected to the Crossflow Test Rig via the V41 valve.

1. The Precipitation Tank Recirculation Loop includes the 938-liter Precipitation Tank with an agitator, recirculation pump, chilled water heat exchanger, and an electric heater. This loop is the primary source of AN-107 simulant samples and is used to maintain the temperature as specified in the task plan Test Matrix.

2. The Liquid Sample Loop includes a pump that takes suction from and discharges to the Precipitation Tank Recirculation Loop permitting samples to be drawn from a three-way valve.

3. The Strontium Nitrate Reagent Loop includes an 80-liter polypropylene reagent tank for the 1M strontium nitrate, a centrifugal pump, flowmeter, and a three-way valve permitting recycle for mixing, or transfer of the reagent to the Precipitation Tank.

4. The Sodium Permanganate Reagent Loop includes a covered 80-liter stainless steel reagent tank for the 1M sodium permanganate, a centrifugal pump, and a three-way valve permitting recycle for mixing, or transfer of the reagent to the Precipitation Tank.

5. The Vapor Sampling Loop includes a diaphragm pump connected to a tube through the Plexiglas Precipitation Tank cover to within six inches of the liquid surface. The discharge of the vapor sampling pump is connected to a three-way valve with tubing leading to a Tedlar vapor sample storage bag or back to the to Precipitation Tank vapor space.

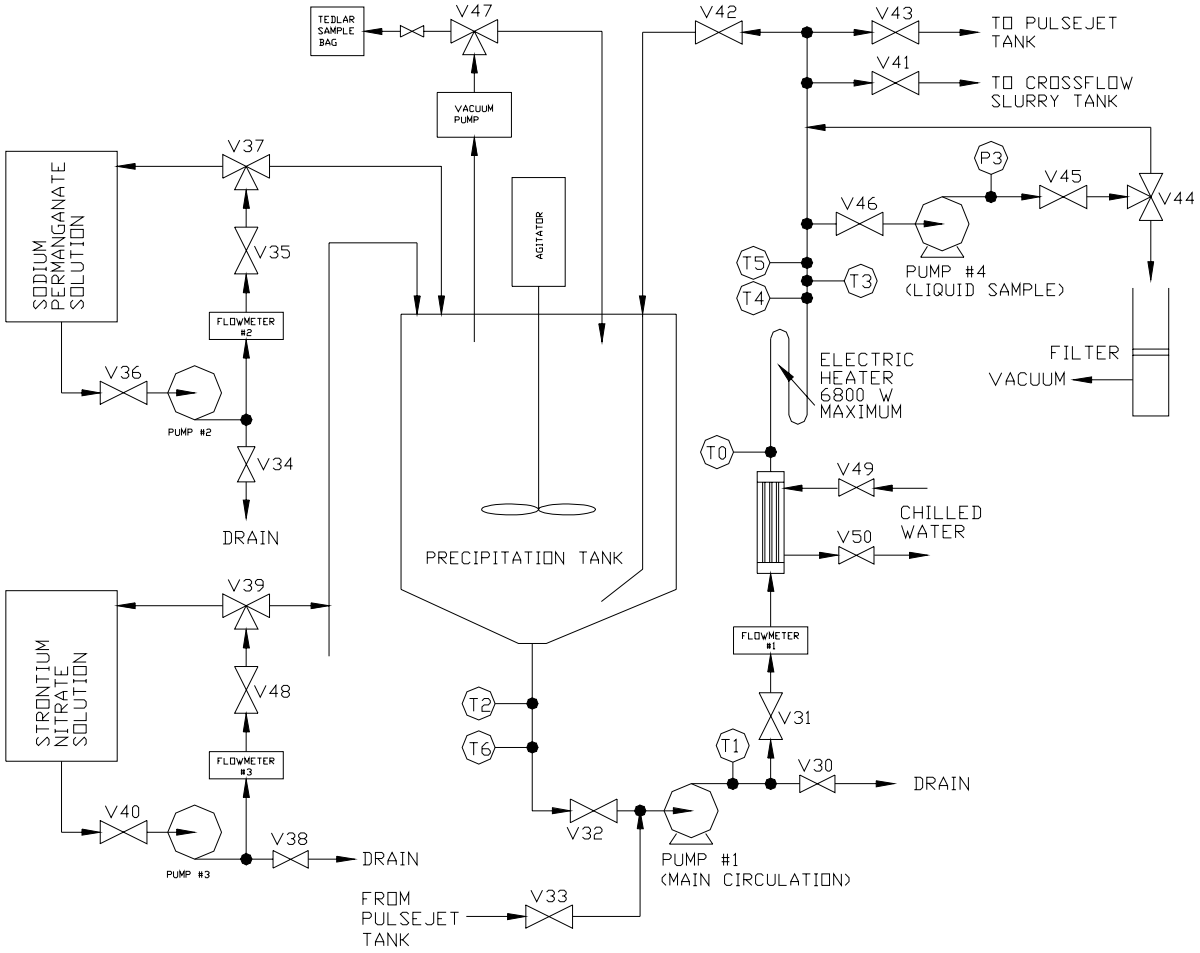


Figure 4-1 Pilot Scale Precipitation Test Setup

4.2 Pilot Scale Crossflow Filter Test Rig Description

Figure 4-2 is a schematic of the Pilot Scale Crossflow Filter Test Rig located in the rear of the Engineering Development Laboratory, Building 786-A. (Note: for this experiment only two slurry pumps were used instead of the three slurry pumps shown.) The Crossflow Filter Test Rig was fabricated utilizing PVC and CPVC plastic pipe to connect the slurry pumps and the Slurry Reservoir, and 300 series stainless steel for the remainder of the Slurry, Filtration, and Cleaning Loops. The rig is approximately 25 feet tall and is serviced by a two-level mezzanine. The Crossflow Test Rig is made up of three basic flow loops:

1. Slurry Loop, which contains two 3-hp centrifugal pumps, flowmeter, throttle valve, and crossflow filter . This loop serves as the primary flow path for circulating slurries. This loop has an internal volume of approximately 20 liters, excluding the Slurry Reservoir.

2. Filtrate Loop, which begins at the filter housing and allows the separated filtrate liquid to flow up through the backpulse piston before returning to the top of the slurry loop to close the circuit. This loop has an internal volume of approximately six liters. Note that this loop

has a three-way valve that can be positioned to draw off the filtrate to a collection tank rather than returning it to the slurry loop. This option is used during dewatering to concentrate the slurry.

3. Cleaning Loop, which enables cleaning of the crossflow filter in place without having to remove the slurry from the test rig. This loop has an internal volume of approximately 15 liters and contains a three hp centrifugal pump.

Two other flow circuits that are subsections of the other loops are the backpulse and the bypass loops:

1. The backpulse loop is part of the filtrate loop and functions to reverse the flow of filtrate back through the filter. A pulse forces filtrate back through the seven filter elements in order to knock off built-up slurry cake on the inside diameter of the porous tubes. (An air driven backpulse piston assembly controls the amount of filtrate used for a backpulse. The piston delivers a constant pressure pulse of 0.036 gal/ft^2 of filter tube inside surface area. This pulse is sufficient to generate a significant improvement in filtrate flux immediately following a backpulse generated by opening the V15 valve. The filtrate flow is interrupted for only about ten seconds during the backpulse operation. The actual backpulse has a duration of only a few seconds.)

2. The bypass loop is part of the slurry loop and routes part of the flow through valve V6 back to the reservoir. This loop is used to better control the slurry flow during slurry pump startup, improve mixing, and ensure the slurry is well-mixed when the flow through the filter needs to be stopped.

To circulate slurries and liquids, the Crossflow Filter Test Rig was equipped with three stainless steel centrifugal pumps: two for the slurry loop and one for the cleaning loop. The Slurry Loop pump motors were manually controlled by a Leeson Speedmaster Variable Frequency Drive connected to a 208-volt three-phase power supply, providing excellent control of the flow of fluid from the pump discharge. Data correlating frequency input to Slurry Loop pumps versus flow achieved was recorded in a Laboratory Notebook (4).

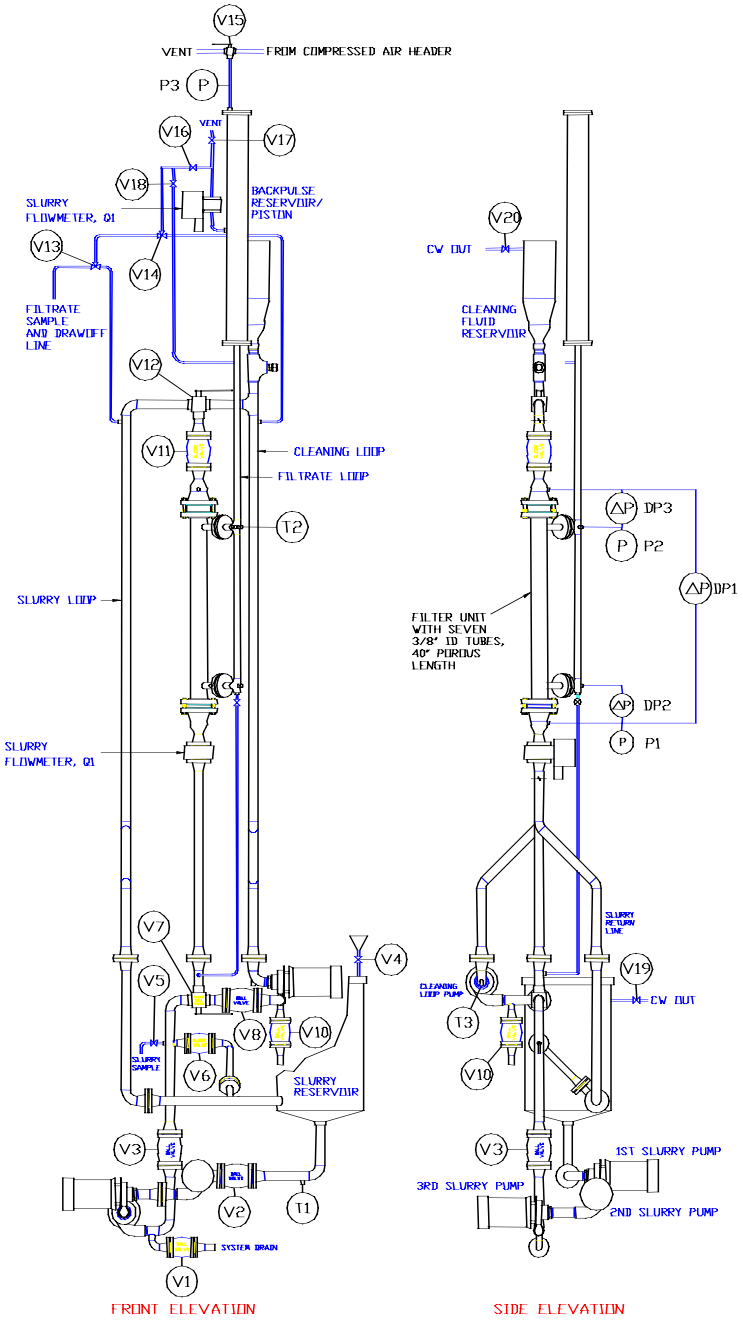


Figure 4-2 Pilot Scale Crossflow Filter Test Rig

4.2.1 Crossflow Filter

The crossflow filter is the primary component in the Crossflow Test Rig used to establish filterability of the precipitate and associated operational characteristics under various flow conditions. Successful past operating experience (9), similarity to the planned RPP filter, and availability dictated the utilization of an existing Mott crossflow filter. The specifications for the filter unit are:

Material: 316 stainless steel (sintered metal)

Porosity: nominal rated 0.1 micron

Length: 40 inches

Diameter: 3/8-inch ID, ½-inch OD

Number of tubes: 7

This filter is thoroughly described in Reference 9.

4.2.2 Slurry Reservoir

The slurry reservoir is a 110-liter plastic tank that receives feed from the RPP Pilot Precipitation System via the V41 valve. Direct addition to the slurry reservoir is made via the funnel attached to the V4 valve. The precipitated waste simulant in the slurry reservoir was kept well mixed utilizing the slurry pumps in the slurry loop drawing from the bottom of the tank.

4.3 Instrumentation and Data Acquisition System

The measurement equipment used to collect data during the precipitation reaction included that recorded by the Pilot Scale Precipitation Data Acquisition System (PSP DAS) listed in Table 4-1 and other instruments not connected to the PSP DAS.

Table 4-1 PSP DAS Channel List for Pilot Scale Precipitation Test Facility

CHAN	INSTRUMENT LABEL	INSTRUMENT LOCATION	RANGE	UNCERTAINTY	M&TE
0	HX Outlet TC-T0	HX OUTLET	0 to 100°C	±1.1°C	TR-02953
1	Recirc Pump Outlet TC-T1	PUMP DISCH	0 to 100°C	±1.2°C	TR-02948
2	Tank Bottom TC-T2	TANK	0 to 100°C	±1.3°C	TR-02947
3	Heater Outlet TC-T3	HEATER OUT	0 to 100°C	±0.9°C	TR-02955
6	Recirc Pump Flow	RECIRC FLOW	0-50gpm	±0.2 gpm	TR-03661
7	$NaMnO_4$ Tank Flow	REAGENT FLOW1	0-5gpm	±0.3 gpm	TR-03563
8	$Sr(NO_3)_2$ Tank Flow	REAGENT FLOW2	0-6.2gpm	±0.02 gpm	TR-03670
9	Ammeter	TEMPERATURE CONTROLLER	0-200 amps	*	3-1982
10	Voltmeter	TEMPERATURE CONTROLLER	0-200 volts	*	3-1981

***** Uncertainty not determined. The ammeter and voltmeter information were recorded in the raw PSP DAS data simply to show when the heater was on or off.

The uncertainty introduced through the use of the 16-bit data acquisition system (DAS) was insignificant (<0.1% reading) and was not included in the values above.

Instruments not connected to the PSP DAS, but used during the experiment include the following:

A specific gravity hydrometer to measure the ratio of the density of the slurry sample compared to the density of pure water at 60 ^{o}F (15.6 ^{o}C) with a range of 1.000 to 1.600 g/mL and an accuracy of $\pm$0.005 g/mL

A variable frequency drive (VFD) for the agitator with a range of 60 to 550 with a 5% accuracy

A VFD for the Precipitation Tank Recirculation Pump with indication from 0 to 60 Hz and an accuracy of 0.010 Hz. A PID control loop on the DAS takes input from magnetic flow meter TR-03661 and outputs a signal to the VFD to control flow in the range of 0 to 50 gpm.

A Temperature Controller connected to a 6 kW heater and two Type E thermocouples with an accuracy of $\pm$2.0^{o}C

The measurement equipment used to collect data during filtration included that recorded by the Crossflow Data Acquisition System (Xflow DAS) listed in Table 4-2 and other instruments not connected to the Xflow DAS.

Table 4-2 Xflow DAS Channel List for Crossflow Filter Test Rig

CHAN	INSTRUMENT LABEL	INSTRUMENT LOCATION	RANGE	UNCER-TAINTY	M&TE NUMBER
D I/O	V-15 Solenoid	Solenoid Control	Open or closed	*	Solenoid
0	Filtrate TC –T2	FLTRT (^{o}C)	0 to 100 ^{o}C	$\pm$1.0 ^{o}C	TR-02927
1	Cleaning Loop TC-T3	CL LOOP (^{o}C)	0 to 100 ^{o}C	$\pm$1.2 ^{o}C	TR-02930
2	Slurry Loop TC-T1	SL LOOP (^{o} C)	0 to 100 ^{o}C	$\pm$1.4 ^{o}C	TR-02929
3	Upper Ambient TC-T4	UP AMB (^{o}C)	0 to 100 ^{o}C	$\pm$1.3 ^{o}C	TR-02925
4	Bottom Ambient TC-T5	BOT AMB (^{o} C)	0 to 100 ^{o}C	$\pm$1.4 ^{o}C	TR-02926
6	Bottom DP-DP2	BOT DP (psid)	0-100 psid	$\pm$0.1 psid	TR-00532
7	Filter Pressure-P1	FLTR (psig)	0-100 psig	$\pm$0.1 psig	TR-02917
8	Filter DP-DP1	FLTR DP (psid)	0-26 psid	$\pm$0.03 psid	TR-03495
9	Top DP-DP3	TOP DP (psid)	0-100 psid	$\pm$0.8 psid	TR-03115
10	Filtrate Pressure-P2	FLTRATE (psig)	0-91 psig	$\pm$0.2psig	TR-03109
11	Piston Pressure-P3	PISTON (psig)	0-151 psig	$\pm$0.3 psig	TR-02145
12	Filter Flow-Q2	FLTR FLOW (gpm)	0-1.21 gpm	$\pm$0.01 gpm	TR-20353
13	Slurry Flow-Q1	SL FLOW (gpm)	0-100 gpm	$\pm$0.4 gpm	TR-20350
14	HI Filter Flow-Q3	FLTR FLOW (gpm)	0-5 gpm	$\pm$0.01gpm	TR-03562

* Uncertainty not applicable as the solenoid valve is either open or closed with a value of “1” or “0” respectively.

Instruments not connected to the Xflow DAS, but used during the experiment include the following:

A Type J thermocouple with accuracy of 1.1 ^{o}C used for the Sample Drying Oven with local indication, and

A VFD for each Slurry Pump manually controlled from 0 to 60 Hz with an accuracy of 0.010 Hz.

The uncertainties in the instrument readings were based on multiple point calibrations with reference standards. Calibration sheets are included in the task logbook (4).

The velocity through the crossflow filter tubes is calculated based on the slurry loop flow measured by magnetic flowmeter Q1 divided by the cross-sectional area of seven tubes with 3/8" nominal ID. The uncertainty in this calculated value is the combination of the instrument uncertainty and the uncertainty in the flow area. A typical flow in the slurry loop exceeds 10 gpm. The uncertainty in the instrument is therefore 3.6% or less. An accurate measurement of the average inside diameter of the filtrate tubes was imposible since it may vary down the length of each filter tube and may vary from tube to tube. Even measuring the diameter at the filter tube ends is difficult because of the weldments to the tube sheets. For these reasons, the uncertainty in flow area will be based on the manufacturer's stated tolerances. For a Mott 3/8" tube the diameter tolerances are stated to be +0.025 inch and –0.005 inch. The diameter of the filter tubes can presumably vary anywhere between those tolerances; therefore, for this task the diameter uncertainty will be taken as +/- 0.015 inch, or 4% of the nominal diameter. The combined uncertainty is (3.6%^2 + 4.0%^2)^1/2 = 5.4%.

The transmembrane pressure is calculated by averaging the differential pressure between the slurry side and the filtrate side at the top (DP3) and bottom (DP2) of the filter. The uncertainty for these instruments at about 40 psid is 0.74 psid or about 1.8%. The combined uncertainty would be about (1.8%^2 + 1.8%^2)^1/2 = 2.5%.

The filtrate flow is calculated based on either magnetic flowmeters Q2 or Q3, depending on the range of flow, divided by the inside surface area of the filtrate tubes. A typical flow rate is 0.5 gpm. The instrument uncertainty is about 0.014 gpm, or 2.8%. The uncertainty of the inside diameter of the filter tubes has already been addressed above. The uncertainty of the length of the filter tubes was estimated from in-house measurements as 1/8 inch, or 0.3% of the nominal 40" length. The combined uncertainty is about (2.8%^2 + 4.0%^2 + 0.3%^2)^1/2 = 4.9%.

4.4 AN-107 Simulated Waste Description

A 634-liter volume of Envelope C Tank AN-107 simulant was used for the initial feed of Batch #2. The non-radioactive AN-107 simulant recipe was chemically similar to the radioactive waste characterized in Hanford Tank AN-107 and included transition metals, complexing agents, other organic compounds and entrained solids. An approved recipe from Eibling and Nash (15) was used per the Task Plan (1). Optima Chemical was selected as the supernate vendor to supply 1300 liters of AN-107 simulant supernate (see Table 4-3).

The partial simulant obtained from Optima contained 12% more sodium EDTA than desired. (See section 1.5.3 for a more complete explanation.) Small deviations in the water content caused the volume to be about 1.5% less than specified resulting in correspondingly higher density and chemical concentrations.

Entrained solids (0.5 w%) and sodium perrhenate were added to the purchased partial supernate simulant in the Precipitate Tank at the EDL to complete the AN-107 simulant.

Surrogates for the transuranic compounds were cerium nitrate, lanthanum nitrate, and neodymium nitrate. These surrogates were selected in sufficient quantity to be comparable to those selected by Nash et al. (10) for bench scale studies. This selection assumes that the lanthanides react chemically in the same manner as the actinides. Sodium perrhenate was added as a surrogate for technetium in small quantity, based on the work of Darab and Smith (14), so that filtrate produced could later be used to demonstrate the effectiveness of cesium and technetium removal by ion exchange.

Table 4-3 Batch #2 Recipe before Precipitating Reagents added

Batch 2 Simulant before reagents were added (based on AN-107; Sr/Tru C-5.5M recipe, ref 15)

Supernate as mixed by Optima

Vessel 1			Recipe amounts for 1300 liters				Actual amounts added by Optima						No te s
			Compound	Water	Non-water		Compound	Water	Non-water				
Compounds	Formula	Formula Weight	mass, grams	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	mass, grams	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	% Extra	
Water charged to tank			260000.00	260000.00				250927.32	250927.32					
Calcium Nitrate	$Ca(NO_3)_2.4H_2O$	236.15	2838.93	865.56	1973.37	1.518	0.00925	2839.49	865.73	1973.75	1.540	0.00938	1.42	
Cerium Nitrate	$Ce(NO_3)_3.6H_2O$	434.22	133.40	33.18	100.22	0.077	0.00024	133.40	33.18	100.22	0.078	0.00024	1.40	
Cesium Nitrate	$CsNO_3$	194.91	22.25		22.25	0.017	0.00009	22.20		22.20	0.017	0.00009	1.17	
Copper Nitrate	$Cu(NO_3)_2.3H_2O$	241.6	93.30	20.85	72.45	0.056	0.00030	93.30	20.85	72.45	0.057	0.00030	1.40	
Ferric Nitrate	$Fe(NO_3)_3.9H_2O$	403.99	9967.23	3996.86	5970.37	4.593	0.01898	9965.43	3996.14	5969.29	4.656	0.01924	1.38	
Lanthanum Nitrate	$La(NO_3)_3.6H_2O$	433.01	115.64	28.84	86.80	0.067	0.00021	115.60	28.83	86.77	0.068	0.00021	1.37	
Lead nitrate	$Pb(NO_3)_2$	331.2	505.64		505.64	0.389	0.00117	505.60		505.60	0.394	0.00119	1.39	
Magnesium Nitrate	$Mg(NO_3)_2.6H_2O$	256.41	215.02	90.57	124.45	0.096	0.00065	215.00	90.56	124.44	0.097	0.00065	1.39	
Manganous Chloride	$MnCl_2.4H_2O$	197.9	1653.44	601.55	1051.89	0.809	0.00643	1653.00	601.39	1051.61	0.820	0.00652	1.37	
Neodymium Nitrate	$Nd(NO_3)_3.6H_2O$	438.34	237.60	58.54	179.06	0.138	0.00042	237.60	58.54	179.06	0.140	0.00042	1.40	
Nickel Nitrate	$Ni(NO_3)_2.6H_2O$	290.81	2141.06	795.14	1345.92	1.035	0.00566	2141.00	795.12	1345.88	1.050	0.00574	1.40	
Potassium Nitrate	KNO_3	101.11	3754.22		3754.22	2.888	0.02856	3755.75		3755.75	2.930	0.02897	1.44	
Strontium Nitrate	$Sr(NO_3)_2$	211.63	13.01		13.01	0.010	0.00005	13.00		13.00	0.010	0.00005	1.32	
Zinc Nitrate	$Zn(NO_3)_2.6H_2O$	297.47	168.04	61.01	107.03	0.082	0.00043	168.00	60.99	107.01	0.083	0.00044	1.38	
Zirconyl Nitrate	$ZrO(NO_3)_2.XH_2O$	249.23	155.92	11.27	144.65	0.111	0.00048	155.90	11.27	144.63	0.113	0.00049	1.39	
EDTA	Na_2EDTA	372.24	5917.79	572.32	5345.47	4.112	0.01223	6536.27	632.13	5904.13	4.605	0.01370	12.00	(1)
HEDTA	HEDTA	278.26	1763.87		1763.87	1.357	0.00488	1764.00		1764.00	1.376	0.00494	1.41	
Sodium Gluconate	$CH_2OH(CHOH)_4COONa$	218.14	3201.21		3201.21	2.462	0.01129	3202.36		3202.36	2.498	0.01145	1.44	
Glycolic Acid	$HOCH_2COOH$	76.05	21954.11		21954.11	16.888	0.22206	31361.38	9408.41	21952.96	17.124	0.22516	1.40	(2)
Citric Acid	$HOC(CH_2CO_2H)_2CO_2H$	192.13	7696.54		7696.54	5.920	0.03081	7697.92		7697.92	6.004	0.03125	1.42	
Nitrilotriacetic Acid	$N(CH_2COOH)_3$	191.14	464.72		464.72	0.357	0.00187	464.70		464.70	0.362	0.00190	1.40	
Iminodiacetic Acid	$HN(CH_2COOH)_2$	133.1	4923.03		4923.03	3.787	0.02845	4921.48		4921.48	3.839	0.02884	1.37	
Boric acid	H_3BO_3	61.83	163.21		163.21	0.126	0.00203	163.20		163.20	0.127	0.00206	1.40	
Sodium Chloride	NaCl	58.44	1482.80		1482.80	1.141	0.01952	1483.00		1483.00	1.157	0.01979	1.42	
Sodium Fluoride	NaF	41.99	239.66		239.66	0.184	0.00439	239.70		239.70	0.187	0.00445	1.42	
Sodium Chromate	Na_2CrO_4	161.97	446.98		446.98	0.344	0.00212	447.00		447.00	0.349	0.00215	1.41	
Sodium Sulfate	Na_2SO_4	142.04	9945.79		9945.79	7.651	0.05386	9947.28		9947.28	7.759	0.05463	1.42	
Potassium Molybdate	K_2MoO_4	238.14	72.45		72.45	0.056	0.00023	72.50		72.50	0.057	0.00024	1.47	
Total Weights in vessel 1			340286.86	267135.70	73151.16			341242.36	267530.47	73711.89				

Notes (1) The formula in the recipe sent to Optima showed anhydrous EDTA, Na_2EDTA. Optima added the dihydride, so calculated they needed 14.44 lbs of the dihydride to get 14.41*453.59*[336.24/(336.24+2*18)] = 5917 g of anhydrous Na_2EDTA. They also decreased the amount of water they used by 14.41*453.59*(2*18)/(336.24+2*18) = 633 g. Unknown to Optima, the recipe was based on adding 5917 g of the dihydride, so Optima's adjustments actually caused the addition of too much EDTA.

(2) Optima substituted 70 w% Glycolic Acid for the Anhydrous Glycolic Acid shown in the recipe.

Batch 2 Simulant before reagents were added (based on AN-107; Sr/Tru C-5.5M recipe, ref 15)

Vessel 2 (added to contents of vessel 1 after mixing)			Recipe amounts for 1300 liters				Actual amounts added by Optima					Notes
			Compound	Water	Non-water		Compound	Water	Non-water			
Compounds	Formula	Formula Weight	mass, grams	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	% Extra	
Water charged to tank			260000.00	260000.00				163610.78	163610.78				
Water used to clean tank & flush lines								75296.34	75296.34				
Sodium Hydroxide	NaOH	40	20596.52		20596.52	15.843	0.39609	41617.10	20808.55	16.231	0.40577	2.45	(3)
Aluminum Nitrate	$Al(NO_3)_3.9H_2O$	375.13	4375.31	1889.48	2485.83	1.912	0.00897	7293.77	4806.59	2487.17	1.940	0.00910	1.46 (6)
Sodium Phosphate	$Na_3PO_4.12H_2O$	380.12	3622.08	2058.22	1563.86	1.203	0.00733	1560.36		1560.36	1.217	0.00742	1.17 (4)
Sodium Formate	NaHCOO	68.01	12809.40		12809.40	9.853	0.14488	12809.45		12809.45	9.992	0.14691	1.40
Sodium Acetate	$NaC_2H_3O_2.3H_2O$	136.08	1931.56	766.49	1165.07	0.896	0.01092	1165.73		1165.73	0.909	0.01108	1.46 (5)
Sodium Oxalate	$Na_2C_2O_4$	134	1025.21		1025.21	0.789	0.00589	1025.12		1025.12	0.800	0.00597	1.39
Sodium Carbonate	Na_2CO_3	105.99	120865.25		120865.25	92.973	0.87719	120882.37		120882.37	94.290	0.88961	1.42
Total Weights added from vessel 2			425225.33	264714.19	160511.14			425261.02	264522.26	160738.76			

Vessel 3 (added to combined vessel 1 and 2 after mixing)			Recipe amounts for 1300 liters				Actual amounts added by Optima					Notes
			Compound	Water	Non-water		Compound	Water	Non-water			
Compounds	Formula	Formula Weight	mass, grams	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	% Extra	
Water charged to tank								478539.98	478539.98				
Water used to clean tank & flush hose								37648.17	37648.17				
Water for mixing Nitrate & Nitrite			130000.00	130000.00									
Water added at end to bring volume up to total			404364.00	404364.00									
Sodium Nitrate	$NaNO_3$	84.99	242371.35		242371.35	186.440	2.19366	242354.42		242354.42	189.040	2.22426	1.39
Sodium Nitrite	$NaNO_2$	69	74589.14		74589.14	57.376	0.83154	74570.59		74570.59	58.166	0.84299	1.38
Total Weights added to previous mixture			851324.49	534364.00	316960.49			833113.16	516188.15	316925.01			
Overall totals			1616836.68	1066213.88	550622.80			1599616.54	1048240.88	551375.66			
Volume, ml			1300000.00					1282027.00					(8)
Calculated density, gm/ml			1.2437					1.2477					

Notes: (3) Optima substituted 50 w% Sodium Hydroxide for the Anhydrous Sodium Hydroxide shown in the recipe.

(4) Optima substituted Anhydrous Sodium Phosphate for the hydrated Sodium Phosphate shown in the recipe.

(5) Optima substituted Anhydrous Sodium Acetate for the hydrated Sodium Acetate shown in the recipe.

(6) The aluminum nitrate was added as a 60 w% of $Al(NO_3)_3.9H_2O$ in water, or a 34.1 w% solution of alumina nitrate. Optima added 7294*0.341 = 2487 grams of aluminum nitrate and 7294*0.659 = 4807 grams of water.

(7) One of the last steps in the Optima procedure called for flushing out the tank and hoses with 40 lb of water and loading it into a drum. This drum was not delivered to SRS, making the simulant 40*453.95 = 18158 g short of water.

(8) Optima volume was estimated by substracting 1 ml per gram of water not added to the supernate.

Batch 2 Simulant before reagents were added (based on AN-107; Sr/Tru C-5.5M recipe, ref 15)

Entrained Solids and Perrhenate added in EDL (10)			Recipe amounts for 650 liters					Actual amounts added by EDL						Notes
			Compound	Water	Non-water			Compound	Water	Non-water				
Compounds	Formula	Formula Weight	mass, grams	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	mass, grams	mass, grams	mass, grams	Conc., mg/mL	Conc., Molar	% Extra	
Sodium Perrhenate	$NaReO_4$	273.2	11.16		11.16	0.009	0.00003	11.16		11.16	0.009	0.00003	1.40	
Aluminum Oxide	Al_2O_3	101.96	225.30		225.30	0.173	0.00170	225.2		225.20	0.176	0.00172	1.36	(9)
Calcium Phosphate	$Ca_3(PO_4)_2$	310.18	2.93		2.93	0.002	0.00001	2.93		2.93	0.002	0.00001	1.40	
Chromic Oxide	Cr_2O_3	151.99	15.47		15.47	0.012	0.00008	15.47		15.47	0.012	0.00008	1.40	
Ferric Oxide	Fe_2O_3	159.69	192.75		192.75	0.148	0.00093	192.7		192.70	0.150	0.00094	1.38	
Manganese Dioxide	MnO_2	86.94	124.78		124.78	0.096	0.00110	124.6		124.60	0.097	0.00112	1.26	
Silicon Dioxide	SiO_2	60.09	21.10		21.10	0.016	0.00027	21.09		21.09	0.016	0.00027	1.35	(9)
Sodium Oxalate	$Na_2C_2O_4$	134	1381.39		1381.39	1.063	0.00793	1381.4		1381.40	1.078	0.00804	1.40	
Sodium Carbonate	$Na_2CO_3.H_2O$	124.01	1306.38	189.62	1116.76	0.859	0.00810	1306.4	189.62	1116.78	0.871	0.00822	1.40	
Sodium Fluoride	NaF	41.99	202.10		202.10	0.155	0.00370	202.1		202.10	0.158	0.00375	1.40	
Sodium Sulfate	$Na_2SO_4.10H_2O$	322.2	166.97	93.28	73.69	0.057	0.00040	167	93.30	73.70	0.057	0.00040	1.42	
Sodium Phosphate	$Na_3PO_4.12H_2O$	380.12	373.97	212.51	161.46	0.124	0.00076	374	212.52	161.48	0.126	0.00077	1.41	
Total mass of compounds added to Batch 1 simulant			4024.30	495.41	3528.89			4024.05	495.44	3528.61				
Total mass of Optima simulant used in Batch 1, grams								791667						
Calculated volume of Optima simulant (based on mass used and calculated density), ml								634488						
Total mass of Optima simulant and EDL additions, grams								795691						
Calculated density of final simulant (neglecting small volume increase due to adding solids), gm/ml								1.2541						

Notes: (9) The recipe in reference 15 specified 0.1754 moles of sodium aluminosilicate, $Na_2.Al_2O_3.(SiO_2)_2.5H_2O$ that was unavailable from suppliers. The author of reference 15 was contacted and a substitute of 2*0.1754 = 0.3058 moles = 21.08 grams of SiO2 and 0.1754 moles = 17.88 grams of Al_2O_3 was substituted. The 17.88 grams of Al_2O_3 was added to the 207.38 grams Al_2O_3 in the original entrained solids recipe for a total of 225.26 grams Al_2O_3 to be added.

(10) All solids added were less than or equal to 5 microns in size

4.5.1 Test Procedure Summary

Time	M/D, 2001 UOS	Action	Condition/Comment
12:45	10/11	Filled Precipitate Tank w/AN-107 simulant supernate, solids and Sodium Perrhenate	Well mixed at 20 ^{o}C and Task Plan Conditions for Batch #2
08:54	10/23	Started caustic addition of 34 liters at 19 M NaOH to raise NaOH concentration by 1M.	Test Conditions for one hour before caustic addition include Recirculation Pump flow 9.64 gpm, Agitator 327.6 rpm, TCs 20 ^{o}C.
09:15	10/23	Caustic adjustment completed and first Slurry Sample (1L+1S) taken	Sample vacuum filtered and solids before reagent addition completed.
09:25	10/23	Started strontium nitrate addition	Addition complete at 09:32
09:43	10/23	Started sodium permanganate addition	Addition complete at 09:47
09:47	10/23	First vapor sample 1G completed	Sample to ADS for analysis.
09:54	10/23	Second Slurry Sample (2L+2S) taken at 7.5 minutes after reagent addition completed	Sample vacuum filtered and solids dried
09:57	10/23	Second vapor sample 2G completed	Sample to ADS for Analysis
10:03	10/23	Third Slurry Sample (3L+3S) taken at 15 minutes after reagent addition completed	Sample vacuum filtered and solids dried
10:18	10/23	Fourth Slurry Sample (4L+4S) taken at 30 minutes after reagent addition completed	Sample vacuum filtered and solids dried
10:48	10/23	Fifth Slurry Sample (5L+5S) taken at 60 minutes after reagent addition completed	Sample vacuum filtered and solids dried
11:00	10/23	Third vapor sample 3G completed	Sample to ADS for Analysis
11:47	10/23	Sixth Slurry Sample (6L+6S) taken at 120 minutes after reagent addition completed	Sample vacuum filtered and solids dried
12:45	10/23	Seventh Slurry Sample (7L+7S) taken at 180 minutes after reagent addition completed	Sample vacuum filtered and solids dried
12:55	10/23	Fourth vapor sample 4G completed	Sample to ADS for Analysis
13:00	10/23	First filtrate sample (PF2-1) taken for Lasentec.	3.2 hours reaction time after reagent addition completed
13:44	10/23	Eighth Slurry Sample (8L+8S) taken at 240 minutes after reagent addition completed	Sample vacuum filtered and solids dried
14:44	10/23	Filled Crossflow Filter Slurry Reservoir and started filtering	V=10.25 ft/sec, TMP=48.74 psid
15:44	10/23	Ninth Slurry Sample (9L+9S) taken at 360 minutes after reagent addition completed	Sample vacuum filtered and solids dried
17:44	10/23	Tenth Slurry Sample (10L+10S) taken at 480 minutes after reagent addition completed.	Sample vacuum filtered and solids dried.
00:15	10/24	Took second filtrate sample (PF2-2) for Lasentec.	14.5 hours reaction time after reagent addition completed
07:30	10/24	Took third filtrate sample (PF2-3) for Lasentec.	21.7 hours reaction time after reagent addition completed
16:00	10/24	Took fourth filtrate sample (PF2-4) for Lasentec.	30.2 hours reaction time after reagent addition completed
00:05	10/25	Took fifth filtrate sample (PF2-5) for Lasentec.	38.3 hours reaction time after reagent addition completed
07:30	10/25	Took sixth filtrate sample (PF2-6) for Lasentec.	45.7 hours reaction time after reagent addition completed
14:00	11/13	Completed pulling a 100 ml ADS Sample 172182 from AN-107 Slurry Drum Batch #2	Sample submitted to ADS for Microtrac Analysis of slurry solids
11:30	11/20	Completed pulling several liters of Coliwasa samples from the Batch #2 Filtrate in drums #2 and #3 in storage for ADS Sample 172483 solids analysis	The samples collected were vacuum filtered and dried to produce approximately one gram of solids for XRD, ICP-MS and ICP-ES analysis.
11:00	01/22 2002	Completed pulling a one liter liquid sample from AN-107 Batch #2 Filtrate Drum for Analysis by the Mobile Lab	ICP-ES elemental analysis performed for comparison with ADS 170454

4.5.2 Test Procedure Details

Details of the test execution can be found in the Test Procedure (7) and the accompanying Operational Instructions (8), which are also listed in the Laboratory Notebook (4). AN-107 supernate simulant (634 liters) at 5.5 M sodium concentration and 1.248 specific gravity, remaining metal complexants, and entrained solids were added to a cleaned and empty Precipitate Tank. The measured pH of Batch #2 was 10 with a free OH^- concentration of 0.04 M. (Note: this free OH^- measurement was made with an early method using titration to a fixed pH. This early method has since been shown to be fairly inaccurate when applied to the complicated RPP simulants.) The PSP DAS data file in Appendix B was started, the Recirculation Pump was set to provide a flow of 9.64 gpm in the Recirculation Loop, and the Temperature Controller set at 20 ^oC. The agitator speed was set at 327 rpm to produce vigorous mixing, and the precipitate tank contents were maintained for one hour at 20 ^oC prior to reagent addition.

Thirty four liters of 50 w% (19M) caustic was added to the tank and allowed to mix thoroughly. The Liquid Sample Loop flow was established with the liquid sample pump discharge throttled to provide a one-liter sample in 20 seconds. The first one-liter slurry sample of Batch #2 was collected. The sample was poured into a 0.2-micron nylon filter cup for vacuum filtering to separate the liquid and solids. The solids were not washed before drying at 100 ^oC for at least eight hours or longer until the solids freely crumbled. After the solids in the filter cup were dried, they were removed, placed in sample vials and weighed prior to transport to ADS for analysis. The analytical results are provided in Appendix A.

A 56.3-liter batch of 1.0 M strontium nitrate solution in DIF water was mixed in the PPE Reagent Tank and a 38.1-liter batch of 1.0 M sodium permanganate solution in DIF water was mixed in the SS Reagent Tank. (These volumes of the reagents were sufficient to bring the strontium concentration to 0.075 M and the manganese concentration to 0.05 M in the resultant slurry.) The reagent throttle valves were adjusted to establish a recycle of 2.1 gpm (8 liters/min). The strontium nitrate was valved to the precipitation tank first, followed by the sodium permanganate eleven minutes later. Immediately following the sodium permanganate addition, the first vapor sample was taken and transported to ADS for analysis. Subsequently, slurry and vapor samples were obtained from the Precipitate System as required by the Test Procedure (7). The results of all ADS analyses are provided in Appendix A.

About 90 liters of the precipitation tank contents were pumped to the Crossflow Filter Slurry Reservoir. The chiller was then started to maintain the slurry at about 25 ^oC. The Xflow DAS file in Appendix C was started, and the slurry pumps were started to fill the Slurry and Filtrate Loops. Filtration data was taken for various slurry flows up to 18 ft/sec and transmembrane pressures up to 50 psid. The slurry flows and transmembrane pressure were varied by adjusting the slurry pump VFD and adjusting V3 and V11 valves controlling the inlet and outlet of the crossflow filter. The crossflow slurry samples were taken from the V5 valve on the Slurry Loop. Filtrate from the filter was collected in polydrums.

Filtration was conducted continuously until the 762 liter batch was concentrated to about 70 liters. The inventory in the crossflow filter slurry loop was maintained between 70 and 90 liters by transferring slurry from the precipitation tank whenever necessary. The contents of the

precipitation tank were agitated vigorously prior to transfers and the precipitation recirculation pump was then operated to transfer material to the crossflow filter slurry reservoir.

About three hours after reagent addition was completed, a one-liter filtrate sample was collected in a dark gray container for Lasentec particle analysis and observation for post-filtration precipitation. Five more one-liter filtrate samples were taken for Lasentec analysis at later times. In addition to samples taken for Lasentec analysis, two more samples of filtrate were subsequently taken from the filtrate drum about three weeks after the test to characterize post-filtration solids. ADS sample 172182 consisting of 100 mL of slurry was obtained from the concentrated slurry drum for Microtrac analysis of particle size distribution. Coliwasa (Composite Liquid Waste Samplers) were used repeatedly to obtain representative samples from the filtrate drum. These samples were combined, filtered through a 0.2-micron nylon filter cup, and the solids dried for analysis (sample 172484). Results are provided in Appendix A.

A backpulse was performed prior to shutdown to drain both test rigs. The slurry contents of the crossflow rig were drained into a drum labeled as Batch #2 slurry. Cleaning operations on the test rigs commenced in accordance with Operating Instructions (8). After cleaning, a DIF water run was made to check the effectiveness of the cleaning operation.

5.0 DISCUSSION OF RESULTS

The solids filtered out of one-liter samples of the precipitation tank contents increased from 4.0 grams before precipitation to about 45 grams after precipitation, about a 11-fold increase. Based on a filtrate density of 1.24, the maximum the insoluble solids content after precipitation could have been is 45 gms/(1240 + 45) gms*100 % = 3.5 w%. Since some of the solids collected were actually dissolved salts that were left behind when the interstitial liquid was evaporated, the actual insoluble solids content is less than this maximum.

The effectiveness of the AN-107 simulant Sr/TRU precipitation reaction with 0.075 M strontium nitrate and 0.05 M sodium permanganate after addition of 1 M additional caustic was determined by the reduction in concentration of strontium and non-radioactive surrogate TRU elements Ce, La, and Nd in the slurry liquid. Nash et al. (11) report that the Sr/TRU reaction with radioactive Large C waste from Hanford Tanks AN-107 and AN-102 reduces strontium-90 by isotopic dilution with non-radioactive strontium nitrate addition through precipitation of strontium carbonate, with permanganate precipitating lanthanides (and TRU elements). Permanganate destroys organics that form soluble complexes with TRU elements. The AN-107 simulant initially added into the Precipitate Tank by the recipe contained non-radioactive lanthanum, neodymium, and cerium as surrogates for the TRU elements along with a very small quantity of strontium. The concentrations of these elements in the liquid as a function of time after reagent addition were determined by ADS as shown in Appendix A. In order to make an accurate comparison, the concentrations after reagent additions need to be corrected for the effect of dilution by the reagents. To make this correction, all concentrations after reagents were added have been multiplied by the appropriate mass dilution factor MD:

$$MD = \frac{(\text{mass of simulant + mass of all additions})}{(\text{mass of simulant})}$$

After just the caustic addition the mass dilution factor is MD_{NaOH} = (795691 grams simulant + 51860 grams caustic) / (795691 grams simulant) = 1.07. After all reagents are added the mass dilution factor is $MD_{All\ Reagents}$ = (795691 grams + 51860 grams caustic + 65275 grams strontium nitrate + 42660 grams sodium permanganate) / (795691 grams simulant) = 1.20.

Table 5-1 reports the ADS analysis of the Batch #2 liquid with concentrations corrected for dilution due to reagent addition. EDL sample 1L is the liquid portion of the slurry sample collected from the precipitation tank after caustic addition but prior to adding the reagents. EDL samples 2L through 8L are the liquid portions of the precipitation tank samples collected from one-eighth to four hours after the reagent additions were completed. Since the initial Batch #2 simulant was made up essentially identically to the initial Batch #1 simulant, a sample was not collected. The values reported as EDL sample 0L are actually the analytical results from the initial simulant sample of the Batch #1 experiment. After three hours of reaction time, a portion of the precipitation tank contents was transferred to the Crossflow Filter Rig. EDL samples 9L and 10L are the liquid portions of the slurry samples collected from the Crossflow Filter Rig six and eight hours after the reagent additions were completed. (The amount of concentration due to filtering was insignificant at the time these samples were collected.) There is also a substantial step change in strontium concentration when the strontium nitrate is added. The rapid addition and reaction was not caught by any sample; however, by calculation, the dilution-corrected concentration for strontium would approach 6200 μg/gm if the strontium remained in solution.

Table 5-1 Concentration of Selected Elements in Batch #2 Liquid Samples

BATCH #2 ANALYSIS WITH CONCENTRATIONS CORRECTED FOR MASS DILUTION													
Initial Mass of Simulant, grams									795691				
Caustic Adjust:	34	liters @	1.5253	grams/ml					51860				
MD_{Na} = ($G_{initial}$ + G_{NaOH}) / ($G_{initial}$)									1.07				
Reagents:	11910	grams strontium nitrate in				53365	grams water		65275				
	5389	grams sodium permanganate in				37271	grams water		42660				
MD = ($G_{initial}$ + $G_{NaOH+reagents}$) / ($G_{initial}$)									1.20				
		Liquid Analysis (µg/gm)											
EDL Sample no.		0L	1L*MD_{Na}	2L*MD	3L*MD	4L*MD	5L*MD	6L*MD	7L*MD	8L*MD	9L*MD	10L*MD	
Time after Reagent Add (hrs)		0	0	0.125	0.25	0.5	1	2	3	4	6	8	2184
ADS Sample No.		169600	170445	170446	170447	170448	170449	170450	170451	170452	170453	170454	
Identity	Method	(1)	(2)										(3)
K	AAK	1620	1404	1427	1392	1407	1345	1383	1389	1418	1464	1403	
CO_3^{2-}		34411	44294	39400	39128	40227	38201	39028	39010	39571	40425	38336	
Free OH^-		483	10674	10466	10304	10547	10158	10661	10418	10448	10542	10094	
Total OH^-		10291	23781	22812	22682	22634	22018	22034	22358	22584	22758	22990	
Na	AANA	95829	118017	120293	118325	105174	100869	108601	107793	110822	117913	108286	
TOC		15036	12299	12370	11951	11760	12370	12104	12256	12746	13115	12694	
TIC		11602	8655	8310	8482	8330	8577	8692	8768	8926	9532	9035	
Acetate	IEC	737	792	832	793	726	700	739	722	745	733	716	
Glycolic Acid	IEC	12857	12800	11937	12952	10924	11186	10956	11528	11811	11984	11600	
Citric Acid	IEC	4910	3726	5458	5085	4884	4895	4956	4819	5107	5272	5021	
Fluoride	IC	2880	2245	2079	2051	2063	2068	2085	2074	2101	2140	2056	
Formate ($HCOO^-$)	IC	5862	5120	5434	5342	5178	5305	5381	5287	5374	5532	5207	
Nitrite (NO_2^-)	IC	35659	27660	28610	27931	27761	28176	28285	27978	28905	29527	28090	
Phosphate (PO_4^{3-})	IC	1147	1302	1215	1215	1126	1098	1064	1030	1098	1150	1069	
Oxalate ($C_2O_4^{2-}$)	IC	880	568	1314	1410	1347	1296	1416	140	1303	1000	1267	
Chloride (Cl^-)	IC	1011	973	997	985	967	982	987	974	1004	1038	971	
Nitrate (NO_3^-)	IC	105156	102983	121256	119222	118437	120388	108060	113619	117856	124689	115750	
Sulfate (SO_4^{2-})	IC	4477	4589	4690	4626	4573	4604	4644	4570	4686	4849	4533	
HEDTA	IPC	579	350	381	405	572	405	429	429	425	446	405	
EDTA	IPC	2270	1796	2121	2097	2406	2335	2025	2073	2151	2134	1978	
Ce	ICP-MS	26.4	26.2	3.81	3.59	3.43	3.16	2.94	2.92	2.80	2.34	2.41	1.27
Cs	ICP-MS	10.4	10.8	10.3	10.2	15.6	10.5	9.7	9.8	10.0	10.4	10.1	
La	ICP-MS	23.2	23.9	2.62	2.43	2.43	2.21	2.19	2.19	2.09	1.90	1.93	0.98
Nd	ICP-MS	43.5	47.2	7.39	7.02	6.81	6.15	6.12	6.38	5.82	5.38	5.51	3.55
Re	ICP-MS	11.00	9.78	10.28	9.86	10.04	9.40	9.85	9.81	9.98	10.22	9.74	
Pb	ICP-MS	201	186	60	57	57	53	55	55	54	55	53	
Al	ICP-ES	386	209	353	257	245	216	214	192	201	204	239	208
B	ICP-ES	56	<22	<24	<24	<24	<24	<24	<24	<24	33	111	27
Ba	ICP-ES	<1.5	<1.6	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	0.15
Ca	ICP-ES	129	323	193	191	197	186	184	184	185	192	183	257
Cd	ICP-ES	<5.0	<5.4	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Cr	ICP-ES	93.0	83.1	75.7	73.3	75.7	72.0	72.0	74.5	72.0	70.8	75.7	72.0
Cu	ICP-ES	22	72	155	183	133	140	19	<10	<10	20	64	14
Fe	ICP-ES	1005	803	120	118	151	112	94	114	96	96	120	60
K	ICP-ES	1420	1321	1393	1345	1417	1333	1381	1405	1381	1417	1357	2392
Mg	ICP-ES	51	<11	<12	<12	<12	<12	<12	<12	<12	<12	<12	0.46
Mn	ICP-ES	294	279	98	89	102	101	107	121	113	110	121	22
Na	ICP-ES	110000	125691	126087	126087	129689	122484	126087	127288	127288	129689	127288	108825
Ni	ICP-ES	296	299	360	365	341	324	304	282	288	298	310	250
P	ICP-ES	205	210	210	190	201	186	204	202	211	219	216	231
Pb	ICP-ES	204	199	<96	<96	<96	<96	<96	<96	<96	<96	<96	42
Si	ICP-ES	47.0	40.5	31.2	27.6	32.4	26.4	<24	<24	<24	<24	<24	17.7
Sr	ICP-ES	5.0	4.5	209	207	208	197	187	190	173	132	132	174
Zr	ICP-ES	33.0	<43	<48	<48	<48	<48	<48	<48	<48	<48	<48	5.0
S	ICP-ES	1650	1832	2077	1993	1981	1897	1969	2137	2077	2282	2149	1661

Note (1)	Sample 0L is before caustic addition and is actually the analysis of sample 1L collected during Batch #1.
(2)	Sample 1L was taken after caustic addition but prior to other reagent additions.
(3)	Mobile Lab Sample RPP-WP-PREC2-FILTRATE collected from filtrate drum on Jan 22, 2002 (91 days after precipitation). The method of analysis is ICP-ES in all cases.

The concentrations of selected elements of interest are shown in the following plots. As mentioned previously, no sample captured the rapid transient concentration of the reagents during addition. No attempt has been made to show these concentrations in the plots.

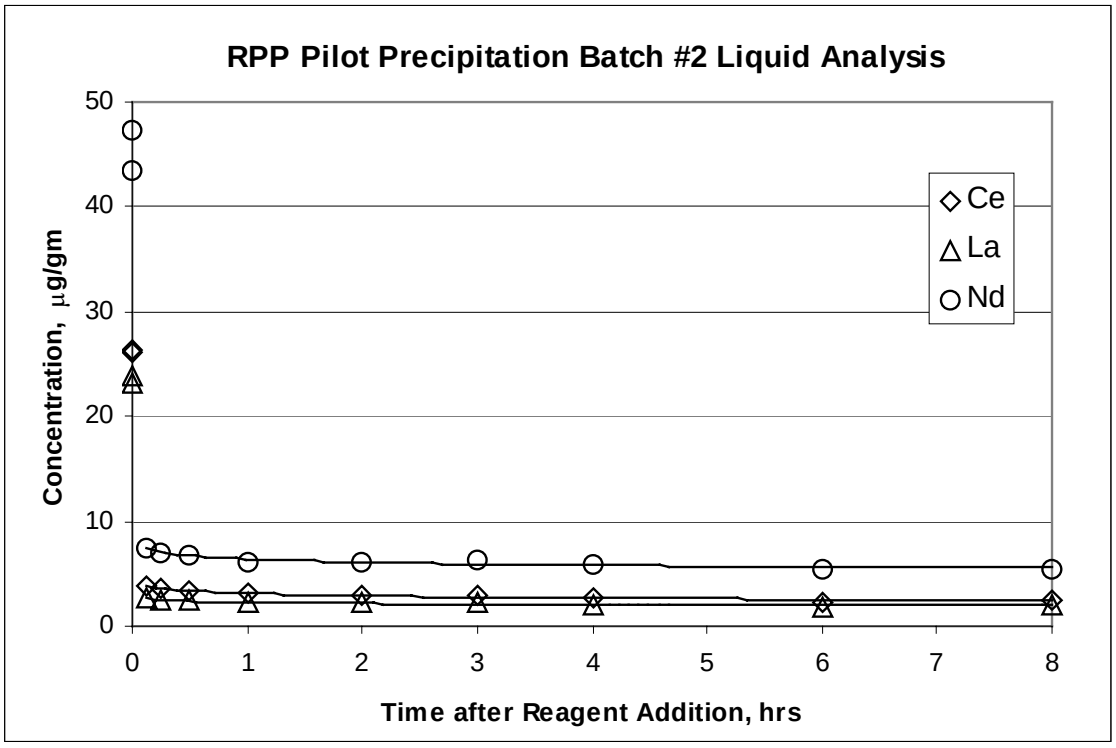


Figure 5-1 Lathanide Elements in Batch #2 Precipitated Liquid

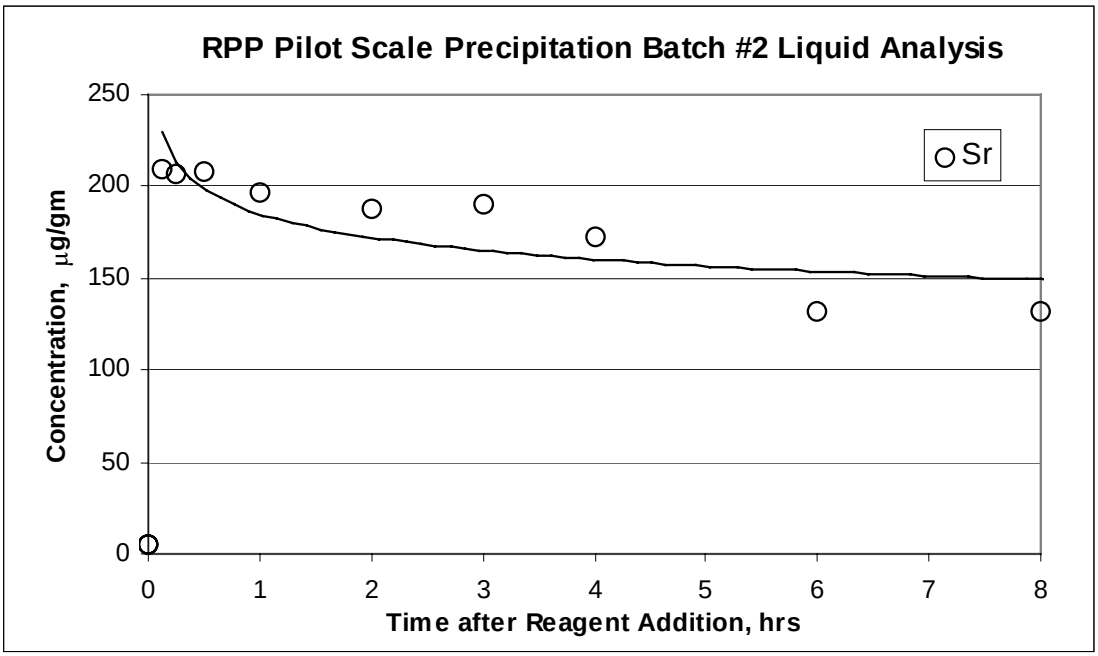


Figure 5-2 Sr in Batch #2 Precipitated Liquid

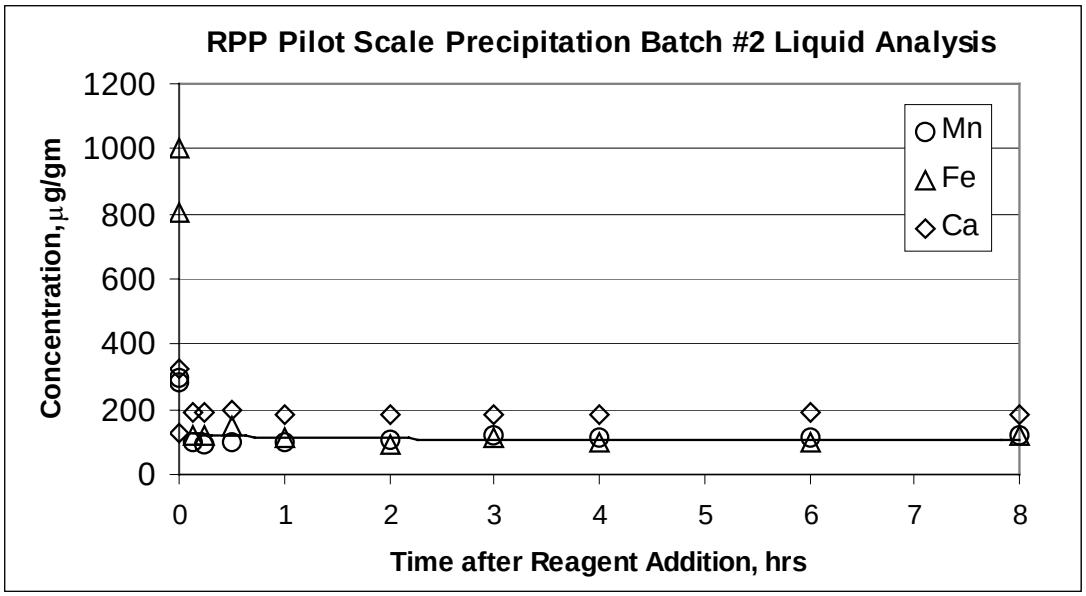


Figure 5-3 Mn, Fe, and Ca in Batch #2 Precipitated Liquid

It can be seen that about 75% of the reductions in concentration occur within the first 7.5 minutes after reagent addition, yet the concentrations continue to change for at least 8 hours. The slow, gradual change after the initial fast precipitation reaction is likely due to adsorption onto the solids or substitution of elements in microcrystals rather than continued precipitation from the liquid.

Since the amount of final glass product that has to be made depends on the amount of sodium added to the waste during processing as well as the amount originally in the waste, it is useful to introduce a waste sodium factor defined as:

$$\text{WNaC} = \frac{\text{(grams of Na in simulant + all grams of Na added)}}{\text{(grams Na in simulant)}}$$

For the process used in Batch #2, WNaC = (83156 grams + 14907 + 877 grams) / (83156 grams) = 1.19. The reagents added nineteen percent of the sodium in the treated liquid.

As a common measure of the removal efficiency, the initial amount of the element in the feed is divided by the final amount in the treated liquid; this measure is called the decontamination factor (DF).

$$\text{DF for element "A"} = \frac{\text{(grams of element "A" in simulant)}}{\text{(grams of element "A" in treated liquid)}}$$

$$= \frac{\text{(mass concentration of element "A" in simulant)}}{\text{(mass concentration of element "A" in treated liquid)(MD)}}$$

The decontamination factor was calculated for the TRU surrogates La, Ce, and Nd four hours after addition of reagents. The DFs for Batch #2 were determined to be 11.1 for La, 9.4 for Ce, and 7.5 for Nd. The DFs obtained for Batch #2 compared to Batch #1 (20) were about 80 % higher for Ce, 30 % higher for La, and about the same for Nd.

Wilmarth (19) has developed the following approximate correlations between La and Nd DFs and Am DF: $DF_{Nd} = 0.62\ DF_{Am} + 0.44$ and $DF_{La} = 0.51\ DF_{Am} + 1.1$. Using these equations the Am DF would be estimated to be in the range 11 to 20. There is at yet no correlation for Pu and Cm DFs.

In a similar precipitation study on a small sample of diluted real AN-107 waste, Hallen et al. (18) reported 74% of the neodymium was removed implying a (1/(1-0.74)) = 3.9 DF for Nd. They reported DFs of 22 for Cm-242 and 28 for Am-241. In a similar precipitation study, but with actual AN-102 waste instead of AN-107, Nash et al. (13) reported DFs of 7.2 for Cm-244 and 9.2 for Am-241.

The strontium DF based upon the relative liquid concentrations only was calculated as 0.02. This calculation used the recipe value of strontium in the simulant rather than the ADS values. Typical small levels of impurities in some of the chemicals added in large amounts could easily increase the strontium in the simulant from the theoretical 2.69 grams to 4 or 5 grams. Since such a large amount of strontium is added as a reagent and precipitated out, the concentration in the treated liquid should have no relation to the amount originally in the simulant. But in real waste, the small amount of strontium in the feed would be strontium-90. Since the 2.69 grams of strontium in the simulant represents the "strontium-90", that is the value that should be used in calculating the DF. The Sr/TRU precipitation studies by Nash et al. (11) identified strontium-90 levels reduced by simple isotopic dilution. The Batch #2 experiment used a non-radioactive simulant, so the isotopic dilution effect cannot be experimentally determined. The maximum possible isotopic dilution factor can be calculated as shown below for the process used with Batch #2:

$$\text{Isotopic Dilution Factor} = \frac{\text{(Initial Grams of Strontium in simulant plus Strontium added as Precipitating Reagent)}}{\text{(Initial Grams of Strontium in simulant)}}$$

$$= (2.69\ \text{gm} + 4931\ \text{gm}) / 2.69\ \text{gm}$$

$$= 1834$$

Assuming complete isotopic mixing, the DF for radioactive strontium in real waste treated with this process would be the product of the DF based upon the relative liquid concentrations only and the Isotopic Dilution Factor, or DF = (0.02)*(1834) = 37. This DF is significantly higher than required to meet the immobilization regulatory requirements. Previous bench scale experiments measured strontium decontamination factors in the range 30 to 100. This contrasts with the Batch #1 (20) result of 1000. (The reader is cautioned that very large DFs can be misleading. A DF of 100 represents removal of 99% of an element; a DF of 1000 represents removal of 99.9%, only an additional 0.9%.) The most likely significant difference between this experiment and the Batch #1 experiment is addition of caustic prior to precipitation. The difference in caustic level will cause a difference in strontium solubility. Higher strontium

solubility will result in more strontium remaining in the liquid and passing through the filter into the filtrate.

X-ray diffraction results (reported in Appendix A) show the presence of Sr in strontianite and a Na,Sr, Silicate. The Batch #1 (20) experiment found a Ca, Sr, Mn oxide in addition to the other two, but this material was not identified in the Batch #2 solid samples. Although the analysis was not quantitative, most of the strontium is expected to be in the strontianite, $SrCO_3$.

The behavior of highly radioactive elements technetium-99 and cesium-137 are also of considerable interest in waste treatment processes. The concentrations of Tc and Cs in the liquid as reported by Nash et al. (11) were unaffected by the Sr/TRU reaction. Based upon the work of Darab and Smith (14), rhenium was selected as a non-radioactive surrogate for Tc-99 in the Batch #2 simulant. Rhenium was added as sodium perrhenate. Inspection of the table of dilution corrected concentration shows the rhenium to be unaffected. Cs-132 is a non-radioactive isotope chemically identical to Cs-137 and would be expected to behave the same. Again, inspection of the table of dilution corrected concentration shows the cesium to be unaffected. These results indicate the technetium and cesium in the real waste would be unaffected by the precipitation process used on Batch #2.

Table 5-1 can be examined to determine some of the other changes in the waste simulant after the reaction. A portion of the carbonate was consumed which would be expected in precipitating the strontium. Other carbon species included in the TIC/TOC analysis did not show significant changes. Analytes in the liquid that decreased significantly in concentration included lead, calcium, iron, magnesium, and boron. In the Batch #2 experiment the iron removal matched the results observed previously by Nash et al. (11), the Batch #1 experiment did not remove as much. Higher iron removal would be expected in a solution with higher hydroxide concentrations. There was also a larger fraction of the lead removed in the Batch #2 experiment compared to the Batch #1 experiment (about 75% vs. about 50%).

Calculations of DFs for other components in the simulant four hours after the reagents were added are shown below. (The calculated DFs should be viewed in conjunction with Table 5.1, as scatter in the analytical results is not readily apparent with a single point calculation such as this.)

Table 5-2 Decontamination Factors for Selected Species Four Hours after Reagent Addition

Batch #2 Decontamination Factors									
Initial Mass of Simulant, grams									795691
Caustic Adjust:	34	liters @	1.5253	grams/ml					51860
MD_{Na} = ($G_{initial}$ + G_{NaOH}) / ($G_{initial}$)									1.07
Reagents:	11910	grams strontium nitrate in				53365	grams water		65275
	5389	grams sodium permanganate in				37271	grams water		42660
MD = Mass Dilution factor = ($G_{initial}$ + $G_{reagents}$) / ($G_{initial}$)									1.20
		Recipe (R) (µg/gm)	EDL Sample 0L (µg/gm)	EDL Sample 8L (µg/gm)	Dilution corrected Conc (8L)*MD (µg/gm)	Analysis based DF = 1L/(8L*MD) (µg/gm)	Recipe based DF = R/(8L*MD) (µg/gm)		
ADS Sample No.			169600	170452					
Compound	Method								
Acetate	IEC		737	620	745	0.99			
Glycolic Acid	IEC		12857	9836	11811	1.09			
Citric Acid	IEC		4910	4253	5107	0.96			
Fluoride	IC		2880	1750	2101	1.37			
Formate ($HCOO^-$)	IC		5862	4475	5374	1.09			
Nitrite (NO_2^-)	IC		35659	24071	28905	1.23			
Phosphate (PO_4^{3-})	IC		1147	914	1098	1.05			
Oxalate ($C_2O_4^{2-}$)	IC		880	1085	1303	0.68			
Chloride (Cl^-)	IC		1011	836	1004	1.01			
Nitrate (NO_3^-)	IC		105156	98146	117856	0.89			
Sulfate (SO_4^{2-})	IC		4477	3902	4686	0.96			
HEDTA	ICP	1097	579	354	425	1.36	2.58		
EDTA	ICP	3170	2270	1791	2151	1.06	1.47		
Ce	ICP-MS	26.8	26.4	2.33	3	9.44	9.57		
Cs	ICP-MS	9.4	10.4	8.3	10	1.04	0.94		
La	ICP-MS	23.1	23.2	1.74	2	11.10	11.04		
Nd	ICP-MS	48.6	43.5	4.85	6	7.47	8.35		
Re	ICP-MS	9.56	11	8.31	10	1.10	0.96		
Pb	ICP-MS	197	201	44.9	54	3.73	3.65		
Al	ICP-ES	196	386	167	201	1.92	0.98		
Ca	ICP-ES	300	129	154	185	0.70	1.62		
Cr	ICP-ES	89.3	93	60	72	1.29	1.24		
Fe	ICP-ES	857	1005	80	96	10.46	8.92		
K	ICP-ES	911	1420	1150	1381	1.03	0.66		
Mn	ICP-ES	285	294	94	113	2.60	2.53		
Na	ICP-ES	111132	110000	106000	127288	0.86	0.87		
Ni	ICP-ES	269	296	240	288	1.03	0.93		
P	ICP-ES	222	205	176	211	0.97	1.05		
Sr	ICP-ES	3.35	5	144	173	0.03	0.02		
S	ICP-ES	1396	1650	1730	2077	0.79	0.67		

The Crossflow Filter Test Rig was operated successfully with different slurry flows and filter pressures with the following feeds:

- AN-107 precipitated simulant slurry
- DIF water after cleaning to confirm that the cleaning performed was adequate to restore filter function

The results of filtration tests with the AN-107 precipitated simulant slurry are shown below. The velocity shown is based on seven tubes with a nominal ID of 3/8 inch and the slurry loop (SL) flow measured with a magnetic flowmeter. Differential pressures are measured between the filter slurry headers and filtrate ports at both the top and bottom ends of the filter. The transmembrane pressure (TMP) is the calculated average of these two differential pressure measurements. The filtrate flow (flux rate) is the total flow from the filtrate housing (measured by a magnetic flowmeter in gpm) divided by the 2.29 ft^2 inside surface area of the filter.

The amount of solids collected ranged from 40 to 50 (average 45) grams per liter in the samples collected after precipitation. At least a few grams of that were sodium salts left behind when the sample was dead-end filtered. Assuming 41 grams/liter with a filtrate of density 1.24, there were 41/(1240+41)*(100) = 3.2 w% solids when filtration was started.

Table 5-3 Crossflow Filter Operations Data with AN-107 Simulant

Velocity (ft/sec)	TMP (psi)	Filtrate Flow (gpm/ft^2)
9.8	51.2	0.026
13.2	45.2	0.035
17.4	44.2	0.038
18.3	21.1	0.028

The filtrate flowrates shown above were corrected to a filtration temperature of 25 ^oC by multiplying by the correction factor $CF = e^{[(2500)(1/(273+\text{Slurry Temperature})-1/298)]}$. Filtration temperatures ranged from 24.9 to 27.4 ^oC, with corresponding correction factors from 1.00 to 0.93. The uncorrected raw data collected during filtration is shown in Appendix C.

A Test Specification was not provided for the pilot precipitation work. The approved Task Plan simply stated that the crossflow filter would be used to demonstrate filterability of the slurry, and a filtration matrix was not specified. In hindsight the filtration conditions chosen by the task leader were not maintained long enough to obtain definitive data in the ranges best matching planned plant operation. The limited amount of data shown in the plot below had to be extrapolated appreciably to provide the values reported in the table above.

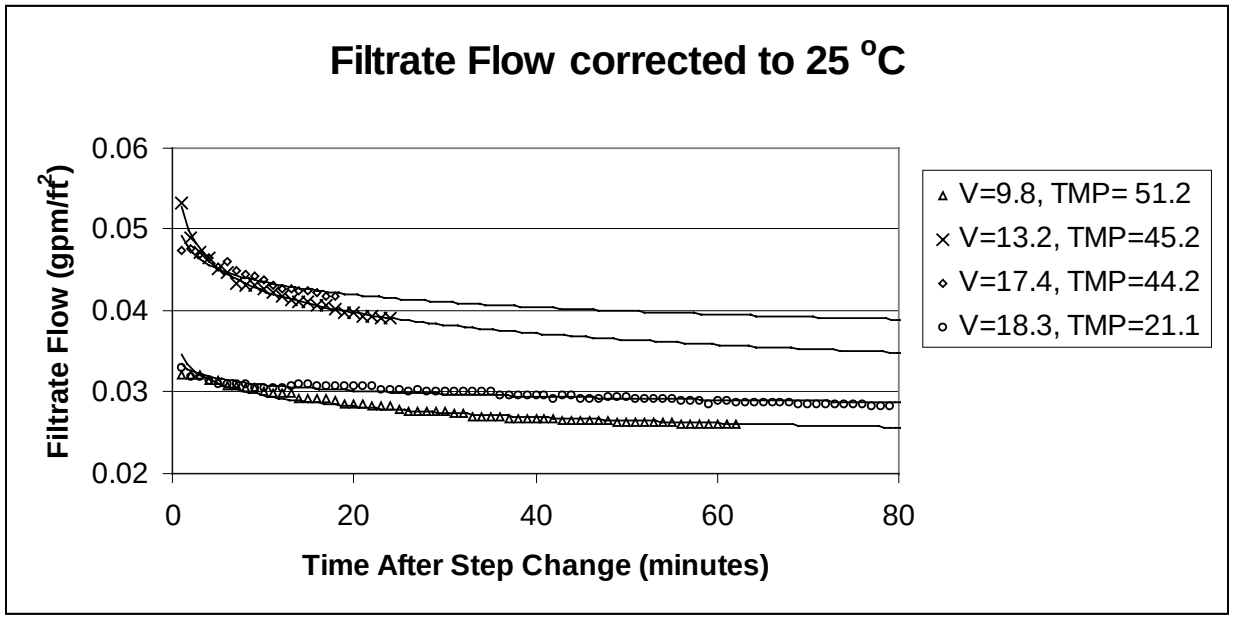


Figure 5.4 Filtrate Production Rate Data

These filtrate rates are similar to those reported by Duignan (17), especially considering the insoluble solids content of approximately 3% in this study was higher than the 2% in his study. The slightly higher sodium concentration (6.0 M vs. 5.5 M) may also have had some effect. He measured a flitrate flow of 0.03 gpm/ft^2 at an axial velocity (V) =8.9 ft/sec and transmembrane pressure (TMP) =32.1 psid. The lower value of 0.026 gpm/ft^2 at V=9.8 and TMP=51.2 measured in this experiment would be reasonable due to the effect of higher solids. This study measured a flux of about 0.035 gpm/ft^2 at V=13.2 ft/sec and TMP = 45.2 psid, comparable to Duignan's 0.04 gpm/ft^2 at V=12.3 ft/sec and TMP=51.1. The 0.038 gpm/ft^2 flux at V=17.4 and TMP=44.2 is lower than expected compared to his 0.52 gpm/ft^2 flux at the lower velocity of 15.3 ft/sec and lower TMP of 29.6 psid

The filtrate fluxes found in this study were slightly higher than obtained in the study of Hallen et al. (18) under similar but not exactly the same conditions. Their study noted the same observation that the flux dropped rapidly in the first 10 minutes after starting filtration then fell gradually for the next 50 minutes. The fluxes reported in their work are averages over the period from 10 minutes to 60 minute after starting filtration; they were: 0.019 gpm/ft^2 at 9.0 ft/sec and 50 psid, 0.025 gpm/ft^2 at 12.2 ft/sec and 30 psid, and 0.024 gpm/ft^2 at 13.1 ft/sec and 49 psid.

In general, the fluxes obtained in the Batch #2 experiment during the abbreviated filtration matrix were similar to the fluxes measured in the Batch #1 experiment (20).

After collecting the abbreviated filter performance data, filtration was continuous until the volume of slurry was reduced to about 70 liters. Although filter fluxes of about 0.04 gpm/ft^2 were achieved during the filter performance testing, long-term operation at the high axial flow-high transmembrane pressure conditions was not possible due to heat from the pump work. (Additional heat removal capacity will be added to the rig.) Sustained operation at 25 °C could be maintained with the filter tube velocity set at about 16 ft/sec and the transmembrane pressure set at about 45 psid. The filtrate production achieved with AN-107 precipitated simulant under

these conditions and with infrequent backpulsing was about 0.03 gpm/ft^2. This initial rate was higher than the 0.02 gpm/ft^2 measured under similar conditions in the Batch #1 experiment (20). Figure 5-5 shows a typical set of data taken early during dewatering. Figure 5-6 shows typical data taken after the slurry volume was reduced from 764 liters to about 70 liters. The flux with the concentrated slurry dropped to about 0.018 gpm/ft^2. Hallen et al. (18) measured 0.021 gpm/ft^2 average flux during dewatering with somewhat lower velocity of 11.6 ft/sec velocity and slightly higher transmembrane pressure of 48 psid.

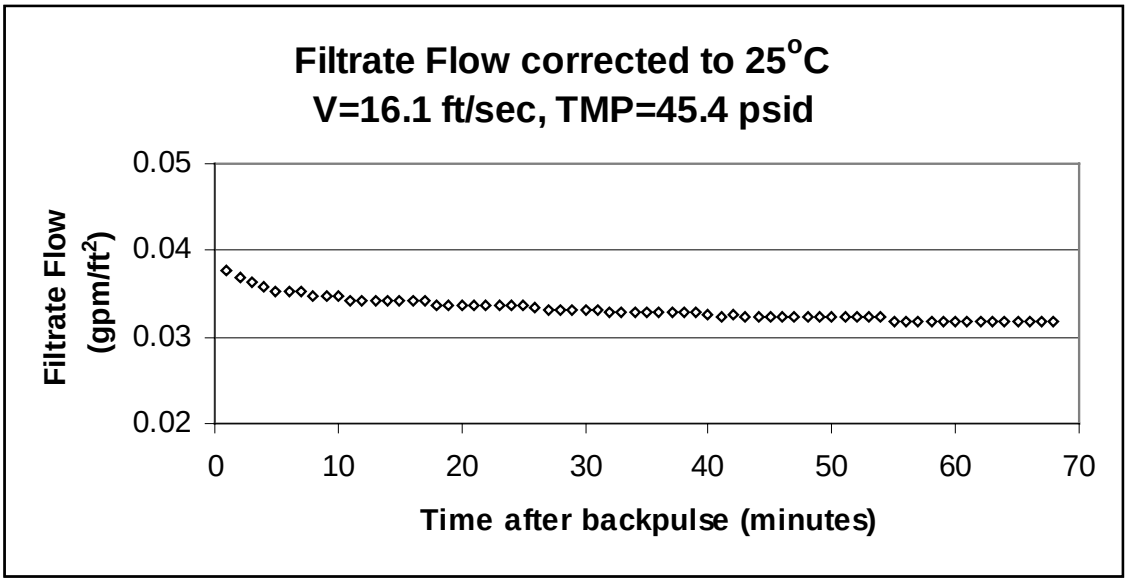


Figure 5-5 Crossflow Filter Filtrate Production with AN-107 Precipitated Simulant Slurry Early During Dewatering

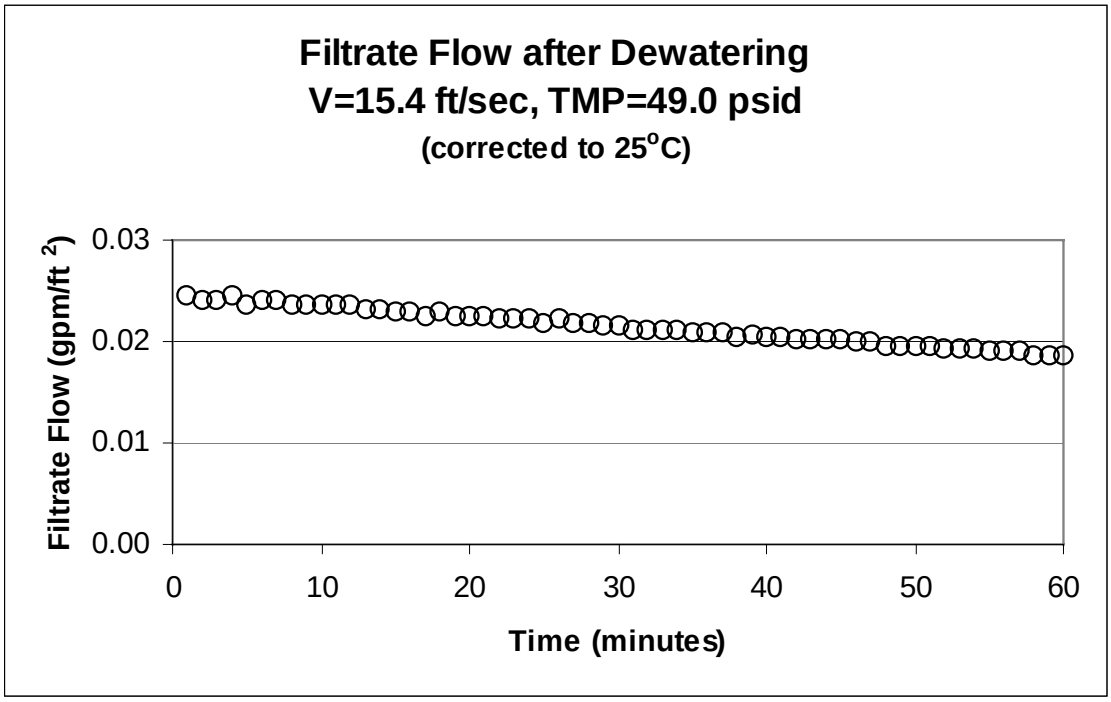


Figure 5-6 Crossflow Filter Filtrate Production with AN-107 Precipitated Simulant Slurry at the End of Dewatering

The filtrate collected from slurry precipitated with this process appeared to be fairly stable. After several months of storage some solids were formed, but there were very little solids formed in filtrate allowed to stand a day or two. This result is in marked contrast to the results of the Batch #1 experiment (20), where filtrate collected within the first eight hours after precipitation formed significant amounts of solids when allowed to stand for 20 hours.

A sample of the slurry collected in a drum was taken several weeks after filtration and sent for particle size analysis. The Microtrac analysis showed most of the particles to be between 0.8 and 10 microns, with a median of about 2 microns. (Note: Microtrac does not measure below 0.08 microns.) A plot of the data is included in Appendix A.

A set of DIF water runs was made after cleaning the filter to compare with the water runs made after cleaning the filter after the Batch #1 experiment. In hindsight the runs were not maintained at constant conditions long enough to obtain definitive fluxes. The available data for two sets of runs at similar conditions before and after Batch #2 are plotted below. All of the raw data collected during the DIF water runs is included in Appendix C.

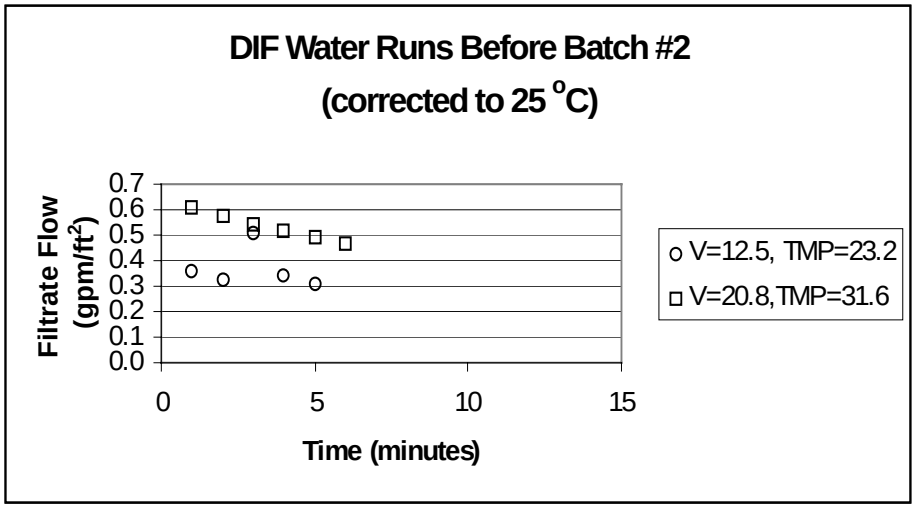


Figure 5-7 Crossflow Filter Flux with Clear Water Prior to Batch #2 Processing

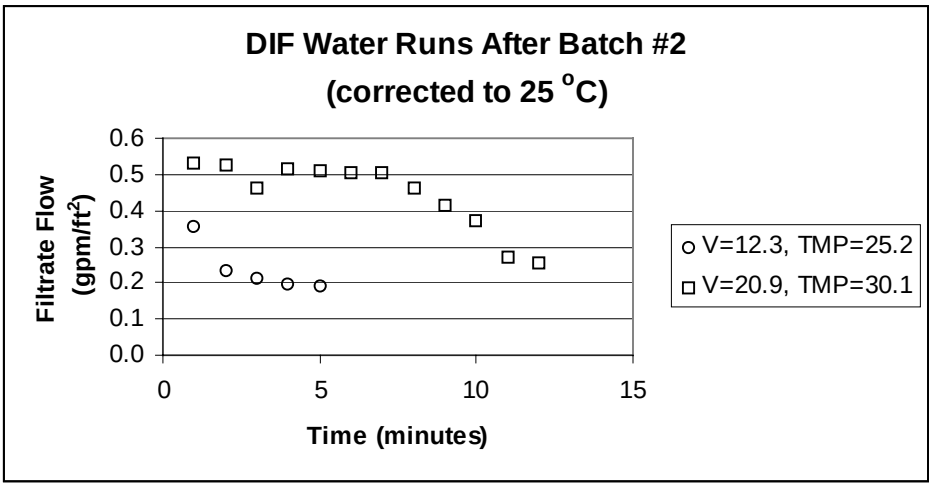


Figure 5-8 Crossflow Filter Flux with Clear Water After Batch #2 Processing

6.0 CONCLUSIONS

- The decontamination factors four hours after completion of reagent addition were 9.4 for cerium, 11.1 for lanthanum, and 7.5 for neodymium. A recently developed correlation between the non-radioactive lanthanides surrogates La and Nd and the radioactive americium would indicate the DF for americium should be in the range 11 to 20, which is adequate to meet regulatory requirements.

- The decontamination factor for strontium four hours after completion of reagent addition was 0.02. The effect of isotopic dilution of strontium could not be determined experimentally since only non-radioactive strontium was used; the calculated maximum possible isotopic dilution factor was 1834. If complete isotopic dilution before filtering is assumed, the decontamination factor for radioactive strontium in real waste treated by this process would be 0.02*1834 = 37, more than adequate to meet regulatory requirements

- The concentrations of Re and Cs in the Batch #2 liquid were unaffected by the Sr/TRU precipitation.

- About 85% of the reduction in concentration of the lanthanides and strontium occurs within the first 7.5 minutes after reagent addition is complete.

- Coupled operation of the Crossflow Filter Test Rig with the Precipitation Test Rig was successfully demonstrated. Filtrate production rates varied between 0.026 gpm/ft^2 at 9.8 ft/sec axial velocity and 51.2 psid transmembrane pressure, and 0.038 gpm/ft^2 at 17.4 ft/sec axial velocity and 44.2 psid transmembrane pressure.

- The filtrate collected from slurry precipitated with this process appeared to be fairly stable. After several months of storage some solids were formed, but there were very little solids formed in filtrate allowed to stand a day or two.

- No volatile/flammable off gases were produced.

7.0 FUTURE WORK

The vigorous mixing capability of the mechanical agitator in the Pilot Scale Precipitate Tank may not be duplicated by the current Pulse Jet Mixer design. Additional testing with a Pilot Scale Pulse Jet Mixer system is recommended to confirm scale-up of reaction kinetics without the use of mechanical agitation.

8.0 REFERENCES

1. Williams, M. R., "Task Technical and Quality Assurance Plan In Support of RPP-WTP Pilot-Scale Precipitation Testing," SRT-RPP-2000-00050, Rev. 0, approved on June 19, 2001.
2. Williams, M. R., Screening Process Review Report, approved on Jan. 3, 2001.
3. Williams, M. R., Environmental Evaluation Checklist, EEC Document No. TC-A-2000-073, Rev. 1, approved on January 23, 2001.
4. Williams, M. R., "RPP Job Folder 22806 Pilot Scale Precipitation Testing," Laboratory Notebook, Document No. WSRC-NB-2001-00078. [Construction, shakedown and Batch #2 test activities are documented.]
5. Steeper, T. J., WSRC Drawing No. EES-22806-M6-001, "RPP-WTP Pilot Scale Precipitation Testing Test Rig Setup", Rev. B, May 5, 2001.
6. Steeper, T. J., WSRC Drawing No. EES-22699-M6-003, "RPP Part B2 Pilot Scale Crossflow Filter Tests Test Rig Assembly with 40" Filter and New Pumps", Rev. A, May 1, 2001.
7. Williams, M. R., "RPP-WTP Pilot Scale Precipitation Testing Procedure", EDS Field Procedure, Document No. FP-882, Rev. 0, Effective September 24, 2001.
8. Williams, M. R., Operational Instructions No. 1-4, starting from No. 1: "Determination of Cleanliness of the Pilot Scale Precipitation System and Crossflow Test Rig per FP-882", October 2, 2001 to No. 4: "Caustic Addition to 1M NaOH of Batch #2 AN-107 simulant in the Pilot Scale Precipitation and additional Filtrate samples", October 15, 2001.
9. Duignan, M. R., "Final Report: Pilot-Scale Cross-flow Ultrafiltration Test Using a Hanford Site Tank 241-AN-105 Waste Simulant – Envelope A + Entrained Solids", BNF-003-98-0221, February 23, 2000.
10. Nash, C. A., Rosencrance, S. W., Walker, B. W., Wilmarth, B. R., "Investigation of Varied Strontium-Transuranic Precipitation Chemistries for Crossflow Filtration", BNF-003-98-0171, Revision 0, April 18, 2000.
11. Nash, C. A., Saito, H. H., Wilmarth, B. R., "Strontium-Transuranic Precipitation and Crossflow Filtration of 241-AN-102 Large C", BNF-003-98-0317, Revision 0, December 5, 2000.
12. Benedict, M., Pigford, T. H., Levi, H. W., "Nuclear Chemical Engineering", Second Edition, McGraw-Hill Book Company, New York, 1981, pp. 407-420.
13. Nash, C. A., Rosencrance, S. W., Wilmarth, B. R., "Entrained Solids, Strontium-Transuranic Precipitation and Crossflow Filtration of 241-AN-102 Large C", SRT-RPP-2000-00003, Revision 0, August, 2000.
14. Darab, J. G. and Smith, P. A., "Chemistry of Technetium and Rhenium Species during Low-Level Radioactive Waste Vitrification", Chem. Mater. 1996, 8, 1004-1021, March 5, 1996.

15. Eibling, R. E. and Nash, C. A. "Hanford Waste Simulants Created to Support the Research and Development on the River Protection Project – Waste Treatment Plant", SRT-RPP-2000-00017, Revision 0, February 2001.
16. Bergmann, L. M. "WTP Material Balance and Process Flowsheet Bases, Requirements, and Results", 24590-WPT-RPT-ENG-01-004, Rev. 0, October 15, 2001.
17. Duignan, M. R., "Final Report: Pilot-Scale Cross-flow Ultrafiltration Test Using a Hanford Site Tank 241-AN-107 Waste Simulant – Envelope C + Entrained Solids + Strontium-Transuranic Precipitation", BNF-003-98-0226, Rev. 0, March 24, 2000.
18. Hallen, R. T., Bredt, P. R., Brooks, K. P., and Jagoda, L. K. "Combined Entrained Solids and Sr/TRU Removal from AN-107 Diluted Feed", BNFL-RPT-027, Rev. 0, August 2000.
19. W. R. Wilmarth, V. H. Dukes, J. T. Mills, F. F. Fondeur, C. C. DiPrete and D. P. DiPrete, "Optimization Study for Strontium and Actinide Removal from 241-AN-107 Supernate," WSRC-TR-2002-00258, September 18, 2002.
20. Williams, Michael R. and Steeper, Timothy J., "Pilot Scale Precipitation Test of AN-107 Simulant Without Caustic Adjustment at 50 ^{o}C", WSRC-TR-2002-00122, Rev. 0, SRT-RPP-2002-00064, Rev. 0, August 19, 2002.

9.0 APPENDICES

1. Appendix A - Analytical Data

2. Appendix B - Experimental Data: Precipitation Test Rig Operations Data

3. Appendix C - Experimental Data: Crossflow Test Rig Operations Data

Appendix A

Analytical Data

Appendix Contents

- Liquid, Solid, and Gas Sample Analyses
- Microtrac Data (Particle Size Distribution of solids collected from concentrated slurry drum 3 weeks after filtration.)
- Lasentec Data

Special Notes:

- Each Solid Sample was divided into four segments for various dissolutions and analyses except the post-filtration solids which were not subdivided due to their small quantity.
- < values indicate below detection limits.
- The simulant samples 0L and 0S are actually the analysis of the simulant sample collected during the Batch #1 experiment prior to adding any reagents. The mixing procedure for Batch #1 and #2 were identical, so an additional sample was not thought to be necessary.
- The simulant sample that was separated into the 1L liquid and 1S solid samples was actually taken about an hour minutes before reagent addition. This sample is considered the "0" time sample for comparison purposes.
- The post-filtration solid sample 172483 was obtained using a coliwasa from the filtrate drum on 11/20/01, which is 26 days after the filtering was completed on 10/25/01. The filtrate was filtered and the solids dried. Analyses performed on this sample included XRD, ICPMS, and ICP-ES.
- SVOC Analysis of Solid Samples was performed on ADS 300170474 through ADS 300170483, which are also identified as 170474 through 1170483 in the data pages.
- VOC Gas Analysis was performed on ADS 3-170441 through ADS 3-170454 and ADS 3-170474 through ADS 3-170483, which are also identified as 170441 through 170454, and 170474 through 170483 in the data sheets.
- A 100 ml sample was obtained from the Batch #2 Slurry drum in storage at 1400 hours on 11/13/01 as ADS sample 3-172182 for Microtrac-SRA150 analysis to determine the distribution of particle sizes in the precipitated slurry 21 days after the precipitation reaction.

BATCH #2 ANALYTICAL RESULTS														
			Liquid Analysis											
EDL Sample No.			0L	1L	2L	3L	4L	5L	6L	7L	8L	9L	10L	Post-Filtration
Time after Reagent Add (hrs)			0	0	0.125	0.25	0.5	1	2	3	4	6	8	2184
ADS Sample No.			169600	170445	170446	170447	170448	170449	170450	170451	170452	170453	170454	(3)
Identity	Method	Units	(1)	(2)										
K	AAK	µg/gm	1620	1318	1188	1159	1172	1120	1152	1157	1181	1219	1168	
AlO_2^-		molar	0.0156	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
CO_3^{2-}		molar	0.7032	0.8585	0.6668	0.6622	0.6808	0.6465	0.6605	0.6602	0.675	0.695	0.6488	
Free OH^-		molar	0.036	0.7545	0.646	0.636	0.651	0.627	0.658	0.643	0.65	0.661	0.623	
Total OH^-		molar	0.767	1.681	1.408	1.4	1.397	1.359	1.36	1.38	1.405	1.427	1.419	
Na	AANA	µg/gm	95829	110796	100175	98536	87585	84000	90439	89766	92288	98193	90176	
Specific Gravity			1.267	1.280	1.260	1.260	1.260	1.260	1.260	1.260	1.270	1.280	1.260	1.280
pH			10.2	12.34	12.38	12.38	12.32	12.37	12.32	12.31	12.29	12.27	12.28	
Total Carbon		µg/ml	33800	25400	21600	21400	20100	22000	21800	22000	23000	24200	22800	
TOC		µg/ml	19050	14780	12980	12540	12340	12980	12700	12860	13480	13980	13320	
TIC		µg/ml	14700	10400	8720	8900	8740	9000	9120	9200	9440	10160	9480	
Acetate	IEC	mg/kg	737	744	693	660	605	583	615	601	620	610	596	
Glycolic Acid	IEC	mg/kg	12857	12017	9941	10786	9097	9315	9124	9600	9836	9980	9660	
Citric Acid	IEC	mg/kg	4910	3498	4545	4235	4067	4076	4127	4013	4253	4390	4181	
Succinic acid	IEC	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
D_2EHPA	IEC	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Gluconate	IEC	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
NTA	IEC	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
IDA	IEC	mg/kg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fluoride	IC	µg/gm	2880	2108	1731	1708	1718	1722	1736	1727	1750	1782	1712	
Formate ($HCOO^-$)	IC	µg/gm	5862	4807	4525	4449	4312	4418	4481	4403	4475	4607	4336	
Nitrite (NO_2^-)	IC	µg/gm	35659	25968	23825	23260	23118	23464	23555	23299	24071	24589	23392	
Phosphate (PO_4^{3-})	IC	µg/gm	1147	1222	1012	1012	938	914	886	858	914	958	890	
Oxalate ($C_2O_4^{2-}$)	IC	µg/gm	880	533	1094	1174	1122	1079	1179	117	1085	833	1055	
Chloride (Cl^-)	IC	µg/gm	1011	913	830	820	805	818	822	811	836	864	809	
Nitrate (NO_3^-)	IC	µg/gm	105156	96682	100977	99283	98630	100254	89988	94617	98146	103836	96392	
Sulfate (SO_4^{2-})	IC	µg/gm	4477	4308	3906	3852	3808	3834	3867	3806	3902	4038	3775	
HEDTA	IPC	mg/l	734	420	400	425	600	425	450	450	450	475	425	
EDTA	IPC	mg/l	2876	2158	2225	2200	2525	2450	2125	2175	2275	2275	2075	
Ce	ICP-MS	µg/gm	26.4	24.6	3.17	2.99	2.86	2.63	2.45	2.43	2.33	1.95	2.01	1.05
Cs	ICP-MS	µg/gm	10.40	10.10	8.58	8.52	13.00	8.73	8.06	8.12	8.30	8.67	8.38	
La	ICP-MS	µg/gm	23.2	22.4	2.18	2.02	2.02	1.84	1.82	1.82	1.74	1.58	1.61	0.81
Nd	ICP-MS	µg/gm	43.5	44.3	6.15	5.85	5.67	5.12	5.1	5.31	4.85	4.48	4.59	2.95
Re	ICP-MS	µg/gm	11	9.18	8.56	8.21	8.36	7.83	8.2	8.17	8.31	8.51	8.11	
Pb	ICP-MS	µg/gm	201	175	49.6	47.4	47.7	44	45.6	45.8	44.9	45.8	44	
Al	ICP-ES	µg/gm	386	196	294	214	204	180	178	160	167	170	199	173
B	ICP-ES	µg/gm	56	<20	<20	<20	<20	<20	<20	<20	<20	33	111	27
Ba	ICP-ES	µg/gm	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	0.12
Ca	ICP-ES	µg/gm	129	303	161	159	164	155	153	153	154	160	152	214
Cd	ICP-ES	µg/gm	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.01
Cr	ICP-ES	µg/gm	93	78	63	61	63	60	60	62	60	59	63	60
Cu	ICP-ES	µg/gm	22	68	129	152	111	117	16	<10	<10	17	53	12
Fe	ICP-ES	µg/gm	1005	754	100	98	126	93	78	95	80	80	100	50
K	ICP-ES	µg/gm	1420	1240	1160	1120	1180	1110	1150	1170	1150	1180	1130	1992
Mg	ICP-ES	µg/gm	51	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.38
Mn	ICP-ES	µg/gm	294	262	82	74	85	84	89	101	94	92	101	18
Mo	ICP-ES	µg/gm												15
Na	ICP-ES	µg/gm	110000	118000	105000	105000	108000	102000	105000	106000	106000	108000	106000	90625
Ni	ICP-ES	µg/gm	296	281	300	304	284	270	253	235	240	248	258	209
P	ICP-ES	µg/gm	205	197	175	158	167	155	170	168	176	182	180	192
Pb	ICP-ES	µg/gm	204	187	<80	<80	<80	<80	<80	<80	<80	<80	<80	35
Si	ICP-ES	µg/gm	47	38	26	23	27	22	<20	<20	<20	<20	<20	15
Sr	ICP-ES	µg/gm	5	4.2	174	172	173	164	156	158	144	110	110	145
Zn	ICP-ES	µg/gm												19.0
Zr	ICP-ES	µg/gm	33	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	4.2
S	ICP-ES	µg/gm	1650	1720	1730	1660	1650	1580	1640	1780	1730	1900	1790	1383

Note (1)	Sample 0L is before caustic addition and is actually the analysis of sample 1L collected during Batch #1.
(2)	Sample 1L was taken after caustic addition but prior to other reagent additions.
(3)	Mobile Lab Sample RPP-WP-PREC2-FILTRATE collected from filtrate drum on Jan 22, 2002 (91 days after precipitation). The method of analysis is ICP-ES in all cases.
N/A	Method not available.

BATCH #2 ANALYTICAL RESULTS														
			Solids Analysis											
EDL Sample No.			0S	1S	2S	3S	4S	5S	6S	7S	8S	9S	10S	Post-Filtration
Time after Reagent Add (hrs)			0	0	0.125	0.25	0.5	1	2	3	4	6	8	674
Identity	Units	Method												
Quantity collected	grams		3.98	5.27	44.26	40.46	43.51	50.78	47.06	45.51	41.71	67.36	84.78	
ADS Sample No.			169764	170431	170432	170433	170434	170435	170436	170437	170438	170439	170440	172484
Pretreatment: 0.25 gm of solids disolved in aquaregia (9 ml HCl + 3 ml HNO_3) then diluted with water to 250 ml														
Cd	µg/gm	ICP-MS	<1	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<2
La	µg/gm	ICP-MS	528	150	383	512	486	529	557	535	597	618	492	12.9
Ce	µg/gm	ICP-MS	843	170	422	567	550	583	624	606	671	703	560	22.7
Nd	µg/gm	ICP-MS	1720	291	778	1040	993	1060	1140	1080	1220	1260	1010	32.2
Re	µg/gm	ICP-MS	2.1	14.5	12.7	18.2	19.8	20.6	17.7	18.3	15.2	15.6	20.8	9.35
Pb	µg/gm	ICP-MS	413	1080	2520	3410	3230	3410	3660	3490	3910	4090	3230	479
Al	µg/gm	ICP-ES	30100	5030	547	549	473	638	851	720	1010	1410	649	3220
B	µg/gm	ICP-ES	910	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	3450
Ba	µg/gm	ICP-ES	21	22	1270	1050	989	1070	1170	1110	1220	1240	989	2540
Ca	µg/gm	ICP-ES	87900	3720	4680	3800	3710	4180	4500	4140	4470	4960	3960	1650
Cd	µg/gm	ICP-ES	<15	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<4.0
Cr	µg/gm	ICP-ES	925	1780	525	488	522	457	528	462	553	701	446	163
Fe	µg/gm	ICP-ES	48600	58500	26700	22400	21300	22900	24500	23500	26000	27000	21400	3410
Mg	µg/gm	ICP-ES	2880	12400	1410	1150	1130	1190	1280	1240	1320	1390	1090	201
Mn	µg/gm	ICP-ES	26000	33900	75300	61500	58600	64100	70500	65200	71200	72500	58300	12100
Na	µg/gm	ICP-ES	165000	204000	141000	182000	183000	198000	187000	174000	149000	166000	204000	111000
Ni	µg/gm	ICP-ES	<70	243	247	306	318	417	376	304	227	322	408	189
P	µg/gm	ICP-ES	1140	<750	<750	<750	<750	<750	<750	<750	<750	<750	<750	184
Pb	µg/gm	ICP-ES	<700	983	3730	3240	3170	3290	3710	3330	3740	3960	3180	492
Si	µg/gm	ICP-ES	2250	1120	274	427	145	485	490	233	259	423	378	225
Sr	µg/gm	ICP-ES	743	66	177000	146000	141000	152000	167000	154000	169000	174000	140000	459
Zr	µg/gm	ICP-ES	378	265	709	610	544	627	657	652	703	729	591	16
K	µg/gm	ICP-ES	<500	1040	1400	1800	1880	2420	2010	1720	1620	1680	2200	3940
S	µg/gm	ICP-ES	1190	1150	1280	1880	1740	2000	1950	1760	1490	1900	2230	773
Nd	µg/gm	ICP-ES	1071	<300	1180	972	960	921	1040	959	1150	1210	1040	<100
Cu	µg/gm	ICP-ES	<50	58	110	85	76	94	96	106	96	99	103	18
Zn	µg/gm	ICP-ES												3740
ADS Sample No.			169774	170421	170422	170423	170424	170425	170426	170427	170428	170429	170430	
Pretreatment: 0.25 gram of solids fused with 1.5 gm Na_2O_2 + 1.0 gm NaOH, disolved in 25 ml of HCL, and diluted with water to 250 ml														
Al	µg/gm	ICP-ES	28300	46400	4600	4700	5100	5200	5100	5000	4800	5200	5000	
B	µg/gm	ICP-ES	247	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	
Ba	µg/gm	ICP-ES	50	89	1132	1104	1269	1126	1130	1258	1188	1224	1136	
Ca	µg/gm	ICP-ES	86100	4862	5034	5398	5718	6346	6774	5780	6488	5823	5573	
Cd	µg/gm	ICP-ES	36	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
Cr	µg/gm	ICP-ES	2161	5515	820	854	880	895	824	859	919	991	845	
Fe	µg/gm	ICP-ES	26600	64600	24000	23300	26800	23100	23500	26500	25400	26200	24200	
Mg	µg/gm	ICP-ES	1430	14000	1190	1230	1350	1320	1250	1410	1340	1330	1130	
Mn	µg/gm	ICP-ES	16800	37600	67200	64900	75600	63600	64900	74300	70700	71700	65900	
Ni	µg/gm	ICP-ES	270	343	282	363	316	437	417	297	294	380	450	
P	µg/gm	ICP-ES	681	<700	<700	<700	<700	<700	<700	<700	<700	<700	<700	
Si	µg/gm	ICP-ES	7090	7860	1160	1130	1300	1030	1140	1100	1100	1030	1050	
Sr	µg/gm	ICP-ES	810	7210	145000	150000	164000	152000	144000	167000	158000	151000	138000	
Zn	µg/gm	ICP-ES		<400	<400	<400	<400	<400	<400	<400	<400	<400	<400	
K	µg/gm	ICP-ES	1460	595	1940	2010	1700	1900	2100	1610	1260	1910	2920	
S	µg/gm	ICP-ES	1950	909	1170	1500	1020	1420	1440	1020	1120	1580	1370	
Nd	µg/gm	ICP-ES	778	528	1410	1290	1440	1280	1310	1350	1370	1560	1160	
ADS Sample No.			169754	170374	170375	170376	170377	170378	170379	170380	170381	170382	170383	
Pretreatment: 0.25 gram of solids fused with 1.5 gm Na_2O_2 + 1.0 gm NaOH, then disolved by and diluted with water to 250 ml														
Fluoride	µg/ml	ICA	<198	869	130	306	207	246	384	282	172	280	225	
Formate ($HCOO^-$)	µg/ml	ICA	<989	4009	16743	14039	12542	17328	20668	11221	15455	15850	12241	
Nitrite (NO_2^-)	µg/ml	ICA	<989	16081	23743	35446	28874	37136	44908	33768	23819	35380	31862	
Phosphate (PO_4^{3-})	µg/ml	ICA	<989	<88	<94	150	<93	180	226	<93	<99	140	152	
Oxalate ($C_2O_4^{2-}$)	µg/ml	ICA	<989	226039	36806	42505	42992	45231	49436	47859	44101	48548	45106	
Chloride (Cl^-)	µg/ml	ICA	989	639	1068	1490	1174	1720	1940	1289	986	1551	1358	
Nitrate (NO_3^-)	µg/ml	ICA	2966	63840	92427	153814	116599	140153	175323	142136	109304	144817	126780	
Sulfate (SO_4^{2-})	µg/ml	ICA	2966	2598	3521	8505	5683	4373	5509	5251	4635	4759	5701	

BATCH #2 ANALYTICAL RESULTS														
								Solids Analysis						
EDL Sample No.			0S	1S	2S	3S	4S	5S	6S	7S	8S	9S	10S	Post-Filtration
Time after Reagent Add (hrs)			0	0	0.125	0.25	0.5	1	2	3	4	6	8	674
Identity	Units	Method												
ADS Sample No.			169784	170474	170475	170476	170477	170478	170479	170480	170481	170482	170483	172484
Solids microwave dried														
Total Carbon	µg/ml		39996	102600	35800	58600	38800	45400	37800	40800	21400	48800	48600	
TOC	µg/ml		16362	92000	22800	39000	24000	30800	23600	25000	15180	31800	31800	
TIC	µg/ml		23634	10400	12960	19500	14800	14400	16000	15960	6340	16840	16600	
Fluoride	µg/ml		147	842	157	239	222	277	470	255	179	285	198	
Formate ($HCOO^-$)	µg/ml		170	4410	15859	19150	14471	18436	16662	11298	16634	14766	13064	
Nitrite (NO_2^-)	µg/ml		169	15823	21879	37332	32929	36607	38391	34951	26248	27271	30652	
Phosphate (PO_4^{3-})	µg/ml		81	<92	<95	136	<95	188	262	84	<95	104	142	
Oxalate ($C_2O_4^{2-}$)	µg/ml		31269	198880	39924	43363	48354	43951	40128	57243	39756	27271	49182	
Chloride (Cl^-)	µg/ml		5533	878	902	1610	1173	1637	1538	1288	1037	1199	1267	
Nitrate (NO_3^-)	µg/ml		897	72872	94864	152580	120504	155045	192328	135608	110163	128537	121881	
Sulfate (SO_4^{2-})	µg/ml		278	2807	4558	4983	6493	5191	9302	7838	4349	5050	4845	
Al_2O_3(corundrum)		XRD	74-1081	46-1212										
MnO_2(pyrolusite)		XRD	24-0735	24-0735										
Fe_2O_3(Hermatite)		XRD	72-0469	86-2368										
$C_2CaO_4!H_2O$(Whewelite)		XRD	20-0231											
$CaCO_3$(calcite)		XRD	86-0174											
SiO_2(Quartz)		XRD	46-1045	46-1045										
$Mn(SO_3)H_2O$(Mang Sulf Hyd)		XRD	82-0764											
$C_2Na_2O_4$(Natroxalate)		XRD	20-1149	20-1149	49-1816	49-1816	49-1816	49-1816	49-1816	49-1816	49-1816	49-1816	49-1816	
$NaNO_3$(Sodium Nitrate)		XRD		72-0025	72-0027	72-0027	72-0027	72-0027	72-0027	72-0027	72-0027	72-0027	72-0027	
$SrCO_3$(Strontianite)		XRD			84-1778	84-1778	84-1778	84-1778	84-1778	84-1778	84-1778	84-1778	84-1778	
$Na_4Sr(SiO_3)_3$-Na,Sr, Silicate		XRD			06-0392	06-0392	06-0392	06-0392	06-0392	06-0392	06-0392	06-0392	06-0392	
$NiMn_2O_3(OH)_4!H_2O$(Asbolane)		XRD												42-1319
Note: Batch #2 0S is before caustic addition which is the same sample analysis as Batch #1 1S, and Batch #2 1S is sample analysis following caustic addition.														

SRT-ADS-02-0031 SVOC Analysis of Solid Samples

ADS Number	Customer ID
300170474	RPP-WTP-PREC2-1S
300170475	RPP-WTP-PREC2-2S
300170476	RPP-WTP-PREC2-3S
300170477	RPP-WTP-PREC2-4S
300170478	RPP-WTP-PREC2-5S
300170479	RPP-WTP-PREC2-6S
300170480	RPP-WTP-PREC2-7S
300170481	RPP-WTP-PREC2-8S
300170482	RPP-WTP-PREC2-9S
300170483	RPP-WTP-PREC2-10S

Results

Ten samples were submitted for semivolatile organic compound (SVOC) analysis. The only SVOC analytes that were detected were phthalates, as well as adipate and maleate, commonly used as commercial plasticizers, as shown in the table below.
The method detection limit (MDL) for the samples in this study was 1 mg/kg.

Sample ID	DEP	DBP	DOA	DOM
RPP-WTP-PREC2-1S	252	17	15	7.3
RPP-WTP-PREC2-2S	8.3	_	_	_
RPP-WTP-PREC2-3S	9	_	_	_
RPP-WTP-PREC2-4S	9.6	_	_	_
RPP-WTP-PREC2-5S	8	_	_	_
RPP-WTP-PREC2-6S	6.5	_	_	_
RPP-WTP-PREC2-7S	6.7	_	_	_
RPP-WTP-PREC2-8S	6	_	_	_
RPP-WTP-PREC2-9S	5.8	_	_	_
RPP-WTP-PREC2-10S	5.1	_	_	_

DEP = Diethylphthalate
DBP = Dibutylphthalate
DOA = Diisooctyadipate
DOM = Diisooctylmaleate

Experimental

The liquid samples were extracted with methylene chloride and analyzed.

Gas Chromatography / Mass Spectrometry (GC/MS) analysis was employed to identify organic compounds in the sample. Analysis were carried out in building 773-A, laboratory B-123. It should be noted that ADS is not certified by DHEC for NPDES discharge compliance monitoring. Analytical separations were carried out on a Hewlett Packard 6890 gas chromatograph, equipped with a 30 m DB-5 column, with 0.25 mm diameter and 0.25 um film thickness. Quantitation was performed using a Hewlett Packard 5973 mass selective detector. The mass spectrometer tuning was confirmed within 24 hours prior to each measurement using perfluorotributylamine.

GC/MS Analysis Results-VOC
solid, liquid, gas samples no detectable VOC analytes

SRT-ADS-01-0537

Sample ID

ADS Number	EDL Sample No.
3-170441	RPP-WPT-PRECIP2-1G
3-170442	RPP-WPT-PRECIP2-2G
3-170443	RPP-WPT-PRECIP2-3G
3-170444	RPP-WPT-PRECIP2-4G
3-170445	(RPP-WTP-PREC2-1L)
3-170446	(RPP-WTP-PREC2-2L)
3-170447	(RPP-WTP-PREC2-3L)
3-170448	(RPP-WTP-PREC2-4L)
3-170449	(RPP-WTP-PREC2-5L)
3-170450	(RPP-WTP-PREC2-6L)
3-170451	(RPP-WTP-PREC2-7L)
3-170452	(RPP-WTP-PREC2-8L)
3-170453	(RPP-WTP-PREC2-9L)
3-170454	(RPP-WTP-PREC2-10L)
3-170474	(RPP-WTP-PREC2-1S)
3-170475	(RPP-WTP-PREC2-2S)
3-170476	(RPP-WTP-PREC2-3S)
3-170477	(RPP-WTP-PREC2-4S)
3-170478	(RPP-WTP-PREC2-5S)
3-170479	(RPP-WTP-PREC2-6S)
3-170480	(RPP-WTP-PREC2-7S)
3-170481	(RPP-WTP-PREC2-8S)
3-170482	(RPP-WTP-PREC2-9S)
3-170483	(RPP-WTP-PREC2-10S)

Results

Ten solid, ten liquid, and four gas samples were submitted for volatile organic compounds (VOC) analysis.
The samples did not contain any detectable VOC analytes, and the limits of detection for this study are tabulated below.

Sample Matrix	MDL
Gas	0.2 ppmv
Liquid (Aqueous)	1 ug/L
Solid	10 ug/kg

Experimental

Solid, liquid, and gas samples were analyzed using purge and trap Gas Chromatography / Mass Spectrometry (GC/MS).
GC/MS analysis was employed to identify organic compounds in the samples. Analyses were carried out in building 773-A, laboratory B-159. It should be noted that ADS is not certified by DHEC for NPDES discharge compliance monitoring.
Samples were concentrated using a Tekmar 2016 Purge and Trap concentrator, using a three stage (10 cm Carbopack B / 6 cm Carboxen 1000 / 1 cm Carboxen 1001) trap. Analytical separations were carried out on a Hewlett Packard 6890 gas chromatograph, equipped with a 20 m DB-624 column, with 0.18 mm diameter and 1.0 um film thickness.
Quantification was performed using a Hewlett Packard 5973 mass selective detector.
The mass spectrometer tuning was confirmed within 24 hours prior to each measurement using perfluorotributylamine.
Some VOC samples for this study were analyzed on the following instrument.
Volatile organic analyses were performed by Gas Chromatography - Mass Spectrometry (GC-MS), using the ADS method 2656 (Contract Laboratory Program SOW 7-93 for Volatile Organics).
Samples were concentrated using an OI Analytical model 4460A Dynamic Headspace concentrator (Purge and Trap), using a three stage (10 cm Carbopack B / 6 cm Carboxen 1000 / 1 cm Carboxen 1001) trap.
Separation was performed with a Hewlett Packard 5890 series II gas chromatograph on a 105m x 0.32 mm VOCOL glass capillary column with 3 um film thickness. Quantitation was performed with a Hewlett Packard model 5971 quadrupole mass spectrometer. Internal standard and recovery surrogate compounds were added as specified in the Contract Laboratory Program for volatile organics (SOW 7-93).
The mass spectrometer tuning was confirmed within 12 hours prior to each measurement using 4-bromofluorobenzene.
Tuning verification was performed against CLP tuning requirements, specifically to optimize CLP requirements for high mass sensitivity. 50/95 ratios which are between 8%-15%, may require appropriate flagging if used for other purposes.

MICROTRAC - SRA150 Ver:7.01

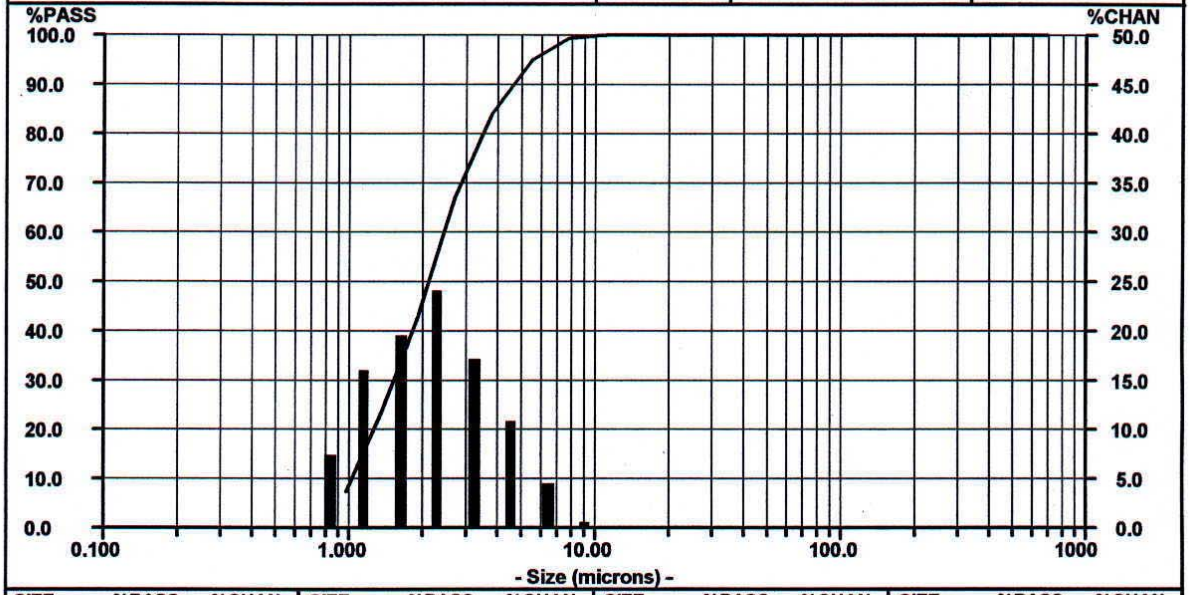
Particle Size

3-172182
10% FSS w/solids

Date: 11/16/01 Meas #: 5135
Time: 07:36 Pres #: 1

Williams, Michael

Summary		Percentiles		Dia	Vol%	Width
mv = 2.513	10% = 1.040	60% = 2.477		2.153	100%	2.689
mn = 1.205	20% = 1.288	70% = 2.893				
ma = 1.870	30% = 1.558	80% = 3.528				
cs = 3.208	40% = 1.865	90% = 4.575				
sd = 1.345	50% = 2.153	95% = 5.503				



SIZE	%PASS	%CHAN	SIZE	%PASS	%CHAN	SIZE	%PASS	%CHAN	SIZE	%PASS	%CHAN
704.0	100.00	0.00									
497.8	100.00	0.00									
352.0	100.00	0.00									
248.9	100.00	0.00									
176.0	100.00	0.00									
124.5	100.00	0.00									
88.00	100.00	0.00									
62.23	100.00	0.00									
44.00	100.00	0.00									
31.11	100.00	0.00									
22.00	100.00	0.00									
15.56	100.00	0.00									
11.00	100.00	0.51									
7.778	99.49	4.50									
5.500	94.99	10.87									
3.889	84.12	17.09									
2.750	67.03	24.07									
1.945	42.96	19.52									
1.375	23.44	16.01									
0.972	7.43	7.43									

Distribution: Volume
Progression: Standard
Upper Edge: 704.0
Lower Edge: 0.688
Residuals: Disabled
Number Of Channels: 20
High Resolution: No
Filter On: N/A

RunTime: 30 seconds
Run Number Avg of 3 runs
Particle: N/A
Particle Transparency: N/A
Particle Refractive Index: N/A
Particle Shape: N/A

Database Path: C:\MTWIN\PDPSD.DB

Fluid: N/A
Fluid Refractive Index: N/A
Loading Factor: 0.0285
Transmission: 0.90
Above Residual: 0.00
Below Residual: 0.00

ASVR Flow Rate: 60
Ultrasonic Power: N/Awatts
Ultrasonic Time: N/A seconds

Lasentec Chord Length Data for Pilot-Scale Precipitation Run #2 Post Filtration Samples

Hanford AN-107 simulant samples were received from Engineering Development Laboratory personnel for analysis of post filtration solids. The samples were isolated at various times after the completion of precipitate reagent additions (on 10-23-01 at 9:47 hours) as indicated in Table 1 below. Each sample was immediately filtered through a 0.45 micron disposable Nalgene Nylon filter unit to yield approximately 1 L of filtrate. The samples were stored in 1L wide-mouth, amber polypropylene bottles to minimize interactions with light during storage. This bottle type allowed for Lasentec chord length analysis without removing the sample from the storage container. Samples were initially analyzed with the Lasentec within 24 hours of the filtration to determine whether any solids were present.

The Lasentec FBRM is a laser-based technique, which utilizes backscattered signal from particles within the detector measurement zone to obtain chord length data for a population of particles. The FBRM is a highly sensitive technique due to the fact that it measures backscattered laser intensity from individual particles within the sample. In addition, the method requires no sample preparation and is suitable for in-process analysis. These are significant advantages over traditional methods for the analysis of suspended solids in liquid media. The FBRM method requires that the particles be passed across the probe surface. This is generally achieved by placing the probe within a flowing liquid stream or (in the case of individual samples) by stirring the liquid using an appropriately designed and positioned impeller blade. A particle chord length is defined as the diameter of the particle as it is presented to the detector. For a given non-spherical particle, the particle may be presented to the detector in a number of orientations and a number of unique chords may be measured. Since the AN-107 simulant composition is complex, post-filtration solids may contain a mixture of particles with different compositions and morphologies (shapes). This adds to the complexity of the measured chord length distribution. In addition, as particle counts increase, the FBRM response may not be linear and the data cannot be considered to be highly quantitative unless suitable standards can be prepared and a calibration curve generated. Nonetheless, general comparisons of particle counts can sometimes be made between samples of the same type.

Table 1. AN-107 Filtrate Sample Isolation Times

Sample ID	Sample Collection Date/Time	Reaction Time Before Filtration (hr)
PF2-1	10-23-01/13:00	3.2
PF2-2	10-24-01/00:15	14.5
PF2-3	10-24-01/07:30	21.7
PF2-4	10-24-01/16:00	30.2
PF2-5	10-25-01/00:05	38.3
PF2-6	10-25-01/07:30	45.7

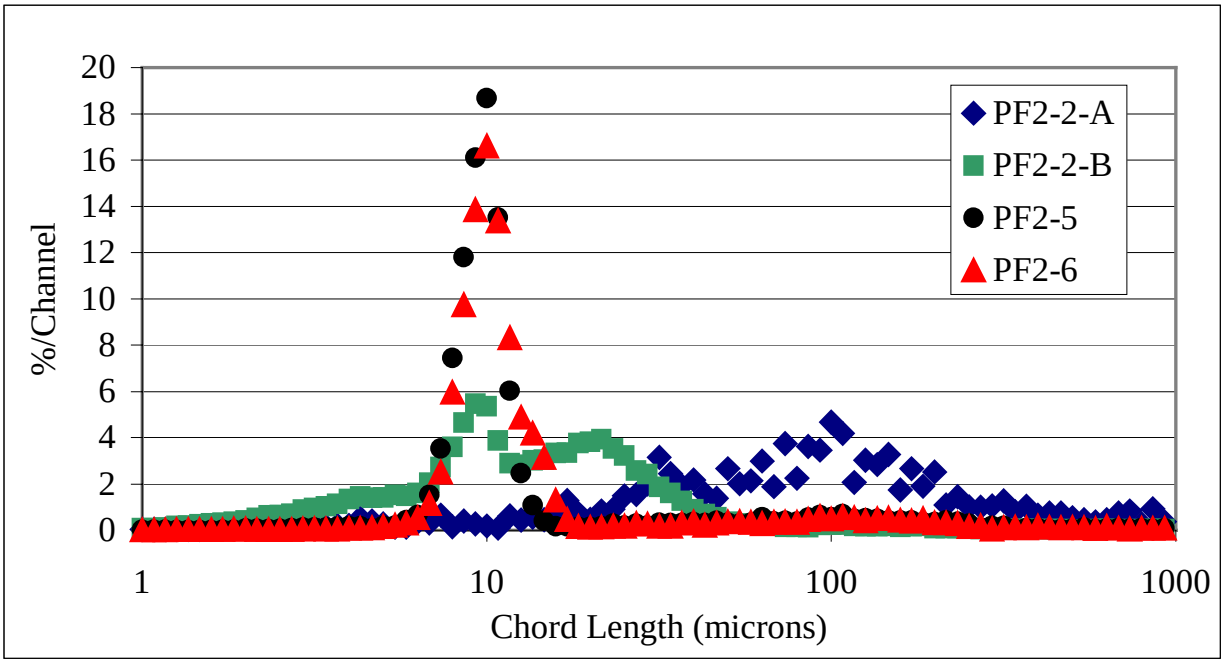
Figure 1 shows the chord length data obtained for selected samples from pilot scale precipitation test #2 after filtration. Table 2 provides the total chord length counts measured per second, the mean chord length for each sample, and the time that after filtration that each sample was

analyzed. Sample PF2-2 was analyzed on two successive days (PF2-2-A and –B). Measurable solids were observed for samples PF2-5 and –6, although the total counts did not exceed 65 for either sample. The counts observed for samples PF2-2-A, -3, and –4 were below normal instrumental background levels (typically around 15 counts per second). Note that the counts per second provided in Table 2 cannot be directly related to weight % solids in the samples, since this measurement was not conducted. Visible solids could not be observed in any of these samples and it is unlikely that the total mass of solid material was high enough to be isolated and measured accurately. Significantly higher counts were observed for sample PF2-2-B approximately 23 hours after the initial analysis of this sample (PF2-2-A) although the total solid content was still very low and no solids were visually observed. The analysis of the –2-B sample does provide an idea of the formation time scale and size of the initial precipitate.

Table 2. Chord Length Data Obtained Following Filtration

Sample	Total Counts/sec	Mean Chord Length (µm)	Measurement Time After Filtration (hr)
PF2-1	Not measured	Not measured	Not measured
PF2-2-A	9	139	18.8
PF2-2-B	187	21	41.6
PF2-3	8	145	11.6
PF2-4	9	141	2.9
PF2-5	59	29	17.7
PF2-6	62	28	10.1

Figure 1. Pilot Scale Run #2 Chord Length Data After Filtration (Chord Length vs. %/Channel)



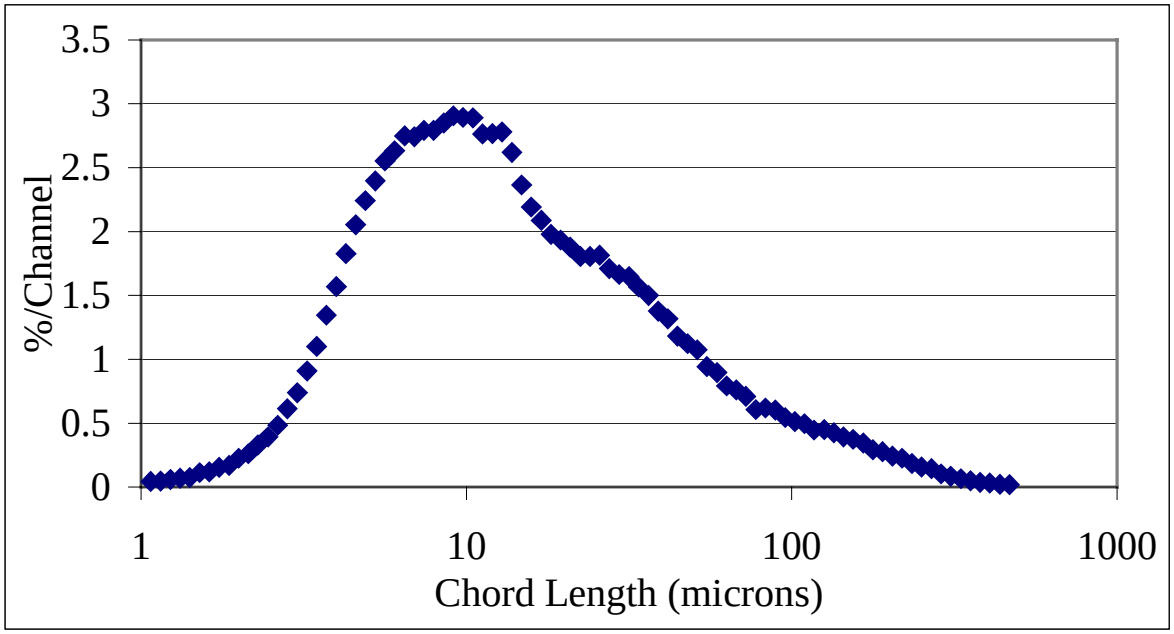
The samples were stored after analysis for nearly 5 months at ambient temperature in the amber bottles. The air headspace above the samples was <10% of the total volume. Table 3 provides

the chord length data obtained for the samples after storage. The samples were all analyzed on 3-6-02. Visible solids were observed for all samples on the container bottoms and sides. Approximately 75% of the solids were removed from the container walls by shaking the bottles. The total counts and mean chord lengths for all measured samples were similar (average counts: 2040; average mean chord length: 27 μm). The chord length distribution shown in Figure 2 for sample PF2-2 is typical of the distributions observed for the other samples.

Table 3. Chord Length Data Obtained After Storage for Several Months

Sample	Total Counts/sec	Mean Chord Length (μm)
PF2-1	2013	33
PF2-2	1972	28
PF2-3	2030	23
PF2-4	2256	24
PF2-5	1931	27
PF2-6	Not measured	Not measured

Figure 2. Pilot Scale Run #2 Chord Length Data for Sample PF2-2 After Storage (Chord Length vs. %/channel)



Appendix B

Experimental Data: Precipitation Test Rig Operations Data

Appendix Contents

Nomenclature for Data Sheets

- HX Outlet (^{o}C) TC-T0, Temperature of the liquid at the outlet of the Heat Exchanger for the Precipitate Tank
- REC PP Outlet (^{o}C) TC-T1, Temperature of the liquid at the discharge of the Recirculation Pump for the Precipitate Tank
- TK BOT (^{o}C) TC-T2, Temperature of the liquid at the bottom of the Precipitate Tank
- HT OUT (^{o}C) TC-T3, Temperature of the liquid at the outlet of the Heater
- Mn Flow (gpm), Flow of 1M $NaMnO_4$ reagent through recirculation loop for mixing, or directed to precipitation tank
- Galigher Flow (gpm), Flow of liquid through the recirculation pump to precipitation tank
- Current to HX (amps), Power to heater for precipitation tank
- Voltage to HX (volts), Voltage to heater for precipitation tank
- Sr Flow (gpm), Flow of 1M $Sr(NO_3)_2$ reagent through recirculation loop for mixing, or directed to precipitation tank

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	6:24	20.6	20.6	20.8	20.6	0.0	-0.1	0	0	0.0
10/23/01	6:25	20.6	20.6	20.8	20.6	0.0	-0.1	0	0	0.0
10/23/01	6:26	20.6	20.6	20.8	20.6	0.0	-0.1	0	0	0.0
10/23/01	6:27	20.6	20.6	20.8	20.7	0.0	-0.1	0	0	0.0
10/23/01	6:28	20.6	20.6	20.9	20.6	0.0	-0.1	65	79	0.0
10/23/01	6:29	20.6	20.6	20.9	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:30	20.6	20.6	20.9	20.7	0.1	-0.1	65	79	0.0
10/23/01	6:31	20.6	20.6	20.9	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:32	20.6	20.6	20.9	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:33	20.6	20.6	20.9	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:34	20.6	20.6	20.9	20.7	0.2	-0.1	65	79	0.0
10/23/01	6:35	20.6	20.6	20.9	20.7	0.2	-0.1	65	79	0.0
10/23/01	6:36	20.6	20.6	20.9	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:37	20.6	20.6	20.9	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:38	20.6	20.6	20.8	20.7	0.0	-0.1	65	79	0.0
10/23/01	6:39	21.6	21.6	21.7	21.6	0.0	9.6	65	79	0.0
10/23/01	6:40	21.6	21.6	21.7	21.6	0.0	9.6	65	79	0.0
10/23/01	6:41	21.7	21.6	21.7	21.7	0.0	9.7	65	79	0.0
10/23/01	6:42	21.7	21.7	21.7	21.7	0.0	9.6	65	79	0.0
10/23/01	6:43	20.9	21.7	21.7	20.9	0.1	9.6	65	79	0.0
10/23/01	6:44	21.3	21.6	21.7	21.2	0.3	9.6	65	79	0.0
10/23/01	6:45	20.6	21.6	21.7	20.5	0.2	9.7	65	79	0.0
10/23/01	6:46	21.1	21.6	21.6	21.1	0.2	9.6	65	79	0.0
10/23/01	6:47	20.6	21.6	21.6	20.6	0.0	9.7	65	79	0.0
10/23/01	6:48	21.1	21.5	21.6	21.0	0.0	9.6	65	79	0.0
10/23/01	6:49	20.6	21.5	21.6	20.6	0.0	9.7	65	79	0.0
10/23/01	6:50	21.0	21.5	21.5	21.0	0.0	9.6	65	79	0.0
10/23/01	6:51	20.5	21.5	21.5	20.6	0.1	9.6	65	79	0.0
10/23/01	6:52	21.0	21.4	21.5	20.9	0.0	9.6	65	79	0.0
10/23/01	6:53	20.9	21.4	21.5	20.9	0.0	9.6	65	79	0.0
10/23/01	6:54	20.8	21.4	21.4	20.7	0.0	9.6	65	79	0.0
10/23/01	6:55	21.0	21.4	21.4	21.0	0.0	9.7	65	79	0.0
10/23/01	6:56	20.7	21.3	21.4	20.6	0.0	9.6	65	79	0.0
10/23/01	6:57	21.0	21.3	21.4	20.9	0.0	9.6	65	79	0.0
10/23/01	6:58	20.5	21.3	21.4	20.4	0.0	9.7	65	79	0.0
10/23/01	6:59	20.9	21.3	21.3	20.9	0.0	9.7	65	79	0.0
10/23/01	7:00	20.3	21.3	21.3	20.3	0.1	9.7	65	79	0.0
10/23/01	7:01	21.1	21.5	21.5	21.0	5.0	9.6	65	79	0.0
10/23/01	7:02	21.0	21.7	21.7	20.9	5.0	9.6	65	79	0.0
10/23/01	7:03	21.4	21.8	21.8	21.1	5.0	9.6	65	79	0.0
10/23/01	7:04	21.6	21.8	21.8	21.3	5.0	9.7	65	79	0.0
10/23/01	7:05	21.3	21.8	21.8	20.8	5.0	9.6	65	79	0.0
10/23/01	7:06	21.6	21.8	21.7	21.2	5.0	9.6	65	79	0.0
10/23/01	7:07	21.0	21.8	21.7	20.6	5.0	9.5	65	79	0.0
10/23/01	7:08	21.5	21.7	21.7	21.1	5.0	9.6	65	79	0.0
10/23/01	7:09	21.0	21.7	21.7	20.7	5.0	9.7	65	79	0.0
10/23/01	7:10	21.4	21.7	21.6	21.0	5.0	9.6	65	79	0.0
10/23/01	7:11	21.5	21.7	21.6	21.1	5.0	9.6	65	79	0.0
10/23/01	7:12	21.2	21.7	21.6	20.7	5.0	9.6	65	79	0.0
10/23/01	7:13	21.5	21.6	21.6	21.0	5.0	9.7	65	79	0.0
10/23/01	7:14	20.9	21.6	21.6	20.4	5.0	9.6	65	79	0.0
10/23/01	7:15	21.4	21.6	21.6	20.9	5.0	9.7	65	79	0.0
10/23/01	7:16	21.1	21.6	21.6	20.8	5.0	9.6	65	79	0.0
10/23/01	7:17	21.3	21.6	21.5	20.8	5.0	9.7	65	79	0.0
10/23/01	7:18	21.5	21.6	21.5	21.0	5.0	9.7	65	79	0.0
10/23/01	7:19	21.1	21.5	21.5	20.5	5.0	9.7	65	79	0.0
10/23/01	7:20	21.4	21.5	21.5	20.9	5.0	9.6	65	79	0.0
10/23/01	7:21	20.7	21.5	21.5	20.4	5.0	9.6	65	79	0.0
10/23/01	7:22	21.3	21.5	21.4	20.8	5.0	9.7	65	79	0.0
10/23/01	7:23	21.4	21.5	21.4	21.0	5.0	9.6	65	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	7:24	21.1	21.5	21.4	20.5	5.0	9.7	65	79	0.0
10/23/01	7:25	21.4	21.4	21.4	20.9	5.0	9.7	65	79	0.0
10/23/01	7:26	20.7	21.5	21.4	20.3	5.0	9.6	65	79	0.0
10/23/01	7:27	21.2	21.4	21.4	20.8	5.0	9.7	65	79	0.0
10/23/01	7:28	21.4	21.4	21.4	20.9	5.0	9.6	65	79	0.0
10/23/01	7:29	21.0	21.4	21.4	20.5	5.0	9.6	65	79	0.0
10/23/01	7:30	21.3	21.4	21.3	20.8	5.0	9.6	65	79	0.0
10/23/01	7:31	20.7	21.4	21.3	20.3	5.0	9.7	65	79	0.0
10/23/01	7:32	21.2	21.3	21.3	20.7	5.0	9.6	65	79	0.0
10/23/01	7:33	21.3	21.3	21.3	20.8	5.0	9.7	65	79	0.0
10/23/01	7:34	20.9	21.3	21.3	20.3	5.0	9.7	65	79	0.0
10/23/01	7:35	21.2	21.3	21.3	20.7	5.0	9.5	65	79	0.0
10/23/01	7:36	20.8	21.3	21.3	20.5	5.0	9.6	65	79	0.0
10/23/01	7:37	21.1	21.3	21.3	20.6	5.0	9.6	65	79	0.0
10/23/01	7:38	21.3	21.3	21.2	20.8	5.0	9.7	65	79	0.0
10/23/01	7:39	20.7	21.2	21.2	20.2	5.0	9.7	65	79	0.0
10/23/01	7:40	21.0	21.2	21.1	20.6	0.6	9.6	65	79	0.0
10/23/01	7:41	20.5	20.9	20.9	20.3	0.0	9.7	65	79	0.0
10/23/01	7:42	20.4	20.7	20.7	20.2	0.0	9.6	65	79	0.0
10/23/01	7:43	20.5	20.6	20.7	20.4	0.0	9.7	65	79	0.0
10/23/01	7:44	19.9	20.6	20.7	19.8	0.0	9.6	65	79	0.0
10/23/01	7:45	20.4	20.6	20.6	20.3	0.0	9.7	65	79	0.0
10/23/01	7:46	20.3	20.6	20.6	20.3	0.0	9.6	65	79	0.0
10/23/01	7:47	20.2	20.6	20.6	20.1	0.0	9.7	65	79	0.0
10/23/01	7:48	20.4	20.6	20.6	20.4	0.0	9.6	65	79	0.0
10/23/01	7:49	19.8	20.6	20.6	19.7	0.0	9.6	65	79	0.0
10/23/01	7:50	20.4	20.6	20.6	20.3	5.0	9.7	65	79	0.0
10/23/01	7:51	20.9	20.9	21.0	20.7	5.0	9.6	65	79	0.0
10/23/01	7:52	20.7	21.1	21.1	20.4	5.0	9.6	65	79	0.0
10/23/01	7:53	21.0	21.1	21.1	20.7	5.0	9.7	65	79	0.0
10/23/01	7:54	20.4	21.0	21.0	20.2	2.1	9.6	65	79	0.0
10/23/01	7:55	20.6	20.8	20.8	20.3	2.1	9.6	65	79	2.0
10/23/01	7:56	20.6	20.7	20.7	20.4	2.1	9.6	65	79	2.1
10/23/01	7:57	20.1	20.6	20.7	19.9	2.2	9.6	65	79	2.1
10/23/01	7:58	20.4	20.6	20.6	20.3	2.1	9.6	65	79	2.1
10/23/01	7:59	20.2	20.6	20.6	20.3	2.1	9.6	65	79	2.1
10/23/01	8:00	20.2	20.5	20.6	20.1	2.1	9.7	65	79	2.1
10/23/01	8:01	20.4	20.5	20.6	20.3	2.1	9.6	65	79	2.1
10/23/01	8:02	19.8	20.5	20.6	19.7	2.1	9.6	65	79	2.0
10/23/01	8:03	20.3	20.5	20.6	20.2	2.1	9.6	65	79	2.0
10/23/01	8:04	20.5	20.5	20.6	20.4	2.1	9.7	65	79	2.0
10/23/01	8:05	20.0	20.5	20.6	19.9	2.1	9.6	65	79	2.0
10/23/01	8:06	20.3	20.5	20.5	20.3	2.1	9.6	65	79	2.0
10/23/01	8:07	20.0	20.5	20.5	20.1	2.1	9.7	65	79	2.0
10/23/01	8:08	20.2	20.5	20.5	20.1	2.1	9.7	65	79	2.0
10/23/01	8:09	20.4	20.5	20.5	20.3	2.1	9.6	65	79	2.0
10/23/01	8:10	19.8	20.5	20.5	19.7	2.1	9.6	65	79	2.0
10/23/01	8:11	20.3	20.4	20.5	20.2	2.1	9.6	65	79	2.0
10/23/01	8:12	20.4	20.4	20.5	20.3	2.1	9.7	65	79	2.0
10/23/01	8:13	20.0	20.4	20.5	19.9	2.1	9.5	65	79	2.0
10/23/01	8:14	20.3	20.4	20.5	20.2	2.1	9.7	65	79	2.0
10/23/01	8:15	20.2	20.4	20.5	20.2	2.1	9.5	65	79	2.0
10/23/01	8:16	20.1	20.4	20.5	20.0	2.1	9.6	65	79	2.0
10/23/01	8:17	20.3	20.4	20.5	20.2	2.1	9.6	65	79	2.0
10/23/01	8:18	19.7	20.4	20.5	19.7	2.1	9.6	65	79	2.0
10/23/01	8:19	20.2	20.4	20.4	20.1	2.1	9.6	65	79	2.0
10/23/01	8:20	20.4	20.4	20.4	20.3	2.1	9.7	65	79	2.0
10/23/01	8:21	19.8	20.4	20.4	19.7	2.1	9.6	65	79	2.0
10/23/01	8:22	20.2	20.4	20.4	20.1	2.1	9.6	65	79	2.0
10/23/01	8:23	20.3	20.4	20.4	20.3	2.1	9.6	65	79	2.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	8:24	20.0	20.4	20.4	19.9	2.1	9.6	65	79	2.0
10/23/01	8:25	20.3	20.4	20.4	20.2	2.1	9.6	65	79	2.0
10/23/01	8:26	19.8	20.4	20.4	19.9	2.1	9.6	65	79	2.0
10/23/01	8:27	20.1	20.4	20.4	20.0	2.1	9.7	65	79	2.0
10/23/01	8:28	20.3	20.3	20.4	20.2	2.1	9.7	65	79	2.0
10/23/01	8:29	19.7	20.4	20.4	19.6	2.0	9.7	65	79	2.0
10/23/01	8:30	20.2	20.3	20.4	20.1	2.1	9.7	65	79	2.0
10/23/01	8:31	20.3	20.3	20.4	20.2	2.0	9.6	65	79	2.0
10/23/01	8:32	19.9	20.3	20.4	19.8	2.1	9.6	65	79	2.0
10/23/01	8:33	20.2	20.3	20.4	20.1	2.0	9.6	65	79	2.0
10/23/01	8:34	19.9	20.3	20.4	20.0	2.0	9.8	65	79	2.0
10/23/01	8:35	20.1	20.3	20.4	20.0	2.0	9.6	65	79	2.0
10/23/01	8:36	20.2	20.3	20.4	20.2	2.0	9.6	65	79	2.0
10/23/01	8:37	19.6	20.3	20.4	19.6	2.0	9.7	65	79	2.0
10/23/01	8:38	20.1	20.3	20.3	20.0	2.0	9.7	65	79	2.0
10/23/01	8:39	20.3	20.3	20.3	20.2	2.0	9.7	65	79	2.0
10/23/01	8:40	19.8	20.3	20.3	19.7	2.1	9.7	65	79	2.0
10/23/01	8:41	20.1	20.3	20.3	20.1	2.0	9.6	65	79	2.0
10/23/01	8:42	20.2	20.3	20.3	20.2	2.1	9.6	65	79	2.0
10/23/01	8:43	20.0	20.3	20.3	19.9	2.1	9.7	65	79	2.0
10/23/01	8:44	20.2	20.3	20.3	20.1	2.1	9.7	65	79	2.0
10/23/01	8:45	19.6	20.3	20.3	19.6	2.0	9.6	65	79	2.0
10/23/01	8:46	20.0	20.2	20.3	20.0	2.1	9.6	65	79	2.0
10/23/01	8:47	20.2	20.2	20.3	20.1	2.0	9.6	65	79	2.0
10/23/01	8:48	19.7	20.2	20.3	19.6	2.0	9.6	65	79	2.0
10/23/01	8:49	20.1	20.2	20.3	20.0	2.0	9.7	65	79	2.0
10/23/01	8:50	20.2	20.2	20.3	20.2	2.0	9.6	65	79	2.0
10/23/01	8:51	19.9	20.2	20.3	19.8	2.1	9.6	65	79	2.0
10/23/01	8:52	20.1	20.2	20.3	20.0	2.1	9.6	65	79	2.0
10/23/01	8:53	19.6	20.2	20.3	19.7	2.1	9.7	65	79	2.0
10/23/01	8:54	20.0	20.2	20.3	19.9	2.1	9.8	65	79	2.0
10/23/01	8:55	20.5	20.6	20.7	20.3	2.1	9.7	65	79	2.0
10/23/01	8:56	20.5	21.4	21.5	20.4	2.1	9.7	65	79	2.0
10/23/01	8:57	21.3	22.0	22.1	21.2	2.1	9.7	65	79	2.0
10/23/01	8:58	21.3	22.0	22.1	21.4	2.1	9.7	65	79	2.0
10/23/01	8:59	21.6	22.2	22.2	21.4	2.1	9.6	65	79	2.0
10/23/01	9:00	21.9	22.5	22.5	21.9	2.1	9.6	65	79	2.0
10/23/01	9:01	21.8	22.7	22.8	21.6	2.1	9.7	65	79	2.0
10/23/01	9:02	22.4	22.9	23.0	22.3	2.1	9.6	65	79	2.0
10/23/01	9:03	22.2	23.3	23.4	22.1	2.1	9.7	65	79	2.0
10/23/01	9:04	22.7	23.4	23.5	22.6	2.1	9.6	65	79	2.0
10/23/01	9:05	22.6	23.8	23.9	22.5	2.1	9.6	65	79	2.0
10/23/01	9:06	23.3	24.0	24.1	23.2	2.1	9.6	65	79	2.0
10/23/01	9:07	23.2	24.3	24.7	23.0	2.1	9.6	65	79	2.0
10/23/01	9:08	23.6	24.6	24.7	23.6	2.1	9.6	65	79	2.0
10/23/01	9:09	23.8	24.9	24.9	23.6	2.1	9.6	65	79	2.0
10/23/01	9:10	23.7	25.2	25.2	23.7	2.1	9.7	65	79	2.0
10/23/01	9:11	24.3	25.4	25.5	24.2	2.1	9.6	65	79	2.0
10/23/01	9:12	23.7	25.4	25.4	23.7	2.1	9.6	65	79	2.0
10/23/01	9:13	24.3	25.3	25.3	24.3	2.1	9.7	65	79	2.0
10/23/01	9:14	23.9	25.2	25.3	23.8	2.1	9.6	65	79	2.0
10/23/01	9:15	23.8	25.2	25.2	23.9	2.1	9.7	65	79	2.0
10/23/01	9:16	24.0	25.1	25.1	23.9	2.1	9.6	65	79	2.0
10/23/01	9:17	23.4	25.0	25.1	23.5	2.1	9.7	65	79	2.0
10/23/01	9:18	24.1	25.0	25.0	24.0	2.1	9.7	65	79	2.0
10/23/01	9:19	23.5	24.9	24.9	23.4	2.1	9.6	65	79	2.0
10/23/01	9:20	24.0	24.9	24.9	23.9	2.1	9.7	65	79	2.0
10/23/01	9:21	23.7	24.8	24.8	23.5	2.1	9.6	65	79	2.0
10/23/01	9:22	23.5	24.8	24.8	23.5	2.1	9.7	65	79	2.0
10/23/01	9:23	23.7	24.7	24.7	23.6	2.1	9.7	65	79	2.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	9:24	23.2	24.7	24.7	23.2	2.1	9.7	65	79	2.0
10/23/01	9:25	23.7	24.6	24.6	23.6	2.1	9.6	65	79	2.0
10/23/01	9:26	23.2	24.6	24.6	23.1	2.1	9.7	65	79	2.0
10/23/01	9:27	23.6	24.5	24.5	23.6	2.1	9.6	65	79	2.0
10/23/01	9:28	23.3	24.5	24.5	23.2	2.1	9.6	65	79	2.0
10/23/01	9:29	23.3	24.4	24.4	23.3	2.1	9.6	65	79	2.0
10/23/01	9:30	23.4	24.3	24.4	23.3	2.1	9.6	65	79	2.0
10/23/01	9:31	22.9	24.3	24.3	22.9	2.1	9.6	65	79	2.0
10/23/01	9:32	23.4	24.2	24.3	23.3	2.1	9.6	65	79	2.0
10/23/01	9:33	22.8	24.2	24.2	22.7	2.1	9.7	65	79	2.0
10/23/01	9:34	23.4	24.1	24.2	23.3	2.1	9.7	65	79	2.0
10/23/01	9:35	22.8	24.1	24.1	22.7	2.1	9.7	65	79	2.0
10/23/01	9:36	23.3	24.1	24.1	23.2	2.1	9.6	65	79	2.2
10/23/01	9:37	23.0	24.1	24.1	22.8	2.1	9.6	65	79	2.2
10/23/01	9:38	23.1	24.0	24.1	23.1	2.1	9.6	65	79	2.2
10/23/01	9:39	23.1	24.0	24.0	22.9	2.1	9.6	65	79	2.1
10/23/01	9:40	22.7	24.0	24.0	22.8	2.1	9.7	65	79	2.1
10/23/01	9:41	23.1	24.0	24.0	23.0	2.1	9.7	65	79	2.1
10/23/01	9:42	22.5	23.9	24.0	22.5	2.1	9.7	65	79	2.1
10/23/01	9:43	23.1	23.9	23.9	23.0	2.1	9.6	65	79	0.0
10/23/01	9:44	22.6	23.9	23.9	22.5	2.1	9.7	65	79	0.0
10/23/01	9:45	23.2	23.8	23.9	23.1	2.1	9.6	65	79	0.0
10/23/01	9:46	22.7	23.8	23.8	22.5	2.1	9.6	65	79	0.0
10/23/01	9:47	23.0	23.8	23.8	23.0	2.1	9.6	65	79	0.0
10/23/01	9:48	22.8	23.7	23.7	22.6	2.1	9.6	65	79	0.0
10/23/01	9:49	22.7	23.7	23.7	22.7	2.1	9.6	65	79	0.0
10/23/01	9:50	22.8	23.6	23.7	22.7	2.1	9.7	65	79	0.0
10/23/01	9:51	22.4	23.6	23.6	22.4	2.1	9.6	65	79	0.0
10/23/01	9:52	22.8	23.5	23.6	22.7	2.1	9.6	65	79	0.0
10/23/01	9:53	22.4	24.0	24.1	22.3	2.3	9.7	65	79	0.0
10/23/01	9:54	23.8	24.9	25.0	23.6	2.1	9.4	65	79	0.0
10/23/01	9:55	24.0	26.0	26.2	23.9	2.1	9.9	65	79	0.0
10/23/01	9:56	25.5	27.0	27.1	25.3	2.1	9.6	65	79	0.0
10/23/01	9:57	25.8	28.0	28.1	25.6	2.0	9.7	65	79	0.0
10/23/01	9:58	26.3	28.2	28.3	26.4	0.0	9.7	65	79	0.0
10/23/01	9:59	26.4	28.1	28.2	26.3	0.0	9.6	65	79	0.0
10/23/01	10:00	25.8	28.1	28.1	25.8	0.0	9.7	65	79	0.0
10/23/01	10:01	26.4	28.0	28.0	26.4	0.0	9.7	65	79	0.0
10/23/01	10:02	26.2	27.9	28.0	26.0	0.0	9.6	65	79	0.0
10/23/01	10:03	25.7	27.9	27.9	25.7	0.0	9.7	65	79	0.0
10/23/01	10:04	26.3	27.8	27.9	26.3	0.0	9.7	65	79	0.0
10/23/01	10:05	25.9	27.7	27.8	25.8	0.0	9.6	65	79	0.0
10/23/01	10:06	25.6	27.7	27.7	25.6	0.0	9.7	65	79	0.0
10/23/01	10:07	26.1	27.6	27.7	26.1	0.0	9.6	65	79	0.0
10/23/01	10:08	25.6	27.5	27.6	25.5	0.0	9.6	65	79	0.0
10/23/01	10:09	25.5	27.5	27.5	25.7	0.0	9.6	65	79	0.0
10/23/01	10:10	25.9	27.4	27.4	25.8	0.0	9.6	65	79	0.0
10/23/01	10:11	25.3	27.3	27.4	25.3	0.0	9.6	65	79	0.0
10/23/01	10:12	25.7	27.3	27.3	25.8	0.0	9.7	65	79	0.0
10/23/01	10:13	25.6	27.2	27.2	25.5	0.0	9.7	65	79	0.0
10/23/01	10:14	25.1	27.1	27.2	25.1	0.0	9.6	65	79	0.0
10/23/01	10:15	25.7	27.0	27.1	25.6	0.0	9.7	65	79	0.0
10/23/01	10:16	25.2	27.0	27.0	25.1	0.0	9.6	65	79	0.0
10/23/01	10:17	25.0	26.9	26.9	25.1	0.0	9.7	65	79	0.0
10/23/01	10:18	25.4	26.8	26.9	25.4	0.0	9.6	65	79	0.0
10/23/01	10:19	24.9	26.8	26.8	24.8	0.0	9.6	65	79	0.0
10/23/01	10:20	25.2	26.7	26.8	25.3	0.0	9.7	65	79	0.0
10/23/01	10:21	25.2	26.6	26.7	25.1	0.0	9.6	65	79	0.0
10/23/01	10:22	24.7	26.6	26.6	24.7	0.0	9.7	65	79	0.0
10/23/01	10:23	25.3	26.5	26.6	25.2	0.0	9.6	65	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	10:24	24.8	26.5	26.5	24.7	0.0	9.6	65	79	0.0
10/23/01	10:25	24.7	26.4	26.4	24.8	0.0	9.6	65	79	0.0
10/23/01	10:26	25.0	26.3	26.4	24.9	0.0	9.6	65	79	0.0
10/23/01	10:27	24.4	26.3	26.3	24.4	0.0	9.7	65	79	0.0
10/23/01	10:28	24.9	26.2	26.2	24.9	0.0	9.6	65	79	0.0
10/23/01	10:29	24.7	26.1	26.2	24.6	0.0	9.6	65	79	0.0
10/23/01	10:30	24.3	26.1	26.1	24.4	0.0	9.7	65	79	0.0
10/23/01	10:31	24.8	26.0	26.0	24.8	0.0	9.7	65	79	0.0
10/23/01	10:32	24.3	26.0	26.0	24.2	0.0	9.7	65	79	0.0
10/23/01	10:33	24.5	25.9	25.9	24.6	0.0	9.6	65	79	0.0
10/23/01	10:34	24.5	25.8	25.9	24.4	0.0	9.6	65	79	0.0
10/23/01	10:35	24.0	25.8	25.8	24.0	0.0	9.6	65	79	0.0
10/23/01	10:36	24.6	25.7	25.7	24.5	0.0	9.6	65	79	0.0
10/23/01	10:37	24.1	25.6	25.7	24.0	0.0	9.6	65	79	0.0
10/23/01	10:38	24.2	25.6	25.6	24.3	0.0	9.7	65	79	0.0
10/23/01	10:39	24.3	25.5	25.6	24.2	0.0	9.6	65	79	0.0
10/23/01	10:40	23.8	25.5	25.5	23.8	0.0	9.6	65	79	0.0
10/23/01	10:41	24.3	25.4	25.4	24.3	0.0	9.6	65	79	0.0
10/23/01	10:42	23.8	25.3	25.4	23.7	0.0	9.6	65	79	0.0
10/23/01	10:43	24.1	25.3	25.3	24.2	0.0	9.7	65	79	0.0
10/23/01	10:44	24.0	25.3	25.3	23.9	0.0	9.7	65	79	0.0
10/23/01	10:45	23.6	25.2	25.3	23.7	0.0	9.6	65	79	0.0
10/23/01	10:46	24.1	25.2	25.2	24.1	0.0	9.6	65	79	0.0
10/23/01	10:47	23.6	25.1	25.2	23.6	0.0	9.6	65	79	0.0
10/23/01	10:48	24.1	25.1	25.2	24.1	0.0	9.6	65	79	0.0
10/23/01	10:49	23.9	25.1	25.1	23.7	0.0	9.7	65	79	0.0
10/23/01	10:50	23.6	25.1	25.1	23.6	0.0	9.7	65	79	0.0
10/23/01	10:51	24.0	25.0	25.0	23.9	0.0	9.6	65	79	0.0
10/23/01	10:52	23.4	24.9	25.0	23.4	0.0	9.6	65	79	0.0
10/23/01	10:53	23.9	24.9	24.9	23.9	0.0	9.6	65	79	0.0
10/23/01	10:54	23.7	24.8	24.9	23.5	0.0	9.6	65	79	0.0
10/23/01	10:55	23.4	24.8	24.8	23.5	0.0	9.6	65	79	0.0
10/23/01	10:56	23.8	24.7	24.8	23.7	0.0	9.6	65	79	0.0
10/23/01	10:57	23.2	24.7	24.7	23.2	0.0	9.6	65	79	0.0
10/23/01	10:58	23.8	24.6	24.7	23.7	0.0	9.6	65	79	0.0
10/23/01	10:59	23.4	24.6	24.6	23.3	0.0	9.7	65	79	0.0
10/23/01	11:00	23.1	24.5	24.6	23.2	0.0	9.6	65	79	0.0
10/23/01	11:01	23.4	24.5	24.5	23.4	0.0	9.7	65	79	0.0
10/23/01	11:02	22.8	24.4	24.5	22.8	0.0	9.6	65	79	0.0
10/23/01	11:03	23.0	24.4	24.4	22.8	0.0	9.7	65	79	0.0
10/23/01	11:04	22.5	24.3	24.3	22.4	0.0	9.7	65	79	0.0
10/23/01	11:05	22.9	24.2	24.2	22.9	0.0	9.6	65	79	0.0
10/23/01	11:06	22.4	24.1	24.2	22.3	0.0	9.6	65	79	0.0
10/23/01	11:07	22.4	24.0	24.1	22.4	0.0	9.7	65	79	0.0
10/23/01	11:08	22.6	24.0	24.0	22.4	0.0	9.6	65	79	0.0
10/23/01	11:09	22.1	23.9	23.9	22.1	0.0	9.6	65	79	0.0
10/23/01	11:10	22.6	23.8	23.9	22.6	0.0	9.7	65	79	0.0
10/23/01	11:11	22.1	23.8	23.8	22.0	0.0	9.6	65	79	0.0
10/23/01	11:12	22.1	23.7	23.7	22.2	0.0	9.7	65	79	0.0
10/23/01	11:13	21.9	23.6	23.6	21.9	0.0	9.6	65	79	0.0
10/23/01	11:14	21.5	23.5	23.6	21.5	0.0	9.6	65	79	0.0
10/23/01	11:15	21.9	23.4	23.5	21.9	0.0	9.6	65	79	0.0
10/23/01	11:16	21.3	23.4	23.4	21.3	0.0	9.6	65	79	0.0
10/23/01	11:17	21.6	23.3	23.3	21.6	0.0	9.6	65	79	0.0
10/23/01	11:18	21.4	23.2	23.2	21.2	0.0	9.7	65	79	0.0
10/23/01	11:19	21.2	23.1	23.1	21.2	0.0	9.7	65	79	0.0
10/23/01	11:20	21.5	23.0	23.0	21.4	0.0	9.6	65	79	0.0
10/23/01	11:21	21.0	22.9	22.9	21.0	0.0	9.7	65	79	0.0
10/23/01	11:22	21.5	22.8	22.9	21.4	0.0	9.6	65	79	0.0
10/23/01	11:23	20.8	22.8	22.8	20.8	0.0	9.6	65	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	12:24	18.5	19.3	19.3	18.5	0.0	9.6	65	79	0.0
10/23/01	12:25	18.3	19.3	19.3	18.1	0.0	9.6	65	79	0.0
10/23/01	12:26	18.1	19.2	19.3	18.1	0.0	9.7	65	79	0.0
10/23/01	12:27	18.4	19.2	19.2	18.3	0.0	9.6	65	79	0.0
10/23/01	12:28	18.0	19.2	19.2	17.9	0.0	9.7	65	79	0.0
10/23/01	12:29	18.5	19.1	19.1	18.4	0.0	9.6	65	79	0.0
10/23/01	12:30	18.0	19.1	19.1	17.8	0.0	9.6	65	79	0.0
10/23/01	12:31	18.1	19.0	19.1	18.1	0.0	9.6	65	79	0.0
10/23/01	12:32	18.2	19.0	19.0	18.0	0.0	9.7	65	79	0.0
10/23/01	12:33	17.8	19.0	19.0	17.8	0.0	9.6	85	79	0.0
10/23/01	12:34	18.3	18.9	19.0	18.2	0.0	9.7	82	79	0.0
10/23/01	12:35	17.8	18.9	18.9	17.7	0.0	9.6	84	79	0.0
10/23/01	12:36	18.1	18.8	18.9	18.1	0.0	9.7	83	79	0.0
10/23/01	12:37	17.9	18.8	18.8	17.8	0.0	9.6	68	79	0.0
10/23/01	12:38	18.4	18.8	18.8	18.2	0.0	9.7	79	79	0.0
10/23/01	12:39	18.6	18.8	18.8	18.5	0.0	9.6	87	79	0.0
10/23/01	12:40	18.2	18.8	18.8	18.1	0.0	9.6	82	79	0.0
10/23/01	12:41	18.7	18.8	18.8	18.6	0.0	9.7	95	79	0.0
10/23/01	12:42	18.1	18.8	18.8	18.1	0.0	9.6	98	79	0.0
10/23/01	12:43	18.7	18.8	18.8	18.6	0.0	9.6	80	79	0.0
10/23/01	12:44	18.1	18.8	18.8	18.1	0.0	9.6	101	79	0.0
10/23/01	12:45	18.7	18.8	18.8	18.6	0.0	9.7	111	79	0.0
10/23/01	12:46	18.1	18.8	18.8	18.1	0.0	9.7	101	79	0.0
10/23/01	12:47	18.7	18.8	18.8	18.6	0.0	9.6	106	79	0.0
10/23/01	12:48	18.2	18.8	18.8	18.1	0.0	9.6	112	79	0.0
10/23/01	12:49	18.7	18.8	18.8	18.6	0.0	9.7	104	79	0.0
10/23/01	12:50	18.2	18.8	18.8	18.1	0.0	9.7	96	79	0.0
10/23/01	12:51	18.7	18.8	18.8	18.6	0.0	9.7	112	79	0.0
10/23/01	12:52	18.3	18.8	18.8	18.2	0.0	9.6	87	79	0.0
10/23/01	12:53	18.7	18.7	18.8	18.6	0.0	9.7	118	79	0.0
10/23/01	12:54	18.3	18.7	18.8	18.2	0.0	9.7	101	79	0.0
10/23/01	12:55	18.7	18.7	18.8	18.6	0.0	9.5	86	79	0.0
10/23/01	12:56	18.4	18.7	18.8	18.3	0.0	9.6	115	79	0.0
10/23/01	12:57	18.6	18.7	18.8	18.6	0.0	9.7	104	79	0.0
10/23/01	12:58	18.5	18.7	18.8	18.3	0.0	9.6	103	79	0.0
10/23/01	12:59	18.4	18.7	18.8	18.4	0.0	9.7	92	79	0.0
10/23/01	13:00	18.5	18.7	18.7	18.4	0.0	9.6	116	79	0.0
10/23/01	13:01	18.3	18.7	18.8	18.3	0.0	9.6	110	79	0.0
10/23/01	13:02	18.6	18.7	18.7	18.4	0.0	9.6	104	79	0.0
10/23/01	13:03	18.2	18.7	18.7	18.2	0.0	9.6	94	79	0.0
10/23/01	13:04	18.6	18.7	18.7	18.5	0.0	9.6	120	79	0.0
10/23/01	13:05	18.1	18.7	18.7	18.1	0.0	9.7	90	79	0.0
10/23/01	13:06	18.6	18.7	18.7	18.5	0.0	9.6	107	79	0.0
10/23/01	13:07	18.1	18.7	18.7	18.0	0.0	9.7	118	79	0.0
10/23/01	13:08	18.6	18.7	18.7	18.5	0.0	9.7	92	79	0.0
10/23/01	13:09	18.1	18.7	18.7	18.0	0.0	9.7	103	79	0.0
10/23/01	13:10	18.6	18.7	18.7	18.5	0.0	9.6	98	79	0.0
10/23/01	13:11	18.2	18.7	18.7	18.1	0.0	9.7	94	79	0.0
10/23/01	13:12	18.7	18.7	18.7	18.6	0.0	9.7	114	79	0.0
10/23/01	13:13	18.3	18.7	18.7	18.1	0.0	9.7	103	79	0.0
10/23/01	13:14	18.7	18.7	18.7	18.6	0.0	9.6	121	79	0.0
10/23/01	13:15	18.3	18.7	18.7	18.2	0.0	9.6	134	79	0.0
10/23/01	13:16	18.6	18.7	18.7	18.6	0.0	9.6	96	79	0.0
10/23/01	13:17	18.4	18.7	18.7	18.3	0.0	9.6	110	79	0.0
10/23/01	13:18	18.4	18.7	18.7	18.4	0.0	9.6	93	79	0.0
10/23/01	13:19	18.5	18.7	18.7	18.3	0.0	9.6	96	79	0.0
10/23/01	13:20	18.2	18.7	18.7	18.3	0.0	9.6	98	79	0.0
10/23/01	13:21	18.5	18.7	18.7	18.4	0.0	9.6	109	79	0.0
10/23/01	13:22	18.1	18.7	18.7	18.1	0.0	9.7	118	79	0.0
10/23/01	13:23	18.6	18.7	18.7	18.4	0.0	9.6	134	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	13:24	18.1	18.7	18.7	18.0	0.0	9.6	121	79	0.0
10/23/01	13:25	18.6	18.7	18.7	18.5	0.0	9.7	97	79	0.0
10/23/01	13:26	18.1	18.7	18.7	18.0	0.0	9.6	103	79	0.0
10/23/01	13:27	18.6	18.6	18.7	18.5	0.0	9.6	88	79	0.0
10/23/01	13:28	18.1	18.7	18.7	18.0	0.0	9.7	120	79	0.0
10/23/01	13:29	18.6	18.7	18.7	18.5	0.0	9.7	115	79	0.0
10/23/01	13:30	18.2	18.7	18.7	18.0	0.0	9.7	122	79	0.0
10/23/01	13:31	18.7	18.7	18.7	18.5	0.0	9.7	93	79	0.0
10/23/01	13:32	18.3	18.7	18.7	18.1	0.0	9.5	124	79	0.0
10/23/01	13:33	18.6	18.6	18.7	18.5	0.0	9.7	143	79	0.0
10/23/01	13:34	18.4	18.6	18.7	18.2	0.0	9.7	103	79	0.0
10/23/01	13:35	18.5	18.7	18.7	18.5	0.0	9.6	130	79	0.0
10/23/01	13:36	18.4	18.6	18.7	18.3	0.0	9.6	130	79	0.0
10/23/01	13:37	18.3	18.6	18.7	18.3	0.0	9.7	114	79	0.0
10/23/01	13:38	18.5	18.6	18.7	18.3	0.0	9.7	100	79	0.0
10/23/01	13:39	18.2	18.6	18.7	18.2	0.0	9.6	137	79	0.0
10/23/01	13:40	18.5	18.6	18.7	18.4	0.0	9.7	99	79	0.0
10/23/01	13:41	18.1	18.6	18.7	18.1	0.0	9.7	101	79	0.0
10/23/01	13:42	18.5	18.6	18.6	18.4	0.0	9.5	107	79	0.0
10/23/01	13:43	18.0	18.6	18.6	18.0	0.0	9.7	107	79	0.0
10/23/01	13:44	18.5	18.6	18.6	18.4	0.0	9.7	81	79	0.0
10/23/01	13:45	18.0	18.6	18.7	18.0	0.0	9.6	126	79	0.0
10/23/01	13:46	18.6	18.6	18.6	18.4	0.0	9.6	110	79	0.0
10/23/01	13:47	18.0	18.6	18.6	17.9	0.0	9.6	126	79	0.0
10/23/01	13:48	18.6	18.6	18.6	18.5	0.0	9.7	128	79	0.0
10/23/01	13:49	18.1	18.6	18.6	18.0	0.0	9.6	126	79	0.0
10/23/01	13:50	18.6	18.6	18.6	18.5	0.0	9.6	97	79	0.0
10/23/01	13:51	18.1	18.6	18.6	18.0	0.0	9.7	132	79	0.0
10/23/01	13:52	18.6	18.6	18.6	18.5	0.0	9.6	111	79	0.0
10/23/01	13:53	18.1	18.6	18.6	18.0	0.0	9.6	123	79	0.0
10/23/01	13:54	18.6	18.6	18.6	18.5	0.0	9.6	85	79	0.0
10/23/01	13:55	18.2	18.6	18.6	18.0	0.0	9.7	118	79	0.0
10/23/01	13:56	18.6	18.6	18.6	18.5	0.0	9.6	122	79	0.0
10/23/01	13:57	18.2	18.6	18.6	18.0	0.0	9.6	104	79	0.0
10/23/01	13:58	18.6	18.6	18.6	18.5	0.0	9.7	117	79	0.0
10/23/01	13:59	18.2	18.6	18.6	18.1	0.0	9.8	136	79	0.0
10/23/01	14:00	18.6	18.6	18.6	18.5	0.0	9.6	122	79	0.0
10/23/01	14:01	18.2	18.6	18.6	18.1	0.0	9.7	113	79	0.0
10/23/01	14:02	18.6	18.6	18.6	18.5	0.0	9.6	101	79	0.0
10/23/01	14:03	18.2	18.6	18.6	18.0	0.0	9.6	86	79	0.0
10/23/01	14:04	18.6	18.6	18.6	18.5	0.0	9.6	132	79	0.0
10/23/01	14:05	18.1	18.6	18.6	18.0	0.0	9.6	124	79	0.0
10/23/01	14:06	18.5	18.6	18.6	18.4	0.0	9.7	93	79	0.0
10/23/01	14:07	18.1	18.6	18.6	18.0	0.0	9.6	90	79	0.0
10/23/01	14:08	18.5	18.6	18.6	18.4	0.0	9.6	133	79	0.0
10/23/01	14:09	18.0	18.6	18.6	17.9	0.0	9.6	114	79	0.0
10/23/01	14:10	18.5	18.6	18.6	18.4	0.0	9.5	115	79	0.0
10/23/01	14:11	18.0	18.6	18.6	17.9	0.0	9.7	105	79	0.0
10/23/01	14:12	18.5	18.6	18.6	18.4	0.0	9.7	125	79	0.0
10/23/01	14:13	18.0	18.6	18.6	17.9	0.0	9.8	85	79	0.0
10/23/01	14:14	18.5	18.5	18.6	18.3	0.0	9.6	122	79	0.0
10/23/01	14:15	18.0	18.6	18.6	18.0	0.0	9.5	127	79	0.0
10/23/01	14:16	18.4	18.5	18.6	18.3	0.0	9.7	113	79	0.0
10/23/01	14:17	18.2	18.6	18.6	18.2	0.0	9.8	72	79	0.0
10/23/01	14:18	18.4	18.5	18.6	18.2	0.0	9.5	107	79	0.0
10/23/01	14:19	18.4	18.5	18.6	18.4	0.0	9.6	112	79	0.0
10/23/01	14:20	18.3	18.5	18.5	18.2	0.0	9.6	78	79	0.0
10/23/01	14:21	18.5	18.5	18.5	18.4	0.0	9.6	74	79	0.0
10/23/01	14:22	18.2	18.5	18.5	18.1	0.0	9.6	119	79	0.0
10/23/01	14:23	18.5	18.5	18.5	18.4	0.0	9.6	91	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	14:24	18.1	18.5	18.5	17.9	0.0	9.6	69	79	0.0
10/23/01	14:25	18.5	18.5	18.5	18.4	0.0	9.5	100	79	0.0
10/23/01	14:26	17.9	18.5	18.5	17.8	0.0	9.6	103	79	0.0
10/23/01	14:27	18.4	18.5	18.5	18.3	0.0	9.7	119	79	0.0
10/23/01	14:28	17.9	18.5	18.5	17.9	0.0	9.6	120	79	0.0
10/23/01	14:29	18.4	18.5	18.5	18.3	0.0	9.6	102	79	0.0
10/23/01	14:30	18.2	18.5	18.5	18.2	0.0	9.6	116	79	0.0
10/23/01	14:31	18.3	18.5	18.5	18.2	0.0	9.6	68	79	0.0
10/23/01	14:32	18.5	18.5	18.5	18.4	0.0	9.7	59	79	0.0
10/23/01	14:33	18.2	18.5	18.5	18.0	0.0	9.7	84	79	0.0
10/23/01	14:34	18.5	18.5	18.5	18.4	0.0	9.7	107	79	0.0
10/23/01	14:35	18.0	18.5	18.5	17.9	0.0	9.6	103	79	0.0
10/23/01	14:36	18.4	18.5	18.5	18.3	0.0	9.4	55	79	0.0
10/23/01	14:37	17.9	18.5	18.5	17.8	0.0	9.6	115	79	0.0
10/23/01	14:38	18.4	18.5	18.5	18.3	0.0	9.6	66	79	0.0
10/23/01	14:39	18.0	18.5	18.5	18.0	0.0	9.6	62	79	0.0
10/23/01	14:40	18.4	18.5	18.5	18.2	0.0	9.6	86	79	0.0
10/23/01	14:41	18.3	18.5	18.5	18.3	0.0	9.5	70	79	0.0
10/23/01	14:42	18.3	18.5	18.5	18.1	0.0	9.7	99	79	0.0
10/23/01	14:43	18.5	18.5	18.5	18.4	0.0	9.5	80	79	0.0
10/23/01	14:44	18.2	18.5	18.5	18.0	0.0	9.6	69	79	0.0
10/23/01	14:45	18.5	18.5	18.5	18.4	0.0	9.7	58	79	0.0
10/23/01	14:46	18.1	18.5	18.5	18.0	0.0	9.5	54	79	0.0
10/23/01	14:47	18.5	18.5	18.5	18.4	0.0	9.7	85	79	0.0
10/23/01	14:48	18.2	18.5	18.5	18.0	0.0	9.7	75	79	0.0
10/23/01	14:49	18.5	18.5	18.5	18.4	0.0	9.7	103	79	0.0
10/23/01	14:50	18.2	18.5	18.5	18.0	0.0	9.5	100	79	0.0
10/23/01	14:51	18.5	18.5	18.5	18.4	0.0	9.6	103	79	0.0
10/23/01	14:52	18.1	18.5	18.5	18.0	0.0	9.8	52	79	0.0
10/23/01	14:53	18.5	18.5	18.5	18.4	0.0	9.5	47	79	0.0
10/23/01	14:54	18.2	18.5	18.5	18.0	0.0	9.6	104	79	0.0
10/23/01	14:55	18.5	18.5	18.5	18.4	0.0	9.6	59	79	0.0
10/23/01	14:56	18.2	18.5	18.5	18.0	0.0	9.7	40	79	0.0
10/23/01	14:57	18.5	18.5	18.5	18.4	0.0	9.7	67	79	0.0
10/23/01	14:58	18.2	18.5	18.5	18.0	0.0	9.7	44	79	0.0
10/23/01	14:59	18.5	18.5	18.5	18.4	0.0	9.6	65	79	0.0
10/23/01	15:00	18.2	18.4	18.5	18.0	0.0	9.7	51	79	0.0
10/23/01	15:01	18.4	18.4	18.5	18.4	0.0	9.6	95	79	0.0
10/23/01	15:02	18.2	18.5	18.5	18.0	0.0	9.7	41	79	0.0
10/23/01	15:03	18.4	18.4	18.5	18.3	0.0	9.7	78	79	0.0
10/23/01	15:04	18.3	18.4	18.5	18.1	0.0	9.8	59	79	0.0
10/23/01	15:05	18.3	18.4	18.5	18.3	0.0	9.5	80	79	0.0
10/23/01	15:06	18.3	18.4	18.4	18.1	0.0	9.6	95	79	0.0
10/23/01	15:07	18.2	18.4	18.5	18.2	0.0	9.8	54	79	0.0
10/23/01	15:08	18.3	18.5	18.5	18.2	0.0	9.7	45	79	0.0
10/23/01	15:09	18.1	18.5	18.5	18.1	0.0	9.7	98	79	0.0
10/23/01	15:10	18.3	18.4	18.4	18.2	0.0	9.7	78	79	0.0
10/23/01	15:11	18.0	18.4	18.5	18.0	0.0	9.6	49	79	0.0
10/23/01	15:12	18.3	18.4	18.4	18.2	0.0	9.6	35	79	0.0
10/23/01	15:13	18.1	18.4	18.4	18.1	0.0	9.8	61	79	0.0
10/23/01	15:14	18.3	18.4	18.4	18.2	0.0	9.8	34	79	0.0
10/23/01	15:15	18.1	18.4	18.5	18.1	0.0	9.6	34	79	0.0
10/23/01	15:16	18.3	18.4	18.4	18.2	0.0	9.6	33	79	0.0
10/23/01	15:17	18.1	18.4	18.4	18.1	0.0	9.6	32	79	0.0
10/23/01	15:18	18.3	18.4	18.4	18.1	0.0	9.7	23	79	0.0
10/23/01	15:19	18.1	18.4	18.4	18.1	0.0	9.6	30	79	0.0
10/23/01	15:20	18.3	18.4	18.4	18.1	0.0	9.7	22	79	0.0
10/23/01	15:21	18.0	18.4	18.4	18.0	0.0	9.7	65	79	0.0
10/23/01	15:22	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	15:23	18.0	18.4	18.4	18.0	0.0	9.6	21	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	15:24	18.3	18.4	18.4	18.2	0.0	9.6	22	79	0.0
10/23/01	15:25	18.0	18.4	18.4	17.9	0.0	9.7	22	79	0.0
10/23/01	15:26	18.3	18.4	18.4	18.2	0.0	9.7	22	79	0.0
10/23/01	15:27	17.9	18.4	18.4	17.9	0.0	9.6	21	79	0.0
10/23/01	15:28	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/23/01	15:29	17.9	18.4	18.4	17.8	0.0	9.7	21	79	0.0
10/23/01	15:30	18.3	18.4	18.4	18.2	0.0	9.5	21	79	0.0
10/23/01	15:31	17.8	18.4	18.4	17.8	0.0	9.7	21	79	0.0
10/23/01	15:32	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	15:33	17.8	18.4	18.4	17.7	0.0	9.5	21	79	0.0
10/23/01	15:34	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	15:35	17.9	18.4	18.4	17.7	0.0	9.6	21	79	0.0
10/23/01	15:36	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	15:37	17.9	18.4	18.4	17.7	0.0	9.7	21	79	0.0
10/23/01	15:38	18.4	18.4	18.4	18.2	0.0	9.5	21	79	0.0
10/23/01	15:39	17.9	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	15:40	18.4	18.4	18.4	18.3	0.0	9.6	21	79	0.0
10/23/01	15:41	18.0	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	15:42	18.4	18.4	18.4	18.3	0.0	9.7	21	79	0.0
10/23/01	15:43	18.0	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	15:44	18.4	18.4	18.4	18.3	0.0	9.7	21	79	0.0
10/23/01	15:45	18.1	18.4	18.4	17.9	0.0	9.6	21	79	0.0
10/23/01	15:46	18.3	18.4	18.4	18.3	0.0	9.6	21	79	0.0
10/23/01	15:47	18.2	18.4	18.4	18.0	0.0	9.6	21	79	0.0
10/23/01	15:48	18.2	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	15:49	18.2	18.4	18.4	18.0	0.0	9.7	21	79	0.0
10/23/01	15:50	18.1	18.4	18.4	18.0	0.0	9.7	21	79	0.0
10/23/01	15:51	18.3	18.4	18.4	18.1	0.0	9.7	21	79	0.0
10/23/01	15:52	17.9	18.4	18.4	17.9	0.0	9.7	21	79	0.0
10/23/01	15:53	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	15:54	17.8	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	15:55	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	15:56	17.8	18.4	18.4	17.7	0.0	9.7	21	79	0.0
10/23/01	15:57	18.4	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/23/01	15:58	17.9	18.4	18.4	17.7	0.0	9.6	21	79	0.0
10/23/01	15:59	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	16:00	18.0	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	16:01	18.4	18.4	18.4	18.3	0.0	9.6	21	79	0.0
10/23/01	16:02	18.1	18.4	18.4	17.9	0.0	9.6	21	79	0.0
10/23/01	16:03	18.4	18.4	18.4	18.3	0.0	9.7	21	79	0.0
10/23/01	16:04	18.2	18.4	18.4	18.0	0.0	9.6	21	79	0.0
10/23/01	16:05	18.2	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	16:06	18.2	18.4	18.4	18.1	0.0	9.7	21	79	0.0
10/23/01	16:07	18.0	18.4	18.4	18.0	0.0	9.6	21	79	0.0
10/23/01	16:08	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	16:09	17.8	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	16:10	18.3	18.3	18.3	18.2	0.0	9.7	21	79	0.0
10/23/01	16:11	17.8	18.4	18.4	17.7	0.0	9.7	21	79	0.0
10/23/01	16:12	18.4	18.3	18.3	18.2	0.0	9.7	21	79	0.0
10/23/01	16:13	17.9	18.3	18.3	17.7	0.0	9.7	21	79	0.0
10/23/01	16:14	18.4	18.3	18.3	18.2	0.0	9.7	21	79	0.0
10/23/01	16:15	17.9	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	16:16	18.4	18.3	18.3	18.2	0.0	9.6	21	79	0.0
10/23/01	16:17	18.0	18.3	18.4	17.8	0.0	9.7	21	79	0.0
10/23/01	16:18	18.4	18.3	18.4	18.3	0.0	9.7	21	79	0.0
10/23/01	16:19	18.1	18.3	18.3	17.9	0.0	9.7	21	79	0.0
10/23/01	16:20	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	16:21	18.2	18.3	18.4	18.0	0.0	9.7	21	79	0.0
10/23/01	16:22	18.1	18.3	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	16:23	18.3	18.3	18.3	18.1	0.0	9.7	21	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	16:24	17.9	18.3	18.4	17.8	0.0	9.7	21	79	0.0
10/23/01	16:25	18.3	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	16:26	17.8	18.3	18.4	17.7	0.0	9.7	21	79	0.0
10/23/01	16:27	18.4	18.3	18.3	18.2	0.0	9.7	21	79	0.0
10/23/01	16:28	17.8	18.4	18.4	17.7	0.0	9.6	21	79	0.0
10/23/01	16:29	18.4	18.3	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	16:30	17.9	18.3	18.4	17.8	0.0	9.7	21	79	0.0
10/23/01	16:31	18.4	18.3	18.4	18.3	0.0	9.7	21	79	0.0
10/23/01	16:32	18.0	18.3	18.3	17.8	0.0	9.7	21	79	0.0
10/23/01	16:33	18.4	18.3	18.4	18.3	0.0	9.7	21	79	0.0
10/23/01	16:34	18.1	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/23/01	16:35	18.2	18.3	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	16:36	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/23/01	16:37	17.9	18.3	18.3	17.9	0.0	9.7	21	79	0.0
10/23/01	16:38	18.3	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/23/01	16:39	17.8	18.3	18.4	17.7	0.0	9.7	21	79	0.0
10/23/01	16:40	18.3	18.3	18.3	18.2	0.0	9.6	21	79	0.0
10/23/01	16:41	17.8	18.3	18.3	17.7	0.0	9.7	21	79	0.0
10/23/01	16:42	18.4	18.3	18.3	18.2	0.0	9.6	21	79	0.0
10/23/01	16:43	17.9	18.3	18.3	17.7	0.0	9.6	21	79	0.0
10/23/01	16:44	18.4	18.3	18.3	18.3	0.0	9.7	21	79	0.0
10/23/01	16:45	18.0	18.3	18.3	17.8	0.0	9.7	21	79	0.0
10/23/01	16:46	18.4	18.3	18.3	18.3	0.0	9.7	21	79	0.0
10/23/01	16:47	18.1	18.3	18.3	17.9	0.0	9.7	21	79	0.0
10/23/01	16:48	18.4	18.3	18.3	18.3	0.0	9.7	21	79	0.0
10/23/01	16:49	17.9	18.4	18.4	17.8	0.0	9.6	21	79	0.0
10/23/01	16:50	18.0	18.3	18.3	17.8	0.0	9.7	21	79	0.0
10/23/01	16:51	18.0	18.3	18.3	17.9	0.0	9.6	21	79	0.0
10/23/01	16:52	18.1	18.3	18.3	17.9	0.0	9.6	21	79	0.0
10/23/01	16:53	18.1	18.3	18.3	17.9	0.0	9.7	21	79	0.0
10/23/01	16:54	18.2	18.3	18.3	18.0	0.0	9.5	21	79	0.0
10/23/01	16:55	18.0	18.3	18.3	17.9	0.0	9.5	21	79	0.0
10/23/01	16:56	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/23/01	16:57	18.0	18.3	18.3	17.9	0.0	9.7	21	79	0.0
10/23/01	16:58	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	16:59	18.0	18.3	18.3	17.9	0.0	9.6	21	79	0.0
10/23/01	17:00	18.1	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/23/01	17:01	18.1	18.3	18.3	17.9	0.0	9.7	21	79	0.0
10/23/01	17:02	18.1	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/23/01	17:03	18.1	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/23/01	17:04	18.0	18.3	18.3	17.9	0.0	9.6	21	79	0.0
10/23/01	17:05	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	17:06	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	17:07	18.3	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/23/01	17:08	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	17:09	18.3	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	17:10	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/23/01	17:11	18.3	18.3	18.3	18.2	0.0	9.6	21	79	0.0
10/23/01	17:12	18.2	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	17:13	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	17:14	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/23/01	17:15	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/23/01	17:16	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	17:17	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/23/01	17:18	18.3	18.4	18.4	18.2	0.0	9.5	21	79	0.0
10/23/01	17:19	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	17:20	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/23/01	17:21	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/23/01	17:22	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/23/01	17:23	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	17:24	18.4	18.4	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:25	18.3	18.4	18.5	18.2	0.0	9.6	21	79	0.0
10/23/01	17:26	18.4	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/23/01	17:27	18.4	18.5	18.5	18.2	0.0	9.6	21	79	0.0
10/23/01	17:28	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:29	18.4	18.5	18.5	18.2	0.0	9.6	21	79	0.0
10/23/01	17:30	18.4	18.5	18.5	18.3	0.0	9.4	21	79	0.0
10/23/01	17:31	18.4	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/23/01	17:32	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:33	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:34	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:35	18.4	18.5	18.5	18.3	0.0	9.5	21	79	0.0
10/23/01	17:36	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:37	18.5	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:38	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/23/01	17:39	18.5	18.5	18.6	18.3	0.0	9.6	21	79	0.0
10/23/01	17:40	18.5	18.6	18.6	18.3	0.0	9.5	21	79	0.0
10/23/01	17:41	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/23/01	17:42	18.5	18.6	18.6	18.3	0.0	9.8	21	79	0.0
10/23/01	17:43	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/23/01	17:44	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/23/01	17:45	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/23/01	17:46	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/23/01	17:47	18.6	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/23/01	17:48	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/23/01	17:49	18.6	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/23/01	17:50	18.5	18.6	18.6	18.4	0.0	9.8	21	79	0.0
10/23/01	17:51	18.6	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/23/01	17:52	18.6	18.6	18.6	18.4	0.0	9.5	21	79	0.0
10/23/01	17:53	18.6	18.6	18.7	18.4	0.0	9.7	21	79	0.0
10/23/01	17:54	18.6	18.6	18.7	18.4	0.0	9.6	21	79	0.0
10/23/01	17:55	18.6	18.7	18.7	18.4	0.0	9.5	21	79	0.0
10/23/01	17:56	18.6	18.7	18.7	18.5	0.0	9.5	21	79	0.0
10/23/01	17:57	18.6	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/23/01	17:58	18.6	18.7	18.7	18.5	0.0	9.6	21	79	0.0
10/23/01	17:59	18.6	18.7	18.7	18.4	0.0	9.8	21	79	0.0
10/23/01	18:00	18.7	18.7	18.7	18.5	0.0	9.6	21	79	0.0
10/23/01	18:01	18.6	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/23/01	18:02	18.7	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/23/01	18:03	18.6	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/23/01	18:04	18.7	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/23/01	18:05	18.6	18.7	18.7	18.5	0.0	9.6	21	79	0.0
10/23/01	18:06	18.7	18.7	18.7	18.5	0.0	9.6	21	79	0.0
10/23/01	18:07	18.7	18.7	18.8	18.5	0.0	9.7	21	79	0.0
10/23/01	18:08	18.7	18.7	18.8	18.5	0.0	9.6	21	79	0.0
10/23/01	18:09	18.7	18.7	18.7	18.5	0.0	9.6	21	79	0.0
10/23/01	18:10	18.7	18.8	18.8	18.5	0.0	9.6	21	79	0.0
10/23/01	18:11	18.7	18.8	18.8	18.6	0.0	9.6	21	79	0.0
10/23/01	18:12	18.7	18.8	18.8	18.5	0.0	9.6	21	79	0.0
10/23/01	18:13	18.7	18.8	18.8	18.6	0.0	9.6	21	79	0.0
10/23/01	18:14	18.7	18.8	18.8	18.5	0.0	9.8	21	79	0.0
10/23/01	18:15	18.7	18.8	18.8	18.6	0.0	9.7	21	79	0.0
10/23/01	18:16	18.7	18.8	18.8	18.6	0.0	9.5	21	79	0.0
10/23/01	18:17	18.8	18.8	18.8	18.6	0.0	9.7	21	79	0.0
10/23/01	18:18	18.7	18.8	18.8	18.6	0.0	9.6	21	79	0.0
10/23/01	18:19	18.8	18.8	18.8	18.6	0.0	9.6	21	79	0.0
10/23/01	18:20	18.7	18.8	18.8	18.6	0.0	9.7	21	79	0.0
10/23/01	18:21	18.7	18.8	18.8	18.6	0.0	9.6	21	79	0.0
10/23/01	18:22	18.8	18.8	18.8	18.6	0.0	9.7	21	79	0.0
10/23/01	18:23	18.8	18.8	18.8	18.6	0.0	9.6	21	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	18:24	18.8	18.9	18.9	18.6	0.0	9.5	21	79	0.0
10/23/01	18:25	18.7	18.9	18.9	18.6	0.0	9.6	21	79	0.0
10/23/01	18:26	18.8	18.9	18.9	18.6	0.0	9.6	21	79	0.0
10/23/01	18:27	18.7	18.9	18.9	18.6	0.0	9.6	21	79	0.0
10/23/01	18:28	18.8	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/23/01	18:29	18.8	18.9	18.9	18.6	0.0	9.7	21	79	0.0
10/23/01	18:30	18.8	18.9	18.9	18.7	0.0	9.7	21	79	0.0
10/23/01	18:31	18.8	18.9	18.9	18.6	0.0	9.7	21	79	0.0
10/23/01	18:32	18.8	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/23/01	18:33	18.8	18.9	18.9	18.6	0.0	9.7	21	79	0.0
10/23/01	18:34	18.8	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/23/01	18:35	18.8	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/23/01	18:36	18.8	18.9	18.9	18.7	0.0	9.7	21	79	0.0
10/23/01	18:37	18.8	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/23/01	18:38	18.8	18.9	18.9	18.7	0.0	9.7	21	79	0.0
10/23/01	18:39	18.8	18.9	18.9	18.7	0.0	9.7	21	79	0.0
10/23/01	18:40	18.8	18.9	18.9	18.7	0.0	9.7	21	79	0.0
10/23/01	18:41	18.9	18.9	18.9	18.7	0.0	9.8	21	79	0.0
10/23/01	18:42	18.8	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/23/01	18:43	18.9	18.9	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	18:44	18.8	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/23/01	18:45	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	18:46	18.8	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/23/01	18:47	18.9	19.0	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	18:48	18.9	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/23/01	18:49	18.9	19.0	19.0	18.8	0.0	9.5	21	79	0.0
10/23/01	18:50	18.9	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/23/01	18:51	18.9	19.0	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	18:52	18.9	19.0	19.0	18.7	0.0	9.7	21	79	0.0
10/23/01	18:53	18.9	19.0	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	18:54	18.9	19.0	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	18:55	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	18:56	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	18:57	18.9	19.0	19.0	18.7	0.0	9.7	21	79	0.0
10/23/01	18:58	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	18:59	18.9	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/23/01	19:00	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	19:01	18.9	19.0	19.0	18.8	0.0	9.5	21	79	0.0
10/23/01	19:02	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	19:03	18.9	19.0	19.0	18.8	0.0	9.6	21	79	0.0
10/23/01	19:04	18.9	19.0	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	19:05	18.9	19.1	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	19:06	18.9	19.0	19.1	18.8	0.0	9.7	21	79	0.0
10/23/01	19:07	19.0	19.1	19.1	18.8	0.0	9.5	21	79	0.0
10/23/01	19:08	18.9	19.0	19.0	18.8	0.0	9.7	21	79	0.0
10/23/01	19:09	19.0	19.1	19.1	18.8	0.0	9.7	21	79	0.0
10/23/01	19:10	18.9	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/23/01	19:11	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/23/01	19:12	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/23/01	19:13	19.0	19.1	19.1	18.9	0.0	9.7	21	79	0.0
10/23/01	19:14	18.9	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/23/01	19:15	19.0	19.1	19.1	18.8	0.0	9.5	21	79	0.0
10/23/01	19:16	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/23/01	19:17	19.0	19.1	19.1	18.9	0.0	9.6	21	79	0.0
10/23/01	19:18	19.0	19.1	19.1	18.9	0.0	9.5	21	79	0.0
10/23/01	19:19	19.0	19.1	19.1	18.9	0.0	9.6	21	79	0.0
10/23/01	19:20	19.0	19.1	19.1	18.9	0.0	9.6	21	79	0.0
10/23/01	19:21	19.0	19.1	19.1	18.9	0.0	9.6	21	79	0.0
10/23/01	19:22	19.0	19.1	19.1	18.9	0.0	9.5	21	79	0.0
10/23/01	19:23	19.0	19.1	19.1	18.9	0.0	9.7	21	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	19:24	19.0	19.1	19.1	18.9	0.0	9.7	21	79	0.0
10/23/01	19:25	19.0	19.1	19.1	18.9	0.0	9.7	21	79	0.0
10/23/01	19:26	19.1	19.2	19.1	18.9	0.0	9.7	21	79	0.0
10/23/01	19:27	19.0	19.2	19.2	18.9	0.0	9.5	21	79	0.0
10/23/01	19:28	19.0	19.1	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:29	19.0	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:30	19.0	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:31	19.0	19.2	19.2	18.9	0.0	9.5	21	79	0.0
10/23/01	19:32	19.0	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:33	19.1	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:34	19.0	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:35	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:36	19.0	19.2	19.2	18.9	0.0	9.6	20	79	0.0
10/23/01	19:37	19.1	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:38	19.0	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:39	19.1	19.2	19.2	19.0	0.0	9.6	21	79	0.0
10/23/01	19:40	19.0	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:41	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:42	19.0	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:43	19.1	19.2	19.2	19.0	0.0	9.7	21	79	0.0
10/23/01	19:44	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:45	19.1	19.2	19.2	19.0	0.0	9.7	21	79	0.0
10/23/01	19:46	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:47	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:48	19.1	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/23/01	19:49	19.1	19.2	19.2	18.9	0.0	9.8	21	79	0.0
10/23/01	19:50	19.1	19.2	19.2	19.0	0.0	9.5	21	79	0.0
10/23/01	19:51	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/23/01	19:52	19.1	19.2	19.2	19.0	0.0	9.7	21	79	0.0
10/23/01	19:53	19.1	19.2	19.2	18.9	0.0	9.5	21	79	0.0
10/23/01	19:54	19.1	19.2	19.2	19.0	0.0	9.6	21	79	0.0
10/23/01	19:55	19.1	19.2	19.2	19.0	0.0	9.6	21	79	0.0
10/23/01	19:56	19.1	19.2	19.2	19.0	0.0	9.7	21	79	0.0
10/23/01	19:57	19.1	19.2	19.2	19.0	0.0	9.6	21	79	0.0
10/23/01	19:58	19.1	19.3	19.2	19.0	0.0	9.7	21	79	0.0
10/23/01	19:59	19.1	19.3	19.2	19.0	0.0	9.6	21	79	0.0
10/23/01	20:00	19.1	19.3	19.2	19.0	0.0	9.6	21	79	0.0
10/23/01	20:01	19.1	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:02	19.1	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:03	19.2	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:04	19.1	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:05	19.2	19.3	19.3	19.0	0.0	9.5	21	79	0.0
10/23/01	20:06	19.1	19.3	19.3	19.0	0.0	9.5	21	79	0.0
10/23/01	20:07	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:08	19.1	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:09	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:10	19.1	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:11	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:12	19.1	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:13	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:14	19.2	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:15	19.2	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:16	19.2	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:17	19.2	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:18	19.2	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:19	19.2	19.3	19.3	19.0	0.0	9.5	21	79	0.0
10/23/01	20:20	19.2	19.3	19.3	19.1	0.0	9.7	21	79	0.0
10/23/01	20:21	19.2	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/23/01	20:22	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:23	19.2	19.3	19.3	19.0	0.0	9.6	21	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	20:24	19.2	19.3	19.3	19.1	0.0	9.8	21	79	0.0
10/23/01	20:25	19.2	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:26	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:27	19.2	19.3	19.3	19.0	0.0	9.6	21	79	0.0
10/23/01	20:28	19.2	19.3	19.3	19.1	0.0	9.7	21	79	0.0
10/23/01	20:29	19.2	19.3	19.3	19.1	0.0	9.6	20	79	0.0
10/23/01	20:30	19.2	19.3	19.3	19.1	0.0	9.5	21	79	0.0
10/23/01	20:31	19.2	19.3	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:32	19.2	19.4	19.3	19.1	0.0	9.7	21	79	0.0
10/23/01	20:33	19.2	19.4	19.3	19.1	0.0	9.7	21	79	0.0
10/23/01	20:34	19.2	19.4	19.3	19.1	0.0	9.7	21	79	0.0
10/23/01	20:35	19.3	19.4	19.3	19.1	0.0	9.6	21	79	0.0
10/23/01	20:36	19.2	19.4	19.4	19.1	0.0	9.5	21	79	0.0
10/23/01	20:37	19.3	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:38	19.2	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:39	19.3	19.4	19.4	19.1	0.0	9.7	21	79	0.0
10/23/01	20:40	19.2	19.4	19.4	19.1	0.0	9.8	21	79	0.0
10/23/01	20:41	19.2	19.4	19.4	19.1	0.0	9.7	21	79	0.0
10/23/01	20:42	19.2	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:43	19.2	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:44	19.3	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:45	19.2	19.4	19.4	19.1	0.0	9.7	21	79	0.0
10/23/01	20:46	19.3	19.4	19.4	19.2	0.0	9.7	21	79	0.0
10/23/01	20:47	19.2	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:48	19.3	19.4	19.4	19.2	0.0	9.6	21	79	0.0
10/23/01	20:49	19.3	19.4	19.4	19.1	0.0	9.6	21	79	0.0
10/23/01	20:50	19.3	19.4	19.4	19.2	0.0	9.6	67	79	0.0
10/23/01	20:51	19.3	19.4	19.4	19.1	0.0	9.7	21	79	0.0
10/23/01	20:52	19.3	19.4	19.4	19.2	0.0	9.6	25	79	0.0
10/23/01	20:53	19.3	19.4	19.4	19.1	0.0	9.7	70	79	0.0
10/23/01	20:54	19.3	19.4	19.4	19.1	0.0	9.6	63	79	0.0
10/23/01	20:55	19.3	19.4	19.4	19.1	0.0	9.5	26	79	0.0
10/23/01	20:56	19.3	19.4	19.4	19.1	0.0	9.6	58	79	0.0
10/23/01	20:57	19.3	19.4	19.4	19.1	0.0	9.7	37	79	0.0
10/23/01	20:58	19.3	19.4	19.4	19.1	0.0	9.6	95	79	0.0
10/23/01	20:59	19.3	19.4	19.4	19.2	0.0	9.8	26	79	0.0
10/23/01	21:00	19.3	19.4	19.4	19.1	0.0	9.6	34	79	0.0
10/23/01	21:01	19.3	19.4	19.4	19.2	0.0	9.6	57	79	0.0
10/23/01	21:02	19.3	19.4	19.4	19.1	0.0	9.7	22	79	0.0
10/23/01	21:03	19.3	19.4	19.4	19.2	0.0	9.6	55	79	0.0
10/23/01	21:04	19.3	19.4	19.4	19.1	0.0	9.7	35	79	0.0
10/23/01	21:05	19.3	19.4	19.4	19.2	0.0	9.7	96	79	0.0
10/23/01	21:06	19.3	19.4	19.4	19.1	0.0	9.5	24	79	0.0
10/23/01	21:07	19.3	19.4	19.4	19.2	0.0	9.5	36	79	0.0
10/23/01	21:08	19.3	19.4	19.4	19.2	0.0	9.6	65	79	0.0
10/23/01	21:09	19.3	19.5	19.5	19.2	0.0	9.6	76	79	0.0
10/23/01	21:10	19.3	19.4	19.4	19.2	0.0	9.6	88	79	0.0
10/23/01	21:11	19.3	19.5	19.5	19.2	0.0	9.6	77	79	0.0
10/23/01	21:12	19.4	19.5	19.5	19.2	0.0	9.7	58	79	0.0
10/23/01	21:13	19.3	19.5	19.5	19.2	0.0	9.6	47	79	0.0
10/23/01	21:14	19.4	19.5	19.5	19.2	0.0	9.7	56	79	0.0
10/23/01	21:15	19.3	19.5	19.5	19.2	0.0	9.6	91	79	0.0
10/23/01	21:16	19.4	19.5	19.5	19.2	0.0	9.6	33	79	0.0
10/23/01	21:17	19.3	19.5	19.5	19.2	0.0	9.7	80	79	0.0
10/23/01	21:18	19.4	19.5	19.5	19.2	0.0	9.7	35	79	0.0
10/23/01	21:19	19.3	19.5	19.5	19.2	0.0	9.8	39	79	0.0
10/23/01	21:20	19.4	19.5	19.5	19.3	0.0	9.7	79	79	0.0
10/23/01	21:21	19.3	19.5	19.5	19.2	0.0	9.7	29	79	0.0
10/23/01	21:22	19.4	19.5	19.5	19.2	0.0	9.8	50	79	0.0
10/23/01	21:23	19.4	19.5	19.5	19.2	0.0	9.5	28	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	21:24	19.4	19.5	19.5	19.2	0.0	9.5	32	79	0.0
10/23/01	21:25	19.4	19.5	19.5	19.3	0.0	9.7	77	79	0.0
10/23/01	21:26	19.4	19.5	19.5	19.2	0.0	9.7	56	79	0.0
10/23/01	21:27	19.4	19.5	19.5	19.3	0.0	9.7	80	79	0.0
10/23/01	21:28	19.4	19.5	19.5	19.2	0.0	9.8	70	79	0.0
10/23/01	21:29	19.4	19.5	19.5	19.3	0.0	9.5	100	79	0.0
10/23/01	21:30	19.3	19.5	19.5	19.2	0.0	9.7	93	79	0.0
10/23/01	21:31	19.4	19.5	19.5	19.3	0.0	9.6	59	79	0.0
10/23/01	21:32	19.4	19.5	19.5	19.2	0.0	9.5	51	79	0.0
10/23/01	21:33	19.4	19.5	19.5	19.3	0.0	9.7	76	79	0.0
10/23/01	21:34	19.4	19.5	19.5	19.2	0.0	9.7	32	79	0.0
10/23/01	21:35	19.4	19.5	19.5	19.3	0.0	9.5	44	79	0.0
10/23/01	21:36	19.4	19.5	19.5	19.2	0.0	9.6	95	79	0.0
10/23/01	21:37	19.4	19.5	19.5	19.3	0.0	9.6	56	79	0.0
10/23/01	21:38	19.4	19.5	19.5	19.2	0.0	9.8	99	79	0.0
10/23/01	21:39	19.4	19.5	19.5	19.3	0.0	9.8	46	79	0.0
10/23/01	21:40	19.4	19.5	19.5	19.3	0.0	9.6	47	79	0.0
10/23/01	21:41	19.4	19.5	19.5	19.3	0.0	9.7	65	79	0.0
10/23/01	21:42	19.4	19.5	19.5	19.3	0.0	9.6	48	79	0.0
10/23/01	21:43	19.4	19.5	19.5	19.2	0.0	9.7	64	79	0.0
10/23/01	21:44	19.4	19.5	19.5	19.3	0.0	9.7	41	79	0.0
10/23/01	21:45	19.4	19.5	19.5	19.3	0.0	9.7	44	79	0.0
10/23/01	21:46	19.4	19.5	19.5	19.3	0.0	9.6	50	79	0.0
10/23/01	21:47	19.4	19.5	19.5	19.3	0.0	9.6	41	79	0.0
10/23/01	21:48	19.4	19.6	19.5	19.3	0.0	9.5	52	79	0.0
10/23/01	21:49	19.4	19.6	19.6	19.3	0.0	9.6	53	79	0.0
10/23/01	21:50	19.4	19.6	19.6	19.3	0.0	9.8	89	79	0.0
10/23/01	21:51	19.4	19.6	19.6	19.3	0.0	9.6	60	79	0.0
10/23/01	21:52	19.4	19.6	19.6	19.3	0.0	9.7	49	79	0.0
10/23/01	21:53	19.4	19.6	19.6	19.3	0.0	9.7	44	79	0.0
10/23/01	21:54	19.4	19.6	19.6	19.3	0.0	9.7	98	79	0.0
10/23/01	21:55	19.5	19.6	19.6	19.3	0.0	9.6	117	79	0.0
10/23/01	21:56	19.4	19.6	19.6	19.3	0.0	9.6	44	79	0.0
10/23/01	21:57	19.5	19.6	19.6	19.3	0.0	9.6	48	79	0.0
10/23/01	21:58	19.4	19.6	19.6	19.3	0.0	9.7	55	79	0.0
10/23/01	21:59	19.5	19.6	19.6	19.4	0.0	9.7	62	79	0.0
10/23/01	22:00	19.4	19.6	19.6	19.3	0.0	9.5	43	79	0.0
10/23/01	22:01	19.5	19.6	19.6	19.4	0.0	9.7	76	79	0.0
10/23/01	22:02	19.4	19.6	19.6	19.3	0.0	9.7	91	79	0.0
10/23/01	22:03	19.5	19.6	19.6	19.4	0.0	9.7	52	79	0.0
10/23/01	22:04	19.4	19.6	19.6	19.3	0.0	9.6	112	79	0.0
10/23/01	22:05	19.5	19.6	19.6	19.4	0.0	9.6	53	79	0.0
10/23/01	22:06	19.5	19.6	19.6	19.3	0.0	9.6	69	79	0.0
10/23/01	22:07	19.5	19.6	19.6	19.4	0.0	9.7	117	79	0.0
10/23/01	22:08	19.5	19.6	19.6	19.4	0.0	9.7	102	79	0.0
10/23/01	22:09	19.4	19.6	19.6	19.3	0.0	9.5	70	79	0.0
10/23/01	22:10	19.5	19.6	19.6	19.4	0.0	9.6	52	79	0.0
10/23/01	22:11	19.4	19.6	19.6	19.3	0.0	9.7	52	79	0.0
10/23/01	22:12	19.5	19.6	19.6	19.4	0.0	9.6	74	79	0.0
10/23/01	22:13	19.4	19.6	19.6	19.3	0.0	9.7	74	79	0.0
10/23/01	22:14	19.5	19.6	19.6	19.4	0.0	9.7	56	79	0.0
10/23/01	22:15	19.5	19.6	19.6	19.3	0.0	9.8	58	79	0.0
10/23/01	22:16	19.5	19.6	19.6	19.4	0.0	9.7	118	79	0.0
10/23/01	22:17	19.5	19.6	19.6	19.3	0.0	9.7	103	79	0.0
10/23/01	22:18	19.5	19.6	19.6	19.4	0.0	9.8	93	79	0.0
10/23/01	22:19	19.5	19.6	19.6	19.4	0.0	9.7	68	79	0.0
10/23/01	22:20	19.5	19.6	19.6	19.3	0.0	9.7	112	79	0.0
10/23/01	22:21	19.5	19.6	19.6	19.4	0.0	9.6	60	79	0.0
10/23/01	22:22	19.5	19.6	19.6	19.3	0.0	9.6	98	79	0.0
10/23/01	22:23	19.5	19.6	19.6	19.4	0.0	9.6	74	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	22:24	19.4	19.6	19.6	19.3	0.0	9.5	90	79	0.0
10/23/01	22:25	19.5	19.6	19.6	19.4	0.0	9.7	61	79	0.0
10/23/01	22:26	19.5	19.6	19.6	19.3	0.0	9.6	119	79	0.0
10/23/01	22:27	19.5	19.6	19.6	19.4	0.0	9.6	74	79	0.0
10/23/01	22:28	19.5	19.6	19.6	19.3	0.0	9.8	104	79	0.0
10/23/01	22:29	19.5	19.6	19.7	19.4	0.0	9.4	92	79	0.0
10/23/01	22:30	19.5	19.7	19.7	19.4	0.0	9.7	93	79	0.0
10/23/01	22:31	19.5	19.7	19.7	19.4	0.0	9.6	84	79	0.0
10/23/01	22:32	19.5	19.7	19.7	19.4	0.0	9.5	64	79	0.0
10/23/01	22:33	19.5	19.7	19.7	19.4	0.0	9.7	69	79	0.0
10/23/01	22:34	19.5	19.7	19.7	19.4	0.0	9.7	109	79	0.0
10/23/01	22:35	19.5	19.7	19.7	19.4	0.0	9.6	75	79	0.0
10/23/01	22:36	19.5	19.7	19.7	19.4	0.0	9.7	65	79	0.0
10/23/01	22:37	19.5	19.7	19.7	19.4	0.0	9.7	110	79	0.0
10/23/01	22:38	19.6	19.7	19.7	19.4	0.0	9.5	66	79	0.0
10/23/01	22:39	19.5	19.7	19.7	19.4	0.0	9.7	123	79	0.0
10/23/01	22:40	19.5	19.7	19.7	19.4	0.0	9.8	90	79	0.0
10/23/01	22:41	19.5	19.7	19.7	19.4	0.0	9.7	113	79	0.0
10/23/01	22:42	19.5	19.7	19.7	19.4	0.0	9.6	74	79	0.0
10/23/01	22:43	19.5	19.7	19.7	19.4	0.0	9.7	89	79	0.0
10/23/01	22:44	19.5	19.7	19.7	19.4	0.0	9.7	68	79	0.0
10/23/01	22:45	19.5	19.7	19.7	19.4	0.0	9.6	94	79	0.0
10/23/01	22:46	19.5	19.7	19.7	19.4	0.0	9.6	77	79	0.0
10/23/01	22:47	19.6	19.7	19.7	19.4	0.0	9.7	74	79	0.0
10/23/01	22:48	19.5	19.7	19.7	19.4	0.0	9.7	107	79	0.0
10/23/01	22:49	19.6	19.7	19.7	19.5	0.0	9.7	112	79	0.0
10/23/01	22:50	19.5	19.7	19.7	19.4	0.0	9.8	114	79	0.0
10/23/01	22:51	19.6	19.7	19.7	19.5	0.0	9.6	95	79	0.0
10/23/01	22:52	19.5	19.7	19.7	19.4	0.0	9.6	107	79	0.0
10/23/01	22:53	19.6	19.7	19.7	19.5	0.0	9.6	126	79	0.0
10/23/01	22:54	19.5	19.7	19.7	19.4	0.0	9.7	112	79	0.0
10/23/01	22:55	19.6	19.7	19.7	19.5	0.0	9.6	95	79	0.0
10/23/01	22:56	19.6	19.7	19.7	19.4	0.0	9.8	114	79	0.0
10/23/01	22:57	19.6	19.7	19.7	19.5	0.0	9.7	74	79	0.0
10/23/01	22:58	19.6	19.7	19.7	19.4	0.0	9.6	75	79	0.0
10/23/01	22:59	19.5	19.7	19.7	19.5	0.0	9.7	75	79	0.0
10/23/01	23:00	19.6	19.7	19.7	19.5	0.0	9.7	127	79	0.0
10/23/01	23:01	19.5	19.7	19.7	19.4	0.0	9.7	75	79	0.0
10/23/01	23:02	19.6	19.7	19.7	19.5	0.0	9.8	86	79	0.0
10/23/01	23:03	19.5	19.7	19.7	19.4	0.0	9.7	110	79	0.0
10/23/01	23:04	19.6	19.7	19.7	19.5	0.0	9.6	93	79	0.0
10/23/01	23:05	19.5	19.7	19.7	19.4	0.0	9.6	121	79	0.0
10/23/01	23:06	19.6	19.7	19.7	19.5	0.0	9.7	78	79	0.0
10/23/01	23:07	19.6	19.7	19.7	19.4	0.0	9.6	86	79	0.0
10/23/01	23:08	19.6	19.7	19.7	19.5	0.0	9.7	123	79	0.0
10/23/01	23:09	19.6	19.7	19.8	19.5	0.0	9.5	115	79	0.0
10/23/01	23:10	19.6	19.7	19.7	19.5	0.0	9.8	96	79	0.0
10/23/01	23:11	19.6	19.7	19.7	19.5	0.0	9.6	100	79	0.0
10/23/01	23:12	19.6	19.8	19.7	19.5	0.0	9.6	104	79	0.0
10/23/01	23:13	19.6	19.8	19.7	19.5	0.0	9.6	99	79	0.0
10/23/01	23:14	19.6	19.8	19.8	19.5	0.0	10.3	120	79	0.0
10/23/01	23:15	19.6	19.8	19.8	19.5	0.0	9.7	125	79	0.0
10/23/01	23:16	19.6	19.8	19.8	19.4	0.0	9.6	101	79	0.0
10/23/01	23:17	19.6	19.8	19.8	19.5	0.0	9.7	81	79	0.0
10/23/01	23:18	19.6	19.8	19.8	19.5	0.0	9.6	105	79	0.0
10/23/01	23:19	19.6	19.8	19.8	19.5	0.0	9.7	120	79	0.0
10/23/01	23:20	19.6	19.8	19.8	19.5	0.0	9.7	108	79	0.0
10/23/01	23:21	19.6	19.8	19.8	19.5	0.0	9.7	88	79	0.0
10/23/01	23:22	19.6	19.8	19.8	19.5	0.0	9.7	82	79	0.0
10/23/01	23:23	19.6	19.8	19.8	19.5	0.0	9.6	121	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/23/01	23:24	19.6	19.8	19.8	19.5	0.0	9.7	112	79	0.0
10/23/01	23:25	19.6	19.8	19.8	19.5	0.0	9.7	123	79	0.0
10/23/01	23:26	19.6	19.8	19.8	19.5	0.0	9.7	123	79	0.0
10/23/01	23:27	19.6	19.8	19.8	19.5	0.0	9.8	91	79	0.0
10/23/01	23:28	19.6	19.8	19.8	19.5	0.0	9.6	130	79	0.0
10/23/01	23:29	19.6	19.8	19.8	19.5	0.0	9.6	95	79	0.0
10/23/01	23:30	19.7	19.8	19.8	19.5	0.0	9.6	133	79	0.0
10/23/01	23:31	19.6	19.8	19.8	19.5	0.0	9.6	115	79	0.0
10/23/01	23:32	19.6	19.8	19.8	19.6	0.0	9.6	128	79	0.0
10/23/01	23:33	19.6	19.8	19.8	19.5	0.0	9.6	103	79	0.0
10/23/01	23:34	19.7	19.8	19.8	19.6	0.0	9.7	124	79	0.0
10/23/01	23:35	19.6	19.8	19.8	19.5	0.0	9.7	90	79	0.0
10/23/01	23:36	19.7	19.8	19.8	19.6	0.0	9.7	127	79	0.0
10/23/01	23:37	19.6	19.8	19.8	19.5	0.0	9.6	96	79	0.0
10/23/01	23:38	19.7	19.8	19.8	19.6	0.0	9.6	117	79	0.0
10/23/01	23:39	19.7	19.8	19.8	19.5	0.0	9.7	130	79	0.0
10/23/01	23:40	19.6	19.8	19.8	19.5	0.0	9.6	117	79	0.0
10/23/01	23:41	19.7	19.8	19.8	19.6	0.0	9.6	127	79	0.0
10/23/01	23:42	19.6	19.8	19.8	19.6	0.0	9.6	124	79	0.0
10/23/01	23:43	19.7	19.8	19.8	19.6	0.0	9.6	129	79	0.0
10/23/01	23:44	19.6	19.8	19.8	19.6	0.0	9.6	122	79	0.0
10/23/01	23:45	19.7	19.8	19.8	19.6	0.0	9.6	98	79	0.0
10/23/01	23:46	19.6	19.8	19.8	19.6	0.0	9.7	127	79	0.0
10/23/01	23:47	19.7	19.8	19.8	19.6	0.0	9.7	98	79	0.0
10/23/01	23:48	19.7	19.8	19.9	19.6	0.0	9.6	89	79	0.0
10/23/01	23:49	19.7	19.9	19.9	19.6	0.0	9.7	127	79	0.0
10/23/01	23:50	19.7	19.9	19.9	19.6	0.0	9.7	97	79	0.0
10/23/01	23:51	19.7	19.9	19.9	19.6	0.0	9.6	129	79	0.0
10/23/01	23:52	19.7	19.9	19.9	19.6	0.0	9.7	136	79	0.0
10/23/01	23:53	19.7	19.9	19.9	19.6	0.0	9.7	122	79	0.0
10/23/01	23:54	19.7	19.9	19.9	19.6	0.0	9.7	127	79	0.0
10/23/01	23:55	19.7	19.9	19.9	19.6	0.0	9.7	123	79	0.0
10/23/01	23:56	19.7	19.8	19.9	19.6	0.0	9.6	118	79	0.0
10/23/01	23:57	19.7	19.9	19.9	19.6	0.0	9.6	103	79	0.0
10/23/01	23:58	19.7	19.8	19.9	19.6	0.0	9.6	139	79	0.0
10/23/01	23:59	19.7	19.9	19.9	19.5	0.0	9.6	103	79	0.0
10/24/01	0:00	19.7	19.9	19.9	19.6	0.0	9.7	97	79	0.0
10/24/01	0:01	19.7	19.9	19.9	19.6	0.0	9.7	94	79	0.0
10/24/01	0:02	19.7	19.9	19.9	19.6	0.0	9.7	88	79	0.0
10/24/01	0:03	19.7	19.9	19.9	19.6	0.0	9.6	124	79	0.0
10/24/01	0:04	19.7	19.9	19.9	19.6	0.0	9.6	136	79	0.0
10/24/01	0:05	19.7	19.9	19.9	19.6	0.0	9.6	134	79	0.0
10/24/01	0:06	19.7	19.9	19.9	19.6	0.0	9.6	114	79	0.0
10/24/01	0:07	19.7	19.9	19.9	19.6	0.0	9.6	119	79	0.0
10/24/01	0:08	19.7	19.9	19.9	19.6	0.0	9.6	105	79	0.0
10/24/01	0:09	19.7	19.9	19.9	19.6	0.0	9.7	124	79	0.0
10/24/01	0:10	19.7	19.9	19.9	19.6	0.0	9.6	113	79	0.0
10/24/01	0:11	19.7	19.9	19.9	19.6	0.0	9.6	134	79	0.0
10/24/01	0:12	19.7	19.9	19.9	19.6	0.0	9.6	96	79	0.0
10/24/01	0:13	19.7	19.9	19.9	19.6	0.0	9.7	95	79	0.0
10/24/01	0:14	19.7	19.9	19.9	19.6	0.0	9.6	113	79	0.0
10/24/01	0:15	19.7	19.9	19.9	19.6	0.0	9.6	128	79	0.0
10/24/01	0:16	19.7	19.9	19.9	19.6	0.0	9.7	105	79	0.0
10/24/01	0:17	19.7	19.9	19.9	19.7	0.0	9.7	100	79	0.0
10/24/01	0:18	19.7	19.9	19.9	19.6	0.0	9.7	104	79	0.0
10/24/01	0:19	19.7	19.9	19.9	19.6	0.0	9.6	132	79	0.0
10/24/01	0:20	19.7	19.9	19.9	19.6	0.0	9.7	93	79	0.0
10/24/01	0:21	19.7	19.9	19.9	19.6	0.0	9.5	100	79	0.0
10/24/01	0:22	19.8	19.9	19.9	19.7	0.0	9.6	123	79	0.0
10/24/01	0:23	19.7	19.9	19.9	19.6	0.0	9.7	125	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	0:24	19.8	19.9	19.9	19.7	0.0	9.7	108	79	0.0
10/24/01	0:25	19.7	19.9	19.9	19.6	0.0	9.6	103	79	0.0
10/24/01	0:26	19.8	19.9	19.9	19.7	0.0	9.6	88	79	0.0
10/24/01	0:27	19.7	19.9	19.9	19.6	0.0	9.7	120	79	0.0
10/24/01	0:28	19.8	19.9	19.9	19.7	0.0	9.8	88	79	0.0
10/24/01	0:29	19.7	19.9	20.0	19.6	0.0	9.6	92	79	0.0
10/24/01	0:30	19.8	19.9	19.9	19.7	0.0	9.6	119	79	0.0
10/24/01	0:31	19.8	19.9	20.0	19.7	0.0	9.6	109	79	0.0
10/24/01	0:32	19.8	19.9	20.0	19.7	0.0	9.7	119	79	0.0
10/24/01	0:33	19.8	19.9	20.0	19.7	0.0	9.6	118	79	0.0
10/24/01	0:34	19.7	19.9	20.0	19.7	0.0	9.6	118	79	0.0
10/24/01	0:35	19.8	20.0	20.0	19.7	0.0	9.7	102	79	0.0
10/24/01	0:36	19.7	19.9	20.0	19.7	0.0	9.6	117	79	0.0
10/24/01	0:37	19.8	20.0	20.0	19.7	0.0	9.7	90	79	0.0
10/24/01	0:38	19.8	20.0	20.0	19.7	0.0	9.7	119	79	0.0
10/24/01	0:39	19.8	20.0	20.0	19.7	0.0	9.6	115	79	0.0
10/24/01	0:40	19.8	20.0	20.0	19.7	0.0	9.7	91	79	0.0
10/24/01	0:41	19.8	19.9	20.0	19.7	0.0	9.7	112	79	0.0
10/24/01	0:42	19.8	19.9	20.0	19.7	0.0	9.6	105	79	0.0
10/24/01	0:43	19.8	20.0	20.0	19.7	0.0	9.5	111	79	0.0
10/24/01	0:44	19.8	20.0	20.0	19.7	0.0	9.7	98	79	0.0
10/24/01	0:45	19.8	20.0	20.0	19.7	0.0	9.8	76	79	0.0
10/24/01	0:46	19.8	20.0	20.0	19.7	0.0	9.7	107	79	0.0
10/24/01	0:47	19.8	20.0	20.0	19.7	0.0	9.7	104	79	0.0
10/24/01	0:48	19.8	20.0	20.0	19.7	0.0	9.6	108	79	0.0
10/24/01	0:49	19.8	20.0	20.0	19.7	0.0	9.6	104	79	0.0
10/24/01	0:50	19.8	20.0	20.0	19.7	0.0	9.6	82	79	0.0
10/24/01	0:51	19.8	20.0	20.0	19.7	0.0	9.6	90	79	0.0
10/24/01	0:52	19.8	20.0	20.0	19.7	0.0	9.7	106	79	0.0
10/24/01	0:53	19.8	20.0	20.0	19.7	0.0	9.7	102	79	0.0
10/24/01	0:54	19.8	20.0	20.0	19.7	0.0	9.6	94	79	0.0
10/24/01	0:55	19.8	20.0	20.0	19.7	0.0	9.6	95	79	0.0
10/24/01	0:56	19.8	20.0	20.0	19.7	0.0	9.5	81	79	0.0
10/24/01	0:57	19.8	20.0	20.0	19.7	0.0	9.7	100	79	0.0
10/24/01	0:58	19.8	20.0	20.0	19.7	0.0	9.7	96	79	0.0
10/24/01	0:59	19.8	20.0	20.0	19.7	0.0	9.5	93	79	0.0
10/24/01	1:00	19.8	20.0	20.0	19.7	0.0	9.6	82	79	0.0
10/24/01	1:01	19.9	20.0	20.0	19.8	0.0	9.6	68	79	0.0
10/24/01	1:02	19.6	20.0	20.0	19.6	0.0	9.7	79	79	0.0
10/24/01	1:03	19.7	20.0	20.0	19.6	0.0	9.6	86	79	0.0
10/24/01	1:04	19.6	20.0	20.0	19.5	0.0	9.7	89	79	0.0
10/24/01	1:05	19.7	20.0	20.0	19.6	0.0	9.6	71	79	0.0
10/24/01	1:06	19.6	20.0	20.0	19.5	0.0	9.6	77	79	0.0
10/24/01	1:07	19.6	20.0	20.0	19.5	0.0	9.6	81	79	0.0
10/24/01	1:08	19.7	20.0	20.0	19.6	0.0	9.7	77	79	0.0
10/24/01	1:09	19.5	19.9	20.0	19.5	0.0	9.6	88	79	0.0
10/24/01	1:10	19.7	19.9	19.9	19.6	0.0	9.6	77	79	0.0
10/24/01	1:11	19.5	19.9	19.9	19.4	0.0	9.6	71	79	0.0
10/24/01	1:12	19.7	19.9	19.9	19.6	0.0	9.6	81	79	0.0
10/24/01	1:13	19.5	19.9	19.9	19.4	0.0	9.6	65	79	0.0
10/24/01	1:14	19.6	19.9	19.9	19.6	0.0	9.6	65	79	0.0
10/24/01	1:15	19.5	19.9	19.9	19.4	0.0	9.6	65	79	0.0
10/24/01	1:16	19.5	19.9	19.9	19.5	0.0	9.7	65	79	0.0
10/24/01	1:17	19.5	19.9	19.9	19.4	0.0	9.7	65	79	0.0
10/24/01	1:18	19.5	19.9	19.9	19.4	0.0	9.6	65	79	0.0
10/24/01	1:19	19.6	19.8	19.9	19.5	0.0	9.7	65	79	0.0
10/24/01	1:20	19.4	19.8	19.9	19.4	0.0	9.6	65	79	0.0
10/24/01	1:21	19.6	19.8	19.9	19.5	0.0	9.6	65	79	0.0
10/24/01	1:22	19.4	19.8	19.8	19.3	0.0	9.7	65	79	0.0
10/24/01	1:23	19.5	19.8	19.8	19.5	0.0	9.6	65	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	1:24	19.4	19.8	19.8	19.3	0.0	9.7	65	79	0.0
10/24/01	1:25	19.5	19.8	19.8	19.4	0.0	9.6	65	79	0.0
10/24/01	1:26	19.4	19.8	19.8	19.4	0.0	9.7	65	79	0.0
10/24/01	1:27	19.4	19.8	19.8	19.4	0.0	9.6	65	79	0.0
10/24/01	1:28	19.5	19.8	19.8	19.4	0.0	9.7	65	79	0.0
10/24/01	1:29	19.4	19.8	19.8	19.3	0.0	9.6	65	79	0.0
10/24/01	1:30	19.5	19.7	19.8	19.4	0.0	9.6	65	79	0.0
10/24/01	1:31	19.3	19.7	19.8	19.3	0.0	9.7	65	79	0.0
10/24/01	1:32	19.5	19.7	19.7	19.4	0.0	9.6	65	79	0.0
10/24/01	1:33	19.3	19.7	19.7	19.2	0.0	9.6	65	79	0.0
10/24/01	1:34	19.4	19.7	19.7	19.4	0.0	9.7	65	79	0.0
10/24/01	1:35	19.3	19.7	19.7	19.3	0.0	9.7	65	79	0.0
10/24/01	1:36	19.4	19.7	19.7	19.3	0.0	9.5	65	79	0.0
10/24/01	1:37	19.4	19.7	19.7	19.3	0.0	9.8	65	79	0.0
10/24/01	1:38	19.3	19.7	19.7	19.2	0.0	9.7	65	79	0.0
10/24/01	1:39	19.4	19.7	19.7	19.3	0.0	9.6	65	79	0.0
10/24/01	1:40	19.3	19.7	19.7	19.2	0.0	9.6	65	79	0.0
10/24/01	1:41	19.4	19.6	19.7	19.3	0.0	9.7	65	79	0.0
10/24/01	1:42	19.3	19.6	19.7	19.2	0.0	9.6	65	79	0.0
10/24/01	1:43	19.4	19.6	19.6	19.3	0.0	9.7	65	79	0.0
10/24/01	1:44	19.3	19.6	19.6	19.2	0.0	9.7	65	79	0.0
10/24/01	1:45	19.3	19.6	19.6	19.3	0.0	9.6	65	79	0.0
10/24/01	1:46	19.3	19.6	19.6	19.2	0.0	9.6	65	79	0.0
10/24/01	1:47	19.3	19.6	19.6	19.2	0.0	9.7	65	79	0.0
10/24/01	1:48	19.3	19.6	19.6	19.2	0.0	9.6	65	79	0.0
10/24/01	1:49	19.2	19.6	19.6	19.1	0.0	9.7	65	79	0.0
10/24/01	1:50	19.3	19.5	19.6	19.2	0.0	9.6	65	79	0.0
10/24/01	1:51	19.2	19.6	19.6	19.1	0.0	9.6	65	79	0.0
10/24/01	1:52	19.3	19.5	19.6	19.2	0.0	9.7	65	79	0.0
10/24/01	1:53	19.2	19.5	19.6	19.1	0.0	9.7	65	79	0.0
10/24/01	1:54	19.3	19.5	19.6	19.2	0.0	9.6	65	79	0.0
10/24/01	1:55	19.2	19.5	19.6	19.1	0.0	9.7	65	79	0.0
10/24/01	1:56	19.2	19.5	19.5	19.2	0.0	9.5	65	79	0.0
10/24/01	1:57	19.2	19.5	19.5	19.1	0.0	9.6	65	79	0.0
10/24/01	1:58	19.2	19.5	19.5	19.1	0.0	9.7	65	79	0.0
10/24/01	1:59	19.2	19.5	19.5	19.1	0.0	9.6	65	79	0.0
10/24/01	2:00	19.1	19.5	19.5	19.0	0.0	9.7	65	79	0.0
10/24/01	2:01	19.3	19.5	19.5	19.2	0.0	9.7	65	79	0.0
10/24/01	2:02	19.1	19.5	19.5	19.0	0.0	9.7	65	79	0.0
10/24/01	2:03	19.2	19.5	19.5	19.2	0.0	9.6	65	79	0.0
10/24/01	2:04	19.1	19.5	19.5	19.0	0.0	9.7	65	79	0.0
10/24/01	2:05	19.2	19.4	19.5	19.1	0.0	9.8	65	79	0.0
10/24/01	2:06	19.1	19.4	19.5	19.0	0.0	9.7	65	79	0.0
10/24/01	2:07	19.1	19.4	19.5	19.0	0.0	9.7	65	79	0.0
10/24/01	2:08	19.2	19.4	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:09	19.1	19.4	19.4	19.0	0.0	9.7	65	79	0.0
10/24/01	2:10	19.2	19.4	19.4	19.1	0.0	9.7	65	79	0.0
10/24/01	2:11	19.0	19.4	19.4	19.0	0.0	9.5	65	79	0.0
10/24/01	2:12	19.2	19.4	19.4	19.1	0.0	9.6	65	79	0.0
10/24/01	2:13	19.0	19.4	19.4	19.0	0.0	9.7	65	79	0.0
10/24/01	2:14	19.1	19.4	19.4	19.1	0.0	9.6	65	79	0.0
10/24/01	2:15	19.1	19.4	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:16	19.1	19.4	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:17	19.1	19.4	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:18	19.0	19.4	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:19	19.1	19.3	19.4	19.0	0.0	9.7	65	79	0.0
10/24/01	2:20	19.0	19.3	19.4	18.9	0.0	9.6	65	79	0.0
10/24/01	2:21	19.1	19.3	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:22	19.0	19.3	19.4	18.9	0.0	9.7	65	79	0.0
10/24/01	2:23	19.1	19.3	19.4	19.0	0.0	9.5	65	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	2:24	19.0	19.4	19.4	18.9	0.0	9.7	65	79	0.0
10/24/01	2:25	19.1	19.4	19.4	19.0	0.0	9.7	65	79	0.0
10/24/01	2:26	19.0	19.3	19.4	19.0	0.0	9.6	65	79	0.0
10/24/01	2:27	19.0	19.3	19.4	19.0	0.0	9.7	65	79	0.0
10/24/01	2:28	19.1	19.3	19.3	19.0	0.0	9.6	65	79	0.0
10/24/01	2:29	19.0	19.3	19.3	18.9	0.0	9.6	65	79	0.0
10/24/01	2:30	19.1	19.3	19.3	19.0	0.0	9.6	65	79	0.0
10/24/01	2:31	18.9	19.3	19.3	18.9	0.0	9.6	65	79	0.0
10/24/01	2:32	19.1	19.3	19.3	19.0	0.0	9.7	69	79	0.0
10/24/01	2:33	18.9	19.3	19.3	18.9	0.0	9.6	70	79	0.0
10/24/01	2:34	19.0	19.3	19.3	19.0	0.0	9.7	71	79	0.0
10/24/01	2:35	18.9	19.3	19.3	18.8	0.0	9.7	79	79	0.0
10/24/01	2:36	19.0	19.3	19.3	18.9	0.0	9.7	71	79	0.0
10/24/01	2:37	19.0	19.3	19.3	18.9	0.0	9.6	72	79	0.0
10/24/01	2:38	18.9	19.3	19.3	18.9	0.0	9.7	77	79	0.0
10/24/01	2:39	19.0	19.3	19.3	18.9	0.0	9.6	73	79	0.0
10/24/01	2:40	18.9	19.2	19.3	18.8	0.0	9.7	87	79	0.0
10/24/01	2:41	19.0	19.2	19.3	18.9	0.0	9.6	85	79	0.0
10/24/01	2:42	18.9	19.2	19.3	18.8	0.0	9.7	87	79	0.0
10/24/01	2:43	19.0	19.2	19.2	18.9	0.0	9.7	63	79	0.0
10/24/01	2:44	18.9	19.2	19.2	18.8	0.0	9.6	71	79	0.0
10/24/01	2:45	19.0	19.2	19.2	18.9	0.0	9.7	81	79	0.0
10/24/01	2:46	18.9	19.2	19.2	18.8	0.0	9.7	75	79	0.0
10/24/01	2:47	18.9	19.2	19.2	18.8	0.0	9.6	65	79	0.0
10/24/01	2:48	18.9	19.2	19.2	18.8	0.0	9.6	93	79	0.0
10/24/01	2:49	18.8	19.2	19.2	18.8	0.0	9.7	68	79	0.0
10/24/01	2:50	18.9	19.2	19.2	18.8	0.0	9.6	92	79	0.0
10/24/01	2:51	18.8	19.2	19.2	18.7	0.0	9.6	86	79	0.0
10/24/01	2:52	19.0	19.2	19.2	18.9	0.0	9.6	83	79	0.0
10/24/01	2:53	18.8	19.1	19.2	18.7	0.0	9.6	93	79	0.0
10/24/01	2:54	18.9	19.2	19.2	18.9	0.0	9.6	98	79	0.0
10/24/01	2:55	18.8	19.2	19.2	18.7	0.0	9.6	96	79	0.0
10/24/01	2:56	18.9	19.1	19.1	18.8	0.0	9.7	98	79	0.0
10/24/01	2:57	18.9	19.1	19.1	18.7	0.0	9.6	87	79	0.0
10/24/01	2:58	18.8	19.1	19.1	18.8	0.0	9.7	97	79	0.0
10/24/01	2:59	18.9	19.1	19.1	18.8	0.0	9.6	70	79	0.0
10/24/01	3:00	18.8	19.1	19.1	18.7	0.0	9.7	93	79	0.0
10/24/01	3:01	18.9	19.1	19.1	18.8	0.0	9.6	104	79	0.0
10/24/01	3:02	18.8	19.1	19.1	18.7	0.0	9.7	106	79	0.0
10/24/01	3:03	18.9	19.1	19.1	18.8	0.0	9.6	78	79	0.0
10/24/01	3:04	18.8	19.1	19.1	18.7	0.0	9.6	104	79	0.0
10/24/01	3:05	18.9	19.1	19.1	18.8	0.0	9.6	105	79	0.0
10/24/01	3:06	18.8	19.1	19.1	18.7	0.0	9.7	96	79	0.0
10/24/01	3:07	18.8	19.1	19.1	18.7	0.0	9.6	107	79	0.0
10/24/01	3:08	18.8	19.1	19.1	18.7	0.0	9.6	104	79	0.0
10/24/01	3:09	18.7	19.1	19.1	18.7	0.0	9.6	108	79	0.0
10/24/01	3:10	18.8	19.1	19.1	18.7	0.0	9.8	94	79	0.0
10/24/01	3:11	18.7	19.1	19.1	18.6	0.0	9.7	95	79	0.0
10/24/01	3:12	18.9	19.0	19.1	18.8	0.0	9.6	109	79	0.0
10/24/01	3:13	18.7	19.1	19.1	18.6	0.0	9.6	110	79	0.0
10/24/01	3:14	18.8	19.0	19.1	18.8	0.0	9.6	105	79	0.0
10/24/01	3:15	18.7	19.0	19.1	18.6	0.0	9.7	88	79	0.0
10/24/01	3:16	18.8	19.0	19.1	18.7	0.0	9.7	113	79	0.0
10/24/01	3:17	18.7	19.0	19.0	18.6	0.0	9.6	116	79	0.0
10/24/01	3:18	18.7	19.0	19.0	18.7	0.0	9.6	101	79	0.0
10/24/01	3:19	18.8	19.0	19.0	18.7	0.0	9.6	117	79	0.0
10/24/01	3:20	18.7	19.0	19.0	18.6	0.0	9.7	120	79	0.0
10/24/01	3:21	18.8	19.0	19.0	18.7	0.0	9.6	118	79	0.0
10/24/01	3:22	18.7	19.0	19.0	18.6	0.0	9.6	92	79	0.0
10/24/01	3:23	18.8	19.0	19.0	18.7	0.0	9.6	114	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	3:24	18.7	19.0	19.0	18.6	0.0	9.7	118	79	0.0
10/24/01	3:25	18.8	19.0	19.0	18.7	0.0	9.6	116	79	0.0
10/24/01	3:26	18.7	19.0	19.0	18.6	0.0	9.6	120	79	0.0
10/24/01	3:27	18.7	19.0	19.0	18.7	0.0	9.6	121	79	0.0
10/24/01	3:28	18.7	19.0	19.0	18.6	0.0	9.6	100	79	0.0
10/24/01	3:29	18.7	19.0	19.0	18.6	0.0	9.7	89	79	0.0
10/24/01	3:30	18.8	19.0	19.0	18.6	0.0	9.6	123	79	0.0
10/24/01	3:31	18.6	19.0	19.0	18.6	0.0	9.7	103	79	0.0
10/24/01	3:32	18.8	19.0	19.0	18.7	0.0	9.6	110	79	0.0
10/24/01	3:33	18.6	19.0	19.0	18.5	0.0	9.6	131	79	0.0
10/24/01	3:34	18.8	18.9	18.9	18.7	0.0	9.6	122	79	0.0
10/24/01	3:35	18.6	18.9	18.9	18.5	0.0	9.7	107	79	0.0
10/24/01	3:36	18.7	18.9	18.9	18.6	0.0	9.6	101	79	0.0
10/24/01	3:37	18.7	18.9	18.9	18.6	0.0	9.6	132	79	0.0
10/24/01	3:38	18.6	18.9	18.9	18.6	0.0	9.6	120	79	0.0
10/24/01	3:39	18.7	18.9	18.9	18.6	0.0	9.7	121	79	0.0
10/24/01	3:40	18.6	18.9	18.9	18.5	0.0	9.6	134	79	0.0
10/24/01	3:41	18.7	18.9	18.9	18.6	0.0	9.6	109	79	0.0
10/24/01	3:42	18.6	18.9	18.9	18.5	0.0	9.6	87	79	0.0
10/24/01	3:43	18.7	18.9	18.9	18.6	0.0	9.7	124	79	0.0
10/24/01	3:44	18.6	18.9	18.9	18.5	0.0	9.7	94	79	0.0
10/24/01	3:45	18.7	18.9	18.9	18.6	0.0	9.5	131	79	0.0
10/24/01	3:46	18.6	18.9	18.9	18.5	0.0	9.7	116	79	0.0
10/24/01	3:47	18.6	18.9	18.9	18.6	0.0	9.7	94	79	0.0
10/24/01	3:48	18.7	18.9	18.9	18.5	0.0	9.6	126	79	0.0
10/24/01	3:49	18.6	18.9	18.9	18.5	0.0	9.7	118	79	0.0
10/24/01	3:50	18.7	18.9	18.9	18.6	0.0	9.6	136	79	0.0
10/24/01	3:51	18.6	18.9	18.9	18.5	0.0	9.6	125	79	0.0
10/24/01	3:52	18.7	18.9	18.9	18.6	0.0	9.6	122	79	0.0
10/24/01	3:53	18.6	18.9	18.9	18.4	0.0	9.7	134	79	0.0
10/24/01	3:54	18.7	18.9	18.9	18.6	0.0	9.6	121	79	0.0
10/24/01	3:55	18.5	18.9	18.9	18.4	0.0	9.6	136	79	0.0
10/24/01	3:56	18.6	18.9	18.9	18.5	0.0	9.6	109	79	0.0
10/24/01	3:57	18.6	18.9	18.9	18.5	0.0	9.7	136	79	0.0
10/24/01	3:58	18.6	18.8	18.9	18.5	0.0	9.7	126	79	0.0
10/24/01	3:59	18.6	18.8	18.8	18.5	0.0	9.7	97	79	0.0
10/24/01	4:00	18.6	18.9	18.9	18.5	0.0	9.5	100	79	0.0
10/24/01	4:01	18.7	18.8	18.8	18.5	0.0	9.7	100	79	0.0
10/24/01	4:02	18.5	18.8	18.8	18.4	0.0	9.6	126	79	0.0
10/24/01	4:03	18.7	18.8	18.8	18.6	0.0	9.6	110	79	0.0
10/24/01	4:04	18.5	18.8	18.8	18.4	0.0	9.7	132	79	0.0
10/24/01	4:05	18.6	18.8	18.8	18.5	0.0	9.6	140	79	0.0
10/24/01	4:06	18.5	18.8	18.8	18.4	0.0	9.7	110	79	0.0
10/24/01	4:07	18.6	18.8	18.8	18.5	0.0	9.6	106	79	0.0
10/24/01	4:08	18.6	18.8	18.8	18.4	0.0	9.6	110	79	0.0
10/24/01	4:09	18.5	18.8	18.8	18.4	0.0	9.6	129	79	0.0
10/24/01	4:10	18.6	18.8	18.8	18.5	0.0	9.7	135	79	0.0
10/24/01	4:11	18.5	18.8	18.8	18.4	0.0	9.6	104	79	0.0
10/24/01	4:12	18.6	18.8	18.8	18.5	0.0	9.7	128	79	0.0
10/24/01	4:13	18.5	18.8	18.8	18.4	0.0	9.7	114	79	0.0
10/24/01	4:14	18.6	18.8	18.8	18.5	0.0	9.6	120	79	0.0
10/24/01	4:15	18.5	18.8	18.8	18.4	0.0	9.7	129	79	0.0
10/24/01	4:16	18.6	18.8	18.8	18.5	0.0	9.6	111	79	0.0
10/24/01	4:17	18.5	18.8	18.8	18.4	0.0	9.6	138	79	0.0
10/24/01	4:18	18.5	18.8	18.8	18.4	0.0	9.7	120	79	0.0
10/24/01	4:19	18.5	18.8	18.8	18.4	0.0	9.6	131	79	0.0
10/24/01	4:20	18.5	18.8	18.8	18.4	0.0	9.6	120	79	0.0
10/24/01	4:21	18.6	18.8	18.8	18.5	0.0	9.6	91	79	0.0
10/24/01	4:22	18.5	18.8	18.8	18.4	0.0	9.6	129	79	0.0
10/24/01	4:23	18.6	18.8	18.8	18.5	0.0	9.7	128	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	4:24	18.5	18.8	18.8	18.3	0.0	9.7	96	79	0.0
10/24/01	4:25	18.6	18.8	18.8	18.5	0.0	9.6	92	79	0.0
10/24/01	4:26	18.5	18.8	18.7	18.3	0.0	9.7	116	79	0.0
10/24/01	4:27	18.5	18.8	18.7	18.4	0.0	9.6	126	79	0.0
10/24/01	4:28	18.5	18.8	18.8	18.4	0.0	8.8	135	79	0.0
10/24/01	4:29	18.6	18.9	18.8	18.5	0.0	9.7	97	79	0.0
10/24/01	4:30	18.6	18.8	18.8	18.4	0.0	9.6	119	79	0.0
10/24/01	4:31	18.5	18.8	18.8	18.4	0.0	9.6	131	79	0.0
10/24/01	4:32	18.6	18.8	18.8	18.5	0.0	9.6	132	79	0.0
10/24/01	4:33	18.4	18.8	18.7	18.3	0.0	9.6	90	79	0.0
10/24/01	4:34	18.6	18.8	18.7	18.5	0.0	9.7	131	79	0.0
10/24/01	4:35	18.5	18.7	18.7	18.3	0.0	9.6	121	79	0.0
10/24/01	4:36	18.5	18.7	18.7	18.4	0.0	9.6	133	79	0.0
10/24/01	4:37	18.5	18.7	18.7	18.3	0.0	9.7	128	79	0.0
10/24/01	4:38	18.5	18.7	18.7	18.4	0.0	9.7	93	79	0.0
10/24/01	4:39	18.5	18.7	18.7	18.4	0.0	9.7	133	79	0.0
10/24/01	4:40	18.4	18.7	18.7	18.4	0.0	9.6	127	79	0.0
10/24/01	4:41	18.5	18.7	18.7	18.4	0.0	9.6	107	79	0.0
10/24/01	4:42	18.4	18.7	18.7	18.3	0.0	9.5	124	79	0.0
10/24/01	4:43	18.5	18.7	18.7	18.4	0.0	9.7	135	79	0.0
10/24/01	4:44	18.4	18.7	18.7	18.3	0.0	9.6	82	79	0.0
10/24/01	4:45	18.6	18.7	18.7	18.4	0.0	9.7	134	79	0.0
10/24/01	4:46	18.4	18.7	18.7	18.3	0.0	9.7	73	79	0.0
10/24/01	4:47	18.5	18.7	18.7	18.4	0.0	9.7	118	79	0.0
10/24/01	4:48	18.4	18.7	18.7	18.3	0.0	9.6	89	79	0.0
10/24/01	4:49	18.5	18.7	18.7	18.4	0.0	9.6	108	79	0.0
10/24/01	4:50	18.5	18.7	18.7	18.3	0.0	9.7	98	79	0.0
10/24/01	4:51	18.4	18.7	18.7	18.3	0.0	9.7	101	79	0.0
10/24/01	4:52	18.5	18.7	18.7	18.4	0.0	9.6	119	79	0.0
10/24/01	4:53	18.4	18.7	18.7	18.3	0.0	9.7	90	79	0.0
10/24/01	4:54	18.5	18.7	18.7	18.4	0.0	9.6	103	79	0.0
10/24/01	4:55	18.4	18.7	18.7	18.3	0.0	9.7	78	79	0.0
10/24/01	4:56	18.5	18.7	18.7	18.4	0.0	9.6	97	79	0.0
10/24/01	4:57	18.4	18.7	18.7	18.3	0.0	9.6	123	79	0.0
10/24/01	4:58	18.5	18.7	18.7	18.4	0.0	9.7	127	79	0.0
10/24/01	4:59	18.4	18.7	18.7	18.3	0.0	9.6	76	79	0.0
10/24/01	5:00	18.4	18.7	18.7	18.3	0.0	9.6	82	79	0.0
10/24/01	5:01	18.5	18.7	18.7	18.3	0.0	9.6	72	79	0.0
10/24/01	5:02	18.4	18.7	18.7	18.3	0.0	9.6	110	79	0.0
10/24/01	5:03	18.5	18.7	18.7	18.4	0.0	9.7	115	79	0.0
10/24/01	5:04	18.4	18.7	18.7	18.2	0.0	9.7	114	79	0.0
10/24/01	5:05	18.5	18.7	18.7	18.4	0.0	9.7	79	79	0.0
10/24/01	5:06	18.4	18.7	18.6	18.2	0.0	9.6	121	79	0.0
10/24/01	5:07	18.5	18.7	18.6	18.4	0.0	9.6	104	79	0.0
10/24/01	5:08	18.4	18.7	18.6	18.2	0.0	9.6	73	79	0.0
10/24/01	5:09	18.4	18.7	18.6	18.3	0.0	9.6	102	79	0.0
10/24/01	5:10	18.4	18.7	18.6	18.3	0.0	9.6	85	79	0.0
10/24/01	5:11	18.4	18.7	18.6	18.3	0.0	9.7	101	79	0.0
10/24/01	5:12	18.5	18.7	18.6	18.3	0.0	9.6	96	79	0.0
10/24/01	5:13	18.4	18.7	18.6	18.2	0.0	9.7	86	79	0.0
10/24/01	5:14	18.5	18.6	18.6	18.4	0.0	9.6	59	79	0.0
10/24/01	5:15	18.3	18.6	18.6	18.2	0.0	9.7	115	79	0.0
10/24/01	5:16	18.5	18.6	18.6	18.4	0.0	9.6	65	79	0.0
10/24/01	5:17	18.3	18.6	18.6	18.2	0.0	9.6	114	79	0.0
10/24/01	5:18	18.4	18.6	18.6	18.3	0.0	9.6	48	79	0.0
10/24/01	5:19	18.4	18.6	18.6	18.2	0.0	9.6	119	79	0.0
10/24/01	5:20	18.4	18.6	18.6	18.3	0.0	9.6	79	79	0.0
10/24/01	5:21	18.4	18.6	18.6	18.3	0.0	9.5	63	79	0.0
10/24/01	5:22	18.4	18.6	18.6	18.3	0.0	9.7	116	79	0.0
10/24/01	5:23	18.5	18.6	18.6	18.3	0.0	9.6	75	79	0.0

PREC2_102301_0623										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	5:24	18.3	18.6	18.6	18.2	0.0	9.6	77	79	0.0
10/24/01	5:25	18.5	18.6	18.6	18.3	0.0	9.6	76	79	0.0
10/24/01	5:26	18.3	18.6	18.6	18.2	0.0	9.7	100	79	0.0
10/24/01	5:27	18.5	18.6	18.6	18.3	0.0	9.6	117	79	0.0
10/24/01	5:28	18.4	18.6	18.6	18.2	0.0	9.6	97	79	0.0
10/24/01	5:29	18.4	18.6	18.6	18.3	0.0	9.7	70	79	0.0
10/24/01	5:30	18.4	18.6	18.6	18.2	0.0	9.6	88	79	0.0
10/24/01	5:31	18.4	18.6	18.6	18.2	0.0	9.6	51	79	0.0
10/24/01	5:32	18.4	18.6	18.6	18.3	0.0	9.7	76	79	0.0
10/24/01	5:33	18.3	18.6	18.6	18.2	0.0	9.6	70	79	0.0
10/24/01	5:34	18.5	18.6	18.6	18.3	0.0	9.6	45	79	0.0
10/24/01	5:35	18.3	18.6	18.6	18.2	0.0	9.6	48	79	0.0
10/24/01	5:36	18.5	18.6	18.6	18.4	0.0	9.7	106	79	0.0
10/24/01	5:37	18.5	18.6	18.6	18.3	0.0	9.7	110	79	0.0
10/24/01	5:38	18.5	18.6	18.6	18.4	0.0	9.7	85	79	0.0
10/24/01	5:39	18.5	18.6	18.6	18.3	0.0	9.6	43	79	0.0
10/24/01	5:40	18.5	18.6	18.6	18.4	0.0	9.6	61	79	0.0
10/24/01	5:41	18.5	18.6	18.6	18.4	0.0	9.6	46	79	0.0
10/24/01	5:42	18.5	18.6	18.6	18.4	0.0	9.7	101	79	0.0
10/24/01	5:43	18.5	18.7	18.6	18.4	0.0	9.7	102	79	0.0
10/24/01	5:44	18.5	18.7	18.7	18.4	0.0	9.6	76	79	0.0
10/24/01	5:45	18.6	18.7	18.7	18.4	0.0	9.7	37	79	0.0
10/24/01	5:46	18.5	18.7	18.7	18.4	0.0	9.5	66	79	0.0
10/24/01	5:47	18.6	18.7	18.7	18.4	0.0	9.6	74	79	0.0
10/24/01	5:48	18.5	18.7	18.7	18.4	0.0	9.6	71	79	0.0
10/24/01	5:49	18.6	18.7	18.7	18.4	0.0	9.8	74	79	0.0
10/24/01	5:50	18.5	18.7	18.7	18.4	0.0	9.7	81	79	0.0
10/24/01	5:51	18.6	18.7	18.7	18.4	0.0	9.6	35	79	0.0
10/24/01	5:52	18.6	18.7	18.7	18.4	0.0	9.6	53	79	0.0
10/24/01	5:53	18.6	18.7	18.7	18.5	0.0	9.6	78	79	0.0
10/24/01	5:54	18.6	18.7	18.7	18.4	0.0	9.6	32	79	0.0
10/24/01	5:55	18.6	18.7	18.7	18.4	0.0	9.6	55	79	0.0
10/24/01	5:56	18.6	18.7	18.7	18.5	0.0	9.5	85	79	0.0
10/24/01	5:57	18.6	18.7	18.7	18.4	0.0	9.7	60	79	0.0
10/24/01	5:58	18.6	18.8	18.7	18.5	0.0	9.6	75	79	0.0
10/24/01	5:59	18.6	18.8	18.7	18.5	0.0	9.7	55	79	0.0
10/24/01	6:00	18.6	18.8	18.7	18.5	0.0	9.5	62	79	0.0
10/24/01	6:01	18.6	18.8	18.7	18.5	0.0	9.7	60	79	0.0
10/24/01	6:02	18.6	18.8	18.8	18.5	0.0	9.7	29	79	0.0
10/24/01	6:03	18.6	18.8	18.8	18.5	0.0	9.7	99	79	0.0
10/24/01	6:04	18.6	18.8	18.8	18.5	0.0	9.6	34	79	0.0
10/24/01	6:05	18.6	18.8	18.8	18.5	0.0	9.6	100	79	0.0
10/24/01	6:06	18.6	18.8	18.8	18.5	0.0	9.6	77	79	0.0
10/24/01	6:07	18.7	18.8	18.8	18.5	0.0	9.6	30	79	0.0
10/24/01	6:08	18.7	18.8	18.8	18.5	0.0	9.8	26	79	0.0
10/24/01	6:09	18.7	18.8	18.8	18.6	0.0	9.6	66	79	0.0
10/24/01	6:10	18.7	18.8	18.8	18.5	0.0	9.6	98	79	0.0
10/24/01	6:11	18.7	18.8	18.8	18.6	0.0	9.6	30	79	0.0
10/24/01	6:12	18.7	18.8	18.8	18.5	0.0	9.6	32	79	0.0
10/24/01	6:13	18.7	18.8	18.8	18.6	0.0	9.7	63	79	0.0
10/24/01	6:14	18.7	18.8	18.8	18.5	0.0	9.6	46	79	0.0
10/24/01	6:15	18.7	18.9	18.8	18.6	0.0	9.6	51	79	0.0
10/24/01	6:16	18.7	18.9	18.8	18.6	0.0	9.6	32	79	0.0
10/24/01	6:17	18.7	18.9	18.8	18.6	0.0	9.7	68	79	0.0
10/24/01	6:18	18.7	18.9	18.9	18.6	0.0	9.6	24	79	0.0
10/24/01	6:19	18.7	18.9	18.9	18.6	0.0	9.7	23	79	0.0
10/24/01	6:20	18.7	18.9	18.9	18.6	0.0	9.6	26	79	0.0
10/24/01	6:21	18.7	18.9	18.9	18.6	0.0	9.6	38	79	0.0
10/24/01	6:22	18.8	18.9	18.9	18.6	0.0	9.7	97	79	0.0
10/24/01	6:23	18.7	18.9	18.9	18.6	0.0	9.6	25	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	6:27	18.8	18.9	18.9	18.7	0.0	9.6	99	79	0.0
10/24/01	6:28	18.8	18.9	18.9	18.7	0.0	9.6	99	79	0.0
10/24/01	6:29	18.8	18.9	18.9	18.6	0.0	9.8	23	79	0.0
10/24/01	6:30	18.8	18.9	18.9	18.6	0.0	9.7	29	79	0.0
10/24/01	6:31	18.8	18.9	18.9	18.7	0.0	9.6	35	79	0.0
10/24/01	6:32	18.8	19.0	18.9	18.6	0.0	9.6	21	79	0.0
10/24/01	6:33	18.8	19.0	18.9	18.7	0.0	9.7	97	79	0.0
10/24/01	6:34	18.8	19.0	18.9	18.7	0.0	9.7	23	79	0.0
10/24/01	6:35	18.9	19.0	18.9	18.7	0.0	9.6	26	79	0.0
10/24/01	6:36	18.8	19.0	19.0	18.7	0.0	9.6	40	79	0.0
10/24/01	6:37	18.9	19.0	19.0	18.7	0.0	9.6	29	79	0.0
10/24/01	6:38	18.8	19.0	19.0	18.7	0.0	9.7	26	79	0.0
10/24/01	6:39	18.9	19.0	19.0	18.7	0.0	9.7	50	79	0.0
10/24/01	6:40	18.8	19.0	19.0	18.7	0.0	9.6	25	79	0.0
10/24/01	6:41	18.8	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/24/01	6:42	18.9	19.0	19.0	18.7	0.0	9.6	37	79	0.0
10/24/01	6:43	18.8	19.0	19.0	18.7	0.0	9.6	46	79	0.0
10/24/01	6:44	18.9	19.0	19.0	18.7	0.0	9.7	28	79	0.0
10/24/01	6:45	18.9	19.0	19.0	18.7	0.0	9.6	20	79	0.0
10/24/01	6:46	18.9	19.0	19.0	18.8	0.0	9.7	20	79	0.0
10/24/01	6:47	18.9	19.0	19.0	18.7	0.0	9.6	21	79	0.0
10/24/01	6:48	18.9	19.1	19.0	18.8	0.0	9.6	21	79	0.0
10/24/01	6:49	18.9	19.1	19.0	18.7	0.0	9.5	21	79	0.0
10/24/01	6:50	18.9	19.1	19.0	18.8	0.0	9.7	37	79	0.0
10/24/01	6:51	18.9	19.1	19.0	18.7	0.0	9.6	21	79	0.0
10/24/01	6:52	18.9	19.1	19.0	18.8	0.0	9.6	21	79	0.0
10/24/01	6:53	18.9	19.1	19.0	18.8	0.0	9.7	21	79	0.0
10/24/01	6:54	18.9	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	6:55	18.9	19.1	19.0	18.8	0.0	9.7	21	79	0.0
10/24/01	6:56	18.9	19.1	19.0	18.8	0.0	9.7	21	79	0.0
10/24/01	6:57	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	6:58	18.9	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	6:59	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	7:00	18.9	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	7:01	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	7:02	18.9	19.1	19.1	18.8	0.0	9.7	21	79	0.0
10/24/01	7:03	19.0	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	7:04	18.9	19.1	19.1	18.8	0.0	9.6	21	79	0.0
10/24/01	7:05	19.0	19.1	19.1	18.8	0.0	9.7	21	79	0.0
10/24/01	7:06	19.0	19.1	19.1	18.8	0.0	9.7	21	79	0.0
10/24/01	7:07	19.0	19.1	19.1	18.8	0.0	9.7	21	79	0.0
10/24/01	7:08	19.0	19.1	19.1	18.9	0.0	9.7	21	79	0.0
10/24/01	7:09	19.0	19.2	19.1	18.8	0.0	9.5	21	79	0.0
10/24/01	7:10	19.0	19.2	19.1	18.9	0.0	9.7	21	79	0.0
10/24/01	7:11	19.0	19.2	19.2	18.8	0.0	9.6	21	79	0.0
10/24/01	7:12	19.1	19.2	19.2	18.9	0.0	9.7	20	79	0.0
10/24/01	7:13	19.0	19.2	19.2	18.8	0.0	9.6	20	79	0.0
10/24/01	7:14	19.0	19.2	19.1	18.9	0.0	9.6	20	79	0.0
10/24/01	7:15	19.0	19.2	19.2	18.8	0.0	9.7	21	79	0.0
10/24/01	7:16	19.0	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/24/01	7:17	19.0	19.2	19.2	18.9	0.0	9.7	20	79	0.0
10/24/01	7:18	19.0	19.2	19.2	18.9	0.0	9.7	20	79	0.0
10/24/01	7:19	19.0	19.2	19.2	18.9	0.0	9.7	21	79	0.0
10/24/01	7:20	19.0	19.2	19.2	18.9	0.0	9.6	20	79	0.0
10/24/01	7:21	19.1	19.2	19.2	18.9	0.0	9.6	20	79	0.0
10/24/01	7:22	19.0	19.2	19.2	18.9	0.0	9.6	20	79	0.0
10/24/01	7:23	19.1	19.2	19.2	18.9	0.0	9.6	21	79	0.0
10/24/01	7:24	19.0	19.2	19.2	18.9	0.0	9.5	20	79	0.0
10/24/01	7:25	19.1	19.2	19.2	19.0	0.0	9.6	35	79	0.0
10/24/01	7:26	19.1	19.2	19.2	18.9	0.0	9.6	20	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	7:27	19.1	19.2	19.2	19.0	0.0	9.6	20	79	0.0
10/24/01	7:28	19.1	19.2	19.2	18.9	0.0	9.7	50	79	0.0
10/24/01	7:29	19.1	19.3	19.2	19.0	0.0	9.6	96	79	0.0
10/24/01	7:30	19.1	19.3	19.2	18.9	0.0	9.6	38	79	0.0
10/24/01	7:31	19.1	19.3	19.2	19.0	0.0	9.7	20	79	0.0
10/24/01	7:32	19.1	19.3	19.2	19.0	0.0	9.6	23	79	0.0
10/24/01	7:33	19.1	19.3	19.3	19.0	0.0	9.6	70	79	0.0
10/24/01	7:34	19.1	19.3	19.3	19.0	0.0	9.6	22	79	0.0
10/24/01	7:35	19.1	19.3	19.2	19.0	0.0	9.7	20	79	0.0
10/24/01	7:36	19.2	19.3	19.3	19.0	0.0	9.7	71	79	0.0
10/24/01	7:37	19.1	19.3	19.3	19.0	0.0	9.6	22	79	0.0
10/24/01	7:38	19.2	19.3	19.3	19.0	0.0	9.6	23	79	0.0
10/24/01	7:39	19.1	19.3	19.3	19.0	0.0	9.7	21	79	0.0
10/24/01	7:40	19.2	19.3	19.3	19.0	0.0	9.7	34	79	0.0
10/24/01	7:41	19.1	19.3	19.3	19.0	0.0	9.6	32	79	0.0
10/24/01	7:42	19.2	19.3	19.3	19.0	0.0	9.7	69	79	0.0
10/24/01	7:43	19.1	19.3	19.3	19.0	0.0	9.6	71	79	0.0
10/24/01	7:44	19.1	19.3	19.3	19.0	0.0	9.6	37	79	0.0
10/24/01	7:45	19.2	19.3	19.3	19.0	0.0	9.6	43	79	0.0
10/24/01	7:46	19.1	19.3	19.3	19.0	0.0	9.6	82	79	0.0
10/24/01	7:47	19.2	19.3	19.3	19.0	0.0	9.6	41	79	0.0
10/24/01	7:48	19.1	19.3	19.3	19.0	0.0	9.6	95	79	0.0
10/24/01	7:49	19.2	19.3	19.3	19.1	0.0	9.7	98	79	0.0
10/24/01	7:50	19.1	19.4	19.3	19.0	0.0	9.7	47	79	0.0
10/24/01	7:51	19.2	19.3	19.3	19.1	0.0	9.7	27	79	0.0
10/24/01	7:52	19.2	19.4	19.3	19.0	0.0	9.5	48	79	0.0
10/24/01	7:53	19.2	19.4	19.3	19.1	0.0	9.6	31	79	0.0
10/24/01	7:54	19.2	19.4	19.4	19.0	0.0	9.7	79	79	0.0
10/24/01	7:55	19.2	19.4	19.4	19.1	0.0	9.6	28	79	0.0
10/24/01	7:56	19.2	19.4	19.4	19.1	0.0	9.6	27	79	0.0
10/24/01	7:57	19.2	19.4	19.4	19.1	0.0	9.6	24	79	0.0
10/24/01	7:58	19.2	19.4	19.4	19.1	0.0	9.7	51	79	0.0
10/24/01	7:59	19.2	19.4	19.4	19.1	0.0	9.7	24	79	0.0
10/24/01	8:00	19.3	19.4	19.4	19.1	0.0	9.7	37	79	0.0
10/24/01	8:01	19.2	19.4	19.4	19.1	0.0	9.6	93	79	0.0
10/24/01	8:02	19.3	19.4	19.4	19.1	0.0	9.6	30	79	0.0
10/24/01	8:03	19.2	19.4	19.4	19.1	0.0	9.7	90	79	0.0
10/24/01	8:04	19.3	19.4	19.4	19.1	0.0	9.6	36	79	0.0
10/24/01	8:05	19.2	19.4	19.4	19.1	0.0	9.5	30	79	0.0
10/24/01	8:06	19.2	19.4	19.4	19.1	0.0	9.6	71	79	0.0
10/24/01	8:07	19.2	19.4	19.4	19.1	0.0	9.7	28	79	0.0
10/24/01	8:08	19.2	19.4	19.4	19.1	0.0	9.6	84	79	0.0
10/24/01	8:09	19.3	19.4	19.4	19.1	0.0	9.7	62	79	0.0
10/24/01	8:10	19.2	19.4	19.4	19.1	0.0	9.6	39	79	0.0
10/24/01	8:11	19.3	19.4	19.4	19.1	0.0	9.6	57	79	0.0
10/24/01	8:12	19.3	19.5	19.4	19.1	0.0	9.6	26	79	0.0
10/24/01	8:13	19.3	19.5	19.4	19.2	0.0	9.7	51	79	0.0
10/24/01	8:14	19.3	19.5	19.4	19.2	0.0	9.7	70	79	0.0
10/24/01	8:15	19.3	19.5	19.4	19.2	0.0	9.7	44	79	0.0
10/24/01	8:16	19.3	19.5	19.5	19.2	0.0	9.6	32	79	0.0
10/24/01	8:17	19.4	19.5	19.5	19.2	0.0	9.7	29	79	0.0
10/24/01	8:18	19.3	19.5	19.5	19.2	0.0	9.6	49	79	0.0
10/24/01	8:19	19.4	19.5	19.5	19.2	0.0	9.7	47	79	0.0
10/24/01	8:20	19.3	19.5	19.5	19.2	0.0	9.6	31	79	0.0
10/24/01	8:21	19.3	19.5	19.5	19.2	0.0	9.7	91	79	0.0
10/24/01	8:22	19.3	19.5	19.5	19.2	0.0	9.6	84	79	0.0
10/24/01	8:23	19.3	19.5	19.5	19.2	0.0	9.7	34	79	0.0
10/24/01	8:24	19.4	19.5	19.5	19.2	0.0	9.6	81	79	0.0
10/24/01	8:25	19.3	19.5	19.5	19.2	0.0	9.7	98	79	0.0
10/24/01	8:26	19.4	19.5	19.5	19.2	0.0	9.7	54	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	8:27	19.3	19.5	19.5	19.2	0.0	9.7	65	79	0.0
10/24/01	8:28	19.4	19.5	19.5	19.2	0.0	9.7	84	79	0.0
10/24/01	8:29	19.3	19.5	19.5	19.2	0.0	9.6	37	79	0.0
10/24/01	8:30	19.4	19.5	19.5	19.2	0.0	9.6	57	79	0.0
10/24/01	8:31	19.3	19.5	19.5	19.2	0.0	9.7	60	79	0.0
10/24/01	8:32	19.4	19.5	19.5	19.2	0.0	9.6	100	79	0.0
10/24/01	8:33	19.4	19.5	19.5	19.2	0.0	9.7	94	79	0.0
10/24/01	8:34	19.4	19.5	19.5	19.2	0.0	9.6	115	79	0.0
10/24/01	8:35	19.4	19.5	19.5	19.2	0.0	9.5	38	79	0.0
10/24/01	8:36	19.3	19.5	19.5	19.2	0.0	9.6	77	79	0.0
10/24/01	8:37	19.4	19.5	19.5	19.2	0.0	9.6	50	79	0.0
10/24/01	8:38	19.3	19.5	19.5	19.2	0.0	9.6	55	79	0.0
10/24/01	8:39	19.4	19.5	19.5	19.3	0.0	9.7	54	79	0.0
10/24/01	8:40	19.3	19.5	19.5	19.2	0.0	9.7	104	79	0.0
10/24/01	8:41	19.4	19.5	19.5	19.3	0.0	9.7	102	79	0.0
10/24/01	8:42	19.3	19.5	19.5	19.2	0.0	9.6	81	79	0.0
10/24/01	8:43	19.4	19.5	19.5	19.3	0.0	9.7	99	79	0.0
10/24/01	8:44	19.4	19.5	19.5	19.2	0.0	9.7	72	79	0.0
10/24/01	8:45	19.4	19.5	19.5	19.2	0.0	9.7	65	79	0.0
10/24/01	8:46	19.4	19.6	19.5	19.2	0.0	9.7	69	79	0.0
10/24/01	8:47	19.4	19.5	19.5	19.2	0.0	9.7	87	79	0.0
10/24/01	8:48	19.4	19.5	19.5	19.2	0.0	9.5	102	79	0.0
10/24/01	8:49	19.3	19.5	19.5	19.2	0.0	9.6	63	79	0.0
10/24/01	8:50	19.4	19.5	19.5	19.3	0.0	9.6	61	79	0.0
10/24/01	8:51	19.4	19.6	19.6	19.2	0.0	9.6	57	79	0.0
10/24/01	8:52	19.4	19.6	19.6	19.3	0.0	9.6	65	79	0.0
10/24/01	8:53	19.4	19.6	19.6	19.2	0.0	9.7	92	79	0.0
10/24/01	8:54	19.4	19.6	19.6	19.3	0.0	9.5	65	79	0.0
10/24/01	8:55	19.4	19.6	19.6	19.2	0.0	9.7	53	79	0.0
10/24/01	8:56	19.4	19.6	19.6	19.3	0.0	9.6	68	79	0.0
10/24/01	8:57	19.4	19.6	19.6	19.2	0.0	9.7	94	79	0.0
10/24/01	8:58	19.4	19.6	19.6	19.3	0.0	9.6	79	79	0.0
10/24/01	8:59	19.4	19.6	19.6	19.3	0.0	9.7	99	79	0.0
10/24/01	9:00	19.4	19.6	19.6	19.3	0.0	9.7	99	79	0.0
10/24/01	9:01	19.4	19.6	19.6	19.3	0.0	9.7	42	79	0.0
10/24/01	9:02	19.4	19.6	19.6	19.2	0.0	9.6	59	79	0.0
10/24/01	9:03	19.4	19.6	19.6	19.3	0.0	9.6	85	79	0.0
10/24/01	9:04	19.4	19.6	19.6	19.2	0.0	9.6	57	79	0.0
10/24/01	9:05	19.4	19.6	19.6	19.3	0.0	9.6	99	79	0.0
10/24/01	9:06	19.4	19.6	19.6	19.2	0.0	9.6	95	79	0.0
10/24/01	9:07	19.4	19.6	19.6	19.3	0.0	9.5	77	79	0.0
10/24/01	9:08	19.4	19.6	19.6	19.2	0.0	9.6	94	79	0.0
10/24/01	9:09	19.4	19.6	19.6	19.3	0.0	9.6	82	79	0.0
10/24/01	9:10	19.4	19.6	19.6	19.2	0.0	9.7	86	79	0.0
10/24/01	9:11	19.4	19.6	19.6	19.3	0.0	9.6	104	79	0.0
10/24/01	9:12	19.4	19.6	19.6	19.3	0.0	9.6	102	79	0.0
10/24/01	9:13	19.4	19.6	19.6	19.2	0.0	9.7	111	79	0.0
10/24/01	9:14	19.4	19.6	19.6	19.3	0.0	9.6	104	79	0.0
10/24/01	9:15	19.4	19.6	19.6	19.2	0.0	9.6	64	79	0.0
10/24/01	9:16	19.5	19.6	19.6	19.3	0.0	9.8	81	79	0.0
10/24/01	9:17	19.4	19.6	19.6	19.2	0.0	9.6	110	79	0.0
10/24/01	9:18	19.5	19.6	19.6	19.3	0.0	9.6	72	79	0.0
10/24/01	9:19	19.4	19.6	19.6	19.2	0.0	9.7	102	79	0.0
10/24/01	9:20	19.4	19.6	19.6	19.3	0.0	9.6	115	79	0.0
10/24/01	9:21	19.4	19.6	19.6	19.3	0.0	9.7	92	79	0.0
10/24/01	9:22	19.4	19.6	19.6	19.3	0.0	9.6	119	79	0.0
10/24/01	9:23	19.4	19.6	19.6	19.3	0.0	9.5	96	79	0.0
10/24/01	9:24	19.4	19.6	19.6	19.3	0.0	9.5	111	79	0.0
10/24/01	9:25	19.5	19.6	19.6	19.3	0.0	9.6	73	79	0.0
10/24/01	9:26	19.4	19.6	19.6	19.3	0.0	9.6	84	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	9:27	19.5	19.6	19.6	19.3	0.0	9.6	117	79	0.0
10/24/01	9:28	19.4	19.6	19.6	19.2	0.0	9.6	109	79	0.0
10/24/01	9:29	19.5	19.6	19.6	19.3	0.0	9.7	71	79	0.0
10/24/01	9:30	19.4	19.6	19.6	19.2	0.0	9.7	117	79	0.0
10/24/01	9:31	19.4	19.6	19.6	19.3	0.0	9.6	89	79	0.0
10/24/01	9:32	19.4	19.6	19.6	19.2	0.0	9.8	100	79	0.0
10/24/01	9:33	19.4	19.6	19.6	19.3	0.0	9.6	85	79	0.0
10/24/01	9:34	19.4	19.6	19.6	19.3	0.0	9.7	72	79	0.0
10/24/01	9:35	19.4	19.6	19.6	19.3	0.0	9.7	118	79	0.0
10/24/01	9:36	19.4	19.6	19.6	19.3	0.0	9.6	114	79	0.0
10/24/01	9:37	19.4	19.6	19.6	19.2	0.0	9.6	82	79	0.0
10/24/01	9:38	19.4	19.6	19.6	19.3	0.0	9.8	65	79	0.0
10/24/01	9:39	19.4	19.6	19.6	19.2	0.0	9.7	122	79	0.0
10/24/01	9:40	19.4	19.6	19.6	19.3	0.0	9.6	91	79	0.0
10/24/01	9:41	19.4	19.6	19.6	19.2	0.0	9.7	120	79	0.0
10/24/01	9:42	19.4	19.6	19.6	19.3	0.0	9.7	76	79	0.0
10/24/01	9:43	19.4	19.6	19.6	19.2	0.0	9.7	73	79	0.0
10/24/01	9:44	19.4	19.6	19.6	19.3	0.0	9.5	116	79	0.0
10/24/01	9:45	19.4	19.6	19.6	19.2	0.0	9.6	74	79	0.0
10/24/01	9:46	19.4	19.6	19.6	19.2	0.0	9.6	97	79	0.0
10/24/01	9:47	19.4	19.6	19.6	19.3	0.0	9.6	115	79	0.0
10/24/01	9:48	19.4	19.6	19.6	19.2	0.0	9.5	102	79	0.0
10/24/01	9:49	19.4	19.6	19.6	19.3	0.0	9.6	105	79	0.0
10/24/01	9:50	19.4	19.6	19.6	19.2	0.0	9.6	81	79	0.0
10/24/01	9:51	19.4	19.6	19.6	19.3	0.0	9.6	112	79	0.0
10/24/01	9:52	19.4	19.6	19.6	19.2	0.0	9.7	99	79	0.0
10/24/01	9:53	19.4	19.6	19.6	19.3	0.0	9.7	131	79	0.0
10/24/01	9:54	19.4	19.6	19.5	19.2	0.0	9.7	67	79	0.0
10/24/01	9:55	19.4	19.6	19.5	19.2	0.0	9.7	96	79	0.0
10/24/01	9:56	19.4	19.6	19.5	19.2	0.0	9.7	97	79	0.0
10/24/01	9:57	19.4	19.6	19.6	19.2	0.0	9.6	86	79	0.0
10/24/01	9:58	19.4	19.6	19.5	19.2	0.0	9.7	131	79	0.0
10/24/01	9:59	19.3	19.6	19.5	19.2	0.0	9.7	85	79	0.0
10/24/01	10:00	19.4	19.5	19.5	19.3	0.0	9.6	116	79	0.0
10/24/01	10:01	19.3	19.5	19.5	19.2	0.0	9.6	129	79	0.0
10/24/01	10:02	19.4	19.5	19.5	19.3	0.0	9.6	73	79	0.0
10/24/01	10:03	19.3	19.5	19.5	19.2	0.0	9.6	71	79	0.0
10/24/01	10:04	19.4	19.5	19.5	19.3	0.0	9.7	124	79	0.0
10/24/01	10:05	19.3	19.5	19.5	19.2	0.0	9.7	101	79	0.0
10/24/01	10:06	19.3	19.5	19.5	19.2	0.0	9.7	71	79	0.0
10/24/01	10:07	19.3	19.5	19.5	19.2	0.0	9.6	113	79	0.0
10/24/01	10:08	19.3	19.5	19.5	19.2	0.0	9.7	85	79	0.0
10/24/01	10:09	19.4	19.5	19.5	19.2	0.0	9.6	73	79	0.0
10/24/01	10:10	19.3	19.5	19.5	19.2	0.0	9.5	108	79	0.0
10/24/01	10:11	19.4	19.5	19.5	19.2	0.0	9.7	91	79	0.0
10/24/01	10:12	19.3	19.5	19.5	19.2	0.0	9.5	85	79	0.0
10/24/01	10:13	19.4	19.6	19.5	19.3	0.0	9.8	91	79	0.0
10/24/01	10:14	19.3	19.6	19.5	19.2	0.0	9.6	93	79	0.0
10/24/01	10:15	19.4	19.6	19.5	19.3	0.0	9.6	102	79	0.0
10/24/01	10:16	19.3	19.6	19.5	19.2	0.0	9.7	92	79	0.0
10/24/01	10:17	19.4	19.6	19.5	19.3	0.0	9.7	72	79	0.0
10/24/01	10:18	19.4	19.5	19.5	19.3	0.0	9.6	126	79	0.0
10/24/01	10:19	19.4	19.6	19.6	19.3	0.0	9.6	125	79	0.0
10/24/01	10:20	19.4	19.6	19.5	19.3	0.0	9.8	113	79	0.0
10/24/01	10:21	19.3	19.6	19.6	19.3	0.0	9.6	93	79	0.0
10/24/01	10:22	19.4	19.6	19.5	19.3	0.0	9.6	75	79	0.0
10/24/01	10:23	19.3	19.6	19.5	19.2	0.0	9.6	95	79	0.0
10/24/01	10:24	19.4	19.5	19.5	19.3	0.0	9.6	129	79	0.0
10/24/01	10:25	19.3	19.6	19.5	19.2	0.0	9.7	78	79	0.0
10/24/01	10:26	19.4	19.5	19.5	19.3	0.0	9.6	74	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	10:27	19.3	19.5	19.5	19.2	0.0	9.6	79	79	0.0
10/24/01	10:28	19.4	19.5	19.5	19.3	0.0	9.6	98	79	0.0
10/24/01	10:29	19.3	19.5	19.5	19.2	0.0	9.7	135	79	0.0
10/24/01	10:30	19.3	19.5	19.5	19.2	0.0	9.6	82	79	0.0
10/24/01	10:31	19.3	19.5	19.5	19.2	0.0	9.6	129	79	0.0
10/24/01	10:32	19.3	19.5	19.5	19.2	0.0	9.6	111	79	0.0
10/24/01	10:33	19.3	19.5	19.5	19.2	0.0	9.7	76	79	0.0
10/24/01	10:34	19.3	19.5	19.5	19.2	0.0	9.6	97	79	0.0
10/24/01	10:35	19.3	19.5	19.5	19.2	0.0	9.6	94	79	0.0
10/24/01	10:36	19.3	19.5	19.5	19.1	0.0	9.8	95	79	0.0
10/24/01	10:37	19.3	19.5	19.5	19.2	0.0	9.7	87	79	0.0
10/24/01	10:38	19.3	19.5	19.5	19.2	0.0	9.6	79	79	0.0
10/24/01	10:39	19.3	19.5	19.5	19.2	0.0	9.7	80	79	0.0
10/24/01	10:40	19.3	19.5	19.5	19.1	0.0	9.6	97	79	0.0
10/24/01	10:41	19.3	19.4	19.5	19.2	0.0	9.6	130	79	0.0
10/24/01	10:42	19.3	19.4	19.5	19.2	0.0	9.7	94	79	0.0
10/24/01	10:43	19.2	19.4	19.5	19.1	0.0	9.7	81	79	0.0
10/24/01	10:44	19.3	19.4	19.5	19.2	0.0	9.6	127	79	0.0
10/24/01	10:45	19.2	19.4	19.4	19.1	0.0	9.6	84	79	0.0
10/24/01	10:46	19.3	19.4	19.4	19.2	0.0	9.6	111	79	0.0
10/24/01	10:47	19.2	19.4	19.4	19.1	0.0	9.6	109	79	0.0
10/24/01	10:48	19.3	19.4	19.4	19.2	0.0	9.6	95	79	0.0
10/24/01	10:49	19.2	19.4	19.4	19.1	0.0	9.6	122	79	0.0
10/24/01	10:50	19.3	19.4	19.4	19.2	0.0	9.7	103	79	0.0
10/24/01	10:51	19.2	19.4	19.4	19.1	0.0	9.7	101	79	0.0
10/24/01	10:52	19.3	19.4	19.4	19.1	0.0	9.7	115	79	0.0
10/24/01	10:53	19.3	19.4	19.4	19.1	0.0	9.6	85	79	0.0
10/24/01	10:54	19.2	19.4	19.4	19.1	0.0	9.6	133	79	0.0
10/24/01	10:55	19.3	19.4	19.4	19.2	0.0	9.6	93	79	0.0
10/24/01	10:56	19.2	19.4	19.4	19.1	0.0	9.7	97	79	0.0
10/24/01	10:57	19.3	19.4	19.4	19.2	0.0	9.7	137	79	0.0
10/24/01	10:58	19.2	19.4	19.4	19.1	0.0	9.7	102	79	0.0
10/24/01	10:59	19.3	19.4	19.4	19.2	0.0	9.6	102	79	0.0
10/24/01	11:00	19.2	19.4	19.4	19.1	0.0	9.6	130	79	0.0
10/24/01	11:01	19.3	19.4	19.4	19.2	0.0	9.6	90	79	0.0
10/24/01	11:02	19.2	19.4	19.4	19.1	0.0	9.6	108	79	0.0
10/24/01	11:03	19.2	19.4	19.4	19.1	0.0	9.7	115	79	0.0
10/24/01	11:05	19.2	19.4	19.4	19.1	0.0	9.6	130	79	0.0
10/24/01	11:06	19.2	19.4	19.4	19.1	0.0	9.8	84	79	0.0
10/24/01	11:07	19.2	19.4	19.4	19.1	0.0	9.6	115	79	0.0
10/24/01	11:08	19.2	19.4	19.4	19.1	0.0	9.6	102	79	0.0
10/24/01	11:09	19.2	19.4	19.4	19.1	0.0	9.7	106	79	0.0
10/24/01	11:10	19.2	19.4	19.4	19.1	0.0	9.6	123	79	0.0
10/24/01	11:11	19.2	19.4	19.4	19.1	0.0	9.6	84	79	0.0
10/24/01	11:12	19.2	19.4	19.4	19.1	0.0	9.5	126	79	0.0
10/24/01	11:13	19.2	19.4	19.4	19.1	0.0	9.7	78	79	0.0
10/24/01	11:14	19.2	19.4	19.4	19.1	0.0	9.7	124	79	0.0
10/24/01	11:15	19.2	19.4	19.4	19.1	0.0	9.7	80	79	0.0
10/24/01	11:16	19.2	19.4	19.4	19.1	0.0	9.6	135	79	0.0
10/24/01	11:17	19.2	19.4	19.4	19.1	0.0	9.6	76	79	0.0
10/24/01	11:18	19.2	19.4	19.4	19.1	0.0	9.7	118	79	0.0
10/24/01	11:19	19.2	19.4	19.4	19.1	0.0	9.6	97	79	0.0
10/24/01	11:20	19.2	19.4	19.4	19.1	0.0	9.7	108	79	0.0
10/24/01	11:21	19.2	19.4	19.4	19.1	0.0	9.6	112	79	0.0
10/24/01	11:22	19.2	19.4	19.4	19.1	0.0	9.6	84	79	0.0
10/24/01	11:23	19.2	19.4	19.4	19.0	0.0	9.7	124	79	0.0
10/24/01	11:24	19.2	19.3	19.4	19.1	0.0	9.6	103	79	0.0
10/24/01	11:25	19.2	19.3	19.4	19.1	0.0	9.5	81	79	0.0
10/24/01	11:26	19.2	19.3	19.4	19.1	0.0	9.7	113	79	0.0
10/24/01	11:27	19.2	19.3	19.4	19.1	0.0	9.5	131	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	11:28	19.2	19.4	19.4	19.1	0.0	9.6	109	79	0.0
10/24/01	11:29	19.2	19.3	19.4	19.1	0.0	9.7	80	79	0.0
10/24/01	11:30	19.1	19.3	19.4	19.0	0.0	9.6	92	79	0.0
10/24/01	11:31	19.2	19.3	19.3	19.1	0.0	9.6	125	79	0.0
10/24/01	11:32	19.1	19.3	19.4	19.0	0.0	9.6	131	79	0.0
10/24/01	11:33	19.2	19.3	19.3	19.1	0.0	9.6	137	79	0.0
10/24/01	11:34	19.1	19.3	19.3	19.0	0.0	9.7	116	79	0.0
10/24/01	11:35	19.2	19.3	19.3	19.1	0.0	9.7	123	79	0.0
10/24/01	11:36	19.1	19.3	19.3	19.0	0.0	9.6	128	79	0.0
10/24/01	11:37	19.2	19.3	19.3	19.1	0.0	9.6	94	79	0.0
10/24/01	11:38	19.2	19.3	19.3	19.0	0.0	9.6	80	79	0.0
10/24/01	11:39	19.1	19.3	19.3	19.0	0.0	9.6	97	79	0.0
10/24/01	11:40	19.2	19.3	19.3	19.1	0.0	9.7	127	79	0.0
10/24/01	11:41	19.1	19.3	19.3	19.0	0.0	9.6	121	79	0.0
10/24/01	11:42	19.2	19.3	19.3	19.1	0.0	9.7	111	79	0.0
10/24/01	11:43	19.1	19.3	19.3	19.0	0.0	9.7	84	79	0.0
10/24/01	11:44	19.2	19.3	19.3	19.1	0.0	9.5	87	79	0.0
10/24/01	11:45	19.1	19.3	19.3	19.0	0.0	9.8	81	79	0.0
10/24/01	11:46	19.2	19.3	19.3	19.1	0.0	9.6	124	79	0.0
10/24/01	11:47	19.1	19.3	19.3	19.0	0.0	9.7	129	79	0.0
10/24/01	11:48	19.1	19.3	19.3	19.0	0.0	9.6	129	79	0.0
10/24/01	11:49	19.2	19.3	19.3	19.0	0.0	9.6	126	79	0.0
10/24/01	11:50	19.1	19.3	19.3	19.0	0.0	9.6	92	79	0.0
10/24/01	11:51	19.2	19.3	19.3	19.0	0.0	9.6	110	79	0.0
10/24/01	11:52	19.1	19.3	19.3	19.0	0.0	9.7	136	79	0.0
10/24/01	11:53	19.2	19.3	19.3	19.1	0.0	9.6	89	79	0.0
10/24/01	11:54	19.1	19.3	19.3	19.0	0.0	9.6	103	79	0.0
10/24/01	11:55	19.2	19.3	19.3	19.1	0.0	9.6	128	79	0.0
10/24/01	11:56	19.1	19.3	19.3	19.0	0.0	9.7	88	79	0.0
10/24/01	11:57	19.2	19.3	19.3	19.1	0.0	9.7	108	79	0.0
10/24/01	11:58	19.1	19.3	19.3	19.0	0.0	9.6	120	79	0.0
10/24/01	11:59	19.1	19.3	19.3	19.0	0.0	9.7	84	79	0.0
10/24/01	12:00	19.2	19.3	19.3	19.0	0.0	9.7	133	79	0.0
10/24/01	12:01	19.1	19.3	19.3	19.0	0.0	9.7	82	79	0.0
10/24/01	12:02	19.2	19.3	19.3	19.0	0.0	9.7	112	79	0.0
10/24/01	12:03	19.1	19.3	19.3	19.0	0.0	9.6	119	79	0.0
10/24/01	12:04	19.2	19.3	19.3	19.0	0.0	9.6	96	79	0.0
10/24/01	12:05	19.1	19.3	19.3	19.0	0.0	9.6	111	79	0.0
10/24/01	12:06	19.2	19.3	19.3	19.0	0.0	9.7	84	79	0.0
10/24/01	12:07	19.1	19.3	19.3	19.0	0.0	9.6	99	79	0.0
10/24/01	12:08	19.1	19.3	19.3	19.0	0.0	9.7	120	79	0.0
10/24/01	12:09	19.1	19.3	19.3	19.0	0.0	9.6	81	79	0.0
10/24/01	12:10	19.1	19.3	19.3	19.0	0.0	9.8	129	79	0.0
10/24/01	12:11	19.1	19.3	19.3	19.0	0.0	9.7	86	79	0.0
10/24/01	12:12	19.1	19.3	19.3	19.0	0.0	9.6	91	79	0.0
10/24/01	12:13	19.1	19.3	19.3	19.0	0.0	9.6	137	79	0.0
10/24/01	12:14	19.1	19.3	19.3	19.0	0.0	9.7	95	79	0.0
10/24/01	12:15	19.2	19.3	19.3	19.0	0.0	9.7	88	79	0.0
10/24/01	12:16	19.1	19.3	19.3	19.0	0.0	9.6	128	79	0.0
10/24/01	12:17	19.1	19.3	19.3	19.0	0.0	9.7	103	79	0.0
10/24/01	12:18	19.1	19.3	19.3	19.0	0.0	9.7	86	79	0.0
10/24/01	12:19	19.1	19.3	19.3	19.0	0.0	9.6	109	79	0.0
10/24/01	12:20	19.1	19.3	19.3	19.0	0.0	9.6	126	79	0.0
10/24/01	12:21	19.1	19.3	19.3	19.0	0.0	9.8	114	79	0.0
10/24/01	12:22	19.1	19.3	19.3	19.0	0.0	9.7	92	79	0.0
10/24/01	12:23	19.1	19.3	19.3	19.0	0.0	9.6	87	79	0.0
10/24/01	12:24	19.1	19.3	19.3	19.0	0.0	9.7	95	79	0.0
10/24/01	12:25	19.1	19.3	19.3	19.0	0.0	9.7	112	79	0.0
10/24/01	12:26	19.1	19.3	19.3	19.0	0.0	9.6	122	79	0.0
10/24/01	12:27	19.1	19.3	19.3	19.0	0.0	9.6	126	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	12:28	19.1	19.3	19.3	19.0	0.0	9.5	120	79	0.0
10/24/01	12:29	19.1	19.3	19.3	19.0	0.0	9.6	102	79	0.0
10/24/01	12:30	19.1	19.3	19.3	19.0	0.0	9.6	81	79	0.0
10/24/01	12:31	19.1	19.3	19.3	19.0	0.0	9.7	79	79	0.0
10/24/01	12:32	19.1	19.3	19.3	19.0	0.0	9.7	81	79	0.0
10/24/01	12:33	19.1	19.3	19.3	19.0	0.0	9.6	94	79	0.0
10/24/01	12:34	19.1	19.3	19.3	19.0	0.0	9.7	92	79	0.0
10/24/01	12:35	19.1	19.3	19.3	19.0	0.0	9.5	102	79	0.0
10/24/01	12:36	19.0	19.3	19.3	19.0	0.0	9.6	112	79	0.0
10/24/01	12:37	19.1	19.3	19.3	19.0	0.0	9.6	121	79	0.0
10/24/01	12:38	19.1	19.2	19.3	18.9	0.0	9.6	137	79	0.0
10/24/01	12:39	19.1	19.2	19.3	19.0	0.0	9.6	135	79	0.0
10/24/01	12:40	19.1	19.2	19.3	19.0	0.0	9.6	120	79	0.0
10/24/01	12:41	19.1	19.2	19.3	19.0	0.0	9.5	104	79	0.0
10/24/01	12:42	19.1	19.2	19.3	19.0	0.0	9.5	106	79	0.0
10/24/01	12:43	19.1	19.2	19.3	19.0	0.0	9.5	91	79	0.0
10/24/01	12:44	19.1	19.2	19.3	19.0	0.0	9.6	83	79	0.0
10/24/01	12:45	19.0	19.2	19.3	19.0	0.0	9.7	77	79	0.0
10/24/01	12:46	19.1	19.2	19.2	19.0	0.0	9.7	90	79	0.0
10/24/01	12:47	19.0	19.2	19.2	18.9	0.0	9.6	121	79	0.0
10/24/01	12:48	19.1	19.2	19.2	19.0	0.0	9.6	125	79	0.0
10/24/01	12:49	19.1	19.2	19.2	18.9	0.0	9.7	132	79	0.0
10/24/01	12:50	19.1	19.2	19.3	19.0	0.0	9.6	114	79	0.0
10/24/01	12:51	19.1	19.2	19.3	19.0	0.0	9.6	75	79	0.0
10/24/01	12:52	19.1	19.2	19.3	19.0	0.0	9.7	83	79	0.0
10/24/01	12:53	19.1	19.2	19.2	19.0	0.0	9.7	113	79	0.0
10/24/01	12:54	19.1	19.2	19.2	19.0	0.0	9.6	127	79	0.0
10/24/01	12:55	19.1	19.2	19.2	19.0	0.0	9.7	85	79	0.0
10/24/01	12:56	19.0	19.2	19.3	18.9	0.0	9.6	98	79	0.0
10/24/01	12:57	19.1	19.2	19.2	19.0	0.0	9.6	117	79	0.0
10/24/01	12:58	19.0	19.2	19.2	18.9	0.0	9.7	75	79	0.0
10/24/01	12:59	19.1	19.2	19.2	19.0	0.0	9.7	132	79	0.0
10/24/01	13:00	19.1	19.2	19.2	18.9	0.0	9.7	79	79	0.0
10/24/01	13:01	19.1	19.2	19.2	19.0	0.0	9.6	129	79	0.0
10/24/01	13:02	19.1	19.2	19.2	18.9	0.0	9.7	128	79	0.0
10/24/01	13:03	19.0	19.2	19.2	18.9	0.0	9.7	79	79	0.0
10/24/01	13:04	19.1	19.2	19.2	19.0	0.0	9.6	118	79	0.0
10/24/01	13:05	19.0	19.2	19.2	18.9	0.0	9.6	132	79	0.0
10/24/01	13:06	19.1	19.2	19.2	19.0	0.0	9.7	113	79	0.0
10/24/01	13:07	19.0	19.2	19.2	18.9	0.0	9.7	78	79	0.0
10/24/01	13:08	19.1	19.2	19.2	19.0	0.0	9.7	71	79	0.0
10/24/01	13:09	19.0	19.2	19.2	18.9	0.0	9.7	112	79	0.0
10/24/01	13:10	19.1	19.2	19.2	19.0	0.0	9.7	89	79	0.0
10/24/01	13:11	19.1	19.2	19.2	19.0	0.0	9.7	92	79	0.0
10/24/01	13:12	19.1	19.3	19.2	19.0	0.0	9.6	87	79	0.0
10/24/01	13:13	19.1	19.3	19.2	19.0	0.0	9.6	106	79	0.0
10/24/01	13:14	19.1	19.2	19.3	19.0	0.0	9.6	115	79	0.0
10/24/01	13:15	19.1	19.2	19.2	19.0	0.0	9.6	121	79	0.0
10/24/01	13:16	19.0	19.2	19.2	18.9	0.0	9.7	89	79	0.0
10/24/01	13:17	19.1	19.2	19.2	19.0	0.0	9.6	89	79	0.0
10/24/01	13:18	19.0	19.2	19.2	18.9	0.0	9.7	113	79	0.0
10/24/01	13:19	19.1	19.2	19.2	19.0	0.0	9.6	83	79	0.0
10/24/01	13:20	19.0	19.2	19.2	18.9	0.0	9.7	102	79	0.0
10/24/01	13:21	19.1	19.2	19.2	19.0	0.0	9.7	122	79	0.0
10/24/01	13:22	19.0	19.2	19.2	18.9	0.0	9.6	132	79	0.0
10/24/01	13:23	19.0	19.2	19.2	18.9	0.0	9.7	114	79	0.0
10/24/01	13:24	19.0	19.2	19.2	18.9	0.0	9.6	112	79	0.0
10/24/01	13:25	19.0	19.2	19.2	18.9	0.0	9.7	93	79	0.0
10/24/01	13:26	19.1	19.2	19.2	18.9	0.0	9.7	131	79	0.0
10/24/01	13:27	19.0	19.2	19.2	18.9	0.0	9.7	112	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	13:28	19.1	19.2	19.2	19.0	0.0	9.6	78	79	0.0
10/24/01	13:29	19.0	19.2	19.2	19.0	0.0	9.6	106	79	0.0
10/24/01	13:30	19.1	19.2	19.2	19.0	0.0	9.7	84	79	0.0
10/24/01	13:31	19.0	19.2	19.2	19.0	0.0	9.7	94	79	0.0
10/24/01	13:32	19.0	19.2	19.2	19.0	0.0	9.6	129	79	0.0
10/24/01	13:33	19.0	19.2	19.2	18.9	0.0	9.6	99	79	0.0
10/24/01	13:34	19.0	19.2	19.2	18.9	0.0	9.6	77	79	0.0
10/24/01	13:35	19.0	19.2	19.2	18.9	0.0	9.6	78	79	0.0
10/24/01	13:36	19.0	19.2	19.2	18.9	0.0	9.6	99	79	0.0
10/24/01	13:37	19.0	19.2	19.2	18.9	0.0	9.6	110	79	0.0
10/24/01	13:38	19.0	19.2	19.2	18.9	0.0	9.7	89	79	0.0
10/24/01	13:39	19.0	19.2	19.2	18.9	0.0	9.7	119	79	0.0
10/24/01	13:40	19.0	19.2	19.2	18.9	0.0	9.6	100	79	0.0
10/24/01	13:41	19.0	19.2	19.2	18.9	0.0	9.5	129	79	0.0
10/24/01	13:42	19.0	19.2	19.2	18.9	0.0	9.8	128	79	0.0
10/24/01	13:43	19.0	19.2	19.2	18.9	0.0	9.6	97	79	0.0
10/24/01	13:44	19.0	19.1	19.2	18.9	0.0	9.5	129	79	0.0
10/24/01	13:45	19.0	19.2	19.2	18.9	0.0	9.7	123	79	0.0
10/24/01	13:46	19.0	19.2	19.2	18.9	0.0	9.6	77	79	0.0
10/24/01	13:47	19.0	19.1	19.2	18.9	0.0	9.7	76	79	0.0
10/24/01	13:48	19.0	19.1	19.2	18.9	0.0	9.7	91	79	0.0
10/24/01	13:49	19.0	19.1	19.2	18.9	0.0	9.7	90	79	0.0
10/24/01	13:50	19.0	19.1	19.2	18.9	0.0	9.6	86	79	0.0
10/24/01	13:51	19.0	19.1	19.2	18.9	0.0	9.8	108	79	0.0
10/24/01	13:52	19.0	19.1	19.2	18.9	0.0	9.6	91	79	0.0
10/24/01	13:53	19.0	19.1	19.2	18.9	0.0	9.5	102	79	0.0
10/24/01	13:54	19.0	19.1	19.2	18.9	0.0	9.7	75	79	0.0
10/24/01	13:55	19.0	19.1	19.2	18.9	0.0	9.6	82	79	0.0
10/24/01	13:56	19.0	19.1	19.2	18.9	0.0	9.7	121	79	0.0
10/24/01	13:57	19.0	19.1	19.1	18.9	0.0	9.7	75	79	0.0
10/24/01	13:58	18.9	19.1	19.2	18.8	0.0	9.7	87	79	0.0
10/24/01	13:59	19.0	19.1	19.2	18.9	0.0	9.7	95	79	0.0
10/24/01	14:00	18.9	19.1	19.1	18.8	0.0	9.6	91	79	0.0
10/24/01	14:01	19.0	19.1	19.1	18.9	0.0	9.6	91	79	0.0
10/24/01	14:02	18.9	19.1	19.1	18.8	0.0	9.5	95	79	0.0
10/24/01	14:03	19.0	19.1	19.1	18.9	0.0	9.5	83	79	0.0
10/24/01	14:04	19.0	19.1	19.1	18.9	0.0	9.6	94	79	0.0
10/24/01	14:05	18.9	19.1	19.1	18.8	0.0	9.6	70	79	0.0
10/24/01	14:06	19.0	19.1	19.1	18.9	0.0	9.6	73	79	0.0
10/24/01	14:07	18.9	19.1	19.1	18.8	0.0	9.7	98	79	0.0
10/24/01	14:08	19.0	19.1	19.1	18.9	0.0	9.6	113	79	0.0
10/24/01	14:09	18.9	19.1	19.1	18.8	0.0	9.7	96	79	0.0
10/24/01	14:10	19.0	19.1	19.1	18.9	0.0	9.8	103	79	0.0
10/24/01	14:11	18.9	19.1	19.1	18.8	0.0	9.6	127	79	0.0
10/24/01	14:12	19.0	19.1	19.1	18.9	0.0	9.6	83	79	0.0
10/24/01	14:13	18.9	19.1	19.1	18.8	0.0	9.7	91	79	0.0
10/24/01	14:14	18.9	19.1	19.1	18.9	0.0	9.6	109	79	0.0
10/24/01	14:15	19.0	19.1	19.1	18.8	0.0	9.7	65	79	0.0
10/24/01	14:16	18.9	19.1	19.1	18.8	0.0	9.6	84	79	0.0
10/24/01	14:17	19.0	19.1	19.1	18.9	0.0	9.8	68	79	0.0
10/24/01	14:18	18.9	19.1	19.1	18.8	0.0	9.6	81	79	0.0
10/24/01	14:19	19.0	19.1	19.1	18.9	0.0	9.6	74	79	0.0
10/24/01	14:20	18.9	19.1	19.1	18.8	0.0	9.6	108	79	0.0
10/24/01	14:21	19.0	19.1	19.1	18.9	0.0	9.6	78	79	0.0
10/24/01	14:22	18.9	19.1	19.1	18.8	0.0	9.6	63	79	0.0
10/24/01	14:23	18.9	19.1	19.1	18.8	0.0	9.6	99	79	0.0
10/24/01	14:24	18.9	19.1	19.1	18.8	0.0	9.7	98	79	0.0
10/24/01	14:25	18.9	19.1	19.1	18.8	0.0	9.7	80	79	0.0
10/24/01	14:26	19.0	19.1	19.1	18.8	0.0	9.7	107	79	0.0
10/24/01	14:27	18.9	19.1	19.1	18.8	0.0	9.6	91	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	14:28	19.0	19.1	19.1	18.8	0.0	9.6	85	79	0.0
10/24/01	14:29	18.9	19.1	19.1	18.8	0.0	9.6	130	79	0.0
10/24/01	14:30	19.0	19.1	19.1	18.8	0.0	9.7	67	79	0.0
10/24/01	14:31	18.9	19.1	19.1	18.8	0.0	9.7	72	79	0.0
10/24/01	14:32	18.9	19.1	19.1	18.8	0.0	9.6	86	79	0.0
10/24/01	14:33	18.9	19.1	19.1	18.8	0.0	9.7	117	79	0.0
10/24/01	14:34	18.9	19.1	19.1	18.8	0.0	9.6	76	79	0.0
10/24/01	14:35	18.9	19.1	19.1	18.8	0.0	9.9	116	79	0.0
10/24/01	14:36	18.9	19.1	19.1	18.8	0.0	9.7	98	79	0.0
10/24/01	14:37	19.0	19.1	19.1	18.9	0.0	9.7	95	79	0.0
10/24/01	14:38	18.9	19.1	19.1	18.8	0.0	9.6	119	79	0.0
10/24/01	14:39	19.0	19.1	19.1	18.8	0.0	9.7	86	79	0.0
10/24/01	14:40	18.9	19.1	19.1	18.8	0.0	9.6	67	79	0.0
10/24/01	14:41	18.9	19.1	19.1	18.8	0.0	9.7	64	79	0.0
10/24/01	14:42	18.9	19.1	19.1	18.8	0.0	9.6	121	79	0.0
10/24/01	14:43	18.9	19.1	19.1	18.8	0.0	9.6	123	79	0.0
10/24/01	14:44	18.9	19.1	19.1	18.8	0.0	9.7	82	79	0.0
10/24/01	14:45	18.9	19.0	19.1	18.8	0.0	9.7	57	79	0.0
10/24/01	14:46	18.9	19.0	19.1	18.8	0.0	9.7	66	79	0.0
10/24/01	14:47	18.9	19.0	19.1	18.8	0.0	9.6	68	79	0.0
10/24/01	14:48	18.9	19.0	19.0	18.8	0.0	9.6	99	79	0.0
10/24/01	14:49	18.9	19.0	19.0	18.7	0.0	9.6	70	79	0.0
10/24/01	14:50	18.9	19.0	19.0	18.8	0.0	9.7	58	79	0.0
10/24/01	14:51	18.8	19.0	19.0	18.7	0.0	9.7	65	79	0.0
10/24/01	14:52	18.9	19.0	19.0	18.8	0.0	9.6	103	79	0.0
10/24/01	14:53	18.8	19.0	19.0	18.7	0.0	9.7	58	79	0.0
10/24/01	14:54	18.9	19.0	19.0	18.7	0.0	9.6	70	79	0.0
10/24/01	14:55	18.9	19.0	19.0	18.7	0.0	9.7	77	79	0.0
10/24/01	14:56	18.8	19.0	19.0	18.7	0.0	9.6	62	79	0.0
10/24/01	14:57	18.9	19.0	19.0	18.7	0.0	9.6	103	79	0.0
10/24/01	14:58	18.8	19.0	19.0	18.7	0.0	9.6	84	79	0.0
10/24/01	14:59	18.8	19.0	19.0	18.7	0.0	9.7	78	79	0.0
10/24/01	15:00	18.8	19.0	19.0	18.7	0.0	9.6	59	79	0.0
10/24/01	15:01	18.8	19.0	19.0	18.7	0.0	9.7	70	79	0.0
10/24/01	15:02	18.8	18.9	19.0	18.7	0.0	9.6	50	79	0.0
10/24/01	15:03	18.8	18.9	19.0	18.7	0.0	9.6	95	79	0.0
10/24/01	15:04	18.8	18.9	19.0	18.7	0.0	9.6	94	79	0.0
10/24/01	15:05	18.8	18.9	18.9	18.7	0.0	9.6	88	79	0.0
10/24/01	15:06	18.8	18.9	18.9	18.7	0.0	9.6	59	79	0.0
10/24/01	15:07	18.8	18.9	18.9	18.7	0.0	9.7	98	79	0.0
10/24/01	15:08	18.8	18.9	18.9	18.7	0.0	9.6	73	79	0.0
10/24/01	15:09	18.8	18.9	18.9	18.6	0.0	9.6	52	79	0.0
10/24/01	15:10	18.8	18.9	18.9	18.7	0.0	9.7	61	79	0.0
10/24/01	15:11	18.8	18.9	18.9	18.6	0.0	9.6	60	79	0.0
10/24/01	15:12	18.8	18.9	18.9	18.7	0.0	9.6	63	79	0.0
10/24/01	15:13	18.8	18.9	18.9	18.6	0.0	9.6	100	79	0.0
10/24/01	15:14	18.8	18.9	18.9	18.7	0.0	9.7	63	79	0.0
10/24/01	15:15	18.8	18.9	18.9	18.6	0.0	9.7	61	79	0.0
10/24/01	15:16	18.8	18.9	18.9	18.6	0.0	9.6	49	79	0.0
10/24/01	15:17	18.8	18.9	18.9	18.7	0.0	9.7	64	79	0.0
10/24/01	15:18	18.7	18.9	18.9	18.6	0.0	9.7	112	79	0.0
10/24/01	15:19	18.8	18.9	18.9	18.7	0.0	9.7	73	79	0.0
10/24/01	15:20	18.7	18.9	18.9	18.6	0.0	9.7	84	79	0.0
10/24/01	15:21	18.8	18.9	18.9	18.7	0.0	9.7	79	79	0.0
10/24/01	15:22	18.7	18.9	18.9	18.6	0.0	9.7	107	79	0.0
10/24/01	15:23	18.7	18.9	18.9	18.6	0.0	9.6	53	79	0.0
10/24/01	15:24	18.7	18.9	18.9	18.6	0.0	9.6	50	79	0.0
10/24/01	15:25	18.7	18.9	18.9	18.6	0.0	9.6	73	79	0.0
10/24/01	15:26	18.7	18.8	18.9	18.6	0.0	9.6	43	79	0.0
10/24/01	15:27	18.7	18.8	18.9	18.6	0.0	9.6	102	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	15:28	18.7	18.8	18.8	18.6	0.0	9.7	51	79	0.0
10/24/01	15:29	18.7	18.8	18.9	18.6	0.0	9.7	45	79	0.0
10/24/01	15:30	18.7	18.8	18.8	18.6	0.0	9.6	78	79	0.0
10/24/01	15:31	18.7	18.8	18.8	18.6	0.0	9.6	96	79	0.0
10/24/01	15:32	18.7	18.8	18.8	18.6	0.0	9.6	58	79	0.0
10/24/01	15:33	18.7	18.8	18.8	18.6	0.0	9.6	64	79	0.0
10/24/01	15:34	18.7	18.8	18.8	18.6	0.0	9.6	64	79	0.0
10/24/01	15:35	18.7	18.8	18.8	18.6	0.0	9.6	95	79	0.0
10/24/01	15:36	18.7	18.8	18.8	18.5	0.0	9.7	41	79	0.0
10/24/01	15:37	18.7	18.8	18.8	18.6	0.0	9.6	101	79	0.0
10/24/01	15:38	18.7	18.8	18.8	18.5	0.0	9.7	52	79	0.0
10/24/01	15:39	18.7	18.8	18.8	18.6	0.0	9.6	66	79	0.0
10/24/01	15:40	18.7	18.8	18.8	18.5	0.0	9.6	38	79	0.0
10/24/01	15:41	18.7	18.8	18.8	18.6	0.0	9.6	37	79	0.0
10/24/01	15:42	18.7	18.8	18.8	18.5	0.0	9.7	54	79	0.0
10/24/01	15:43	18.7	18.8	18.8	18.5	0.0	9.6	51	79	0.0
10/24/01	15:44	18.7	18.8	18.8	18.5	0.0	9.6	38	79	0.0
10/24/01	15:45	18.6	18.8	18.8	18.5	0.0	9.6	66	79	0.0
10/24/01	15:46	18.7	18.8	18.8	18.6	0.0	9.7	35	79	0.0
10/24/01	15:47	18.6	18.8	18.8	18.5	0.0	9.6	41	79	0.0
10/24/01	15:48	18.7	18.8	18.8	18.6	0.0	9.6	34	79	0.0
10/24/01	15:49	18.6	18.8	18.8	18.5	0.0	9.6	35	79	0.0
10/24/01	15:50	18.7	18.8	18.8	18.6	0.0	9.6	39	79	0.0
10/24/01	15:51	18.6	18.8	18.8	18.5	0.0	9.6	35	79	0.0
10/24/01	15:52	18.6	18.8	18.8	18.5	0.0	9.6	87	79	0.0
10/24/01	15:53	18.6	18.8	18.8	18.5	0.0	9.6	87	79	0.0
10/24/01	15:54	18.6	18.8	18.8	18.5	0.0	9.6	59	79	0.0
10/24/01	15:55	18.7	18.8	18.8	18.5	0.0	9.6	46	79	0.0
10/24/01	15:56	18.6	18.7	18.8	18.5	0.0	9.7	99	79	0.0
10/24/01	15:57	18.7	18.7	18.8	18.5	0.0	9.6	31	79	0.0
10/24/01	15:58	18.6	18.7	18.8	18.5	0.0	9.7	33	79	0.0
10/24/01	15:59	18.6	18.7	18.8	18.5	0.0	9.7	80	79	0.0
10/24/01	16:00	18.6	18.7	18.8	18.5	0.0	9.6	82	79	0.0
10/24/01	16:01	18.6	18.7	18.8	18.5	0.0	9.6	26	79	0.0
10/24/01	16:02	18.6	18.7	18.7	18.5	0.0	9.6	28	79	0.0
10/24/01	16:03	18.6	18.7	18.8	18.5	0.0	9.7	34	79	0.0
10/24/01	16:04	18.6	18.7	18.7	18.5	0.0	9.7	50	79	0.0
10/24/01	16:05	18.6	18.7	18.7	18.5	0.0	9.6	24	79	0.0
10/24/01	16:06	18.6	18.7	18.7	18.5	0.0	9.7	37	79	0.0
10/24/01	16:07	18.6	18.7	18.8	18.5	0.0	9.6	26	79	0.0
10/24/01	16:08	18.7	18.7	18.7	18.5	0.0	9.6	33	79	0.0
10/24/01	16:09	18.6	18.7	18.7	18.5	0.0	9.6	30	79	0.0
10/24/01	16:10	18.6	18.7	18.8	18.5	0.0	9.7	25	79	0.0
10/24/01	16:11	18.6	18.7	18.7	18.5	0.0	9.6	24	79	0.0
10/24/01	16:12	18.6	18.7	18.7	18.5	0.0	9.6	39	79	0.0
10/24/01	16:13	18.6	18.7	18.7	18.5	0.0	9.6	23	79	0.0
10/24/01	16:14	18.6	18.7	18.7	18.5	0.0	9.6	23	79	0.0
10/24/01	16:15	18.6	18.7	18.7	18.5	0.0	9.6	33	79	0.0
10/24/01	16:16	18.6	18.7	18.7	18.4	0.0	9.6	54	79	0.0
10/24/01	16:17	18.6	18.7	18.7	18.5	0.0	9.6	37	79	0.0
10/24/01	16:18	18.6	18.7	18.7	18.4	0.0	9.7	87	79	0.0
10/24/01	16:19	18.6	18.7	18.7	18.5	0.0	9.7	86	79	0.0
10/24/01	16:20	18.6	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:21	18.6	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/24/01	16:22	18.6	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:23	18.6	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/24/01	16:24	18.6	18.7	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:25	18.5	18.7	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:26	18.6	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/24/01	16:27	18.5	18.7	18.7	18.4	0.0	9.7	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	16:28	18.6	18.7	18.7	18.5	0.0	9.6	21	79	0.0
10/24/01	16:29	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:30	18.6	18.7	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:31	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:32	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:33	18.6	18.6	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:34	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:35	18.6	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:36	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:37	18.6	18.7	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:38	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:39	18.6	18.6	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:40	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:41	18.5	18.7	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:42	18.5	18.6	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:43	18.5	18.6	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:44	18.5	18.6	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:45	18.5	18.6	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:46	18.6	18.6	18.7	18.4	0.0	9.7	21	79	0.0
10/24/01	16:47	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	16:48	18.6	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	16:49	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	16:50	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	16:51	18.5	18.7	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	16:52	18.5	18.7	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	16:53	18.6	18.7	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	16:54	18.5	18.6	18.7	18.4	0.0	9.6	21	79	0.0
10/24/01	16:55	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	16:56	18.5	18.6	18.6	18.4	0.0	9.7	20	79	0.0
10/24/01	16:57	18.6	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	16:58	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	16:59	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:00	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:01	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:02	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:03	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:04	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:05	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:06	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:07	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:08	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:09	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:10	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:11	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:12	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:13	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:14	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:15	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:16	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:17	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:18	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:19	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:20	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:21	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:22	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:23	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:24	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:25	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	17:26	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:27	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	17:28	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:29	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:30	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:31	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:32	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	17:33	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:34	18.5	18.6	18.6	18.3	0.0	9.7	20	79	0.0
10/24/01	17:35	18.5	18.6	18.6	18.4	0.0	9.6	20	79	0.0
10/24/01	17:36	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	17:37	18.5	18.6	18.6	18.4	0.0	9.6	20	79	0.0
10/24/01	17:38	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	17:39	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:40	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:41	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:42	18.6	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:43	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:44	18.6	18.6	18.6	18.4	0.0	9.7	20	79	0.0
10/24/01	17:45	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:46	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:47	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:48	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:49	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:50	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:51	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:52	18.5	18.6	18.6	18.4	0.0	9.6	20	79	0.0
10/24/01	17:53	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	17:54	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:55	18.5	18.6	18.6	18.4	0.0	9.7	20	79	0.0
10/24/01	17:56	18.5	18.6	18.6	18.3	0.0	9.7	20	79	0.0
10/24/01	17:57	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:58	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	17:59	18.5	18.6	18.6	18.4	0.0	9.7	20	79	0.0
10/24/01	18:00	18.5	18.6	18.6	18.4	0.0	9.7	20	79	0.0
10/24/01	18:01	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:02	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	18:03	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:04	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:05	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:06	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:07	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:08	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:09	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:10	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:11	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:12	18.5	18.6	18.6	18.3	0.0	9.6	20	79	0.0
10/24/01	18:13	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	18:14	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:15	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	18:16	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:17	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:18	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:19	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:20	18.5	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/24/01	18:21	18.4	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:22	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	18:23	18.4	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:24	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/24/01	18:25	18.5	18.6	18.6	18.3	0.0	9.7	20	79	0.0
10/24/01	18:26	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:27	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	18:28	18.4	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:29	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:30	18.4	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:31	18.5	18.6	18.6	18.4	0.0	9.6	20	79	0.0
10/24/01	18:32	18.4	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:33	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:34	18.4	18.6	18.6	18.3	0.0	9.7	20	79	0.0
10/24/01	18:35	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:36	18.5	18.5	18.6	18.3	0.0	9.6	20	79	0.0
10/24/01	18:37	18.4	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:38	18.5	18.5	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:39	18.4	18.6	18.6	18.3	0.0	9.6	20	79	0.0
10/24/01	18:40	18.5	18.6	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:41	18.4	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:42	18.5	18.6	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:43	18.4	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/24/01	18:44	18.5	18.5	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:45	18.5	18.5	18.6	18.3	0.0	9.7	21	79	0.0
10/24/01	18:46	18.4	18.5	18.6	18.3	0.0	9.6	21	79	0.0
10/24/01	18:47	18.5	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/24/01	18:48	18.4	18.5	18.6	18.3	0.0	9.6	20	79	0.0
10/24/01	18:49	18.5	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:50	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:51	18.5	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:52	18.4	18.5	18.5	18.3	0.0	9.6	20	79	0.0
10/24/01	18:53	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:54	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:55	18.4	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/24/01	18:56	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:57	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:58	18.5	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	18:59	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:00	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:01	18.4	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/24/01	19:02	18.4	18.5	18.5	18.3	0.0	9.6	20	79	0.0
10/24/01	19:03	18.4	18.5	18.5	18.3	0.0	9.6	20	79	0.0
10/24/01	19:04	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:05	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:06	18.4	18.5	18.5	18.2	0.0	9.6	21	79	0.0
10/24/01	19:07	18.4	18.5	18.5	18.3	0.0	9.6	20	79	0.0
10/24/01	19:08	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:09	18.5	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:10	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:11	18.4	18.5	18.5	18.3	0.0	9.7	21	79	0.0
10/24/01	19:12	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:13	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:14	18.4	18.5	18.5	18.3	0.0	9.6	20	79	0.0
10/24/01	19:15	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:16	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:17	18.4	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:18	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:19	18.4	18.5	18.5	18.2	0.0	9.7	20	79	0.0
10/24/01	19:20	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/24/01	19:21	18.4	18.5	18.5	18.2	0.0	9.6	21	79	0.0
10/24/01	19:22	18.4	18.5	18.5	18.2	0.0	9.7	20	79	0.0
10/24/01	19:23	18.4	18.5	18.5	18.2	0.0	9.7	20	79	0.0
10/24/01	19:24	18.4	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:25	18.4	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:26	18.3	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:27	18.4	18.5	18.5	18.3	0.0	9.6	20	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	19:28	18.4	18.5	18.5	18.2	0.0	9.7	20	79	0.0
10/24/01	19:29	18.4	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:30	18.3	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:31	18.4	18.5	18.5	18.2	0.0	9.7	21	79	0.0
10/24/01	19:32	18.4	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:33	18.3	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:34	18.4	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:35	18.3	18.4	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:36	18.4	18.4	18.5	18.3	0.0	9.6	21	79	0.0
10/24/01	19:37	18.3	18.5	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:38	18.4	18.4	18.5	18.2	0.0	9.6	21	79	0.0
10/24/01	19:39	18.3	18.4	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:40	18.4	18.4	18.5	18.2	0.0	9.7	21	79	0.0
10/24/01	19:41	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	19:42	18.3	18.4	18.5	18.2	0.0	9.6	20	79	0.0
10/24/01	19:43	18.4	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	19:44	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	19:45	18.4	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/24/01	19:46	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	19:47	18.4	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	19:48	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	19:49	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	19:50	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	19:51	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	19:52	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	19:53	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	19:54	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	19:55	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/24/01	19:56	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	19:57	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	19:58	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	19:59	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:00	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:01	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:02	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/24/01	20:03	18.4	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	20:04	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	20:05	18.4	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	20:06	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	20:07	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:08	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	20:09	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:10	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:11	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	20:12	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:13	18.3	18.4	18.4	18.1	0.0	9.7	21	79	0.0
10/24/01	20:14	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	20:15	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:16	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:17	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:18	18.3	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/24/01	20:19	18.3	18.4	18.4	18.1	0.0	9.7	20	79	0.0
10/24/01	20:20	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:21	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:22	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:23	18.3	18.4	18.4	18.2	0.0	9.7	21	79	0.0
10/24/01	20:24	18.2	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:25	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	20:26	18.2	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:27	18.3	18.3	18.4	18.1	0.0	9.7	20	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	20:28	18.3	18.3	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:29	18.2	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:30	18.3	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	20:31	18.2	18.3	18.4	18.1	0.0	9.7	21	79	0.0
10/24/01	20:32	18.3	18.3	18.4	18.1	0.0	9.7	20	79	0.0
10/24/01	20:33	18.2	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:34	18.3	18.3	18.4	18.1	0.0	9.7	21	79	0.0
10/24/01	20:35	18.2	18.4	18.4	18.1	0.0	9.7	21	79	0.0
10/24/01	20:36	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:37	18.3	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:38	18.2	18.4	18.4	18.1	0.0	9.7	20	79	0.0
10/24/01	20:39	18.3	18.3	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:40	18.2	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:41	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:42	18.2	18.4	18.4	18.1	0.0	9.7	20	79	0.0
10/24/01	20:43	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	20:44	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:45	18.3	18.4	18.4	18.2	0.0	9.6	21	79	0.0
10/24/01	20:46	18.3	18.4	18.4	18.1	0.0	9.7	20	79	0.0
10/24/01	20:47	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/24/01	20:48	18.3	18.4	18.4	18.1	0.0	9.7	21	79	0.0
10/24/01	20:49	18.2	18.4	18.4	18.1	0.0	9.6	21	79	0.0
10/24/01	20:50	18.3	18.4	18.4	18.2	0.0	9.7	20	79	0.0
10/24/01	20:51	18.2	18.3	18.4	18.1	0.0	9.7	20	79	0.0
10/24/01	20:52	18.3	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/24/01	20:53	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	20:54	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	20:55	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	20:56	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	20:57	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	20:58	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	20:59	18.3	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:00	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:01	18.3	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/24/01	21:02	18.2	18.4	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	21:03	18.3	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:04	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	21:05	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	21:06	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:07	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:08	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:09	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:10	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:11	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/24/01	21:12	18.2	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/24/01	21:13	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/24/01	21:14	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:15	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:16	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/24/01	21:17	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:18	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:19	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:20	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:21	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:22	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/24/01	21:23	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:24	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:25	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:26	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	21:27	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	21:28	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:29	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:30	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:31	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:32	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	21:33	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/24/01	21:34	18.2	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/24/01	21:35	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/24/01	21:36	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:37	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:38	18.1	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:39	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/24/01	21:40	18.1	18.3	18.3	18.0	0.0	9.7	20	79	0.0
10/24/01	21:41	18.2	18.3	18.3	18.0	0.0	9.7	20	79	0.0
10/24/01	21:42	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:43	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:44	18.2	18.2	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:45	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:46	18.2	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:47	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:48	18.2	18.2	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	21:49	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	21:50	18.2	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	21:51	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	21:52	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	21:53	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	21:54	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	21:55	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	21:56	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	21:57	18.2	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	21:58	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	21:59	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:00	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:01	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:02	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:03	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	22:04	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:05	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:06	18.2	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	22:07	18.1	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	22:08	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	22:09	18.1	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/24/01	22:10	18.1	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	22:11	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:12	18.1	18.2	18.3	18.0	0.0	9.6	20	79	0.0
10/24/01	22:13	18.2	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	22:14	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:15	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:16	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:17	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:18	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:19	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	22:20	18.2	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:21	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	22:22	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:23	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:24	18.2	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	22:25	18.1	18.2	18.2	17.9	0.0	9.7	20	79	0.0
10/24/01	22:26	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	22:27	18.1	18.2	18.2	17.9	0.0	9.7	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	22:28	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:29	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:30	18.1	18.2	18.2	17.9	0.0	9.7	21	79	0.0
10/24/01	22:31	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:32	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	22:33	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:34	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:35	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:36	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:37	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:38	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	22:39	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:40	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:41	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	22:42	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:43	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	22:44	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:45	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:46	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:47	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:48	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:49	18.2	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:50	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:51	18.2	18.3	18.2	18.1	0.0	9.7	21	79	0.0
10/24/01	22:52	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/24/01	22:53	18.2	18.2	18.3	18.0	0.0	9.7	21	79	0.0
10/24/01	22:54	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	22:55	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:56	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:57	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:58	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	22:59	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:00	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:01	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:02	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:03	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:04	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:05	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:06	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:07	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:08	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:09	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:10	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:11	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:12	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:13	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:14	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:15	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	23:16	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:17	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:18	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:19	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:20	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	23:21	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:22	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:23	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	23:24	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	23:25	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:26	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	23:27	18.2	18.2	18.2	18.0	0.0	9.7	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/24/01	23:28	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:29	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:30	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:31	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	23:32	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	23:33	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:34	18.2	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	23:35	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:36	18.2	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	23:37	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:38	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:39	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:40	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:41	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/24/01	23:42	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:43	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:44	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:45	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:46	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:47	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:48	18.1	18.2	18.2	17.9	0.0	9.7	21	79	0.0
10/24/01	23:49	18.1	18.2	18.2	17.9	0.0	9.7	21	79	0.0
10/24/01	23:50	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/24/01	23:51	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:52	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:53	18.1	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/24/01	23:54	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/24/01	23:55	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:56	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:57	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:58	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/24/01	23:59	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:00	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:01	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:02	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:03	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:04	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/25/01	0:05	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:06	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:07	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:08	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:09	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:10	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:11	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:12	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:13	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:14	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:15	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:16	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:17	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:18	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:19	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:20	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:21	18.1	18.2	18.2	18.0	0.0	9.7	21	79	0.0
10/25/01	0:22	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:23	18.1	18.2	18.2	18.0	0.0	9.6	20	79	0.0
10/25/01	0:24	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:25	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/25/01	0:26	18.1	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:27	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	0:28	18.2	18.2	18.2	18.0	0.0	9.6	21	79	0.0
10/25/01	0:29	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:30	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	0:31	18.1	18.2	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	0:32	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/25/01	0:33	18.1	18.2	18.3	18.0	0.0	9.6	21	79	0.0
10/25/01	0:34	18.1	18.2	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	0:35	18.2	18.2	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	0:36	18.1	18.3	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	0:37	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/25/01	0:38	18.1	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	0:39	18.2	18.3	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	0:40	18.1	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/25/01	0:41	18.1	18.3	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	0:42	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/25/01	0:43	18.1	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	0:44	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/25/01	0:45	18.1	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	0:46	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/25/01	0:47	18.1	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	0:48	18.2	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/25/01	0:49	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/25/01	0:50	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/25/01	0:51	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/25/01	0:52	18.1	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/25/01	0:53	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/25/01	0:54	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	0:55	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/25/01	0:56	18.2	18.3	18.3	18.0	0.0	9.6	21	79	0.0
10/25/01	0:57	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/25/01	0:58	18.2	18.3	18.3	18.1	0.0	9.7	21	79	0.0
10/25/01	0:59	18.2	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/25/01	1:00	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/25/01	1:01	18.2	18.3	18.3	18.1	0.0	9.6	20	79	0.0
10/25/01	1:02	18.2	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/25/01	1:03	18.2	18.3	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	1:04	18.2	18.3	18.3	18.1	0.0	9.7	20	79	0.0
10/25/01	1:05	18.2	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/25/01	1:06	18.3	18.4	18.3	18.1	0.0	9.6	20	79	0.0
10/25/01	1:07	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/25/01	1:08	18.3	18.4	18.4	18.1	0.0	9.6	20	79	0.0
10/25/01	1:09	18.2	18.3	18.3	18.0	0.0	9.6	20	79	0.0
10/25/01	1:10	18.2	18.3	18.3	18.0	0.0	9.7	21	79	0.0
10/25/01	1:11	18.1	18.3	18.3	17.9	0.0	9.6	21	79	0.0
10/25/01	1:12	18.1	18.2	18.3	18.0	0.0	9.7	20	79	0.0
10/25/01	1:13	18.0	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/25/01	1:14	18.0	18.2	18.2	17.9	0.0	9.6	21	79	0.0
10/25/01	1:15	18.0	18.2	18.2	17.9	0.0	9.6	20	79	0.0
10/25/01	1:16	18.0	18.1	18.1	17.8	0.0	9.7	20	79	0.0
10/25/01	1:17	18.0	18.1	18.1	17.8	0.0	9.7	20	79	0.0
10/25/01	1:18	17.9	18.1	18.1	17.8	0.0	9.6	20	79	0.0
10/25/01	1:19	17.9	18.0	18.1	17.8	0.0	9.6	20	79	0.0
10/25/01	1:20	17.8	18.0	18.0	17.7	0.0	9.7	20	79	0.0
10/25/01	1:21	17.9	18.0	18.0	17.7	0.0	9.7	20	79	0.0
10/25/01	1:22	17.8	18.0	18.0	17.7	0.0	9.6	20	79	0.0
10/25/01	1:23	17.8	18.0	18.0	17.7	0.0	9.7	20	79	0.0
10/25/01	1:24	17.8	18.0	18.0	17.6	0.0	9.7	20	79	0.0
10/25/01	1:25	17.8	17.9	17.9	17.7	0.0	9.7	20	79	0.0
10/25/01	1:26	17.8	17.9	17.9	17.6	0.0	9.7	20	79	0.0
10/25/01	1:27	17.7	17.9	17.9	17.6	0.0	9.6	20	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	1:28	17.7	17.9	17.9	17.6	0.0	9.6	20	79	0.0
10/25/01	1:29	17.7	17.9	17.9	17.6	0.0	9.6	21	79	0.0
10/25/01	1:30	17.7	17.8	17.9	17.6	0.0	9.6	21	79	0.0
10/25/01	1:31	17.6	17.8	17.8	17.5	0.0	9.6	20	79	0.0
10/25/01	1:32	17.7	17.8	17.8	17.5	0.0	9.7	21	79	0.0
10/25/01	1:33	17.6	17.8	17.8	17.5	0.0	9.6	20	79	0.0
10/25/01	1:34	17.7	17.8	17.8	17.5	0.0	9.6	20	79	0.0
10/25/01	1:35	17.6	17.8	17.8	17.5	0.0	9.7	20	79	0.0
10/25/01	1:36	17.6	17.8	17.8	17.5	0.0	9.7	21	79	0.0
10/25/01	1:37	17.6	17.7	17.7	17.4	0.0	9.7	20	79	0.0
10/25/01	1:38	17.6	17.7	17.7	17.4	0.0	9.7	20	79	0.0
10/25/01	1:39	17.6	17.7	17.7	17.4	0.0	9.6	20	79	0.0
10/25/01	1:40	17.5	17.7	17.7	17.4	0.0	9.6	20	79	0.0
10/25/01	1:41	17.6	17.7	17.7	17.4	0.0	9.7	21	79	0.0
10/25/01	1:42	17.5	17.7	17.7	17.4	0.0	9.6	21	79	0.0
10/25/01	1:43	17.5	17.7	17.7	17.4	0.0	9.6	20	79	0.0
10/25/01	1:44	17.5	17.7	17.7	17.4	0.0	9.7	20	79	0.0
10/25/01	1:45	17.5	17.7	17.7	17.4	0.0	9.6	21	79	0.0
10/25/01	1:46	17.5	17.7	17.7	17.3	0.0	9.6	20	79	0.0
10/25/01	1:47	17.5	17.6	17.6	17.4	0.0	9.7	21	79	0.0
10/25/01	1:48	17.5	17.6	17.7	17.4	0.0	9.6	21	79	0.0
10/25/01	1:49	17.5	17.6	17.6	17.4	0.0	9.7	20	79	0.0
10/25/01	1:50	17.5	17.6	17.6	17.3	0.0	9.7	21	79	0.0
10/25/01	1:51	17.5	17.6	17.6	17.3	0.0	9.6	20	79	0.0
10/25/01	1:52	17.5	17.6	17.6	17.3	0.0	9.7	21	79	0.0
10/25/01	1:53	17.4	17.6	17.6	17.3	0.0	9.6	20	79	0.0
10/25/01	1:54	17.5	17.6	17.6	17.3	0.0	9.7	21	79	0.0
10/25/01	1:55	17.4	17.6	17.6	17.3	0.0	9.6	21	79	0.0
10/25/01	1:56	17.5	17.6	17.6	17.3	0.0	9.7	20	79	0.0
10/25/01	1:57	17.4	17.6	17.6	17.3	0.0	9.6	21	79	0.0
10/25/01	1:58	17.4	17.6	17.6	17.3	0.0	9.6	21	79	0.0
10/25/01	1:59	17.4	17.6	17.6	17.2	0.0	9.7	20	79	0.0
10/25/01	2:00	17.4	17.5	17.6	17.3	0.0	9.6	21	79	0.0
10/25/01	2:01	17.4	17.5	17.6	17.3	0.0	9.6	21	79	0.0
10/25/01	2:02	17.4	17.5	17.6	17.3	0.0	9.7	21	79	0.0
10/25/01	2:03	17.4	17.5	17.5	17.3	0.0	9.7	21	79	0.0
10/25/01	2:04	17.4	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:05	17.4	17.5	17.5	17.3	0.0	9.7	20	79	0.0
10/25/01	2:06	17.4	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:07	17.4	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:08	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:09	17.4	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:10	17.3	17.5	17.5	17.2	0.0	9.8	21	79	0.0
10/25/01	2:11	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:12	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:13	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:14	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:15	17.3	17.5	17.5	17.2	0.0	9.6	21	79	0.0
10/25/01	2:16	17.4	17.5	17.5	17.2	0.0	9.7	21	79	0.0
10/25/01	2:17	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:18	17.4	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:19	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:20	17.3	17.4	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:21	17.3	17.5	17.5	17.1	0.0	9.6	21	79	0.0
10/25/01	2:22	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:23	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:24	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:25	17.3	17.4	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:26	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:27	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	2:28	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:29	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:30	17.3	17.5	17.5	17.1	0.0	9.6	20	79	0.0
10/25/01	2:31	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:32	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:33	17.3	17.4	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:34	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:35	17.3	17.4	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:36	17.3	17.4	17.4	17.2	0.0	9.6	20	79	0.0
10/25/01	2:37	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:38	17.3	17.4	17.4	17.2	0.0	9.6	20	79	0.0
10/25/01	2:39	17.3	17.4	17.5	17.1	0.0	9.7	20	79	0.0
10/25/01	2:40	17.3	17.4	17.4	17.2	0.0	9.6	20	79	0.0
10/25/01	2:41	17.3	17.4	17.4	17.1	0.0	9.6	21	79	0.0
10/25/01	2:42	17.3	17.4	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:43	17.3	17.5	17.5	17.1	0.0	9.7	20	79	0.0
10/25/01	2:44	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:45	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:46	17.3	17.5	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:47	17.3	17.4	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:48	17.3	17.5	17.5	17.2	0.0	9.7	20	79	0.0
10/25/01	2:49	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:50	17.3	17.5	17.5	17.1	0.0	9.6	20	79	0.0
10/25/01	2:51	17.3	17.4	17.5	17.2	0.0	9.6	20	79	0.0
10/25/01	2:52	17.3	17.4	17.4	17.1	0.0	9.7	21	79	0.0
10/25/01	2:53	17.3	17.4	17.4	17.2	0.0	9.6	20	79	0.0
10/25/01	2:54	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	2:55	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	2:56	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	2:57	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	2:58	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	2:59	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:00	17.3	17.4	17.4	17.1	0.0	9.6	21	79	0.0
10/25/01	3:01	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:02	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	3:03	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:04	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:05	17.2	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:06	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:07	17.2	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:08	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	3:09	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	3:10	17.3	17.4	17.4	17.1	0.0	9.7	20	79	0.0
10/25/01	3:11	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:12	17.2	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:13	17.3	17.3	17.3	17.1	0.0	9.7	20	79	0.0
10/25/01	3:14	17.2	17.3	17.3	17.0	0.0	9.6	20	79	0.0
10/25/01	3:15	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:16	17.3	17.4	17.4	17.1	0.0	10.8	20	79	0.0
10/25/01	3:17	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:18	17.3	17.4	17.4	17.1	0.0	9.6	20	79	0.0
10/25/01	3:19	17.4	17.4	17.4	17.2	0.0	9.6	20	79	0.0
10/25/01	3:20	17.5	17.5	17.5	17.3	0.0	9.6	20	79	0.0
10/25/01	3:21	17.6	17.6	17.6	17.4	0.0	9.6	20	79	0.0
10/25/01	3:22	17.6	17.6	17.6	17.4	0.0	9.7	20	79	0.0
10/25/01	3:23	17.7	17.7	17.7	17.5	0.0	9.7	20	79	0.0
10/25/01	3:24	17.8	17.8	17.8	17.6	0.0	9.6	20	79	0.0
10/25/01	3:25	17.8	17.9	17.9	17.7	0.0	9.6	20	79	0.0
10/25/01	3:26	17.9	17.9	17.9	17.7	0.0	9.6	20	79	0.0
10/25/01	3:27	18.0	18.0	18.0	17.8	0.0	9.7	20	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	3:28	18.0	18.1	18.1	17.9	0.0	9.7	20	79	0.0
10/25/01	3:29	18.1	18.1	18.1	17.9	0.0	9.7	20	79	0.0
10/25/01	3:30	18.1	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	3:31	18.2	18.2	18.2	18.0	0.0	9.7	20	79	0.0
10/25/01	3:32	18.3	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/25/01	3:33	18.3	18.3	18.3	18.1	0.0	9.6	21	79	0.0
10/25/01	3:34	18.4	18.4	18.4	18.2	0.0	9.6	20	79	0.0
10/25/01	3:35	18.4	18.5	18.5	18.3	0.0	9.7	20	79	0.0
10/25/01	3:36	18.5	18.5	18.5	18.3	0.0	9.6	21	79	0.0
10/25/01	3:37	18.5	18.6	18.6	18.4	0.0	9.7	21	79	0.0
10/25/01	3:38	18.6	18.6	18.6	18.4	0.0	9.6	21	79	0.0
10/25/01	3:39	18.6	18.6	18.7	18.5	0.0	9.6	21	79	0.0
10/25/01	3:40	18.7	18.7	18.7	18.5	0.0	9.7	21	79	0.0
10/25/01	3:41	18.7	18.7	18.7	18.5	0.0	9.7	20	79	0.0
10/25/01	3:42	18.7	18.8	18.8	18.6	0.0	9.7	21	79	0.0
10/25/01	3:43	18.8	18.8	18.8	18.6	0.0	9.6	21	79	0.0
10/25/01	3:44	18.8	18.9	18.9	18.7	0.0	9.6	20	79	0.0
10/25/01	3:45	18.9	18.9	18.9	18.7	0.0	9.6	21	79	0.0
10/25/01	3:46	18.9	18.9	19.0	18.8	0.0	9.6	21	79	0.0
10/25/01	3:47	18.9	19.0	19.0	18.8	0.0	9.6	20	79	0.0
10/25/01	3:48	19.0	19.0	19.0	18.8	0.0	9.6	20	79	0.0
10/25/01	3:49	19.0	19.0	19.1	18.9	0.0	9.6	21	79	0.0
10/25/01	3:50	19.0	19.1	19.1	18.9	0.0	9.7	21	79	0.0
10/25/01	3:51	19.1	19.1	19.1	18.9	0.0	9.6	20	79	0.0
10/25/01	3:52	19.1	19.1	19.2	18.9	0.0	9.6	21	79	0.0
10/25/01	3:53	19.1	19.2	19.2	19.0	0.0	9.6	20	79	0.0
10/25/01	3:54	19.2	19.2	19.2	19.0	0.0	9.6	21	79	0.0
10/25/01	3:55	19.2	19.3	19.3	19.1	0.0	9.7	21	79	0.0
10/25/01	3:56	19.2	19.3	19.3	19.1	0.0	9.7	21	79	0.0
10/25/01	3:57	19.3	19.3	19.3	19.1	0.0	9.7	21	79	0.0
10/25/01	3:58	19.3	19.3	19.3	19.1	0.0	9.7	20	79	0.0
10/25/01	3:59	19.3	19.4	19.4	19.2	0.0	9.6	21	79	0.0
10/25/01	4:00	19.3	19.4	19.4	19.2	0.0	9.6	20	79	0.0
10/25/01	4:01	19.4	19.4	19.4	19.2	0.0	9.7	20	79	0.0
10/25/01	4:02	19.4	19.4	19.4	19.2	0.0	9.6	20	79	0.0
10/25/01	4:03	19.4	19.5	19.5	19.3	0.0	9.6	21	79	0.0
10/25/01	4:04	19.4	19.5	19.5	19.3	0.0	9.6	21	79	0.0
10/25/01	4:05	19.4	19.5	19.5	19.3	0.0	9.7	21	79	0.0
10/25/01	4:06	19.5	19.5	19.5	19.3	0.0	9.6	20	79	0.0
10/25/01	4:07	19.5	19.5	19.6	19.3	0.0	9.7	21	79	0.0
10/25/01	4:08	19.5	19.6	19.6	19.4	0.0	9.7	21	79	0.0
10/25/01	4:09	19.5	19.6	19.6	19.4	0.0	9.6	21	79	0.0
10/25/01	4:10	19.5	19.6	19.6	19.4	0.0	9.6	21	79	0.0
10/25/01	4:11	19.6	19.6	19.6	19.4	0.0	9.6	21	79	0.0
10/25/01	4:12	19.6	19.6	19.7	19.4	0.0	9.7	21	79	0.0
10/25/01	4:13	19.6	19.7	19.7	19.5	0.0	9.7	21	79	0.0
10/25/01	4:14	19.6	19.7	19.7	19.5	0.0	9.6	20	79	0.0
10/25/01	4:15	19.7	19.7	19.7	19.5	0.0	9.7	21	79	0.0
10/25/01	4:16	19.7	19.7	19.7	19.5	0.0	9.7	20	79	0.0
10/25/01	4:17	19.7	19.7	19.7	19.6	0.0	9.7	21	79	0.0
10/25/01	4:18	19.7	19.8	19.8	19.6	0.0	9.7	21	79	0.0
10/25/01	4:19	19.7	19.8	19.8	19.6	0.0	9.6	23	79	0.0
10/25/01	4:20	19.7	19.8	19.8	19.6	0.0	9.7	95	79	0.0
10/25/01	4:21	19.7	19.8	19.8	19.6	0.0	9.7	21	79	0.0
10/25/01	4:22	19.8	19.8	19.8	19.6	0.0	9.6	24	79	0.0
10/25/01	4:23	19.8	19.8	19.8	19.6	0.0	9.7	61	79	0.0
10/25/01	4:24	19.8	19.9	19.9	19.7	0.0	9.6	99	79	0.0
10/25/01	4:25	19.8	19.9	19.9	19.7	0.0	9.6	67	79	0.0
10/25/01	4:26	19.8	19.9	19.9	19.7	0.0	9.7	32	79	0.0
10/25/01	4:27	19.8	19.9	19.9	19.7	0.0	9.7	43	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	4:28	19.8	19.9	19.9	19.7	0.0	9.6	81	79	0.0
10/25/01	4:29	19.8	19.9	19.9	19.7	0.0	9.6	39	79	0.0
10/25/01	4:30	19.9	19.9	19.9	19.8	0.0	9.7	55	79	0.0
10/25/01	4:31	19.9	19.9	20.0	19.7	0.0	9.6	60	79	0.0
10/25/01	4:32	19.9	19.9	20.0	19.8	0.0	9.6	58	79	0.0
10/25/01	4:33	19.9	20.0	20.0	19.8	0.0	9.6	35	79	0.0
10/25/01	4:34	19.9	20.0	20.0	19.8	0.0	9.6	40	79	0.0
10/25/01	4:35	19.9	20.0	20.0	19.8	0.0	9.6	74	79	0.0
10/25/01	4:36	19.9	20.0	20.0	19.8	0.0	9.6	83	79	0.0
10/25/01	4:37	19.9	20.0	20.0	19.8	0.0	9.6	90	79	0.0
10/25/01	4:38	19.9	20.0	20.0	19.8	0.0	9.6	89	79	0.0
10/25/01	4:39	20.0	20.0	20.0	19.8	0.0	9.6	77	79	0.0
10/25/01	4:40	20.0	20.0	20.0	19.8	0.0	9.7	35	79	0.0
10/25/01	4:41	20.0	20.0	20.1	19.9	0.0	9.7	74	79	0.0
10/25/01	4:42	20.0	20.0	20.1	19.9	0.0	9.6	54	79	0.0
10/25/01	4:43	20.0	20.1	20.1	19.9	0.0	9.6	92	79	0.0
10/25/01	4:44	20.0	20.1	20.1	19.9	0.0	9.6	58	79	0.0
10/25/01	4:45	20.0	20.1	20.1	19.9	0.0	9.7	69	79	0.0
10/25/01	4:46	20.0	20.1	20.1	19.9	0.0	9.6	90	79	0.0
10/25/01	4:47	20.0	20.1	20.1	19.9	0.0	9.6	90	79	0.0
10/25/01	4:48	20.1	20.1	20.1	20.0	0.0	9.6	85	79	0.0
10/25/01	4:49	20.1	20.1	20.2	20.0	0.0	9.6	52	79	0.0
10/25/01	4:50	20.1	20.2	20.2	20.0	0.0	9.6	46	79	0.0
10/25/01	4:51	20.1	20.2	20.2	20.0	0.0	9.6	100	79	0.0
10/25/01	4:52	20.1	20.2	20.2	20.0	0.0	9.6	84	79	0.0
10/25/01	4:53	20.1	20.2	20.2	20.0	0.0	9.6	54	79	0.0
10/25/01	4:54	20.1	20.2	20.2	20.1	0.0	9.6	80	79	0.0
10/25/01	4:55	20.1	20.2	20.3	20.1	0.0	9.6	83	79	0.0
10/25/01	4:56	20.2	20.2	20.3	20.1	0.0	9.6	88	79	0.0
10/25/01	4:57	20.2	20.2	20.3	20.1	0.0	9.6	57	79	0.0
10/25/01	4:58	20.2	20.3	20.3	20.1	0.0	8.2	91	79	0.0
10/25/01	4:59	20.2	20.3	20.3	20.1	0.0	9.6	62	79	0.0
10/25/01	5:00	20.3	20.4	20.4	20.2	0.0	9.3	102	79	0.0
10/25/01	5:01	20.4	20.6	20.4	20.2	0.0	9.7	79	79	0.0
10/25/01	5:02	20.5	20.6	20.6	20.4	0.0	9.3	82	79	0.0
10/25/01	5:03	20.5	20.6	20.6	20.4	0.0	9.0	112	79	0.0
10/25/01	5:04	20.4	20.5	20.5	20.3	0.0	8.0	89	79	0.0
10/25/01	5:05	20.3	20.4	20.5	20.2	0.0	8.0	80	79	0.0
10/25/01	5:06	20.3	20.4	20.4	20.2	0.0	8.0	109	79	0.0
10/25/01	5:07	20.3	20.4	20.4	20.2	0.0	8.0	115	79	0.0
10/25/01	5:08	20.2	20.3	20.4	20.1	0.0	8.0	94	79	0.0
10/25/01	5:09	20.2	20.3	20.3	20.1	0.0	7.9	114	79	0.0
10/25/01	5:10	20.1	20.2	20.3	20.0	0.0	8.0	80	79	0.0
10/25/01	5:11	20.1	20.2	20.2	20.0	0.0	8.0	128	79	0.0
10/25/01	5:12	20.1	20.1	20.2	20.0	0.0	8.0	106	79	0.0
10/25/01	5:13	20.0	20.1	20.2	19.9	0.0	7.9	99	79	0.0
10/25/01	5:14	20.0	20.1	20.1	19.9	0.0	7.9	127	79	0.0
10/25/01	5:15	19.9	20.0	20.1	19.8	0.0	7.9	127	79	0.0
10/25/01	5:16	19.9	20.0	20.1	19.8	0.0	8.0	105	79	0.0
10/25/01	5:17	19.9	20.0	20.0	19.8	0.0	8.0	92	79	0.0
10/25/01	5:18	19.9	19.9	20.0	19.8	0.0	8.0	79	79	0.0
10/25/01	5:19	19.8	19.9	20.0	19.7	0.0	8.0	79	79	0.0
10/25/01	5:20	19.8	19.9	19.9	19.7	0.0	8.0	82	79	0.0
10/25/01	5:21	19.8	19.8	19.9	19.6	0.0	8.0	94	79	0.0
10/25/01	5:22	19.7	19.8	19.9	19.6	0.0	8.0	116	79	0.0
10/25/01	5:23	19.7	19.8	19.8	19.6	0.0	8.0	80	79	0.0
10/25/01	5:24	19.7	19.8	19.8	19.6	0.0	8.1	116	79	0.0
10/25/01	5:25	19.6	19.7	19.8	19.6	0.0	8.0	91	79	0.0
10/25/01	5:26	19.6	19.7	19.8	19.5	0.0	8.0	86	79	0.0
10/25/01	5:27	19.6	19.7	19.8	19.5	0.0	8.0	120	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	5:28	19.6	19.7	19.7	19.5	0.0	8.0	130	79	0.0
10/25/01	5:29	19.6	19.7	19.7	19.5	0.0	8.0	110	79	0.0
10/25/01	5:30	19.5	19.6	19.7	19.5	0.0	8.0	86	79	0.0
10/25/01	5:31	19.5	19.6	19.7	19.4	0.0	8.0	77	79	0.0
10/25/01	5:32	19.5	19.6	19.7	19.4	0.0	7.9	89	79	0.0
10/25/01	5:33	19.5	19.6	19.6	19.4	0.0	8.0	110	79	0.0
10/25/01	5:34	19.5	19.6	19.6	19.4	0.0	8.0	111	79	0.0
10/25/01	5:35	19.5	19.6	19.6	19.4	0.0	8.0	133	79	0.0
10/25/01	5:36	19.5	19.6	19.6	19.4	0.0	8.0	135	79	0.0
10/25/01	5:37	19.5	19.6	19.6	19.4	0.0	8.1	117	79	0.0
10/25/01	5:38	19.5	19.5	19.6	19.4	0.0	8.1	111	79	0.0
10/25/01	5:39	19.4	19.5	19.6	19.3	0.0	8.0	86	79	0.0
10/25/01	5:40	19.5	19.5	19.6	19.4	0.0	8.0	94	79	0.0
10/25/01	5:41	19.4	19.5	19.6	19.3	0.0	8.0	114	79	0.0
10/25/01	5:42	19.4	19.5	19.6	19.3	0.0	8.0	128	79	0.0
10/25/01	5:43	19.4	19.5	19.5	19.3	0.0	8.0	94	79	0.0
10/25/01	5:44	19.4	19.5	19.5	19.3	0.0	8.0	83	79	0.0
10/25/01	5:45	19.4	19.5	19.5	19.3	0.0	8.0	120	79	0.0
10/25/01	5:46	19.4	19.4	19.5	19.3	0.0	8.0	115	79	0.0
10/25/01	5:47	19.3	19.4	19.5	19.2	0.0	8.0	82	79	0.0
10/25/01	5:48	19.3	19.4	19.5	19.2	0.0	8.0	105	79	0.0
10/25/01	5:49	19.3	19.4	19.5	19.2	0.0	8.0	124	79	0.0
10/25/01	5:50	19.3	19.4	19.5	19.2	0.0	7.9	75	79	0.0
10/25/01	5:51	19.3	19.4	19.4	19.2	0.0	8.0	108	79	0.0
10/25/01	5:52	19.3	19.4	19.4	19.2	0.0	7.9	125	79	0.0
10/25/01	5:53	19.3	19.3	19.4	19.2	0.0	8.0	110	79	0.0
10/25/01	5:54	19.3	19.3	19.4	19.2	0.0	8.0	93	79	0.0
10/25/01	5:55	19.2	19.3	19.4	19.1	0.0	8.0	82	79	0.0
10/25/01	5:56	19.2	19.3	19.4	19.1	0.0	8.0	82	79	0.0
10/25/01	5:57	19.2	19.3	19.4	19.1	0.0	8.0	90	79	0.0
10/25/01	5:58	19.2	19.3	19.4	19.1	0.0	8.0	101	79	0.0
10/25/01	5:59	19.2	19.3	19.3	19.1	0.0	8.0	96	79	0.0
10/25/01	6:00	19.2	19.3	19.3	19.1	0.0	8.0	109	79	0.0
10/25/01	6:01	19.2	19.3	19.3	19.1	0.0	8.0	112	79	0.0
10/25/01	6:02	19.2	19.3	19.3	19.1	0.0	8.1	99	79	0.0
10/25/01	6:03	19.2	19.3	19.3	19.1	0.0	8.0	96	79	0.0
10/25/01	6:04	19.2	19.2	19.3	19.1	0.0	8.0	91	79	0.0
10/25/01	6:05	19.1	19.2	19.3	19.0	0.0	8.0	98	79	0.0
10/25/01	6:06	19.2	19.2	19.3	19.1	0.0	8.0	84	79	0.0
10/25/01	6:07	19.1	19.2	19.3	19.0	0.0	8.0	81	79	0.0
10/25/01	6:08	19.1	19.2	19.3	19.0	0.0	8.0	80	79	0.0
10/25/01	6:09	19.1	19.2	19.3	19.0	0.0	8.0	83	79	0.0
10/25/01	6:10	19.1	19.2	19.3	19.0	0.0	8.0	100	79	0.0
10/25/01	6:11	19.1	19.2	19.3	19.0	0.0	8.0	115	79	0.0
10/25/01	6:12	19.1	19.2	19.3	19.0	0.0	7.9	120	79	0.0
10/25/01	6:13	19.1	19.2	19.3	19.0	0.0	8.0	126	79	0.0
10/25/01	6:14	19.1	19.2	19.3	19.0	0.0	8.0	85	79	0.0
10/25/01	6:15	19.1	19.2	19.3	19.0	0.0	8.0	82	79	0.0
10/25/01	6:16	19.1	19.2	19.3	19.0	0.0	8.0	97	79	0.0
10/25/01	6:17	19.1	19.2	19.3	19.0	0.0	8.0	121	79	0.0
10/25/01	6:18	19.1	19.2	19.2	19.0	0.0	8.1	114	79	0.0
10/25/01	6:19	19.1	19.2	19.2	19.0	0.0	8.0	88	79	0.0
10/25/01	6:20	19.1	19.2	19.2	19.0	0.0	8.0	125	79	0.0
10/25/01	6:21	19.1	19.2	19.2	19.0	0.0	8.1	85	79	0.0
10/25/01	6:22	19.1	19.2	19.2	19.0	0.0	8.1	90	79	0.0
10/25/01	6:23	19.1	19.2	19.2	19.0	0.0	8.0	129	79	0.0
10/25/01	6:24	19.1	19.2	19.2	19.0	0.0	8.0	109	79	0.0
10/25/01	6:25	19.1	19.2	19.2	19.0	0.0	8.0	107	79	0.0
10/25/01	6:26	19.1	19.2	19.2	19.0	0.0	8.0	123	79	0.0
10/25/01	6:27	19.1	19.2	19.2	19.0	0.0	8.0	115	79	0.0

PREC2_102401_0627										
DATE	TIME	HX Outlet (°C) TC0	REC PP OUT (°C) TC1	TK BOT (°C) TC2	HX OUT (°C) TC3	Mn Flow (gpm)	Galigher Flow (gpm)	Current to HX	Voltage to HX	Sr Flow (gpm)
10/25/01	6:28	19.1	19.2	19.2	19.0	0.0	8.0	73	79	0.0
10/25/01	6:29	19.1	19.1	19.2	19.0	0.0	8.0	128	79	0.0
10/25/01	6:30	19.1	19.1	19.2	19.0	0.0	8.0	83	79	0.0
10/25/01	6:31	19.0	19.1	19.2	18.9	0.0	8.0	96	79	0.0
10/25/01	6:32	19.0	19.1	19.2	18.9	0.0	8.0	94	79	0.0
10/25/01	6:33	19.0	19.1	19.2	18.9	0.0	8.0	83	79	0.0
10/25/01	6:34	19.0	19.1	19.2	18.9	0.0	8.0	110	79	0.0
10/25/01	6:35	19.0	19.1	19.2	18.9	0.0	8.0	116	79	0.0
10/25/01	6:36	19.0	19.1	19.2	18.9	0.0	8.0	114	79	0.0
10/25/01	6:37	19.0	19.1	19.1	18.9	0.0	8.0	94	79	0.0
10/25/01	6:38	19.0	19.1	19.1	18.9	0.0	8.0	71	79	0.0
10/25/01	6:39	19.0	19.1	19.1	18.9	0.0	8.1	119	79	0.0
10/25/01	6:40	19.0	19.1	19.1	18.9	0.0	8.0	113	79	0.0
10/25/01	6:41	19.0	19.1	19.1	18.9	0.0	8.1	101	79	0.0
10/25/01	6:42	19.0	19.1	19.1	18.9	0.0	8.0	104	79	0.0
10/25/01	6:43	19.0	19.1	19.1	18.9	0.0	8.0	116	79	0.0
10/25/01	6:44	19.0	19.1	19.1	18.9	0.0	8.0	93	79	0.0
10/25/01	6:45	19.0	19.1	19.1	18.9	0.0	8.0	101	79	0.0
10/25/01	6:46	19.0	19.1	19.1	18.9	0.0	8.0	121	79	0.0
10/25/01	6:47	19.1	19.2	19.2	19.0	0.0	7.9	112	79	0.0
10/25/01	6:48	19.1	19.3	19.3	19.0	0.0	7.8	120	79	0.0
10/25/01	6:49	19.3	19.5	19.4	19.2	0.0	7.4	130	79	0.0
10/25/01	6:50	19.3	19.6	19.4	19.2	0.0	7.8	102	79	0.0
10/25/01	6:51	19.8	20.1	19.7	19.6	0.0	6.4	128	79	0.0
10/25/01	6:52	20.1	20.4	20.0	20.0	0.0	6.5	119	79	0.0
10/25/01	6:53	20.0	20.3	20.2	19.9	0.0	5.8	81	79	0.0
10/25/01	6:54	19.9	19.7	20.9	20.9	0.0	-0.1	96	79	0.0
10/25/01	6:55	20.0	20.1	20.8	20.5	0.0	-0.1	95	79	0.0
10/25/01	6:56	20.0	20.1	20.8	20.5	0.0	-0.1	113	79	0.0
10/25/01	6:57	20.0	20.3	20.8	20.5	0.0	-0.1	91	79	0.0

Appendix C

Experimental Data: Crossflow Test Rig Operations Data

Appendix Contents

Nomenclature for Data Sheets

- Solenoid, 1=yes and 0=no for pressure to the backpulse piston
- FLTRT (^{o}C) T2, Filtrate temperature in filter at exit of the housing
- CL LOOP (^{o}C) T3, Temperature of the liquid in the cleaning loop
- SL LOOP (^{o}C) T1, Temperature of the liquid in the slurry loop at the slurry reservoir
- UP AMB (^{o}C) T4, Ambient temperature at the top of the crossflow test rig-3rd level
- BOT AMB (^{o}C) T5, Ambient temperature at the bottom of the crossflow test rig-1st level
- BOT DP (psid) dP2, Differential pressure between the filter slurry entrance and the bottom filtrate exit
- FLTR (psig) P1, pressure at the filter slurry entrance
- FLTR DP (psid) dP1, Differential pressure between the filter slurry entrance and exit
- TOP DP (psid) dP3, Differential pressure between the filter slurry exit and the top filtrate exit
- FLTRATE (psig) P2, Pressure at the filtrate exit
- BP (psig) P3, Air pressure applied to the backpulse piston
- SL FLOW (gpm) Q1, Flow rate of the slurry
- FLTR FLOW (gpm) Q2, flow rate of the filtrate (low range meter used for slurry runs)
- HI FLTR FLOW (gpm) Q3, Flow rate of the filtrate (high range meter used for water runs)
- Temp corr flow (gpm/ft^2), Filtrate flow per unit area of filter calculated by dividing the total filtrate flow by the area of the filter (2.29 ft^2) and correcting for temperature variation from 25 ^{o}C by multiplying by $e^{(2500)(1/(273 + T1)-1/298))}$
- Axial Vel (ft/sec), Axial tube velocity calculated by dividing the total slurry loop flow by the crosectional area of seven 3/8" ID tubes (0.415 ft^2)
- Avg TMP (psid), calculated by averaging BOT DP and TOP DP

Experimental data:

Data Set	Solution	Done on
Xflow2_102301_1011	AN-107 Simulant	10/23/01
Xflow2_102401_0630	AN-107 Simulant	10/24/01
Xflow2_102501_0700	AN-107 Simulant	10/25/01
Xflow1_101501_0837	DIF Water	10/15/01
Xflow2_110101_1045	DIF Water	11/01/01

Note: Data plotted in the body of the report is highlighted for ease of reference.

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	10:55	0	22.7	22.0	23.1	23.4	22.0	17.0	20.8	13.6	3.2	5.2	0	46.1	0.021	0.0097	19.1	10.1
10/23/01	10:56	0	22.7	22.1	23.4	23.4	22.1	41.8	47.0	24.0	17.0	6.7	0	64.7	0.018	0.0082	26.9	29.4
10/23/01	10:57	0	22.8	22.1	23.7	23.4	22.2	50.4	58.5	11.8	38.0	9.3	0	42.6	0.018	0.0082	17.7	44.2
10/23/01	10:58	0	22.8	22.1	23.9	23.5	22.2	47.1	58.5	11.6	35.2	12.3	0	42.4	0.018	0.0081	17.6	41.2
10/23/01	10:59	0	22.1	22.1	24.2	23.5	22.2	54.2	58.3	11.6	42.5	4.9	0	42.7	0.010	0.0045	17.7	48.3
10/23/01	11:00	0	22.3	22.1	24.4	23.5	22.2	54.0	58.2	11.7	42.3	4.9	0	42.8	0.010	0.0044	17.7	48.2
10/23/01	11:01	0	22.4	22.1	24.6	23.6	22.3	54.2	58.9	11.5	42.7	4.9	0	42.1	0.010	0.0044	17.5	48.5
10/23/01	11:02	0	22.4	22.1	24.8	23.6	22.3	53.7	58.5	11.3	42.8	4.9	0	41.9	0.010	0.0044	17.4	48.3
10/23/01	11:03	0	23.0	22.1	25.1	23.8	22.4	53.3	58.3	11.7	42.1	5.1	0	42.6	0.010	0.0044	17.7	47.7
10/23/01	11:04	0	23.5	22.1	25.2	24.0	22.4	52.3	58.3	11.5	41.3	6.2	0	42.3	0.010	0.0043	17.5	46.8
10/23/01	11:05	0	24.7	22.1	25.4	24.1	22.4	50.8	58.2	11.3	40.2	7.5	0	42.0	0.010	0.0043	17.4	45.5
10/23/01	11:06	0	24.9	22.1	25.6	24.1	22.5	50.0	58.3	11.4	39.2	8.4	0	42.4	0.010	0.0043	17.6	44.6
10/23/01	11:07	0	25.2	22.1	25.7	24.2	22.5	49.8	58.7	11.2	38.9	8.9	0	41.8	0.111	0.0475	17.4	44.3
10/23/01	11:08	0	25.3	22.1	25.9	24.2	22.6	49.7	58.3	11.3	39.0	9.0	0	42.0	0.112	0.0477	17.4	44.3
10/23/01	11:09	0	25.5	22.2	26.0	24.2	22.6	49.6	58.4	11.1	38.9	8.9	0	41.7	0.111	0.0471	17.3	44.3
10/23/01	11:10	0	25.7	22.2	26.2	24.3	22.6	49.6	58.3	11.2	39.0	8.9	0	41.7	0.110	0.0464	17.3	44.3
10/23/01	11:11	0	25.8	22.2	26.4	24.3	22.7	49.6	58.4	11.2	38.7	8.9	0	41.9	0.108	0.0454	17.4	44.2
10/23/01	11:12	0	26.0	22.2	26.5	24.3	22.8	49.8	58.6	11.2	38.7	8.9	0	42.0	0.110	0.0460	17.4	44.2
10/23/01	11:13	0	26.2	22.2	26.6	24.4	22.8	49.5	58.2	11.2	38.8	8.9	0	41.7	0.108	0.0450	17.3	44.2
10/23/01	11:14	0	26.3	22.2	26.8	24.4	22.9	49.6	58.4	11.2	39.2	8.9	0	42.3	0.107	0.0444	17.5	44.4
10/23/01	11:15	0	26.5	22.2	26.9	24.6	22.9	49.4	58.3	11.2	38.7	8.9	0	41.3	0.107	0.0443	17.1	44.1
10/23/01	11:16	0	26.6	22.3	27.0	24.6	22.9	50.1	59.0	11.2	38.9	8.9	0	41.7	0.106	0.0438	17.3	44.5
10/23/01	11:17	0	26.7	22.3	27.1	24.7	23.0	49.3	58.0	11.5	38.3	8.9	0	42.4	0.105	0.0432	17.6	43.8
10/23/01	11:18	0	26.9	22.3	27.2	24.7	23.1	49.2	58.0	11.4	38.3	8.9	0	42.2	0.104	0.0427	17.5	43.8
10/23/01	11:19	0	27.0	22.3	27.3	24.8	23.1	49.1	57.8	11.3	38.2	8.9	0	42.2	0.104	0.0426	17.5	43.7
10/23/01	11:20	0	27.1	22.3	27.4	24.8	23.1	49.7	58.5	11.0	38.8	9.0	0	41.6	0.104	0.0425	17.3	44.2
10/23/01	11:21	0	27.2	22.3	27.5	24.8	23.1	49.7	58.6	11.0	39.2	9.0	0	41.7	0.104	0.0424	17.3	44.5
10/23/01	11:22	0	27.2	22.3	27.6	24.8	23.1	49.3	58.1	10.9	38.9	9.0	0	41.5	0.104	0.0423	17.2	44.1
10/23/01	11:23	0	27.4	22.4	27.6	24.7	23.0	49.8	58.6	11.0	39.2	9.0	0	41.5	0.103	0.0418	17.2	44.5
10/23/01	11:24	0	27.4	22.4	27.7	24.6	23.0	49.6	58.3	10.9	39.1	9.0	0	41.8	0.103	0.0417	17.3	44.4
																Average	17.4	44.2
10/23/01	11:25	0	27.5	22.4	27.8	24.6	22.9	38.0	46.6	9.1	29.3	8.8	0	37.0	0.083	0.0335	15.4	33.6
10/23/01	11:26	0	27.6	22.4	27.7	24.6	22.9	23.9	32.6	6.7	17.7	8.7	0	31.0	0.054	0.0219	12.9	20.8
10/23/01	11:27	0	27.6	22.4	27.6	24.5	22.9	21.7	30.3	6.2	15.9	8.8	0	29.8	0.032	0.0130	12.4	18.8
10/23/01	11:28	0	27.5	22.4	27.4	24.6	22.9	19.3	30.2	6.2	13.6	11.0	0	29.8	0.030	0.0122	12.4	16.5
10/23/01	11:29	0	27.2	22.4	27.3	24.6	22.8	15.9	30.3	6.2	10.2	14.4	0	29.8	0.011	0.0045	12.4	13.0
10/23/01	11:30	0	27.2	22.4	27.2	24.5	22.8	10.3	30.3	6.2	4.6	20.0	0	29.8	0.010	0.0041	12.4	7.5
10/23/01	11:31	0	26.9	22.4	27.1	24.5	22.8	17.5	30.2	6.3	11.6	12.8	0	29.9	0.010	0.0041	12.4	14.5
10/23/01	11:32	0	27.3	22.5	27.0	24.4	22.8	24.1	30.6	6.3	18.3	6.4	0	29.9	0.121	0.0500	12.4	21.2
10/23/01	11:33	0	27.4	22.5	26.9	24.4	22.7	23.7	30.0	6.2	18.1	6.3	0	29.8	0.104	0.0430	12.4	20.9
10/23/01	11:34	0	27.3	22.5	26.8	24.4	22.7	24.0	30.4	6.3	18.3	6.4	0	29.9	0.097	0.0402	12.4	21.1
10/23/01	11:35	0	27.2	22.5	26.7	24.4	22.7	31.4	37.9	7.6	24.3	6.5	0	33.2	0.108	0.0450	13.8	27.9
10/23/01	11:36	0	27.2	22.5	26.8	24.4	22.7	42.2	48.8	15.8	26.7	6.5	0	51.0	0.128	0.0531	21.2	34.4
10/23/01	11:37	0	27.1	22.5	26.9	24.4	22.7	38.9	45.3	15.4	23.9	6.4	0	50.2	0.110	0.0456	20.8	31.4
10/23/01	11:38	0	27.1	22.5	27.0	24.3	22.6	38.8	45.2	15.5	23.7	6.4	0	50.3	0.108	0.0446	20.9	31.3
10/23/01	11:39	0	27.1	22.5	27.0	24.3	22.6	38.8	45.1	15.2	23.9	6.4	0	50.5	0.106	0.0437	21.0	31.3
10/23/01	11:40	0	27.1	22.5	27.1	24.3	22.5	38.7	45.0	15.2	24.5	6.4	0	50.2	0.105	0.0432	20.8	31.6
10/23/01	11:41	0	27.1	22.5	27.2	24.3	22.5	32.2	38.3	15.0	18.0	6.3	0	49.0	0.086	0.0354	20.3	25.1
10/23/01	11:42	0	27.1	22.5	27.1	24.3	22.6	26.7	32.9	15.3	12.1	6.2	0	49.9	0.056	0.0230	20.7	19.4
10/23/01	11:43	0	27.1	22.5	27.1	24.3	22.6	22.5	30.3	15.4	7.5	7.9	0	52.0	0.049	0.0202	21.6	15.0

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	11:44	0	27.2	22.5	27.1	24.3	22.7	22.5	30.5	15.4	7.7	7.9	0	50.1	0.050	0.0206	20.8	15.1
10/23/01	11:45	0	27.2	22.6	27.1	24.4	22.7	22.5	30.4	15.4	7.8	7.9	0	50.7	0.049	0.0202	21.0	15.2
10/23/01	11:46	0	27.1	22.6	27.0	24.4	22.7	22.7	30.7	15.3	8.1	7.9	0	50.5	0.050	0.0206	20.9	15.4
10/23/01	11:47	0	27.1	22.6	27.0	24.5	22.8	17.0	24.9	12.7	4.7	7.9	0	45.6	0.039	0.0161	18.9	10.8
10/23/01	11:48	0	27.0	22.6	26.9	24.5	22.8	11.1	19.0	12.5	-1.3	7.8	0	45.6	0.014	0.0058	18.9	4.9
10/23/01	11:49	0	26.9	22.6	26.7	24.6	22.9	9.6	17.4	12.5	-2.4	7.8	0	45.2	0.010	0.0042	18.7	3.6
10/23/01	11:50	0	26.9	22.6	26.6	24.6	22.9	13.7	21.5	15.4	-1.0	7.8	0	50.0	0.017	0.0071	20.7	6.3
10/23/01	11:51	0	26.8	22.6	26.6	24.6	23.0	14.0	21.9	15.5	-0.8	7.8	0	50.1	0.017	0.0071	20.8	6.6
10/23/01	11:52	0	26.8	22.6	26.5	24.7	23.0	14.6	22.4	15.6	-0.5	7.8	0	50.7	0.019	0.0080	21.1	7.0
10/23/01	11:53	0	26.9	22.6	26.5	24.8	23.1	26.7	34.6	12.2	15.2	8.0	0	44.0	0.079	0.0331	18.3	20.9
10/23/01	11:54	0	26.8	22.6	26.5	24.8	23.1	26.8	34.7	12.3	14.9	7.9	0	44.4	0.076	0.0319	18.4	20.9
10/23/01	11:55	0	26.8	22.6	26.5	24.8	23.1	26.8	34.6	12.4	15.1	7.9	0	44.4	0.076	0.0319	18.4	20.9
10/23/01	11:56	0	26.7	22.7	26.4	24.9	23.1	26.8	34.8	12.4	14.9	7.9	0	44.3	0.075	0.0314	18.4	20.9
10/23/01	11:57	0	26.7	22.7	26.4	24.9	23.2	26.7	34.6	12.5	14.8	7.9	0	44.4	0.074	0.0310	18.4	20.7
10/23/01	11:58	0	26.7	22.7	26.4	25.0	23.2	27.0	34.9	12.4	14.9	7.9	0	44.2	0.074	0.0310	18.4	20.9
10/23/01	11:59	0	26.7	22.7	26.4	25.0	23.3	26.8	34.8	12.4	14.9	7.9	0	44.6	0.074	0.0311	18.5	20.8
10/23/01	12:00	0	26.7	22.7	26.4	25.0	23.3	26.7	34.6	12.4	15.0	7.9	0	44.2	0.074	0.0311	18.3	20.9
10/23/01	12:01	0	26.6	22.7	26.4	25.1	23.3	26.9	34.8	12.5	14.8	7.9	0	44.1	0.073	0.0306	18.3	20.8
10/23/01	12:02	0	26.6	22.7	26.4	25.2	23.4	26.8	34.7	12.3	15.0	7.9	0	44.4	0.073	0.0306	18.4	20.9
10/23/01	12:03	0	26.6	22.7	26.4	25.2	23.4	26.9	34.8	12.5	14.9	7.9	0	44.3	0.073	0.0307	18.4	20.9
10/23/01	12:04	0	26.6	22.8	25.9	25.2	23.4	26.7	34.6	12.5	15.1	7.9	0	44.3	0.072	0.0306	18.4	20.9
10/23/01	12:05	0	26.5	22.8	25.1	25.2	23.4	27.3	35.1	12.4	15.2	7.9	0	44.1	0.071	0.0309	18.3	21.2
10/23/01	12:06	0	26.4	22.8	24.6	25.1	23.4	27.1	34.9	12.5	15.4	7.9	0	44.1	0.070	0.0310	18.3	21.2
10/23/01	12:07	0	26.1	22.8	24.6	25.1	23.3	27.2	35.1	12.5	15.2	7.9	0	44.3	0.070	0.0309	18.4	21.2
10/23/01	12:08	0	26.1	22.8	24.6	25.1	23.3	27.2	35.1	12.5	15.2	7.9	0	44.1	0.070	0.0309	18.3	21.2
10/23/01	12:09	0	26.0	22.8	24.6	25.0	23.2	27.3	35.2	12.5	15.3	7.9	0	44.0	0.070	0.0309	18.3	21.3
10/23/01	12:10	0	26.0	22.8	24.7	24.9	23.2	27.2	35.1	12.5	15.2	7.9	0	44.3	0.070	0.0308	18.4	21.2
10/23/01	12:11	0	26.0	22.8	24.7	24.9	23.2	27.3	35.2	12.5	15.3	7.9	0	44.3	0.070	0.0308	18.4	21.3
10/23/01	12:12	0	25.8	22.8	24.7	25.0	23.2	27.1	34.9	12.4	15.6	7.9	0	43.9	0.070	0.0308	18.2	21.4
10/23/01	12:13	0	25.7	22.9	24.8	25.0	23.1	27.2	35.1	12.4	15.3	7.9	0	44.1	0.070	0.0308	18.3	21.2
10/23/01	12:14	0	25.6	22.9	24.8	25.0	23.1	27.2	35.1	12.5	15.3	7.9	0	44.0	0.070	0.0308	18.3	21.2
10/23/01	12:15	0	25.5	22.9	24.8	24.9	23.0	27.2	35.1	12.5	15.3	7.9	0	44.1	0.069	0.0303	18.3	21.3
10/23/01	12:16	0	25.4	22.9	24.8	24.9	23.0	27.2	35.1	12.5	15.0	7.9	0	44.6	0.069	0.0303	18.5	21.1
10/23/01	12:17	0	25.3	22.9	24.9	24.9	23.0	27.3	35.2	12.4	15.4	7.9	0	44.1	0.069	0.0302	18.3	21.3
10/23/01	12:18	0	25.3	22.9	24.9	25.0	23.0	27.3	35.1	12.5	15.5	7.9	0	44.3	0.069	0.0302	18.4	21.4
10/23/01	12:19	0	25.3	22.9	24.9	24.9	23.0	27.2	35.1	12.5	15.1	7.9	0	44.6	0.069	0.0302	18.5	21.1
10/23/01	12:20	0	25.2	22.9	24.9	24.9	23.0	27.2	35.1	12.4	15.1	7.9	0	44.2	0.069	0.0302	18.3	21.2
10/23/01	12:21	0	25.2	22.9	24.9	24.9	22.9	27.1	35.0	12.5	15.1	7.9	0	44.2	0.069	0.0302	18.3	21.1
10/23/01	12:22	0	25.2	22.9	25.0	24.9	22.9	27.3	35.2	12.5	15.2	7.9	0	43.1	0.069	0.0302	17.9	21.3
10/23/01	12:23	0	25.2	22.9	24.9	24.9	22.8	27.2	35.2	12.5	15.2	7.9	0	44.0	0.069	0.0302	18.3	21.2
10/23/01	12:24	0	25.2	22.9	25.0	24.9	22.8	27.0	34.8	12.4	15.2	7.9	0	44.3	0.069	0.0301	18.4	21.1
10/23/01	12:25	0	25.2	22.9	25.0	24.9	22.8	27.2	35.1	12.5	15.1	7.9	0	44.3	0.069	0.0302	18.4	21.2
10/23/01	12:26	0	25.2	22.9	25.0	24.9	22.8	27.2	35.0	12.4	15.1	7.9	0	44.1	0.069	0.0301	18.3	21.1
10/23/01	12:27	0	25.2	22.9	25.0	24.9	22.8	27.4	35.3	12.5	15.2	7.9	0	44.1	0.069	0.0301	18.3	21.3
10/23/01	12:28	0	25.2	22.9	25.0	24.9	22.8	27.1	34.8	12.5	15.3	7.9	0	44.3	0.068	0.0297	18.4	21.2
10/23/01	12:29	0	25.2	22.9	25.1	24.9	22.8	27.3	35.2	12.4	15.3	7.9	0	44.2	0.068	0.0296	18.4	21.3
10/23/01	12:30	0	25.2	23.0	25.1	24.9	22.7	27.3	35.2	12.5	15.1	7.9	0	44.3	0.068	0.0296	18.4	21.2
10/23/01	12:31	0	25.2	23.0	25.0	24.9	22.7	27.1	34.9	12.4	15.1	7.9	0	44.1	0.068	0.0297	18.3	21.1
10/23/01	12:32	0	25.2	23.0	25.1	24.9	22.7	27.2	35.1	12.6	15.0	7.9	0	44.5	0.068	0.0296	18.5	21.1
10/23/01	12:33	0	25.3	23.0	25.1	24.9	22.7	27.3	35.1	12.5	15.2	7.9	0	44.3	0.068	0.0296	18.4	21.3

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	12:34	0	25.3	23.0	25.1	24.8	22.7	27.3	35.1	12.5	15.1	7.9	0	44.3	0.067	0.0292	18.4	21.2
10/23/01	12:35	0	25.3	23.0	25.1	24.9	22.7	27.1	35.0	12.5	15.0	7.9	0	43.9	0.068	0.0296	18.2	21.1
10/23/01	12:36	0	25.3	23.0	25.1	24.8	22.7	27.1	34.9	12.4	15.2	7.9	0	44.3	0.068	0.0296	18.4	21.1
10/23/01	12:37	0	25.3	23.0	25.1	24.9	22.7	27.2	35.0	12.6	15.0	7.9	0	44.2	0.067	0.0291	18.4	21.1
10/23/01	12:38	0	25.3	23.0	25.2	24.9	22.7	27.3	35.1	12.5	14.9	7.9	0	44.0	0.067	0.0291	18.3	21.1
10/23/01	12:39	0	25.3	23.0	25.2	24.9	22.7	27.0	34.8	12.5	15.0	7.9	0	44.4	0.067	0.0291	18.4	21.0
10/23/01	12:40	0	25.4	23.0	25.3	24.8	22.7	27.1	35.0	12.5	15.1	7.9	0	44.2	0.068	0.0295	18.4	21.1
10/23/01	12:41	0	25.4	23.0	25.3	24.7	22.7	27.2	35.0	12.4	15.1	7.9	0	44.1	0.068	0.0294	18.3	21.1
10/23/01	12:42	0	25.4	23.0	25.4	24.7	22.7	27.2	35.0	12.6	15.2	7.9	0	44.4	0.068	0.0294	18.4	21.2
10/23/01	12:43	0	25.4	23.0	25.5	24.6	22.7	27.1	34.9	12.5	15.1	7.9	0	44.2	0.068	0.0293	18.4	21.1
10/23/01	12:44	0	25.5	23.0	25.5	24.7	22.8	27.1	34.9	12.4	15.1	7.9	0	44.2	0.068	0.0293	18.3	21.1
10/23/01	12:45	0	25.5	23.0	25.6	24.7	22.9	27.2	35.1	12.5	15.2	7.9	0	44.2	0.068	0.0292	18.3	21.2
10/23/01	12:46	0	25.5	23.0	25.6	24.8	22.9	27.2	35.0	12.3	15.2	7.9	0	44.3	0.068	0.0292	18.4	21.2
10/23/01	12:47	0	25.6	23.0	25.7	24.8	23.0	27.0	34.9	12.5	15.1	7.9	0	44.1	0.068	0.0291	18.3	21.0
10/23/01	12:48	0	25.7	23.0	25.7	24.9	23.1	27.0	34.8	12.4	15.2	7.9	0	44.1	0.068	0.0291	18.3	21.1
10/23/01	12:49	0	25.7	23.0	25.8	25.0	23.1	27.2	35.0	12.5	15.0	7.9	0	44.2	0.068	0.0291	18.3	21.1
10/23/01	12:50	0	25.6	23.1	25.8	25.1	23.2	27.1	35.0	12.4	15.2	7.9	0	44.1	0.068	0.0290	18.3	21.1
10/23/01	12:51	0	25.7	23.1	25.9	25.2	23.3	26.9	34.7	12.6	15.1	7.9	0	44.2	0.067	0.0285	18.4	21.0
10/23/01	12:52	0	25.8	23.1	25.9	25.3	23.3	27.1	34.8	12.5	15.1	7.9	0	44.2	0.068	0.0289	18.3	21.1
10/23/01	12:53	0	25.8	23.1	26.0	25.3	23.4	27.2	35.1	12.4	15.1	7.9	0	44.3	0.068	0.0289	18.4	21.1
10/23/01	12:54	0	25.9	23.1	26.0	25.4	23.4	27.3	35.1	12.4	15.1	7.9	0	44.2	0.068	0.0289	18.3	21.2
10/23/01	12:55	0	25.9	23.1	26.1	25.4	23.4	27.2	35.0	12.4	15.2	7.9	0	43.9	0.068	0.0288	18.2	21.2
10/23/01	12:56	0	26.0	23.1	26.1	25.4	23.4	27.2	34.9	12.5	15.2	7.9	0	44.8	0.068	0.0288	18.6	21.2
10/23/01	12:57	0	26.0	23.1	26.1	25.4	23.4	27.1	35.0	12.3	15.2	7.9	0	44.2	0.068	0.0288	18.4	21.2
10/23/01	12:58	0	26.0	23.2	26.2	25.4	23.4	27.0	34.8	12.4	15.3	7.9	0	44.3	0.068	0.0287	18.4	21.2
10/23/01	12:59	0	26.0	23.2	26.2	25.4	23.3	27.2	35.0	12.6	15.0	7.9	0	44.3	0.068	0.0287	18.4	21.1
10/23/01	13:00	0	26.2	23.2	26.3	25.3	23.3	27.0	34.9	12.4	15.1	7.9	0	44.2	0.068	0.0287	18.3	21.1
10/23/01	13:01	0	26.2	23.2	26.3	25.3	23.3	27.2	35.1	12.4	15.1	7.9	0	44.5	0.068	0.0286	18.5	21.1
10/23/01	13:02	0	26.2	23.2	26.4	25.3	23.3	27.1	35.0	12.4	15.3	7.9	0	44.0	0.068	0.0286	18.3	21.2
10/23/01	13:03	0	26.3	23.2	26.4	25.3	23.3	26.9	34.8	12.4	15.1	7.9	0	44.2	0.068	0.0286	18.3	21.0
10/23/01	13:04	0	26.2	23.2	26.4	25.3	23.3	27.1	34.9	12.5	15.0	7.9	0	44.4	0.068	0.0285	18.4	21.0
10/23/01	13:05	0	26.3	23.2	26.4	25.3	23.2	27.2	35.0	12.5	15.1	7.9	0	44.2	0.068	0.0285	18.3	21.1
10/23/01	13:06	0	26.4	23.2	26.5	25.3	23.2	27.2	35.1	12.4	15.4	7.9	0	44.1	0.068	0.0285	18.3	21.3
10/23/01	13:07	0	26.4	23.3	26.5	25.3	23.2	27.1	35.0	12.4	15.0	7.9	0	44.1	0.068	0.0285	18.3	21.1
10/23/01	13:08	0	26.4	23.2	26.5	25.2	23.2	27.0	34.9	12.4	15.0	7.9	0	44.2	0.068	0.0285	18.3	21.0
10/23/01	13:09	0	26.6	23.2	26.6	25.3	23.2	27.4	35.2	12.4	15.2	7.9	0	44.3	0.068	0.0284	18.4	21.3
10/23/01	13:10	0	26.5	23.3	26.6	25.2	23.2	27.2	35.0	12.4	15.1	7.9	0	44.3	0.068	0.0284	18.4	21.2
10/23/01	13:11	0	26.5	23.3	26.7	25.2	23.2	27.0	34.9	12.5	15.1	7.9	0	44.3	0.068	0.0283	18.4	21.1
																Average	18.3	21.1
10/23/01	13:12	0	26.6	23.3	26.7	25.2	23.1	27.2	35.1	12.4	15.2	7.9	0	44.3	0.071	0.0296	18.4	21.2
10/23/01	13:13	0	26.7	23.3	26.7	25.2	23.1	27.0	34.8	12.4	15.3	7.9	0	44.3	0.068	0.0283	18.4	21.2
10/23/01	13:14	0	26.6	23.3	26.7	25.2	23.1	27.1	34.9	12.5	15.1	7.9	0	44.4	0.068	0.0283	18.4	21.1
10/23/01	13:15	0	26.7	23.3	26.8	25.1	23.1	27.1	34.9	12.4	15.0	7.9	0	44.3	0.068	0.0283	18.4	21.0
10/23/01	13:16	0	26.8	23.3	26.8	25.2	23.1	27.2	35.0	12.4	15.2	7.9	0	44.2	0.069	0.0287	18.3	21.2
10/23/01	13:17	0	26.8	23.3	26.8	25.2	23.1	27.1	34.9	12.5	15.2	7.9	0	44.2	0.070	0.0291	18.3	21.1
10/23/01	13:18	0	26.8	23.3	26.8	25.2	23.0	27.2	35.0	12.5	15.1	7.9	0	44.1	0.068	0.0282	18.3	21.1
10/23/01	13:19	0	26.8	23.3	26.9	25.2	23.0	27.0	34.7	12.3	15.0	7.9	0	44.4	0.069	0.0286	18.4	21.0
10/23/01	13:20	0	26.7	23.3	26.9	25.1	23.0	26.9	34.8	12.4	15.1	7.9	0	44.1	0.068	0.0282	18.3	21.0
10/23/01	13:21	0	26.8	23.3	26.9	25.1	23.0	27.1	34.9	12.4	15.2	7.9	0	44.2	0.068	0.0281	18.3	21.1
10/23/01	13:22	0	26.9	23.3	26.9	25.1	22.9	27.2	35.1	12.4	15.2	7.9	0	44.2	0.069	0.0285	18.4	21.2

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	13:23	0	26.9	23.3	27.0	25.0	22.9	27.0	34.9	12.5	15.0	7.9	0	44.4	0.068	0.0281	18.4	21.0
10/23/01	13:24	0	26.8	23.3	27.0	25.1	23.0	27.2	34.9	12.4	14.9	7.9	0	44.2	0.069	0.0285	18.3	21.1
10/23/01	13:25	0	26.9	23.3	27.0	25.0	23.0	27.1	34.8	12.3	15.1	7.9	0	44.3	0.069	0.0285	18.4	21.1
10/23/01	13:26	0	27.0	23.3	27.0	25.0	23.0	21.8	34.8	12.4	9.9	13.1	0	44.3	0.010	0.0041	18.4	15.8
10/23/01	13:27	0	26.9	23.4	27.1	25.1	23.0	10.2	30.9	11.1	-0.5	20.6	0	41.6	0.010	0.0041	17.3	4.8
10/23/01	13:28	0	27.0	23.4	27.0	25.1	23.0	8.9	30.0	11.8	-2.1	21.0	0	42.7	0.010	0.0041	17.7	3.4
10/23/01	13:29	0	27.0	23.3	27.0	25.1	22.9	16.9	30.0	11.5	5.7	13.1	0	42.4	0.010	0.0041	17.6	11.3
10/23/01	13:30	0	27.1	23.3	27.0	25.1	22.9	21.3	30.2	11.7	9.9	8.9	0	42.5	0.121	0.0500	17.7	15.6
10/23/01	13:31	0	27.1	23.4	27.0	25.1	22.9	21.9	30.1	11.4	11.1	8.3	0	42.1	0.082	0.0339	17.5	16.5
10/23/01	13:32	0	27.1	23.4	27.0	25.1	22.9	22.1	30.3	11.4	11.2	8.2	0	42.1	0.077	0.0318	17.5	16.6
10/23/01	13:33	0	27.1	23.4	27.0	25.1	23.0	21.9	30.1	11.2	11.1	8.2	0	42.0	0.074	0.0306	17.4	16.5
10/23/01	13:34	0	27.1	23.4	26.9	25.1	23.0	22.2	30.4	11.5	11.2	8.2	0	42.0	0.072	0.0298	17.4	16.7
10/23/01	13:35	0	27.1	23.4	26.9	25.1	22.9	21.9	30.1	11.4	11.1	8.2	0	42.0	0.070	0.0289	17.4	16.5
10/23/01	13:36	0	27.0	23.4	27.0	25.1	22.9	22.2	30.4	11.4	11.2	8.1	0	42.0	0.069	0.0285	17.4	16.7
10/23/01	13:37	0	27.1	23.4	26.9	25.1	22.9	22.2	30.3	11.5	11.2	8.1	0	42.1	0.068	0.0281	17.5	16.7
10/23/01	13:38	0	27.1	23.4	26.9	25.1	22.9	25.5	33.8	7.9	18.0	8.3	0	33.9	0.088	0.0364	14.1	21.7
10/23/01	13:39	0	27.1	23.4	26.9	25.1	22.9	35.4	43.9	8.0	28.0	8.6	0	34.3	0.111	0.0460	14.2	31.7
10/23/01	13:40	0	27.1	23.4	27.0	25.1	22.9	37.1	45.5	6.4	31.3	8.5	0	30.1	0.107	0.0442	12.5	34.2
10/23/01	13:41	0	27.1	23.4	26.9	25.1	22.9	37.1	45.4	6.4	31.0	8.4	0	29.9	0.101	0.0418	12.4	34.1
10/23/01	13:42	0	27.1	23.4	27.0	25.1	22.9	36.9	45.3	6.4	31.1	8.4	0	30.2	0.098	0.0405	12.5	34.0
10/23/01	13:43	0	27.1	23.4	27.0	25.1	22.9	36.9	45.2	6.3	31.1	8.3	0	30.0	0.095	0.0392	12.5	34.0
10/23/01	13:44	0	27.2	23.4	27.0	25.1	22.9	23.6	31.7	4.7	19.3	8.1	0	25.0	0.064	0.0264	10.4	21.5
10/23/01	13:45	0	27.2	23.4	27.0	25.1	22.9	21.9	30.0	6.3	16.3	8.0	0	30.1	0.055	0.0227	12.5	19.1
10/23/01	13:46	0	27.2	23.4	26.9	25.1	22.9	22.2	30.2	6.4	16.4	8.0	0	30.0	0.055	0.0227	12.4	19.3
10/23/01	13:47	0	27.1	23.4	26.9	25.1	22.9	22.1	30.2	6.3	16.4	8.0	0	29.8	0.056	0.0232	12.4	19.3
10/23/01	13:48	0	27.1	23.4	26.8	25.2	22.9	5.6	13.6	6.4	-0.4	7.8	0	29.8	0.013	0.0054	12.4	2.6
10/23/01	13:49	0	27.1	23.4	26.7	25.1	22.9	6.8	14.7	7.3	0.0	7.8	0	32.1	0.013	0.0054	13.3	3.4
10/23/01	13:50	0	27.0	23.4	26.6	25.2	22.9	7.2	15.1	6.5	1.2	7.8	0	30.3	0.017	0.0071	12.6	4.2
10/23/01	13:51	0	27.0	23.4	26.5	25.1	22.9	7.2	15.1	6.5	1.2	7.8	0	30.3	0.017	0.0071	12.6	4.2
10/23/01	13:52	0	26.9	23.4	26.4	25.1	22.9	7.2	15.1	6.5	1.2	7.8	0	30.3	0.017	0.0071	12.6	4.2
10/23/01	13:53	0	26.9	23.4	26.3	25.1	22.9	7.1	15.0	6.5	1.3	7.8	0	30.2	0.017	0.0072	12.5	4.2
10/23/01	13:54	0	26.9	23.4	26.2	25.1	22.9	7.2	15.2	6.5	1.2	7.8	0	30.2	0.017	0.0072	12.5	4.2
10/23/01	13:55	0	26.9	23.4	26.1	25.1	22.8	7.2	15.1	6.5	1.2	7.8	0	30.3	0.017	0.0072	12.6	4.2
10/23/01	13:56	0	26.8	23.4	26.0	25.1	22.8	7.3	15.2	6.6	1.2	7.8	0	30.3	0.017	0.0072	12.6	4.3
10/23/01	13:57	0	26.8	23.4	25.9	25.2	22.8	7.3	15.2	6.5	1.2	7.8	0	30.3	0.017	0.0072	12.6	4.2
10/23/01	13:58	0	26.8	23.5	25.9	25.2	22.8	7.2	15.1	6.5	1.2	7.8	0	30.3	0.017	0.0072	12.6	4.2
10/23/01	13:59	0	26.7	23.5	25.8	25.1	22.8	7.3	15.2	6.5	1.2	7.8	0	30.2	0.017	0.0073	12.5	4.2
10/23/01	14:00	0	26.6	23.4	25.7	25.2	22.7	7.3	15.2	6.5	1.1	7.8	0	30.2	0.017	0.0073	12.5	4.2
10/23/01	14:01	0	26.5	23.4	25.6	25.1	22.7	7.2	15.1	6.5	1.2	7.8	0	30.2	0.017	0.0073	12.5	4.2
10/23/01	14:02	0	26.4	23.5	25.5	25.2	22.8	6.5	14.4	2.9	3.9	7.9	0	18.4	0.021	0.0090	7.6	5.2
10/23/01	14:03	0	26.4	23.5	25.4	25.2	22.8	7.2	15.1	2.1	5.7	7.9	0	14.9	0.025	0.0108	6.2	6.4
10/23/01	14:04	0	26.3	23.5	25.4	25.2	22.8	7.1	15.0	2.3	5.2	7.9	0	15.4	0.025	0.0108	6.4	6.1
10/23/01	14:05	0	26.2	23.5	25.3	25.3	22.8	7.2	15.1	2.3	5.4	7.9	0	15.4	0.025	0.0108	6.4	6.3
10/23/01	14:06	0	26.1	23.5	25.2	25.2	22.8	7.1	15.1	2.2	5.4	7.9	0	15.3	0.025	0.0108	6.4	6.3
10/23/01	14:07	0	26.0	23.5	25.1	25.2	22.8	7.4	15.4	2.3	5.4	7.9	0	15.3	0.026	0.0113	6.4	6.4
10/23/01	14:08	0	26.0	23.5	25.0	25.2	22.8	7.5	15.3	2.3	5.3	7.9	0	15.3	0.025	0.0109	6.4	6.4
10/23/01	14:09	0	25.9	23.5	25.0	25.2	22.8	7.2	15.2	2.2	5.6	7.9	0	15.3	0.025	0.0109	6.3	6.4
10/23/01	14:10	0	25.8	23.5	24.9	25.3	22.8	7.5	15.4	2.3	5.4	7.9	0	15.2	0.026	0.0114	6.3	6.4
10/23/01	14:11	0	25.7	23.5	24.8	25.3	22.8	7.0	15.0	2.2	5.6	7.9	0	15.3	0.025	0.0110	6.4	6.3
10/23/01	14:12	0	25.7	23.5	24.8	25.3	22.7	7.2	15.1	2.2	5.4	7.9	0	15.3	0.025	0.0110	6.3	6.3

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	14:13	0	25.6	23.4	24.6	25.2	22.7	7.1	15.0	2.2	5.6	7.9	0	15.3	0.025	0.0110	6.3	6.3
10/23/01	14:14	0	25.5	23.5	24.6	25.2	22.7	7.6	15.6	2.2	5.6	7.9	0	15.1	0.026	0.0115	6.3	6.6
10/23/01	14:15	0	25.5	23.5	24.5	25.2	22.7	7.5	15.5	2.2	5.5	7.9	0	15.0	0.026	0.0115	6.2	6.5
10/23/01	14:16	0	25.4	23.5	24.5	25.1	22.7	7.5	15.4	2.2	5.6	7.9	0	15.1	0.026	0.0115	6.3	6.5
10/23/01	14:17	0	25.3	23.5	24.5	25.1	22.7	7.2	15.1	2.2	5.5	7.9	0	15.1	0.026	0.0115	6.2	6.4
10/23/01	14:18	0	25.3	23.5	24.4	25.1	22.7	7.1	15.0	2.2	5.3	7.9	0	15.1	0.026	0.0116	6.3	6.2
10/23/01	14:19	0	25.2	23.5	24.3	25.0	22.7	7.2	15.2	2.2	5.7	7.9	0	15.0	0.026	0.0116	6.2	6.4
10/23/01	14:20	0	25.2	23.5	24.3	25.0	22.7	13.5	21.5	2.9	11.0	8.0	0	17.9	0.042	0.0187	7.4	12.2
10/23/01	14:21	0	25.1	23.5	24.2	25.0	22.7	2.3	10.3	1.4	0.5	7.8	0	12.3	0.010	0.0045	5.1	1.4
10/23/01	14:22	0	25.0	23.5	24.1	25.0	22.7	1.9	9.8	1.4	0.8	7.8	0	10.8	0.012	0.0054	4.5	1.4
10/23/01	14:23	0	25.0	23.5	24.1	25.0	22.7	6.3	14.2	1.1	5.6	7.9	0	9.0	0.025	0.0112	3.7	5.9
10/23/01	14:24	0	24.9	23.5	24.0	25.0	22.7	6.9	14.8	1.2	6.0	7.9	0	9.6	0.027	0.0121	4.0	6.5
10/23/01	14:25	0	24.9	23.5	24.0	25.0	22.7	6.9	14.8	1.3	6.1	7.9	0	10.1	0.027	0.0121	4.2	6.5
10/23/01	14:26	0	24.8	23.5	23.9	25.0	22.7	7.0	14.9	1.3	5.9	7.9	0	10.1	0.027	0.0122	4.2	6.4
10/23/01	14:27	0	24.8	23.5	23.9	25.0	22.7	7.0	14.9	1.3	6.2	7.9	0	10.1	0.027	0.0122	4.2	6.6
10/23/01	14:28	0	24.7	23.5	23.8	24.9	22.7	14.7	22.6	1.4	13.6	8.0	0	11.3	0.046	0.0208	4.7	14.1
10/23/01	14:29	0	24.7	23.5	23.8	24.9	22.6	19.0	27.1	1.3	18.2	8.1	0	10.1	0.059	0.0266	4.2	18.6
10/23/01	14:30	0	24.8	23.5	23.8	24.9	22.6	21.4	29.5	1.3	20.7	8.1	0	10.2	0.063	0.0285	4.2	21.1
10/23/01	14:31	0	24.7	23.5	23.8	24.9	22.6	21.8	29.9	1.3	20.8	8.1	0	10.1	0.060	0.0271	4.2	21.3
10/23/01	14:32	0	24.7	23.5	23.8	25.0	22.6	21.9	30.0	1.3	20.6	8.0	0	10.0	0.058	0.0262	4.2	21.2
10/23/01	14:33	0	24.6	23.5	23.8	24.9	22.6	21.9	29.9	1.3	20.8	8.0	0	10.0	0.056	0.0253	4.1	21.4
10/23/01	14:34	0	24.7	23.5	23.9	24.9	22.6	36.9	45.1	1.3	35.9	8.2	0	9.9	0.076	0.0343	4.1	36.4
10/23/01	14:35	0	24.6	23.5	23.9	24.9	22.6	37.3	45.5	1.3	36.3	8.1	0	9.8	0.068	0.0306	4.1	36.8
10/23/01	14:36	0	24.5	23.5	23.9	25.0	22.6	37.0	45.0	1.3	36.4	8.1	0	9.6	0.063	0.0284	4.0	36.7
10/23/01	14:37	0	24.5	23.5	24.0	24.9	22.6	37.3	45.2	1.3	36.5	8.1	0	9.4	0.059	0.0265	3.9	36.9
10/23/01	14:38	0	24.4	23.5	24.1	25.0	22.6	55.9	63.8	1.6	54.9	8.1	0	11.4	0.072	0.0323	4.7	55.4
10/23/01	14:39	0	24.4	23.5	24.2	24.9	22.6	52.4	60.4	1.5	50.6	8.1	0	10.4	0.060	0.0268	4.3	51.5
10/23/01	14:40	0	24.5	23.5	24.3	25.0	22.6	52.4	60.4	1.5	51.3	8.0	0	10.4	0.057	0.0254	4.3	51.9
10/23/01	14:41	0	24.6	23.5	24.4	25.0	22.6	51.6	59.4	1.5	50.3	8.0	0	10.3	0.055	0.0244	4.3	50.9
10/23/01	14:42	0	24.7	23.5	24.6	25.0	22.6	52.0	60.0	1.5	51.2	8.0	0	10.4	0.053	0.0234	4.3	51.6
10/23/01	14:43	0	24.8	23.5	24.6	25.0	22.6	51.9	59.7	1.5	51.4	8.0	0	10.4	0.051	0.0225	4.3	51.7
10/23/01	14:44	0	24.9	23.5	24.9	25.0	22.6	36.6	44.6	13.8	23.4	7.9	0	43.4	0.032	0.0140	18.0	30.0
10/23/01	14:45	0	24.9	23.5	25.0	25.0	22.6	36.1	43.9	13.8	22.9	7.9	0	43.6	0.032	0.0140	18.1	29.5
10/23/01	14:46	0	25.0	23.5	25.1	25.0	22.6	26.9	34.8	12.7	14.8	7.9	0	41.0	0.026	0.0113	17.0	20.9
10/23/01	14:47	0	25.0	23.5	25.2	25.1	22.7	22.8	30.7	10.7	12.6	7.9	0	37.6	0.023	0.0100	15.6	17.7
10/23/01	14:48	0	25.1	23.5	25.2	25.0	22.7	22.2	30.9	10.7	11.9	8.6	0	37.7	0.016	0.0069	15.6	17.1
10/23/01	14:49	0	25.1	23.5	25.2	25.2	22.8	17.4	30.5	9.8	7.9	13.0	0	38.3	0.136	0.0590	15.9	12.6
10/23/01	14:50	0	25.2	23.5	25.3	25.2	22.8	19.1	30.5	9.8	9.8	11.4	0	38.2	0.097	0.0421	15.9	14.4
10/23/01	14:51	0	25.2	23.5	25.3	25.3	22.9	21.7	32.1	8.5	12.6	10.3	0	35.7	0.081	0.0351	14.8	17.2
10/23/01	14:52	0	25.2	23.5	25.3	25.3	23.0	46.0	56.8	6.0	39.8	10.8	0	28.6	0.145	0.0627	11.9	42.9
10/23/01	14:53	0	25.4	23.5	25.5	25.5	23.1	41.7	51.5	12.5	29.6	9.9	0	44.2	0.120	0.0516	18.3	35.6
10/23/01	14:54	0	25.5	23.5	25.7	25.5	23.2	50.6	60.4	4.8	46.2	10.0	0	24.9	0.120	0.0514	10.3	48.4
10/23/01	14:55	0	25.6	23.5	25.8	25.6	23.2	51.1	60.7	4.7	46.9	9.6	0	24.7	0.109	0.0466	10.2	49.0
10/23/01	14:56	0	25.7	23.5	25.9	25.7	23.3	51.4	60.8	4.6	46.4	9.5	0	24.2	0.103	0.0438	10.1	48.9
10/23/01	14:57	0	25.8	23.5	26.1	25.8	23.3	51.4	60.4	4.6	47.3	9.4	0	24.2	0.098	0.0415	10.0	49.3
10/23/01	14:58	0	25.9	23.5	26.2	25.8	23.4	51.4	60.6	4.5	47.7	9.3	0	24.0	0.095	0.0401	10.0	49.6
10/23/01	14:59	0	26.1	23.5	26.3	25.8	23.3	51.7	60.9	4.5	47.7	9.2	0	24.1	0.092	0.0387	10.0	49.7
10/23/01	15:00	0	26.2	23.5	26.4	25.8	23.4	51.9	61.0	4.5	47.5	9.1	0	24.0	0.089	0.0373	10.0	49.7
10/23/01	15:01	0	26.3	23.6	26.5	25.8	23.3	51.7	60.7	4.5	47.8	9.1	0	24.0	0.088	0.0368	10.0	49.8
10/23/01	15:02	0	26.4	23.6	26.7	25.8	23.3	51.7	60.4	4.5	47.9	9.0	0	24.0	0.087	0.0363	10.0	49.8

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	15:03	0	26.5	23.6	26.7	25.8	23.3	52.2	60.9	4.5	48.1	8.9	0	24.0	0.086	0.0358	10.0	50.1
10/23/01	15:04	0	26.7	23.6	26.9	25.7	23.3	51.7	60.3	4.4	48.4	8.7	0	24.0	0.085	0.0352	9.9	50.0
10/23/01	15:05	0	26.8	23.6	27.0	25.7	23.3	52.8	61.1	4.5	48.1	8.5	0	23.9	0.087	0.0359	9.9	50.4
10/23/01	15:06	0	26.9	23.6	27.1	25.7	23.3	52.3	60.4	4.4	48.5	8.3	0	23.8	0.083	0.0342	9.9	50.4
10/23/01	15:07	0	27.0	23.6	27.2	25.6	23.3	53.0	61.1	4.5	48.8	8.3	0	23.9	0.082	0.0337	9.9	50.9
10/23/01	15:08	0	27.1	23.6	27.3	25.6	23.3	52.6	61.0	4.5	48.6	8.3	0	23.9	0.081	0.0332	9.9	50.6
10/23/01	15:09	0	27.2	23.6	27.3	25.6	23.3	52.4	60.6	4.4	48.8	8.3	0	23.9	0.080	0.0328	9.9	50.6
10/23/01	15:10	0	27.3	23.6	26.3	25.6	23.3	53.0	61.1	4.4	48.5	8.2	0	23.7	0.077	0.0324	9.8	50.8
10/23/01	15:11	0	27.1	23.6	25.6	25.6	23.3	52.9	61.0	4.4	49.3	8.2	0	23.7	0.075	0.0322	9.8	51.1
10/23/01	15:12	0	27.0	23.6	25.3	25.7	23.2	53.5	61.6	4.4	49.3	8.2	0	23.6	0.074	0.0321	9.8	51.4
10/23/01	15:13	0	26.9	23.6	25.3	25.8	23.3	53.4	61.4	4.4	49.2	8.2	0	23.6	0.074	0.0320	9.8	51.3
10/23/01	15:14	0	26.8	23.6	25.5	25.8	23.3	53.0	61.1	4.4	49.3	8.2	0	23.6	0.073	0.0315	9.8	51.1
10/23/01	15:15	0	26.7	23.6	25.6	25.8	23.3	53.5	61.7	4.4	49.4	8.2	0	23.6	0.073	0.0314	9.8	51.5
10/23/01	15:16	0	26.5	23.6	25.7	25.8	23.3	53.3	61.3	4.3	49.2	8.2	0	23.6	0.072	0.0308	9.8	51.3
10/23/01	15:17	0	26.4	23.6	25.8	25.8	23.3	53.1	61.2	4.4	49.0	8.2	0	23.6	0.072	0.0308	9.8	51.1
10/23/01	15:18	0	26.3	23.6	25.9	25.9	23.3	53.2	61.4	4.4	49.2	8.2	0	23.6	0.072	0.0306	9.8	51.2
10/23/01	15:19	0	26.3	23.6	26.0	26.0	23.3	53.6	61.6	4.4	49.6	8.2	0	23.6	0.072	0.0306	9.8	51.6
10/23/01	15:20	0	26.3	23.7	26.1	26.0	23.3	53.1	61.3	4.3	49.2	8.2	0	23.6	0.071	0.0301	9.8	51.2
10/23/01	15:21	0	26.3	23.7	26.2	26.0	23.3	53.4	61.5	4.4	48.8	8.2	0	23.6	0.071	0.0300	9.8	51.1
10/23/01	15:22	0	26.4	23.7	26.3	26.0	23.3	53.2	61.4	4.3	48.9	8.2	0	23.5	0.071	0.0299	9.8	51.0
10/23/01	15:23	0	26.4	23.7	26.4	26.1	23.3	53.1	61.1	4.3	49.1	8.2	0	23.5	0.071	0.0298	9.7	51.1
10/23/01	15:24	0	26.5	23.7	26.5	26.1	23.3	52.7	60.8	4.3	49.3	8.2	0	23.5	0.070	0.0293	9.7	51.0
10/23/01	15:25	0	26.5	23.7	26.5	26.1	23.3	53.7	61.9	4.3	49.3	8.2	0	23.5	0.070	0.0293	9.7	51.5
10/23/01	15:26	0	26.7	23.7	26.6	26.1	23.3	53.3	61.2	4.3	49.4	8.2	0	23.5	0.070	0.0292	9.8	51.3
10/23/01	15:27	0	26.8	23.7	26.7	26.0	23.3	53.7	61.8	4.4	49.2	8.2	0	23.5	0.070	0.0291	9.8	51.5
10/23/01	15:28	0	26.9	23.7	26.8	26.0	23.3	52.7	60.7	4.3	49.6	8.2	0	23.5	0.070	0.0290	9.8	51.2
10/23/01	15:29	0	27.0	23.7	26.9	25.9	23.3	53.4	61.7	4.3	49.3	8.2	0	23.5	0.069	0.0286	9.8	51.4
10/23/01	15:30	0	27.0	23.7	27.0	25.9	23.2	53.4	61.4	4.3	49.7	8.2	0	23.5	0.069	0.0285	9.7	51.5
10/23/01	15:31	0	27.0	23.7	27.0	25.9	23.3	53.0	60.9	4.3	49.2	8.2	0	23.5	0.069	0.0285	9.7	51.1
10/23/01	15:32	0	27.1	23.7	27.1	25.9	23.3	53.5	61.3	4.3	49.2	8.2	0	23.5	0.069	0.0284	9.8	51.3
10/23/01	15:33	0	27.1	23.7	27.2	25.9	23.3	53.3	61.4	4.3	49.0	8.2	0	23.5	0.069	0.0283	9.8	51.1
10/23/01	15:34	0	27.3	23.7	27.3	25.9	23.3	53.3	61.2	4.3	49.8	8.2	0	23.5	0.069	0.0283	9.7	51.5
10/23/01	15:35	0	27.3	23.7	27.3	25.8	23.3	53.4	61.2	4.3	49.3	8.2	0	23.4	0.068	0.0278	9.7	51.3
10/23/01	15:36	0	27.4	23.7	27.4	25.9	23.3	53.2	61.2	4.3	49.3	8.2	0	23.4	0.068	0.0277	9.7	51.3
10/23/01	15:37	0	27.4	23.7	27.5	25.8	23.3	53.3	61.4	4.3	49.4	8.2	0	23.4	0.068	0.0277	9.7	51.4
10/23/01	15:38	0	27.5	23.7	27.6	25.9	23.3	53.2	61.3	4.3	49.3	8.2	0	23.5	0.068	0.0276	9.8	51.3
10/23/01	15:39	0	27.6	23.7	27.6	25.8	23.2	53.5	61.5	4.3	49.1	8.2	0	23.4	0.068	0.0276	9.7	51.3
10/23/01	15:40	0	27.7	23.7	27.7	25.8	23.2	54.1	62.2	4.3	49.6	8.2	0	23.5	0.068	0.0276	9.7	51.9
10/23/01	15:41	0	27.7	23.7	27.7	25.7	23.3	53.5	61.6	4.3	49.9	8.2	0	23.5	0.068	0.0275	9.8	51.7
10/23/01	15:42	0	27.7	23.7	27.8	25.7	23.2	52.8	60.9	4.3	48.9	8.1	0	23.5	0.068	0.0275	9.7	50.8
10/23/01	15:43	0	27.8	23.7	27.9	25.7	23.2	52.8	60.8	4.3	49.4	8.1	0	23.6	0.067	0.0270	9.8	51.1
10/23/01	15:44	0	27.9	23.7	27.9	25.6	23.2	52.7	60.5	4.3	49.5	8.1	0	23.6	0.067	0.0270	9.8	51.1
10/23/01	15:45	0	27.9	23.7	28.0	25.6	23.2	53.2	61.2	4.3	49.4	8.1	0	23.6	0.067	0.0269	9.8	51.3
10/23/01	15:46	0	28.0	23.8	28.0	25.7	23.2	52.4	60.4	4.3	49.8	8.1	0	23.6	0.067	0.0269	9.8	51.1
10/23/01	15:47	0	28.1	23.7	28.1	25.6	23.2	52.7	60.7	4.3	48.8	8.1	0	23.5	0.067	0.0268	9.8	50.8
10/23/01	15:48	0	28.1	23.8	28.2	25.8	23.2	53.5	61.5	4.4	49.2	8.1	0	23.6	0.067	0.0268	9.8	51.4
10/23/01	15:49	0	28.2	23.7	28.2	25.7	23.2	52.9	61.0	4.3	49.3	8.1	0	23.5	0.067	0.0268	9.8	51.1
10/23/01	15:50	0	28.3	23.8	28.3	25.7	23.2	53.3	61.5	4.3	49.3	8.1	0	23.6	0.067	0.0267	9.8	51.3
10/23/01	15:51	0	28.3	23.8	28.3	25.7	23.2	52.9	61.0	4.3	49.0	8.1	0	23.6	0.067	0.0267	9.8	51.0
10/23/01	15:52	0	28.4	23.8	28.3	25.8	23.2	52.9	60.7	4.3	48.6	8.1	0	23.6	0.067	0.0267	9.8	50.7

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	15:53	0	28.4	23.8	28.5	25.8	23.2	53.1	61.1	4.3	49.2	8.1	0	23.6	0.067	0.0266	9.8	51.1
10/23/01	15:54	0	28.5	23.8	28.5	25.8	23.2	52.9	60.8	4.3	49.1	8.1	0	23.5	0.067	0.0266	9.8	51.0
10/23/01	15:55	0	28.5	23.8	28.5	25.9	23.2	53.3	61.3	4.4	49.1	8.1	0	23.6	0.067	0.0265	9.8	51.2
10/23/01	15:56	0	28.6	23.8	28.6	26.0	23.2	53.2	61.3	4.3	48.9	8.1	0	23.6	0.067	0.0265	9.8	51.1
10/23/01	15:57	0	28.6	23.8	28.7	26.1	23.3	52.9	61.2	4.3	49.4	8.1	0	23.6	0.067	0.0264	9.8	51.2
10/23/01	15:58	0	28.7	23.8	28.7	26.1	23.2	53.2	61.3	4.3	49.6	8.1	0	23.6	0.067	0.0264	9.8	51.4
10/23/01	15:59	0	28.7	23.8	28.7	26.2	23.3	53.2	61.1	4.3	48.5	8.1	0	23.5	0.067	0.0264	9.7	50.9
10/23/01	16:00	0	28.8	23.8	28.8	26.2	23.4	53.3	61.5	4.3	49.3	8.1	0	23.5	0.067	0.0263	9.8	51.3
10/23/01	16:01	0	28.8	23.8	28.8	26.1	23.3	52.7	60.7	4.3	48.9	8.1	0	23.5	0.067	0.0263	9.7	50.8
10/23/01	16:02	0	28.9	23.8	28.9	26.0	23.3	53.5	61.6	4.3	49.4	8.1	0	23.5	0.067	0.0263	9.8	51.4
10/23/01	16:03	0	28.9	23.8	28.9	26.0	23.3	53.3	61.2	4.3	49.3	8.1	0	23.5	0.067	0.0262	9.7	51.3
10/23/01	16:04	0	29.0	23.8	29.0	25.9	23.3	53.0	60.9	4.3	49.3	8.1	0	23.4	0.067	0.0262	9.7	51.1
10/23/01	16:05	0	29.0	23.8	29.0	25.9	23.3	53.7	61.7	4.3	49.4	8.1	0	23.5	0.067	0.0262	9.8	51.6
10/23/01	16:06	0	29.1	23.8	29.0	25.9	23.3	52.8	60.8	4.3	49.2	8.1	0	23.5	0.067	0.0261	9.8	51.0
10/23/01	16:07	0	29.1	23.8	29.0	25.8	23.3	52.8	60.9	4.2	49.5	8.1	0	23.5	0.067	0.0261	9.7	51.1
10/23/01	16:08	0	29.1	23.8	29.1	25.8	23.3	52.4	60.1	4.2	49.3	8.1	0	23.4	0.067	0.0261	9.7	50.9
10/23/01	16:09	0	29.2	23.8	29.1	25.8	23.3	53.6	61.6	4.3	49.8	8.1	0	23.5	0.067	0.0261	9.8	51.7
10/23/01	16:10	0	29.2	23.8	29.2	25.8	23.3	52.9	60.8	4.3	49.2	8.1	0	23.4	0.067	0.0261	9.7	51.1
10/23/01	16:11	0	29.3	23.8	29.2	25.8	23.2	52.9	60.8	4.3	48.9	8.1	0	23.4	0.067	0.0260	9.7	50.9
10/23/01	16:12	0	29.3	23.8	29.3	25.9	23.3	53.6	61.6	4.3	49.1	8.1	0	23.4	0.067	0.0260	9.7	51.4
																Average	9.8	51.2
10/23/01	16:13	0	29.3	23.8	29.2	25.8	23.2	22.0	30.0	2.5	20.0	7.9	0	16.5	0.034	0.0132	6.8	21.0
10/23/01	16:14	0	29.3	23.8	29.1	25.8	23.2	22.0	30.0	2.5	20.0	7.9	0	16.6	0.033	0.0129	6.9	21.0
10/23/01	16:15	0	29.3	23.8	29.0	25.7	23.2	18.2	30.2	2.5	16.1	12.0	0	16.6	0.119	0.0465	6.9	17.1
10/23/01	16:16	0	29.3	23.8	28.9	25.7	23.2	36.5	43.4	3.4	34.1	6.9	0	20.0	0.014	0.0055	8.3	35.3
10/23/01	16:17	0	29.2	23.8	29.0	25.7	23.2	52.4	61.0	4.3	48.1	8.6	0	23.3	0.118	0.0461	9.7	50.3
10/23/01	16:18	0	29.2	23.8	29.0	25.7	23.2	53.1	61.5	4.4	49.1	8.4	0	23.6	0.103	0.0402	9.8	51.1
10/23/01	16:19	0	29.2	23.9	29.1	25.7	23.2	52.6	60.8	4.4	48.7	8.3	0	23.5	0.097	0.0378	9.8	50.7
10/23/01	16:20	0	29.1	23.8	29.1	25.7	23.2	53.4	61.6	4.5	49.0	8.3	0	23.6	0.093	0.0362	9.8	51.2
10/23/01	16:21	0	29.4	23.9	29.2	25.7	23.3	52.8	60.9	4.4	49.2	8.2	0	23.5	0.091	0.0354	9.7	51.0
10/23/01	16:22	0	29.3	23.9	29.2	25.8	23.2	52.9	60.9	4.4	48.7	8.2	0	23.6	0.088	0.0342	9.8	50.8
10/23/01	16:23	0	29.3	23.9	29.3	25.9	23.2	53.2	61.2	4.4	48.8	8.2	0	23.6	0.087	0.0337	9.8	51.0
10/23/01	16:24	0	29.4	23.9	29.3	25.9	23.2	52.8	60.7	4.4	48.9	8.2	0	23.6	0.085	0.0329	9.8	50.8
10/23/01	16:25	0	29.4	23.9	29.4	26.0	23.2	53.1	61.0	4.4	49.0	8.2	0	23.5	0.084	0.0325	9.8	51.1
10/23/01	16:26	0	29.5	23.9	29.4	26.1	23.2	53.2	61.2	4.4	49.1	8.2	0	23.4	0.083	0.0321	9.7	51.2
10/23/01	16:27	0	29.6	23.9	29.5	26.1	23.2	53.2	61.4	4.4	49.0	8.2	0	23.4	0.082	0.0316	9.7	51.1
10/23/01	16:28	0	29.6	23.9	29.5	26.2	23.2	53.2	61.4	4.4	49.3	8.2	0	23.5	0.081	0.0312	9.7	51.3
10/23/01	16:29	0	29.6	23.9	29.5	26.2	23.3	53.3	61.5	4.4	49.2	8.2	0	23.4	0.081	0.0312	9.7	51.3
10/23/01	16:30	0	29.6	23.9	29.6	26.2	23.3	52.9	60.9	4.4	48.7	8.2	0	23.4	0.079	0.0304	9.7	50.8
10/23/01	16:31	0	29.7	23.9	29.6	26.1	23.3	52.8	61.0	4.4	48.8	8.2	0	23.5	0.078	0.0300	9.7	50.8
10/23/01	16:32	0	29.7	23.9	29.6	26.1	23.2	53.5	61.7	4.4	49.1	8.2	0	23.5	0.078	0.0300	9.8	51.3
10/23/01	16:33	0	29.7	23.9	29.7	26.2	23.2	53.2	61.5	4.4	48.9	8.3	0	23.5	0.075	0.0288	9.7	51.1
10/23/01	16:34	0	29.7	23.9	29.6	26.2	23.2	53.5	61.8	4.4	49.1	8.5	0	23.4	0.075	0.0288	9.7	51.3
10/23/01	16:35	0	29.8	23.9	29.7	26.2	23.2	52.8	61.2	4.4	49.1	8.6	0	23.4	0.074	0.0283	9.7	50.9
10/23/01	16:36	0	29.8	23.9	29.8	26.2	23.3	53.1	61.9	4.4	48.6	8.7	0	23.4	0.075	0.0287	9.7	50.9
10/23/01	16:37	0	29.9	23.9	29.8	26.2	23.3	51.9	60.5	4.3	48.4	8.8	0	23.4	0.073	0.0279	9.7	50.1
10/23/01	16:38	0	29.9	23.9	29.8	26.2	23.2	52.6	61.6	4.4	48.2	9.0	0	23.4	0.071	0.0271	9.7	50.4
10/23/01	16:39	0	29.9	23.9	29.9	26.2	23.2	51.7	60.7	4.3	48.3	9.2	0	23.4	0.075	0.0286	9.7	50.0
10/23/01	16:40	0	29.9	23.9	29.9	26.1	23.2	52.1	61.1	4.3	48.2	9.2	0	23.4	0.074	0.0282	9.7	50.1
10/23/01	16:41	0	29.9	23.9	29.8	26.1	23.3	51.5	60.5	4.3	48.3	9.1	0	23.4	0.074	0.0283	9.7	49.9

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	16:42	0	30.0	23.9	29.9	26.1	23.2	51.8	60.8	4.3	48.3	9.1	0	23.4	0.074	0.0282	9.7	50.1
10/23/01	16:43	0	30.0	23.9	29.9	26.1	23.2	51.9	61.2	4.3	48.0	9.1	0	23.4	0.073	0.0278	9.7	50.0
10/23/01	16:44	0	30.0	23.9	30.0	26.2	23.2	52.2	61.3	4.3	48.0	9.1	0	23.4	0.073	0.0278	9.7	50.1
10/23/01	16:45	0	30.1	23.9	29.9	26.1	23.2	52.4	61.4	4.3	48.5	9.1	0	23.4	0.073	0.0278	9.7	50.5
10/23/01	16:46	0	30.1	23.9	30.0	26.1	23.2	52.4	61.5	4.3	48.5	9.1	0	23.4	0.073	0.0277	9.7	50.4
10/23/01	16:47	0	30.1	23.9	30.0	26.1	23.2	52.3	61.2	4.4	48.7	9.1	0	23.4	0.073	0.0277	9.7	50.5
10/23/01	16:48	0	30.1	23.9	30.0	26.0	23.2	52.5	61.4	4.4	48.4	9.1	0	23.4	0.072	0.0274	9.7	50.5
10/23/01	16:49	0	30.2	23.9	30.0	26.0	23.3	52.8	61.8	4.4	48.3	9.1	0	23.4	0.072	0.0274	9.7	50.5
10/23/01	16:50	0	30.2	23.9	29.9	26.1	23.3	52.3	61.5	4.4	48.4	9.1	0	23.4	0.072	0.0274	9.7	50.4
10/23/01	16:51	0	30.2	23.9	29.7	26.1	23.2	52.6	61.6	4.4	48.1	9.1	0	23.3	0.071	0.0272	9.7	50.4
10/23/01	16:52	0	30.1	23.9	29.7	26.1	23.2	51.7	60.4	4.3	48.6	9.1	0	23.4	0.071	0.0272	9.7	50.1
10/23/01	16:53	0	30.1	23.9	29.4	26.1	23.3	52.3	61.3	4.3	48.0	9.1	0	23.3	0.070	0.0270	9.7	50.2
10/23/01	16:54	0	30.0	23.9	29.4	26.1	23.3	52.3	61.3	4.3	48.3	9.1	0	23.2	0.070	0.0270	9.6	50.3
10/23/01	16:55	0	29.9	23.9	29.2	26.1	23.3	52.6	61.5	4.4	48.7	9.0	0	23.3	0.070	0.0272	9.7	50.7
10/23/01	16:56	0	29.9	23.9	29.2	26.2	23.2	52.1	60.9	4.3	48.0	9.0	0	23.3	0.069	0.0268	9.7	50.1
10/23/01	16:57	0	29.8	23.9	29.0	26.1	23.2	52.2	61.2	4.3	48.0	9.0	0	23.3	0.069	0.0270	9.7	50.1
10/23/01	16:58	0	29.7	23.9	28.9	26.2	23.2	52.8	61.6	4.4	48.6	9.0	0	23.3	0.068	0.0267	9.7	50.7
10/23/01	16:59	0	29.6	23.9	28.8	26.2	23.3	52.7	61.6	4.4	48.0	9.0	0	23.3	0.068	0.0267	9.7	50.3
10/23/01	17:00	0	29.6	23.9	28.6	26.2	23.3	52.8	61.9	4.4	48.8	9.0	0	23.4	0.068	0.0268	9.7	50.8
10/23/01	17:01	0	29.5	23.9	28.6	26.2	23.3	52.0	60.6	4.3	48.1	9.0	0	23.3	0.068	0.0269	9.7	50.1
10/23/01	17:02	0	29.4	24.0	28.4	26.2	23.3	52.1	60.8	4.4	48.1	9.0	0	23.3	0.067	0.0266	9.7	50.1
10/23/01	17:03	0	29.3	23.9	28.4	26.3	23.2	52.9	61.8	4.4	48.5	9.0	0	23.2	0.067	0.0266	9.6	50.7
10/23/01	17:04	0	29.2	24.0	28.3	26.3	23.3	51.9	60.9	4.3	48.5	9.0	0	23.2	0.067	0.0267	9.6	50.2
10/23/01	17:05	0	29.2	23.9	28.1	26.4	23.3	52.8	61.6	4.4	48.5	9.0	0	23.2	0.066	0.0264	9.6	50.6
10/23/01	17:06	0	29.1	23.9	28.1	26.4	23.3	52.8	61.9	4.4	48.7	9.0	0	23.3	0.066	0.0265	9.7	50.7
10/23/01	17:07	0	29.1	24.0	28.0	26.5	23.3	51.7	60.5	4.3	48.5	9.0	0	23.3	0.066	0.0265	9.7	50.1
10/23/01	17:08	0	29.0	24.0	27.9	26.4	23.3	52.0	60.7	4.4	49.0	9.0	0	23.3	0.066	0.0266	9.7	50.5
10/23/01	17:09	0	28.9	24.0	27.8	26.3	23.2	52.6	61.5	4.4	48.8	9.0	0	23.2	0.065	0.0263	9.6	50.7
10/23/01	17:10	0	28.9	24.0	27.7	26.3	23.3	53.1	61.7	4.4	48.7	9.0	0	23.3	0.065	0.0264	9.7	50.9
10/23/01	17:11	0	28.8	24.0	27.6	26.2	23.3	52.8	61.6	4.4	48.9	9.0	0	23.2	0.065	0.0264	9.6	50.9
10/23/01	17:12	0	28.7	24.0	27.5	26.1	23.3	52.9	61.6	4.4	48.7	9.0	0	23.2	0.065	0.0264	9.6	50.8
10/23/01	17:13	0	28.6	24.0	27.4	26.0	23.3	52.4	61.3	4.4	48.5	8.9	0	23.2	0.064	0.0261	9.6	50.5
10/23/01	17:14	0	28.5	24.0	27.4	26.0	23.2	52.6	61.3	4.4	48.8	8.9	0	23.2	0.064	0.0261	9.6	50.7
10/23/01	17:15	0	28.5	24.0	26.6	26.0	23.2	52.7	61.7	4.4	48.6	8.9	0	23.1	0.063	0.0263	9.6	50.7
10/23/01	17:16	0	28.2	24.0	25.7	26.0	23.2	53.7	62.6	4.4	49.2	8.9	0	23.1	0.062	0.0265	9.6	51.5
10/23/01	17:17	0	28.0	24.0	25.3	26.0	23.2	53.3	62.1	4.4	48.7	8.9	0	23.1	0.061	0.0264	9.6	51.0
10/23/01	17:18	0	27.6	24.0	25.3	26.1	23.2	52.3	61.0	4.3	48.9	8.9	0	23.0	0.061	0.0264	9.6	50.6
10/23/01	17:19	1	27.6	24.0	25.4	26.1	23.2	6.2	56.7	7.4	-0.7	50.2	53	32.5	0.017	0.0073	13.5	2.7
10/23/01	17:20	0	27.6	24.0	25.3	26.1	23.3	46.7	56.5	7.5	39.7	9.8	0	32.6	0.159	0.0688	13.5	43.2
10/23/01	17:21	0	27.3	24.0	25.3	26.1	23.2	47.6	56.8	7.5	40.4	9.1	0	32.5	0.133	0.0575	13.5	44.0
10/23/01	17:22	0	27.1	24.0	25.3	26.1	23.2	47.8	56.6	7.4	40.9	8.7	0	32.3	0.123	0.0532	13.4	44.4
10/23/01	17:23	0	26.8	24.0	25.3	26.1	23.2	48.5	56.8	7.4	41.5	8.3	0	32.1	0.123	0.0533	13.3	45.0
10/23/01	17:24	0	26.6	24.0	25.2	26.2	23.3	48.6	56.8	7.3	41.7	8.1	0	32.1	0.113	0.0490	13.3	45.2
10/23/01	17:25	0	26.5	24.0	25.3	26.2	23.3	49.0	57.0	7.4	41.9	8.1	0	32.1	0.109	0.0472	13.3	45.5
10/23/01	17:26	0	26.3	24.0	25.2	26.2	23.3	48.5	56.6	7.4	41.7	8.1	0	32.1	0.107	0.0465	13.3	45.1
10/23/01	17:27	0	26.3	24.0	25.2	26.1	23.2	48.8	56.8	7.4	41.9	8.1	0	32.1	0.104	0.0451	13.3	45.3
10/23/01	17:28	0	26.2	24.0	25.2	26.1	23.2	48.6	56.7	7.4	41.8	8.1	0	32.2	0.103	0.0448	13.3	45.2
10/23/01	17:29	0	26.0	24.0	25.2	26.1	23.2	48.5	56.7	7.3	41.6	8.2	0	32.0	0.100	0.0435	13.3	45.1
10/23/01	17:30	0	26.0	24.0	25.1	26.1	23.2	48.6	56.7	7.4	41.5	8.3	0	32.1	0.099	0.0431	13.3	45.0
10/23/01	17:31	0	25.9	24.0	25.1	26.1	23.2	48.6	56.8	7.2	42.0	8.3	0	31.8	0.099	0.0431	13.2	45.3

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	17:32	0	25.9	24.0	25.1	26.1	23.2	48.5	56.9	7.2	41.5	8.3	0	31.8	0.098	0.0427	13.2	45.0
10/23/01	17:33	0	25.8	24.0	25.1	26.0	23.2	48.6	56.8	7.2	41.6	8.3	0	31.8	0.097	0.0423	13.2	45.1
10/23/01	17:34	0	25.8	24.0	25.0	26.0	23.2	48.7	57.0	7.2	41.7	8.3	0	31.8	0.096	0.0419	13.2	45.2
10/23/01	17:35	0	25.8	24.0	25.1	26.0	23.2	48.7	57.0	7.2	41.8	8.3	0	31.8	0.095	0.0414	13.2	45.3
10/23/01	17:36	0	25.7	24.0	25.0	26.1	23.2	48.8	57.0	7.3	42.1	8.3	0	31.7	0.094	0.0410	13.2	45.4
10/23/01	17:37	0	25.7	24.0	25.0	26.1	23.2	48.5	56.7	7.2	41.9	8.3	0	31.7	0.094	0.0410	13.2	45.2
10/23/01	17:38	0	25.7	24.0	25.0	26.0	23.2	48.6	56.9	7.1	41.5	8.3	0	31.6	0.093	0.0406	13.1	45.1
10/23/01	17:39	0	25.6	24.0	24.9	26.1	23.2	48.6	56.7	7.2	41.7	8.3	0	31.5	0.093	0.0407	13.1	45.1
10/23/01	17:40	0	25.6	24.0	25.0	26.0	23.2	48.8	57.0	7.2	41.8	8.3	0	31.6	0.092	0.0402	13.1	45.3
10/23/01	17:41	0	25.6	24.0	24.9	26.0	23.1	48.7	57.0	7.2	41.9	8.3	0	31.5	0.091	0.0399	13.1	45.3
10/23/01	17:42	0	25.6	24.0	24.9	25.9	23.1	48.7	56.9	7.2	41.8	8.3	0	31.5	0.091	0.0398	13.1	45.3
10/23/01	17:43	0	25.6	24.0	24.9	25.9	23.1	48.0	56.1	7.1	42.0	8.3	0	31.6	0.090	0.0394	13.1	45.0
10/23/01	17:44	0	25.5	24.0	24.9	25.8	23.2	48.8	57.1	7.2	41.8	8.3	0	31.5	0.090	0.0394	13.1	45.3
10/23/01	17:45	0	25.5	24.0	24.9	25.8	23.1	48.5	56.7	7.2	41.9	8.3	0	31.6	0.089	0.0390	13.1	45.2
10/23/01	17:46	0	25.5	24.0	24.9	25.7	23.1	48.6	56.7	7.1	41.9	8.3	0	31.6	0.089	0.0390	13.1	45.2
																Average	13.2	45.2
10/23/01	17:47	1	25.5	24.0	24.8	25.7	23.2	-1.1	57.5	7.0	24.8	53.6	52	31.6	0.122	0.0535	13.1	11.9
10/23/01	17:48	0	25.4	24.0	24.8	25.7	23.2	46.5	56.8	7.2	39.7	10.3	0	31.7	0.161	0.0706	13.2	43.1
10/23/01	17:49	0	25.4	24.0	24.8	25.7	23.2	47.6	56.7	7.4	40.5	9.5	0	31.9	0.127	0.0558	13.2	44.0
10/23/01	17:50	0	25.4	24.0	24.8	25.7	23.2	52.7	62.0	7.9	45.5	9.5	0	33.3	0.125	0.0548	13.8	49.1
10/23/01	17:51	0	25.3	24.0	24.9	25.7	23.2	50.6	59.7	10.5	40.6	9.1	0	39.5	0.114	0.0500	16.4	45.6
10/23/01	17:52	0	25.3	24.0	24.9	25.7	23.2	50.7	59.4	10.6	40.9	8.9	0	39.5	0.110	0.0482	16.4	45.8
10/23/01	17:53	0	25.3	24.0	24.9	25.7	23.2	50.9	59.3	10.5	40.9	8.7	0	39.5	0.109	0.0477	16.4	45.9
10/23/01	17:54	0	25.3	24.0	24.9	25.7	23.2	51.4	59.8	10.5	41.1	8.4	0	39.3	0.113	0.0495	16.3	46.3
10/23/01	17:55	0	25.3	24.0	25.0	25.7	23.2	52.0	60.1	10.5	41.6	8.2	0	39.4	0.107	0.0467	16.3	46.8
10/23/01	17:56	0	25.3	24.0	25.0	25.8	23.2	51.8	60.0	10.4	41.6	8.2	0	39.4	0.106	0.0463	16.3	46.7
10/23/01	17:57	0	25.3	24.0	25.0	25.7	23.2	51.5	59.5	10.4	41.7	8.2	0	39.3	0.105	0.0458	16.3	46.6
10/23/01	17:58	0	25.3	24.0	25.0	25.8	23.1	51.4	59.5	10.4	41.3	8.3	0	39.5	0.103	0.0450	16.4	46.4
10/23/01	17:59	0	25.3	24.0	25.1	25.8	23.1	51.4	59.6	10.5	41.3	8.3	0	39.4	0.103	0.0449	16.4	46.3
10/23/01	18:00	0	25.3	24.0	25.1	25.8	23.1	51.5	59.7	10.5	41.4	8.4	0	39.4	0.103	0.0449	16.4	46.5
10/23/01	18:01	0	25.3	24.0	25.1	25.9	23.1	51.1	59.4	10.5	40.9	8.4	0	39.6	0.102	0.0444	16.5	46.0
10/23/01	18:02	0	25.4	24.0	25.0	25.9	23.1	51.6	59.8	10.5	41.3	8.4	0	39.3	0.101	0.0442	16.3	46.5
10/23/01	18:03	0	25.4	24.0	24.6	25.9	23.1	51.7	60.0	10.5	41.6	8.4	0	39.3	0.100	0.0442	16.3	46.6
10/23/01	18:04	0	25.3	24.0	24.4	25.8	23.1	51.6	59.9	10.5	41.5	8.4	0	39.4	0.099	0.0439	16.4	46.6
10/23/01	18:05	0	25.3	24.0	24.5	25.7	23.1	51.4	59.8	10.5	41.4	8.4	0	39.4	0.099	0.0439	16.4	46.4
10/23/01	18:06	0	25.3	24.0	24.5	25.6	23.1	51.4	59.7	10.3	42.1	8.4	0	39.2	0.099	0.0438	16.2	46.7
10/23/01	18:07	0	25.3	24.0	24.5	25.6	23.2	51.6	59.8	10.4	41.6	8.4	0	39.1	0.099	0.0438	16.2	46.6
10/23/01	18:08	0	25.2	24.0	24.6	25.5	23.2	51.4	59.7	10.3	41.7	8.4	0	39.1	0.098	0.0433	16.2	46.6
10/23/01	18:09	0	25.1	24.0	24.6	25.6	23.1	51.4	59.7	10.5	41.2	8.4	0	39.4	0.098	0.0432	16.4	46.3
10/23/01	18:10	0	25.1	24.0	24.6	25.6	23.1	51.6	59.7	10.5	41.4	8.4	0	39.3	0.098	0.0432	16.3	46.5
10/23/01	18:11	0	25.1	24.0	24.6	25.6	23.1	51.6	59.9	10.4	41.4	8.4	0	39.1	0.097	0.0428	16.2	46.5
10/23/01	18:12	0	25.0	24.0	24.7	25.6	23.0	51.6	59.8	10.4	41.6	8.4	0	39.1	0.097	0.0427	16.2	46.6
10/23/01	18:13	0	25.0	24.0	24.7	25.5	23.0	51.9	60.2	10.4	41.5	8.4	0	39.2	0.097	0.0427	16.3	46.7
10/23/01	18:14	0	25.0	24.0	24.8	25.5	23.0	51.5	59.7	10.4	41.5	8.4	0	39.4	0.097	0.0427	16.3	46.5
10/23/01	18:15	0	25.0	24.0	24.7	25.6	23.1	51.3	59.6	10.5	41.1	8.4	0	39.4	0.096	0.0423	16.3	46.2
10/23/01	18:16	0	25.1	24.0	24.8	25.6	23.1	51.6	59.9	10.4	41.5	8.4	0	39.1	0.096	0.0421	16.2	46.5
10/23/01	18:17	0	25.0	24.0	24.8	25.6	23.0	51.5	59.9	10.4	41.5	8.4	0	39.2	0.096	0.0422	16.3	46.5
10/23/01	18:18	0	25.1	24.0	24.8	25.6	23.0	48.5	60.0	10.4	38.4	11.5	0	39.3	0.168	0.0737	16.3	43.4
10/23/01	18:19	0	25.1	24.0	24.9	25.6	23.1	49.5	59.6	10.2	39.6	10.2	0	39.1	0.131	0.0574	16.2	44.5
10/23/01	18:20	0	25.1	24.0	24.9	25.6	23.1	49.9	59.6	10.4	40.2	9.9	0	39.3	0.122	0.0534	16.3	45.1

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	18:21	0	25.1	24.0	24.9	25.5	23.0	50.5	60.2	10.3	40.3	9.8	0	39.1	0.117	0.0512	16.2	45.4
10/23/01	18:22	0	25.1	24.0	24.9	25.6	23.0	50.4	59.9	10.2	40.5	9.7	0	39.1	0.114	0.0499	16.2	45.5
10/23/01	18:23	0	25.1	24.0	24.9	25.6	23.0	50.6	60.1	10.3	40.7	9.6	0	39.1	0.112	0.0490	16.2	45.7
10/23/01	18:24	0	25.2	24.0	25.0	25.6	22.9	50.5	59.9	10.3	40.8	9.6	0	38.9	0.109	0.0477	16.1	45.6
10/23/01	18:25	0	25.2	24.0	25.0	25.5	22.9	50.5	59.8	10.2	40.7	9.5	0	39.0	0.107	0.0468	16.2	45.6
10/23/01	18:26	0	25.2	24.0	25.0	25.5	22.9	50.4	59.8	10.2	40.8	9.5	0	38.9	0.106	0.0463	16.2	45.6
10/23/01	18:27	0	25.2	24.0	25.0	25.5	22.9	50.9	60.2	10.3	40.6	9.5	0	38.9	0.105	0.0458	16.2	45.7
10/23/01	18:28	0	25.2	24.0	25.0	25.5	22.9	50.7	60.0	10.2	40.7	9.5	0	38.9	0.104	0.0454	16.1	45.7
10/23/01	18:29	0	25.2	24.0	25.1	25.5	22.9	50.5	60.0	10.2	41.1	9.4	0	39.1	0.103	0.0449	16.2	45.8
10/23/01	18:30	0	25.3	24.0	25.1	25.5	22.9	50.4	59.7	10.2	41.1	9.4	0	39.2	0.102	0.0445	16.3	45.8
10/23/01	18:31	0	25.3	24.0	25.1	25.4	22.9	50.8	60.1	10.3	40.8	9.4	0	39.1	0.101	0.0440	16.2	45.8
10/23/01	18:32	0	25.4	24.0	25.1	25.3	22.9	50.5	59.7	10.2	40.8	9.3	0	38.9	0.100	0.0436	16.2	45.7
10/23/01	18:33	0	25.3	24.0	25.1	25.3	22.8	50.8	59.8	10.2	41.3	9.3	0	39.0	0.100	0.0435	16.2	46.1
10/23/01	18:34	0	25.3	24.0	25.1	25.3	22.8	50.9	60.1	10.2	41.1	9.3	0	38.9	0.099	0.0431	16.1	46.0
10/23/01	18:35	0	25.3	24.0	25.1	25.3	22.8	51.1	60.2	10.3	41.0	9.2	0	38.9	0.099	0.0431	16.1	46.0
10/23/01	18:36	0	25.3	24.0	25.2	25.3	22.8	51.1	60.1	10.4	40.9	9.2	0	39.0	0.098	0.0426	16.2	46.0
10/23/01	18:37	0	25.4	23.9	25.1	25.3	22.8	51.2	60.3	10.3	40.7	9.2	0	39.1	0.097	0.0422	16.2	46.0
10/23/01	18:38	0	25.4	24.0	25.2	25.2	22.8	50.8	59.7	10.2	41.2	9.1	0	39.0	0.097	0.0422	16.2	46.0
10/23/01	18:39	0	25.4	24.0	25.1	25.2	22.8	51.0	60.1	10.3	41.1	9.1	0	39.0	0.097	0.0422	16.2	46.0
10/23/01	18:40	0	25.4	24.0	25.2	25.2	22.8	51.3	60.4	10.3	40.9	9.0	0	39.0	0.096	0.0417	16.2	46.1
10/23/01	18:41	0	25.4	24.0	25.2	25.2	22.8	51.2	60.0	10.3	41.3	9.0	0	39.4	0.096	0.0416	16.4	46.2
10/23/01	18:42	0	25.4	23.9	25.2	25.2	22.7	51.2	60.3	10.2	41.2	9.0	0	38.8	0.096	0.0417	16.1	46.2
10/23/01	18:43	0	25.5	24.0	25.2	25.2	22.7	51.4	60.3	10.2	41.4	9.0	0	38.8	0.095	0.0412	16.1	46.4
10/23/01	18:44	0	25.5	23.9	25.2	25.2	22.7	50.7	59.4	10.2	41.2	8.9	0	38.9	0.095	0.0412	16.2	45.9
10/23/01	18:45	0	25.5	23.9	25.2	25.1	22.7	51.1	59.9	10.2	41.5	8.9	0	38.8	0.095	0.0412	16.1	46.3
10/23/01	18:46	0	25.5	23.9	25.3	25.1	22.7	51.2	59.9	10.2	41.8	8.9	0	39.0	0.094	0.0407	16.2	46.5
10/23/01	18:47	0	25.5	23.9	25.3	25.0	22.7	51.2	59.8	10.3	41.4	8.9	0	38.8	0.094	0.0408	16.1	46.3
10/23/01	18:48	0	25.5	23.9	25.3	25.1	22.6	51.7	60.4	10.3	41.5	8.8	0	38.9	0.094	0.0407	16.2	46.6
10/23/01	18:49	0	25.5	23.9	25.3	25.0	22.6	51.5	60.1	10.4	41.3	8.8	0	38.9	0.093	0.0403	16.1	46.4
10/23/01	18:50	0	25.6	23.9	25.3	25.0	22.6	51.0	59.6	10.4	41.4	8.8	0	39.1	0.093	0.0403	16.2	46.2
10/23/01	18:51	0	25.6	23.9	25.3	24.9	22.6	51.0	59.6	10.3	41.0	8.8	0	39.1	0.092	0.0398	16.2	46.0
10/23/01	18:52	0	25.6	23.9	25.3	24.9	22.5	51.5	59.9	10.3	41.7	8.7	0	39.0	0.092	0.0398	16.2	46.6
10/23/01	18:53	0	25.6	23.9	25.3	24.9	22.5	51.3	59.6	10.3	41.4	8.6	0	39.2	0.094	0.0407	16.3	46.3
10/23/01	18:54	0	25.6	23.9	25.3	24.9	22.5	51.7	60.1	10.4	41.4	8.5	0	39.0	0.093	0.0403	16.2	46.5
10/23/01	18:55	0	25.6	23.9	25.4	24.9	22.5	51.9	60.3	10.4	41.8	8.4	0	39.0	0.092	0.0397	16.2	46.8
10/23/01	18:56	0	25.6	23.9	25.4	24.9	22.5	51.5	59.7	10.3	41.6	8.4	0	39.0	0.092	0.0398	16.2	46.6
10/23/01	18:57	1	25.6	23.9	25.4	24.8	22.5	9.1	60.0	10.3	-0.7	50.7	53	39.1	0.010	0.0043	16.2	4.2
10/23/01	18:58	0	25.6	23.9	25.4	24.8	22.5	48.9	60.0	10.3	39.0	11.1	0	39.1	0.113	0.0488	16.2	43.9
10/23/01	18:59	0	25.6	23.9	25.4	24.8	22.5	49.1	59.6	10.3	39.5	10.6	0	39.0	0.104	0.0449	16.2	44.3
10/23/01	19:00	0	25.7	23.9	25.3	24.8	22.4	49.4	59.7	10.3	39.8	10.4	0	39.1	0.101	0.0437	16.2	44.6
10/23/01	19:01	0	25.6	23.9	25.4	24.7	22.4	49.5	59.7	10.2	40.4	10.4	0	39.0	0.099	0.0427	16.2	44.9
10/23/01	19:02	0	25.6	23.9	25.4	24.7	22.4	49.7	59.9	10.4	40.1	10.3	0	39.1	0.098	0.0423	16.2	44.9
10/23/01	19:03	0	25.7	23.9	25.4	24.6	22.4	49.6	59.7	10.3	39.9	10.2	0	39.0	0.097	0.0419	16.2	44.7
10/23/01	19:04	0	25.7	23.9	25.4	24.6	22.4	49.7	59.7	10.4	40.2	10.2	0	38.9	0.096	0.0415	16.1	45.0
10/23/01	19:05	0	25.6	23.8	25.4	24.6	22.3	49.5	59.4	10.3	40.1	10.2	0	39.1	0.095	0.0410	16.2	44.8
10/23/01	19:06	0	25.7	23.8	25.4	24.5	22.3	50.0	60.1	10.4	39.9	10.1	0	39.1	0.095	0.0410	16.2	45.0
10/23/01	19:07	0	25.7	23.8	25.4	24.5	22.3	49.8	59.9	10.4	39.9	10.1	0	39.0	0.094	0.0406	16.2	44.9
10/23/01	19:08	0	25.7	23.8	25.4	24.5	22.3	49.6	59.5	10.3	40.2	10.1	0	39.2	0.094	0.0405	16.3	44.9
10/23/01	19:09	0	25.7	23.8	25.4	24.4	22.3	50.0	59.9	10.4	40.0	10.1	0	39.1	0.093	0.0401	16.2	45.0
10/23/01	19:10	0	25.7	23.8	25.5	24.4	22.3	49.6	59.5	10.3	40.1	10.0	0	39.1	0.093	0.0401	16.2	44.8

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	19:11	0	25.7	23.8	25.5	24.4	22.3	49.9	59.8	10.3	39.7	10.0	0	39.1	0.092	0.0397	16.2	44.8
10/23/01	19:12	0	25.7	23.8	25.5	24.4	22.3	49.8	59.7	10.3	40.0	10.0	0	39.1	0.092	0.0396	16.2	44.9
10/23/01	19:13	0	25.8	23.8	25.5	24.3	22.2	49.8	59.7	10.3	40.2	10.0	0	39.1	0.092	0.0397	16.2	45.0
10/23/01	19:14	0	25.8	23.7	25.5	24.3	22.2	49.8	59.6	10.4	40.1	10.0	0	39.1	0.091	0.0392	16.2	45.0
10/23/01	19:15	0	25.8	23.7	25.5	24.2	22.2	49.8	59.6	10.3	40.1	10.0	0	39.1	0.091	0.0392	16.2	45.0
10/23/01	19:16	0	25.7	23.7	25.5	24.3	22.2	49.8	59.6	10.5	39.8	10.0	0	39.1	0.091	0.0392	16.2	44.8
10/23/01	19:17	0	25.8	23.7	25.5	24.3	22.3	50.3	60.1	10.4	40.1	9.9	0	39.1	0.091	0.0392	16.2	45.2
10/23/01	19:18	0	25.8	23.7	25.5	24.3	22.3	50.0	59.7	10.4	40.1	9.9	0	38.9	0.090	0.0388	16.2	45.1
10/23/01	19:19	0	25.8	23.7	25.5	24.3	22.3	50.0	59.9	10.4	40.4	9.9	0	39.0	0.090	0.0387	16.2	45.2
10/23/01	19:20	0	25.8	23.7	25.5	24.3	22.4	50.3	60.2	10.4	40.1	9.9	0	39.0	0.090	0.0388	16.2	45.2
10/23/01	19:21	0	25.7	23.7	25.5	24.3	22.5	50.5	60.3	10.4	40.1	9.9	0	39.0	0.089	0.0383	16.2	45.3
10/23/01	19:22	0	25.8	23.7	25.5	24.4	22.5	50.2	59.9	10.4	40.2	9.9	0	39.2	0.089	0.0383	16.3	45.2
10/23/01	19:23	0	25.8	23.7	25.6	24.4	22.6	50.0	59.7	10.5	40.4	9.9	0	39.1	0.089	0.0383	16.2	45.2
10/23/01	19:24	0	25.7	23.7	25.5	24.5	22.7	50.1	59.9	10.4	40.1	9.9	0	39.1	0.089	0.0383	16.2	45.1
10/23/01	19:25	0	25.8	23.7	25.6	24.6	22.8	50.2	60.0	10.4	39.9	9.9	0	39.0	0.089	0.0382	16.2	45.1
10/23/01	19:26	0	25.8	23.7	25.5	24.6	22.8	50.4	60.2	10.4	40.3	9.8	0	39.0	0.088	0.0379	16.2	45.4
10/23/01	19:27	0	25.8	23.7	25.6	24.7	22.8	50.1	59.8	10.3	40.3	9.8	0	38.9	0.088	0.0378	16.1	45.2
10/23/01	19:28	0	25.8	23.7	25.5	24.8	22.9	50.2	59.9	10.4	40.4	9.8	0	39.5	0.088	0.0379	16.4	45.3
10/23/01	19:29	0	25.8	23.7	25.6	24.8	23.0	50.3	60.0	10.3	40.0	9.8	0	38.9	0.088	0.0378	16.1	45.1
10/23/01	19:30	0	25.8	23.7	25.6	24.8	23.0	50.6	60.3	10.4	40.1	9.8	0	38.9	0.088	0.0378	16.1	45.4
10/23/01	19:31	0	25.8	23.7	25.3	24.9	22.9	50.2	59.8	10.3	40.3	9.8	0	39.0	0.087	0.0377	16.2	45.3
10/23/01	19:32	0	25.7	23.7	24.8	24.9	22.9	50.1	59.6	10.3	40.5	9.7	0	38.8	0.086	0.0378	16.1	45.3
10/23/01	19:33	0	25.6	23.7	24.4	24.8	22.9	50.2	59.9	10.2	40.8	9.7	0	38.9	0.085	0.0378	16.1	45.5
10/23/01	19:34	0	25.6	23.7	24.2	24.7	22.8	47.5	59.8	10.2	37.7	12.5	0	38.6	0.010	0.0045	16.0	42.6
10/23/01	19:35	0	25.6	23.7	24.2	24.7	22.8	49.0	60.0	10.3	39.3	11.0	0	38.9	0.099	0.0442	16.2	44.2
10/23/01	19:36	0	25.6	23.7	24.3	24.6	22.8	49.1	59.8	10.3	39.3	10.8	0	38.8	0.095	0.0423	16.1	44.2
10/23/01	19:37	0	25.4	23.7	24.3	24.6	22.8	49.5	60.1	10.3	39.5	10.6	0	39.0	0.093	0.0414	16.2	44.5
10/23/01	19:38	0	25.3	23.7	24.3	24.5	22.7	49.4	59.9	10.3	39.8	10.6	0	38.9	0.092	0.0409	16.1	44.6
10/23/01	19:39	0	25.2	23.7	24.4	24.4	22.7	49.2	59.6	10.2	40.0	10.5	0	39.1	0.091	0.0404	16.2	44.6
10/23/01	19:40	0	25.1	23.7	24.5	24.4	22.7	49.5	59.8	10.3	39.6	10.5	0	39.0	0.090	0.0399	16.2	44.6
10/23/01	19:41	0	25.0	23.7	24.4	24.4	22.6	49.5	59.7	10.3	39.7	10.4	0	38.9	0.090	0.0399	16.1	44.6
10/23/01	19:42	0	25.0	23.7	24.5	24.3	22.6	49.9	60.2	10.3	39.7	10.4	0	39.0	0.089	0.0394	16.2	44.8
10/23/01	19:43	0	24.9	23.7	24.5	24.2	22.6	49.7	60.0	10.2	39.9	10.4	0	38.9	0.088	0.0389	16.1	44.8
10/23/01	19:44	0	24.9	23.7	24.6	24.2	22.5	49.4	59.7	10.3	39.8	10.4	0	39.0	0.088	0.0389	16.2	44.6
10/23/01	19:45	0	24.9	23.7	24.6	24.1	22.5	49.6	59.9	10.3	39.9	10.4	0	38.7	0.088	0.0389	16.0	44.7
10/23/01	19:46	0	24.9	23.7	24.6	24.1	22.5	49.7	60.0	10.4	39.9	10.3	0	38.9	0.088	0.0389	16.2	44.8
10/23/01	19:47	0	24.9	23.7	24.6	24.1	22.5	49.8	60.0	10.3	40.1	10.3	0	38.8	0.087	0.0384	16.1	44.9
10/23/01	19:48	0	24.9	23.7	24.7	24.1	22.4	49.4	59.5	10.4	39.8	10.3	0	39.1	0.087	0.0384	16.2	44.6
10/23/01	19:49	0	24.9	23.7	24.7	24.0	22.4	49.8	59.9	10.4	39.8	10.3	0	39.1	0.086	0.0379	16.2	44.8
10/23/01	19:50	0	24.9	23.7	24.7	24.0	22.4	50.1	60.2	10.4	39.8	10.3	0	39.2	0.086	0.0379	16.3	45.0
10/23/01	19:51	0	24.9	23.7	24.7	24.0	22.4	49.9	59.9	10.4	39.8	10.3	0	39.1	0.086	0.0379	16.2	44.8
10/23/01	19:52	0	25.0	23.7	24.7	24.0	22.4	49.7	59.7	10.4	39.6	10.2	0	39.2	0.086	0.0379	16.3	44.6
10/23/01	19:53	0	25.0	23.7	24.8	24.0	22.4	49.7	59.9	10.4	39.9	10.2	0	39.0	0.086	0.0378	16.2	44.8
10/23/01	19:54	0	25.0	23.6	24.8	24.0	22.5	49.7	59.7	10.3	40.0	10.2	0	39.1	0.085	0.0373	16.2	44.9
10/23/01	19:55	0	25.0	23.6	24.8	24.0	22.5	49.4	59.5	10.3	40.1	10.2	0	38.9	0.085	0.0373	16.1	44.8
10/23/01	19:56	0	25.0	23.6	24.8	24.1	22.5	49.8	59.9	10.3	39.9	10.2	0	38.9	0.085	0.0373	16.1	44.9
10/23/01	19:57	0	25.0	23.6	24.9	24.1	22.5	49.8	59.7	10.4	40.0	10.2	0	39.0	0.085	0.0373	16.2	44.9
10/23/01	19:58	0	25.1	23.6	24.9	24.1	22.6	49.7	59.8	10.4	40.2	10.2	0	39.0	0.085	0.0373	16.2	45.0
10/23/01	19:59	0	25.0	23.6	24.9	24.1	22.6	50.3	60.6	10.3	40.2	10.2	0	38.9	0.085	0.0372	16.1	45.3
10/23/01	20:00	0	25.1	23.6	24.9	24.2	22.7	49.9	60.0	10.4	40.0	10.2	0	39.0	0.084	0.0368	16.2	44.9

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	20:01	0	25.1	23.6	24.9	24.2	22.8	49.7	59.8	10.4	39.9	10.2	0	39.0	0.084	0.0368	16.2	44.8
10/23/01	20:02	0	25.1	23.6	25.0	24.3	22.8	49.9	59.8	10.3	40.1	10.2	0	38.8	0.084	0.0367	16.1	45.0
10/23/01	20:03	0	25.2	23.6	25.0	24.3	22.8	49.9	59.9	10.4	40.0	10.2	0	38.9	0.084	0.0367	16.1	45.0
10/23/01	20:04	0	25.2	23.6	25.0	24.4	22.9	49.7	59.7	10.3	40.0	10.1	0	39.0	0.084	0.0367	16.2	44.9
10/23/01	20:05	0	25.2	23.6	25.0	24.4	22.9	47.6	60.0	10.4	37.6	12.5	0	39.2	0.010	0.0044	16.3	42.6
10/23/01	20:06	0	25.2	23.6	25.0	24.5	23.0	49.0	59.4	10.2	39.7	10.7	0	38.9	0.100	0.0436	16.1	44.3
10/23/01	20:07	0	25.2	23.6	25.1	24.5	23.0	49.7	60.0	10.4	39.8	10.4	0	39.1	0.095	0.0414	16.2	44.7
10/23/01	20:08	0	25.3	23.6	25.1	24.5	23.1	50.0	60.2	10.3	39.3	10.3	0	39.0	0.093	0.0405	16.2	44.6
10/23/01	20:09	0	25.3	23.6	25.1	24.6	23.1	49.8	59.9	10.4	39.8	10.3	0	38.9	0.091	0.0397	16.2	44.8
10/23/01	20:10	0	25.3	23.6	25.1	24.6	23.0	49.9	60.0	10.3	39.7	10.2	0	39.0	0.091	0.0396	16.2	44.8
10/23/01	20:11	0	25.3	23.6	25.1	24.6	23.0	49.6	59.6	10.4	39.7	10.2	0	39.0	0.090	0.0392	16.2	44.6
10/23/01	20:12	0	25.3	23.6	25.1	24.5	23.0	50.0	60.0	10.4	39.8	10.2	0	39.2	0.089	0.0387	16.3	44.9
10/23/01	20:13	0	25.4	23.6	25.2	24.5	22.9	49.8	59.7	10.4	39.8	10.1	0	39.0	0.089	0.0387	16.2	44.8
10/23/01	20:14	0	25.4	23.6	25.2	24.4	22.9	49.9	59.9	10.4	40.0	10.1	0	38.9	0.088	0.0382	16.2	44.9
10/23/01	20:15	0	25.4	23.6	25.2	24.3	22.8	50.0	60.0	10.4	39.9	10.1	0	39.1	0.088	0.0382	16.2	45.0
10/23/01	20:16	0	25.4	23.7	25.2	24.3	22.8	49.9	59.8	10.3	40.1	10.1	0	39.1	0.088	0.0382	16.2	45.0
10/23/01	20:17	0	25.4	23.6	25.2	24.2	22.7	50.1	60.0	10.5	40.5	10.0	0	39.2	0.087	0.0378	16.3	45.3
10/23/01	20:18	0	25.4	23.7	25.2	24.2	22.7	50.0	59.8	10.4	39.7	10.0	0	39.2	0.087	0.0378	16.3	44.8
10/23/01	20:19	0	25.5	23.7	25.2	24.1	22.6	49.8	59.7	10.5	40.0	10.0	0	38.9	0.087	0.0377	16.2	44.9
10/23/01	20:20	0	25.4	23.7	25.2	24.1	22.6	49.5	59.4	10.3	39.7	10.0	0	39.0	0.086	0.0373	16.2	44.6
10/23/01	20:21	0	25.5	23.7	25.3	24.0	22.6	49.9	59.8	10.4	40.1	10.0	0	39.0	0.086	0.0373	16.2	45.0
10/23/01	20:22	0	25.5	23.7	25.2	24.0	22.5	50.1	59.9	10.4	40.1	10.0	0	38.7	0.086	0.0373	16.1	45.1
10/23/01	20:23	0	25.5	23.7	25.3	23.9	22.5	50.0	59.8	10.5	40.1	10.0	0	39.1	0.086	0.0372	16.2	45.0
10/23/01	20:24	0	25.5	23.7	25.3	23.9	22.5	50.2	60.1	10.5	39.5	10.0	0	39.2	0.086	0.0373	16.3	44.8
10/23/01	20:25	0	25.5	23.7	25.3	23.9	22.4	49.9	59.6	10.4	39.9	10.0	0	39.1	0.085	0.0368	16.2	44.9
10/23/01	20:26	0	25.6	23.6	25.3	23.9	22.4	49.9	59.7	10.4	40.0	9.9	0	39.4	0.085	0.0368	16.3	44.9
10/23/01	20:27	0	25.6	23.6	25.3	23.9	22.3	49.9	59.6	10.4	39.7	9.9	0	39.2	0.085	0.0368	16.2	44.8
10/23/01	20:28	0	25.6	23.6	25.3	23.8	22.2	50.3	60.1	10.5	40.2	9.9	0	39.1	0.085	0.0368	16.2	45.2
10/23/01	20:29	0	25.6	23.6	25.3	23.8	22.3	50.0	59.7	10.5	40.2	9.9	0	39.3	0.085	0.0368	16.3	45.1
10/23/01	20:30	0	25.6	23.6	25.3	23.8	22.3	50.1	59.9	10.4	40.1	9.9	0	39.2	0.084	0.0364	16.3	45.1
10/23/01	20:31	1	25.6	23.6	25.3	23.8	22.3	7.7	60.2	10.5	-2.8	52.4	53	39.0	0.010	0.0043	16.2	2.5
10/23/01	20:32	0	25.5	23.6	25.4	23.8	22.4	49.0	60.0	10.5	39.0	11.2	0	39.0	0.107	0.0462	16.2	44.0
10/23/01	20:33	0	25.6	23.6	25.3	23.8	22.4	49.6	60.0	10.5	39.2	10.5	0	39.0	0.095	0.0411	16.2	44.4
10/23/01	20:34	0	25.6	23.6	25.3	23.8	22.4	49.8	59.9	10.5	39.8	10.3	0	39.1	0.093	0.0402	16.2	44.8
10/23/01	20:35	0	25.6	23.6	25.3	23.9	22.5	49.4	59.4	10.3	39.5	10.2	0	39.0	0.091	0.0394	16.2	44.5
10/23/01	20:36	0	25.6	23.6	25.4	23.9	22.5	49.8	59.8	10.4	39.7	10.2	0	39.1	0.090	0.0389	16.2	44.8
10/23/01	20:37	0	25.6	23.6	25.4	23.9	22.6	49.8	59.7	10.4	40.2	10.1	0	39.0	0.090	0.0389	16.2	45.0
10/23/01	20:38	0	25.7	23.6	25.4	24.0	22.7	50.2	60.0	10.4	39.9	10.1	0	39.0	0.089	0.0384	16.2	45.0
10/23/01	20:39	0	25.6	23.6	25.4	24.0	22.7	50.2	60.0	10.5	40.4	10.0	0	39.0	0.088	0.0380	16.2	45.3
10/23/01	20:40	0	25.6	23.6	25.4	24.0	22.7	50.0	59.8	10.5	40.3	10.0	0	39.0	0.088	0.0380	16.2	45.2
10/23/01	20:41	0	25.6	23.6	25.4	24.1	22.7	50.2	59.9	10.4	40.4	9.9	0	38.9	0.088	0.0380	16.2	45.3
10/23/01	20:42	0	25.6	23.6	25.4	24.1	22.8	50.2	60.0	10.5	40.6	9.9	0	38.9	0.087	0.0376	16.1	45.4
10/23/01	20:43	0	25.6	23.6	25.4	24.2	22.8	50.2	59.7	10.4	40.4	9.8	0	38.9	0.087	0.0375	16.1	45.3
10/23/01	20:44	0	25.7	23.6	25.4	24.2	22.8	50.1	59.8	10.4	40.4	9.8	0	39.0	0.087	0.0376	16.2	45.3
10/23/01	20:45	0	25.6	23.6	25.5	24.2	22.9	50.7	60.3	10.4	40.3	9.8	0	38.9	0.086	0.0371	16.1	45.5
10/23/01	20:46	0	25.7	23.6	25.5	24.3	23.0	50.6	60.1	10.4	40.1	9.8	0	38.9	0.086	0.0371	16.2	45.3
10/23/01	20:47	0	25.6	23.6	25.5	24.4	23.0	50.0	59.6	10.3	40.2	9.7	0	38.8	0.086	0.0370	16.1	45.1
10/23/01	20:48	0	25.7	23.6	25.5	24.4	23.0	50.3	59.9	10.4	40.6	9.7	0	38.9	0.086	0.0370	16.1	45.4
10/23/01	20:49	0	25.7	23.6	25.5	24.4	23.0	50.8	60.3	10.4	40.5	9.7	0	38.8	0.085	0.0366	16.1	45.6
10/23/01	20:50	0	25.7	23.6	25.5	24.4	23.0	50.5	59.9	10.4	40.4	9.7	0	39.0	0.085	0.0366	16.2	45.4

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	20:51	0	25.7	23.6	25.5	24.4	23.0	50.6	60.1	10.3	40.5	9.6	0	38.7	0.085	0.0366	16.0	45.5
10/23/01	20:52	0	25.7	23.6	25.5	24.4	22.9	50.8	60.1	10.5	40.6	9.6	0	38.9	0.085	0.0366	16.1	45.7
10/23/01	20:53	0	25.7	23.6	25.5	24.3	22.9	50.4	59.9	10.3	40.5	9.6	0	38.9	0.085	0.0366	16.1	45.5
10/23/01	20:54	0	25.7	23.6	25.5	24.2	22.9	50.6	59.9	10.4	40.4	9.6	0	38.9	0.084	0.0362	16.1	45.5
10/23/01	20:55	0	25.7	23.6	25.5	24.2	22.8	50.5	59.9	10.4	40.5	9.6	0	39.0	0.084	0.0362	16.2	45.5
10/23/01	20:56	0	25.7	23.6	25.5	24.1	22.8	50.6	60.0	10.4	40.7	9.5	0	38.9	0.084	0.0362	16.1	45.6
10/23/01	20:57	0	25.7	23.6	25.5	24.1	22.7	50.6	60.0	10.4	40.8	9.5	0	38.9	0.084	0.0362	16.2	45.7
10/23/01	20:58	0	25.8	23.6	25.5	24.0	22.6	50.7	60.0	10.4	40.8	9.5	0	38.9	0.084	0.0361	16.1	45.8
10/23/01	20:59	0	25.8	23.6	25.5	24.0	22.6	50.5	59.7	10.3	40.9	9.5	0	38.7	0.084	0.0362	16.1	45.7
10/23/01	21:00	0	25.8	23.6	25.6	23.9	22.6	50.8	60.0	10.3	40.8	9.5	0	38.7	0.084	0.0361	16.0	45.8
10/23/01	21:01	0	25.8	23.6	25.5	23.9	22.5	50.6	59.9	10.3	40.7	9.5	0	38.6	0.084	0.0361	16.0	45.7
10/23/01	21:02	0	25.8	23.6	25.6	23.8	22.5	50.8	60.0	10.3	40.8	9.4	0	38.8	0.083	0.0356	16.1	45.8
10/23/01	21:03	0	25.9	23.6	25.6	23.8	22.4	50.6	59.8	10.3	40.9	9.4	0	38.7	0.083	0.0357	16.0	45.8
10/23/01	21:04	0	25.9	23.6	25.6	23.7	22.4	50.6	59.8	10.2	41.1	9.4	0	38.6	0.083	0.0356	16.0	45.9
10/23/01	21:05	0	25.9	23.6	25.6	23.7	22.3	51.0	60.3	10.3	41.0	9.4	0	38.7	0.083	0.0356	16.0	46.0
10/23/01	21:06	0	25.9	23.5	25.6	23.7	22.3	50.8	60.0	10.3	40.9	9.4	0	38.7	0.083	0.0356	16.1	45.8
10/23/01	21:07	0	25.9	23.5	25.6	23.6	22.3	51.0	60.3	10.4	40.6	9.4	0	38.7	0.083	0.0357	16.0	45.8
10/23/01	21:08	0	25.9	23.5	25.7	23.6	22.3	51.0	60.2	10.3	40.6	9.4	0	38.8	0.083	0.0356	16.1	45.8
10/23/01	21:09	0	25.9	23.5	25.6	23.6	22.3	50.5	59.5	10.3	40.8	9.3	0	38.8	0.082	0.0352	16.1	45.6
10/23/01	21:10	0	25.9	23.5	25.7	23.6	22.3	51.0	60.2	10.5	40.8	9.3	0	38.9	0.082	0.0351	16.1	45.9
10/23/01	21:11	0	25.9	23.5	25.7	23.7	22.4	51.0	60.1	10.4	41.0	9.3	0	38.9	0.082	0.0351	16.2	46.0
10/23/01	21:12	0	26.0	23.5	25.7	23.7	22.5	50.5	59.5	10.4	40.5	9.3	0	38.8	0.082	0.0351	16.1	45.5
10/23/01	21:13	0	25.9	23.5	25.2	23.7	22.5	51.0	60.2	10.3	41.0	9.2	0	38.8	0.081	0.0352	16.1	46.0
10/23/01	21:14	0	25.8	23.5	24.7	23.7	22.5	51.2	60.2	10.3	41.6	9.2	0	38.6	0.081	0.0357	16.0	46.4
10/23/01	21:15	0	25.6	23.5	24.5	23.8	22.5	48.4	60.0	10.2	38.7	11.9	0	38.6	0.010	0.0044	16.0	43.5
10/23/01	21:16	0	25.7	23.5	24.5	23.8	22.6	49.7	60.3	10.3	39.5	10.7	0	38.6	0.092	0.0408	16.0	44.6
10/23/01	21:17	0	25.6	23.5	24.6	23.8	22.6	49.9	60.2	10.3	39.6	10.5	0	38.8	0.088	0.0388	16.1	44.7
10/23/01	21:18	0	25.5	23.5	24.6	23.9	22.6	49.6	59.8	10.3	40.0	10.4	0	38.8	0.087	0.0384	16.1	44.8
10/23/01	21:19	0	25.4	23.5	24.7	23.9	22.7	49.8	60.0	10.3	40.2	10.3	0	38.7	0.086	0.0379	16.0	45.0
10/23/01	21:20	0	25.3	23.5	24.7	23.9	22.7	49.8	59.9	10.3	40.0	10.3	0	38.8	0.085	0.0375	16.1	44.9
10/23/01	21:21	0	25.3	23.5	24.7	23.9	22.7	50.0	60.2	10.3	40.0	10.3	0	38.8	0.085	0.0374	16.1	45.0
10/23/01	21:22	0	25.2	23.5	24.7	23.9	22.7	50.0	60.1	10.3	40.4	10.3	0	38.8	0.084	0.0370	16.1	45.2
10/23/01	21:23	0	25.1	23.5	24.8	24.0	22.8	49.8	59.9	10.4	40.1	10.2	0	38.7	0.084	0.0369	16.1	45.0
10/23/01	21:24	0	25.1	23.5	24.8	24.1	22.8	50.0	59.9	10.3	40.1	10.2	0	38.8	0.083	0.0365	16.1	45.1
10/23/01	21:25	0	25.1	23.5	24.8	24.1	22.8	50.3	60.4	10.3	40.1	10.2	0	38.8	0.083	0.0364	16.1	45.2
10/23/01	21:26	0	25.1	23.5	24.9	24.1	22.9	49.9	60.0	10.3	40.3	10.2	0	38.8	0.083	0.0364	16.1	45.1
10/23/01	21:27	0	25.1	23.5	24.9	24.1	23.0	50.1	60.1	10.3	40.3	10.2	0	38.9	0.083	0.0364	16.1	45.2
10/23/01	21:28	0	25.1	23.5	24.9	24.1	23.0	50.0	60.0	10.3	40.3	10.2	0	38.8	0.082	0.0359	16.1	45.1
10/23/01	21:29	0	25.1	23.5	24.9	24.2	23.0	50.1	60.0	10.3	40.2	10.2	0	38.8	0.082	0.0359	16.1	45.1
10/23/01	21:30	0	25.1	23.5	24.9	24.2	22.9	49.8	59.8	10.3	40.2	10.2	0	38.9	0.082	0.0359	16.1	45.0
10/23/01	21:31	0	25.1	23.5	24.9	24.1	22.8	49.9	60.0	10.4	40.1	10.1	0	38.8	0.082	0.0359	16.1	45.0
10/23/01	21:32	0	25.2	23.5	25.0	24.1	22.7	50.0	59.9	10.3	39.9	10.1	0	38.9	0.082	0.0358	16.1	44.9
10/23/01	21:33	0	25.2	23.5	24.9	24.0	22.7	50.3	60.3	10.3	40.0	10.1	0	38.8	0.081	0.0354	16.1	45.2
10/23/01	21:34	0	25.2	23.5	25.0	24.0	22.6	50.0	59.9	10.3	40.4	10.1	0	38.8	0.081	0.0354	16.1	45.2
10/23/01	21:35	0	25.2	23.5	24.9	23.9	22.6	50.2	60.1	10.3	40.1	10.1	0	38.9	0.081	0.0354	16.1	45.2
10/23/01	21:36	0	25.2	23.5	25.0	23.9	22.5	50.2	60.2	10.3	40.4	10.1	0	38.6	0.081	0.0353	16.0	45.3
10/23/01	21:37	0	25.3	23.5	25.0	23.8	22.4	50.3	60.4	10.4	40.1	10.1	0	38.5	0.081	0.0353	16.0	45.2
10/23/01	21:38	0	25.3	23.5	25.1	23.7	22.3	50.4	60.4	10.4	40.3	10.1	0	38.9	0.081	0.0353	16.2	45.3
10/23/01	21:39	0	25.3	23.6	25.1	23.7	22.3	50.3	60.1	10.3	40.4	10.1	0	38.8	0.081	0.0353	16.1	45.3
10/23/01	21:40	0	25.3	23.5	25.1	23.6	22.2	50.1	60.0	10.5	40.2	10.1	0	39.1	0.080	0.0349	16.2	45.1

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	21:41	0	25.3	23.5	25.1	23.5	22.2	50.1	60.0	10.4	40.3	10.1	0	39.0	0.080	0.0349	16.2	45.2
10/23/01	21:42	0	25.3	23.5	25.0	23.5	22.1	50.3	60.2	10.5	40.0	10.1	0	39.0	0.080	0.0349	16.2	45.2
10/23/01	21:43	0	25.3	23.5	25.1	23.4	22.1	50.4	60.2	10.5	40.1	10.1	0	38.9	0.080	0.0348	16.1	45.3
10/23/01	21:44	0	25.4	23.5	25.1	23.4	22.2	50.4	60.3	10.4	40.4	10.0	0	39.0	0.080	0.0349	16.2	45.4
10/23/01	21:45	0	25.4	23.5	25.2	23.4	22.2	50.3	60.0	10.4	40.1	10.0	0	39.1	0.080	0.0348	16.2	45.2
10/23/01	21:46	0	25.4	23.5	25.1	23.5	22.3	50.2	60.0	10.5	40.1	10.0	0	39.0	0.080	0.0348	16.2	45.1
10/23/01	21:47	0	25.4	23.5	25.2	23.5	22.3	50.1	59.8	10.3	40.3	10.0	0	38.8	0.080	0.0348	16.1	45.2
10/23/01	21:48	0	25.4	23.5	25.2	23.5	22.3	50.1	60.0	10.3	40.5	10.0	0	38.8	0.079	0.0344	16.1	45.3
10/23/01	21:49	0	25.4	23.5	25.2	23.6	22.3	50.2	60.1	10.4	40.2	10.0	0	38.8	0.079	0.0343	16.1	45.2
10/23/01	21:50	0	25.4	23.4	25.2	23.6	22.3	50.3	60.1	10.3	40.4	10.0	0	38.8	0.079	0.0343	16.1	45.3
10/23/01	21:51	0	25.4	23.4	25.2	23.6	22.4	50.5	60.4	10.4	40.4	10.0	0	38.9	0.079	0.0343	16.1	45.4
10/23/01	21:52	0	25.5	23.4	25.2	23.6	22.4	50.2	60.1	10.5	40.4	10.0	0	39.0	0.079	0.0343	16.2	45.3
10/23/01	21:53	0	25.5	23.4	25.3	23.6	22.5	50.5	60.2	10.4	40.3	10.0	0	39.1	0.079	0.0343	16.2	45.4
10/23/01	21:54	0	25.5	23.5	25.3	23.7	22.5	50.3	60.0	10.4	40.3	10.0	0	38.9	0.079	0.0342	16.2	45.3
10/23/01	21:55	0	25.5	23.5	25.2	23.8	22.5	50.1	59.9	10.4	40.4	10.0	0	38.9	0.079	0.0343	16.2	45.2
10/23/01	21:56	0	25.5	23.4	25.3	23.8	22.6	50.2	60.1	10.5	40.3	10.0	0	39.0	0.079	0.0342	16.2	45.2
10/23/01	21:57	0	25.4	23.4	25.3	23.8	22.6	47.7	60.2	10.5	37.8	12.6	0	39.0	0.010	0.0043	16.2	42.8
10/23/01	21:58	0	25.5	23.4	25.3	23.8	22.6	49.9	60.2	10.6	39.7	10.5	0	39.1	0.092	0.0398	16.2	44.8
10/23/01	21:59	0	25.5	23.4	25.3	23.8	22.6	49.9	60.1	10.5	40.0	10.3	0	39.0	0.088	0.0381	16.2	45.0
10/23/01	22:00	0	25.5	23.4	25.3	23.8	22.7	49.9	59.9	10.4	39.9	10.2	0	39.0	0.086	0.0372	16.2	44.9
10/23/01	22:01	0	25.5	23.4	25.3	23.9	22.7	50.3	60.4	10.5	40.3	10.1	0	39.0	0.086	0.0372	16.2	45.3
10/23/01	22:02	0	25.6	23.5	25.3	23.9	22.8	49.9	60.0	10.4	40.0	10.1	0	39.1	0.085	0.0368	16.2	45.0
10/23/01	22:03	0	25.5	23.4	25.3	24.0	22.8	50.0	59.8	10.5	40.1	10.1	0	39.1	0.084	0.0363	16.2	45.0
10/23/01	22:04	0	25.6	23.4	25.4	24.0	22.8	49.8	59.8	10.5	40.0	10.0	0	39.1	0.084	0.0363	16.2	44.9
10/23/01	22:05	0	25.5	23.4	25.4	24.0	22.8	50.3	60.1	10.5	40.1	10.0	0	39.0	0.084	0.0363	16.2	45.2
10/23/01	22:06	0	25.5	23.4	25.4	24.1	22.9	50.1	59.9	10.5	40.3	10.0	0	39.0	0.083	0.0359	16.2	45.2
10/23/01	22:07	0	25.6	23.5	25.4	24.1	22.9	50.4	60.2	10.5	40.2	10.0	0	39.1	0.083	0.0358	16.2	45.3
10/23/01	22:08	0	25.6	23.5	25.4	24.1	23.0	50.8	60.7	10.5	40.5	10.0	0	39.0	0.083	0.0359	16.2	45.6
10/23/01	22:09	0	25.6	23.5	25.4	24.1	23.0	50.4	60.2	10.5	40.2	10.0	0	39.0	0.083	0.0358	16.2	45.3
10/23/01	22:10	0	25.6	23.5	25.4	24.1	23.0	50.5	60.5	10.5	40.3	9.9	0	39.0	0.082	0.0354	16.2	45.4
10/23/01	22:11	0	25.6	23.5	25.4	24.1	23.0	49.9	59.6	10.5	40.1	9.9	0	39.0	0.082	0.0354	16.2	45.0
10/23/01	22:12	0	25.6	23.5	25.4	24.2	23.0	50.2	59.9	10.5	39.9	9.9	0	39.0	0.082	0.0354	16.2	45.0
10/23/01	22:13	0	25.7	23.5	25.4	24.1	22.9	50.3	60.2	10.4	40.3	9.9	0	38.9	0.081	0.0349	16.1	45.3
10/23/01	22:14	0	25.7	23.5	25.4	24.0	22.8	50.1	59.8	10.4	40.3	9.9	0	39.4	0.081	0.0350	16.3	45.2
10/23/01	22:15	0	25.7	23.5	25.4	23.9	22.7	50.7	60.3	10.6	40.2	9.9	0	39.0	0.081	0.0350	16.2	45.4
10/23/01	22:16	0	25.7	23.5	25.4	23.8	22.7	50.6	60.2	10.5	40.2	9.9	0	39.0	0.081	0.0350	16.2	45.4
10/23/01	22:17	0	25.7	23.5	25.4	23.8	22.6	50.2	59.9	10.5	40.2	9.9	0	39.0	0.081	0.0350	16.2	45.2
10/23/01	22:18	0	25.7	23.5	25.4	23.7	22.5	50.2	60.0	10.4	40.7	9.9	0	39.0	0.081	0.0349	16.2	45.4
10/23/01	22:19	0	25.7	23.5	25.4	23.6	22.4	50.5	60.2	10.5	40.2	9.8	0	39.1	0.080	0.0345	16.2	45.4
10/23/01	22:20	0	25.7	23.5	25.5	23.6	22.4	50.9	60.7	10.5	40.3	9.8	0	39.0	0.080	0.0345	16.2	45.6
10/23/01	22:21	0	25.7	23.5	25.4	23.5	22.3	50.3	59.9	10.5	40.3	9.8	0	38.9	0.080	0.0345	16.1	45.3
10/23/01	22:22	0	25.7	23.5	25.5	23.5	22.3	50.5	60.3	10.6	39.9	9.8	0	38.9	0.080	0.0345	16.1	45.2
10/23/01	22:23	0	25.8	23.5	25.5	23.4	22.2	50.3	60.0	10.5	40.3	9.8	0	39.0	0.080	0.0345	16.2	45.3
10/23/01	22:24	0	25.7	23.5	25.5	23.3	22.2	47.7	60.2	10.6	37.4	12.5	0	39.0	0.010	0.0043	16.2	42.6
10/23/01	22:25	0	25.8	23.5	25.5	23.3	22.2	49.3	60.2	10.5	38.9	11.0	0	39.1	0.091	0.0392	16.2	44.1
10/23/01	22:26	0	25.8	23.5	25.6	23.3	22.2	49.3	59.8	10.5	39.7	10.7	0	38.9	0.087	0.0374	16.1	44.5
10/23/01	22:27	0	25.7	23.5	25.5	23.3	22.2	49.5	60.0	10.5	39.4	10.6	0	39.0	0.086	0.0370	16.2	44.5
10/23/01	22:28	0	25.8	23.4	25.6	23.3	22.2	49.8	60.2	10.5	39.5	10.5	0	39.0	0.085	0.0365	16.2	44.6
10/23/01	22:29	0	25.8	23.4	25.6	23.3	22.2	49.7	60.0	10.5	39.6	10.5	0	38.9	0.084	0.0361	16.1	44.7
10/23/01	22:30	0	25.8	23.4	25.6	23.3	22.3	50.0	60.4	10.5	40.0	10.5	0	38.9	0.084	0.0361	16.2	45.0

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	22:31	0	25.8	23.4	25.6	23.3	22.3	50.0	60.2	10.4	40.2	10.4	0	38.8	0.083	0.0357	16.1	45.1
10/23/01	22:32	0	25.9	23.4	25.6	23.4	22.3	50.2	60.4	10.5	40.0	10.4	0	38.9	0.083	0.0356	16.1	45.1
10/23/01	22:33	0	25.8	23.4	25.6	23.4	22.3	49.8	60.0	10.5	39.7	10.4	0	38.9	0.083	0.0356	16.1	44.8
10/23/01	22:34	0	25.8	23.4	25.6	23.4	22.4	49.9	60.0	10.4	39.9	10.4	0	38.9	0.082	0.0352	16.1	44.9
10/23/01	22:35	0	25.8	23.4	25.6	23.4	22.4	49.7	59.9	10.5	40.0	10.3	0	38.9	0.082	0.0352	16.2	44.8
10/23/01	22:36	0	25.9	23.4	25.6	23.5	22.4	50.1	60.2	10.6	39.9	10.3	0	38.9	0.082	0.0352	16.1	45.0
10/23/01	22:37	0	25.9	23.4	25.7	23.5	22.5	50.1	60.2	10.5	39.8	10.3	0	38.9	0.082	0.0351	16.1	44.9
10/23/01	22:38	0	25.9	23.4	25.7	23.5	22.5	50.0	60.1	10.5	39.9	10.3	0	38.9	0.081	0.0347	16.1	45.0
10/23/01	22:39	0	25.9	23.4	25.7	23.5	22.5	50.0	60.2	10.5	39.9	10.3	0	38.8	0.081	0.0347	16.1	45.0
10/23/01	22:40	0	25.9	23.4	25.7	23.6	22.6	49.8	59.9	10.5	40.1	10.3	0	38.9	0.081	0.0347	16.1	44.9
10/23/01	22:41	0	25.9	23.4	25.7	23.6	22.6	50.2	60.3	10.4	40.1	10.3	0	38.9	0.081	0.0347	16.1	45.1
10/23/01	22:42	0	25.9	23.4	25.7	23.7	22.6	50.4	60.5	10.5	40.1	10.2	0	38.7	0.081	0.0347	16.1	45.2
10/23/01	22:43	0	25.9	23.4	25.7	23.6	22.6	50.1	60.2	10.4	39.9	10.2	0	38.8	0.080	0.0342	16.1	45.0
10/23/01	22:44	0	25.9	23.4	25.7	23.6	22.7	50.2	60.1	10.5	40.2	10.2	0	38.9	0.080	0.0342	16.1	45.2
10/23/01	22:45	0	26.0	23.4	25.7	23.7	22.7	50.1	60.1	10.5	40.1	10.2	0	38.9	0.080	0.0342	16.2	45.1
10/23/01	22:46	0	26.0	23.4	25.8	23.8	22.7	49.8	59.8	10.5	40.0	10.2	0	38.9	0.080	0.0342	16.1	44.9
10/23/01	22:47	0	26.0	23.4	25.7	23.8	22.7	50.4	60.5	10.5	40.0	10.2	0	39.0	0.080	0.0342	16.2	45.2
10/23/01	22:48	0	26.0	23.4	25.8	23.8	22.8	50.4	60.4	10.4	40.2	10.2	0	38.8	0.080	0.0342	16.1	45.3
10/23/01	22:49	0	26.0	23.4	25.7	23.8	22.8	50.0	60.0	10.5	40.3	10.2	0	38.8	0.080	0.0342	16.1	45.1
10/23/01	22:50	0	26.0	23.4	25.8	23.8	22.8	50.5	60.6	10.6	40.2	10.2	0	38.9	0.080	0.0342	16.2	45.4
10/23/01	22:51	0	26.0	23.4	25.8	23.8	22.8	50.2	60.2	10.4	40.2	10.2	0	38.9	0.079	0.0338	16.1	45.2
10/23/01	22:52	0	26.0	23.4	25.8	23.8	22.9	50.2	60.2	10.5	40.0	10.2	0	38.9	0.079	0.0337	16.1	45.1
10/23/01	22:53	0	26.0	23.4	25.8	23.8	22.9	50.4	60.4	10.5	39.8	10.1	0	38.8	0.079	0.0337	16.1	45.1
10/23/01	22:54	0	26.1	23.4	25.8	23.8	22.9	50.3	60.3	10.6	40.3	10.1	0	38.8	0.079	0.0338	16.1	45.3
10/23/01	22:55	0	26.1	23.4	25.8	23.9	22.9	50.4	60.4	10.5	40.4	10.1	0	39.2	0.079	0.0337	16.3	45.4
10/23/01	22:56	0	26.1	23.4	25.8	23.8	22.9	50.0	59.9	10.6	40.2	10.1	0	38.9	0.079	0.0337	16.1	45.1
10/23/01	22:57	0	26.1	23.4	25.8	23.9	23.0	50.2	60.0	10.5	40.0	10.1	0	39.0	0.079	0.0337	16.2	45.1
10/23/01	22:58	0	26.1	23.4	25.8	23.9	23.0	50.3	60.3	10.5	40.3	10.1	0	39.0	0.079	0.0337	16.2	45.3
10/23/01	22:59	0	26.1	23.4	25.8	23.9	23.0	50.1	60.1	10.5	40.0	10.1	0	38.8	0.079	0.0337	16.1	45.1
10/23/01	23:00	0	26.1	23.4	25.8	23.9	23.0	50.2	60.3	10.4	40.5	10.1	0	38.9	0.078	0.0333	16.1	45.3
10/23/01	23:01	0	26.1	23.4	25.9	23.9	23.0	50.5	60.5	10.5	40.2	10.1	0	38.9	0.078	0.0332	16.2	45.3
10/23/01	23:02	0	26.1	23.4	25.8	23.9	22.9	50.4	60.2	10.5	40.0	10.1	0	38.8	0.078	0.0333	16.1	45.2
10/23/01	23:03	0	26.1	23.4	25.9	23.8	22.8	50.6	60.6	10.6	40.3	10.1	0	38.8	0.078	0.0332	16.1	45.5
10/23/01	23:04	0	26.1	23.4	25.8	23.8	22.8	50.1	60.0	10.5	40.3	10.1	0	38.8	0.078	0.0333	16.1	45.2
10/23/01	23:05	0	26.1	23.4	25.9	23.7	22.7	50.2	60.2	10.6	40.1	10.1	0	38.8	0.078	0.0332	16.1	45.2
10/23/01	23:06	0	26.1	23.4	25.8	23.6	22.6	50.5	60.4	10.5	40.3	10.1	0	38.9	0.078	0.0333	16.1	45.4
10/23/01	23:07	0	26.1	23.5	25.9	23.6	22.5	50.7	60.8	10.5	40.1	10.1	0	38.7	0.078	0.0333	16.1	45.4
10/23/01	23:08	0	26.2	23.5	25.9	23.5	22.5	50.4	60.4	10.5	40.3	10.1	0	38.9	0.078	0.0332	16.2	45.3
10/23/01	23:09	0	26.1	23.5	25.9	23.4	22.4	50.4	60.3	10.5	40.4	10.1	0	38.8	0.078	0.0333	16.1	45.4
10/23/01	23:10	0	26.2	23.5	25.9	23.4	22.3	50.3	60.2	10.4	40.4	10.0	0	38.8	0.078	0.0332	16.1	45.4
10/23/01	23:11	0	26.2	23.5	25.9	23.3	22.3	50.7	60.7	10.5	40.7	10.0	0	38.8	0.077	0.0328	16.1	45.7
10/23/01	23:12	0	26.2	23.5	25.9	23.3	22.2	50.2	60.1	10.5	40.2	10.0	0	38.7	0.077	0.0328	16.1	45.2
10/23/01	23:13	0	26.2	23.5	25.7	23.3	22.2	50.5	60.4	10.4	40.0	10.0	0	38.6	0.077	0.0329	16.0	45.2
10/23/01	23:14	0	26.1	23.5	25.1	23.2	22.2	50.4	60.3	10.3	40.2	10.0	0	38.6	0.076	0.0331	16.0	45.3
10/23/01	23:15	0	26.0	23.4	24.6	23.2	22.2	50.4	60.1	10.3	40.6	9.9	0	38.5	0.075	0.0332	16.0	45.5
10/23/01	23:16	0	25.9	23.4	24.4	23.1	22.2	47.9	60.4	10.2	38.0	12.6	0	38.5	0.010	0.0044	16.0	43.0
10/23/01	23:17	0	25.9	23.4	24.4	23.1	22.2	49.9	60.3	10.4	39.9	10.5	0	38.5	0.085	0.0377	16.0	44.9
10/23/01	23:18	0	25.8	23.4	24.5	23.1	22.3	50.0	60.3	10.2	40.0	10.4	0	38.5	0.083	0.0367	16.0	45.0
10/23/01	23:19	0	25.7	23.4	24.5	23.1	22.3	49.9	60.1	10.3	40.3	10.3	0	38.6	0.082	0.0363	16.0	45.1
10/23/01	23:20	0	25.6	23.4	24.6	23.1	22.3	50.2	60.4	10.3	40.1	10.3	0	38.6	0.081	0.0358	16.0	45.1

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/23/01	23:21	0	25.4	23.4	24.6	23.2	22.3	50.3	60.5	10.3	40.3	10.3	0	38.6	0.080	0.0353	16.0	45.3
10/23/01	23:22	0	25.3	23.4	24.7	23.2	22.4	50.2	60.3	10.4	40.2	10.2	0	38.6	0.080	0.0353	16.0	45.2
10/23/01	23:23	0	25.2	23.4	24.7	23.3	22.4	50.2	60.1	10.4	40.4	10.2	0	38.6	0.080	0.0352	16.0	45.3
10/23/01	23:24	0	25.2	23.4	24.7	23.3	22.4	50.2	60.3	10.3	40.5	10.2	0	38.6	0.079	0.0348	16.0	45.4
10/23/01	23:25	0	25.1	23.4	24.7	23.3	22.4	50.1	60.0	10.4	40.5	10.2	0	38.6	0.079	0.0347	16.0	45.3
10/23/01	23:26	0	25.1	23.4	24.7	23.4	22.4	50.1	60.2	10.3	40.5	10.2	0	38.7	0.079	0.0347	16.1	45.3
10/23/01	23:27	0	25.1	23.4	24.8	23.4	22.4	50.2	60.2	10.3	40.6	10.2	0	38.7	0.078	0.0343	16.0	45.4
10/23/01	23:28	0	25.0	23.3	24.8	23.4	22.4	50.1	60.0	10.3	40.5	10.1	0	38.6	0.078	0.0343	16.0	45.3
10/23/01	23:29	0	25.1	23.4	24.8	23.4	22.5	50.4	60.4	10.3	40.5	10.1	0	38.7	0.078	0.0342	16.0	45.4
10/23/01	23:30	0	25.1	23.4	24.8	23.5	22.5	50.2	60.3	10.3	40.3	10.1	0	38.5	0.078	0.0342	16.0	45.3
10/23/01	23:31	0	25.1	23.4	24.9	23.4	22.5	50.5	60.5	10.3	40.3	10.1	0	38.6	0.078	0.0342	16.0	45.4
10/23/01	23:32	0	25.1	23.4	24.9	23.5	22.6	50.5	60.5	10.3	40.3	10.1	0	38.7	0.078	0.0342	16.1	45.4
10/23/01	23:33	0	25.1	23.4	24.9	23.6	22.6	50.5	60.5	10.4	40.3	10.1	0	38.7	0.078	0.0341	16.1	45.4
10/23/01	23:34	0	25.1	23.4	24.9	23.6	22.6	50.2	60.1	10.4	40.6	10.1	0	38.7	0.077	0.0337	16.1	45.4
10/23/01	23:35	0	25.1	23.3	25.0	23.6	22.7	50.5	60.5	10.4	40.4	10.1	0	38.8	0.077	0.0336	16.1	45.5
10/23/01	23:36	0	25.2	23.4	25.0	23.6	22.7	50.3	60.1	10.4	40.5	10.1	0	38.8	0.077	0.0336	16.1	45.4
10/23/01	23:37	0	25.2	23.4	25.0	23.6	22.8	50.4	60.3	10.4	40.5	10.1	0	38.7	0.077	0.0336	16.1	45.4
10/23/01	23:38	0	25.2	23.4	25.1	23.7	22.8	50.6	60.6	10.4	40.6	10.1	0	38.9	0.077	0.0336	16.1	45.6
10/23/01	23:39	0	25.2	23.4	25.1	23.7	22.8	50.1	59.9	10.4	40.3	10.1	0	38.7	0.077	0.0336	16.1	45.2
10/23/01	23:40	0	25.3	23.4	25.1	23.8	22.8	50.5	60.3	10.4	40.4	10.0	0	39.0	0.077	0.0336	16.2	45.5
10/23/01	23:41	0	25.3	23.4	25.0	23.7	22.8	50.3	60.1	10.4	40.5	10.0	0	38.8	0.077	0.0336	16.1	45.4
10/23/01	23:42	0	25.3	23.4	25.1	23.7	22.8	50.5	60.4	10.5	40.4	10.0	0	38.9	0.077	0.0335	16.1	45.4
10/23/01	23:43	0	25.3	23.4	25.1	23.7	22.9	50.4	60.1	10.4	40.6	10.0	0	38.9	0.076	0.0331	16.1	45.5
10/23/01	23:44	0	25.4	23.4	25.2	23.8	22.9	50.5	60.4	10.4	40.4	10.0	0	38.8	0.076	0.0330	16.1	45.5
10/23/01	23:45	0	25.4	23.4	25.2	23.7	22.9	50.6	60.5	10.5	40.5	10.0	0	38.9	0.076	0.0330	16.1	45.5
10/23/01	23:46	0	25.4	23.4	25.2	23.7	22.9	50.6	60.7	10.5	40.4	10.0	0	38.7	0.076	0.0330	16.1	45.5
10/23/01	23:47	0	25.4	23.4	25.2	23.8	22.9	50.5	60.4	10.5	40.4	10.0	0	38.8	0.076	0.0330	16.1	45.5
10/23/01	23:48	0	25.4	23.4	25.2	23.8	22.9	50.4	60.2	10.4	40.3	10.0	0	38.9	0.076	0.0330	16.1	45.3
10/23/01	23:49	0	25.5	23.4	25.2	23.8	23.0	50.5	60.4	10.4	40.6	10.0	0	38.8	0.076	0.0330	16.1	45.5
10/23/01	23:50	0	25.5	23.4	25.3	23.8	23.0	50.7	60.6	10.5	40.5	10.0	0	38.8	0.076	0.0329	16.1	45.6
10/23/01	23:51	0	25.5	23.4	25.3	23.8	23.0	50.4	60.1	10.4	40.4	10.0	0	38.8	0.076	0.0329	16.1	45.4
10/23/01	23:52	0	25.5	23.4	25.3	23.8	22.9	50.8	60.7	10.6	40.4	10.0	0	38.9	0.076	0.0329	16.2	45.6
10/23/01	23:53	0	25.5	23.4	25.3	23.8	22.9	50.3	60.0	10.4	40.5	10.0	0	39.0	0.076	0.0329	16.2	45.4
10/23/01	23:54	0	25.5	23.4	25.3	23.7	22.8	50.5	60.3	10.5	40.4	10.0	0	38.9	0.076	0.0329	16.1	45.4
10/23/01	23:55	0	25.6	23.4	25.3	23.7	22.7	50.3	60.2	10.5	40.3	10.0	0	38.9	0.076	0.0329	16.1	45.3
10/23/01	23:56	0	25.6	23.4	25.3	23.6	22.7	50.3	60.0	10.4	40.5	10.0	0	38.8	0.075	0.0325	16.1	45.4
10/23/01	23:57	0	25.6	23.4	25.3	23.5	22.6	50.4	60.3	10.4	40.3	10.0	0	38.8	0.075	0.0324	16.1	45.4
10/23/01	23:58	0	25.6	23.4	25.3	23.5	22.5	50.9	60.7	10.5	40.4	10.0	0	38.7	0.075	0.0325	16.1	45.6
10/23/01	23:59	0	25.6	23.4	25.4	23.4	22.4	50.3	60.0	10.4	40.7	10.0	0	38.9	0.075	0.0324	16.2	45.5
10/24/01	0:00	0	25.6	23.4	25.4	23.4	22.3	50.7	60.5	10.5	40.4	9.9	0	38.8	0.075	0.0324	16.1	45.5
10/24/01	0:01	0	25.6	23.4	25.4	23.3	22.3	50.3	60.1	10.5	40.7	9.9	0	38.8	0.075	0.0324	16.1	45.5
10/24/01	0:02	0	25.6	23.4	25.3	23.3	22.2	50.5	60.3	10.3	40.5	9.9	0	38.7	0.075	0.0324	16.1	45.5
10/24/01	0:03	0	25.7	23.4	25.4	23.2	22.1	50.5	60.3	10.4	40.3	9.9	0	38.9	0.075	0.0324	16.2	45.4
10/24/01	0:04	0	25.7	23.4	25.4	23.2	22.1	50.1	59.8	10.4	40.5	9.9	0	38.9	0.075	0.0324	16.2	45.3
10/24/01	0:05	0	25.7	23.4	25.4	23.1	22.1	50.5	60.3	10.4	40.7	9.9	0	38.8	0.075	0.0324	16.1	45.6
10/24/01	0:06	0	25.7	23.3	25.4	23.1	22.1	50.5	60.2	10.4	40.3	9.9	0	38.9	0.075	0.0324	16.1	45.4
10/24/01	0:07	0	25.7	23.3	25.4	23.1	22.1	50.6	60.4	10.5	40.6	9.9	0	38.9	0.075	0.0324	16.1	45.6
10/24/01	0:08	0	25.7	23.3	25.5	23.1	22.1	50.3	60.1	10.4	40.6	9.9	0	38.9	0.075	0.0323	16.2	45.5
10/24/01	0:09	0	25.7	23.3	25.4	23.0	22.1	50.7	60.5	10.6	40.3	9.9	0	38.8	0.075	0.0323	16.1	45.5
10/24/01	0:10	0	25.7	23.3	25.5	23.0	22.1	50.2	59.9	10.4	40.3	9.9	0	38.9	0.075	0.0323	16.2	45.3

Xflow2_102301_1011

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	0:11	0	25.8	23.3	25.5	23.1	22.1	50.5	60.4	10.5	40.7	9.9	0	38.8	0.074	0.0319	16.1	45.6
10/24/01	0:12	0	25.7	23.3	25.5	23.1	22.2	50.5	60.3	10.5	40.4	9.9	0	38.9	0.074	0.0319	16.1	45.5
10/24/01	0:13	0	25.8	23.3	25.5	23.1	22.2	50.8	60.5	10.5	40.5	9.9	0	39.0	0.074	0.0319	16.2	45.6
10/24/01	0:14	0	25.8	23.3	25.6	23.1	22.2	50.6	60.3	10.5	40.2	9.9	0	38.8	0.074	0.0318	16.1	45.4
10/24/01	0:15	0	25.8	23.3	25.5	23.1	22.3	50.1	59.7	10.5	40.5	9.9	0	38.8	0.074	0.0319	16.1	45.3
10/24/01	0:16	0	25.8	23.3	25.6	23.1	22.3	50.7	60.4	10.5	40.3	9.9	0	38.9	0.074	0.0318	16.1	45.5
10/24/01	0:17	0	25.8	23.3	25.6	23.2	22.3	50.8	60.6	10.5	40.6	9.9	0	38.9	0.074	0.0318	16.1	45.7
10/24/01	0:18	0	25.8	23.3	25.6	23.3	22.4	50.4	60.1	10.4	40.6	9.9	0	38.9	0.074	0.0318	16.1	45.5
10/24/01	0:19	0	25.8	23.3	25.6	23.3	22.4	50.5	60.3	10.5	40.4	9.9	0	38.8	0.074	0.0318	16.1	45.5
10/24/01	0:20	0	25.8	23.3	25.6	23.3	22.5	50.6	60.4	10.6	40.6	9.9	0	38.9	0.074	0.0318	16.1	45.6
10/24/01	0:21	0	25.9	23.3	25.6	23.3	22.5	50.4	60.2	10.5	40.6	9.9	0	38.9	0.074	0.0318	16.1	45.5
10/24/01	0:22	0	25.9	23.3	25.6	23.3	22.5	50.6	60.2	10.5	40.5	9.9	0	38.9	0.074	0.0318	16.2	45.5
10/24/01	0:23	0	25.9	23.3	25.7	23.4	22.6	50.4	60.1	10.5	40.8	9.9	0	38.7	0.074	0.0317	16.1	45.6
10/24/01	0:24	0	25.9	23.3	25.6	23.4	22.7	50.7	60.5	10.5	40.5	9.9	0	38.7	0.074	0.0318	16.0	45.6
																Average	16.1	45.4
10/24/01	0:25	0	25.9	23.3	25.7	23.5	22.7	50.4	60.0	10.5	40.7	9.9	0	38.9	0.073	0.0313	16.2	45.5
10/24/01	0:26	0	25.9	23.3	25.7	23.5	22.8	50.6	60.4	10.6	40.5	9.9	0	38.9	0.075	0.0322	16.1	45.5
10/24/01	0:27	0	25.9	23.3	25.7	23.5	22.7	50.6	60.3	10.5	40.7	9.9	0	38.9	0.074	0.0317	16.1	45.7
10/24/01	0:28	1	25.8	23.3	25.7	23.5	22.8	9.5	60.4	10.5	-0.4	50.8	53	38.8	0.010	0.0043	16.1	4.5
10/24/01	0:29	0	25.9	23.3	25.7	23.5	22.8	49.6	60.2	10.5	39.5	10.8	0	38.9	0.089	0.0381	16.1	44.5
10/24/01	0:30	0	25.9	23.3	25.7	23.6	22.8	49.9	60.2	10.5	39.8	10.4	0	38.9	0.083	0.0355	16.1	44.8
10/24/01	0:31	0	25.9	23.3	25.7	23.5	22.8	49.7	59.9	10.5	40.2	10.3	0	38.9	0.082	0.0351	16.1	45.0
10/24/01	0:32	0	25.9	23.3	25.7	23.5	22.8	50.0	59.9	10.5	40.3	10.2	0	38.8	0.081	0.0347	16.1	45.1
10/24/01	0:33	0	25.9	23.3	25.7	23.5	22.8	49.9	59.9	10.6	40.2	10.2	0	38.9	0.081	0.0347	16.1	45.0
10/24/01	0:34	0	25.9	23.3	25.7	23.5	22.8	50.4	60.3	10.5	40.5	10.2	0	38.9	0.080	0.0342	16.1	45.4
10/24/01	0:35	0	25.9	23.3	25.7	23.5	22.9	50.3	60.3	10.5	40.3	10.1	0	38.8	0.080	0.0342	16.1	45.3
10/24/01	0:36	0	26.0	23.3	25.8	23.6	22.9	50.6	60.7	10.5	40.0	10.1	0	38.8	0.079	0.0338	16.1	45.3
10/24/01	0:37	0	26.0	23.3	25.8	23.6	22.9	50.1	60.0	10.6	40.1	10.1	0	38.8	0.079	0.0338	16.1	45.1
10/24/01	0:38	0	26.0	23.3	25.8	23.6	22.9	50.2	60.2	10.6	40.3	10.1	0	38.9	0.079	0.0337	16.1	45.2
10/24/01	0:39	0	26.0	23.3	25.8	23.6	22.9	50.6	60.6	10.6	40.2	10.0	0	38.8	0.079	0.0338	16.1	45.4
10/24/01	0:40	0	26.0	23.3	25.8	23.6	22.8	50.3	60.2	10.5	40.6	10.0	0	38.8	0.078	0.0333	16.1	45.5
10/24/01	0:41	0	26.1	23.3	25.8	23.6	22.8	50.2	59.9	10.5	40.3	10.0	0	38.8	0.078	0.0333	16.1	45.2
10/24/01	0:42	0	26.0	23.3	25.8	23.5	22.7	50.4	60.2	10.5	40.3	10.0	0	38.7	0.078	0.0333	16.1	45.3
10/24/01	0:43	0	26.1	23.3	25.8	23.4	22.6	50.6	60.4	10.6	40.2	10.0	0	38.9	0.078	0.0333	16.1	45.4
10/24/01	0:44	0	26.1	23.4	25.8	23.4	22.5	50.1	60.0	10.5	40.3	10.0	0	38.8	0.078	0.0333	16.1	45.2
10/24/01	0:45	0	26.0	23.4	25.8	23.3	22.5	50.6	60.4	10.5	40.5	10.0	0	38.8	0.078	0.0333	16.1	45.5
10/24/01	0:46	0	26.1	23.4	25.8	23.3	22.4	50.5	60.3	10.6	40.7	9.9	0	39.0	0.077	0.0329	16.2	45.6
10/24/01	0:47	0	26.1	23.4	25.9	23.2	22.3	50.2	59.8	10.4	40.4	9.9	0	38.8	0.077	0.0328	16.1	45.3
10/24/01	0:48	0	26.1	23.4	25.8	23.1	22.2	50.5	60.4	10.6	40.4	9.9	0	38.8	0.077	0.0328	16.1	45.4
10/24/01	0:49	0	26.1	23.4	25.9	23.0	22.2	50.8	60.5	10.5	40.4	9.9	0	38.8	0.077	0.0328	16.1	45.6
10/24/01	0:50	0	26.2	23.4	25.9	23.0	22.1	50.1	59.9	10.5	40.4	9.9	0	38.7	0.077	0.0328	16.1	45.3
10/24/01	0:51	0	26.2	23.4	25.9	23.0	22.1	50.6	60.5	10.5	40.4	9.9	0	38.7	0.077	0.0328	16.1	45.5
10/24/01	0:52	0	26.2	23.4	25.9	22.9	22.1	50.5	60.3	10.5	40.6	9.9	0	38.5	0.077	0.0328	16.0	45.5
10/24/01	0:53	0	26.2	23.3	25.9	22.9	22.1	50.7	60.4	10.5	40.3	9.9	0	38.8	0.077	0.0328	16.1	45.5
10/24/01	0:54	0	26.2	23.3	25.9	22.9	22.2	50.8	60.4	10.6	40.5	9.9	0	38.8	0.077	0.0328	16.1	45.6
10/24/01	0:55	0	26.2	23.3	25.9	22.9	22.1	50.9	60.7	10.6	40.2	9.9	0	38.9	0.077	0.0327	16.2	45.5
10/24/01	0:56	0	26.2	23.3	25.9	23.0	22.2	50.9	60.6	10.6	40.3	9.9	0	38.8	0.076	0.0324	16.1	45.6
10/24/01	0:57	0	26.2	23.3	25.9	22.9	22.2	51.1	60.8	10.6	40.6	9.8	0	38.9	0.076	0.0323	16.1	45.9
10/24/01	0:58	0	26.2	23.3	25.9	22.9	22.2	50.5	60.2	10.6	40.6	9.8	0	38.8	0.076	0.0323	16.1	45.5
10/24/01	0:59	0	26.2	23.3	25.9	22.9	22.2	50.6	60.2	10.6	40.6	9.8	0	38.8	0.076	0.0324	16.1	45.6

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	6:30	0	26.0	25.2	25.7	25.6	25.7	50.4	60.4	10.4	40.9	9.9	0	38.3	0.078	0.0334	15.9	45.6
10/24/01	6:31	0	26.0	25.2	25.7	25.6	25.8	50.8	60.9	10.4	41.0	9.9	0	38.4	0.077	0.0329	16.0	45.9
10/24/01	6:32	0	26.0	25.2	25.7	25.5	25.8	50.7	60.7	10.5	40.9	9.8	0	38.5	0.076	0.0325	16.0	45.8
10/24/01	6:33	0	26.0	25.3	25.8	25.6	25.8	51.0	61.0	10.6	41.0	9.8	0	38.4	0.076	0.0325	15.9	46.0
10/24/01	6:34	0	26.0	25.3	25.8	25.6	25.7	51.2	61.2	10.5	41.3	9.8	0	38.4	0.076	0.0324	15.9	46.3
10/24/01	6:35	0	26.0	25.3	25.8	25.6	25.7	50.7	60.6	10.4	40.9	9.8	0	38.5	0.075	0.0320	16.0	45.8
10/24/01	6:36	0	26.0	25.3	25.9	25.6	25.8	51.1	61.0	10.5	41.2	9.8	0	38.5	0.075	0.0320	16.0	46.1
10/24/01	6:37	0	26.1	25.3	25.8	25.6	25.8	51.0	60.8	10.5	40.9	9.7	0	38.4	0.075	0.0320	15.9	45.9
10/24/01	6:38	0	26.1	25.3	25.9	25.6	25.8	50.8	60.6	10.4	41.0	9.7	0	38.4	0.075	0.0319	15.9	45.9
10/24/01	6:39	0	26.1	25.3	25.8	25.6	25.8	51.0	60.7	10.4	41.2	9.7	0	38.4	0.074	0.0316	15.9	46.1
10/24/01	6:40	0	26.1	25.3	25.8	25.6	25.8	51.2	60.9	10.5	41.2	9.7	0	38.5	0.074	0.0316	16.0	46.2
10/24/01	6:41	0	26.1	25.3	25.9	25.6	25.7	51.1	60.9	10.5	41.1	9.7	0	38.4	0.074	0.0315	16.0	46.1
10/24/01	6:42	0	26.2	25.3	26.0	25.7	25.8	50.9	60.7	10.5	41.1	9.7	0	38.3	0.074	0.0315	15.9	46.0
10/24/01	6:43	0	26.2	25.3	26.0	25.6	25.8	51.3	61.0	10.5	41.0	9.7	0	38.2	0.074	0.0315	15.9	46.2
10/24/01	6:44	0	26.2	25.3	25.9	25.6	25.9	51.0	61.0	10.5	41.3	9.7	0	38.5	0.074	0.0315	16.0	46.2
10/24/01	6:45	0	26.2	25.3	26.0	25.6	25.8	51.0	60.8	10.5	41.3	9.7	0	38.5	0.074	0.0314	16.0	46.2
10/24/01	6:46	0	26.2	25.3	26.0	25.6	25.8	50.9	60.7	10.5	41.0	9.7	0	38.5	0.074	0.0314	16.0	45.9
10/24/01	6:47	0	26.3	25.4	26.0	25.6	25.8	50.9	60.6	10.4	41.1	9.7	0	38.4	0.073	0.0310	15.9	46.0
10/24/01	6:48	0	26.3	25.3	26.0	25.6	25.8	51.0	60.7	10.4	41.4	9.7	0	38.4	0.073	0.0310	15.9	46.2
10/24/01	6:49	0	26.3	25.3	26.0	25.6	25.8	51.2	60.8	10.5	41.1	9.7	0	38.5	0.073	0.0310	16.0	46.2
10/24/01	6:50	0	26.3	25.4	26.0	25.6	25.8	51.1	60.8	10.4	41.1	9.6	0	38.1	0.073	0.0310	15.8	46.1
10/24/01	6:51	0	26.3	25.4	26.0	25.6	25.8	51.3	61.0	10.5	41.4	9.6	0	38.4	0.073	0.0310	15.9	46.3
10/24/01	6:52	0	26.3	25.4	26.0	25.6	25.7	51.4	61.1	10.5	41.0	9.6	0	38.5	0.073	0.0310	16.0	46.2
10/24/01	6:53	0	26.3	25.4	26.1	25.6	25.8	51.2	60.9	10.5	41.3	9.6	0	38.4	0.073	0.0309	16.0	46.2
10/24/01	6:54	0	26.3	25.4	26.1	25.6	25.7	51.5	61.1	10.5	41.4	9.6	0	38.4	0.073	0.0309	15.9	46.4
10/24/01	6:55	0	26.3	25.4	26.1	25.6	25.8	51.2	60.8	10.5	41.2	9.6	0	38.4	0.073	0.0309	15.9	46.2
10/24/01	6:56	0	26.3	25.4	26.1	25.6	25.8	51.2	60.9	10.5	41.7	9.6	0	38.4	0.073	0.0309	15.9	46.5
10/24/01	6:57	0	26.4	25.4	26.1	25.6	25.8	51.4	61.1	10.5	41.3	9.6	0	38.4	0.073	0.0309	15.9	46.3
10/24/01	6:58	0	26.3	25.4	26.1	25.6	25.8	51.3	61.0	10.4	41.2	9.6	0	38.4	0.072	0.0305	15.9	46.3
10/24/01	6:59	0	26.4	25.4	26.1	25.6	25.8	51.0	60.5	10.5	41.1	9.6	0	38.4	0.072	0.0305	15.9	46.0
10/24/01	7:00	0	26.4	25.4	26.1	25.6	25.8	51.5	61.2	10.6	41.3	9.6	0	38.5	0.072	0.0304	16.0	46.4
10/24/01	7:01	0	26.4	25.4	26.2	25.7	25.8	51.6	61.3	10.5	41.2	9.6	0	38.4	0.072	0.0304	16.0	46.4
10/24/01	7:02	0	26.4	25.4	26.1	25.7	25.9	51.5	61.3	10.5	41.3	9.6	0	38.5	0.072	0.0305	16.0	46.4
10/24/01	7:03	0	26.4	25.4	26.2	25.7	25.8	51.5	61.2	10.6	41.1	9.6	0	38.4	0.072	0.0304	15.9	46.3
10/24/01	7:04	0	26.4	25.4	26.2	25.7	26.0	51.2	60.7	10.5	41.0	9.6	0	38.4	0.072	0.0304	15.9	46.1
10/24/01	7:05	0	26.5	25.4	26.2	25.7	25.9	51.3	60.9	10.6	41.3	9.6	0	38.5	0.072	0.0304	16.0	46.3
10/24/01	7:06	0	26.4	25.4	26.2	25.6	25.9	51.2	60.9	10.6	41.5	9.6	0	38.4	0.072	0.0304	16.0	46.4
10/24/01	7:07	0	26.4	25.4	26.2	25.6	25.8	51.4	61.0	10.5	41.2	9.6	0	38.4	0.072	0.0304	15.9	46.3
10/24/01	7:08	0	26.5	25.4	26.2	25.7	25.9	51.2	60.8	10.5	41.3	9.6	0	38.3	0.072	0.0304	15.9	46.2
10/24/01	7:09	0	26.5	25.4	26.3	25.7	25.8	51.0	60.6	10.5	41.3	9.6	0	38.3	0.072	0.0303	15.9	46.1
10/24/01	7:10	0	26.5	25.5	26.3	25.7	25.9	51.2	60.7	10.5	40.9	9.6	0	38.5	0.071	0.0299	16.0	46.0
10/24/01	7:11	0	26.5	25.5	26.3	25.7	25.8	51.2	60.9	10.5	41.0	9.6	0	38.4	0.072	0.0303	15.9	46.1
10/24/01	7:12	0	26.5	25.5	26.3	25.7	25.8	51.6	61.3	10.7	41.2	9.6	0	38.4	0.072	0.0304	15.9	46.4
10/24/01	7:13	0	26.5	25.5	26.3	25.7	25.8	51.1	60.6	10.5	41.1	9.6	0	38.5	0.072	0.0303	16.0	46.1
10/24/01	7:14	0	26.5	25.5	26.3	25.7	25.8	51.4	61.1	10.6	41.2	9.6	0	38.5	0.071	0.0299	16.0	46.3
10/24/01	7:15	0	26.6	25.5	26.4	25.7	25.9	51.1	60.6	10.6	41.1	9.6	0	38.6	0.071	0.0299	16.0	46.1
10/24/01	7:16	0	26.6	25.5	26.3	25.7	25.8	51.2	60.8	10.7	41.1	9.5	0	38.6	0.071	0.0299	16.0	46.1
10/24/01	7:17	0	26.6	25.5	26.4	25.7	25.9	51.5	61.2	10.7	41.3	9.6	0	38.7	0.071	0.0298	16.0	46.4
10/24/01	7:18	0	26.6	25.5	26.3	25.7	25.8	51.7	61.3	10.7	41.2	9.5	0	38.5	0.071	0.0299	16.0	46.4
10/24/01	7:19	0	26.6	25.5	26.3	25.8	25.9	51.1	60.6	10.6	41.3	9.5	0	38.6	0.071	0.0299	16.0	46.2
10/24/01	7:20	0	26.6	25.5	26.3	25.8	25.8	51.2	60.8	10.6	41.1	9.5	0	38.6	0.071	0.0299	16.0	46.2
10/24/01	7:21	0	26.6	25.5	26.4	25.8	25.9	51.4	60.9	10.6	40.9	9.5	0	38.6	0.071	0.0298	16.0	46.1
10/24/01	7:22	0	26.6	25.5	26.4	25.7	25.8	51.2	60.8	10.7	41.0	9.5	0	38.6	0.071	0.0298	16.0	46.1
10/24/01	7:23	0	26.6	25.5	26.4	25.8	25.9	51.2	60.8	10.7	40.9	9.5	0	38.6	0.071	0.0298	16.0	46.0
10/24/01	7:24	0	26.6	25.5	26.4	25.8	25.8	51.4	60.9	10.7	41.1	9.5	0	38.7	0.071	0.0298	16.1	46.2
10/24/01	7:25	0	26.7	25.5	26.4	25.8	25.8	51.7	61.4	10.7	41.1	9.5	0	38.5	0.071	0.0298	16.0	46.4
10/24/01	7:26	0	26.6	25.5	26.5	25.8	25.7	51.2	60.7	10.6	41.3	9.5	0	38.5	0.071	0.0298	16.0	46.2
10/24/01	7:27	0	26.7	25.5	26.4	25.8	25.7	51.3	60.9	10.6	41.3	9.5	0	38.5	0.071	0.0298	16.0	46.3
10/24/01	7:28	0	26.7	25.5	26.4	25.8	25.7	51.6	61.1	10.7	41.1	9.5	0	38.4	0.071	0.0298	15.9	46.3
10/24/01	7:29	0	26.7	25.5	26.4	25.8	25.7	51.1	60.7	10.6	41.1	9.5	0	38.6	0.071	0.0298	16.0	46.1

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	7:30	0	26.7	25.5	26.5	25.7	25.7	51.5	61.0	10.7	41.5	9.5	0	38.5	0.071	0.0297	16.0	46.5
10/24/01	7:31	0	26.7	25.5	26.5	25.8	25.7	51.6	61.1	10.7	41.1	9.5	0	38.6	0.071	0.0298	16.0	46.3
10/24/01	7:32	0	26.7	25.5	26.5	25.8	25.8	51.6	61.3	10.7	41.0	9.5	0	38.3	0.071	0.0297	15.9	46.3
10/24/01	7:33	0	26.7	25.5	26.5	25.8	25.7	51.4	60.9	10.7	41.0	9.5	0	38.6	0.071	0.0297	16.0	46.2
10/24/01	7:34	0	26.8	25.6	26.5	25.8	25.8	51.4	61.0	10.7	41.4	9.5	0	38.7	0.071	0.0297	16.1	46.4
10/24/01	7:35	0	26.7	25.6	26.5	25.8	25.7	51.6	61.1	10.7	41.4	9.5	0	38.6	0.071	0.0297	16.0	46.5
10/24/01	7:36	0	26.8	25.6	26.5	25.8	25.7	51.6	61.1	10.7	41.1	9.5	0	38.6	0.070	0.0293	16.0	46.3
10/24/01	7:37	0	26.7	25.6	26.5	25.8	25.7	51.2	60.6	10.6	41.4	9.5	0	38.6	0.070	0.0293	16.0	46.3
10/24/01	7:38	0	26.8	25.6	26.5	25.8	25.7	51.1	60.5	10.7	41.1	9.5	0	38.7	0.070	0.0293	16.1	46.1
10/24/01	7:39	0	26.8	25.6	26.6	25.8	25.7	51.4	61.0	10.7	41.4	9.5	0	38.6	0.070	0.0293	16.0	46.4
10/24/01	7:40	0	26.8	25.6	26.5	25.9	25.7	51.5	61.0	10.7	41.4	9.5	0	38.6	0.070	0.0293	16.0	46.4
10/24/01	7:41	0	26.8	25.6	26.6	25.8	25.8	51.6	61.1	10.7	41.3	9.5	0	38.7	0.070	0.0293	16.1	46.4
10/24/01	7:42	0	26.8	25.6	26.6	25.9	25.7	51.9	61.6	10.7	41.1	9.5	0	38.6	0.070	0.0292	16.0	46.5
10/24/01	7:43	0	26.9	25.6	26.6	25.8	25.8	51.7	61.5	10.7	41.3	9.5	0	38.6	0.070	0.0293	16.0	46.5
10/24/01	7:44	0	26.8	25.6	26.6	25.8	25.7	51.6	61.1	10.8	41.0	9.5	0	38.6	0.070	0.0292	16.0	46.3
10/24/01	7:45	0	26.9	25.6	26.6	25.9	25.8	51.1	60.7	10.7	41.1	9.5	0	38.5	0.070	0.0292	16.0	46.1
10/24/01	7:46	0	26.9	25.6	26.6	25.9	25.7	51.6	61.1	10.7	41.3	9.5	0	38.5	0.070	0.0292	16.0	46.4
10/24/01	7:47	0	26.9	25.6	26.7	25.9	25.7	51.5	61.1	10.7	41.2	9.5	0	38.5	0.070	0.0292	16.0	46.4
10/24/01	7:48	0	26.9	25.6	26.6	25.8	25.8	51.4	61.1	10.7	41.2	9.5	0	38.5	0.070	0.0292	16.0	46.3
10/24/01	7:49	0	26.9	25.6	26.6	25.9	25.8	51.7	61.2	10.8	41.1	9.5	0	38.5	0.070	0.0292	16.0	46.4
10/24/01	7:50	0	26.9	25.6	26.7	25.8	25.8	51.2	60.6	10.7	41.0	9.5	0	38.6	0.070	0.0291	16.0	46.1
10/24/01	7:51	0	26.9	25.6	26.6	25.9	25.8	51.7	61.3	10.8	41.2	9.5	0	38.6	0.070	0.0292	16.0	46.4
10/24/01	7:52	0	27.0	25.6	26.7	25.9	25.8	51.3	60.7	10.8	41.2	9.5	0	38.4	0.070	0.0291	15.9	46.2
10/24/01	7:53	0	26.9	25.6	26.7	25.9	25.8	51.5	61.0	10.8	41.3	9.5	0	38.6	0.070	0.0292	16.0	46.4
10/24/01	7:54	0	27.0	25.7	26.8	25.9	25.9	51.6	61.2	10.7	41.4	9.5	0	38.5	0.070	0.0291	16.0	46.5
10/24/01	7:55	0	27.0	25.7	26.7	25.9	25.8	51.3	60.7	10.8	41.1	9.5	0	38.5	0.070	0.0291	16.0	46.2
10/24/01	7:56	0	27.0	25.7	26.7	25.9	25.8	51.4	61.0	10.8	41.2	9.5	0	38.5	0.070	0.0291	16.0	46.3
10/24/01	7:57	0	27.0	25.7	26.8	25.9	25.7	51.6	61.1	10.7	41.1	9.5	0	38.5	0.070	0.0291	16.0	46.4
10/24/01	7:58	0	27.0	25.7	26.7	25.9	25.8	51.2	60.8	10.8	41.2	9.5	0	38.6	0.070	0.0291	16.0	46.2
10/24/01	7:59	0	27.1	25.7	26.8	25.9	25.7	51.4	60.9	10.7	41.4	9.5	0	38.7	0.070	0.0291	16.0	46.4
10/24/01	8:00	0	27.1	25.7	26.8	25.9	25.7	51.5	61.1	10.9	41.3	9.5	0	38.6	0.070	0.0291	16.0	46.4
10/24/01	8:01	0	27.1	25.7	26.8	25.9	25.7	51.5	61.0	10.8	41.4	9.5	0	38.6	0.070	0.0291	16.0	46.5
10/24/01	8:02	0	27.0	25.7	26.8	25.8	25.7	51.4	61.0	10.7	41.3	9.5	0	38.5	0.070	0.0291	16.0	46.4
10/24/01	8:03	0	27.0	25.7	26.8	25.8	25.7	51.6	61.2	10.7	41.3	9.5	0	38.6	0.070	0.0290	16.0	46.4
10/24/01	8:04	0	27.1	25.7	26.8	25.9	25.7	51.6	61.2	10.8	41.4	9.5	0	38.5	0.070	0.0291	16.0	46.5
10/24/01	8:05	0	27.0	25.7	26.8	25.9	25.8	51.5	61.0	10.7	41.2	9.5	0	38.6	0.070	0.0290	16.0	46.4
10/24/01	8:06	0	27.1	25.7	26.8	25.9	25.7	51.7	61.2	10.8	41.3	9.5	0	38.6	0.070	0.0291	16.0	46.5
10/24/01	8:07	0	27.1	25.7	26.8	25.9	25.8	51.4	60.9	10.8	41.4	9.5	0	38.5	0.070	0.0290	16.0	46.4
10/24/01	8:08	0	27.1	25.7	26.8	25.9	25.8	51.4	60.9	10.8	41.2	9.5	0	38.5	0.070	0.0290	16.0	46.3
10/24/01	8:09	0	27.1	25.7	26.9	25.9	25.8	51.9	61.3	10.8	41.5	9.5	0	38.6	0.070	0.0290	16.0	46.7
10/24/01	8:10	0	27.1	25.7	26.9	25.9	25.7	51.5	61.0	10.7	41.1	9.5	0	38.5	0.070	0.0290	16.0	46.3
10/24/01	8:11	0	27.1	25.7	26.9	25.9	25.7	51.3	60.8	10.7	41.3	9.5	0	38.5	0.070	0.0290	16.0	46.3
10/24/01	8:12	0	27.1	25.7	26.8	25.9	25.7	51.3	60.9	10.7	41.3	9.5	0	38.6	0.070	0.0290	16.0	46.3
10/24/01	8:13	0	27.1	25.7	26.9	25.9	25.7	51.8	61.4	10.8	41.2	9.5	0	38.5	0.070	0.0290	16.0	46.5
10/24/01	8:14	0	27.1	25.7	26.8	25.9	25.8	51.4	60.8	10.8	41.3	9.5	0	38.5	0.069	0.0287	16.0	46.3
10/24/01	8:15	0	27.1	25.7	26.5	25.9	25.8	51.4	60.8	10.7	41.1	9.4	0	38.6	0.069	0.0289	16.0	46.3
10/24/01	8:16	0	27.1	25.7	26.4	25.9	25.8	51.5	61.0	10.8	41.4	9.4	0	38.7	0.069	0.0290	16.0	46.4
10/24/01	8:17	0	27.0	25.7	26.2	25.9	25.8	51.1	60.6	10.7	41.4	9.4	0	38.6	0.068	0.0287	16.0	46.3
10/24/01	8:18	0	27.0	25.7	26.1	25.9	25.8	51.6	60.9	10.6	41.6	9.4	0	38.6	0.068	0.0288	16.0	46.6
10/24/01	8:19	0	27.0	25.7	25.9	25.9	25.8	51.6	61.0	10.7	41.2	9.4	0	38.5	0.068	0.0289	16.0	46.4
10/24/01	8:20	0	26.9	25.8	25.8	26.0	25.8	51.4	60.8	10.6	41.5	9.4	0	38.6	0.068	0.0290	16.0	46.5
10/24/01	8:21	0	26.9	25.8	25.7	25.9	25.8	51.4	60.9	10.6	41.3	9.4	0	38.7	0.068	0.0291	16.1	46.4
10/24/01	8:22	0	26.9	25.8	25.7	26.0	25.9	51.8	61.2	10.7	41.2	9.4	0	38.7	0.067	0.0287	16.0	46.5
10/24/01	8:23	0	26.8	25.8	25.6	25.9	25.8	51.8	61.2	10.7	41.3	9.3	0	38.7	0.067	0.0288	16.1	46.5
10/24/01	8:24	0	26.7	25.8	25.5	25.9	25.8	51.7	61.1	10.7	41.6	9.3	0	38.7	0.067	0.0288	16.1	46.7
10/24/01	8:25	0	26.7	25.8	25.5	26.0	25.9	51.8	61.3	10.6	41.3	9.3	0	38.6	0.067	0.0288	16.0	46.5
10/24/01	8:26	0	26.6	25.8	25.5	26.0	25.8	51.4	60.8	10.6	41.3	9.3	0	38.7	0.067	0.0288	16.1	46.4
10/24/01	8:27	0	26.5	25.8	25.6	26.0	25.9	48.8	60.6	10.6	38.8	11.8	0	38.7	0.107	0.0459	16.0	43.8
10/24/01	8:28	0	26.4	25.8	25.6	26.0	25.8	50.4	60.8	10.7	40.0	10.4	0	38.7	0.091	0.0391	16.1	45.2
10/24/01	8:29	0	26.3	25.8	25.7	26.0	25.8	50.5	60.9	10.7	40.9	10.3	0	38.7	0.088	0.0377	16.1	45.7

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	8:30	0	26.3	25.8	25.7	26.0	25.8	50.7	61.1	10.7	40.6	10.2	0	38.6	0.086	0.0369	16.0	45.6
10/24/01	8:31	0	26.2	25.8	25.7	26.0	25.9	51.1	61.4	10.8	40.7	10.2	0	38.6	0.085	0.0364	16.0	45.9
10/24/01	8:32	0	26.2	25.8	25.7	26.0	25.8	50.5	60.6	10.6	40.6	10.1	0	38.9	0.084	0.0360	16.1	45.6
10/24/01	8:33	0	26.1	25.8	25.8	26.0	25.9	50.7	60.9	10.7	40.7	10.1	0	38.7	0.084	0.0359	16.0	45.7
10/24/01	8:34	0	26.1	25.8	25.8	26.0	25.8	50.8	60.8	10.7	40.5	10.1	0	38.6	0.083	0.0355	16.0	45.6
10/24/01	8:35	0	26.1	25.8	25.8	26.0	25.9	50.9	61.0	10.6	40.7	10.0	0	38.7	0.082	0.0350	16.1	45.8
10/24/01	8:36	0	26.1	25.8	25.8	26.0	25.8	50.8	60.9	10.7	40.8	10.0	0	38.7	0.082	0.0350	16.1	45.8
10/24/01	8:37	0	26.1	25.8	25.8	26.0	25.9	51.0	61.0	10.7	40.8	10.0	0	38.7	0.082	0.0350	16.1	45.9
10/24/01	8:38	0	26.1	25.8	25.9	26.0	25.8	50.9	61.0	10.8	40.8	10.0	0	38.6	0.081	0.0345	16.0	45.8
10/24/01	8:39	0	26.1	25.8	25.8	26.0	25.8	50.9	60.8	10.7	40.9	10.0	0	38.6	0.081	0.0345	16.0	45.9
10/24/01	8:40	0	26.1	25.8	25.9	26.0	25.9	50.9	60.7	10.7	40.9	10.0	0	38.7	0.081	0.0345	16.0	45.9
10/24/01	8:41	0	26.1	25.8	25.8	26.1	25.8	51.2	61.1	10.7	41.1	9.9	0	38.7	0.080	0.0341	16.1	46.1
10/24/01	8:42	0	26.2	25.8	25.9	26.1	25.9	50.7	60.6	10.7	41.0	9.9	0	38.7	0.080	0.0340	16.1	45.9
10/24/01	8:43	0	26.2	25.8	25.9	26.1	25.9	51.0	61.2	10.7	40.7	9.9	0	38.7	0.080	0.0340	16.0	45.9
10/24/01	8:44	0	26.2	25.8	26.0	26.1	25.9	51.1	61.1	10.7	41.0	9.9	0	38.7	0.080	0.0340	16.1	46.1
10/24/01	8:45	0	26.2	25.9	26.0	26.1	25.9	51.1	61.0	10.8	40.7	9.9	0	38.7	0.079	0.0336	16.1	45.9
10/24/01	8:46	0	26.2	25.8	26.0	26.1	25.9	51.0	60.9	10.7	40.7	9.9	0	38.8	0.079	0.0335	16.1	45.8
10/24/01	8:47	0	26.3	25.9	26.0	26.1	25.9	50.9	60.9	10.6	40.9	9.9	0	38.7	0.079	0.0335	16.1	45.9
10/24/01	8:48	0	26.3	25.8	26.1	26.1	25.9	51.0	60.9	10.7	41.0	9.9	0	38.7	0.079	0.0335	16.0	46.0
10/24/01	8:49	0	26.3	25.9	26.1	26.1	25.9	51.3	61.2	10.7	41.1	9.9	0	38.7	0.079	0.0334	16.1	46.2
10/24/01	8:50	0	26.3	25.8	26.1	26.1	25.9	51.2	61.1	10.7	41.0	9.9	0	38.6	0.078	0.0330	16.0	46.1
10/24/01	8:51	0	26.3	25.9	26.1	26.1	26.0	51.2	61.1	10.7	41.0	9.8	0	38.7	0.078	0.0330	16.0	46.1
10/24/01	8:52	0	26.4	25.9	26.1	26.1	25.9	51.0	60.8	10.7	40.8	9.8	0	38.6	0.078	0.0330	16.0	45.9
10/24/01	8:53	0	26.4	25.9	26.2	26.2	26.0	51.3	61.2	10.7	41.3	9.8	0	38.7	0.078	0.0330	16.1	46.3
10/24/01	8:54	0	26.4	25.9	26.1	26.1	25.9	51.4	61.4	10.7	41.0	9.8	0	38.6	0.078	0.0330	16.0	46.2
10/24/01	8:55	0	26.4	25.9	26.2	26.2	26.0	51.0	60.8	10.6	41.1	9.8	0	38.6	0.078	0.0329	16.0	46.1
10/24/01	8:56	0	26.5	25.9	26.2	26.2	26.0	51.1	60.9	10.7	40.9	9.8	0	38.6	0.078	0.0329	16.0	46.0
10/24/01	8:57	0	26.4	25.9	26.3	26.2	26.0	51.1	60.9	10.8	41.2	9.8	0	38.6	0.078	0.0329	16.0	46.2
10/24/01	8:58	0	26.4	25.9	26.2	26.2	25.9	51.2	61.0	10.7	40.8	9.8	0	38.8	0.077	0.0325	16.1	46.0
10/24/01	8:59	0	26.5	25.9	26.2	26.2	26.0	51.7	61.7	10.9	41.3	9.8	0	38.6	0.077	0.0325	16.0	46.5
10/24/01	9:00	0	26.5	25.9	26.2	26.2	26.0	51.3	61.1	10.8	41.2	9.8	0	38.7	0.077	0.0325	16.1	46.2
10/24/01	9:01	0	26.5	25.9	26.2	26.2	26.0	51.3	61.1	10.7	41.1	9.8	0	38.6	0.077	0.0325	16.0	46.2
10/24/01	9:02	0	26.5	25.9	26.3	26.2	26.0	51.2	61.0	10.6	40.7	9.8	0	38.5	0.077	0.0325	16.0	45.9
10/24/01	9:03	0	26.5	25.9	26.2	26.2	26.0	51.2	61.1	10.8	41.1	9.8	0	38.6	0.077	0.0325	16.0	46.2
10/24/01	9:04	0	26.5	25.9	26.3	26.3	26.1	51.4	61.2	10.6	41.3	9.8	0	38.6	0.077	0.0324	16.0	46.3
10/24/01	9:05	0	26.5	25.9	26.3	26.2	26.0	51.4	61.4	10.7	41.2	9.8	0	38.6	0.077	0.0324	16.0	46.3
10/24/01	9:06	0	26.6	25.9	26.3	26.3	25.9	51.0	60.7	10.6	41.1	9.8	0	38.6	0.077	0.0324	16.0	46.1
10/24/01	9:07	0	26.6	25.9	26.3	26.2	25.7	51.0	61.0	10.8	41.2	9.8	0	38.5	0.077	0.0324	16.0	46.1
10/24/01	9:08	0	26.6	25.9	26.3	26.1	25.6	51.0	60.8	10.7	41.0	9.8	0	38.6	0.076	0.0320	16.0	46.0
10/24/01	9:09	0	26.6	25.9	26.3	26.0	25.4	51.1	60.8	10.8	41.1	9.7	0	38.6	0.076	0.0320	16.0	46.1
10/24/01	9:10	0	26.7	25.9	26.4	25.9	25.3	51.5	61.3	10.9	41.0	9.7	0	38.6	0.076	0.0319	16.0	46.3
10/24/01	9:11	0	26.7	25.9	26.3	25.8	25.2	51.2	60.9	10.7	41.2	9.7	0	38.6	0.076	0.0320	16.0	46.2
10/24/01	9:12	0	26.7	25.9	26.3	25.7	25.1	51.1	60.9	10.7	41.1	9.7	0	38.8	0.076	0.0320	16.1	46.1
10/24/01	9:13	0	26.7	25.9	26.4	25.6	25.0	51.4	61.1	10.8	41.2	9.7	0	38.6	0.076	0.0319	16.0	46.3
10/24/01	9:14	0	26.7	25.9	26.4	25.5	24.8	51.2	60.8	10.6	40.8	9.7	0	38.5	0.076	0.0319	16.0	46.0
10/24/01	9:15	0	26.7	25.9	26.4	25.4	24.7	51.7	61.6	10.8	41.0	9.7	0	38.6	0.076	0.0319	16.0	46.4
10/24/01	9:16	0	26.7	25.9	26.4	25.4	24.6	51.3	61.0	10.8	41.3	9.7	0	38.6	0.076	0.0319	16.0	46.3
10/24/01	9:17	0	26.7	25.9	26.5	25.4	24.5	51.8	61.6	10.8	41.2	9.7	0	38.6	0.076	0.0319	16.0	46.5
10/24/01	9:18	0	26.7	25.9	26.4	25.3	24.4	51.4	61.2	10.8	41.2	9.7	0	38.3	0.076	0.0319	15.9	46.3
10/24/01	9:19	0	26.7	25.9	26.4	25.2	24.3	51.3	61.0	10.7	41.2	9.7	0	38.7	0.075	0.0315	16.1	46.3
10/24/01	9:20	0	26.8	25.9	26.4	25.2	24.3	51.6	61.4	10.9	41.1	9.7	0	38.5	0.075	0.0315	16.0	46.3
10/24/01	9:21	0	26.8	25.9	26.5	25.1	24.1	51.3	61.1	10.8	41.1	9.7	0	38.6	0.075	0.0314	16.0	46.2
10/24/01	9:22	0	26.8	25.9	26.4	25.1	24.0	51.4	61.1	10.7	41.0	9.7	0	38.7	0.075	0.0315	16.1	46.2
10/24/01	9:23	0	26.8	25.9	26.5	25.0	24.0	51.2	60.9	10.7	41.2	9.7	0	38.6	0.075	0.0314	16.0	46.2
10/24/01	9:24	0	26.8	25.9	26.5	25.0	23.9	51.3	61.0	10.8	40.9	9.7	0	38.3	0.075	0.0314	15.9	46.1
10/24/01	9:25	0	26.8	25.8	26.4	24.9	23.8	51.4	61.2	10.8	41.2	9.7	0	38.6	0.075	0.0315	16.0	46.3
10/24/01	9:26	0	26.8	25.7	26.5	24.8	23.8	51.3	61.0	10.7	40.9	9.7	0	38.5	0.075	0.0314	16.0	46.1
10/24/01	9:27	0	26.8	25.7	26.5	24.8	23.7	51.2	61.0	10.7	41.3	9.7	0	38.6	0.075	0.0314	16.0	46.2
10/24/01	9:28	0	26.8	25.7	26.5	24.8	23.6	51.6	61.5	10.8	41.0	9.7	0	38.6	0.075	0.0314	16.0	46.3
10/24/01	9:29	0	26.8	25.7	26.5	24.8	23.5	51.4	61.1	10.7	41.2	9.7	0	38.5	0.075	0.0314	16.0	46.3

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	9:30	0	26.8	25.7	26.5	24.7	23.5	51.3	60.9	10.8	41.2	9.7	0	38.6	0.074	0.0309	16.0	46.3
10/24/01	9:31	0	26.9	25.7	26.5	24.7	23.4	51.2	60.8	10.8	41.3	9.7	0	38.6	0.075	0.0314	16.0	46.3
10/24/01	9:32	0	26.9	25.7	26.6	24.7	23.4	51.5	61.1	10.8	41.0	9.7	0	38.5	0.074	0.0309	16.0	46.3
10/24/01	9:33	0	26.9	25.6	26.5	24.7	23.4	51.2	61.0	10.7	41.1	9.7	0	38.5	0.074	0.0309	16.0	46.2
10/24/01	9:34	0	26.9	25.6	26.6	24.6	23.3	51.4	61.2	10.8	40.8	9.7	0	38.6	0.074	0.0309	16.0	46.1
10/24/01	9:35	0	26.9	25.6	26.5	24.6	23.2	51.6	61.4	10.7	41.1	9.7	0	38.6	0.074	0.0309	16.0	46.3
10/24/01	9:36	0	26.9	25.6	26.6	24.6	23.1	51.5	61.2	10.8	41.3	9.7	0	38.6	0.074	0.0309	16.0	46.4
10/24/01	9:37	0	26.9	25.5	26.6	24.5	23.1	51.4	61.1	10.8	41.3	9.7	0	38.7	0.074	0.0309	16.0	46.4
10/24/01	9:38	0	26.9	25.5	26.6	24.5	23.0	51.4	61.2	10.7	41.2	9.7	0	38.6	0.074	0.0309	16.0	46.3
10/24/01	9:39	0	26.9	25.5	26.6	24.4	23.0	51.8	61.5	10.8	41.2	9.7	0	38.5	0.074	0.0309	16.0	46.5
10/24/01	9:40	0	26.9	25.5	26.6	24.4	22.9	51.4	61.0	10.8	41.2	9.6	0	38.5	0.074	0.0309	16.0	46.3
10/24/01	9:41	0	26.9	25.5	26.6	24.4	22.8	51.5	61.2	10.7	41.3	9.6	0	38.5	0.074	0.0309	16.0	46.4
10/24/01	9:42	0	26.9	25.4	26.6	24.3	22.8	51.6	61.3	10.8	41.2	9.6	0	38.6	0.074	0.0309	16.0	46.4
10/24/01	9:43	0	26.9	25.4	26.6	24.3	22.8	51.4	61.0	10.9	41.1	9.6	0	38.6	0.074	0.0309	16.0	46.3
10/24/01	9:44	0	27.0	25.4	26.6	24.3	22.7	51.8	61.6	10.9	41.2	9.6	0	38.6	0.074	0.0309	16.0	46.5
10/24/01	9:45	0	26.9	25.3	26.6	24.3	22.7	51.5	61.1	10.8	41.4	9.6	0	38.6	0.074	0.0309	16.0	46.4
10/24/01	9:46	0	27.0	25.3	26.6	24.3	22.7	51.3	60.8	10.9	40.9	9.6	0	38.6	0.073	0.0305	16.0	46.1
10/24/01	9:47	0	27.0	25.3	26.7	24.3	22.6	51.4	61.1	10.8	41.0	9.6	0	38.5	0.073	0.0304	16.0	46.2
10/24/01	9:48	0	27.0	25.3	26.7	24.3	22.5	51.3	60.8	10.9	41.0	9.6	0	38.5	0.073	0.0304	16.0	46.2
10/24/01	9:49	0	27.0	25.3	26.7	24.3	22.5	51.8	61.5	10.9	41.2	9.6	0	38.6	0.073	0.0304	16.0	46.5
10/24/01	9:50	0	27.0	25.2	26.7	24.2	22.5	51.6	61.4	10.9	41.3	9.6	0	38.6	0.073	0.0304	16.0	46.4
10/24/01	9:51	0	27.0	25.2	26.7	24.2	22.4	51.4	61.1	10.8	41.3	9.6	0	38.5	0.073	0.0304	16.0	46.3
10/24/01	9:52	0	27.0	25.2	26.7	24.2	22.4	51.2	60.8	10.8	41.2	9.6	0	38.5	0.073	0.0304	16.0	46.2
10/24/01	9:53	0	27.0	25.2	26.7	24.1	22.4	51.3	60.9	10.8	40.9	9.6	0	38.5	0.073	0.0304	16.0	46.1
10/24/01	9:54	0	27.0	25.2	26.7	24.1	22.4	51.3	61.0	10.8	41.2	9.6	0	38.5	0.073	0.0304	16.0	46.3
10/24/01	9:55	0	27.0	25.1	26.7	24.1	22.3	51.7	61.3	10.8	41.2	9.6	0	38.5	0.073	0.0304	16.0	46.4
10/24/01	9:56	0	27.0	25.1	26.7	24.1	22.3	51.2	60.9	10.7	41.1	9.6	0	38.4	0.073	0.0304	15.9	46.1
10/24/01	9:57	0	27.0	25.1	26.7	24.0	22.2	51.7	61.4	10.8	41.0	9.6	0	38.4	0.073	0.0304	15.9	46.3
10/24/01	9:58	0	27.0	25.0	26.7	24.0	22.2	51.5	61.1	10.8	41.2	9.6	0	38.6	0.073	0.0304	16.0	46.4
10/24/01	9:59	0	27.0	25.0	26.7	23.9	22.2	51.3	60.8	10.9	41.4	9.6	0	38.4	0.073	0.0304	15.9	46.4
10/24/01	10:00	0	27.0	25.0	26.7	23.9	22.1	51.4	61.0	10.9	41.3	9.6	0	38.5	0.073	0.0304	16.0	46.3
10/24/01	10:01	0	27.1	25.0	26.8	23.9	22.1	51.5	61.2	10.8	41.2	9.6	0	38.6	0.073	0.0303	16.0	46.4
10/24/01	10:02	0	27.1	25.0	26.8	23.9	22.1	51.7	61.3	10.9	41.1	9.6	0	38.5	0.073	0.0303	16.0	46.4
10/24/01	10:03	0	27.0	25.0	26.8	23.8	22.1	51.5	60.9	10.8	41.0	9.6	0	38.4	0.073	0.0303	15.9	46.2
10/24/01	10:04	0	27.1	24.9	26.8	23.8	22.0	51.4	61.0	10.8	41.2	9.6	0	38.5	0.073	0.0303	16.0	46.3
10/24/01	10:05	0	27.1	24.9	26.8	23.8	22.0	51.6	61.3	10.9	41.2	9.6	0	38.4	0.072	0.0299	15.9	46.4
10/24/01	10:06	0	27.1	24.9	26.8	23.7	21.9	51.3	60.8	10.8	41.2	9.6	0	38.4	0.073	0.0303	15.9	46.3
10/24/01	10:07	0	27.1	24.9	26.8	23.7	22.0	51.4	60.9	10.8	41.1	9.6	0	38.5	0.072	0.0299	16.0	46.3
10/24/01	10:08	0	27.1	24.8	26.8	23.8	22.0	51.2	60.8	10.8	41.1	9.6	0	38.4	0.072	0.0299	15.9	46.2
10/24/01	10:09	0	27.1	24.8	26.8	23.8	22.0	51.6	61.2	10.8	41.3	9.6	0	38.4	0.072	0.0299	15.9	46.4
10/24/01	10:10	0	27.1	24.8	26.9	23.8	22.1	51.2	60.7	10.9	40.9	9.6	0	38.5	0.073	0.0303	16.0	46.0
10/24/01	10:11	0	27.1	24.8	26.8	23.8	22.1	51.4	60.9	10.8	41.5	9.6	0	38.4	0.073	0.0303	15.9	46.5
10/24/01	10:12	0	27.1	24.8	26.9	23.9	22.2	51.8	61.3	10.8	41.6	9.6	0	38.4	0.072	0.0298	15.9	46.7
10/24/01	10:13	0	27.1	24.8	26.9	23.9	22.2	51.6	61.2	10.8	41.5	9.6	0	38.4	0.072	0.0298	15.9	46.5
10/24/01	10:14	0	27.1	24.8	26.7	24.0	22.3	51.5	60.9	10.7	41.3	9.6	0	38.4	0.072	0.0300	15.9	46.4
10/24/01	10:15	0	27.1	24.7	26.0	24.0	22.4	51.3	60.7	10.7	41.5	9.5	0	38.2	0.071	0.0302	15.9	46.4
10/24/01	10:16	0	26.9	24.7	25.6	24.1	22.5	51.6	61.0	10.5	41.3	9.5	0	38.2	0.070	0.0300	15.8	46.4
10/24/01	10:17	0	26.9	24.7	25.4	24.1	22.5	51.8	61.3	10.7	41.5	9.4	0	38.2	0.070	0.0303	15.9	46.7
10/24/01	10:18	0	26.8	24.7	25.4	24.2	22.6	51.6	61.0	10.5	41.7	9.4	0	38.2	0.070	0.0303	15.9	46.6
10/24/01	10:19	0	26.7	24.7	25.3	24.3	22.6	51.7	61.2	10.6	41.5	9.4	0	38.2	0.070	0.0303	15.9	46.6
10/24/01	10:20	0	26.7	24.7	25.4	24.3	22.7	51.5	60.9	10.6	41.5	9.4	0	38.3	0.070	0.0302	15.9	46.5
10/24/01	10:21	0	26.6	24.7	25.4	24.3	22.7	51.7	61.0	10.6	41.5	9.4	0	38.3	0.070	0.0302	15.9	46.6
10/24/01	10:22	0	26.2	24.7	25.4	24.3	22.8	9.6	61.1	10.6	-0.4	51.4	82	38.3	0.010	0.0043	15.9	4.6
10/24/01	10:23	0	26.3	24.7	25.5	24.4	22.9	50.6	61.2	10.6	40.3	10.7	0	38.4	0.095	0.0409	15.9	45.4
10/24/01	10:24	0	26.2	24.7	25.5	24.5	22.9	50.9	61.2	10.6	40.8	10.4	0	38.4	0.089	0.0383	15.9	45.9
10/24/01	10:25	0	26.1	24.7	25.5	24.5	22.9	50.6	60.9	10.6	40.8	10.3	0	38.3	0.087	0.0374	15.9	45.7
10/24/01	10:26	0	26.0	24.7	25.5	24.5	22.9	50.8	61.0	10.6	40.9	10.2	0	38.3	0.086	0.0370	15.9	45.8
10/24/01	10:27	0	26.0	24.7	25.6	24.5	22.9	50.7	60.8	10.6	40.9	10.2	0	38.3	0.085	0.0365	15.9	45.8
10/24/01	10:28	0	25.9	24.7	25.6	24.5	22.8	50.9	61.0	10.6	40.8	10.2	0	38.3	0.084	0.0361	15.9	45.8
10/24/01	10:29	0	25.9	24.6	25.6	24.4	22.8	50.9	61.1	10.6	40.6	10.1	0	38.3	0.084	0.0361	15.9	45.8

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	10:30	0	25.9	24.6	25.6	24.4	22.8	50.7	61.0	10.6	40.7	10.1	0	38.3	0.083	0.0357	15.9	45.7
10/24/01	10:31	0	25.9	24.6	25.6	24.3	22.7	50.8	60.9	10.6	41.2	10.1	0	38.3	0.083	0.0356	15.9	46.0
10/24/01	10:32	0	25.9	24.6	25.6	24.3	22.6	51.2	61.2	10.5	40.9	10.1	0	38.3	0.082	0.0352	15.9	46.0
10/24/01	10:33	0	25.9	24.6	25.6	24.3	22.6	51.2	61.2	10.7	41.1	10.1	0	38.3	0.082	0.0352	15.9	46.1
10/24/01	10:34	0	26.0	24.6	25.7	24.2	22.5	51.1	61.3	10.5	40.9	10.0	0	38.3	0.081	0.0347	15.9	46.0
10/24/01	10:35	0	25.9	24.6	25.7	24.2	22.5	51.1	61.2	10.6	41.3	10.0	0	38.3	0.081	0.0347	15.9	46.2
10/24/01	10:36	0	25.9	24.5	25.7	24.0	22.5	50.8	61.0	10.6	40.9	10.0	0	38.3	0.081	0.0346	15.9	45.8
10/24/01	10:37	0	26.0	24.6	25.7	24.0	22.4	51.0	61.0	10.7	40.7	10.0	0	38.4	0.080	0.0342	15.9	45.9
10/24/01	10:38	0	26.0	24.5	25.8	24.0	22.4	51.1	61.0	10.7	41.2	10.0	0	38.3	0.080	0.0342	15.9	46.1
10/24/01	10:39	0	26.0	24.5	25.8	24.0	22.4	51.0	60.7	10.6	41.0	10.0	0	38.4	0.080	0.0342	15.9	46.0
10/24/01	10:40	0	26.1	24.5	25.8	23.9	22.4	51.0	60.8	10.7	41.1	10.0	0	38.4	0.080	0.0342	15.9	46.1
10/24/01	10:41	0	26.1	24.5	25.8	24.0	22.4	50.7	60.5	10.6	41.2	10.0	0	38.4	0.080	0.0341	15.9	45.9
10/24/01	10:42	0	26.1	24.4	25.8	24.0	22.3	51.2	61.0	10.6	40.7	9.9	0	38.3	0.079	0.0337	15.9	45.9
10/24/01	10:43	0	26.1	24.4	25.9	24.0	22.3	51.1	61.1	10.6	41.1	9.9	0	38.4	0.079	0.0337	15.9	46.1
10/24/01	10:44	0	26.1	24.4	25.8	24.0	22.2	50.9	60.7	10.6	40.9	9.9	0	38.3	0.079	0.0337	15.9	45.9
10/24/01	10:45	0	26.1	24.4	25.9	23.9	22.2	51.0	60.7	10.6	41.0	9.9	0	38.3	0.079	0.0337	15.9	46.0
10/24/01	10:46	0	26.2	24.4	25.9	23.9	22.2	51.0	60.7	10.7	40.7	9.9	0	38.3	0.079	0.0336	15.9	45.8
10/24/01	10:47	0	26.2	24.4	25.9	23.9	22.2	51.2	61.1	10.7	41.0	9.9	0	38.4	0.078	0.0332	15.9	46.1
10/24/01	10:48	0	26.2	24.4	25.9	23.9	22.2	51.2	61.1	10.6	41.0	9.9	0	38.4	0.078	0.0332	15.9	46.1
10/24/01	10:49	0	26.2	24.3	26.0	23.9	22.2	51.4	61.3	10.7	41.0	9.9	0	38.4	0.078	0.0332	15.9	46.2
10/24/01	10:50	0	26.2	24.3	26.0	23.9	22.3	51.2	61.2	10.7	40.8	9.9	0	38.3	0.078	0.0332	15.9	46.0
10/24/01	10:51	0	26.3	24.3	26.0	23.9	22.3	50.9	60.7	10.5	41.0	9.9	0	38.3	0.078	0.0331	15.9	46.0
10/24/01	10:52	0	26.3	24.3	26.1	24.0	22.3	50.9	60.7	10.6	40.7	9.9	0	38.3	0.078	0.0331	15.9	45.8
10/24/01	10:53	0	26.3	24.3	26.0	24.0	22.4	51.1	60.8	10.7	41.3	9.9	0	38.3	0.078	0.0331	15.9	46.2
10/24/01	10:54	0	26.3	24.3	26.1	24.0	22.4	51.0	60.7	10.6	41.0	9.9	0	38.4	0.078	0.0331	15.9	46.0
10/24/01	10:55	0	26.3	24.3	26.1	24.0	22.5	51.2	61.0	10.6	41.2	9.9	0	38.3	0.078	0.0330	15.9	46.2
10/24/01	10:56	0	26.3	24.3	26.1	24.1	22.6	51.4	61.1	10.7	41.3	9.8	0	38.5	0.077	0.0326	16.0	46.3
10/24/01	10:57	0	26.3	24.3	26.1	24.2	22.6	51.4	61.3	10.7	41.2	9.8	0	38.4	0.077	0.0326	16.0	46.3
10/24/01	10:58	0	26.3	24.3	26.1	24.3	22.7	51.4	61.2	10.6	41.1	9.8	0	38.2	0.077	0.0326	15.8	46.3
10/24/01	10:59	0	26.4	24.3	26.1	24.4	22.8	51.0	60.6	10.6	41.3	9.8	0	38.3	0.077	0.0326	15.9	46.2
10/24/01	11:00	0	26.4	24.3	26.2	24.4	22.8	51.7	61.5	10.8	41.2	9.8	0	38.3	0.077	0.0326	15.9	46.5
10/24/01	11:01	0	26.4	24.3	26.2	24.5	22.8	51.2	60.9	10.7	40.9	9.8	0	38.3	0.077	0.0325	15.9	46.0
10/24/01	11:02	0	26.4	24.3	26.2	24.5	22.9	51.2	61.0	10.7	41.0	9.8	0	38.4	0.077	0.0326	15.9	46.1
10/24/01	11:03	0	26.4	24.3	26.2	24.6	22.9	51.1	61.0	10.6	41.3	9.8	0	38.4	0.077	0.0325	15.9	46.2
10/24/01	11:04	0	26.4	24.3	26.2	24.5	22.8	51.3	61.0	10.7	41.2	9.8	0	38.2	0.077	0.0325	15.9	46.2
10/24/01	11:05	0	26.4	24.3	26.2	24.5	22.8	51.8	61.7	10.7	41.2	9.8	0	38.3	0.076	0.0321	15.9	46.5
10/24/01	11:06	0	26.4	24.3	26.2	24.5	22.8	51.2	60.9	10.7	41.1	9.8	0	38.3	0.076	0.0321	15.9	46.2
10/24/01	11:07	0	26.5	24.2	26.3	24.4	22.8	51.7	61.5	10.7	41.1	9.8	0	38.3	0.076	0.0320	15.9	46.4
10/24/01	11:08	0	26.5	24.2	26.2	24.4	22.7	51.5	61.3	10.8	41.1	9.8	0	38.6	0.076	0.0321	16.0	46.3
10/24/01	11:09	0	26.5	24.2	26.3	24.3	22.7	51.6	61.3	10.7	41.1	9.8	0	38.4	0.076	0.0320	15.9	46.3
10/24/01	11:10	0	26.5	24.2	26.2	24.3	22.7	50.9	60.6	10.7	41.1	9.8	0	38.4	0.076	0.0321	15.9	46.0
10/24/01	11:11	0	26.5	24.2	26.3	24.3	22.7	51.3	61.0	10.7	41.3	9.8	0	38.3	0.076	0.0320	15.9	46.3
10/24/01	11:12	0	26.5	24.2	26.3	24.2	22.7	51.4	61.2	10.7	41.0	9.8	0	38.3	0.076	0.0320	15.9	46.2
10/24/01	11:13	0	26.6	24.2	26.3	24.2	22.6	51.2	60.8	10.6	41.3	9.8	0	38.4	0.076	0.0320	15.9	46.2
10/24/01	11:14	0	26.6	24.2	26.3	24.3	22.6	51.6	61.4	10.8	41.3	9.8	0	38.4	0.076	0.0320	15.9	46.5
10/24/01	11:15	0	26.6	24.2	26.3	24.3	22.6	51.5	61.3	10.7	41.2	9.8	0	38.4	0.076	0.0320	15.9	46.3
10/24/01	11:16	0	26.6	24.2	26.4	24.2	22.6	51.1	60.9	10.7	41.0	9.7	0	38.3	0.075	0.0315	15.9	46.1
10/24/01	11:17	0	26.6	24.2	26.4	24.2	22.6	51.4	61.0	10.8	40.9	9.7	0	38.4	0.075	0.0315	15.9	46.1
10/24/01	11:18	0	26.6	24.2	26.3	24.2	22.6	51.4	61.1	10.7	41.3	9.7	0	38.4	0.075	0.0316	16.0	46.3
10/24/01	11:19	0	26.6	24.2	26.4	24.3	22.6	51.0	60.6	10.7	41.1	9.7	0	38.4	0.075	0.0315	15.9	46.1
10/24/01	11:20	0	26.6	24.1	26.4	24.2	22.6	51.7	61.4	10.7	41.2	9.7	0	38.3	0.075	0.0315	15.9	46.5
10/24/01	11:21	0	26.7	24.1	26.4	24.2	22.6	51.2	60.9	10.7	41.2	9.7	0	38.3	0.075	0.0315	15.9	46.2
10/24/01	11:22	0	26.7	24.1	26.4	24.2	22.6	51.2	60.9	10.8	41.1	9.7	0	38.4	0.075	0.0315	15.9	46.1
10/24/01	11:23	0	26.7	24.1	26.4	24.3	22.5	51.5	61.1	10.7	41.2	9.7	0	38.4	0.075	0.0315	15.9	46.4
10/24/01	11:24	0	26.7	24.1	26.4	24.2	22.5	51.5	61.2	10.7	41.3	9.7	0	38.3	0.075	0.0315	15.9	46.4
10/24/01	11:25	0	26.7	24.1	26.4	24.3	22.5	51.3	61.0	10.7	41.3	9.7	0	38.3	0.075	0.0315	15.9	46.3
10/24/01	11:26	0	26.7	24.1	26.5	24.2	22.5	51.7	61.4	10.7	41.3	9.7	0	38.3	0.075	0.0314	15.9	46.5
10/24/01	11:27	0	26.7	24.1	26.5	24.2	22.5	51.3	61.0	10.7	41.2	9.7	0	38.3	0.075	0.0314	15.9	46.2
10/24/01	11:28	0	26.7	24.1	26.5	24.2	22.5	52.0	61.7	10.8	41.3	9.7	0	38.4	0.075	0.0314	15.9	46.6
10/24/01	11:29	0	26.8	24.1	26.5	24.2	22.5	51.4	61.0	10.8	40.9	9.7	0	38.3	0.075	0.0314	15.9	46.2

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	11:30	0	26.8	24.1	26.5	24.2	22.5	51.5	61.2	10.8	41.2	9.7	0	38.4	0.075	0.0314	15.9	46.4
10/24/01	11:31	0	26.8	24.1	26.6	24.2	22.5	51.5	61.3	10.7	41.4	9.7	0	38.3	0.075	0.0313	15.9	46.4
10/24/01	11:32	0	26.8	24.0	26.5	24.2	22.5	51.5	61.1	10.7	41.1	9.7	0	38.3	0.074	0.0310	15.9	46.3
10/24/01	11:33	0	26.8	24.0	26.6	24.2	22.5	51.2	60.9	10.8	41.1	9.7	0	38.3	0.074	0.0309	15.9	46.1
10/24/01	11:34	0	26.8	24.0	26.6	24.3	22.5	51.4	61.0	10.8	41.3	9.7	0	38.3	0.074	0.0309	15.9	46.3
10/24/01	11:35	0	26.8	24.0	26.6	24.3	22.4	51.6	61.2	10.7	41.3	9.7	0	38.3	0.074	0.0309	15.9	46.4
10/24/01	11:36	0	26.8	24.0	26.6	24.2	22.4	51.7	61.5	10.8	41.2	9.7	0	38.3	0.074	0.0309	15.9	46.4
10/24/01	11:37	0	26.9	24.0	26.5	24.2	22.4	51.4	61.0	10.9	41.3	9.7	0	38.3	0.074	0.0309	15.9	46.4
10/24/01	11:38	0	26.9	24.0	26.6	24.2	22.4	51.6	61.3	10.8	41.3	9.7	0	38.3	0.074	0.0309	15.9	46.4
10/24/01	11:39	0	26.9	24.0	26.6	24.2	22.5	51.6	61.2	10.8	41.0	9.7	0	38.3	0.074	0.0309	15.9	46.3
10/24/01	11:40	0	26.9	24.0	26.6	24.2	22.4	51.7	61.4	10.9	41.5	9.7	0	38.3	0.074	0.0309	15.9	46.6
10/24/01	11:41	0	26.9	24.0	26.6	24.1	22.4	51.3	60.8	10.8	41.1	9.7	0	38.3	0.074	0.0309	15.9	46.2
10/24/01	11:42	0	26.9	24.0	26.7	24.2	22.4	51.7	61.4	10.8	41.6	9.7	0	38.4	0.074	0.0308	15.9	46.7
10/24/01	11:43	0	26.9	23.9	26.7	24.2	22.4	51.6	61.2	10.8	41.2	9.7	0	38.3	0.074	0.0308	15.9	46.4
10/24/01	11:44	0	26.9	23.9	26.7	24.2	22.4	51.4	61.0	10.8	41.3	9.7	0	38.3	0.074	0.0308	15.9	46.3
10/24/01	11:45	0	26.9	23.9	26.7	24.1	22.4	51.7	61.4	10.7	40.9	9.7	0	38.3	0.074	0.0308	15.9	46.3
10/24/01	11:46	0	27.0	23.9	26.8	24.1	22.4	51.5	61.1	10.8	41.4	9.7	0	38.3	0.074	0.0308	15.9	46.5
10/24/01	11:47	0	27.0	23.9	26.7	24.1	22.4	51.7	61.2	10.8	41.0	9.7	0	38.3	0.074	0.0308	15.9	46.3
10/24/01	11:48	0	27.0	23.9	26.8	24.1	22.4	51.6	61.1	10.8	41.0	9.7	0	38.2	0.074	0.0308	15.9	46.3
10/24/01	11:49	0	27.0	23.9	26.8	24.1	22.4	51.5	61.2	10.8	41.2	9.7	0	38.3	0.074	0.0307	15.9	46.4
10/24/01	11:50	0	27.0	23.9	26.8	24.1	22.4	51.3	60.9	10.8	41.1	9.6	0	38.3	0.074	0.0307	15.9	46.2
10/24/01	11:51	0	27.0	23.9	26.9	24.1	22.4	51.6	61.2	10.8	41.4	9.7	0	38.3	0.074	0.0307	15.9	46.5
10/24/01	11:52	0	27.1	23.9	26.8	24.1	22.4	51.5	61.1	10.8	41.2	9.6	0	38.3	0.073	0.0303	15.9	46.3
10/24/01	11:53	0	27.1	23.9	26.9	24.1	22.4	51.5	61.1	10.8	41.3	9.6	0	38.3	0.073	0.0303	15.9	46.4
10/24/01	11:54	0	27.1	23.9	26.9	24.2	22.4	51.4	61.0	10.7	41.0	9.6	0	38.1	0.073	0.0303	15.8	46.2
10/24/01	11:55	0	27.1	23.9	26.3	24.2	22.4	51.7	61.3	10.7	41.5	9.6	0	38.2	0.073	0.0307	15.9	46.6
10/24/01	11:56	0	26.9	23.9	26.0	24.2	22.4	51.4	60.9	10.6	41.4	9.6	0	38.2	0.072	0.0306	15.8	46.4
10/24/01	11:57	0	26.9	23.9	25.8	24.2	22.4	51.3	60.7	10.6	41.6	9.6	0	38.2	0.072	0.0308	15.9	46.4
10/24/01	11:58	0	26.7	23.8	25.7	24.2	22.4	48.5	60.9	10.7	38.2	12.3	0	38.2	0.010	0.0043	15.8	43.3
10/24/01	11:59	0	26.7	23.8	25.7	24.2	22.4	50.8	61.0	10.6	40.8	10.2	0	38.3	0.093	0.0398	15.9	45.8
10/24/01	12:00	0	26.6	23.8	25.8	24.2	22.4	51.2	61.1	10.7	41.1	10.0	0	38.2	0.089	0.0380	15.9	46.2
10/24/01	12:01	0	26.5	23.8	25.8	24.1	22.4	51.6	61.4	10.8	41.0	10.0	0	38.3	0.087	0.0372	15.9	46.3
10/24/01	12:02	0	26.4	23.8	25.8	24.1	22.4	51.2	61.0	10.6	41.0	9.9	0	38.1	0.086	0.0367	15.8	46.1
10/24/01	12:03	0	26.4	23.8	25.8	24.1	22.3	51.3	61.1	10.6	40.9	9.9	0	38.3	0.085	0.0363	15.9	46.1
10/24/01	12:04	0	26.3	23.8	25.9	24.1	22.3	51.1	60.9	10.7	41.0	9.9	0	38.2	0.084	0.0358	15.9	46.1
10/24/01	12:05	0	26.3	23.8	25.9	24.1	22.3	51.2	60.9	10.7	41.3	9.8	0	38.2	0.084	0.0358	15.8	46.2
10/24/01	12:06	0	26.2	23.8	25.9	24.1	22.3	51.3	61.1	10.7	41.1	9.8	0	38.2	0.083	0.0353	15.8	46.2
10/24/01	12:07	0	26.2	23.8	26.0	24.1	22.3	51.2	61.0	10.7	40.9	9.8	0	38.2	0.083	0.0353	15.9	46.0
10/24/01	12:08	0	26.2	23.8	26.0	24.1	22.3	51.4	61.0	10.7	41.3	9.8	0	38.2	0.083	0.0353	15.9	46.3
10/24/01	12:09	0	26.3	23.8	26.0	24.2	22.3	50.9	60.6	10.6	41.0	9.8	0	38.3	0.082	0.0348	15.9	46.0
10/24/01	12:10	0	26.2	23.8	26.0	24.2	22.3	51.3	61.0	10.7	40.9	9.8	0	38.2	0.082	0.0348	15.9	46.1
10/24/01	12:11	0	26.3	23.8	26.1	24.2	22.4	51.2	60.8	10.6	41.4	9.8	0	38.2	0.081	0.0343	15.9	46.3
10/24/01	12:12	0	26.3	23.7	26.0	24.2	22.3	51.1	60.7	10.6	41.0	9.7	0	38.2	0.081	0.0343	15.9	46.1
10/24/01	12:13	0	26.4	23.8	26.1	24.2	22.3	51.5	61.2	10.7	41.0	9.7	0	38.3	0.081	0.0343	15.9	46.2
10/24/01	12:14	0	26.4	23.7	26.1	24.3	22.3	51.5	61.2	10.8	41.1	9.7	0	38.3	0.081	0.0343	15.9	46.3
10/24/01	12:15	0	26.4	23.7	26.2	24.3	22.3	51.3	61.0	10.7	41.1	9.7	0	38.3	0.080	0.0338	15.9	46.2
10/24/01	12:16	0	26.4	23.7	26.2	24.3	22.3	51.2	60.8	10.7	41.1	9.7	0	38.3	0.080	0.0338	15.9	46.2
10/24/01	12:17	0	26.5	23.7	26.2	24.3	22.3	51.2	60.8	10.7	41.3	9.7	0	38.3	0.080	0.0338	15.9	46.3
10/24/01	12:18	0	26.4	23.7	26.2	24.3	22.4	51.3	60.9	10.7	41.5	9.7	0	38.2	0.080	0.0338	15.9	46.4
10/24/01	12:19	0	26.5	23.7	26.2	24.3	22.4	51.1	60.9	10.6	41.0	9.7	0	38.3	0.080	0.0337	15.9	46.0
10/24/01	12:20	0	26.5	23.7	26.3	24.3	22.4	51.5	61.0	10.7	41.3	9.7	0	38.4	0.080	0.0337	15.9	46.4
10/24/01	12:21	0	26.5	23.7	26.3	24.3	22.4	51.3	60.8	10.7	41.1	9.7	0	38.3	0.079	0.0333	15.9	46.2
10/24/01	12:22	0	26.5	23.7	26.3	24.3	22.4	51.7	61.3	10.8	41.1	9.7	0	38.3	0.079	0.0332	15.9	46.4
10/24/01	12:23	0	26.6	23.7	26.2	24.2	22.4	51.2	60.7	10.7	41.1	9.7	0	38.3	0.079	0.0333	15.9	46.1
10/24/01	12:24	0	26.6	23.7	26.3	24.2	22.4	51.5	61.2	10.6	41.5	9.6	0	38.2	0.079	0.0332	15.9	46.5
10/24/01	12:25	0	26.6	23.7	26.4	24.2	22.4	51.4	61.0	10.7	41.2	9.6	0	38.3	0.079	0.0332	15.9	46.3
10/24/01	12:26	0	26.6	23.7	26.4	24.2	22.4	51.5	61.1	10.7	41.2	9.6	0	38.3	0.079	0.0332	15.9	46.4
10/24/01	12:27	0	26.6	23.7	26.4	24.2	22.4	51.4	61.0	10.6	41.2	9.6	0	38.2	0.079	0.0332	15.9	46.3
10/24/01	12:28	0	26.6	23.7	26.4	24.2	22.4	51.4	61.1	10.7	41.3	9.6	0	38.3	0.079	0.0332	15.9	46.4
10/24/01	12:29	0	26.6	23.7	26.4	24.2	22.4	51.4	61.0	10.7	41.2	9.6	0	38.3	0.079	0.0332	15.9	46.3

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	12:30	0	26.7	23.7	26.4	24.2	22.4	51.4	60.9	10.7	41.4	9.6	0	38.3	0.078	0.0327	15.9	46.4
10/24/01	12:31	0	26.7	23.7	26.4	24.2	22.4	51.9	61.5	10.9	41.2	9.6	0	38.3	0.078	0.0328	15.9	46.6
10/24/01	12:32	0	26.7	23.7	26.4	24.2	22.4	51.5	60.8	10.7	41.5	9.6	0	38.3	0.078	0.0327	15.9	46.5
10/24/01	12:33	0	26.7	23.7	26.5	24.3	22.4	51.5	61.0	10.8	41.6	9.6	0	38.3	0.078	0.0326	15.9	46.5
10/24/01	12:34	0	26.7	23.7	26.5	24.2	22.4	51.5	61.1	10.7	41.1	9.6	0	38.2	0.078	0.0327	15.9	46.3
10/24/01	12:35	0	26.7	23.6	26.5	24.2	22.4	51.6	61.1	10.7	41.3	9.6	0	38.3	0.078	0.0326	15.9	46.5
10/24/01	12:36	0	26.8	23.7	26.5	24.2	22.4	51.7	61.3	10.8	41.1	9.6	0	38.2	0.077	0.0322	15.9	46.4
10/24/01	12:37	0	26.8	23.6	26.5	24.2	22.4	51.5	61.0	10.7	41.4	9.6	0	38.4	0.077	0.0322	15.9	46.5
10/24/01	12:38	0	26.8	23.6	26.5	24.2	22.4	51.5	61.0	10.7	41.3	9.6	0	38.3	0.077	0.0322	15.9	46.4
10/24/01	12:39	0	26.8	23.6	26.5	24.2	22.4	51.9	61.5	10.8	41.6	9.6	0	38.3	0.077	0.0322	15.9	46.8
10/24/01	12:40	0	26.8	23.6	26.5	24.3	22.4	51.6	61.1	10.7	41.3	9.6	0	38.3	0.077	0.0322	15.9	46.5
10/24/01	12:41	0	26.8	23.6	26.6	24.3	22.4	51.6	61.2	10.8	41.1	9.6	0	38.2	0.077	0.0322	15.9	46.3
10/24/01	12:42	0	26.8	23.6	26.6	24.3	22.4	51.7	61.1	10.7	41.5	9.6	0	38.2	0.077	0.0322	15.9	46.6
10/24/01	12:43	0	26.9	23.6	26.6	24.2	22.4	51.8	61.3	10.8	41.2	9.6	0	38.2	0.077	0.0321	15.9	46.5
10/24/01	12:44	0	26.9	23.6	26.7	24.2	22.4	51.5	61.1	10.7	41.4	9.6	0	38.3	0.077	0.0321	15.9	46.4
10/24/01	12:45	0	26.9	23.6	26.6	24.2	22.4	51.3	60.7	10.7	41.2	9.5	0	38.2	0.077	0.0321	15.9	46.3
10/24/01	12:46	0	26.9	23.6	26.7	24.1	22.4	51.5	61.1	10.7	41.4	9.5	0	38.2	0.077	0.0321	15.8	46.4
10/24/01	12:47	0	26.9	23.6	26.7	24.1	22.4	51.9	61.5	10.8	41.1	9.6	0	38.2	0.077	0.0321	15.8	46.5
10/24/01	12:48	0	26.9	23.6	26.7	24.1	22.4	51.5	61.0	10.7	41.2	9.5	0	38.4	0.077	0.0320	15.9	46.4
10/24/01	12:49	0	26.9	23.6	26.7	24.1	22.4	51.5	61.0	10.8	41.4	9.5	0	38.3	0.076	0.0316	15.9	46.5
10/24/01	12:50	0	27.0	23.6	26.7	24.1	22.4	51.5	60.9	10.7	41.4	9.5	0	38.2	0.077	0.0320	15.9	46.4
10/24/01	12:51	0	27.0	23.6	26.7	24.1	22.4	52.2	61.8	10.9	41.6	9.5	0	38.2	0.076	0.0316	15.9	46.9
10/24/01	12:52	0	27.0	23.6	26.8	24.2	22.4	51.8	61.2	10.8	41.7	9.5	0	38.3	0.076	0.0315	15.9	46.7
10/24/01	12:53	0	27.0	23.6	26.8	24.2	22.4	51.2	60.6	10.7	41.3	9.5	0	38.3	0.076	0.0316	15.9	46.3
10/24/01	12:54	0	27.0	23.6	26.8	24.1	22.4	51.7	61.2	10.8	41.8	9.5	0	38.3	0.076	0.0315	15.9	46.7
10/24/01	12:55	0	27.1	23.6	26.8	24.2	22.4	51.9	61.5	10.8	41.4	9.5	0	38.3	0.076	0.0315	15.9	46.7
10/24/01	12:56	0	27.0	23.6	26.8	24.2	22.4	51.6	60.9	10.8	41.4	9.5	0	38.2	0.076	0.0315	15.9	46.5
10/24/01	12:57	0	27.1	23.6	26.8	24.2	22.4	51.9	61.4	10.8	41.2	9.5	0	38.3	0.076	0.0315	15.9	46.6
10/24/01	12:58	0	27.1	23.6	26.8	24.2	22.4	52.0	61.5	10.8	41.5	9.5	0	38.3	0.076	0.0315	15.9	46.7
10/24/01	12:59	0	27.1	23.6	26.9	24.2	22.4	51.8	61.3	10.7	41.4	9.5	0	38.2	0.076	0.0315	15.8	46.6
10/24/01	13:00	0	27.1	23.6	26.9	24.2	22.4	51.2	60.5	10.7	41.1	9.5	0	38.2	0.075	0.0311	15.9	46.2
10/24/01	13:01	0	27.2	23.6	26.9	24.3	22.4	51.5	60.9	10.8	41.3	9.5	0	38.2	0.076	0.0315	15.9	46.4
10/24/01	13:02	0	27.2	23.6	27.0	24.2	22.5	51.4	60.9	10.8	41.4	9.5	0	38.2	0.076	0.0314	15.8	46.4
10/24/01	13:03	0	27.2	23.5	27.0	24.2	22.5	51.8	61.2	10.8	41.4	9.5	0	38.3	0.076	0.0314	15.9	46.6
10/24/01	13:04	0	27.2	23.5	27.0	24.2	22.4	51.6	61.1	10.8	41.5	9.5	0	38.2	0.076	0.0314	15.8	46.5
10/24/01	13:05	0	27.2	23.5	27.0	24.2	22.5	51.6	61.2	10.8	41.6	9.5	0	38.2	0.075	0.0310	15.8	46.6
10/24/01	13:06	0	27.2	23.5	27.0	24.2	22.5	51.4	60.7	10.7	41.5	9.5	0	38.3	0.076	0.0313	15.9	46.5
10/24/01	13:07	0	27.2	23.5	27.0	24.2	22.5	51.7	61.1	10.8	41.1	9.5	0	38.3	0.075	0.0310	15.9	46.4
10/24/01	13:08	0	27.2	23.5	27.0	24.3	22.5	51.6	61.1	10.8	41.3	9.5	0	38.2	0.075	0.0310	15.8	46.5
10/24/01	13:09	0	27.3	23.5	27.0	24.3	22.5	51.7	61.0	10.8	41.4	9.5	0	38.4	0.075	0.0309	15.9	46.5
10/24/01	13:10	0	27.3	23.5	27.1	24.4	22.5	51.4	60.8	10.8	41.6	9.5	0	38.2	0.075	0.0309	15.8	46.5
10/24/01	13:11	0	27.3	23.5	27.1	24.3	22.5	51.8	61.2	10.8	41.3	9.5	0	38.2	0.075	0.0309	15.9	46.5
10/24/01	13:12	0	27.3	23.5	26.5	24.4	22.5	51.5	60.7	10.8	41.7	9.4	0	38.2	0.074	0.0310	15.8	46.6
10/24/01	13:13	0	27.2	23.5	26.1	24.4	22.5	52.0	61.3	10.7	41.7	9.4	0	38.2	0.073	0.0309	15.8	46.8
10/24/01	13:14	0	27.0	23.5	25.9	24.4	22.5	51.8	61.1	10.6	41.9	9.4	0	38.2	0.073	0.0311	15.9	46.9
10/24/01	13:15	0	27.0	23.5	25.8	24.4	22.5	52.0	61.2	10.6	41.8	9.3	0	38.1	0.073	0.0312	15.8	46.9
10/24/01	13:16	0	26.9	23.5	25.8	24.4	22.5	49.6	60.9	10.6	39.4	11.4	0	38.2	0.108	0.0461	15.9	44.5
10/24/01	13:17	0	26.8	23.5	25.8	24.4	22.6	50.8	61.2	10.6	40.5	10.4	0	38.2	0.093	0.0397	15.9	45.6
10/24/01	13:18	0	26.7	23.5	25.9	24.4	22.6	50.8	61.0	10.6	40.5	10.3	0	38.2	0.089	0.0379	15.8	45.7
10/24/01	13:19	0	26.6	23.5	25.8	24.4	22.6	50.9	61.1	10.6	40.8	10.2	0	38.2	0.088	0.0375	15.9	45.9
10/24/01	13:20	0	26.5	23.5	25.9	24.5	22.6	51.1	61.3	10.7	40.7	10.1	0	38.2	0.086	0.0366	15.9	45.9
10/24/01	13:21	0	26.5	23.5	26.0	24.5	22.6	51.7	61.8	10.7	41.0	10.1	0	38.2	0.086	0.0366	15.9	46.4
10/24/01	13:22	0	26.4	23.5	25.9	24.5	22.6	51.4	61.5	10.7	41.0	10.1	0	38.2	0.085	0.0361	15.9	46.2
10/24/01	13:23	0	26.3	23.5	25.9	24.5	22.6	51.1	61.1	10.7	40.9	10.0	0	38.2	0.084	0.0357	15.9	46.0
10/24/01	13:24	0	26.3	23.5	26.0	24.5	22.6	51.3	61.4	10.7	41.0	10.0	0	38.3	0.084	0.0357	15.9	46.2
10/24/01	13:25	0	26.3	23.5	26.0	24.5	22.6	51.0	60.9	10.6	41.0	10.0	0	38.3	0.083	0.0353	15.9	46.0
10/24/01	13:26	0	26.3	23.5	26.0	24.5	22.7	51.2	61.1	10.7	41.1	10.0	0	38.3	0.083	0.0352	15.9	46.1
10/24/01	13:27	0	26.3	23.5	26.0	24.6	22.7	51.0	60.9	10.7	41.0	9.9	0	38.4	0.082	0.0348	15.9	46.0
10/24/01	13:28	0	26.3	23.6	26.1	24.6	23.0	51.3	61.3	10.7	41.1	9.9	0	38.2	0.082	0.0347	15.8	46.2
10/24/01	13:29	0	26.3	23.6	26.1	24.7	23.1	50.7	60.6	10.6	40.9	9.9	0	38.2	0.082	0.0347	15.8	45.8

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	13:30	0	26.4	23.6	26.1	24.8	23.2	51.1	61.1	10.7	41.2	9.9	0	38.1	0.081	0.0343	15.8	46.2
10/24/01	13:31	0	26.4	23.5	26.2	24.9	23.1	51.5	61.2	10.7	41.1	9.9	0	38.2	0.081	0.0342	15.9	46.3
10/24/01	13:32	0	26.4	23.5	26.2	25.0	23.0	51.2	61.1	10.7	41.1	9.9	0	38.3	0.081	0.0342	15.9	46.1
10/24/01	13:33	0	26.4	23.5	26.2	25.0	23.0	51.1	60.9	10.7	40.9	9.9	0	38.3	0.081	0.0342	15.9	46.0
10/24/01	13:34	0	26.4	23.5	26.2	24.9	22.9	51.2	61.0	10.7	41.2	9.9	0	38.2	0.081	0.0342	15.8	46.2
10/24/01	13:35	0	26.4	23.5	26.2	24.9	22.9	51.5	61.3	10.6	41.3	9.9	0	38.3	0.081	0.0342	15.9	46.4
10/24/01	13:36	0	26.5	23.5	26.2	24.9	22.9	51.7	61.5	10.7	41.2	9.8	0	38.3	0.080	0.0338	15.9	46.4
10/24/01	13:37	0	26.5	23.5	26.2	24.9	22.9	51.3	61.1	10.7	41.2	9.8	0	38.2	0.080	0.0337	15.9	46.2
10/24/01	13:38	0	26.5	23.5	26.2	24.8	22.9	51.5	61.4	10.7	41.4	9.8	0	38.2	0.080	0.0337	15.9	46.5
10/24/01	13:39	0	26.5	23.6	26.3	24.8	22.9	51.3	61.1	10.7	41.3	9.8	0	38.2	0.080	0.0337	15.9	46.3
10/24/01	13:40	0	26.5	23.6	26.3	24.8	22.9	51.3	61.0	10.7	41.2	9.8	0	38.3	0.080	0.0337	15.9	46.2
10/24/01	13:41	0	26.6	23.6	26.3	24.9	22.9	51.7	61.6	10.7	41.2	9.8	0	38.3	0.079	0.0333	15.9	46.5
10/24/01	13:42	0	26.6	23.6	26.3	24.9	22.9	51.8	61.5	10.7	41.1	9.8	0	38.3	0.079	0.0333	15.9	46.4
10/24/01	13:43	0	26.6	23.6	26.3	24.9	22.9	51.5	61.3	10.9	41.1	9.8	0	38.3	0.079	0.0333	15.9	46.3
10/24/01	13:44	0	26.6	23.6	26.3	25.0	22.9	51.7	61.5	10.7	41.5	9.8	0	38.2	0.079	0.0332	15.9	46.6
10/24/01	13:45	0	26.6	23.6	26.3	25.0	22.9	51.2	61.0	10.8	41.2	9.8	0	38.1	0.079	0.0332	15.8	46.2
10/24/01	13:46	0	26.6	23.6	26.4	25.0	22.9	51.5	61.1	10.7	41.1	9.8	0	38.2	0.079	0.0332	15.8	46.3
10/24/01	13:47	0	26.7	23.6	26.4	25.1	22.9	51.4	61.0	10.8	41.4	9.8	0	38.2	0.079	0.0332	15.8	46.4
10/24/01	13:48	0	26.7	23.6	26.4	25.0	22.9	51.1	60.8	10.6	41.3	9.8	0	38.2	0.078	0.0327	15.9	46.2
10/24/01	13:49	0	26.7	23.6	26.4	25.1	22.9	51.2	60.9	10.7	41.3	9.8	0	38.3	0.078	0.0327	15.9	46.3
10/24/01	13:50	0	26.7	23.6	26.4	25.0	22.9	51.2	60.8	10.7	41.3	9.8	0	38.2	0.078	0.0327	15.8	46.3
10/24/01	13:51	0	26.7	23.6	26.4	25.0	23.0	51.4	61.0	10.8	41.0	9.7	0	38.1	0.078	0.0328	15.8	46.2
10/24/01	13:52	0	26.7	23.6	26.5	24.9	22.9	51.6	61.3	10.7	41.6	9.7	0	38.3	0.078	0.0327	15.9	46.6
10/24/01	13:53	0	26.7	23.6	26.5	24.9	23.0	51.5	61.3	10.7	41.4	9.7	0	38.2	0.078	0.0327	15.9	46.5
10/24/01	13:54	0	26.7	23.6	26.5	24.8	22.9	51.9	61.6	10.8	41.4	9.7	0	38.3	0.078	0.0327	15.9	46.7
10/24/01	13:55	0	26.8	23.6	26.5	24.9	23.0	51.7	61.3	10.8	41.4	9.7	0	38.3	0.078	0.0326	15.9	46.5
10/24/01	13:56	0	26.8	23.6	26.5	24.8	23.0	51.8	61.5	10.8	41.3	9.7	0	38.3	0.078	0.0327	15.9	46.5
10/24/01	13:57	0	26.8	23.6	26.6	24.8	22.9	51.8	61.5	10.7	41.3	9.7	0	38.2	0.078	0.0326	15.8	46.6
10/24/01	13:58	0	26.8	23.6	26.5	24.8	22.9	51.5	61.1	10.8	41.3	9.7	0	38.2	0.077	0.0323	15.9	46.4
10/24/01	13:59	0	26.8	23.6	26.6	24.8	23.0	51.6	61.2	10.7	41.4	9.7	0	38.2	0.077	0.0322	15.9	46.5
10/24/01	14:00	0	26.8	23.6	26.6	24.9	23.0	51.0	60.6	10.6	41.3	9.7	0	38.2	0.077	0.0322	15.9	46.2
10/24/01	14:01	0	26.8	23.6	26.6	24.8	23.0	51.4	61.1	10.7	41.0	9.7	0	38.2	0.077	0.0321	15.8	46.2
10/24/01	14:02	0	26.9	23.6	26.6	24.8	23.0	51.4	61.1	10.8	41.2	9.7	0	38.2	0.077	0.0322	15.8	46.3
10/24/01	14:03	0	26.9	23.6	26.6	24.8	23.0	51.3	60.9	10.8	41.1	9.7	0	38.2	0.077	0.0321	15.9	46.2
10/24/01	14:04	0	26.9	23.6	26.7	24.8	23.0	51.3	60.9	10.7	41.2	9.7	0	38.2	0.077	0.0321	15.9	46.3
10/24/01	14:05	0	26.9	23.6	26.7	24.8	22.9	51.3	60.8	10.7	41.3	9.7	0	38.2	0.077	0.0321	15.9	46.3
10/24/01	14:06	0	26.9	23.6	26.7	24.7	22.9	51.1	60.6	10.6	41.1	9.7	0	38.2	0.077	0.0321	15.9	46.1
10/24/01	14:07	0	26.9	23.6	26.7	24.8	22.9	51.8	61.6	10.8	41.6	9.7	0	38.2	0.077	0.0321	15.9	46.7
10/24/01	14:08	0	27.0	23.6	26.8	24.8	22.9	51.3	60.9	10.7	41.4	9.7	0	38.1	0.077	0.0320	15.8	46.3
10/24/01	14:09	0	27.0	23.6	26.8	24.8	22.9	51.6	61.2	10.7	41.5	9.7	0	38.2	0.076	0.0316	15.9	46.6
10/24/01	14:10	0	27.0	23.6	26.8	24.7	22.9	51.3	61.0	10.7	41.4	9.7	0	38.2	0.077	0.0320	15.8	46.4
10/24/01	14:11	0	27.0	23.6	26.8	24.7	22.9	51.7	61.2	10.8	41.3	9.7	0	38.1	0.077	0.0319	15.8	46.5
10/24/01	14:12	0	27.0	23.6	26.8	24.7	22.9	51.4	61.0	10.7	41.2	9.7	0	38.3	0.076	0.0316	15.9	46.3
10/24/01	14:13	0	27.0	23.6	26.8	24.7	22.9	51.5	61.0	10.7	41.5	9.7	0	38.2	0.076	0.0316	15.9	46.5
10/24/01	14:14	0	27.0	23.6	26.8	24.7	22.9	51.4	61.0	10.7	41.2	9.7	0	38.1	0.076	0.0316	15.8	46.3
10/24/01	14:15	0	27.1	23.6	26.8	24.7	22.9	51.9	61.5	10.8	41.2	9.7	0	38.2	0.076	0.0315	15.9	46.5
10/24/01	14:16	0	27.1	23.6	26.8	24.7	22.9	51.7	61.3	10.8	41.3	9.7	0	38.5	0.076	0.0315	16.0	46.5
10/24/01	14:17	0	27.1	23.6	26.9	24.7	22.9	51.5	61.1	10.8	41.3	9.7	0	38.2	0.076	0.0315	15.9	46.4
10/24/01	14:18	0	27.1	23.6	26.9	24.8	22.9	51.6	61.2	10.8	41.4	9.7	0	38.1	0.076	0.0315	15.8	46.5
10/24/01	14:19	0	27.1	23.6	26.9	24.8	22.9	51.1	60.7	10.7	41.4	9.7	0	38.0	0.076	0.0314	15.8	46.3
10/24/01	14:20	0	27.2	23.6	26.9	24.8	22.9	51.9	61.6	10.8	41.2	9.7	0	38.2	0.076	0.0315	15.9	46.5
10/24/01	14:21	0	27.1	23.6	26.9	24.8	22.9	51.6	61.2	10.7	41.4	9.7	0	38.2	0.076	0.0314	15.9	46.5
10/24/01	14:22	0	27.2	23.6	27.0	24.8	22.9	51.7	61.2	10.7	41.3	9.6	0	38.1	0.076	0.0314	15.8	46.5
10/24/01	14:23	0	27.2	23.6	27.0	24.8	22.9	51.4	61.0	10.8	41.1	9.6	0	38.1	0.076	0.0314	15.8	46.3
10/24/01	14:24	0	27.2	23.6	27.0	24.8	22.9	51.7	61.4	10.8	41.4	9.6	0	38.3	0.076	0.0314	15.9	46.5
10/24/01	14:25	0	27.2	23.6	27.0	24.7	22.9	51.7	61.2	10.8	41.4	9.6	0	38.2	0.076	0.0314	15.9	46.6
10/24/01	14:26	0	27.3	23.6	27.0	24.7	22.9	51.5	61.1	10.8	41.6	9.6	0	38.2	0.076	0.0314	15.8	46.6
10/24/01	14:27	0	27.3	23.6	27.0	24.7	22.9	51.6	61.1	10.9	41.5	9.6	0	38.2	0.075	0.0310	15.8	46.5
10/24/01	14:28	0	27.3	23.6	27.0	24.7	22.9	51.7	61.3	10.9	41.1	9.6	0	38.1	0.075	0.0309	15.8	46.4
10/24/01	14:29	0	27.3	23.6	27.1	24.7	22.9	51.7	61.4	10.8	41.4	9.6	0	38.2	0.075	0.0309	15.8	46.6

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	14:30	0	27.3	23.6	27.1	24.7	22.9	51.7	61.3	10.9	41.5	9.6	0	38.1	0.075	0.0308	15.8	46.6
10/24/01	14:31	0	27.3	23.6	27.1	24.7	22.9	51.1	60.6	10.8	41.3	9.6	0	38.1	0.075	0.0309	15.8	46.2
10/24/01	14:32	0	27.4	23.6	27.1	24.6	22.9	51.8	61.4	10.8	41.4	9.6	0	38.1	0.075	0.0309	15.8	46.6
10/24/01	14:33	0	27.4	23.6	27.2	24.6	22.9	51.9	61.6	10.8	41.4	9.6	0	38.1	0.075	0.0308	15.8	46.7
10/24/01	14:34	0	27.4	23.6	27.1	24.6	22.9	51.9	61.5	10.8	41.3	9.6	0	38.1	0.075	0.0308	15.8	46.6
10/24/01	14:35	0	27.4	23.6	27.2	24.6	22.9	51.6	61.0	10.9	41.1	9.6	0	38.1	0.075	0.0308	15.8	46.3
10/24/01	14:36	0	27.4	23.6	27.2	24.6	22.9	51.6	61.2	10.7	41.2	9.6	0	38.1	0.075	0.0308	15.8	46.4
10/24/01	14:37	0	27.5	23.6	27.0	24.6	22.9	51.6	61.1	10.8	41.6	9.6	0	38.2	0.075	0.0310	15.8	46.6
10/24/01	14:38	0	27.4	23.6	26.3	24.6	22.8	51.4	60.9	10.8	41.4	9.6	0	38.2	0.073	0.0307	15.8	46.4
10/24/01	14:39	0	27.2	23.6	26.1	24.6	22.8	51.9	61.4	10.7	41.3	9.5	0	38.2	0.073	0.0309	15.9	46.6
10/24/01	14:40	0	27.2	23.6	26.0	24.6	22.9	51.7	61.2	10.7	41.4	9.5	0	38.3	0.073	0.0310	15.9	46.6
10/24/01	14:41	0	27.1	23.6	26.0	24.6	22.9	51.8	61.4	10.7	41.5	9.5	0	38.2	0.073	0.0310	15.8	46.6
10/24/01	14:42	0	27.0	23.6	26.0	24.5	22.9	51.9	61.5	10.7	41.4	9.5	0	38.3	0.073	0.0310	15.9	46.6
10/24/01	14:43	0	26.9	23.6	26.0	24.6	22.9	51.8	61.3	10.7	41.3	9.5	0	38.2	0.073	0.0310	15.9	46.5
10/24/01	14:44	0	26.8	23.6	26.1	24.6	22.9	51.7	61.1	10.8	41.3	9.5	0	38.3	0.072	0.0305	15.9	46.5
10/24/01	14:45	0	26.7	23.6	26.1	24.6	22.9	51.6	61.0	10.6	41.4	9.5	0	38.3	0.073	0.0309	15.9	46.5
10/24/01	14:46	0	26.7	23.6	26.1	24.6	22.9	51.5	61.0	10.7	41.3	9.5	0	38.3	0.073	0.0309	15.9	46.4
10/24/01	14:47	0	26.6	23.6	26.1	24.6	22.9	51.7	61.2	10.8	41.5	9.5	0	38.2	0.073	0.0309	15.8	46.6
10/24/01	14:48	0	26.5	23.6	26.2	24.5	22.9	51.7	61.3	10.7	41.6	9.5	0	38.2	0.073	0.0308	15.9	46.6
10/24/01	14:49	0	26.5	23.6	26.2	24.6	22.8	48.7	60.7	10.8	39.0	12.1	0	38.2	0.010	0.0042	15.9	43.8
10/24/01	14:50	0	26.5	23.6	26.3	24.5	22.8	50.9	61.2	10.7	40.6	10.3	0	38.2	0.096	0.0405	15.9	45.7
10/24/01	14:51	0	26.5	23.6	26.2	24.5	22.8	51.0	61.0	10.7	41.2	10.1	0	38.2	0.091	0.0384	15.9	46.1
10/24/01	14:52	0	26.5	23.6	26.3	24.5	22.8	51.1	61.1	10.7	40.8	10.0	0	38.4	0.089	0.0375	15.9	46.0
10/24/01	14:53	0	26.5	23.6	26.3	24.5	22.8	50.9	61.0	10.7	41.1	10.0	0	38.3	0.088	0.0371	15.9	46.0
10/24/01	14:54	0	26.5	23.6	26.3	24.5	22.8	50.9	60.8	10.7	41.2	9.9	0	38.2	0.086	0.0362	15.8	46.0
10/24/01	14:55	0	26.6	23.6	26.4	24.5	22.8	51.1	60.9	10.6	41.2	9.9	0	38.2	0.086	0.0361	15.8	46.1
10/24/01	14:56	0	26.6	23.6	26.4	24.6	22.8	51.1	60.9	10.8	41.0	9.9	0	38.2	0.085	0.0357	15.9	46.1
10/24/01	14:57	0	26.6	23.6	26.4	24.5	22.8	50.8	60.6	10.7	41.2	9.9	0	38.3	0.085	0.0357	15.9	46.0
10/24/01	14:58	0	26.7	23.6	26.4	24.5	22.8	51.1	60.9	10.7	41.2	9.8	0	38.3	0.084	0.0353	15.9	46.2
10/24/01	14:59	0	26.7	23.6	26.5	24.5	22.8	51.6	61.4	10.7	41.3	9.8	0	38.2	0.084	0.0352	15.8	46.4
10/24/01	15:00	0	26.7	23.6	26.5	24.6	22.8	51.0	60.6	10.7	41.1	9.8	0	38.1	0.083	0.0347	15.8	46.1
10/24/01	15:01	0	26.7	23.6	26.5	24.6	22.8	51.3	61.2	10.8	40.9	9.8	0	38.2	0.083	0.0347	15.9	46.1
10/24/01	15:02	0	26.8	23.6	26.5	24.6	22.8	51.7	61.6	10.8	41.2	9.8	0	38.3	0.083	0.0348	15.9	46.5
10/24/01	15:03	0	26.8	23.6	26.6	24.6	22.8	51.0	60.5	10.7	41.1	9.8	0	38.3	0.082	0.0343	15.9	46.1
10/24/01	15:04	0	26.8	23.6	26.6	24.6	22.8	51.3	60.8	10.7	41.2	9.8	0	38.3	0.082	0.0343	15.9	46.2
10/24/01	15:05	0	26.8	23.6	26.6	24.6	22.8	51.6	61.4	10.7	41.5	9.8	0	38.3	0.082	0.0343	15.9	46.6
10/24/01	15:06	0	26.9	23.6	26.6	24.6	22.8	51.3	60.8	10.8	41.3	9.8	0	38.2	0.082	0.0342	15.9	46.3
10/24/01	15:07	0	26.9	23.6	26.6	24.6	22.8	51.7	61.4	10.8	41.3	9.7	0	38.3	0.082	0.0342	15.9	46.5
10/24/01	15:08	0	26.9	23.6	26.6	24.5	22.8	51.6	61.2	10.8	41.4	9.7	0	38.3	0.081	0.0338	15.9	46.5
10/24/01	15:09	0	26.9	23.6	26.6	24.6	22.8	51.8	61.4	10.8	41.3	9.7	0	38.3	0.081	0.0338	15.9	46.5
10/24/01	15:10	0	26.9	23.6	26.6	24.5	22.8	51.7	61.4	10.7	41.1	9.7	0	38.3	0.081	0.0338	15.9	46.4
10/24/01	15:11	0	26.9	23.6	26.6	24.5	22.8	51.5	61.2	10.7	41.4	9.7	0	38.3	0.081	0.0338	15.9	46.4
10/24/01	15:12	0	26.9	23.6	26.7	24.5	22.8	51.8	61.4	10.8	41.4	9.7	0	38.3	0.081	0.0338	15.9	46.6
10/24/01	15:13	0	26.9	23.6	26.6	24.5	22.8	51.6	61.1	10.8	41.5	9.7	0	38.2	0.080	0.0334	15.9	46.5
10/24/01	15:14	0	26.9	23.6	26.7	24.6	22.8	51.6	61.2	10.8	41.5	9.7	0	38.2	0.080	0.0333	15.9	46.6
10/24/01	15:15	0	26.9	23.6	26.7	24.6	22.8	51.3	60.9	10.8	41.2	9.7	0	38.2	0.080	0.0333	15.9	46.2
10/24/01	15:16	0	27.0	23.6	26.7	24.7	22.8	51.5	61.1	10.8	41.2	9.7	0	38.2	0.080	0.0333	15.9	46.4
10/24/01	15:17	0	27.0	23.6	26.7	24.7	22.8	51.7	61.3	10.8	41.2	9.7	0	38.2	0.080	0.0333	15.9	46.4
10/24/01	15:18	0	27.0	23.6	26.7	24.7	22.8	51.5	61.0	10.7	41.4	9.7	0	38.2	0.080	0.0333	15.9	46.5
10/24/01	15:19	0	27.0	23.6	26.8	24.8	22.8	51.4	61.0	10.8	41.3	9.7	0	38.3	0.079	0.0328	15.9	46.3
10/24/01	15:20	0	27.0	23.6	26.7	24.9	22.8	51.5	61.2	10.8	41.1	9.6	0	38.3	0.079	0.0329	15.9	46.3
10/24/01	15:21	0	27.0	23.6	26.8	24.9	22.8	51.6	61.0	10.8	41.2	9.6	0	38.3	0.079	0.0328	15.9	46.4
10/24/01	15:22	0	27.0	23.6	26.8	24.9	22.8	51.5	61.0	10.8	41.2	9.6	0	38.3	0.079	0.0328	15.9	46.3
10/24/01	15:23	0	27.0	23.6	26.7	24.9	22.8	51.6	61.2	10.8	41.7	9.6	0	38.3	0.079	0.0329	15.9	46.6
10/24/01	15:24	0	27.0	23.6	26.8	24.9	22.9	51.3	61.0	10.7	41.4	9.6	0	38.2	0.078	0.0324	15.9	46.4
10/24/01	15:25	0	27.1	23.6	26.8	24.9	22.9	51.5	61.0	10.7	41.4	9.6	0	38.2	0.079	0.0328	15.8	46.4
10/24/01	15:26	0	27.1	23.6	26.8	25.0	22.8	51.5	61.2	10.8	41.4	9.6	0	38.2	0.078	0.0324	15.9	46.5
10/24/01	15:27	0	27.1	23.6	26.8	25.0	22.8	51.6	61.2	10.8	41.4	9.6	0	38.2	0.078	0.0324	15.9	46.5
10/24/01	15:28	0	27.1	23.6	26.8	25.0	22.9	51.5	61.1	10.7	41.2	9.6	0	38.2	0.078	0.0323	15.8	46.3
10/24/01	15:29	0	27.1	23.6	26.9	25.1	22.9	51.5	61.1	10.8	41.3	9.6	0	38.1	0.078	0.0323	15.8	46.4

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	15:30	0	27.1	23.6	26.9	25.1	22.9	51.7	61.1	10.8	41.4	9.6	0	38.2	0.078	0.0323	15.9	46.6
10/24/01	15:31	0	27.2	23.6	26.9	25.1	22.9	51.7	61.1	10.8	41.5	9.6	0	38.2	0.078	0.0323	15.8	46.6
10/24/01	15:32	0	27.2	23.6	27.0	25.1	22.9	51.5	61.1	10.7	41.6	9.6	0	38.3	0.078	0.0322	15.9	46.6
10/24/01	15:33	0	27.2	23.6	27.0	25.1	22.9	51.8	61.2	10.8	41.6	9.6	0	38.2	0.078	0.0322	15.9	46.7
10/24/01	15:34	0	27.2	23.6	27.0	25.0	22.9	51.5	61.0	10.9	41.5	9.6	0	38.1	0.078	0.0322	15.8	46.5
10/24/01	15:35	0	27.2	23.6	27.0	25.0	23.0	52.1	61.7	10.8	41.3	9.6	0	38.2	0.078	0.0323	15.9	46.7
10/24/01	15:36	0	27.2	23.6	27.0	24.9	22.9	51.8	61.4	10.9	41.4	9.6	0	38.2	0.078	0.0322	15.9	46.6
10/24/01	15:37	0	27.3	23.6	27.0	24.9	22.9	51.8	61.3	10.8	41.3	9.6	0	38.2	0.078	0.0322	15.8	46.5
10/24/01	15:38	0	27.3	23.6	27.0	25.0	22.9	52.0	61.6	10.8	41.5	9.6	0	38.1	0.078	0.0322	15.8	46.8
10/24/01	15:39	0	27.3	23.7	27.1	24.9	22.9	51.9	61.4	10.9	41.6	9.6	0	38.4	0.077	0.0317	15.9	46.8
10/24/01	15:40	0	27.3	23.7	27.0	25.0	23.0	51.9	61.3	10.8	41.5	9.6	0	38.1	0.077	0.0318	15.8	46.7
10/24/01	15:41	0	27.3	23.6	27.1	25.0	23.0	51.8	61.2	10.8	41.4	9.6	0	38.2	0.077	0.0317	15.9	46.6
10/24/01	15:42	0	27.3	23.6	27.1	25.0	23.0	51.8	61.3	10.8	41.6	9.5	0	38.2	0.077	0.0317	15.9	46.7
10/24/01	15:43	0	27.3	23.7	27.1	25.0	23.0	51.8	61.4	10.9	41.8	9.5	0	38.2	0.077	0.0317	15.9	46.8
10/24/01	15:44	0	27.4	23.6	27.1	25.0	23.0	51.6	61.1	10.9	41.2	9.5	0	38.1	0.077	0.0317	15.8	46.4
10/24/01	15:45	0	27.4	23.7	27.1	25.0	23.0	52.0	61.4	10.9	41.7	9.5	0	38.2	0.077	0.0317	15.9	46.8
10/24/01	15:46	0	27.4	23.7	27.2	25.0	23.0	51.9	61.4	10.9	41.4	9.5	0	38.3	0.077	0.0316	15.9	46.6
10/24/01	15:47	0	27.4	23.7	27.2	25.1	23.0	51.8	61.3	10.8	41.7	9.5	0	38.2	0.077	0.0316	15.8	46.7
10/24/01	15:48	0	27.4	23.7	27.2	25.0	23.0	51.9	61.3	10.9	41.4	9.5	0	38.2	0.077	0.0316	15.8	46.6
10/24/01	15:49	0	27.4	23.6	27.2	25.0	23.0	52.0	61.6	10.9	41.4	9.5	0	38.2	0.077	0.0316	15.8	46.7
10/24/01	15:50	0	27.4	23.6	27.3	25.0	23.0	52.0	61.4	10.9	41.3	9.5	0	38.2	0.077	0.0316	15.8	46.6
10/24/01	15:51	0	27.5	23.7	27.2	25.1	23.0	52.1	61.6	10.9	41.9	9.5	0	38.2	0.077	0.0316	15.8	47.0
10/24/01	15:52	0	27.5	23.7	27.3	25.1	23.0	52.0	61.6	10.8	41.5	9.5	0	38.2	0.077	0.0316	15.9	46.8
10/24/01	15:53	0	27.5	23.7	27.3	25.1	23.0	51.8	61.3	10.8	41.2	9.5	0	38.1	0.076	0.0312	15.8	46.5
10/24/01	15:54	0	27.5	23.7	27.3	25.1	23.0	51.7	61.2	10.9	41.7	9.5	0	38.2	0.076	0.0312	15.8	46.7
10/24/01	15:55	0	27.5	23.7	27.3	25.0	23.0	51.6	61.0	10.9	41.4	9.5	0	38.1	0.076	0.0311	15.8	46.5
10/24/01	15:56	0	27.5	23.7	27.3	25.0	23.0	51.9	61.3	10.9	41.3	9.5	0	38.1	0.076	0.0311	15.8	46.6
10/24/01	15:57	0	27.6	23.7	27.3	24.9	23.0	51.8	61.3	10.8	41.4	9.5	0	38.1	0.076	0.0311	15.8	46.6
10/24/01	15:58	0	27.6	23.7	27.4	25.0	23.0	52.0	61.4	10.9	41.6	9.5	0	38.1	0.076	0.0311	15.8	46.8
10/24/01	15:59	0	27.6	23.7	27.4	24.9	23.0	51.9	61.3	10.9	41.7	9.5	0	38.1	0.076	0.0311	15.8	46.8
10/24/01	16:00	0	27.6	23.7	27.4	24.9	23.0	51.7	61.2	10.9	41.8	9.5	0	38.2	0.076	0.0310	15.8	46.7
10/24/01	16:01	0	27.6	23.7	27.4	24.9	23.0	51.8	61.4	10.9	41.4	9.5	0	38.1	0.076	0.0310	15.8	46.6
10/24/01	16:02	0	27.6	23.7	27.4	24.8	23.0	52.1	61.5	10.9	41.9	9.5	0	38.1	0.076	0.0310	15.8	47.0
10/24/01	16:03	0	27.6	23.7	27.5	24.8	23.0	52.0	61.5	10.9	41.7	9.5	0	38.1	0.076	0.0310	15.8	46.9
10/24/01	16:04	0	27.7	23.7	27.4	24.9	23.0	52.0	61.3	10.9	41.7	9.5	0	38.1	0.076	0.0310	15.8	46.8
10/24/01	16:05	0	27.7	23.7	27.4	24.9	22.9	52.1	61.6	10.9	41.5	9.5	0	38.1	0.076	0.0310	15.8	46.8
10/24/01	16:06	0	27.7	23.7	27.5	24.9	23.0	52.1	61.5	10.9	41.7	9.5	0	38.2	0.076	0.0310	15.8	46.9
10/24/01	16:07	0	27.7	23.7	27.5	25.0	23.0	52.3	61.6	11.0	41.5	9.5	0	38.2	0.076	0.0310	15.8	46.9
10/24/01	16:08	0	27.8	23.7	27.0	24.9	23.0	51.5	60.9	10.8	41.4	9.4	0	38.1	0.075	0.0310	15.8	46.4
10/24/01	16:09	0	27.6	23.7	26.5	24.9	23.0	52.0	61.3	10.8	41.8	9.4	0	38.3	0.074	0.0310	15.9	46.9
10/24/01	16:10	0	27.5	23.7	26.2	24.9	23.0	52.2	61.5	10.8	41.5	9.4	0	38.3	0.073	0.0308	15.9	46.8
10/24/01	16:11	0	27.4	23.7	26.1	24.9	23.0	51.9	61.3	10.8	41.5	9.3	0	38.3	0.073	0.0309	15.9	46.7
10/24/01	16:12	0	27.4	23.7	26.1	24.9	23.0	51.7	60.9	10.8	41.6	9.3	0	38.3	0.073	0.0309	15.9	46.6
10/24/01	16:13	0	27.3	23.7	26.1	24.8	23.0	51.8	61.1	10.8	41.7	9.3	0	38.3	0.073	0.0309	15.9	46.7
10/24/01	16:14	0	27.2	23.7	26.2	24.8	23.0	52.0	61.2	10.8	41.7	9.3	0	38.4	0.073	0.0309	15.9	46.8
10/24/01	16:15	0	27.1	23.7	26.2	24.8	23.0	51.8	61.1	10.8	41.7	9.3	0	38.4	0.073	0.0308	15.9	46.7
10/24/01	16:16	0	27.0	23.7	26.2	24.9	22.9	52.1	61.4	10.8	41.7	9.3	0	38.4	0.073	0.0308	15.9	46.9
10/24/01	16:17	0	26.9	23.7	26.2	24.9	23.0	52.4	61.7	10.9	41.9	9.3	0	38.4	0.073	0.0308	15.9	47.2
10/24/01	16:18	0	26.8	23.7	26.2	24.9	23.0	52.2	61.5	10.9	41.8	9.3	0	38.5	0.073	0.0308	16.0	47.0
10/24/01	16:19	0	26.7	23.7	26.3	24.9	23.0	52.1	61.4	10.9	41.6	9.3	0	38.3	0.073	0.0308	15.9	46.9
10/24/01	16:20	0	26.7	23.7	26.3	24.9	23.0	52.2	61.4	10.8	42.1	9.3	0	38.3	0.073	0.0307	15.9	47.1
10/24/01	16:21	0	26.6	23.7	26.3	24.9	23.0	51.9	61.3	10.8	41.8	9.3	0	38.5	0.073	0.0307	16.0	46.9
10/24/01	16:22	0	26.6	23.7	26.3	24.9	23.0	51.9	61.1	10.8	41.9	9.3	0	38.3	0.073	0.0308	15.9	46.9
10/24/01	16:23	0	26.6	23.7	26.3	25.0	23.0	52.2	61.4	10.9	41.8	9.3	0	38.4	0.073	0.0307	15.9	47.0
10/24/01	16:24	0	26.6	23.7	26.3	25.0	23.0	52.1	61.3	10.8	41.9	9.3	0	38.4	0.073	0.0307	15.9	47.0
10/24/01	16:25	0	26.6	23.7	26.3	25.0	23.0	52.0	61.1	10.8	42.0	9.3	0	38.4	0.073	0.0307	15.9	47.0
10/24/01	16:26	0	26.6	23.7	26.4	25.0	23.0	51.9	61.1	10.8	41.9	9.3	0	38.3	0.073	0.0306	15.9	46.9
10/24/01	16:27	0	26.7	23.7	26.4	25.0	23.0	52.3	61.4	10.9	41.6	9.3	0	38.3	0.073	0.0306	15.9	46.9
10/24/01	16:28	0	26.7	23.7	26.5	24.9	23.0	52.2	61.4	10.8	42.1	9.3	0	38.3	0.073	0.0306	15.9	47.1
10/24/01	16:29	0	26.7	23.7	26.5	25.0	23.0	52.1	61.4	10.8	42.0	9.3	0	38.3	0.073	0.0306	15.9	47.0

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	16:30	0	26.7	23.7	26.5	25.0	23.0	52.0	61.1	10.8	42.0	9.3	0	38.5	0.073	0.0305	16.0	47.0
10/24/01	16:31	0	26.7	23.7	26.5	25.0	23.1	52.1	61.3	10.9	41.9	9.2	0	38.4	0.073	0.0306	15.9	47.0
10/24/01	16:32	0	26.8	23.7	26.5	25.1	23.1	52.0	61.2	10.8	41.7	9.2	0	38.2	0.073	0.0305	15.9	46.8
10/24/01	16:33	0	26.8	23.7	26.5	25.0	23.1	51.7	61.0	10.8	41.6	9.2	0	38.3	0.073	0.0305	15.9	46.6
10/24/01	16:34	0	26.8	23.7	26.6	25.1	23.1	52.0	61.1	10.9	41.7	9.2	0	38.3	0.073	0.0305	15.9	46.9
10/24/01	16:35	0	26.8	23.7	26.6	25.1	23.1	52.1	61.3	10.9	41.7	9.2	0	38.3	0.073	0.0304	15.9	46.9
10/24/01	16:36	0	26.8	23.7	26.6	25.2	23.1	52.2	61.4	10.9	41.8	9.2	0	38.3	0.073	0.0305	15.9	47.0
10/24/01	16:37	0	26.9	23.7	26.7	25.2	23.1	52.0	61.2	10.8	41.8	9.2	0	38.3	0.073	0.0304	15.9	46.9
10/24/01	16:38	0	26.9	23.7	26.7	25.2	23.1	52.1	61.3	10.8	41.9	9.2	0	38.3	0.073	0.0304	15.9	47.0
10/24/01	16:39	0	26.9	23.7	26.7	25.2	23.1	52.2	61.4	10.8	41.7	9.2	0	38.3	0.073	0.0304	15.9	46.9
10/24/01	16:40	0	26.9	23.7	26.7	25.3	23.1	52.1	61.1	10.8	41.8	9.2	0	38.3	0.073	0.0304	15.9	46.9
10/24/01	16:41	0	27.0	23.7	26.7	25.3	23.2	52.0	61.2	10.8	41.7	9.2	0	38.3	0.073	0.0304	15.9	46.9
10/24/01	16:42	0	26.9	23.7	26.7	25.3	23.2	49.6	61.1	10.8	39.3	11.5	0	38.3	0.110	0.0458	15.9	44.5
10/24/01	16:43	0	27.0	23.7	26.7	25.4	23.2	50.8	61.3	10.8	40.5	10.4	0	38.4	0.094	0.0392	15.9	45.6
10/24/01	16:44	0	27.0	23.7	26.7	25.5	23.2	51.0	61.3	10.9	40.9	10.2	0	38.4	0.090	0.0375	15.9	45.9
10/24/01	16:45	0	27.0	23.7	26.7	25.5	23.2	51.3	61.5	10.9	40.9	10.2	0	38.3	0.089	0.0370	15.9	46.1
10/24/01	16:46	0	27.0	23.7	26.8	25.5	23.2	51.1	61.3	10.8	40.9	10.1	0	38.3	0.088	0.0365	15.9	46.0
10/24/01	16:47	0	27.0	23.7	26.8	25.5	23.2	51.4	61.6	10.9	41.0	10.1	0	38.3	0.087	0.0361	15.9	46.2
10/24/01	16:48	0	27.0	23.7	26.9	25.5	23.2	51.0	60.9	10.8	41.2	10.0	0	38.2	0.086	0.0356	15.9	46.1
10/24/01	16:49	0	27.0	23.7	26.8	25.5	23.2	51.1	61.0	10.9	41.2	10.0	0	38.3	0.086	0.0357	15.9	46.1
10/24/01	16:50	0	27.0	23.7	26.9	25.6	23.2	51.1	61.0	10.9	41.0	10.0	0	38.3	0.085	0.0352	15.9	46.1
10/24/01	16:51	0	27.1	23.7	26.9	25.5	23.3	51.5	61.4	10.9	41.1	10.0	0	38.2	0.084	0.0348	15.9	46.3
10/24/01	16:52	0	27.1	23.7	26.8	25.4	23.2	51.5	61.4	11.0	41.0	10.0	0	38.4	0.084	0.0348	15.9	46.3
10/24/01	16:53	0	27.1	23.7	26.7	25.4	23.2	51.9	61.8	10.9	41.0	9.9	0	38.3	0.083	0.0345	15.9	46.4
10/24/01	16:54	0	27.0	23.7	26.6	25.4	23.2	51.7	61.8	10.9	40.9	9.9	0	38.4	0.083	0.0347	15.9	46.3
10/24/01	16:55	0	27.0	23.7	26.6	25.3	23.2	51.4	61.2	10.8	41.2	9.9	0	38.4	0.082	0.0343	15.9	46.3
10/24/01	16:56	0	27.0	23.8	26.6	25.4	23.2	51.5	61.4	10.8	41.3	9.9	0	38.3	0.082	0.0343	15.9	46.4
10/24/01	16:57	0	26.9	23.8	26.6	25.4	23.2	51.7	61.5	10.9	41.1	9.9	0	38.4	0.082	0.0343	15.9	46.4
10/24/01	16:58	0	26.9	23.8	26.6	25.4	23.2	51.8	61.6	11.0	41.2	9.8	0	38.4	0.082	0.0343	15.9	46.5
10/24/01	16:59	0	26.9	23.7	26.6	25.5	23.2	51.7	61.5	10.9	41.3	9.8	0	38.3	0.082	0.0343	15.9	46.5
10/24/01	17:00	0	26.9	23.8	26.6	25.4	23.2	51.6	61.3	10.9	41.2	9.8	0	38.4	0.081	0.0338	15.9	46.4
10/24/01	17:01	0	26.9	23.8	26.6	25.5	23.2	51.4	61.3	10.9	41.3	9.8	0	38.4	0.081	0.0338	15.9	46.4
10/24/01	17:02	0	26.9	23.8	26.6	25.4	23.2	51.7	61.4	10.9	41.4	9.8	0	38.3	0.081	0.0338	15.9	46.6
10/24/01	17:03	0	26.9	23.8	26.7	25.5	23.2	51.4	61.2	10.8	41.3	9.8	0	38.3	0.081	0.0338	15.9	46.3
10/24/01	17:04	0	26.9	23.8	26.7	25.5	23.2	51.8	61.4	10.8	41.2	9.8	0	38.4	0.081	0.0337	15.9	46.5
10/24/01	17:05	0	27.0	23.8	26.7	25.5	23.2	51.5	61.3	10.8	41.4	9.8	0	38.4	0.080	0.0333	15.9	46.5
10/24/01	17:06	0	27.0	23.8	26.7	25.5	23.3	51.9	61.7	10.9	41.3	9.8	0	38.4	0.080	0.0333	15.9	46.6
10/24/01	17:07	0	27.0	23.8	26.7	25.6	23.2	51.7	61.5	10.8	41.4	9.8	0	38.4	0.080	0.0333	15.9	46.6
10/24/01	17:08	0	27.0	23.8	26.7	25.6	23.2	51.8	61.5	10.9	41.1	9.8	0	38.3	0.080	0.0333	15.9	46.4
10/24/01	17:09	0	27.0	23.8	26.7	25.5	23.3	51.7	61.5	10.9	41.5	9.8	0	38.3	0.080	0.0333	15.9	46.6
10/24/01	17:10	0	27.0	23.8	26.8	25.4	23.2	51.5	61.2	10.8	41.1	9.8	0	38.4	0.080	0.0332	15.9	46.3
10/24/01	17:11	0	27.1	23.8	26.7	25.4	23.2	51.4	61.1	10.9	41.4	9.8	0	38.3	0.080	0.0333	15.9	46.4
10/24/01	17:12	0	27.1	23.8	26.8	25.3	23.2	51.3	61.0	10.9	41.3	9.7	0	38.2	0.079	0.0328	15.9	46.3
10/24/01	17:13	0	27.1	23.8	26.8	25.3	23.2	52.0	61.8	10.9	41.2	9.7	0	38.3	0.079	0.0328	15.9	46.6
10/24/01	17:14	0	27.1	23.8	26.8	25.3	23.2	51.7	61.4	10.9	41.2	9.7	0	38.3	0.079	0.0328	15.9	46.5
10/24/01	17:15	0	27.1	23.8	26.9	25.4	23.3	51.7	61.4	10.9	41.4	9.7	0	38.3	0.079	0.0327	15.9	46.6
10/24/01	17:16	0	27.1	23.8	26.9	25.4	23.2	51.7	61.4	10.8	41.2	9.7	0	38.2	0.079	0.0327	15.9	46.4
10/24/01	17:17	0	27.1	23.8	26.9	25.4	23.3	51.7	61.5	10.9	41.3	9.7	0	38.3	0.079	0.0327	15.9	46.5
10/24/01	17:18	0	27.2	23.8	26.9	25.3	23.3	51.7	61.4	10.8	41.1	9.7	0	38.3	0.079	0.0327	15.9	46.4
10/24/01	17:19	0	27.2	23.8	26.9	25.3	23.3	51.8	61.5	11.0	41.5	9.7	0	38.3	0.079	0.0327	15.9	46.7
10/24/01	17:20	0	27.2	23.8	26.9	25.3	23.3	52.1	61.8	11.0	41.5	9.7	0	38.3	0.079	0.0327	15.9	46.8
10/24/01	17:21	0	27.2	23.8	27.0	25.4	23.2	51.6	61.4	10.9	41.4	9.7	0	38.3	0.079	0.0327	15.9	46.5
10/24/01	17:22	0	27.2	23.8	27.0	25.3	23.2	51.9	61.7	10.9	41.3	9.7	0	38.3	0.079	0.0326	15.9	46.6
10/24/01	17:23	0	27.2	23.8	27.0	25.3	23.3	52.0	61.7	10.9	41.7	9.7	0	38.3	0.079	0.0327	15.9	46.9
10/24/01	17:24	0	27.2	23.8	27.0	25.3	23.3	51.9	61.6	10.9	41.6	9.7	0	38.4	0.079	0.0326	15.9	46.7
10/24/01	17:25	0	27.2	23.8	27.0	25.3	23.3	51.8	61.3	11.0	41.7	9.7	0	38.3	0.078	0.0322	15.9	46.7
10/24/01	17:26	0	27.2	23.8	27.0	25.3	23.2	51.7	61.4	10.9	41.2	9.7	0	38.2	0.078	0.0322	15.9	46.5
10/24/01	17:27	0	27.2	23.8	27.0	25.3	23.2	52.0	61.6	10.9	41.5	9.7	0	38.4	0.078	0.0322	15.9	46.7
10/24/01	17:28	0	27.3	23.8	27.1	25.4	23.2	51.4	61.1	10.9	41.2	9.7	0	38.3	0.078	0.0321	15.9	46.3
10/24/01	17:29	0	27.3	23.8	27.0	25.4	23.2	51.7	61.3	11.0	41.4	9.7	0	38.3	0.078	0.0322	15.9	46.6

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	17:30	0	27.3	23.9	27.1	25.4	23.2	51.9	61.6	11.0	41.4	9.7	0	38.2	0.078	0.0321	15.8	46.6
10/24/01	17:31	0	27.3	23.8	27.1	25.4	23.3	52.1	61.9	10.9	41.7	9.7	0	38.3	0.078	0.0321	15.9	46.9
10/24/01	17:32	0	27.3	23.8	27.1	25.4	23.3	51.5	61.2	10.9	41.3	9.7	0	38.2	0.078	0.0321	15.9	46.4
10/24/01	17:33	0	27.4	23.8	27.1	25.4	23.3	51.7	61.2	10.9	41.8	9.7	0	38.2	0.078	0.0321	15.9	46.7
10/24/01	17:34	0	27.4	23.8	27.0	25.4	23.3	51.9	61.4	10.9	41.9	9.7	0	38.3	0.078	0.0322	15.9	46.9
10/24/01	17:35	0	27.4	23.8	27.1	25.4	23.3	52.1	61.8	10.9	41.6	9.7	0	38.3	0.078	0.0321	15.9	46.9
10/24/01	17:36	0	27.4	23.8	27.1	25.4	23.3	51.7	61.5	11.0	41.2	9.7	0	38.3	0.077	0.0317	15.9	46.5
10/24/01	17:37	0	27.4	23.9	27.2	25.4	23.3	52.0	61.6	10.9	41.5	9.7	0	38.3	0.077	0.0316	15.9	46.7
10/24/01	17:38	0	27.4	23.9	27.2	25.4	23.3	51.8	61.4	10.8	41.2	9.6	0	38.2	0.077	0.0317	15.9	46.5
10/24/01	17:39	0	27.4	23.8	27.1	25.4	23.3	51.8	61.4	10.9	41.5	9.7	0	38.4	0.077	0.0317	15.9	46.6
10/24/01	17:40	0	27.4	23.9	27.1	25.4	23.3	52.1	61.7	10.9	41.7	9.6	0	38.3	0.077	0.0317	15.9	46.9
10/24/01	17:41	0	27.4	23.9	27.0	25.4	23.3	51.9	61.5	10.9	41.4	9.6	0	38.3	0.077	0.0318	15.9	46.6
10/24/01	17:42	0	27.4	23.9	26.9	25.4	23.3	51.8	61.4	10.9	41.3	9.6	0	38.3	0.076	0.0314	15.9	46.6
10/24/01	17:43	0	27.3	23.8	26.7	25.3	23.3	51.8	61.5	10.9	41.6	9.6	0	38.3	0.076	0.0317	15.9	46.7
10/24/01	17:44	0	27.2	23.8	26.6	25.2	23.3	51.6	61.2	10.8	41.7	9.6	0	38.3	0.076	0.0317	15.9	46.7
10/24/01	17:45	0	27.2	23.9	26.5	25.3	23.3	52.0	61.4	11.0	41.5	9.6	0	38.4	0.076	0.0318	15.9	46.7
10/24/01	17:46	0	27.2	23.9	26.5	25.3	23.3	51.8	61.4	10.9	41.8	9.6	0	38.4	0.075	0.0314	15.9	46.8
10/24/01	17:47	0	27.1	23.9	26.4	25.3	23.3	52.1	61.7	10.9	41.5	9.6	0	38.3	0.075	0.0315	15.9	46.8
10/24/01	17:48	0	27.1	23.9	26.4	25.3	23.3	51.9	61.4	10.9	41.6	9.6	0	38.5	0.075	0.0315	16.0	46.8
10/24/01	17:49	0	27.0	23.9	26.5	25.3	23.3	52.2	61.7	10.9	41.4	9.6	0	38.4	0.075	0.0314	15.9	46.8
10/24/01	17:50	0	26.9	23.9	26.5	25.2	23.2	52.1	61.7	10.9	41.5	9.6	0	38.3	0.075	0.0314	15.9	46.8
10/24/01	17:51	0	26.9	23.9	26.4	25.2	23.2	51.6	61.2	10.9	41.8	9.6	0	38.5	0.075	0.0315	16.0	46.7
10/24/01	17:52	0	26.9	23.9	26.5	25.2	23.2	52.0	61.4	10.9	41.3	9.6	0	38.3	0.075	0.0314	15.9	46.6
10/24/01	17:53	0	26.8	23.9	26.5	25.1	23.2	51.9	61.5	10.9	41.4	9.6	0	38.4	0.075	0.0314	15.9	46.6
10/24/01	17:54	0	26.8	23.9	26.5	25.1	23.2	52.3	62.0	11.0	41.5	9.6	0	38.4	0.075	0.0314	15.9	46.9
10/24/01	17:55	0	26.8	23.9	26.6	25.2	23.2	52.0	61.5	11.0	41.6	9.6	0	38.4	0.074	0.0309	15.9	46.8
10/24/01	17:56	0	26.9	23.9	26.6	25.2	23.3	51.9	61.5	10.9	41.5	9.6	0	38.3	0.075	0.0313	15.9	46.7
10/24/01	17:57	0	26.9	23.9	26.6	25.2	23.2	52.0	61.5	10.8	41.6	9.6	0	38.4	0.075	0.0313	15.9	46.8
10/24/01	17:58	0	26.9	23.9	26.6	25.2	23.2	51.8	61.3	10.8	41.8	9.6	0	38.3	0.075	0.0313	15.9	46.8
10/24/01	17:59	0	26.9	23.9	26.6	25.3	23.2	52.0	61.5	11.0	41.3	9.5	0	38.3	0.075	0.0313	15.9	46.6
10/24/01	18:00	0	26.9	23.9	26.6	25.2	23.2	51.8	61.3	10.9	41.2	9.5	0	38.3	0.074	0.0309	15.9	46.5
10/24/01	18:01	0	27.0	23.9	26.7	25.3	23.2	51.5	60.9	10.8	41.8	9.5	0	38.3	0.075	0.0313	15.9	46.6
10/24/01	18:02	0	27.0	23.9	26.8	25.3	23.2	51.8	61.2	10.9	41.4	9.5	0	38.3	0.074	0.0308	15.9	46.6
10/24/01	18:03	0	27.0	23.9	26.7	25.4	23.2	51.9	61.4	10.9	41.8	9.5	0	38.3	0.075	0.0312	15.9	46.8
10/24/01	18:04	0	27.0	23.9	26.8	25.3	23.2	51.9	61.5	10.9	41.3	9.5	0	38.3	0.074	0.0307	15.9	46.6
10/24/01	18:05	0	27.1	23.9	26.8	25.3	23.2	51.8	61.4	10.8	41.5	9.5	0	38.4	0.075	0.0311	15.9	46.7
10/24/01	18:06	0	27.1	23.9	26.8	25.3	23.2	52.0	61.5	10.9	41.6	9.5	0	38.5	0.075	0.0312	16.0	46.8
10/24/01	18:07	0	27.1	23.9	26.8	25.3	23.2	51.9	61.4	10.9	41.8	9.5	0	38.3	0.075	0.0311	15.9	46.9
10/24/01	18:08	0	27.0	23.9	26.9	25.4	23.2	51.7	61.2	10.9	41.8	9.5	0	38.4	0.075	0.0311	15.9	46.7
10/24/01	18:09	0	27.1	23.9	26.9	25.3	23.2	52.0	61.5	10.9	41.5	9.5	0	38.3	0.074	0.0307	15.9	46.8
10/24/01	18:10	0	27.1	23.9	26.9	25.3	23.2	52.0	61.5	10.9	41.5	9.5	0	38.4	0.074	0.0307	15.9	46.7
10/24/01	18:11	0	27.1	23.9	26.9	25.3	23.1	52.2	61.7	11.1	41.7	9.5	0	38.3	0.074	0.0307	15.9	46.9
10/24/01	18:12	0	27.1	23.9	26.9	25.3	23.1	52.1	61.5	11.0	41.6	9.5	0	38.4	0.074	0.0306	15.9	46.8
10/24/01	18:13	0	27.2	23.9	26.9	25.3	23.1	51.9	61.4	11.0	41.8	9.5	0	38.4	0.074	0.0306	15.9	46.9
10/24/01	18:14	0	27.1	23.9	26.9	25.2	23.1	52.1	61.5	10.9	41.9	9.5	0	38.4	0.074	0.0306	15.9	47.0
10/24/01	18:15	0	27.2	23.9	26.9	25.2	23.0	51.8	61.2	10.8	41.8	9.5	0	38.3	0.074	0.0306	15.9	46.8
10/24/01	18:16	0	27.2	23.9	26.9	25.2	23.1	52.0	61.4	10.9	41.4	9.5	0	38.4	0.074	0.0306	15.9	46.7
10/24/01	18:17	0	27.2	23.9	26.9	25.1	23.1	52.0	61.5	10.9	41.6	9.5	0	38.3	0.074	0.0306	15.9	46.8
10/24/01	18:18	0	27.2	23.9	26.9	25.1	23.1	51.8	61.3	10.9	41.5	9.5	0	38.3	0.074	0.0306	15.9	46.7
10/24/01	18:19	0	27.2	23.9	27.0	25.1	23.0	52.0	61.5	10.9	41.5	9.5	0	38.2	0.074	0.0306	15.9	46.8
10/24/01	18:20	0	27.2	23.9	27.0	25.0	23.0	52.0	61.6	11.0	41.6	9.5	0	38.4	0.074	0.0306	15.9	46.8
10/24/01	18:21	0	27.2	23.9	27.0	25.0	23.0	52.0	61.5	10.9	41.8	9.5	0	38.3	0.074	0.0306	15.9	46.9
10/24/01	18:22	0	27.2	23.9	27.0	25.0	23.0	52.3	61.8	11.0	41.8	9.5	0	38.3	0.074	0.0306	15.9	47.0
10/24/01	18:23	0	27.3	23.9	27.0	25.0	23.1	52.2	61.8	11.0	42.0	9.5	0	38.2	0.074	0.0306	15.8	47.1
10/24/01	18:24	0	27.3	23.9	27.0	25.0	23.0	52.0	61.6	11.0	41.7	9.5	0	38.3	0.074	0.0305	15.9	46.8
10/24/01	18:25	0	27.3	23.9	27.0	25.0	23.1	52.2	61.8	11.0	41.6	9.5	0	38.4	0.074	0.0305	15.9	46.9
10/24/01	18:26	0	27.3	23.9	27.1	25.0	23.0	52.0	61.6	10.9	41.6	9.5	0	38.3	0.074	0.0305	15.9	46.8
10/24/01	18:27	0	27.3	23.9	27.1	25.0	23.0	52.1	61.7	11.0	41.5	9.5	0	38.3	0.074	0.0305	15.9	46.8
10/24/01	18:28	0	27.3	23.9	27.1	24.9	23.0	52.0	61.5	11.0	41.8	9.5	0	38.4	0.074	0.0305	15.9	46.9
10/24/01	18:29	0	27.4	23.9	27.1	25.0	23.0	51.8	61.3	11.0	41.7	9.5	0	38.4	0.074	0.0304	15.9	46.8

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	18:30	0	27.4	23.9	27.1	25.0	23.0	52.5	62.2	11.0	41.5	9.5	0	38.4	0.074	0.0304	15.9	47.0
10/24/01	18:31	0	27.4	23.9	27.2	25.0	23.0	52.5	62.0	11.0	41.7	9.5	0	38.4	0.074	0.0304	15.9	47.1
10/24/01	18:32	0	27.4	23.9	27.1	24.9	23.0	52.2	61.7	11.0	41.6	9.5	0	38.3	0.074	0.0304	15.9	46.9
10/24/01	18:33	0	27.4	23.9	27.2	24.9	23.0	52.0	61.5	11.0	41.6	9.5	0	38.3	0.074	0.0304	15.9	46.8
10/24/01	18:34	0	27.4	23.9	27.1	24.9	23.0	52.1	61.6	11.1	42.0	9.5	0	38.3	0.074	0.0304	15.9	47.1
10/24/01	18:35	0	27.4	23.9	27.2	24.9	23.0	51.9	61.3	10.9	42.0	9.5	0	38.3	0.074	0.0304	15.9	46.9
10/24/01	18:36	0	27.5	23.9	27.1	24.8	23.0	52.1	61.5	11.0	41.7	9.5	0	38.4	0.074	0.0304	15.9	46.9
10/24/01	18:37	0	27.4	23.9	27.2	24.8	22.9	51.8	61.4	10.9	41.8	9.5	0	38.3	0.074	0.0304	15.9	46.8
10/24/01	18:38	0	27.5	23.9	27.2	24.7	22.9	52.0	61.5	11.0	41.8	9.5	0	38.3	0.074	0.0304	15.9	46.9
10/24/01	18:39	0	27.5	23.9	27.2	24.8	22.9	51.9	61.3	10.9	41.7	9.5	0	38.3	0.073	0.0299	15.9	46.8
10/24/01	18:40	0	27.5	23.9	27.3	24.7	22.9	52.5	62.0	11.0	41.7	9.5	0	38.3	0.073	0.0299	15.9	47.1
10/24/01	18:41	0	27.5	23.9	27.3	24.7	22.9	52.5	62.0	10.9	41.7	9.5	0	38.3	0.073	0.0299	15.9	47.1
10/24/01	18:42	0	27.5	23.9	27.3	24.7	22.9	51.8	61.3	11.0	41.7	9.5	0	38.3	0.073	0.0299	15.9	46.8
10/24/01	18:43	0	27.5	23.9	27.3	24.7	22.9	52.1	61.7	11.0	41.7	9.5	0	38.2	0.073	0.0299	15.9	46.9
10/24/01	18:44	0	27.5	23.9	27.3	24.6	22.8	51.9	61.3	10.9	41.8	9.5	0	38.2	0.074	0.0303	15.9	46.9
10/24/01	18:45	0	27.6	23.9	27.4	24.6	22.8	52.3	61.7	11.0	41.9	9.5	0	38.3	0.073	0.0298	15.9	47.1
10/24/01	18:46	0	27.6	23.9	27.3	24.6	22.8	51.9	61.3	11.1	41.9	9.5	0	38.3	0.073	0.0299	15.9	46.9
10/24/01	18:47	0	27.6	23.9	27.4	24.7	22.8	52.3	61.8	11.0	41.8	9.5	0	38.3	0.073	0.0298	15.9	47.1
10/24/01	18:48	0	27.6	23.9	27.3	24.7	22.8	52.4	61.9	11.0	41.9	9.5	0	38.3	0.073	0.0299	15.9	47.1
10/24/01	18:49	0	27.6	23.9	27.4	24.7	22.8	51.9	61.4	11.0	41.6	9.5	0	38.3	0.073	0.0298	15.9	46.8
10/24/01	18:50	0	27.6	23.9	27.4	24.6	22.8	52.2	61.7	11.0	42.0	9.5	0	38.3	0.073	0.0298	15.9	47.1
10/24/01	18:51	0	27.6	23.9	27.4	24.6	22.8	52.3	61.8	11.0	41.8	9.5	0	38.2	0.073	0.0298	15.9	47.1
10/24/01	18:52	0	27.6	23.9	27.4	24.6	22.8	52.2	61.7	11.0	41.7	9.5	0	38.3	0.073	0.0298	15.9	46.9
10/24/01	18:53	0	27.6	23.9	27.4	24.7	22.8	52.1	61.5	11.1	42.2	9.5	0	38.3	0.073	0.0298	15.9	47.1
10/24/01	18:54	0	27.7	23.9	27.4	24.6	22.8	52.4	61.8	11.1	41.6	9.5	0	38.2	0.073	0.0298	15.9	47.0
10/24/01	18:55	0	27.7	23.8	27.4	24.6	22.8	52.2	61.6	11.0	41.7	9.5	0	38.2	0.073	0.0298	15.9	46.9
10/24/01	18:56	0	27.7	23.9	27.5	24.6	22.8	52.6	62.2	11.1	41.8	9.5	0	38.2	0.073	0.0298	15.8	47.2
10/24/01	18:57	0	27.7	23.9	27.4	24.5	22.7	52.4	61.8	11.0	41.8	9.5	0	38.3	0.073	0.0298	15.9	47.1
10/24/01	18:58	0	27.7	23.8	27.5	24.5	22.7	52.5	62.0	11.1	41.7	9.5	0	38.3	0.073	0.0297	15.9	47.1
10/24/01	18:59	0	27.7	23.8	27.5	24.5	22.7	52.2	61.6	11.0	41.7	9.5	0	38.3	0.073	0.0297	15.9	47.0
10/24/01	19:00	0	27.7	23.8	27.5	24.4	22.7	52.0	61.4	11.0	41.8	9.5	0	38.2	0.073	0.0297	15.9	46.9
10/24/01	19:01	0	27.8	23.8	27.5	24.4	22.7	52.3	61.7	11.0	41.7	9.5	0	38.2	0.073	0.0297	15.9	47.0
10/24/01	19:02	0	27.8	23.8	27.6	24.4	22.7	52.5	62.0	11.0	41.7	9.5	0	38.2	0.073	0.0297	15.8	47.1
10/24/01	19:03	0	27.8	23.8	27.5	24.4	22.7	52.2	61.6	11.0	42.1	9.5	0	38.1	0.073	0.0297	15.8	47.1
10/24/01	19:04	0	27.7	23.8	27.5	24.3	22.6	52.3	61.7	11.0	41.9	9.5	0	38.2	0.073	0.0297	15.8	47.1
10/24/01	19:05	0	27.8	23.8	27.6	24.4	22.6	52.2	61.6	11.0	41.6	9.5	0	38.2	0.073	0.0297	15.8	46.9
10/24/01	19:06	0	27.8	23.8	27.5	24.4	22.6	52.5	62.0	11.0	42.0	9.5	0	38.2	0.073	0.0297	15.8	47.2
10/24/01	19:07	0	27.8	23.8	27.6	24.4	22.6	52.3	61.8	11.1	41.9	9.5	0	38.2	0.073	0.0296	15.8	47.1
10/24/01	19:08	0	27.8	23.8	27.4	24.3	22.6	52.4	61.9	11.0	42.1	9.5	0	38.2	0.073	0.0298	15.8	47.3
10/24/01	19:09	0	27.8	23.8	26.8	24.3	22.6	52.4	61.8	11.0	41.6	9.4	0	38.3	0.072	0.0299	15.9	47.0
10/24/01	19:10	0	27.7	23.8	26.4	24.3	22.6	52.1	61.5	11.0	42.1	9.4	0	38.4	0.071	0.0298	16.0	47.1
10/24/01	19:11	0	27.6	23.8	26.3	24.3	22.6	52.2	61.5	10.9	42.1	9.4	0	38.3	0.071	0.0299	15.9	47.2
10/24/01	19:12	0	27.5	23.8	26.2	24.3	22.6	52.5	62.0	10.9	41.9	9.3	0	38.4	0.070	0.0296	15.9	47.2
10/24/01	19:13	0	27.4	23.8	26.3	24.2	22.5	52.5	61.9	10.9	41.9	9.4	0	38.4	0.070	0.0295	15.9	47.2
10/24/01	19:14	0	27.3	23.8	26.3	24.2	22.5	51.8	61.1	10.9	41.7	9.3	0	38.4	0.070	0.0295	15.9	46.8
10/24/01	19:15	0	27.2	23.8	26.2	24.2	22.5	52.2	61.6	10.9	41.7	9.4	0	38.3	0.070	0.0295	15.9	46.9
10/24/01	19:16	0	27.1	23.8	26.3	24.2	22.5	52.7	62.1	11.0	41.8	9.4	0	38.4	0.071	0.0299	15.9	47.3
10/24/01	19:17	0	27.0	23.8	26.3	24.2	22.5	52.3	61.7	10.9	41.8	9.4	0	38.4	0.070	0.0295	15.9	47.0
10/24/01	19:18	0	26.9	23.8	26.4	24.1	22.5	52.1	61.5	10.9	41.9	9.4	0	38.4	0.071	0.0298	15.9	47.0
10/24/01	19:19	0	26.8	23.8	26.4	24.1	22.5	52.1	61.5	10.9	41.8	9.4	0	38.3	0.070	0.0294	15.9	46.9
10/24/01	19:20	0	26.8	23.8	26.4	24.1	22.4	52.4	61.7	11.0	42.1	9.4	0	38.4	0.070	0.0294	15.9	47.2
10/24/01	19:21	0	26.7	23.7	26.4	24.1	22.4	52.2	61.4	11.0	41.8	9.4	0	38.4	0.070	0.0294	15.9	47.0
10/24/01	19:22	0	26.7	23.7	26.4	24.0	22.4	52.1	61.4	10.9	41.9	9.4	0	38.4	0.070	0.0294	15.9	47.0
10/24/01	19:23	0	26.7	23.7	26.4	24.0	22.4	52.4	61.8	10.9	41.9	9.4	0	38.3	0.071	0.0298	15.9	47.1
10/24/01	19:24	0	26.7	23.7	26.4	24.0	22.4	52.2	61.5	10.9	42.0	9.4	0	38.4	0.070	0.0294	15.9	47.1
10/24/01	19:25	0	26.7	23.7	26.5	24.0	22.4	52.4	61.6	11.0	41.8	9.4	0	38.3	0.070	0.0293	15.9	47.1
10/24/01	19:26	0	26.8	23.7	26.4	24.0	22.4	52.3	61.6	10.9	41.9	9.4	0	38.4	0.070	0.0294	15.9	47.1
10/24/01	19:27	0	26.8	23.7	26.5	24.1	22.4	52.1	61.3	10.9	41.6	9.4	0	38.3	0.070	0.0293	15.9	46.9
10/24/01	19:28	0	26.8	23.7	26.4	24.0	22.3	52.0	61.4	10.9	42.0	9.3	0	38.3	0.070	0.0294	15.9	47.0
10/24/01	19:29	0	26.8	23.7	26.6	24.0	22.3	52.1	61.5	10.9	41.9	9.3	0	38.3	0.070	0.0292	15.9	47.0

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	19:30	0	26.9	23.7	26.6	24.1	22.4	52.2	61.6	10.9	42.0	9.3	0	38.3	0.070	0.0293	15.9	47.1
10/24/01	19:31	0	26.9	23.7	26.6	24.0	22.4	52.3	61.7	10.9	41.9	9.4	0	38.3	0.070	0.0292	15.9	47.1
10/24/01	19:32	0	26.9	23.7	26.6	24.0	22.4	52.0	61.3	11.0	41.6	9.4	0	38.4	0.070	0.0292	15.9	46.8
10/24/01	19:33	0	26.9	23.7	26.7	24.0	22.3	52.3	61.5	10.9	42.0	9.4	0	38.4	0.070	0.0292	15.9	47.1
10/24/01	19:34	0	26.9	23.7	26.7	24.0	22.3	52.2	61.5	10.9	41.7	9.4	0	38.3	0.070	0.0291	15.9	46.9
10/24/01	19:35	0	26.9	23.6	26.7	24.0	22.3	52.0	61.3	11.0	42.0	9.4	0	38.4	0.070	0.0292	15.9	47.0
10/24/01	19:36	0	26.9	23.7	26.7	24.0	22.3	52.5	61.8	10.9	42.1	9.4	0	38.3	0.071	0.0295	15.9	47.3
10/24/01	19:37	0	26.9	23.7	26.7	24.0	22.3	52.6	61.9	11.0	41.9	9.4	0	38.4	0.071	0.0296	15.9	47.2
10/24/01	19:38	0	26.9	23.6	26.7	23.9	22.3	52.1	61.4	10.9	42.0	9.4	0	38.3	0.071	0.0295	15.9	47.1
10/24/01	19:39	0	26.9	23.6	26.7	23.9	22.3	52.5	61.8	11.0	42.2	9.4	0	38.5	0.070	0.0291	16.0	47.3
10/24/01	19:40	0	27.0	23.6	26.7	23.9	22.3	52.7	62.0	11.1	42.0	9.4	0	38.4	0.070	0.0292	15.9	47.4
10/24/01	19:41	0	27.0	23.6	26.8	23.9	22.3	52.4	61.7	10.9	41.9	9.4	0	38.4	0.070	0.0291	15.9	47.1
10/24/01	19:42	0	27.0	23.6	26.8	23.9	22.2	52.3	61.6	11.0	41.9	9.4	0	38.4	0.071	0.0295	15.9	47.1
10/24/01	19:43	0	27.1	23.6	26.8	23.9	22.3	52.4	61.7	11.0	42.1	9.4	0	38.3	0.070	0.0291	15.9	47.3
10/24/01	19:44	0	27.1	23.6	26.8	23.9	22.2	52.4	61.8	10.9	41.9	9.4	0	38.4	0.070	0.0291	15.9	47.2
10/24/01	19:45	0	27.1	23.6	26.8	23.8	22.2	52.5	61.8	10.9	41.9	9.4	0	38.4	0.070	0.0291	15.9	47.2
10/24/01	19:46	0	27.1	23.6	26.8	23.8	22.2	52.3	61.8	11.0	42.0	9.4	0	38.4	0.070	0.0291	16.0	47.1
10/24/01	19:47	0	27.1	23.6	26.8	23.8	22.2	52.6	62.0	10.9	42.0	9.4	0	38.3	0.071	0.0294	15.9	47.3
10/24/01	19:48	0	27.1	23.6	26.8	23.8	22.1	52.4	61.7	11.0	41.8	9.3	0	38.3	0.070	0.0290	15.9	47.1
10/24/01	19:49	0	27.1	23.6	26.8	23.8	22.1	52.6	62.0	11.1	42.0	9.3	0	38.4	0.070	0.0291	15.9	47.3
10/24/01	19:50	0	27.1	23.6	26.9	23.8	22.2	52.3	61.6	11.0	42.3	9.3	0	38.3	0.070	0.0290	15.9	47.3
10/24/01	19:51	0	27.1	23.6	26.9	23.8	22.2	52.5	61.8	11.0	41.8	9.4	0	38.4	0.070	0.0290	15.9	47.2
10/24/01	19:52	0	27.2	23.6	26.9	23.8	22.2	52.2	61.5	10.9	41.9	9.3	0	38.3	0.070	0.0290	15.9	47.0
10/24/01	19:53	0	27.2	23.5	26.9	23.8	22.2	52.5	61.8	11.1	41.8	9.3	0	38.4	0.070	0.0290	15.9	47.2
10/24/01	19:54	0	27.2	23.5	27.0	23.8	22.3	52.3	61.6	11.0	42.2	9.3	0	38.4	0.070	0.0289	15.9	47.3
10/24/01	19:55	0	27.2	23.5	27.0	23.8	22.3	52.5	61.8	10.9	41.9	9.3	0	38.4	0.070	0.0289	15.9	47.2
10/24/01	19:56	0	27.2	23.5	27.0	23.8	22.4	52.4	61.7	11.0	42.0	9.3	0	38.6	0.070	0.0289	16.0	47.2
10/24/01	19:57	0	27.2	23.5	27.0	23.9	22.5	52.1	61.4	11.0	42.4	9.3	0	38.3	0.070	0.0289	15.9	47.2
10/24/01	19:58	0	27.2	23.5	27.1	24.0	22.5	52.4	61.8	10.9	42.1	9.3	0	38.2	0.070	0.0289	15.9	47.3
10/24/01	19:59	0	27.2	23.5	27.0	24.0	22.6	52.5	61.9	11.0	41.9	9.3	0	38.3	0.070	0.0289	15.9	47.2
10/24/01	20:00	0	27.2	23.5	27.1	24.1	22.7	52.5	61.8	10.9	42.0	9.3	0	38.4	0.070	0.0288	15.9	47.2
10/24/01	20:01	0	27.2	23.5	27.0	24.2	22.7	52.5	61.9	11.0	42.1	9.3	0	38.3	0.070	0.0289	15.9	47.3
10/24/01	20:02	0	27.3	23.5	27.0	24.3	22.8	52.2	61.5	11.0	41.9	9.3	0	38.2	0.070	0.0289	15.9	47.0
10/24/01	20:03	0	27.3	23.6	27.1	24.3	22.9	52.5	61.8	11.0	42.0	9.3	0	38.3	0.070	0.0288	15.9	47.2
10/24/01	20:04	0	27.3	23.5	27.1	24.4	22.9	52.5	61.8	11.1	41.9	9.3	0	38.4	0.070	0.0288	15.9	47.2
10/24/01	20:05	0	27.3	23.5	27.2	24.4	22.9	53.0	62.4	11.1	42.1	9.3	0	38.4	0.070	0.0288	15.9	47.6
10/24/01	20:06	0	27.3	23.5	27.1	24.4	22.8	52.6	62.0	11.0	42.3	9.3	0	38.2	0.070	0.0288	15.9	47.5
10/24/01	20:07	0	27.3	23.5	27.1	24.3	22.8	52.0	61.4	11.0	42.1	9.3	0	38.2	0.070	0.0288	15.9	47.1
10/24/01	20:08	0	27.4	23.5	27.1	24.3	22.7	52.7	62.0	11.0	42.0	9.3	0	38.3	0.070	0.0288	15.9	47.3
10/24/01	20:09	0	27.3	23.5	27.1	24.2	22.7	52.4	61.7	11.0	42.3	9.3	0	38.4	0.070	0.0288	16.0	47.4
10/24/01	20:10	0	27.4	23.5	27.1	24.2	22.7	52.3	61.5	11.0	42.1	9.3	0	38.3	0.070	0.0288	15.9	47.2
10/24/01	20:11	0	27.3	23.5	27.2	24.1	22.7	52.8	62.1	11.0	42.1	9.3	0	38.4	0.070	0.0288	15.9	47.4
10/24/01	20:12	0	27.4	23.5	27.2	24.0	22.6	52.6	61.9	11.0	42.1	9.3	0	38.4	0.070	0.0287	15.9	47.3
10/24/01	20:13	0	27.4	23.6	27.2	24.1	22.6	52.4	61.6	11.0	41.9	9.3	0	38.3	0.070	0.0288	15.9	47.2
10/24/01	20:14	0	27.4	23.6	27.2	24.0	22.6	52.1	61.4	10.9	41.9	9.3	0	38.2	0.070	0.0287	15.9	47.0
10/24/01	20:15	0	27.4	23.5	27.2	24.0	22.6	52.4	61.7	11.0	41.9	9.3	0	38.2	0.070	0.0288	15.9	47.1
10/24/01	20:16	0	27.5	23.5	27.2	24.0	22.5	52.9	62.3	11.0	42.0	9.3	0	38.2	0.070	0.0287	15.9	47.4
10/24/01	20:17	0	27.5	23.5	27.2	23.9	22.5	52.4	61.7	11.0	42.1	9.3	0	38.2	0.070	0.0287	15.9	47.2
10/24/01	20:18	0	27.5	23.6	27.3	23.9	22.5	52.6	62.0	11.0	42.0	9.3	0	38.3	0.070	0.0287	15.9	47.3
10/24/01	20:19	0	27.5	23.5	27.3	23.9	22.5	52.7	61.9	11.2	42.3	9.3	0	38.3	0.070	0.0287	15.9	47.5
10/24/01	20:20	0	27.5	23.5	27.3	23.9	22.4	52.4	61.7	11.1	42.0	9.3	0	38.3	0.070	0.0287	15.9	47.2
10/24/01	20:21	0	27.5	23.5	27.3	23.8	22.4	52.6	61.9	11.1	41.9	9.3	0	38.3	0.070	0.0287	15.9	47.3
10/24/01	20:22	0	27.5	23.5	27.3	23.8	22.3	52.5	61.9	11.0	41.9	9.3	0	38.2	0.070	0.0287	15.8	47.2
10/24/01	20:23	0	27.5	23.5	27.3	23.8	22.3	52.6	62.1	11.1	42.0	9.3	0	38.3	0.070	0.0286	15.9	47.3
10/24/01	20:24	0	27.6	23.5	27.3	23.8	22.3	52.8	62.1	11.1	42.1	9.3	0	38.4	0.070	0.0286	15.9	47.4
10/24/01	20:25	0	27.5	23.5	27.4	23.7	22.2	52.7	62.0	11.2	42.1	9.3	0	38.2	0.070	0.0286	15.9	47.4
10/24/01	20:26	0	27.5	23.5	27.3	23.7	22.2	52.8	62.1	11.0	41.9	9.3	0	38.3	0.070	0.0287	15.9	47.4
10/24/01	20:27	0	27.6	23.5	27.3	23.7	22.2	52.6	61.8	11.0	42.2	9.3	0	38.2	0.070	0.0286	15.9	47.4
10/24/01	20:28	0	27.6	23.5	27.4	23.7	22.2	52.7	62.0	11.0	41.9	9.3	0	38.2	0.070	0.0286	15.8	47.3
10/24/01	20:29	0	27.6	23.5	27.4	23.7	22.2	52.4	61.6	11.0	41.9	9.3	0	38.3	0.070	0.0286	15.9	47.1

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	20:30	0	27.6	23.5	27.4	23.7	22.1	52.5	61.8	11.1	42.1	9.3	0	38.2	0.070	0.0286	15.9	47.3
10/24/01	20:31	0	27.6	23.5	27.4	23.7	22.1	52.8	62.2	11.0	42.1	9.3	0	38.3	0.070	0.0286	15.9	47.4
10/24/01	20:32	0	27.7	23.5	27.4	23.6	22.2	52.8	62.2	11.1	42.0	9.3	0	38.3	0.070	0.0286	15.9	47.4
10/24/01	20:33	0	27.7	23.5	27.4	23.7	22.2	52.5	61.7	11.1	42.0	9.3	0	38.2	0.070	0.0286	15.9	47.3
10/24/01	20:34	0	27.7	23.4	27.5	23.7	22.3	53.0	62.4	11.1	42.0	9.3	0	38.3	0.070	0.0285	15.9	47.5
10/24/01	20:35	0	27.7	23.4	27.5	23.8	22.3	52.9	62.3	11.1	41.9	9.3	0	38.3	0.070	0.0285	15.9	47.4
10/24/01	20:36	0	27.7	23.4	27.5	23.8	22.4	52.3	61.7	11.1	41.8	9.3	0	38.2	0.070	0.0285	15.9	47.1
10/24/01	20:37	0	27.7	23.4	27.5	23.8	22.4	52.9	62.2	11.1	42.2	9.3	0	38.2	0.070	0.0285	15.9	47.5
10/24/01	20:38	0	27.7	23.4	27.6	23.9	22.5	52.6	61.8	11.1	41.7	9.3	0	38.2	0.070	0.0285	15.9	47.1
10/24/01	20:39	0	27.7	23.4	27.6	23.9	22.5	52.5	61.7	11.1	42.1	9.3	0	38.2	0.070	0.0284	15.9	47.3
10/24/01	20:40	0	27.7	23.4	27.6	24.0	22.6	52.8	62.1	11.1	41.9	9.3	0	38.3	0.071	0.0289	15.9	47.3
10/24/01	20:41	0	27.8	23.4	27.6	24.0	22.7	52.5	61.8	11.0	42.2	9.3	0	38.2	0.070	0.0285	15.9	47.3
10/24/01	20:42	0	27.8	23.4	27.6	24.0	22.8	52.5	61.8	11.0	42.1	9.3	0	38.2	0.070	0.0284	15.9	47.3
10/24/01	20:43	0	27.8	23.4	27.7	24.1	22.8	52.3	61.7	11.1	42.0	9.3	0	38.2	0.070	0.0283	15.8	47.1
10/24/01	20:44	0	27.8	23.4	27.7	24.2	22.9	52.7	62.0	11.1	42.2	9.3	0	38.2	0.070	0.0284	15.9	47.5
10/24/01	20:45	0	27.8	23.4	27.6	24.2	22.9	52.6	61.8	11.0	42.0	9.4	0	38.2	0.070	0.0284	15.9	47.3
10/24/01	20:46	0	27.9	23.4	27.7	24.3	23.0	52.7	62.0	11.2	42.1	9.4	0	38.2	0.070	0.0284	15.9	47.4
10/24/01	20:47	0	27.9	23.5	27.7	24.3	23.0	52.4	61.7	11.0	42.5	9.4	0	38.1	0.070	0.0283	15.8	47.5
10/24/01	20:48	0	27.9	23.5	27.7	24.3	23.1	52.6	61.8	11.2	42.2	9.4	0	38.2	0.070	0.0283	15.9	47.4
10/24/01	20:49	0	27.9	23.4	27.7	24.3	23.0	52.3	61.6	11.1	42.2	9.3	0	38.2	0.070	0.0284	15.8	47.3
10/24/01	20:50	0	27.9	23.4	27.8	24.4	23.0	52.7	62.1	11.0	42.0	9.3	0	38.2	0.070	0.0283	15.9	47.4
10/24/01	20:51	0	27.9	23.4	27.8	24.4	23.0	52.5	61.9	11.1	42.1	9.4	0	38.2	0.070	0.0282	15.9	47.3
10/24/01	20:52	0	27.9	23.4	27.8	24.3	22.9	52.5	61.9	11.1	41.9	9.4	0	38.2	0.070	0.0283	15.8	47.2
10/24/01	20:53	0	28.0	23.5	27.8	24.3	22.9	52.7	61.9	11.2	42.2	9.4	0	38.2	0.070	0.0283	15.8	47.4
10/24/01	20:54	0	28.0	23.4	27.8	24.2	22.8	52.6	61.9	11.1	42.0	9.4	0	38.2	0.070	0.0283	15.8	47.3
10/24/01	20:55	0	28.0	23.5	27.8	24.2	22.8	52.6	61.9	11.1	42.1	9.3	0	38.2	0.070	0.0283	15.8	47.4
10/24/01	20:56	0	28.0	23.5	27.8	24.1	22.8	52.7	62.1	11.2	42.2	9.3	0	38.2	0.070	0.0283	15.9	47.5
10/24/01	20:57	0	28.0	23.5	27.9	24.1	22.7	52.5	61.9	11.1	42.0	9.4	0	38.2	0.070	0.0282	15.8	47.3
10/24/01	20:58	0	28.1	23.5	27.9	24.0	22.6	52.6	62.0	11.1	42.2	9.3	0	38.2	0.070	0.0282	15.8	47.4
10/24/01	20:59	0	28.1	23.5	27.9	23.9	22.6	52.8	62.1	11.1	42.3	9.4	0	38.2	0.070	0.0282	15.9	47.6
10/24/01	21:00	0	28.1	23.5	27.9	24.0	22.6	52.6	61.8	11.1	42.1	9.3	0	38.2	0.070	0.0282	15.8	47.3
10/24/01	21:01	0	28.1	23.5	27.9	23.9	22.6	52.6	61.9	11.2	41.8	9.3	0	38.1	0.070	0.0282	15.8	47.2
10/24/01	21:02	0	28.0	23.5	28.0	23.9	22.6	51.0	62.0	11.1	40.3	11.0	0	38.1	0.105	0.0422	15.8	45.6
10/24/01	21:03	0	28.2	23.5	27.5	23.8	22.6	51.8	62.0	11.0	41.3	10.1	0	38.1	0.088	0.0358	15.8	46.5
10/24/01	21:04	0	28.1	23.5	26.9	23.8	22.5	52.0	62.0	11.0	41.4	10.0	0	38.3	0.085	0.0352	15.9	46.7
10/24/01	21:05	0	27.9	23.5	26.6	23.8	22.5	52.2	62.1	11.1	41.5	9.9	0	38.3	0.084	0.0351	15.9	46.9
10/24/01	21:06	0	27.8	23.5	26.4	23.7	22.5	51.9	61.8	11.0	41.6	9.8	0	38.4	0.082	0.0345	15.9	46.8
10/24/01	21:07	0	27.8	23.5	26.3	23.8	22.4	52.3	62.2	11.0	41.6	9.8	0	38.4	0.081	0.0341	15.9	46.9
10/24/01	21:08	0	27.6	23.5	26.4	23.7	22.4	51.9	61.8	11.0	41.5	9.8	0	38.4	0.081	0.0341	15.9	46.7
10/24/01	21:09	0	27.5	23.5	26.4	23.7	22.4	52.2	61.9	11.0	41.8	9.8	0	38.3	0.081	0.0341	15.9	47.0
10/24/01	21:10	0	27.4	23.5	26.3	23.7	22.3	51.9	61.7	11.0	41.7	9.8	0	38.3	0.080	0.0336	15.9	46.8
10/24/01	21:11	0	27.2	23.5	26.4	23.6	22.3	52.2	62.0	11.1	41.7	9.8	0	38.5	0.080	0.0336	16.0	46.9
10/24/01	21:12	0	27.1	23.5	26.4	23.6	22.3	52.4	62.1	11.1	41.7	9.8	0	38.4	0.080	0.0336	16.0	47.0
10/24/01	21:13	0	27.1	23.4	26.4	23.6	22.3	51.8	61.5	11.0	41.4	9.7	0	38.4	0.079	0.0332	15.9	46.6
10/24/01	21:14	0	27.0	23.4	26.4	23.5	22.2	51.8	61.6	11.0	41.4	9.7	0	38.3	0.079	0.0332	15.9	46.6
10/24/01	21:15	0	26.9	23.4	26.4	23.5	22.2	52.2	62.0	11.1	41.8	9.7	0	38.4	0.079	0.0332	15.9	47.0
10/24/01	21:16	0	26.8	23.4	26.4	23.5	22.2	51.9	61.5	11.0	41.6	9.7	0	38.3	0.079	0.0332	15.9	46.7
10/24/01	21:17	0	26.8	23.4	26.5	23.5	22.3	52.3	61.9	11.0	41.8	9.7	0	38.4	0.079	0.0331	15.9	47.1
10/24/01	21:18	0	26.8	23.4	26.5	23.6	22.3	52.2	62.0	11.0	41.6	9.7	0	38.5	0.078	0.0327	16.0	46.9
10/24/01	21:19	0	26.8	23.4	26.6	23.6	22.4	52.2	61.9	11.1	41.8	9.7	0	38.4	0.078	0.0326	15.9	47.0
10/24/01	21:20	0	26.8	23.4	26.6	23.7	22.4	52.2	61.8	11.1	41.7	9.7	0	38.4	0.078	0.0326	15.9	46.9
10/24/01	21:21	0	26.8	23.4	26.6	23.7	22.4	52.1	61.8	11.0	41.1	9.7	0	38.4	0.078	0.0326	15.9	46.6
10/24/01	21:22	0	26.8	23.4	26.6	23.7	22.5	52.0	61.7	11.0	41.6	9.7	0	38.3	0.078	0.0326	15.9	46.8
10/24/01	21:23	0	26.9	23.4	26.6	23.8	22.5	52.2	61.9	11.0	41.5	9.7	0	38.4	0.078	0.0325	15.9	46.8
10/24/01	21:24	0	26.9	23.4	26.6	23.8	22.6	52.1	61.8	11.0	41.6	9.7	0	38.3	0.078	0.0326	15.9	46.8
10/24/01	21:25	0	26.9	23.4	26.7	23.8	22.6	52.5	62.2	10.9	41.8	9.7	0	38.3	0.077	0.0321	15.9	47.1
10/24/01	21:26	0	26.9	23.4	26.7	23.8	22.8	52.1	61.7	11.0	41.8	9.7	0	38.4	0.078	0.0325	16.0	47.0
10/24/01	21:27	0	26.9	23.4	26.7	24.0	22.8	52.0	61.6	11.0	41.3	9.7	0	38.4	0.078	0.0324	15.9	46.7
10/24/01	21:28	0	27.0	23.4	26.8	24.0	22.8	52.1	61.7	11.1	41.8	9.7	0	38.4	0.077	0.0320	16.0	47.0
10/24/01	21:29	0	27.0	23.4	26.7	24.1	22.9	52.0	61.6	11.0	42.1	9.7	0	38.4	0.077	0.0321	15.9	47.0

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	21:30	0	27.0	23.4	26.8	24.1	22.9	52.3	61.9	11.0	41.6	9.7	0	38.4	0.077	0.0320	15.9	46.9
10/24/01	21:31	0	27.0	23.4	26.8	24.1	23.0	52.0	61.6	11.0	41.8	9.7	0	38.5	0.077	0.0320	16.0	46.9
10/24/01	21:32	0	27.0	23.4	26.9	24.2	23.1	52.3	62.0	11.1	41.6	9.7	0	38.4	0.077	0.0319	15.9	46.9
10/24/01	21:33	0	27.0	23.4	26.9	24.3	23.2	51.9	61.6	11.0	41.9	9.7	0	38.4	0.077	0.0319	15.9	46.9
10/24/01	21:34	0	27.0	23.4	26.9	24.3	23.1	52.5	62.3	11.0	41.7	9.7	0	38.3	0.077	0.0319	15.9	47.1
10/24/01	21:35	0	27.1	23.4	26.9	24.4	23.1	52.1	61.7	11.1	41.7	9.6	0	38.3	0.077	0.0319	15.9	46.9
10/24/01	21:36	0	27.0	23.4	26.8	24.3	23.0	52.1	61.6	11.1	41.8	9.6	0	38.3	0.077	0.0320	15.9	46.9
10/24/01	21:37	0	27.1	23.4	26.9	24.3	23.0	52.3	62.0	11.0	41.8	9.6	0	38.4	0.077	0.0319	15.9	47.1
10/24/01	21:38	0	27.1	23.4	26.9	24.2	22.9	52.1	61.7	11.1	41.7	9.6	0	38.4	0.077	0.0319	15.9	46.9
10/24/01	21:39	0	27.1	23.4	26.9	24.1	22.9	52.4	62.2	11.0	41.8	9.6	0	38.3	0.077	0.0319	15.9	47.1
10/24/01	21:40	0	27.2	23.4	26.9	24.1	22.9	52.3	62.0	11.0	42.0	9.6	0	38.4	0.077	0.0319	15.9	47.2
10/24/01	21:41	0	27.2	23.4	26.9	24.0	22.8	52.3	62.1	11.0	41.8	9.6	0	38.3	0.076	0.0314	15.9	47.1
10/24/01	21:42	0	27.2	23.4	27.0	24.0	22.8	52.1	61.7	11.1	41.5	9.6	0	38.3	0.077	0.0318	15.9	46.8
10/24/01	21:43	0	27.2	23.4	27.0	24.0	22.7	52.2	61.9	11.1	42.0	9.6	0	38.3	0.076	0.0314	15.9	47.1
10/24/01	21:44	0	27.2	23.4	27.0	23.9	22.7	52.3	61.8	11.1	41.8	9.6	0	38.4	0.076	0.0313	15.9	47.0
10/24/01	21:45	0	27.2	23.4	27.0	23.9	22.6	51.7	61.3	11.0	41.5	9.6	0	38.2	0.076	0.0314	15.9	46.6
10/24/01	21:46	0	27.3	23.4	27.0	23.8	22.6	52.1	61.7	10.9	41.7	9.6	0	38.2	0.076	0.0314	15.9	46.9
10/24/01	21:47	0	27.3	23.4	27.1	23.8	22.5	52.2	61.9	11.0	41.6	9.6	0	38.4	0.076	0.0313	15.9	46.9
10/24/01	21:48	0	27.3	23.4	27.1	23.7	22.4	52.3	61.9	11.0	41.9	9.6	0	38.3	0.076	0.0313	15.9	47.1
10/24/01	21:49	0	27.3	23.4	27.1	23.7	22.4	52.1	61.7	11.0	41.8	9.6	0	38.3	0.076	0.0313	15.9	46.9
10/24/01	21:50	0	27.3	23.5	27.1	23.7	22.4	52.2	61.7	11.0	41.9	9.6	0	38.3	0.076	0.0313	15.9	47.0
10/24/01	21:51	0	27.4	23.4	27.1	23.6	22.3	52.3	61.8	11.0	41.6	9.6	0	38.4	0.076	0.0313	15.9	47.0
10/24/01	21:52	0	27.3	23.4	27.2	23.6	22.3	52.2	61.7	11.1	41.4	9.6	0	38.2	0.076	0.0312	15.9	46.8
10/24/01	21:53	0	27.4	23.4	27.2	23.6	22.4	52.4	62.0	11.1	41.8	9.6	0	38.3	0.076	0.0312	15.9	47.1
10/24/01	21:54	0	27.4	23.4	27.2	23.6	22.3	52.3	61.9	11.0	41.9	9.6	0	38.3	0.076	0.0312	15.9	47.1
10/24/01	21:55	0	27.5	23.4	27.2	23.6	22.4	52.3	61.9	11.1	41.8	9.6	0	38.3	0.076	0.0312	15.9	47.1
10/24/01	21:56	0	27.5	23.4	27.2	23.7	22.4	52.3	61.9	11.0	41.7	9.6	0	38.3	0.076	0.0312	15.9	47.0
10/24/01	21:57	0	27.5	23.4	27.2	23.6	22.4	52.2	61.8	11.0	41.8	9.6	0	38.3	0.076	0.0312	15.9	47.0
10/24/01	21:58	0	27.5	23.4	27.3	23.7	22.5	52.4	62.0	11.1	41.7	9.6	0	38.3	0.076	0.0311	15.9	47.0
10/24/01	21:59	0	27.6	23.4	27.3	23.7	22.5	52.3	61.9	11.1	42.0	9.6	0	38.3	0.076	0.0311	15.9	47.1
10/24/01	22:00	0	27.5	23.4	27.3	23.8	22.6	52.5	62.1	11.1	42.1	9.6	0	38.3	0.076	0.0311	15.9	47.3
10/24/01	22:01	0	27.6	23.4	27.4	23.8	22.6	52.5	62.1	11.1	41.8	9.6	0	38.2	0.076	0.0311	15.9	47.1
10/24/01	22:02	0	27.6	23.4	27.4	23.9	22.7	52.4	62.1	11.1	41.5	9.6	0	38.2	0.076	0.0310	15.9	46.9
10/24/01	22:03	0	27.6	23.4	27.4	24.0	22.8	52.4	61.9	11.1	41.8	9.6	0	38.2	0.075	0.0306	15.9	47.1
10/24/01	22:04	0	27.6	23.4	27.4	24.0	22.8	52.3	61.9	11.1	42.1	9.6	0	38.3	0.076	0.0310	15.9	47.2
10/24/01	22:05	0	27.6	23.4	27.4	24.1	22.8	52.6	62.2	11.1	41.9	9.6	0	38.2	0.075	0.0306	15.9	47.3
10/24/01	22:06	0	27.7	23.4	27.5	24.1	22.9	52.5	62.1	11.1	41.9	9.6	0	38.2	0.076	0.0310	15.9	47.2
10/24/01	22:07	0	27.7	23.4	27.5	24.1	23.0	52.1	61.5	11.1	41.7	9.6	0	38.2	0.075	0.0306	15.9	46.9
10/24/01	22:08	0	27.7	23.4	27.5	24.1	23.0	52.1	61.6	11.1	41.7	9.6	0	38.1	0.075	0.0305	15.8	46.9
10/24/01	22:09	0	27.7	23.4	27.5	24.2	23.1	52.5	62.0	11.1	41.9	9.6	0	38.3	0.075	0.0305	15.9	47.2
10/24/01	22:10	0	27.7	23.4	27.6	24.3	23.1	52.4	62.0	11.1	41.9	9.6	0	38.3	0.075	0.0305	15.9	47.1
10/24/01	22:11	0	27.8	23.4	27.6	24.3	23.1	52.5	62.1	11.1	42.1	9.6	0	38.2	0.076	0.0309	15.9	47.3
10/24/01	22:12	0	27.8	23.4	27.6	24.3	23.1	52.2	61.7	11.0	42.1	9.6	0	38.3	0.075	0.0305	15.9	47.2
10/24/01	22:13	0	27.8	23.4	27.6	24.4	23.1	52.3	61.9	11.1	41.9	9.6	0	38.2	0.075	0.0304	15.9	47.1
10/24/01	22:14	0	27.8	23.4	27.6	24.4	23.1	52.5	62.2	11.1	41.8	9.6	0	38.2	0.075	0.0304	15.9	47.2
10/24/01	22:15	0	27.8	23.4	27.6	24.3	23.0	52.3	61.7	11.0	41.4	9.6	0	38.2	0.075	0.0304	15.9	46.8
10/24/01	22:16	0	27.8	23.4	27.6	24.3	23.0	52.4	61.9	11.1	42.0	9.6	0	38.2	0.075	0.0304	15.9	47.2
10/24/01	22:17	0	27.8	23.4	27.6	24.2	22.9	52.4	61.8	11.1	41.8	9.6	0	38.2	0.075	0.0304	15.9	47.1
10/24/01	22:18	0	27.8	23.4	27.6	24.1	22.9	52.5	62.1	11.2	41.9	9.6	0	38.2	0.075	0.0304	15.8	47.2
10/24/01	22:19	0	27.8	23.4	27.7	24.1	22.8	52.5	62.1	11.1	41.8	9.6	0	38.3	0.075	0.0304	15.9	47.1
10/24/01	22:20	0	27.9	23.4	27.7	24.0	22.8	52.5	62.1	11.2	42.1	9.6	0	38.2	0.075	0.0304	15.9	47.3
10/24/01	22:21	0	27.9	23.5	27.6	24.0	22.7	52.3	61.8	11.2	41.9	9.6	0	38.2	0.075	0.0305	15.9	47.1
10/24/01	22:22	0	28.0	23.4	27.7	23.9	22.7	52.3	61.9	11.2	42.1	9.6	0	38.3	0.075	0.0304	15.9	47.2
10/24/01	22:23	0	28.0	23.5	27.7	23.9	22.6	52.5	62.0	11.1	42.0	9.6	0	38.1	0.075	0.0303	15.8	47.2
10/24/01	22:24	0	28.0	23.4	27.7	23.8	22.6	52.5	62.2	11.1	41.8	9.6	0	38.1	0.075	0.0304	15.8	47.2
10/24/01	22:25	0	28.0	23.5	27.8	23.8	22.5	52.1	61.6	11.1	41.9	9.6	0	38.1	0.075	0.0303	15.8	47.0
10/24/01	22:26	0	28.0	23.5	27.8	23.7	22.5	52.5	62.0	11.1	41.8	9.6	0	38.1	0.075	0.0303	15.8	47.1
10/24/01	22:27	0	28.0	23.5	27.9	23.7	22.5	52.5	62.0	11.1	42.0	9.6	0	38.1	0.075	0.0302	15.8	47.3
10/24/01	22:28	0	28.1	23.5	27.9	23.7	22.4	52.4	62.0	11.1	41.9	9.6	0	38.1	0.075	0.0302	15.8	47.2
10/24/01	22:29	0	28.1	23.4	27.8	23.6	22.4	52.8	62.3	11.1	42.0	9.6	0	38.3	0.075	0.0303	15.9	47.4

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	22:30	0	28.1	23.4	27.8	23.6	22.4	52.6	62.1	11.2	41.9	9.6	0	38.1	0.075	0.0303	15.8	47.3
10/24/01	22:31	0	28.1	23.4	27.9	23.6	22.4	52.7	62.4	11.1	42.1	9.6	0	38.2	0.075	0.0302	15.8	47.4
10/24/01	22:32	0	28.1	23.4	27.9	23.6	22.4	52.4	61.9	11.1	42.0	9.6	0	38.1	0.075	0.0302	15.8	47.2
10/24/01	22:33	0	28.2	23.4	28.0	23.6	22.4	52.9	62.5	11.2	41.9	9.6	0	38.2	0.075	0.0301	15.8	47.4
10/24/01	22:34	0	28.2	23.4	28.0	23.7	22.5	52.6	62.1	11.2	42.0	9.6	0	38.2	0.075	0.0301	15.9	47.3
10/24/01	22:35	0	28.2	23.4	28.0	23.7	22.5	52.6	62.0	11.1	41.9	9.6	0	38.1	0.075	0.0301	15.8	47.2
10/24/01	22:36	0	28.2	23.4	28.1	23.8	22.6	52.6	62.2	11.1	42.0	9.6	0	38.1	0.075	0.0301	15.8	47.3
10/24/01	22:37	0	28.3	23.4	28.0	23.8	22.6	52.6	62.0	11.2	42.0	9.6	0	38.1	0.075	0.0302	15.8	47.3
10/24/01	22:38	0	28.3	23.4	28.1	23.9	22.7	52.5	61.9	11.2	42.0	9.6	0	38.1	0.075	0.0300	15.8	47.3
10/24/01	22:39	0	28.3	23.4	28.2	23.9	22.7	52.4	61.9	11.2	41.9	9.5	0	38.1	0.075	0.0300	15.8	47.1
10/24/01	22:40	0	28.3	23.4	28.2	24.0	22.8	52.5	62.1	11.2	41.6	9.6	0	38.0	0.075	0.0299	15.8	47.0
10/24/01	22:41	0	28.3	23.4	28.2	24.1	22.8	52.8	62.4	11.2	41.9	9.6	0	38.1	0.075	0.0299	15.8	47.4
10/24/01	22:42	0	28.4	23.4	28.2	24.1	22.9	52.7	62.3	11.2	42.0	9.6	0	38.2	0.075	0.0299	15.8	47.4
10/24/01	22:43	0	28.4	23.4	28.3	24.2	22.9	52.5	61.9	11.2	42.1	9.6	0	38.2	0.075	0.0299	15.8	47.3
10/24/01	22:44	0	28.4	23.4	28.2	24.2	22.9	52.6	62.1	11.2	42.0	9.6	0	38.2	0.075	0.0299	15.8	47.3
10/24/01	22:45	0	28.4	23.4	28.3	24.2	23.0	52.4	61.9	11.2	42.0	9.6	0	38.1	0.075	0.0299	15.8	47.2
10/24/01	22:46	0	28.5	23.4	28.3	24.3	23.1	52.5	62.0	11.1	42.2	9.5	0	38.0	0.075	0.0298	15.8	47.3
10/24/01	22:47	0	28.5	23.4	28.4	24.3	23.1	52.8	62.3	11.2	42.2	9.6	0	38.1	0.075	0.0298	15.8	47.5
10/24/01	22:48	0	28.5	23.4	28.4	24.3	23.2	52.7	62.4	11.2	42.0	9.6	0	38.1	0.075	0.0298	15.8	47.4
10/24/01	22:49	0	28.6	23.4	28.4	24.4	23.2	52.9	62.4	11.2	42.0	9.6	0	38.0	0.075	0.0298	15.8	47.5
10/24/01	22:50	0	28.6	23.4	28.3	24.4	23.2	52.9	62.5	11.1	41.9	9.6	0	38.0	0.075	0.0299	15.8	47.4
10/24/01	22:51	0	28.6	23.4	28.4	24.4	23.3	53.0	62.5	11.2	42.2	9.6	0	38.0	0.075	0.0298	15.8	47.6
10/24/01	22:52	0	28.6	23.4	27.7	24.4	23.2	52.4	61.8	11.1	42.3	9.5	0	38.1	0.074	0.0300	15.8	47.4
10/24/01	22:53	0	28.4	23.4	27.3	24.4	23.2	52.6	62.2	11.0	42.0	9.5	0	38.2	0.073	0.0299	15.9	47.3
10/24/01	22:54	0	28.3	23.5	26.9	24.4	23.2	52.6	61.9	10.9	42.3	9.4	0	38.2	0.072	0.0298	15.8	47.4
10/24/01	22:55	0	28.2	23.4	26.8	24.4	23.1	52.8	62.2	11.0	42.1	9.4	0	38.2	0.072	0.0299	15.9	47.4
10/24/01	22:56	0	28.2	23.5	26.7	24.3	23.1	52.5	61.9	11.0	42.2	9.4	0	38.3	0.072	0.0300	15.9	47.3
10/24/01	22:57	0	28.0	23.5	26.7	24.3	23.0	52.9	62.3	10.9	42.2	9.4	0	38.4	0.071	0.0296	15.9	47.6
10/24/01	22:58	0	27.9	23.4	26.7	24.2	23.0	52.5	61.9	10.9	42.3	9.4	0	38.2	0.072	0.0300	15.9	47.4
10/24/01	22:59	0	27.7	23.5	26.7	24.1	22.9	52.6	61.9	10.8	42.1	9.4	0	38.2	0.071	0.0296	15.8	47.3
10/24/01	23:00	0	27.6	23.5	26.7	24.0	22.8	52.6	61.9	11.0	42.3	9.4	0	38.3	0.071	0.0296	15.9	47.4
10/24/01	23:01	0	27.5	23.5	26.8	24.0	22.8	52.4	61.7	11.0	42.3	9.4	0	38.3	0.072	0.0299	15.9	47.3
10/24/01	23:02	0	27.4	23.5	26.8	24.0	22.7	52.8	62.1	11.0	42.1	9.4	0	38.3	0.071	0.0295	15.9	47.4
10/24/01	23:03	0	27.3	23.5	26.8	23.9	22.7	52.6	62.0	11.0	41.8	9.4	0	38.2	0.071	0.0295	15.9	47.2
10/24/01	23:04	0	27.2	23.5	26.8	23.9	22.7	52.2	61.6	11.0	42.2	9.4	0	38.2	0.071	0.0295	15.8	47.2
10/24/01	23:05	0	27.2	23.5	26.8	23.8	22.7	52.9	62.3	11.1	42.5	9.4	0	38.3	0.071	0.0295	15.9	47.7
10/24/01	23:06	0	27.2	23.5	26.8	23.8	22.6	52.5	61.9	11.0	42.2	9.4	0	38.3	0.071	0.0295	15.9	47.4
10/24/01	23:07	0	27.1	23.5	26.8	23.7	22.6	52.5	61.9	10.9	41.9	9.4	0	38.2	0.071	0.0295	15.9	47.2
10/24/01	23:08	0	27.2	23.5	26.8	23.7	22.5	52.3	61.7	10.9	42.2	9.4	0	38.2	0.072	0.0299	15.8	47.2
10/24/01	23:09	0	27.1	23.5	26.9	23.7	22.5	52.8	62.1	11.0	42.3	9.3	0	38.2	0.071	0.0294	15.9	47.5
10/24/01	23:10	0	27.2	23.5	26.9	23.7	22.5	52.6	62.0	11.0	42.1	9.4	0	38.3	0.071	0.0294	15.9	47.4
10/24/01	23:11	0	27.2	23.5	26.9	23.7	22.4	52.8	62.2	11.1	42.3	9.4	0	38.3	0.072	0.0298	15.9	47.5
10/24/01	23:12	0	27.2	23.5	26.9	23.7	22.5	52.6	61.9	11.0	42.6	9.4	0	38.3	0.071	0.0294	15.9	47.6
10/24/01	23:13	0	27.2	23.5	26.9	23.7	22.5	52.7	62.1	10.9	42.4	9.4	0	38.2	0.071	0.0294	15.9	47.6
10/24/01	23:14	0	27.2	23.4	26.9	23.7	22.5	52.4	61.7	11.0	42.4	9.4	0	38.3	0.071	0.0294	15.9	47.4
10/24/01	23:15	0	27.2	23.5	26.9	23.8	22.6	52.7	62.0	11.0	42.2	9.4	0	38.3	0.072	0.0298	15.9	47.5
10/24/01	23:16	0	27.2	23.5	27.0	23.8	22.6	52.7	62.2	11.1	42.3	9.4	0	38.3	0.072	0.0297	15.9	47.5
10/24/01	23:17	0	27.2	23.4	27.0	23.9	22.6	52.6	61.9	11.1	42.5	9.3	0	38.3	0.071	0.0293	15.9	47.5
10/24/01	23:18	0	27.3	23.5	27.0	23.9	22.7	52.6	61.9	11.0	42.2	9.4	0	38.3	0.072	0.0297	15.9	47.4
10/24/01	23:19	0	27.2	23.5	27.0	23.9	22.7	52.6	61.9	10.9	42.4	9.3	0	38.2	0.071	0.0293	15.8	47.5
10/24/01	23:20	0	27.3	23.5	27.0	24.0	22.7	52.9	62.3	11.0	42.1	9.3	0	38.3	0.071	0.0293	15.9	47.5
10/24/01	23:21	0	27.3	23.5	27.1	24.0	22.8	52.6	61.9	11.0	42.2	9.3	0	38.3	0.071	0.0292	15.9	47.4
10/24/01	23:22	0	27.3	23.5	27.1	24.0	22.9	52.4	61.7	11.0	42.2	9.3	0	38.3	0.071	0.0292	15.9	47.3
10/24/01	23:23	0	27.3	23.5	27.2	24.1	22.9	52.8	62.1	11.1	42.2	9.3	0	38.3	0.072	0.0296	15.9	47.5
10/24/01	23:24	0	27.3	23.4	27.1	24.1	22.9	52.6	61.9	11.0	42.2	9.3	0	38.3	0.071	0.0292	15.9	47.4
10/24/01	23:25	0	27.4	23.5	27.1	24.1	22.9	52.4	61.6	11.0	42.2	9.3	0	38.4	0.071	0.0292	15.9	47.3
10/24/01	23:26	0	27.4	23.5	27.2	24.2	23.0	52.4	61.7	11.0	41.8	9.3	0	38.2	0.071	0.0292	15.9	47.1
10/24/01	23:27	0	27.4	23.5	27.2	24.2	23.0	52.7	62.2	11.0	42.3	9.3	0	38.3	0.071	0.0291	15.9	47.5
10/24/01	23:28	0	27.4	23.5	27.2	24.2	23.1	52.8	62.1	11.1	42.3	9.3	0	38.3	0.071	0.0291	15.9	47.5
10/24/01	23:29	0	27.4	23.5	27.2	24.2	23.1	52.7	62.0	11.0	42.1	9.3	0	38.2	0.071	0.0291	15.9	47.4

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/24/01	23:30	0	27.4	23.5	27.2	24.2	23.2	52.5	61.9	11.1	42.3	9.3	0	38.3	0.071	0.0292	15.9	47.4
10/24/01	23:31	0	27.5	23.5	27.3	24.3	23.2	52.7	62.1	11.0	42.0	9.3	0	38.3	0.072	0.0295	15.9	47.4
10/24/01	23:32	0	27.5	23.5	27.3	24.4	23.2	52.4	61.6	10.9	42.1	9.3	0	38.2	0.071	0.0291	15.9	47.3
10/24/01	23:33	0	27.5	23.5	27.3	24.4	23.1	52.5	61.8	11.0	42.1	9.3	0	38.2	0.071	0.0291	15.9	47.3
10/24/01	23:34	0	27.5	23.5	27.3	24.3	23.1	52.6	61.9	11.0	42.1	9.3	0	38.3	0.071	0.0291	15.9	47.3
10/24/01	23:35	0	27.5	23.5	27.3	24.3	23.0	53.0	62.3	11.1	42.2	9.3	0	38.3	0.071	0.0291	15.9	47.6
10/24/01	23:36	0	27.5	23.5	27.3	24.3	23.0	52.7	62.1	11.1	42.2	9.3	0	38.2	0.072	0.0295	15.9	47.5
10/24/01	23:37	0	27.5	23.5	27.3	24.2	22.9	52.6	61.9	11.1	42.3	9.3	0	38.3	0.072	0.0295	15.9	47.5
10/24/01	23:38	0	27.5	23.5	27.4	24.2	22.9	52.9	62.2	11.1	42.4	9.3	0	38.3	0.072	0.0294	15.9	47.7
10/24/01	23:39	0	27.6	23.5	27.3	24.1	22.9	53.0	62.1	11.0	42.2	9.3	0	38.3	0.071	0.0291	15.9	47.6
10/24/01	23:40	0	27.6	23.5	27.3	24.1	22.8	52.5	61.8	11.1	42.1	9.3	0	38.3	0.071	0.0291	15.9	47.3
10/24/01	23:41	0	27.6	23.5	27.3	24.0	22.8	52.8	62.2	11.1	42.5	9.3	0	38.3	0.071	0.0291	15.9	47.7
10/24/01	23:42	0	27.6	23.5	27.3	24.0	22.7	52.8	62.1	11.1	42.4	9.3	0	38.3	0.071	0.0291	15.9	47.6
10/24/01	23:43	0	27.6	23.5	27.4	23.9	22.8	52.8	62.1	11.1	42.3	9.3	0	38.2	0.071	0.0290	15.9	47.5
10/24/01	23:44	0	27.6	23.5	27.4	23.9	22.9	52.6	62.0	10.9	42.2	9.3	0	38.2	0.071	0.0290	15.9	47.4
10/24/01	23:45	0	27.7	23.5	27.5	24.0	23.2	52.6	62.0	11.1	42.2	9.3	0	38.2	0.071	0.0289	15.8	47.4
10/24/01	23:46	0	27.7	23.5	27.5	24.0	23.3	52.3	61.7	11.0	42.3	9.3	0	38.3	0.071	0.0289	15.9	47.3
10/24/01	23:47	0	27.7	23.5	27.5	24.1	23.5	52.8	62.1	11.1	42.5	9.3	0	38.3	0.071	0.0289	15.9	47.7
10/24/01	23:48	0	27.7	23.5	27.5	24.2	23.6	52.8	62.2	11.1	42.3	9.3	0	38.2	0.071	0.0289	15.9	47.6
10/24/01	23:49	0	27.7	23.5	27.5	24.3	23.8	52.9	62.2	11.1	42.3	9.3	0	38.2	0.071	0.0289	15.9	47.6
10/24/01	23:50	0	27.8	23.5	27.6	24.4	23.8	53.0	62.4	11.0	42.5	9.3	0	38.3	0.071	0.0288	15.9	47.7
10/24/01	23:51	0	27.8	23.6	27.5	24.6	24.0	52.6	62.1	11.0	42.3	9.3	0	38.2	0.071	0.0289	15.8	47.4
10/24/01	23:52	0	27.8	23.5	27.6	24.5	24.1	52.8	62.2	11.1	42.1	9.3	0	38.3	0.071	0.0288	15.9	47.5
10/24/01	23:53	0	27.8	23.6	27.6	24.7	24.1	52.6	61.9	11.1	42.2	9.3	0	38.2	0.071	0.0289	15.8	47.4
10/24/01	23:54	0	27.8	23.5	27.6	24.6	24.3	52.9	62.3	11.1	42.3	9.3	0	38.2	0.071	0.0288	15.8	47.6
10/24/01	23:55	0	27.8	23.6	27.7	24.7	24.3	53.1	62.4	11.0	42.4	9.3	0	38.2	0.072	0.0292	15.8	47.8
10/24/01	23:56	0	27.8	23.6	27.6	24.7	24.4	52.5	61.9	11.0	42.1	9.3	0	38.1	0.071	0.0288	15.8	47.3
10/24/01	23:57	0	27.9	23.6	27.7	24.8	24.4	52.5	61.7	11.1	42.0	9.3	0	38.2	0.072	0.0292	15.8	47.2
10/24/01	23:58	0	27.9	23.6	27.7	24.8	24.5	52.9	62.2	11.1	42.4	9.3	0	38.1	0.071	0.0288	15.8	47.6
10/24/01	23:59	0	27.9	23.6	27.7	24.8	24.6	52.7	62.1	11.1	42.4	9.3	0	38.1	0.072	0.0291	15.8	47.6
10/25/01	0:00	0	27.9	23.7	27.8	24.9	24.6	52.8	62.0	11.1	42.2	9.3	0	38.2	0.072	0.0291	15.8	47.5
10/25/01	0:01	0	27.9	23.6	27.8	24.9	24.6	53.1	62.4	11.0	42.2	9.3	0	38.2	0.072	0.0291	15.9	47.6
10/25/01	0:02	0	28.0	23.7	27.7	24.9	24.7	53.0	62.3	11.0	42.4	9.3	0	38.2	0.071	0.0287	15.8	47.7
10/25/01	0:03	0	28.0	23.7	27.8	24.9	24.8	52.7	62.1	11.1	42.2	9.3	0	38.1	0.071	0.0287	15.8	47.5
10/25/01	0:04	0	28.0	23.7	27.8	24.9	24.7	52.7	62.0	11.2	41.9	9.3	0	38.1	0.072	0.0291	15.8	47.3
10/25/01	0:05	1	28.0	23.7	27.9	24.9	24.9	9.7	62.2	11.0	-0.6	52.3	81	38.2	0.010	0.0040	15.8	4.5
10/25/01	0:06	0	27.9	23.7	27.9	24.9	24.8	51.4	62.5	11.1	40.7	10.9	0	38.1	0.098	0.0395	15.8	46.1
10/25/01	0:07	0	28.0	23.7	27.9	25.0	25.0	51.9	62.3	11.2	41.2	10.3	0	38.1	0.088	0.0354	15.8	46.5
10/25/01	0:08	0	28.0	23.7	27.9	25.0	25.1	51.9	62.1	11.2	41.4	10.2	0	38.1	0.085	0.0342	15.8	46.7
10/25/01	0:09	0	28.0	23.7	27.8	25.0	25.1	52.1	62.2	11.1	41.8	10.1	0	38.1	0.088	0.0355	15.8	46.9
10/25/01	0:10	0	28.1	23.7	27.9	25.1	25.1	52.3	62.5	11.1	41.8	10.1	0	38.2	0.083	0.0334	15.8	47.0
10/25/01	0:11	0	28.1	23.7	27.9	25.1	25.1	52.4	62.5	11.1	41.7	10.1	0	38.1	0.083	0.0335	15.8	47.0
10/25/01	0:12	0	28.1	23.9	28.0	25.1	25.2	52.1	62.4	11.1	41.9	10.1	0	38.1	0.082	0.0329	15.8	47.0
10/25/01	0:13	0	28.2	23.8	28.1	25.1	25.1	52.0	62.2	11.1	41.5	10.1	0	38.1	0.082	0.0329	15.8	46.8
10/25/01	0:14	0	28.2	23.9	28.0	25.1	25.3	52.0	62.0	11.2	41.6	10.0	0	38.1	0.081	0.0325	15.8	46.8
10/25/01	0:15	0	28.2	23.9	28.0	25.1	25.2	52.1	62.1	11.1	41.6	10.0	0	38.1	0.081	0.0325	15.8	46.8
10/25/01	0:16	0	28.2	23.9	28.1	25.1	25.3	52.1	62.0	11.2	41.5	10.0	0	38.1	0.081	0.0324	15.8	46.8
10/25/01	0:17	0	28.3	23.9	28.1	25.1	25.3	52.5	62.5	11.2	41.8	10.0	0	38.1	0.081	0.0325	15.8	47.1
10/25/01	0:18	0	28.4	23.9	28.0	25.1	25.3	52.4	62.5	11.2	41.7	10.0	0	38.2	0.080	0.0321	15.8	47.1
10/25/01	0:19	0	28.4	23.9	28.2	25.2	25.3	52.3	62.3	11.1	41.6	10.0	0	38.1	0.080	0.0320	15.8	47.0
10/25/01	0:20	0	28.3	23.9	28.2	25.2	25.3	52.8	62.8	11.3	42.1	10.0	0	38.2	0.080	0.0319	15.8	47.5
10/25/01	0:21	0	28.3	23.9	28.3	25.2	25.4	52.2	62.1	11.2	41.8	10.0	0	38.1	0.080	0.0319	15.8	47.0
10/25/01	0:22	0	28.4	24.0	28.2	25.2	25.4	52.4	62.3	11.2	41.6	9.9	0	38.1	0.079	0.0315	15.8	47.0
10/25/01	0:23	0	28.4	24.0	28.2	25.2	25.4	52.1	62.2	11.2	41.8	9.9	0	38.2	0.079	0.0315	15.8	47.0
10/25/01	0:24	0	28.5	24.0	28.1	25.2	25.4	52.4	62.4	11.2	41.4	9.9	0	38.2	0.079	0.0316	15.8	46.9
10/25/01	0:25	0	28.5	24.0	28.3	25.3	25.4	52.5	62.4	11.2	42.0	9.9	0	38.1	0.079	0.0315	15.8	47.2
10/25/01	0:26	0	28.5	24.0	28.3	25.3	25.5	52.3	62.3	11.2	41.6	9.9	0	38.1	0.079	0.0314	15.8	47.0
10/25/01	0:27	0	28.5	24.1	28.4	25.3	25.5	52.3	62.3	11.2	41.8	9.9	0	38.2	0.079	0.0314	15.8	47.1
10/25/01	0:28	0	28.6	24.1	28.4	25.3	25.5	52.0	61.9	11.2	41.8	9.9	0	38.1	0.079	0.0314	15.8	46.9
10/25/01	0:29	0	28.6	24.1	28.4	25.4	25.5	52.5	62.4	11.2	41.8	9.9	0	38.2	0.079	0.0314	15.8	47.1

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	0:30	0	28.6	24.1	28.5	25.3	25.6	52.3	62.3	11.2	42.0	9.9	0	38.1	0.078	0.0309	15.8	47.1
10/25/01	0:31	0	28.6	24.1	28.4	25.3	25.5	52.2	62.1	11.2	41.6	9.9	0	38.1	0.078	0.0310	15.8	46.9
10/25/01	0:32	0	28.6	24.1	28.4	25.3	25.6	52.2	62.1	11.2	41.5	9.9	0	38.1	0.078	0.0310	15.8	46.8
10/25/01	0:33	0	28.7	24.2	28.5	25.3	25.6	52.5	62.5	11.3	41.3	9.9	0	38.0	0.078	0.0309	15.8	46.9
10/25/01	0:34	0	28.7	24.2	28.6	25.4	25.6	52.3	62.2	11.1	41.7	9.9	0	38.0	0.078	0.0308	15.8	47.0
10/25/01	0:35	0	28.8	24.2	28.5	25.4	25.7	52.4	62.4	11.3	41.6	9.9	0	38.1	0.078	0.0309	15.8	47.0
10/25/01	0:36	0	28.8	24.2	28.7	25.4	25.7	52.6	62.5	11.2	41.9	9.9	0	38.0	0.078	0.0308	15.8	47.2
10/25/01	0:37	0	28.8	24.2	28.7	25.4	25.7	52.9	63.0	11.3	41.8	9.9	0	38.1	0.078	0.0307	15.8	47.4
10/25/01	0:38	0	28.9	24.2	28.8	25.4	25.6	52.3	62.2	11.2	41.8	9.9	0	38.0	0.078	0.0307	15.8	47.0
10/25/01	0:39	0	28.9	24.2	28.8	25.4	25.7	52.3	62.1	11.2	41.7	9.9	0	38.1	0.079	0.0311	15.8	47.0
10/25/01	0:40	0	28.9	24.3	28.7	25.5	25.7	52.6	62.7	11.2	41.8	9.9	0	38.1	0.078	0.0307	15.8	47.2
10/25/01	0:41	0	29.0	24.3	28.9	25.6	25.8	52.1	62.0	11.3	41.7	9.9	0	38.0	0.078	0.0306	15.8	46.9
10/25/01	0:42	0	29.0	24.3	29.0	25.5	25.7	52.7	62.6	11.2	41.9	9.9	0	38.0	0.078	0.0305	15.8	47.3
10/25/01	0:43	0	29.0	24.4	28.9	25.5	25.8	52.5	62.4	11.3	42.0	9.9	0	38.0	0.078	0.0306	15.8	47.2
10/25/01	0:44	0	29.0	24.4	29.0	25.5	25.8	52.5	62.4	11.2	41.9	9.8	0	38.0	0.077	0.0301	15.8	47.2
10/25/01	0:45	0	29.1	24.4	29.1	25.5	25.8	52.4	62.3	11.2	42.0	9.8	0	37.9	0.077	0.0300	15.7	47.2
10/25/01	0:46	0	29.1	24.4	29.1	25.5	25.8	52.5	62.3	11.1	42.0	9.8	0	38.0	0.077	0.0300	15.8	47.2
10/25/01	0:47	0	29.2	24.4	29.2	25.5	25.8	52.5	62.2	11.3	41.9	9.9	0	38.0	0.078	0.0303	15.8	47.2
10/25/01	0:48	0	29.2	24.4	29.1	25.5	25.9	52.7	62.6	11.3	42.1	9.9	0	38.1	0.078	0.0304	15.8	47.4
10/25/01	0:49	0	29.2	24.4	29.1	25.5	25.8	52.3	62.1	11.1	41.6	9.8	0	37.9	0.077	0.0300	15.7	46.9
10/25/01	0:50	0	29.3	24.5	29.2	25.6	25.9	52.7	62.7	11.2	42.1	9.8	0	38.0	0.077	0.0299	15.8	47.4
10/25/01	0:51	0	29.3	24.5	29.2	25.6	25.9	52.4	62.2	11.2	42.1	9.8	0	38.0	0.078	0.0303	15.8	47.2
10/25/01	0:52	0	29.3	24.5	29.3	25.6	25.9	52.5	62.4	11.2	42.0	9.8	0	38.0	0.077	0.0298	15.8	47.2
10/25/01	0:53	0	29.4	24.5	29.3	25.6	25.9	52.8	62.8	11.3	42.0	9.8	0	38.0	0.077	0.0299	15.8	47.4
10/25/01	0:54	0	29.4	24.5	29.3	25.6	25.9	52.6	62.5	11.2	42.0	9.8	0	37.9	0.077	0.0298	15.7	47.3
10/25/01	0:55	0	29.5	24.5	29.5	25.7	26.0	52.5	62.4	11.2	41.8	9.8	0	38.0	0.077	0.0297	15.8	47.1
10/25/01	0:56	0	29.5	24.6	29.5	25.6	25.9	52.7	62.6	11.2	42.3	9.8	0	38.0	0.077	0.0297	15.8	47.5
10/25/01	0:57	0	29.5	24.5	29.5	25.6	26.0	52.5	62.4	11.3	41.9	9.8	0	38.0	0.077	0.0297	15.8	47.2
10/25/01	0:58	0	29.6	24.6	29.4	25.6	25.9	52.9	62.9	11.3	41.7	9.8	0	38.0	0.077	0.0297	15.8	47.3
10/25/01	0:59	0	29.6	24.6	29.6	25.7	26.0	52.3	62.1	11.3	41.9	9.8	0	38.0	0.077	0.0296	15.8	47.1
10/25/01	1:00	0	29.7	24.6	29.5	25.7	26.0	52.8	62.9	11.3	42.1	9.8	0	38.0	0.077	0.0297	15.8	47.5
10/25/01	1:01	0	29.7	24.6	29.7	25.7	26.0	52.8	62.7	11.3	42.1	9.8	0	38.0	0.077	0.0295	15.7	47.4
10/25/01	1:02	0	29.7	24.6	29.7	25.7	26.1	52.6	62.7	11.2	41.7	9.8	0	37.9	0.077	0.0295	15.7	47.2
10/25/01	1:03	0	29.8	24.6	29.7	25.7	26.0	52.8	62.7	11.2	41.8	9.8	0	37.9	0.077	0.0295	15.7	47.3
10/25/01	1:04	0	29.8	24.6	29.9	25.7	26.1	53.0	63.0	11.2	42.0	9.8	0	37.9	0.077	0.0294	15.7	47.5
10/25/01	1:05	0	29.9	24.7	29.9	25.7	26.0	52.9	62.8	11.3	42.1	9.8	0	37.9	0.077	0.0294	15.7	47.5
10/25/01	1:06	0	29.9	24.7	29.9	25.8	26.1	52.9	62.8	11.3	42.2	9.8	0	38.0	0.077	0.0294	15.8	47.6
10/25/01	1:07	0	29.9	24.7	29.4	25.7	26.0	53.1	62.9	11.3	42.1	9.8	0	38.0	0.076	0.0294	15.8	47.6
10/25/01	1:08	0	29.8	24.7	28.7	25.7	26.1	52.9	62.8	11.2	42.5	9.7	0	38.1	0.075	0.0295	15.8	47.7
10/25/01	1:09	0	29.7	24.7	28.1	25.7	26.1	52.9	62.8	11.2	42.2	9.7	0	38.1	0.074	0.0296	15.8	47.6
10/25/01	1:10	0	29.6	24.7	27.7	25.8	26.2	52.4	62.1	11.1	42.2	9.6	0	38.2	0.073	0.0296	15.8	47.3
10/25/01	1:11	0	29.5	24.8	27.5	25.8	26.1	52.8	62.6	11.0	42.2	9.6	0	38.2	0.072	0.0293	15.9	47.5
10/25/01	1:12	0	29.3	24.8	27.4	25.8	26.2	52.6	62.3	11.1	42.2	9.6	0	38.2	0.072	0.0294	15.9	47.4
10/25/01	1:13	0	29.1	24.8	27.3	25.8	26.1	52.6	62.3	11.1	42.3	9.6	0	38.2	0.072	0.0295	15.9	47.5
10/25/01	1:14	0	29.0	24.8	27.2	25.8	26.2	52.5	62.2	11.0	42.1	9.6	0	38.2	0.072	0.0296	15.9	47.3
10/25/01	1:15	0	28.9	24.8	27.2	25.9	26.2	52.3	61.9	11.0	42.1	9.6	0	38.2	0.071	0.0291	15.8	47.2
10/25/01	1:16	0	28.8	24.8	27.2	25.8	26.2	52.6	62.3	11.0	42.1	9.6	0	38.2	0.071	0.0292	15.8	47.4
10/25/01	1:17	0	28.6	24.9	27.2	25.9	26.2	52.5	62.2	11.0	41.8	9.6	0	38.2	0.071	0.0291	15.8	47.2
10/25/01	1:18	0	28.5	24.9	27.1	26.0	26.3	52.4	61.9	11.0	42.0	9.6	0	38.3	0.071	0.0292	15.9	47.2
10/25/01	1:19	0	28.3	24.9	27.2	26.0	26.3	52.6	62.3	11.0	42.0	9.6	0	38.2	0.071	0.0292	15.8	47.3
10/25/01	1:20	0	28.2	24.9	27.1	26.0	26.3	52.7	62.5	11.0	42.2	9.6	0	38.2	0.071	0.0292	15.8	47.5
10/25/01	1:21	0	28.1	24.9	27.1	25.9	26.3	52.4	62.1	10.9	42.1	9.6	0	38.2	0.071	0.0292	15.9	47.2
10/25/01	1:22	0	28.0	25.0	27.1	25.9	26.3	52.8	62.6	11.1	42.1	9.6	0	38.2	0.071	0.0292	15.8	47.5
10/25/01	1:23	0	27.9	25.0	27.2	26.0	26.3	52.2	61.8	11.0	41.9	9.6	0	38.1	0.071	0.0292	15.8	47.1
10/25/01	1:24	0	27.8	25.0	27.1	25.9	26.3	52.3	62.0	10.9	41.9	9.6	0	38.2	0.071	0.0292	15.8	47.1
10/25/01	1:25	0	27.8	25.0	27.1	25.9	26.3	52.3	61.9	10.9	41.7	9.6	0	38.1	0.071	0.0292	15.8	47.0
10/25/01	1:26	0	27.7	25.0	27.1	25.9	26.3	52.5	62.2	11.1	41.8	9.5	0	38.1	0.071	0.0292	15.8	47.1
10/25/01	1:27	0	27.6	25.0	27.1	26.0	26.4	52.5	62.3	11.0	42.0	9.6	0	38.2	0.071	0.0292	15.8	47.3
10/25/01	1:28	0	27.6	25.0	27.2	26.0	26.3	52.7	62.5	11.1	42.1	9.6	0	38.1	0.071	0.0292	15.8	47.4
10/25/01	1:29	0	27.5	25.1	27.1	26.0	26.4	52.8	62.5	11.0	42.1	9.6	0	38.1	0.071	0.0292	15.8	47.4

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	1:30	0	27.5	25.1	27.1	26.0	26.4	52.4	62.2	11.0	42.0	9.6	0	38.1	0.071	0.0292	15.8	47.2
10/25/01	1:31	0	27.5	25.1	27.1	26.0	26.4	52.5	62.1	11.1	42.2	9.6	0	38.2	0.071	0.0292	15.8	47.4
10/25/01	1:32	0	27.5	25.1	27.2	26.0	26.4	52.5	62.2	10.9	41.7	9.6	0	38.1	0.071	0.0292	15.8	47.1
10/25/01	1:33	0	27.5	25.1	27.1	26.0	26.4	52.4	62.0	11.0	42.0	9.5	0	38.2	0.071	0.0292	15.8	47.2
10/25/01	1:34	0	27.5	25.2	27.1	26.1	26.5	52.5	62.3	11.1	41.9	9.5	0	38.3	0.070	0.0288	15.9	47.2
10/25/01	1:35	0	27.5	25.1	27.1	26.1	26.4	52.5	62.3	11.0	41.8	9.5	0	38.3	0.070	0.0288	15.9	47.2
10/25/01	1:36	0	27.5	25.1	27.1	26.1	26.5	52.6	62.2	11.1	42.2	9.5	0	38.3	0.070	0.0289	15.9	47.4
10/25/01	1:37	0	27.5	25.2	27.1	26.1	26.4	52.4	62.0	11.2	42.2	9.5	0	38.4	0.071	0.0292	15.9	47.3
10/25/01	1:38	0	27.4	25.2	27.2	26.0	26.5	52.8	62.6	11.2	42.0	9.5	0	38.3	0.070	0.0288	15.9	47.4
10/25/01	1:39	0	27.4	25.2	27.2	26.1	26.4	52.7	62.4	11.1	41.9	9.5	0	38.3	0.070	0.0288	15.9	47.3
10/25/01	1:40	0	27.4	25.2	27.1	26.0	26.5	52.4	62.1	11.1	41.7	9.5	0	38.3	0.070	0.0288	15.9	47.1
10/25/01	1:41	0	27.5	25.2	27.2	26.0	26.5	52.4	62.1	11.2	41.8	9.5	0	38.3	0.070	0.0288	15.9	47.1
10/25/01	1:42	0	27.4	25.2	27.1	26.0	26.5	52.4	62.0	11.1	42.0	9.5	0	38.3	0.070	0.0288	15.9	47.2
10/25/01	1:43	0	27.4	25.3	27.1	26.0	26.5	52.7	62.3	11.2	42.2	9.5	0	38.3	0.070	0.0288	15.9	47.4
10/25/01	1:44	0	27.5	25.3	27.2	26.0	26.4	52.5	62.1	11.2	41.8	9.5	0	38.3	0.070	0.0288	15.9	47.1
10/25/01	1:45	0	27.4	25.3	27.2	26.1	26.5	52.6	62.4	11.1	42.0	9.5	0	38.3	0.070	0.0288	15.9	47.3
10/25/01	1:46	0	27.5	25.3	27.1	26.1	26.4	52.6	62.2	11.0	41.8	9.5	0	38.3	0.070	0.0288	15.9	47.2
10/25/01	1:47	0	27.5	25.3	27.2	26.1	26.5	52.9	62.6	11.2	42.1	9.5	0	38.3	0.070	0.0287	15.9	47.5
10/25/01	1:48	0	27.5	25.3	27.2	26.2	26.5	52.8	62.5	11.1	42.0	9.5	0	38.3	0.070	0.0288	15.9	47.4
10/25/01	1:49	0	27.5	25.3	27.2	26.2	26.6	52.5	62.2	11.1	42.2	9.5	0	38.3	0.070	0.0288	15.9	47.3
10/25/01	1:50	0	27.5	25.3	27.2	26.1	26.5	52.8	62.5	11.1	42.4	9.5	0	38.2	0.070	0.0288	15.8	47.6
10/25/01	1:51	0	27.5	25.4	27.1	26.1	26.5	52.6	62.2	11.1	42.1	9.5	0	38.4	0.070	0.0288	15.9	47.4
10/25/01	1:52	0	27.5	25.4	27.2	26.2	26.6	52.8	62.4	11.1	42.2	9.5	0	38.3	0.070	0.0288	15.9	47.5
10/25/01	1:53	0	27.5	25.4	27.0	26.2	26.6	52.8	62.5	11.1	41.9	9.5	0	38.3	0.070	0.0289	15.9	47.3
10/25/01	1:54	0	27.5	25.4	27.2	26.3	26.6	52.7	62.4	11.2	42.1	9.5	0	38.3	0.070	0.0288	15.9	47.4
10/25/01	1:55	0	27.5	25.4	27.1	26.2	26.6	52.6	62.3	11.1	42.1	9.5	0	38.4	0.070	0.0288	15.9	47.3
10/25/01	1:56	0	27.5	25.4	27.2	26.1	26.6	52.6	62.1	11.2	42.1	9.5	0	38.3	0.070	0.0287	15.9	47.4
10/25/01	1:57	0	27.5	25.4	27.2	26.1	26.6	52.5	62.2	11.1	42.1	9.5	0	38.2	0.070	0.0287	15.9	47.3
10/25/01	1:58	0	27.5	25.5	27.2	26.1	26.6	52.7	62.3	11.2	41.9	9.5	0	38.3	0.070	0.0287	15.9	47.3
10/25/01	1:59	0	27.6	25.5	27.2	26.2	26.6	52.7	62.4	11.2	42.0	9.5	0	38.3	0.070	0.0288	15.9	47.4
10/25/01	2:00	0	27.5	25.5	27.2	26.2	26.6	52.6	62.2	11.2	41.9	9.5	0	38.3	0.070	0.0287	15.9	47.2
10/25/01	2:01	0	27.5	25.5	27.3	26.2	26.6	52.6	62.1	11.2	42.2	9.5	0	38.3	0.070	0.0287	15.9	47.4
10/25/01	2:02	0	27.6	25.5	27.3	26.2	26.6	52.8	62.6	11.2	41.9	9.5	0	38.3	0.070	0.0287	15.9	47.4
10/25/01	2:03	0	27.6	25.5	27.3	26.2	26.6	52.5	62.0	11.2	41.8	9.5	0	38.3	0.070	0.0287	15.9	47.1
10/25/01	2:04	0	27.6	25.5	27.3	26.2	26.6	52.6	62.3	11.1	42.2	9.5	0	38.2	0.070	0.0287	15.9	47.4
10/25/01	2:05	0	27.6	25.5	27.3	26.2	26.6	52.9	62.6	11.2	42.1	9.5	0	38.2	0.070	0.0287	15.8	47.5
10/25/01	2:06	0	27.6	25.5	27.2	26.2	26.7	52.6	62.3	11.2	41.9	9.5	0	38.3	0.070	0.0288	15.9	47.3
10/25/01	2:07	0	27.6	25.6	27.4	26.2	26.7	52.7	62.3	11.2	42.2	9.5	0	38.3	0.070	0.0286	15.9	47.4
10/25/01	2:08	0	27.6	25.5	27.2	26.2	26.6	52.8	62.6	11.2	42.1	9.5	0	38.2	0.070	0.0287	15.8	47.5
10/25/01	2:09	0	27.6	25.6	27.4	26.2	26.7	52.5	62.1	11.2	42.3	9.5	0	38.3	0.070	0.0286	15.9	47.4
10/25/01	2:10	0	27.6	25.6	27.3	26.3	26.6	52.8	62.4	11.2	41.9	9.5	0	38.2	0.070	0.0287	15.8	47.4
10/25/01	2:11	0	27.7	25.7	27.3	26.3	26.7	52.6	62.3	11.2	41.8	9.5	0	38.2	0.070	0.0287	15.9	47.2
10/25/01	2:12	0	27.7	25.7	27.3	26.3	26.7	52.7	62.4	11.2	42.0	9.5	0	38.2	0.070	0.0287	15.8	47.3
10/25/01	2:13	0	27.7	25.7	27.4	26.3	26.7	52.7	62.5	11.2	42.4	9.5	0	38.3	0.070	0.0286	15.9	47.6
10/25/01	2:14	0	27.7	25.7	27.4	26.4	26.7	52.8	62.4	11.2	42.1	9.5	0	38.3	0.070	0.0286	15.9	47.4
10/25/01	2:15	0	27.7	25.7	27.3	26.4	26.8	52.6	62.3	11.3	41.9	9.5	0	38.2	0.070	0.0287	15.8	47.3
10/25/01	2:16	0	27.7	25.7	27.4	26.4	26.7	52.6	62.4	11.2	42.1	9.5	0	38.2	0.070	0.0286	15.8	47.4
10/25/01	2:17	0	27.7	25.7	27.4	26.3	26.7	52.5	62.1	11.2	42.0	9.5	0	38.2	0.070	0.0286	15.9	47.3
10/25/01	2:18	0	27.7	25.7	27.3	26.4	26.8	53.0	62.8	11.3	42.2	9.5	0	38.2	0.070	0.0286	15.8	47.6
10/25/01	2:19	0	27.8	25.7	27.3	26.3	26.7	52.5	62.1	11.2	42.1	9.5	0	38.2	0.070	0.0287	15.9	47.3
10/25/01	2:20	0	27.7	25.7	27.5	26.3	26.8	52.8	62.5	11.3	42.2	9.5	0	38.2	0.070	0.0285	15.9	47.5
10/25/01	2:21	0	27.7	25.7	27.5	26.3	26.7	52.7	62.4	11.3	42.1	9.5	0	38.2	0.070	0.0285	15.8	47.4
10/25/01	2:22	0	27.8	25.7	27.3	26.3	26.8	53.1	62.9	11.3	42.1	9.5	0	38.2	0.070	0.0286	15.9	47.6
10/25/01	2:23	0	27.8	25.8	27.4	26.3	26.7	52.7	62.4	11.2	42.0	9.5	0	38.2	0.070	0.0286	15.8	47.3
10/25/01	2:24	0	27.8	25.8	27.4	26.4	26.8	52.8	62.6	11.2	41.9	9.5	0	38.2	0.070	0.0286	15.9	47.3
10/25/01	2:25	0	27.8	25.8	27.5	26.4	26.8	52.6	62.1	11.2	41.9	9.5	0	38.2	0.070	0.0285	15.8	47.2
10/25/01	2:26	0	27.8	25.8	27.5	26.4	26.8	52.8	62.5	11.1	42.0	9.5	0	38.2	0.070	0.0285	15.8	47.4
10/25/01	2:27	0	27.9	25.8	27.5	26.4	26.8	52.6	62.3	11.2	42.3	9.5	0	38.2	0.070	0.0285	15.8	47.4
10/25/01	2:28	0	27.9	25.8	27.6	26.5	26.8	52.5	62.1	11.2	42.3	9.5	0	38.0	0.070	0.0285	15.8	47.4

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	2:29	0	27.9	25.9	27.7	26.4	26.8	52.8	62.5	11.2	42.0	9.5	0	38.2	0.070	0.0284	15.8	47.4
10/25/01	2:30	0	27.9	25.9	27.5	26.4	26.8	53.1	62.9	11.3	42.1	9.5	0	38.2	0.070	0.0285	15.9	47.6
10/25/01	2:31	0	27.9	25.9	27.7	26.3	26.9	52.8	62.5	11.1	42.2	9.5	0	38.2	0.070	0.0284	15.8	47.5
10/25/01	2:32	0	27.9	25.9	27.7	26.3	26.8	52.9	62.5	11.3	42.2	9.5	0	38.1	0.070	0.0284	15.8	47.5
10/25/01	2:33	0	28.0	25.9	27.7	26.3	26.9	53.0	62.6	11.3	42.6	9.5	0	38.2	0.070	0.0283	15.9	47.8
10/25/01	2:34	0	28.0	25.9	27.5	26.4	26.8	52.8	62.4	11.3	42.0	9.5	0	38.2	0.070	0.0285	15.8	47.4
10/25/01	2:35	0	28.0	25.9	27.8	26.4	26.9	52.9	62.6	11.2	42.1	9.5	0	38.2	0.070	0.0283	15.8	47.5
10/25/01	2:36	0	28.0	25.9	27.7	26.4	26.8	52.9	62.5	11.3	42.3	9.5	0	38.2	0.070	0.0283	15.8	47.6
10/25/01	2:37	0	28.0	25.9	27.7	26.4	26.9	52.7	62.5	11.3	42.0	9.5	0	38.1	0.070	0.0283	15.8	47.4
10/25/01	2:38	0	28.0	25.9	27.8	26.4	26.9	52.5	62.2	11.2	42.3	9.5	0	38.1	0.070	0.0283	15.8	47.4
10/25/01	2:39	0	28.0	25.9	27.9	26.4	26.9	52.7	62.4	11.2	42.1	9.5	0	38.1	0.070	0.0282	15.8	47.4
10/25/01	2:40	0	28.1	25.9	27.8	26.5	26.9	52.9	62.7	11.3	42.4	9.5	0	38.1	0.070	0.0283	15.8	47.7
10/25/01	2:41	0	28.1	26.0	27.7	26.5	26.9	53.0	62.7	11.3	42.0	9.5	0	38.2	0.070	0.0284	15.8	47.5
10/25/01	2:42	0	28.1	26.0	27.8	26.5	26.9	52.9	62.6	11.3	42.2	9.5	0	38.1	0.070	0.0283	15.8	47.5
10/25/01	2:43	0	28.2	26.0	28.0	26.5	26.8	53.1	62.8	11.4	42.3	9.5	0	38.1	0.070	0.0281	15.8	47.7
10/25/01	2:44	0	28.2	26.0	27.9	26.5	26.9	52.7	62.4	11.3	42.1	9.5	0	38.1	0.070	0.0282	15.8	47.4
10/25/01	2:45	0	28.2	26.0	27.8	26.5	26.7	52.9	62.6	11.3	42.3	9.5	0	38.1	0.070	0.0282	15.8	47.6
10/25/01	2:46	0	28.2	26.0	28.0	26.4	26.5	53.0	62.7	11.3	42.1	9.5	0	38.1	0.070	0.0281	15.8	47.5
10/25/01	2:47	0	28.3	26.0	27.8	26.4	26.4	52.7	62.3	11.2	42.3	9.5	0	38.1	0.070	0.0283	15.8	47.5
10/25/01	2:48	0	28.3	26.0	28.1	26.4	26.2	52.7	62.3	11.3	42.4	9.5	0	38.2	0.070	0.0281	15.8	47.6
10/25/01	2:49	0	28.3	26.0	28.0	26.3	26.1	53.2	63.0	11.2	42.0	9.5	0	38.1	0.070	0.0281	15.8	47.6
10/25/01	2:50	0	28.3	26.0	28.1	26.2	26.0	53.0	62.7	11.4	42.3	9.5	0	38.2	0.070	0.0280	15.9	47.7
10/25/01	2:51	0	28.4	26.0	28.1	26.1	25.9	53.1	62.7	11.4	42.1	9.5	0	38.1	0.070	0.0280	15.8	47.6
10/25/01	2:52	0	28.4	26.0	28.2	26.1	25.7	52.9	62.6	11.4	42.2	9.5	0	38.1	0.070	0.0280	15.8	47.5
10/25/01	2:53	0	28.4	26.0	28.2	26.0	25.6	53.2	63.0	11.3	42.3	9.5	0	38.1	0.070	0.0280	15.8	47.8
10/25/01	2:54	0	28.4	26.0	28.2	25.9	25.5	52.9	62.7	11.3	42.4	9.5	0	38.0	0.070	0.0279	15.8	47.7
10/25/01	2:55	0	28.5	26.0	28.2	25.9	25.5	52.8	62.4	11.2	42.1	9.5	0	38.1	0.070	0.0280	15.8	47.4
10/25/01	2:56	0	28.5	26.0	28.2	25.8	25.4	53.2	62.9	11.2	42.5	9.5	0	38.1	0.070	0.0280	15.8	47.8
10/25/01	2:57	0	28.5	26.0	28.3	25.8	25.3	52.9	62.6	11.3	42.2	9.5	0	38.0	0.070	0.0279	15.8	47.6
10/25/01	2:58	0	28.5	26.0	28.4	25.8	25.2	52.9	62.6	11.3	42.1	9.5	0	38.0	0.070	0.0278	15.8	47.5
10/25/01	2:59	0	28.6	26.0	28.2	25.7	25.1	53.0	62.7	11.2	42.5	9.5	0	38.0	0.070	0.0279	15.8	47.7
10/25/01	3:00	0	28.6	26.0	28.3	25.6	25.0	53.5	63.3	11.3	42.3	9.5	0	38.2	0.070	0.0279	15.8	47.9
10/25/01	3:01	0	28.6	26.0	28.4	25.6	25.0	52.9	62.5	11.3	42.4	9.5	0	38.0	0.070	0.0278	15.8	47.6
10/25/01	3:02	0	28.6	26.0	28.5	25.6	24.9	53.1	62.8	11.3	42.3	9.5	0	38.0	0.071	0.0281	15.8	47.7
10/25/01	3:03	0	28.7	26.0	28.5	25.6	24.9	53.0	62.7	11.3	42.3	9.5	0	38.0	0.071	0.0281	15.8	47.6
10/25/01	3:04	0	28.7	26.0	28.5	25.5	24.8	52.8	62.5	11.4	42.1	9.5	0	38.0	0.071	0.0282	15.8	47.4
10/25/01	3:05	0	28.7	26.0	28.5	25.5	24.8	53.2	62.9	11.3	42.2	9.5	0	38.0	0.070	0.0277	15.8	47.7
10/25/01	3:06	0	28.8	26.0	28.5	25.4	24.7	53.0	62.6	11.4	42.0	9.5	0	38.0	0.071	0.0281	15.8	47.5
10/25/01	3:07	0	28.8	25.9	28.5	25.4	24.6	53.1	62.8	11.2	42.1	9.5	0	37.9	0.070	0.0278	15.7	47.6
10/25/01	3:08	0	28.8	25.9	28.5	25.4	24.6	52.8	62.5	11.3	42.2	9.5	0	37.9	0.071	0.0281	15.7	47.5
10/25/01	3:09	0	28.9	25.9	28.7	25.4	24.5	53.0	62.8	11.3	42.1	9.5	0	38.0	0.071	0.0280	15.8	47.6
10/25/01	3:10	0	28.9	25.9	28.8	25.4	24.5	52.9	62.6	11.3	42.5	9.6	0	37.9	0.071	0.0279	15.7	47.7
10/25/01	3:11	0	28.9	25.9	28.7	25.3	24.4	52.9	62.6	11.3	42.2	9.6	0	38.0	0.071	0.0280	15.8	47.5
10/25/01	3:12	0	28.9	25.9	28.8	25.3	24.4	53.1	62.9	11.3	42.2	9.6	0	37.9	0.071	0.0279	15.7	47.7
10/25/01	3:13	0	29.0	25.8	28.9	25.2	24.3	52.9	62.6	11.3	42.5	9.6	0	37.9	0.071	0.0278	15.7	47.7
10/25/01	3:14	0	29.0	25.9	28.9	25.2	24.3	53.1	62.9	11.3	42.7	9.6	0	38.0	0.071	0.0278	15.7	47.9
10/25/01	3:15	0	29.1	25.8	29.0	25.2	24.3	53.1	62.8	11.3	42.5	9.6	0	37.9	0.071	0.0277	15.7	47.8
10/25/01	3:16	0	29.1	25.8	28.6	25.2	24.2	52.8	62.5	11.2	42.8	9.5	0	37.9	0.071	0.0281	15.7	47.8
10/25/01	3:17	0	29.0	25.8	27.8	25.1	24.1	52.6	62.3	11.1	42.3	9.5	0	38.0	0.069	0.0278	15.8	47.5
10/25/01	3:18	0	28.9	25.8	27.4	25.1	24.1	52.9	62.5	11.1	42.6	9.4	0	37.9	0.068	0.0277	15.7	47.7
10/25/01	3:19	0	28.8	25.8	27.2	25.1	24.0	53.1	62.7	11.1	42.3	9.4	0	38.2	0.068	0.0279	15.8	47.7
10/25/01	3:20	0	28.8	25.8	26.9	25.1	24.0	53.0	62.6	11.1	42.6	9.4	0	38.1	0.068	0.0282	15.8	47.8
10/25/01	3:21	0	28.6	25.7	26.9	25.0	23.9	52.8	62.2	11.1	42.4	9.4	0	38.0	0.067	0.0277	15.8	47.6
10/25/01	3:22	0	28.5	25.7	26.9	25.0	23.9	52.7	62.3	11.1	42.4	9.4	0	38.1	0.067	0.0278	15.8	47.6
10/25/01	3:23	0	28.4	25.7	26.7	24.9	23.9	52.9	62.3	11.1	42.1	9.4	0	38.1	0.067	0.0279	15.8	47.5
10/25/01	3:24	0	28.3	25.7	26.8	24.8	23.8	52.7	62.2	11.1	42.2	9.4	0	38.1	0.067	0.0279	15.8	47.5
10/25/01	3:25	0	28.1	25.7	26.7	24.8	23.8	52.6	62.1	11.1	42.5	9.4	0	38.1	0.067	0.0279	15.8	47.6
10/25/01	3:26	0	28.0	25.7	26.8	24.8	23.7	52.8	62.4	11.0	42.4	9.4	0	38.0	0.067	0.0278	15.8	47.6
10/25/01	3:27	0	27.9	25.7	26.7	24.8	23.7	53.2	62.8	11.1	42.2	9.4	0	38.1	0.067	0.0279	15.8	47.7
10/25/01	3:28	0	27.8	25.7	26.7	24.8	23.6	53.0	62.6	11.1	42.5	9.4	0	38.1	0.067	0.0279	15.8	47.8
10/25/01	3:29	0	27.7	25.6	26.8	24.7	23.6	52.7	62.1	11.0	42.2	9.4	0	38.2	0.067	0.0278	15.8	47.5

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	3:30	0	27.6	25.6	26.8	24.7	23.6	52.9	62.3	11.1	42.2	9.4	0	38.1	0.067	0.0278	15.8	47.6
10/25/01	3:31	0	27.5	25.6	26.7	24.7	23.5	52.8	62.3	11.1	42.2	9.3	0	38.0	0.067	0.0279	15.8	47.5
10/25/01	3:32	0	27.4	25.6	26.7	24.6	23.5	53.0	62.5	11.1	42.1	9.4	0	38.0	0.067	0.0279	15.8	47.5
10/25/01	3:33	0	27.3	25.6	26.7	24.7	23.4	52.9	62.5	11.0	42.3	9.4	0	38.1	0.067	0.0279	15.8	47.6
10/25/01	3:34	0	27.2	25.6	26.8	24.6	23.4	52.9	62.4	11.1	42.5	9.4	0	38.1	0.067	0.0278	15.8	47.7
10/25/01	3:35	0	27.2	25.5	26.8	24.6	23.4	52.6	62.1	11.0	42.2	9.4	0	38.1	0.067	0.0278	15.8	47.4
10/25/01	3:36	0	27.2	25.5	26.8	24.6	23.3	52.9	62.4	11.1	42.2	9.4	0	38.0	0.067	0.0278	15.8	47.5
10/25/01	3:37	0	27.2	25.5	26.8	24.6	23.3	53.0	62.5	11.1	42.0	9.4	0	38.1	0.067	0.0278	15.8	47.5
10/25/01	3:38	0	27.2	25.5	26.8	24.6	23.3	52.8	62.2	11.1	42.3	9.4	0	38.1	0.067	0.0278	15.8	47.5
10/25/01	3:39	0	27.2	25.4	26.9	24.5	23.3	52.6	62.1	11.1	42.1	9.4	0	37.9	0.067	0.0278	15.7	47.3
10/25/01	3:40	0	27.2	25.4	26.7	24.5	23.2	52.9	62.2	11.1	42.1	9.3	0	38.0	0.067	0.0279	15.8	47.5
10/25/01	3:41	0	27.2	25.4	26.8	24.5	23.2	53.0	62.4	11.2	42.3	9.4	0	38.0	0.067	0.0278	15.8	47.7
10/25/01	3:42	0	27.2	25.4	26.8	24.5	23.2	53.0	62.5	11.1	42.5	9.4	0	38.1	0.067	0.0278	15.8	47.8
10/25/01	3:43	0	27.2	25.4	26.8	24.4	23.2	53.0	62.5	11.1	42.6	9.4	0	38.2	0.067	0.0278	15.9	47.8
10/25/01	3:44	0	27.2	25.4	26.9	24.5	23.2	52.7	62.0	11.0	42.7	9.4	0	38.2	0.067	0.0278	15.8	47.7
10/25/01	3:45	0	27.2	25.4	26.8	24.4	23.1	52.6	61.9	11.1	42.5	9.4	0	38.1	0.067	0.0278	15.8	47.6
10/25/01	3:46	0	27.2	25.4	26.8	24.4	23.1	52.9	62.5	11.0	42.4	9.4	0	38.1	0.067	0.0278	15.8	47.6
10/25/01	3:47	0	27.2	25.3	26.8	24.4	23.1	52.5	61.9	11.0	42.3	9.4	0	38.0	0.067	0.0278	15.8	47.4
10/25/01	3:48	0	27.2	25.3	26.8	24.4	23.1	52.8	62.2	11.1	42.3	9.4	0	38.1	0.067	0.0278	15.8	47.6
10/25/01	3:49	0	27.2	25.3	26.8	24.4	23.0	52.8	62.4	11.1	42.4	9.4	0	38.1	0.067	0.0278	15.8	47.6
10/25/01	3:50	0	27.2	25.3	26.7	24.4	23.0	53.0	62.4	11.1	42.5	9.4	0	38.0	0.067	0.0279	15.8	47.8
10/25/01	3:51	0	27.2	25.2	26.8	24.3	22.9	53.3	62.7	11.3	42.5	9.4	0	38.1	0.067	0.0278	15.8	47.9
10/25/01	3:52	0	27.2	25.2	26.9	24.3	22.9	52.8	62.3	11.1	42.6	9.4	0	38.1	0.067	0.0278	15.8	47.7
10/25/01	3:53	0	27.2	25.2	26.8	24.3	22.9	53.1	62.5	11.1	42.5	9.4	0	38.1	0.067	0.0278	15.8	47.8
10/25/01	3:54	0	27.2	25.2	26.8	24.3	22.9	53.0	62.5	11.1	42.3	9.4	0	38.1	0.067	0.0278	15.8	47.7
10/25/01	3:55	0	27.2	25.2	26.8	24.2	22.9	53.4	62.9	11.1	42.4	9.4	0	37.9	0.067	0.0278	15.7	47.9
10/25/01	3:56	0	27.2	25.1	26.9	24.2	22.9	53.1	62.5	11.2	42.3	9.4	0	38.1	0.066	0.0273	15.8	47.7
10/25/01	3:57	0	27.2	25.1	26.9	24.2	22.9	53.1	62.5	11.1	42.6	9.4	0	38.1	0.067	0.0277	15.8	47.9
10/25/01	3:58	0	27.2	25.1	26.8	24.1	22.8	53.0	62.3	11.1	42.4	9.3	0	38.0	0.067	0.0278	15.8	47.7
10/25/01	3:59	0	27.2	25.1	26.9	24.2	22.8	52.9	62.3	11.1	42.5	9.4	0	38.1	0.067	0.0277	15.8	47.7
10/25/01	4:00	0	27.2	25.1	26.9	24.1	22.8	53.2	62.8	11.1	42.3	9.4	0	37.9	0.067	0.0277	15.7	47.8
10/25/01	4:01	0	27.2	25.1	26.8	24.1	22.8	53.0	62.5	11.1	42.1	9.4	0	38.0	0.067	0.0278	15.8	47.6
10/25/01	4:02	0	27.2	25.1	26.9	24.1	22.8	52.8	62.2	11.1	42.1	9.4	0	38.0	0.067	0.0277	15.8	47.4
10/25/01	4:03	0	27.3	25.0	26.9	24.1	22.8	53.0	62.4	11.2	42.4	9.4	0	38.0	0.067	0.0277	15.8	47.7
10/25/01	4:04	0	27.2	25.0	27.0	24.0	22.7	53.3	62.8	11.2	42.6	9.4	0	38.0	0.067	0.0277	15.7	48.0
10/25/01	4:05	0	27.3	25.0	27.0	24.0	22.7	52.9	62.4	11.0	42.5	9.4	0	37.9	0.067	0.0277	15.7	47.7
10/25/01	4:06	0	27.3	25.0	26.9	24.0	22.6	52.8	62.2	11.1	42.5	9.4	0	38.0	0.067	0.0277	15.8	47.6
10/25/01	4:07	0	27.3	25.0	27.0	24.0	22.6	53.1	62.6	11.1	42.5	9.4	0	37.9	0.066	0.0273	15.7	47.8
10/25/01	4:08	0	27.3	25.0	27.0	24.0	22.7	53.1	62.6	11.0	42.6	9.4	0	37.9	0.067	0.0277	15.7	47.8
10/25/01	4:09	0	27.3	25.0	27.0	23.9	22.7	53.2	62.8	11.1	42.4	9.4	0	38.0	0.067	0.0276	15.8	47.8
10/25/01	4:10	0	27.3	24.9	26.9	23.9	22.6	53.0	62.4	11.0	42.5	9.4	0	37.9	0.066	0.0273	15.7	47.7
10/25/01	4:11	0	27.4	24.9	26.9	23.9	22.6	53.0	62.5	11.0	42.3	9.4	0	37.8	0.066	0.0273	15.7	47.6
10/25/01	4:12	0	27.4	24.9	27.0	23.9	22.6	52.8	62.3	11.0	42.3	9.4	0	37.9	0.067	0.0276	15.7	47.6
10/25/01	4:13	0	27.4	24.9	27.0	23.9	22.6	52.8	62.2	11.1	42.6	9.4	0	37.9	0.067	0.0277	15.7	47.7
10/25/01	4:14	0	27.4	24.9	27.2	23.9	22.6	53.0	62.4	11.1	42.4	9.4	0	37.9	0.067	0.0275	15.7	47.7
10/25/01	4:15	0	27.4	24.8	27.0	23.9	22.5	52.9	62.3	11.2	42.6	9.4	0	37.9	0.067	0.0277	15.7	47.8
10/25/01	4:16	0	27.4	24.8	27.2	23.8	22.4	53.0	62.5	11.1	42.4	9.4	0	38.0	0.067	0.0275	15.8	47.7
10/25/01	4:17	0	27.4	24.8	27.2	23.8	22.4	53.0	62.4	11.1	42.4	9.4	0	37.9	0.067	0.0275	15.7	47.7
10/25/01	4:18	0	27.4	24.8	27.0	23.8	22.4	53.2	62.6	11.0	42.5	9.4	0	37.9	0.067	0.0277	15.7	47.8
10/25/01	4:19	0	27.5	24.8	27.2	23.8	22.4	53.1	62.5	11.1	42.6	9.4	0	37.9	0.067	0.0275	15.7	47.9
10/25/01	4:20	0	27.5	24.8	27.2	23.7	22.4	52.8	62.3	11.1	42.7	9.4	0	38.0	0.067	0.0275	15.8	47.8
10/25/01	4:21	0	27.5	24.8	27.2	23.7	22.3	53.4	62.7	11.1	42.6	9.4	0	37.9	0.067	0.0275	15.7	48.0
10/25/01	4:22	0	27.5	24.7	27.2	23.7	22.3	53.2	62.6	11.1	42.6	9.4	0	38.0	0.067	0.0275	15.8	47.9
10/25/01	4:23	0	27.5	24.7	27.1	23.7	22.3	53.1	62.5	11.1	42.6	9.4	0	37.9	0.067	0.0276	15.7	47.9
10/25/01	4:24	0	27.5	24.6	27.2	23.6	22.3	53.1	62.6	11.2	42.6	9.4	0	37.9	0.067	0.0275	15.7	47.9
10/25/01	4:25	0	27.5	24.6	27.2	23.6	22.2	53.3	62.7	11.1	42.5	9.4	0	37.9	0.067	0.0275	15.7	47.9
10/25/01	4:26	0	27.5	24.6	27.1	23.6	22.2	52.9	62.4	11.1	42.5	9.4	0	37.9	0.067	0.0276	15.7	47.7
10/25/01	4:27	0	27.6	24.6	27.2	23.6	22.2	53.1	62.4	11.1	42.4	9.4	0	37.9	0.067	0.0275	15.7	47.7
10/25/01	4:28	0	27.6	24.6	27.2	23.6	22.3	52.9	62.4	11.1	42.4	9.4	0	37.8	0.067	0.0275	15.7	47.7
10/25/01	4:29	0	27.6	24.6	27.4	23.6	22.2	52.8	62.2	11.1	42.4	9.4	0	37.9	0.067	0.0274	15.7	47.6

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	4:30	0	27.6	24.6	27.1	23.6	22.2	53.2	62.5	11.2	42.3	9.4	0	37.9	0.067	0.0276	15.7	47.7
10/25/01	4:31	0	27.6	24.6	27.2	23.6	22.2	53.0	62.3	11.2	42.4	9.4	0	37.9	0.067	0.0275	15.7	47.7
10/25/01	4:32	0	27.6	24.6	27.4	23.6	22.2	53.0	62.4	11.1	43.0	9.4	0	37.9	0.067	0.0273	15.7	48.0
10/25/01	4:33	0	27.7	24.5	27.2	23.6	22.2	53.4	62.9	11.2	42.7	9.4	0	37.9	0.067	0.0275	15.7	48.1
10/25/01	4:34	0	27.7	24.5	27.4	23.6	22.2	53.3	62.8	11.2	42.5	9.4	0	38.0	0.067	0.0273	15.7	47.9
10/25/01	4:35	0	27.7	24.5	27.2	23.5	22.2	53.5	63.0	11.2	42.8	9.4	0	37.9	0.067	0.0275	15.7	48.2
10/25/01	4:36	0	27.7	24.5	27.3	23.6	22.2	53.3	62.7	11.2	42.7	9.4	0	37.9	0.067	0.0274	15.7	48.0
10/25/01	4:37	0	27.7	24.5	27.4	23.6	22.1	53.1	62.5	11.2	42.3	9.4	0	37.9	0.067	0.0274	15.7	47.7
10/25/01	4:38	0	27.7	24.4	27.6	23.6	22.1	53.0	62.4	11.2	42.5	9.4	0	37.8	0.067	0.0272	15.7	47.8
10/25/01	4:39	0	27.8	24.4	27.6	23.5	22.1	53.1	62.4	11.1	42.5	9.4	0	37.9	0.067	0.0272	15.7	47.8
10/25/01	4:40	0	27.8	24.4	27.6	23.5	22.2	53.5	63.0	11.2	42.6	9.4	0	37.9	0.067	0.0272	15.7	48.0
10/25/01	4:41	0	27.8	24.4	27.5	23.5	22.2	53.1	62.5	11.2	42.8	9.4	0	37.9	0.067	0.0273	15.7	48.0
10/25/01	4:42	0	27.9	24.4	27.7	23.5	22.3	53.6	63.0	11.3	42.6	9.4	0	38.0	0.067	0.0272	15.8	48.1
10/25/01	4:43	0	27.8	24.4	27.6	23.5	22.3	53.1	62.6	11.2	42.5	9.4	0	37.9	0.067	0.0272	15.7	47.8
10/25/01	4:44	0	27.9	24.4	27.7	23.4	22.4	53.3	62.7	11.2	42.6	9.4	0	38.0	0.067	0.0272	15.8	48.0
10/25/01	4:45	0	27.9	24.4	27.7	23.5	22.4	53.4	62.7	11.2	42.7	9.4	0	37.9	0.067	0.0271	15.7	48.1
10/25/01	4:46	0	27.9	24.3	27.7	23.5	22.5	53.5	63.1	11.3	42.7	9.4	0	37.9	0.067	0.0271	15.7	48.1
10/25/01	4:47	0	27.9	24.3	27.7	23.6	22.5	53.4	62.8	11.2	42.6	9.4	0	38.0	0.067	0.0271	15.8	48.0
10/25/01	4:48	0	27.9	24.3	27.7	23.6	22.5	53.5	62.9	11.2	42.6	9.4	0	37.9	0.067	0.0271	15.7	48.0
10/25/01	4:49	0	28.0	24.3	27.8	23.7	22.6	53.7	63.2	11.3	42.8	9.4	0	38.0	0.067	0.0270	15.8	48.2
10/25/01	4:50	0	28.0	24.3	27.7	23.7	22.7	53.8	63.5	11.3	42.8	9.4	0	38.0	0.068	0.0275	15.8	48.3
10/25/01	4:51	0	28.0	24.3	28.0	23.8	22.8	53.1	62.5	11.2	42.8	9.4	0	37.9	0.067	0.0269	15.7	47.9
10/25/01	4:52	0	28.0	24.3	28.0	23.8	22.8	53.5	62.9	11.3	42.5	9.4	0	38.0	0.067	0.0269	15.8	48.0
10/25/01	4:53	0	28.1	24.3	28.0	23.9	22.9	53.2	62.5	11.2	42.4	9.4	0	37.9	0.067	0.0269	15.7	47.8
10/25/01	4:54	0	28.1	24.3	27.9	23.9	22.9	53.2	62.7	11.2	42.3	9.4	0	37.9	0.067	0.0270	15.7	47.7
10/25/01	4:55	0	28.1	24.3	28.1	24.0	22.9	53.2	62.6	11.3	42.7	9.4	0	38.0	0.067	0.0268	15.8	48.0
10/25/01	4:56	0	28.2	24.3	27.9	24.1	22.8	53.0	62.4	11.2	42.3	9.4	0	37.9	0.067	0.0270	15.7	47.7
10/25/01	4:57	0	28.2	24.3	28.1	24.1	22.8	53.1	62.6	11.2	42.8	9.4	0	37.9	0.068	0.0272	15.7	47.9
10/25/01	4:58	0	28.2	24.3	28.0	24.0	22.8	53.1	62.4	11.3	42.5	9.4	0	38.0	0.067	0.0269	15.8	47.8
10/25/01	4:59	0	28.2	24.3	28.1	23.9	22.8	53.3	62.8	11.3	42.5	9.4	0	38.0	0.067	0.0268	15.8	47.9
10/25/01	5:00	0	28.3	24.3	27.9	24.0	22.8	53.3	62.7	11.3	42.6	9.4	0	38.0	0.067	0.0270	15.8	47.9
10/25/01	5:01	0	28.2	24.2	27.7	23.9	22.7	53.1	62.5	11.3	42.8	9.4	0	38.1	0.067	0.0272	15.8	47.9
10/25/01	5:02	0	28.1	24.2	27.5	24.0	22.8	52.8	62.2	11.2	42.4	9.3	0	38.1	0.066	0.0269	15.8	47.6
10/25/01	5:03	0	28.0	24.2	27.3	23.9	22.8	53.1	62.5	11.2	42.6	9.3	0	38.1	0.066	0.0270	15.8	47.9
10/25/01	5:04	0	28.0	24.2	27.3	23.9	22.7	53.3	62.7	11.2	42.3	9.3	0	38.1	0.066	0.0270	15.8	47.8
10/25/01	5:05	0	27.9	24.2	27.3	23.9	22.7	53.1	62.5	11.1	42.6	9.3	0	38.2	0.066	0.0270	15.9	47.9
10/25/01	5:06	0	27.8	24.2	27.3	23.8	22.6	53.0	62.3	11.1	42.5	9.3	0	38.1	0.066	0.0270	15.8	47.8
10/25/01	5:07	0	27.8	24.2	27.3	23.8	22.6	52.8	62.2	11.2	42.4	9.3	0	38.1	0.066	0.0270	15.8	47.6
10/25/01	5:08	0	27.7	24.2	27.3	23.7	22.5	53.3	62.7	11.1	42.4	9.3	0	38.0	0.066	0.0271	15.8	47.9
10/25/01	5:09	0	27.7	24.2	27.3	23.8	22.5	53.1	62.4	11.2	42.6	9.3	0	38.0	0.066	0.0271	15.8	47.8
10/25/01	5:10	0	27.7	24.2	27.3	23.7	22.5	53.1	62.6	11.2	42.7	9.3	0	38.1	0.066	0.0270	15.8	47.9
10/25/01	5:11	0	27.7	24.2	27.3	23.7	22.5	52.9	62.4	11.1	42.6	9.3	0	38.1	0.066	0.0270	15.8	47.7
10/25/01	5:12	0	27.7	24.2	27.3	23.7	22.4	53.0	62.3	11.2	42.3	9.3	0	38.1	0.066	0.0270	15.8	47.6
10/25/01	5:13	0	27.7	24.1	27.2	23.6	22.4	53.0	62.4	11.2	42.4	9.3	0	38.1	0.066	0.0271	15.8	47.7
10/25/01	5:14	0	27.7	24.2	27.3	23.6	22.3	53.1	62.6	11.1	42.4	9.3	0	38.2	0.066	0.0270	15.8	47.7
10/25/01	5:15	0	27.7	24.1	27.2	23.6	22.3	52.9	62.2	11.1	42.2	9.3	0	38.0	0.066	0.0271	15.8	47.5
10/25/01	5:16	0	27.6	24.1	27.3	23.5	22.3	52.8	62.2	11.1	42.3	9.3	0	38.0	0.066	0.0270	15.8	47.5
10/25/01	5:17	0	27.6	24.1	27.3	23.5	22.2	52.9	62.2	11.1	42.7	9.3	0	38.1	0.066	0.0270	15.8	47.8
10/25/01	5:18	0	27.7	24.1	27.3	23.5	22.2	53.2	62.6	11.1	42.6	9.3	0	38.0	0.066	0.0270	15.8	47.9
10/25/01	5:19	0	27.7	24.1	27.4	23.4	22.2	53.0	62.5	11.2	42.8	9.3	0	38.1	0.066	0.0270	15.8	47.9
10/25/01	5:20	0	27.7	24.0	27.3	23.4	22.2	53.0	62.3	11.2	42.6	9.3	0	38.1	0.066	0.0271	15.8	47.8
10/25/01	5:21	0	27.6	24.0	27.3	23.4	22.1	53.3	62.8	11.2	42.6	9.3	0	38.1	0.066	0.0270	15.8	47.9
10/25/01	5:22	0	27.7	24.0	27.3	23.4	22.2	53.5	62.9	11.2	42.6	9.3	0	38.0	0.066	0.0270	15.8	48.0
10/25/01	5:23	0	27.6	24.0	27.3	23.4	22.1	53.1	62.5	11.2	42.6	9.3	0	38.1	0.066	0.0270	15.8	47.9
10/25/01	5:24	0	27.7	24.0	27.3	23.5	22.1	53.1	62.4	11.2	42.3	9.3	0	38.0	0.066	0.0271	15.8	47.7
10/25/01	5:25	0	27.7	24.0	27.4	23.4	22.2	53.0	62.3	11.1	42.5	9.3	0	38.1	0.066	0.0269	15.8	47.7
10/25/01	5:26	0	27.7	24.0	27.3	23.5	22.2	53.3	62.7	11.2	42.6	9.3	0	38.1	0.066	0.0270	15.8	47.9
10/25/01	5:27	0	27.7	24.0	27.2	23.4	22.2	53.1	62.5	11.2	42.3	9.3	0	38.0	0.066	0.0271	15.8	47.7
10/25/01	5:28	0	27.7	24.0	27.3	23.4	22.3	52.8	62.1	11.2	42.4	9.3	0	38.0	0.066	0.0270	15.8	47.6

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	5:29	0	27.7	24.0	27.3	23.4	22.3	52.8	62.1	11.2	42.3	9.3	0	38.0	0.066	0.0271	15.8	47.6
10/25/01	5:30	0	27.7	24.0	27.4	23.5	22.4	53.0	62.4	11.2	42.5	9.3	0	37.9	0.066	0.0269	15.7	47.8
10/25/01	5:31	0	27.7	24.0	27.4	23.5	22.4	53.0	62.3	11.1	42.3	9.3	0	38.0	0.065	0.0265	15.8	47.7
10/25/01	5:32	0	27.7	23.9	27.5	23.5	22.5	53.2	62.5	11.1	42.3	9.3	0	38.0	0.066	0.0269	15.8	47.7
10/25/01	5:33	0	27.7	23.9	27.3	23.5	22.5	52.8	62.0	11.2	42.5	9.3	0	38.0	0.066	0.0271	15.8	47.6
10/25/01	5:34	0	27.7	23.9	27.5	23.6	22.5	53.1	62.5	11.1	42.5	9.3	0	38.0	0.066	0.0269	15.8	47.8
10/25/01	5:35	0	27.7	23.9	27.4	23.6	22.6	53.3	62.6	11.2	42.5	9.3	0	38.1	0.066	0.0269	15.8	47.9
10/25/01	5:36	0	27.7	23.9	27.4	23.6	22.6	53.0	62.3	11.2	42.4	9.3	0	38.1	0.066	0.0269	15.8	47.7
10/25/01	5:37	0	27.8	24.0	27.4	23.7	22.7	53.4	62.6	11.3	42.6	9.3	0	38.0	0.066	0.0270	15.8	48.0
10/25/01	5:38	0	27.8	23.9	27.5	23.7	22.7	53.0	62.4	11.1	42.7	9.3	0	38.0	0.066	0.0268	15.8	47.8
10/25/01	5:39	0	27.8	23.9	27.5	23.7	22.7	53.3	62.6	11.2	42.8	9.3	0	38.0	0.066	0.0269	15.8	48.0
10/25/01	5:40	0	27.8	23.9	27.4	23.7	22.7	53.3	62.7	11.2	42.3	9.3	0	38.0	0.066	0.0269	15.8	47.8
10/25/01	5:41	0	27.8	23.9	27.5	23.7	22.7	53.5	62.9	11.2	42.3	9.3	0	38.0	0.066	0.0269	15.8	47.9
10/25/01	5:42	0	27.8	23.9	27.5	23.7	22.6	53.5	62.9	11.2	42.5	9.3	0	37.9	0.066	0.0269	15.7	48.0
10/25/01	5:43	0	27.8	23.9	27.6	23.7	22.6	53.1	62.4	11.2	42.6	9.3	0	37.9	0.066	0.0268	15.7	47.8
10/25/01	5:44	0	27.8	23.9	27.4	23.6	22.5	52.9	62.2	11.3	42.6	9.3	0	37.9	0.066	0.0269	15.7	47.7
10/25/01	5:45	0	27.8	23.9	27.5	23.6	22.5	53.3	62.7	11.2	42.5	9.3	0	38.0	0.066	0.0269	15.8	47.9
10/25/01	5:46	0	27.8	23.9	27.6	23.6	22.5	53.0	62.3	11.2	42.5	9.3	0	37.9	0.066	0.0268	15.7	47.8
10/25/01	5:47	0	27.8	23.9	27.6	23.6	22.5	53.2	62.6	11.2	42.5	9.3	0	37.9	0.066	0.0268	15.7	47.8
10/25/01	5:48	0	27.9	23.9	27.6	23.6	22.5	53.1	62.5	11.3	42.5	9.3	0	37.8	0.066	0.0268	15.7	47.8
10/25/01	5:49	0	27.9	23.9	27.7	23.5	22.4	53.3	62.7	11.1	42.6	9.3	0	37.9	0.066	0.0267	15.7	47.9
10/25/01	5:50	0	27.9	23.9	27.7	23.5	22.3	52.9	62.3	11.2	42.4	9.3	0	37.9	0.066	0.0267	15.7	47.6
10/25/01	5:51	0	27.8	23.9	27.6	23.5	22.3	50.4	62.4	11.2	39.7	12.0	0	37.9	0.010	0.0041	15.7	45.0
10/25/01	5:52	0	27.9	23.9	27.8	23.4	22.4	52.3	62.7	11.3	41.7	10.3	0	37.9	0.085	0.0344	15.7	47.0
10/25/01	5:53	0	28.0	23.9	27.8	23.4	22.4	52.3	62.4	11.2	41.8	10.1	0	37.8	0.079	0.0319	15.7	47.0
10/25/01	5:54	0	28.0	23.9	27.9	23.3	22.4	52.7	62.8	11.3	41.9	10.0	0	38.0	0.078	0.0314	15.8	47.3
10/25/01	5:55	0	28.0	23.8	27.9	23.4	22.4	52.5	62.5	11.3	41.9	9.9	0	37.9	0.077	0.0311	15.7	47.2
10/25/01	5:56	0	28.0	23.8	27.9	23.3	22.4	52.3	62.2	11.3	41.9	9.9	0	37.9	0.076	0.0306	15.7	47.1
10/25/01	5:57	0	28.0	23.8	27.9	23.4	22.3	52.5	62.4	11.3	41.7	9.9	0	37.9	0.075	0.0302	15.7	47.1
10/25/01	5:58	0	28.1	23.8	27.8	23.3	22.3	52.6	62.5	11.3	41.8	9.9	0	37.9	0.075	0.0303	15.7	47.2
10/25/01	5:59	0	28.1	23.8	27.7	23.3	22.3	52.5	62.4	11.3	41.9	9.8	0	37.8	0.075	0.0304	15.7	47.2
10/25/01	6:00	0	28.1	23.8	28.0	23.3	22.3	52.4	62.3	11.3	41.9	9.8	0	37.9	0.074	0.0297	15.7	47.1
10/25/01	6:01	0	28.2	23.8	27.9	23.3	22.3	52.6	62.5	11.2	42.0	9.8	0	37.9	0.074	0.0298	15.7	47.3
10/25/01	6:02	0	28.2	23.8	28.0	23.3	22.3	52.8	62.6	11.2	42.3	9.8	0	37.9	0.074	0.0297	15.7	47.6
10/25/01	6:03	0	28.2	23.8	28.0	23.2	22.4	52.6	62.3	11.3	41.9	9.8	0	37.9	0.074	0.0297	15.7	47.2
10/25/01	6:04	0	28.2	23.8	28.1	23.2	22.4	53.2	63.0	11.3	42.3	9.8	0	38.0	0.074	0.0297	15.8	47.8
10/25/01	6:05	0	28.2	23.8	28.1	23.3	22.4	52.8	62.6	11.3	42.2	9.8	0	37.9	0.073	0.0292	15.7	47.5
10/25/01	6:06	0	28.3	23.7	28.1	23.3	22.5	52.7	62.5	11.3	42.1	9.8	0	37.9	0.073	0.0292	15.7	47.4
10/25/01	6:07	0	28.3	23.7	27.9	23.3	22.5	52.8	62.5	11.3	42.2	9.8	0	37.9	0.073	0.0294	15.7	47.5
10/25/01	6:08	0	28.3	23.7	28.1	23.4	22.5	52.9	62.7	11.3	42.3	9.8	0	37.9	0.073	0.0292	15.7	47.6
10/25/01	6:09	0	28.4	23.7	28.3	23.4	22.5	53.1	62.9	11.3	42.0	9.8	0	37.9	0.073	0.0291	15.7	47.5
10/25/01	6:10	0	28.4	23.7	28.2	23.4	22.6	52.8	62.6	11.3	42.1	9.7	0	37.9	0.072	0.0287	15.7	47.5
10/25/01	6:11	0	28.4	23.7	28.2	23.4	22.7	52.6	62.4	11.3	42.3	9.7	0	37.9	0.072	0.0288	15.7	47.4
10/25/01	6:12	0	28.4	23.7	28.3	23.5	22.7	52.8	62.7	11.4	42.5	9.7	0	37.9	0.072	0.0287	15.7	47.7
10/25/01	6:13	0	28.4	23.7	28.3	23.5	22.7	52.8	62.5	11.3	42.3	9.7	0	37.9	0.072	0.0287	15.7	47.5
10/25/01	6:14	0	28.5	23.7	28.4	23.6	22.8	52.8	62.6	11.3	42.1	9.7	0	37.8	0.072	0.0286	15.7	47.5
10/25/01	6:15	0	28.5	23.7	28.4	23.6	22.8	52.7	62.5	11.3	41.8	9.7	0	37.8	0.072	0.0286	15.7	47.3
10/25/01	6:16	0	28.5	23.7	28.4	23.7	22.8	52.9	62.7	11.4	42.0	9.7	0	37.8	0.072	0.0286	15.7	47.5
10/25/01	6:17	0	28.5	23.7	28.3	23.6	22.8	52.7	62.5	11.4	42.4	9.7	0	37.8	0.072	0.0287	15.7	47.6
10/25/01	6:18	0	28.6	23.7	28.6	23.6	22.8	52.9	62.6	11.4	42.2	9.7	0	37.9	0.072	0.0285	15.7	47.5
10/25/01	6:19	0	28.6	23.7	28.5	23.6	22.8	52.9	62.6	11.3	42.4	9.7	0	37.9	0.072	0.0285	15.7	47.7
10/25/01	6:20	0	28.6	23.7	28.4	23.6	22.7	53.2	62.9	11.3	42.1	9.7	0	37.8	0.072	0.0286	15.7	47.6
10/25/01	6:21	0	28.7	23.7	28.6	23.6	22.7	52.9	62.7	11.3	42.2	9.7	0	37.8	0.072	0.0284	15.7	47.6
10/25/01	6:22	0	28.7	23.7	28.6	23.6	22.6	52.9	62.6	11.3	42.5	9.7	0	37.9	0.072	0.0284	15.7	47.7
10/25/01	6:23	0	28.7	23.7	28.7	23.5	22.6	53.4	63.2	11.4	42.2	9.7	0	37.8	0.072	0.0284	15.7	47.8
10/25/01	6:24	0	28.7	23.7	28.7	23.4	22.6	53.0	62.6	11.3	42.1	9.7	0	37.9	0.072	0.0284	15.7	47.5
10/25/01	6:25	0	28.8	23.7	28.7	23.4	22.6	53.0	62.6	11.3	42.1	9.7	0	37.8	0.071	0.0280	15.7	47.6
10/25/01	6:26	0	28.8	23.7	28.7	23.4	22.6	52.8	62.5	11.3	42.4	9.7	0	37.8	0.071	0.0279	15.7	47.6
10/25/01	6:27	0	28.9	23.7	28.8	23.3	22.6	52.9	62.6	11.3	42.3	9.7	0	37.9	0.071	0.0279	15.7	47.6
10/25/01	6:28	0	28.9	23.7	28.9	23.4	22.5	53.2	62.9	11.4	42.4	9.7	0	37.8	0.072	0.0282	15.7	47.8
10/25/01	6:29	0	29.0	23.7	28.8	23.3	22.5	53.6	63.3	11.4	42.3	9.7	0	37.8	0.072	0.0283	15.7	47.9

Xflow2_102401_0630

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLT-RATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corrected flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	6:30	0	29.0	23.7	28.9	23.3	22.4	52.7	62.3	11.2	42.3	9.7	0	37.9	0.071	0.0278	15.7	47.5
10/25/01	6:31	0	29.0	23.7	28.9	23.3	22.4	53.3	63.2	11.3	42.2	9.7	0	37.8	0.071	0.0278	15.7	47.8
10/25/01	6:32	0	29.1	23.6	29.0	23.3	22.4	53.0	62.7	11.4	42.5	9.7	0	37.8	0.071	0.0277	15.7	47.7
10/25/01	6:33	0	29.1	23.6	29.0	23.3	22.4	52.7	62.4	11.3	42.2	9.7	0	37.8	0.071	0.0277	15.7	47.4
10/25/01	6:34	0	29.1	23.6	29.1	23.3	22.3	53.0	62.7	11.3	42.2	9.7	0	37.8	0.071	0.0277	15.7	47.6
10/25/01	6:35	0	29.2	23.6	29.2	23.2	22.3	53.2	62.9	11.4	42.4	9.7	0	37.8	0.071	0.0276	15.7	47.8
10/25/01	6:36	0	29.1	23.6	29.2	23.2	22.2	51.0	62.4	11.3	40.4	11.4	0	37.8	0.098	0.0381	15.7	45.7
10/25/01	6:37	0	29.3	23.6	29.3	23.1	22.2	52.5	62.8	11.4	41.9	10.2	0	37.8	0.077	0.0299	15.7	47.2
10/25/01	6:38	0	29.3	23.6	29.2	23.1	22.3	53.0	63.1	11.5	41.9	10.1	0	37.8	0.074	0.0287	15.7	47.4
10/25/01	6:39	0	29.3	23.6	29.4	23.1	22.2	52.8	62.9	11.4	41.6	10.0	0	37.8	0.073	0.0282	15.7	47.2
10/25/01	6:40	0	29.4	23.6	29.5	23.1	22.2	52.7	62.8	11.5	41.9	10.0	0	37.8	0.073	0.0282	15.7	47.3
10/25/01	6:41	0	29.4	23.6	29.5	23.1	22.3	52.8	62.8	11.4	41.8	10.0	0	37.8	0.072	0.0278	15.7	47.3
10/25/01	6:42	0	29.5	23.6	29.6	23.1	22.3	52.5	62.3	11.4	42.1	9.9	0	37.8	0.072	0.0277	15.7	47.3
10/25/01	6:43	0	29.5	23.6	29.6	23.2	22.3	52.9	62.8	11.4	42.1	9.9	0	37.8	0.071	0.0273	15.7	47.5
10/25/01	6:44	0	29.6	23.6	29.6	23.2	22.4	53.0	62.8	11.4	42.3	9.9	0	37.9	0.071	0.0273	15.7	47.7
10/25/01	6:45	0	29.6	23.5	29.7	23.3	22.4	53.1	63.0	11.5	41.9	9.9	0	37.8	0.071	0.0272	15.7	47.5
10/25/01	6:46	0	29.7	23.5	29.7	23.2	22.4	53.1	63.1	11.5	42.1	9.9	0	37.8	0.071	0.0272	15.7	47.6
10/25/01	6:47	0	29.7	23.5	29.8	23.3	22.4	53.2	63.2	11.5	42.1	9.9	0	37.8	0.071	0.0272	15.7	47.7
10/25/01	6:48	0	29.8	23.5	29.8	23.3	22.5	53.1	63.0	11.5	42.4	9.9	0	37.8	0.071	0.0271	15.7	47.7
10/25/01	6:49	0	29.8	23.5	29.8	23.5	22.5	53.1	62.9	11.4	42.4	9.9	0	37.8	0.070	0.0268	15.7	47.7
10/25/01	6:50	0	29.8	23.5	29.7	23.5	22.6	52.9	62.9	11.4	42.4	9.9	0	37.8	0.070	0.0269	15.7	47.6
10/25/01	6:51	0	29.8	23.5	29.7	23.5	22.6	53.0	62.9	11.5	42.2	9.8	0	37.8	0.070	0.0269	15.7	47.6
10/25/01	6:52	0	29.8	23.5	29.5	23.5	22.6	53.0	62.9	11.5	42.2	9.8	0	37.9	0.069	0.0266	15.7	47.6
10/25/01	6:53	0	29.8	23.5	29.6	23.6	22.7	53.2	63.2	11.5	42.2	9.8	0	38.0	0.069	0.0265	15.8	47.7
10/25/01	6:54	0	29.8	23.5	29.5	23.6	22.7	52.9	62.6	11.5	42.1	9.8	0	38.0	0.069	0.0266	15.8	47.5
10/25/01	6:55	0	29.7	23.5	29.4	23.6	22.7	53.0	62.8	11.3	41.9	9.8	0	37.9	0.069	0.0267	15.7	47.5
10/25/01	6:56	0	29.7	23.5	29.4	23.6	22.7	53.0	62.9	11.4	42.1	9.8	0	37.8	0.069	0.0267	15.7	47.6
10/25/01	6:57	0	29.7	23.5	29.4	23.7	22.8	52.8	62.5	11.3	42.1	9.8	0	38.0	0.068	0.0263	15.8	47.5
10/25/01	6:58	0	29.6	23.5	29.3	23.7	22.8	53.2	63.0	11.4	42.3	9.8	0	38.0	0.068	0.0264	15.8	47.8
10/25/01	6:59	0	29.6	23.5	29.3	23.7	22.8	53.2	63.0	11.4	42.1	9.8	0	37.9	0.068	0.0264	15.7	47.6
														Averages		0.0305	15.9	46.8

Xflow2_102501_0700

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	7:00	0	29.6	23.5	29.2	23.7	22.8	53.1	62.8	11.4	42.2	9.8	0	38.0	0.068	0.0264	15.8	47.6
10/25/01	7:01	0	29.5	23.5	29.2	23.7	22.7	53.2	63.0	11.4	42.4	9.7	0	38.0	0.068	0.0264	15.8	47.8
10/25/01	7:02	0	29.5	23.5	29.2	23.6	22.7	52.7	62.5	11.4	42.1	9.7	0	38.0	0.068	0.0264	15.8	47.4
10/25/01	7:03	0	29.5	23.5	29.3	23.6	22.6	53.1	62.9	11.3	42.4	9.7	0	38.0	0.068	0.0264	15.8	47.8
10/25/01	7:04	0	29.5	23.5	29.2	23.5	22.6	52.9	62.7	11.4	42.4	9.7	0	37.9	0.068	0.0264	15.7	47.6
10/25/01	7:05	0	29.5	23.5	29.3	23.5	22.6	52.8	62.4	11.4	42.3	9.7	0	38.0	0.068	0.0263	15.8	47.6
10/25/01	7:06	0	29.5	23.5	29.3	23.5	22.5	53.1	62.9	11.4	42.1	9.7	0	38.0	0.067	0.0259	15.8	47.6
10/25/01	7:07	0	29.5	23.5	29.3	23.4	22.5	52.9	62.7	11.4	41.9	9.7	0	37.9	0.068	0.0263	15.7	47.4
10/25/01	7:08	0	29.5	23.5	29.3	23.4	22.4	53.0	62.7	11.5	42.2	9.7	0	38.0	0.067	0.0260	15.8	47.6
10/25/01	7:09	0	29.5	23.5	29.4	23.4	22.4	52.8	62.6	11.4	42.3	9.7	0	37.9	0.068	0.0263	15.7	47.6
10/25/01	7:10	0	29.6	23.5	29.4	23.4	22.4	53.0	62.7	11.3	42.0	9.7	0	37.9	0.068	0.0263	15.7	47.5
10/25/01	7:11	0	29.6	23.5	29.5	23.4	22.3	53.1	62.8	11.3	42.2	9.7	0	37.9	0.068	0.0262	15.7	47.6
10/25/01	7:12	0	29.6	23.5	29.5	23.4	22.3	53.1	62.8	11.4	42.4	9.7	0	37.9	0.068	0.0262	15.7	47.7
10/25/01	7:13	0	29.6	23.5	29.5	23.3	22.2	52.8	62.6	11.4	42.3	9.7	0	37.8	0.068	0.0262	15.7	47.6
10/25/01	7:14	0	29.6	23.5	29.6	23.3	22.2	53.0	62.8	11.4	42.1	9.7	0	37.9	0.068	0.0262	15.7	47.6
10/25/01	7:15	0	29.7	23.5	29.5	23.3	22.2	52.7	62.4	11.3	42.3	9.7	0	37.8	0.068	0.0262	15.7	47.5
10/25/01	7:16	0	29.7	23.5	29.6	23.3	22.1	53.0	62.7	11.4	42.2	9.7	0	37.8	0.067	0.0258	15.7	47.6
10/25/01	7:17	0	29.7	23.4	29.7	23.2	22.1	53.1	62.9	11.3	42.3	9.7	0	37.8	0.068	0.0261	15.7	47.7
10/25/01	7:18	0	29.7	23.4	29.7	23.2	22.2	53.4	63.1	11.3	42.4	9.7	0	37.7	0.068	0.0261	15.6	47.9
10/25/01	7:19	0	29.8	23.4	29.7	23.2	22.2	53.0	62.9	11.3	42.6	9.7	0	37.7	0.068	0.0261	15.6	47.8
10/25/01	7:20	0	29.8	23.4	29.7	23.1	22.2	52.8	62.5	11.2	42.5	9.7	0	37.7	0.068	0.0260	15.6	47.7
10/25/01	7:21	0	29.8	23.4	29.7	23.1	22.2	53.4	63.2	11.3	42.4	9.7	0	37.7	0.067	0.0257	15.6	47.9
10/25/01	7:22	0	29.8	23.4	29.8	23.1	22.2	52.9	62.7	11.1	42.4	9.7	0	37.5	0.068	0.0260	15.6	47.7
10/25/01	7:23	0	29.9	23.4	29.8	23.2	22.2	53.0	62.7	11.3	42.7	9.7	0	37.7	0.067	0.0256	15.6	47.9
10/25/01	7:24	0	29.9	23.4	29.7	23.3	22.2	53.2	62.9	11.2	42.3	9.7	0	37.7	0.068	0.0261	15.6	47.7
10/25/01	7:25	0	29.9	23.4	29.6	23.2	22.3	53.2	62.9	11.3	42.9	9.7	0	37.7	0.068	0.0261	15.6	48.1
10/25/01	7:26	0	29.9	23.4	29.6	23.3	22.3	53.0	62.7	11.2	42.5	9.7	0	37.6	0.067	0.0257	15.6	47.7
10/25/01	7:27	0	29.8	23.4	29.6	23.3	22.3	52.9	62.6	11.1	42.4	9.7	0	37.6	0.067	0.0257	15.6	47.6
10/25/01	7:28	0	29.8	23.4	29.6	23.3	22.4	53.2	63.0	11.3	42.6	9.7	0	37.7	0.067	0.0257	15.6	47.9
10/25/01	7:29	0	29.8	23.4	29.6	23.3	22.4	53.3	63.1	11.3	42.5	9.7	0	37.7	0.067	0.0257	15.7	47.9
10/25/01	7:30	0	29.8	23.4	29.6	23.4	22.4	53.3	63.0	11.2	42.3	9.7	0	37.6	0.067	0.0258	15.6	47.8
10/25/01	7:31	0	29.8	23.4	29.6	23.4	22.5	53.2	62.8	11.2	42.4	9.7	0	37.6	0.067	0.0257	15.6	47.8
10/25/01	7:32	0	29.8	23.4	29.6	23.4	22.5	52.9	62.7	11.2	42.3	9.7	0	37.7	0.067	0.0258	15.6	47.6
10/25/01	7:33	0	29.8	23.4	29.7	23.5	22.5	53.0	62.8	11.1	42.5	9.7	0	37.6	0.067	0.0257	15.6	47.7
10/25/01	7:34	0	29.8	23.4	29.7	23.5	22.5	53.1	62.9	11.1	42.5	9.7	0	37.6	0.067	0.0257	15.6	47.8
10/25/01	7:35	0	29.8	23.4	29.7	23.5	22.6	53.0	62.7	11.1	42.3	9.7	0	37.6	0.067	0.0257	15.6	47.6
10/25/01	7:36	0	29.9	23.4	29.8	23.5	22.6	52.8	62.5	11.1	42.7	9.7	0	37.6	0.067	0.0256	15.6	47.8
10/25/01	7:37	0	29.9	23.3	29.7	23.6	22.6	53.4	63.1	11.2	42.6	9.7	0	37.6	0.067	0.0257	15.6	48.0
10/25/01	7:38	0	29.9	23.4	29.8	23.6	22.7	53.2	63.0	11.3	42.4	9.7	0	37.7	0.067	0.0256	15.6	47.8
10/25/01	7:39	0	29.9	23.3	29.8	23.6	22.7	53.4	63.3	11.3	42.4	9.7	0	37.6	0.067	0.0256	15.6	47.9
10/25/01	7:40	0	29.9	23.3	29.8	23.7	22.6	53.2	62.9	11.2	42.8	9.7	0	37.7	0.067	0.0256	15.6	48.0
10/25/01	7:41	0	29.9	23.3	29.9	23.6	22.6	53.2	62.9	11.3	42.6	9.7	0	37.9	0.067	0.0256	15.7	47.9
10/25/01	7:42	0	30.0	23.3	29.9	23.6	22.6	53.1	62.8	11.3	42.6	9.7	0	37.9	0.067	0.0256	15.7	47.8
10/25/01	7:43	0	30.0	23.3	29.9	23.5	22.5	53.3	63.1	11.4	42.5	9.7	0	37.9	0.067	0.0255	15.7	47.9
10/25/01	7:44	0	30.0	23.3	29.9	23.5	22.5	53.3	63.1	11.3	42.7	9.7	0	37.8	0.067	0.0255	15.7	48.0
10/25/01	7:45	0	30.0	23.4	29.8	23.4	22.5	53.3	63.1	11.3	42.5	9.7	0	37.8	0.067	0.0256	15.7	47.9
10/25/01	7:46	0	30.0	23.4	29.9	23.4	22.5	52.9	62.5	11.3	42.4	9.7	0	37.8	0.067	0.0255	15.7	47.7
10/25/01	7:47	0	30.1	23.4	30.0	23.4	22.4	52.9	62.6	11.3	42.2	9.7	0	37.7	0.066	0.0251	15.7	47.6
10/25/01	7:48	0	30.1	23.4	30.0	23.3	22.4	53.0	62.7	11.3	42.0	9.7	0	37.8	0.067	0.0255	15.7	47.5
10/25/01	7:49	0	30.1	23.3	30.0	23.3	22.3	53.1	62.8	11.2	42.8	9.7	0	37.5	0.067	0.0255	15.6	47.9
10/25/01	7:50	0	30.1	23.3	30.1	23.3	22.3	53.3	63.0	11.2	42.8	9.7	0	37.5	0.067	0.0254	15.6	48.0
10/25/01	7:51	0	30.2	23.3	30.0	23.3	22.3	53.3	63.0	11.2	42.7	9.7	0	37.5	0.067	0.0255	15.6	48.0
10/25/01	7:52	0	30.2	23.3	29.9	23.2	22.2	53.5	63.3	11.2	42.7	9.7	0	37.6	0.067	0.0256	15.6	48.1
10/25/01	7:53	0	30.2	23.3	30.1	23.2	22.2	53.2	62.8	11.2	42.8	9.7	0	37.5	0.067	0.0254	15.6	48.0
10/25/01	7:54	0	30.2	23.3	30.0	23.2	22.1	53.2	62.9	11.2	42.8	9.7	0	37.5	0.067	0.0254	15.6	48.0
10/25/01	7:55	0	30.2	23.3	30.1	23.1	22.1	53.3	63.0	11.2	42.7	9.7	0	37.6	0.067	0.0254	15.6	48.0
10/25/01	7:56	0	30.3	23.3	30.2	23.1	22.1	53.1	62.9	11.2	42.6	9.7	0	37.5	0.067	0.0253	15.6	47.9
10/25/01	7:57	0	30.3	23.3	30.2	23.0	22.1	53.3	63.0	11.2	42.6	9.7	0	37.5	0.067	0.0254	15.5	48.0
10/25/01	7:58	0	30.3	23.3	30.3	23.0	22.1	53.1	62.8	11.1	42.7	9.7	0	37.4	0.067	0.0253	15.5	47.9
10/25/01	7:59	0	30.4	23.3	30.3	23.0	22.1	53.2	62.8	11.2	42.9	9.7	0	37.5	0.067	0.0253	15.6	48.0

Xflow2_102501_0700

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	8:00	0	30.4	23.3	30.3	23.1	22.1	53.2	62.9	11.3	42.6	9.7	0	37.5	0.067	0.0252	15.6	47.9
10/25/01	8:01	0	30.4	23.3	30.4	23.1	22.2	53.5	63.2	11.3	42.7	9.7	0	37.5	0.067	0.0252	15.6	48.1
10/25/01	8:02	0	30.4	23.3	30.4	23.1	22.2	53.3	63.0	11.1	42.8	9.7	0	37.4	0.067	0.0252	15.5	48.1
10/25/01	8:03	0	30.4	23.3	30.4	23.2	22.2	53.4	63.2	11.2	42.9	9.7	0	37.5	0.067	0.0252	15.6	48.1
10/25/01	8:04	0	30.5	23.3	30.5	23.2	22.2	53.5	63.4	11.2	42.9	9.7	0	37.5	0.067	0.0252	15.6	48.2
10/25/01	8:05	0	30.5	23.3	30.5	23.2	22.3	53.4	62.9	11.2	42.9	9.7	0	37.5	0.067	0.0252	15.6	48.1
10/25/01	8:06	0	30.5	23.3	30.4	23.2	22.3	53.4	63.1	11.2	42.9	9.7	0	37.5	0.067	0.0252	15.6	48.2
10/25/01	8:07	0	30.5	23.3	30.5	23.2	22.3	53.3	63.1	11.2	42.7	9.7	0	37.5	0.067	0.0251	15.6	48.0
10/25/01	8:08	0	30.6	23.3	30.6	23.3	22.4	53.3	62.9	11.2	42.7	9.7	0	37.4	0.067	0.0251	15.5	48.0
10/25/01	8:09	0	30.6	23.3	30.6	23.3	22.4	53.5	63.2	11.2	42.8	9.7	0	37.4	0.067	0.0251	15.5	48.1
10/25/01	8:10	0	30.7	23.3	30.7	23.3	22.4	53.2	63.0	11.1	42.6	9.7	0	37.3	0.067	0.0250	15.5	47.9
10/25/01	8:11	0	30.7	23.3	30.7	23.3	22.4	53.4	63.1	11.2	42.5	9.7	0	37.4	0.067	0.0250	15.5	48.0
10/25/01	8:12	0	30.7	23.3	30.8	23.4	22.5	53.9	63.7	11.3	42.8	9.7	0	37.5	0.067	0.0249	15.6	48.3
10/25/01	8:13	0	30.8	23.3	30.8	23.5	22.5	53.2	62.9	11.2	42.9	9.7	0	37.4	0.067	0.0249	15.5	48.1
10/25/01	8:14	0	30.8	23.3	30.8	23.5	22.5	53.3	63.1	11.2	42.8	9.7	0	37.4	0.067	0.0249	15.5	48.1
10/25/01	8:15	0	30.9	23.3	30.9	23.5	22.6	53.7	63.6	11.3	42.7	9.7	0	37.4	0.067	0.0249	15.5	48.2
10/25/01	8:16	0	30.9	23.3	31.0	23.6	22.6	53.6	63.3	11.2	43.1	9.7	0	37.4	0.067	0.0248	15.5	48.3
10/25/01	8:17	0	30.9	23.3	31.0	23.6	22.6	53.6	63.4	11.2	42.9	9.7	0	37.4	0.068	0.0251	15.5	48.2
10/25/01	8:18	0	31.0	23.3	31.0	23.6	22.6	53.4	63.2	11.2	42.8	9.7	0	37.4	0.068	0.0252	15.5	48.1
10/25/01	8:19	0	31.0	23.3	31.1	23.6	22.6	53.4	63.2	11.3	42.5	9.7	0	37.3	0.068	0.0251	15.5	47.9
10/25/01	8:20	0	31.1	23.3	31.1	23.7	22.6	53.6	63.4	11.3	42.6	9.7	0	37.4	0.067	0.0247	15.5	48.1
10/25/01	8:21	0	31.1	23.3	31.0	23.8	22.5	53.5	63.2	11.3	43.1	9.7	0	37.4	0.067	0.0248	15.5	48.3
10/25/01	8:22	0	31.1	23.3	31.0	23.8	22.5	53.7	63.5	11.2	42.8	9.7	0	37.4	0.067	0.0248	15.5	48.3
10/25/01	8:23	0	31.1	23.3	31.0	23.7	22.4	53.6	63.4	11.2	42.8	9.7	0	37.3	0.068	0.0252	15.5	48.2
10/25/01	8:24	0	31.1	23.3	30.9	23.7	22.4	53.9	63.6	11.2	43.1	9.7	0	37.3	0.067	0.0249	15.5	48.5
10/25/01	8:25	0	31.1	23.3	30.9	23.6	22.4	53.5	63.2	11.3	42.9	9.7	0	37.4	0.067	0.0249	15.5	48.2
10/25/01	8:26	0	31.1	23.2	30.9	23.5	22.4	53.5	63.2	11.3	42.8	9.7	0	37.3	0.067	0.0249	15.5	48.1
10/25/01	8:27	0	31.1	23.2	30.9	23.5	22.3	53.7	63.5	11.3	42.8	9.7	0	37.3	0.067	0.0249	15.5	48.2
10/25/01	8:28	0	31.1	23.3	30.9	23.5	22.3	53.9	63.6	11.4	43.2	9.7	0	37.4	0.067	0.0249	15.5	48.5
10/25/01	8:29	0	31.0	23.3	30.9	23.4	22.3	53.9	63.6	11.4	43.0	9.7	0	37.3	0.067	0.0249	15.5	48.4
10/25/01	8:30	0	31.0	23.3	30.8	23.4	22.2	53.4	63.0	11.3	43.0	9.7	0	37.3	0.067	0.0249	15.5	48.2
10/25/01	8:31	0	31.0	23.3	30.8	23.3	22.2	54.3	64.0	11.4	43.0	9.7	0	37.3	0.067	0.0249	15.5	48.6
10/25/01	8:32	0	31.0	23.3	30.8	23.3	22.2	53.7	63.4	11.3	43.1	9.7	0	37.3	0.066	0.0246	15.5	48.4
10/25/01	8:33	0	31.0	23.3	30.8	23.3	22.1	53.8	63.5	11.3	43.2	9.7	0	37.3	0.066	0.0246	15.5	48.5
10/25/01	8:34	0	31.0	23.3	30.8	23.2	22.1	53.7	63.3	11.4	43.4	9.6	0	37.4	0.066	0.0246	15.5	48.6
10/25/01	8:35	0	31.0	23.2	30.8	23.2	22.1	53.9	63.5	11.4	43.2	9.6	0	37.3	0.066	0.0246	15.5	48.6
10/25/01	8:36	0	31.0	23.2	30.7	23.1	22.1	53.9	63.5	11.4	43.2	9.6	0	37.3	0.065	0.0242	15.5	48.5
10/25/01	8:37	0	30.9	23.2	30.8	23.1	22.1	54.2	63.9	11.5	43.3	9.6	0	37.3	0.066	0.0246	15.5	48.7
10/25/01	8:38	0	31.0	23.2	30.9	23.1	22.1	54.1	63.8	11.4	43.4	9.6	0	37.3	0.065	0.0241	15.5	48.7
10/25/01	8:39	0	31.0	23.2	30.8	23.2	22.1	53.9	63.5	11.4	43.2	9.6	0	37.2	0.065	0.0242	15.5	48.5
10/25/01	8:40	0	31.0	23.2	30.9	23.2	22.2	54.0	63.7	11.3	43.3	9.6	0	37.3	0.066	0.0245	15.5	48.7
10/25/01	8:41	0	31.0	23.2	30.9	23.2	22.2	53.8	63.4	11.4	43.2	9.6	0	37.2	0.064	0.0237	15.5	48.5
10/25/01	8:42	0	31.0	23.2	31.0	23.2	22.2	54.2	63.8	11.4	43.1	9.6	0	37.2	0.065	0.0241	15.5	48.7
10/25/01	8:43	0	31.0	23.2	31.0	23.3	22.2	53.8	63.3	11.4	43.2	9.6	0	37.2	0.065	0.0240	15.4	48.5
10/25/01	8:44	0	31.1	23.2	31.1	23.4	22.3	54.0	63.6	11.4	43.3	9.6	0	37.2	0.064	0.0236	15.4	48.6
10/25/01	8:45	0	31.1	23.2	31.1	23.3	22.3	53.7	63.3	11.3	43.1	9.6	0	37.2	0.064	0.0236	15.4	48.4
10/25/01	8:46	0	31.1	23.2	31.1	23.3	22.3	54.1	63.6	11.4	43.4	9.6	0	37.2	0.064	0.0236	15.4	48.7
10/25/01	8:47	0	31.2	23.2	31.2	23.4	22.4	54.0	63.4	11.3	43.3	9.5	0	37.0	0.064	0.0236	15.4	48.6
10/25/01	8:48	0	31.2	23.2	31.2	23.5	22.4	54.4	64.0	11.4	43.4	9.5	0	37.1	0.064	0.0235	15.4	48.9
10/25/01	8:49	0	31.3	23.2	31.3	23.4	22.4	54.1	63.6	11.4	43.5	9.5	0	37.1	0.063	0.0231	15.4	48.8
10/25/01	8:50	0	31.3	23.2	31.3	23.5	22.4	54.1	63.5	11.4	43.5	9.5	0	37.1	0.063	0.0231	15.4	48.8
10/25/01	8:51	0	31.3	23.2	31.4	23.5	22.5	53.8	63.3	11.3	43.3	9.5	0	37.1	0.063	0.0231	15.4	48.5
10/25/01	8:52	0	31.4	23.2	31.5	23.6	22.5	54.0	63.6	11.4	43.3	9.5	0	37.0	0.063	0.0230	15.4	48.6
10/25/01	8:53	0	31.5	23.2	31.6	23.5	22.5	54.1	63.6	11.4	43.1	9.5	0	37.1	0.062	0.0226	15.4	48.6
10/25/01	8:54	0	31.5	23.2	31.6	23.6	22.6	54.5	63.9	11.4	43.5	9.5	0	37.1	0.063	0.0229	15.4	49.0
10/25/01	8:55	0	31.6	23.2	31.7	23.6	22.6	54.2	63.6	11.5	43.5	9.5	0	37.2	0.062	0.0225	15.4	48.8
10/25/01	8:56	0	31.6	23.2	31.8	23.7	22.6	54.2	63.7	11.4	43.6	9.4	0	37.1	0.062	0.0224	15.4	48.9
10/25/01	8:57	0	31.7	23.2	31.9	23.7	22.7	54.2	63.7	11.4	43.2	9.4	0	37.2	0.062	0.0224	15.4	48.7
10/25/01	8:58	0	31.8	23.2	31.9	23.8	22.7	54.3	63.7	11.3	43.2	9.4	0	37.1	0.062	0.0224	15.4	48.8
10/25/01	8:59	0	31.8	23.2	32.0	23.7	22.7	54.4	63.8	11.4	43.1	9.4	0	37.0	0.062	0.0223	15.4	48.8

Xflow2_102501_0700

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig)	P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	9:00	0	31.9	23.2	32.1	23.7	22.7	54.3	63.7	11.4	43.8		9.4	0	37.1	0.062	0.0223	15.4	49.0
10/25/01	9:01	0	32.0	23.2	32.2	23.8	22.7	54.1	63.5	11.3	43.5		9.4	0	37.1	0.061	0.0219	15.4	48.8
10/25/01	9:02	0	32.0	23.2	32.3	23.7	22.7	54.5	63.9	11.5	43.5		9.4	0	37.1	0.062	0.0222	15.4	49.0
10/25/01	9:03	0	32.1	23.2	32.3	23.6	22.6	54.3	63.6	11.4	43.5		9.4	0	37.0	0.061	0.0218	15.4	48.9
10/25/01	9:04	0	32.2	23.2	32.4	23.6	22.5	53.8	63.2	11.4	43.6		9.4	0	37.1	0.061	0.0217	15.4	48.7
10/25/01	9:05	0	32.3	23.2	32.5	23.5	22.5	54.3	63.7	11.4	43.6		9.3	0	37.1	0.061	0.0217	15.4	49.0
10/25/01	9:06	0	32.4	23.2	32.6	23.4	22.5	54.6	64.0	11.5	43.3		9.3	0	37.1	0.061	0.0216	15.4	49.0
10/25/01	9:07	0	32.4	23.2	32.7	23.4	22.5	54.4	63.8	11.4	43.8		9.3	0	37.1	0.060	0.0212	15.4	49.1
10/25/01	9:08	0	32.5	23.2	32.8	23.4	22.4	54.5	63.9	11.5	43.7		9.3	0	37.1	0.060	0.0212	15.4	49.1
10/25/01	9:09	0	32.6	23.2	32.9	23.4	22.4	54.4	63.7	11.3	43.6		9.3	0	37.1	0.060	0.0211	15.4	49.0
10/25/01	9:10	0	32.7	23.2	33.0	23.4	22.4	54.0	63.3	11.4	43.6		9.3	0	37.1	0.060	0.0210	15.4	48.8
10/25/01	9:11	0	32.8	23.2	33.1	23.4	22.4	54.6	63.9	11.4	43.8		9.3	0	37.0	0.060	0.0210	15.4	49.2
10/25/01	9:12	0	32.9	23.2	33.2	23.3	22.4	54.6	63.9	11.4	43.8		9.3	0	37.1	0.060	0.0209	15.4	49.2
10/25/01	9:13	0	33.0	23.2	33.2	23.3	22.3	54.6	63.9	11.4	43.8		9.3	0	37.0	0.060	0.0209	15.4	49.2
10/25/01	9:14	0	33.1	23.2	33.4	23.3	22.3	54.5	63.7	11.4	43.6		9.3	0	37.1	0.059	0.0205	15.4	49.0
10/25/01	9:15	0	33.1	23.2	33.5	23.3	22.3	54.5	63.7	11.5	43.6		9.3	0	37.1	0.060	0.0208	15.4	49.0
10/25/01	9:16	0	33.2	23.2	33.5	23.2	22.2	54.8	64.1	11.6	43.9		9.2	0	37.2	0.059	0.0204	15.4	49.3
10/25/01	9:17	0	33.3	23.2	33.6	23.2	22.2	54.4	63.6	11.4	44.0		9.2	0	37.2	0.059	0.0203	15.4	49.2
10/25/01	9:18	0	33.4	23.2	33.7	23.2	22.1	54.7	63.9	11.4	43.9		9.2	0	37.2	0.059	0.0203	15.5	49.3
10/25/01	9:19	0	33.5	23.2	33.9	23.2	22.1	54.4	63.6	11.5	43.8		9.2	0	37.0	0.059	0.0202	15.4	49.1
10/25/01	9:20	0	33.6	23.1	34.0	23.1	22.2	54.6	63.8	11.5	43.6		9.2	0	37.1	0.059	0.0202	15.4	49.1
10/25/01	9:21	0	33.7	23.2	34.1	23.2	22.2	54.7	63.9	11.5	43.9		9.2	0	37.1	0.059	0.0201	15.4	49.3
10/25/01	9:22	0	33.8	23.2	34.2	23.1	22.2	55.1	64.4	11.4	43.9		9.2	0	37.2	0.059	0.0201	15.4	49.5
10/25/01	9:23	0	33.9	23.2	34.3	23.2	22.2	55.4	64.6	11.5	44.0		9.2	0	37.1	0.059	0.0200	15.4	49.7
10/25/01	9:24	0	34.0	23.1	34.4	23.2	22.2	54.8	64.0	11.5	44.0		9.2	0	37.0	0.058	0.0196	15.4	49.4
10/25/01	9:25	0	34.1	23.1	34.5	23.3	22.3	55.0	64.2	11.5	43.8		9.2	0	37.2	0.058	0.0195	15.4	49.4
10/25/01	9:26	0	34.2	23.1	34.6	23.3	22.3	55.2	64.5	11.5	44.1		9.2	0	37.1	0.058	0.0195	15.4	49.7
10/25/01	9:27	0	34.3	23.1	34.7	23.4	22.3	54.9	64.0	11.5	44.0		9.1	0	37.1	0.058	0.0194	15.4	49.4
10/25/01	9:28	0	34.4	23.1	34.8	23.4	22.3	54.8	63.9	11.5	44.1		9.1	0	37.0	0.058	0.0194	15.4	49.5
10/25/01	9:29	0	34.5	23.1	35.0	23.5	22.4	55.2	64.5	11.6	43.9		9.1	0	37.0	0.058	0.0193	15.4	49.6
10/25/01	9:30	0	34.6	23.1	35.1	23.5	22.4	54.6	63.9	11.4	43.8		9.1	0	37.1	0.058	0.0192	15.4	49.2
10/25/01	9:31	0	34.7	23.1	35.2	23.6	22.5	54.8	64.0	11.5	44.0		9.1	0	37.2	0.058	0.0192	15.4	49.4
10/25/01	9:32	0	34.8	23.1	35.3	23.7	22.5	55.0	64.2	11.5	44.1		9.1	0	37.1	0.058	0.0191	15.4	49.6
10/25/01	9:33	0	35.0	23.2	35.4	23.8	22.6	55.0	64.1	11.5	43.7		9.1	0	37.1	0.058	0.0191	15.4	49.4
10/25/01	9:34	0	35.0	23.2	35.5	23.7	22.6	55.3	64.5	11.6	44.2		9.1	0	37.1	0.057	0.0187	15.4	49.7
10/25/01	9:35	0	35.2	23.1	35.6	23.7	22.6	54.7	63.8	11.5	44.0		9.1	0	37.2	0.057	0.0186	15.4	49.4
10/25/01	9:36	0	35.3	23.2	35.7	23.8	22.7	54.8	63.8	11.6	43.6		9.1	0	37.2	0.057	0.0186	15.4	49.2
10/25/01	9:37	0	35.4	23.2	35.9	23.9	22.7	54.8	63.9	11.6	44.1		9.1	0	37.2	0.056	0.0182	15.4	49.4
																	Average	15.4	49.0
10/25/01	9:38	0	35.5	23.2	36.0	23.9	22.7	23.0	32.1	6.4	18.7		9.2	0	33.1	0.037	0.0120	13.8	20.8
10/25/01	9:39	0	35.2	23.2	35.8	23.9	22.6	-7.2	-2.6	0.6	-7.9		5.1	0	-0.2	0.010	0.0033	-0.1	-7.5
10/25/01	9:40	0	34.4	23.2	35.9	23.8	22.6	-3.8	-2.6	0.6	-3.7		0.9	0	-0.2	0.010	0.0032	-0.1	-3.7
10/25/01	9:41	0	32.2	23.1	35.9	23.6	22.6	-0.8	-2.8	0.0	-0.5		-2.3	0	-0.2	0.010	0.0032	-0.1	-0.6
10/25/01	9:42	0	31.5	23.2	35.4	23.6	22.5	-6.7	-2.5	0.5	-7.6		5.0	0	-0.2	0.010	0.0033	-0.1	-7.2
10/25/01	9:43	0	30.5	23.2	35.8	23.5	22.5	-0.9	2.9	-1.9	0.0		5.0	0	-0.2	0.010	0.0033	-0.1	-0.4
10/25/01	9:44	0	32.3	23.2	35.8	23.4	22.5	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0033	-0.1	0.1
10/25/01	9:45	0	32.6	23.2	35.8	23.3	22.4	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0033	-0.1	0.1
10/25/01	9:46	0	32.7	23.2	35.8	23.2	22.4	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0033	-0.1	0.1
10/25/01	9:47	0	32.7	23.2	35.8	23.2	22.4	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0033	-0.1	0.1
10/25/01	9:48	0	32.5	23.1	34.9	23.1	22.3	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0033	-0.1	0.1
10/25/01	9:49	0	32.5	23.2	32.9	23.1	22.3	-0.1	3.7	-1.9	0.8		5.0	0	-0.2	0.010	0.0035	-0.1	0.4
10/25/01	9:50	0	32.5	23.2	30.6	23.0	22.2	-0.2	3.6	-1.9	0.7		5.0	0	-0.2	0.010	0.0037	-0.1	0.2
10/25/01	9:51	0	32.5	23.2	27.9	23.0	22.2	-0.3	3.5	-1.9	0.6		5.1	0	-0.2	0.010	0.0040	-0.1	0.1
10/25/01	9:52	0	32.3	23.1	28.6	23.0	22.2	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0040	-0.1	0.1
10/25/01	9:53	0	32.3	23.1	28.9	22.9	22.2	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0039	-0.1	0.1
10/25/01	9:54	0	32.2	23.1	29.0	22.9	22.1	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0039	-0.1	0.1
10/25/01	9:55	0	32.1	23.1	29.3	22.9	22.1	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0039	-0.1	0.1
10/25/01	9:56	0	32.0	23.1	29.3	22.8	22.1	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0039	-0.1	0.1
10/25/01	9:57	0	31.9	23.1	28.6	22.8	22.0	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0040	-0.1	0.1
10/25/01	9:58	0	31.8	23.1	28.0	22.8	22.0	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0040	-0.1	0.1

Xflow2_102501_0700

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig)	P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/25/01	9:59	0	31.7	23.1	27.6	22.8	22.0	-0.4	3.4	-1.9	0.6		5.0	0	-0.2	0.010	0.0041	-0.1	0.1
10/25/01	10:00	0	31.7	23.1	27.1	22.7	22.0	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0041	-0.1	0.1
10/25/01	10:01	0	31.5	23.1	26.9	22.7	22.0	-0.4	3.4	-1.9	0.6		5.0	0	-0.2	0.010	0.0041	-0.1	0.1
10/25/01	10:02	0	31.5	23.1	26.6	22.7	22.0	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0042	-0.1	0.1
10/25/01	10:03	0	31.4	23.1	26.4	22.7	22.0	-0.4	3.4	-1.9	0.5		5.0	0	-0.2	0.010	0.0042	-0.1	0.1
10/25/01	10:04	0	31.3	23.1	22.2	22.7	22.1	-0.4	3.4	-1.9	0.6		5.0	0	-0.2	0.010	0.0047	-0.1	0.1
10/25/01	10:05	0	31.2	23.1	22.3	22.8	22.1	-0.4	3.5	-1.9	0.5		5.1	0	-0.2	0.010	0.0047	-0.1	0.1
10/25/01	10:06	0	31.1	23.1	22.6	22.8	22.1	-0.4	3.5	-1.9	0.5		5.2	0	-0.2	0.010	0.0047	-0.1	0.1
10/25/01	10:07	0	31.0	23.1	22.8	22.8	22.1	-0.4	3.6	-1.9	0.6		5.2	0	-0.2	0.010	0.0046	-0.1	0.1
10/25/01	10:08	0	30.9	23.1	22.9	22.8	22.1	-0.4	3.7	-1.9	0.5		5.3	0	-0.2	0.010	0.0046	-0.1	0.1
10/25/01	10:09	0	30.9	23.1	23.6	22.8	22.1	-0.5	4.1	-1.9	0.4		5.8	0	-0.2	0.010	0.0045	-0.1	0.0
10/25/01	10:10	0	30.3	23.1	23.9	22.8	22.1	0.8	6.5	4.5	-4.6		6.9	0	31.8	0.011	0.0050	13.2	-1.9
10/25/01	10:11	0	24.5	23.1	24.2	22.8	22.2	5.8	17.4	11.0	-4.9		11.6	0	53.0	0.767	0.3428	22.0	0.5
10/25/01	10:12	0	24.7	23.1	24.4	22.8	22.2	11.7	17.6	11.2	0.8		5.9	0	53.1	0.010	0.0044	22.0	6.3
10/25/01	10:13	0	24.7	23.1	24.6	22.8	22.2	10.2	17.7	11.3	-0.7		7.5	0	52.8	0.010	0.0044	21.9	4.8
10/25/01	10:14	0	24.7	23.0	24.8	22.8	22.2	9.7	18.6	10.3	0.0		8.9	0	50.4	0.010	0.0044	20.9	4.8
10/25/01	10:15	0	25.2	23.0	25.0	22.8	22.2	8.5	18.6	10.3	-1.5		10.2	0	51.3	0.010	0.0044	21.3	3.5
10/25/01	10:16	0	24.8	23.1	25.2	22.9	22.2	8.8	18.7	10.4	-1.3		10.0	0	50.5	0.010	0.0043	21.0	3.8
10/25/01	10:17	0	24.9	23.1	25.4	22.9	22.3	8.9	18.9	10.2	-1.1		10.0	0	50.7	0.010	0.0043	21.0	3.9
10/25/01	10:18	0	25.0	23.0	25.5	22.9	22.3	8.7	18.6	10.4	-0.8		10.0	0	50.7	0.010	0.0043	21.0	3.9
10/25/01	10:19	0	25.4	23.0	25.7	23.0	22.2	15.4	18.7	10.3	5.7		3.4	0	50.1	0.010	0.0043	20.8	10.5
10/25/01	10:20	0	25.6	23.0	25.8	23.0	22.2	9.8	18.7	10.2	-0.2		9.0	0	50.3	0.010	0.0043	20.9	4.8
10/25/01	10:21	0	25.8	23.0	25.9	22.9	22.2	13.5	26.3	3.7	10.2		12.7	0	29.4	0.010	0.0043	12.2	11.8
10/25/01	10:22	0	25.9	23.0	26.1	22.9	22.2	18.7	27.2	3.8	15.2		8.6	0	29.6	0.196	0.0830	12.3	17.0
10/25/01	10:23	0	26.1	23.0	26.2	22.9	22.2	18.9	27.3	3.8	15.5		8.4	0	29.5	0.205	0.0865	12.3	17.2
10/25/01	10:24	1	26.3	23.0	26.3	22.8	22.1	3.1	27.5	3.7	-0.6		24.4	64	29.3	0.010	0.0042	12.1	1.3
10/25/01	10:25	0	26.3	23.0	26.5	22.8	22.1	16.9	27.2	3.7	13.5		10.3	0	29.4	0.296	0.1241	12.2	15.2
10/25/01	10:26	0	26.5	23.0	26.6	22.8	22.1	18.8	27.4	3.7	15.4		8.5	0	29.2	0.261	0.1090	12.1	17.1
10/25/01	10:27	0	26.6	23.0	26.7	22.7	22.0	15.1	27.5	3.7	11.5		12.4	0	29.2	0.236	0.0983	12.1	13.3
10/25/01	10:28	0	26.7	23.0	26.8	22.7	22.0	17.1	27.4	3.6	13.6		10.4	0	29.2	0.249	0.1033	12.1	15.3
10/25/01	10:29	0	26.8	23.0	26.9	22.7	22.0	17.2	27.3	3.6	13.9		10.1	0	29.1	0.246	0.1018	12.1	15.6
10/25/01	10:30	0	26.9	23.0	27.0	22.7	22.0	17.5	27.4	3.7	14.1		9.9	0	29.2	0.246	0.1015	12.1	15.8
10/25/01	10:31	0	27.1	23.0	27.2	22.6	22.0	17.7	27.5	3.6	14.5		9.7	0	29.0	0.249	0.1024	12.1	16.1
10/25/01	10:32	0	27.2	23.0	27.3	22.6	21.9	18.4	27.4	3.6	15.1		9.0	0	29.1	0.267	0.1094	12.1	16.8
10/25/01	10:33	0	27.2	23.0	27.4	22.5	21.9	18.9	27.4	3.5	15.7		8.4	0	29.0	0.262	0.1070	12.0	17.3
10/25/01	10:34	0	27.3	23.0	27.5	22.5	21.9	18.9	27.2	3.6	15.8		8.4	0	29.0	0.260	0.1059	12.1	17.3
10/25/01	10:35	0	27.5	23.0	27.6	22.4	21.9	19.1	27.5	3.6	15.8		8.4	0	29.0	0.257	0.1043	12.0	17.5
10/25/01	10:36	0	27.6	23.0	27.7	22.4	21.9	19.0	27.3	3.5	16.0		8.4	0	28.9	0.262	0.1061	12.0	17.5
10/25/01	10:37	0	27.6	23.0	27.8	22.4	21.8	19.1	27.4	3.6	15.8		8.4	0	28.9	0.258	0.1041	12.0	17.4
10/25/01	10:38	0	27.4	22.9	27.7	22.5	21.8	-1.2	-1.1	-0.1	-0.9		0.1	0	-0.2	0.010	0.0040	-0.1	-1.0

Xflow1_101501_0837

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	HI FLTR FLOW (gpm) Q3	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/15/01	8:45	1	20.2	19.8	20.4	19.7	18.9	11.0	17.2	9.6	1.7	6.7	53.8	48.5	0.01	-0.019	-0.009	20.1	6.3
10/15/01	8:46	1	20.1	19.8	20.5	19.7	18.9	10.8	24.5	13.3	-2.7	14.1	53.9	59.2	0.01	-0.019	-0.009	24.6	4.1
10/15/01	8:47	1	20.1	19.8	20.7	19.7	19.0	10.1	22.1	11.9	-2.1	12.5	53.8	55.3	0.01	-0.019	-0.009	22.9	4.0
10/15/01	8:48	1	20.3	20.2	20.8	19.9	19.0	6.5	22.3	12.0	-3.2	16.3	53.8	49.5	0.01	-0.019	-0.009	20.6	1.6
10/15/01	8:49	1	20.4	20.2	21.0	20.0	19.0	9.6	21.8	11.8	-2.4	12.7	53.8	55.2	0.01	-0.019	-0.009	22.9	3.6
10/15/01	8:50	1	20.6	20.2	21.2	20.0	19.0	9.7	22.0	11.9	-2.2	12.6	53.9	54.4	0.01	-0.019	-0.009	22.6	3.8
10/15/01	8:51	1	20.7	20.2	21.3	19.9	19.0	9.9	22.1	12.2	-2.0	12.6	53.8	55.9	0.01	-0.019	-0.009	23.2	4.0
10/15/01	8:52	1	20.8	20.1	21.5	19.9	19.0	9.8	21.8	12.1	-2.0	12.6	53.8	55.3	0.01	-0.019	-0.009	22.9	3.9
10/15/01	8:53	1	20.9	20.1	21.7	19.9	19.1	9.6	21.9	12.0	-2.1	12.7	53.8	54.4	0.01	-0.019	-0.009	22.6	3.7
10/15/01	8:54	1	21.1	20.1	21.8	19.9	19.1	9.6	21.9	11.9	-2.3	12.6	53.8	55.7	0.01	-0.019	-0.009	23.1	3.7
10/15/01	8:55	1	21.2	20.1	22.0	19.9	19.1	9.9	22.2	11.9	-2.1	12.7	53.9	55.2	0.01	-0.019	-0.009	22.9	3.9
10/15/01	8:56	1	21.3	20.1	22.2	19.9	19.1	9.7	21.9	12.1	-2.2	12.7	53.8	55.3	0.01	-0.019	-0.009	23.0	3.7
10/15/01	8:57	1	21.5	20.0	22.3	19.9	19.1	9.3	21.5	12.0	-2.0	12.7	53.8	55.4	0.01	-0.019	-0.009	23.0	3.6
10/15/01	8:58	1	21.6	20.1	22.5	19.9	19.1	9.8	22.1	11.9	-2.0	12.7	53.8	55.7	0.01	-0.019	-0.009	23.1	3.9
10/15/01	8:59	1	21.8	20.0	22.6	19.9	19.1	9.7	22.0	12.1	-2.2	12.7	53.9	55.4	0.01	-0.019	-0.009	23.0	3.7
10/15/01	9:00	1	21.9	20.0	22.8	19.9	19.2	9.6	23.0	11.1	-1.2	13.9	53.8	53.5	0.01	-0.019	-0.009	22.2	4.2
10/15/01	9:01	1	22.2	20.0	23.0	19.9	19.2	9.1	31.1	11.0	-1.7	22.4	53.8	53.3	0.01	-0.019	-0.009	22.1	3.7
10/15/01	9:02	1	22.2	20.0	23.2	19.9	19.2	8.1	32.0	10.0	-1.9	24.3	53.8	50.3	0.01	-0.019	-0.009	20.9	3.1
10/15/01	9:03	1	22.4	20.0	23.4	19.9	19.2	8.1	32.2	10.1	-1.4	24.4	54.0	50.4	0.01	-0.019	-0.009	20.9	3.4
10/15/01	9:04	1	22.6	20.0	23.6	20.0	19.2	8.0	31.9	10.1	-1.8	24.3	53.8	50.8	0.01	-0.019	-0.009	21.1	3.1
10/15/01	9:05	1	22.8	20.0	23.8	20.0	19.3	7.9	31.9	10.0	-1.8	24.5	53.8	50.6	0.01	-0.019	-0.009	21.0	3.0
10/15/01	9:06	0	23.3	20.0	24.0	20.0	19.3	22.0	31.7	9.9	12.5	10.1	0.0	51.3	1.194	1.191	0.535	21.3	17.2
10/15/01	9:07	0	23.9	20.0	24.1	20.0	19.3	23.0	31.6	9.9	13.4	9.2	0.0	51.1	1.158	1.110	0.497	21.2	18.2
10/15/01	9:08	0	24.2	20.0	24.3	20.0	19.3	24.3	32.0	9.8	14.7	8.2	0.0	50.8	1.043	1.001	0.446	21.1	19.5
10/15/01	9:09	0	24.4	20.0	24.5	20.1	19.3	25.1	32.1	9.9	15.2	7.5	0.0	51.1	0.929	0.899	0.399	21.2	20.1
10/15/01	9:10	0	24.6	20.0	24.6	20.1	19.4	25.2	31.8	9.8	15.6	7.0	0.0	50.5	0.881	0.842	0.371	21.0	20.4
10/15/01	9:11	0	24.7	20.0	24.8	20.1	19.4	25.7	31.9	9.9	15.8	6.7	0.0	51.5	0.82	0.781	0.343	21.4	20.8
10/15/01	9:12	0	24.9	20.0	25.0	20.1	19.4	25.8	31.8	9.9	16.0	6.5	0.0	51.2	0.775	0.730	0.319	21.2	20.9
10/15/01	9:13	0	25.0	20.0	25.2	20.1	19.4	19.8	31.6	9.7	10.3	12.2	0.0	51.0	1.211	1.289	0.560	21.2	15.1
10/15/01	9:14	0	25.3	20.0	25.4	20.1	19.4	22.4	31.6	9.8	12.5	9.8	0.0	51.3	1.193	1.144	0.494	21.3	17.5
10/15/01	9:15	0	25.4	20.0	25.6	20.2	19.5	20.9	31.8	9.9	11.2	11.4	0.0	51.5	1.211	1.321	0.568	21.4	16.0
10/15/01	9:16	0	25.7	20.0	25.7	20.2	19.5	23.0	31.5	9.9	13.4	9.0	0.0	51.3	1.184	1.143	0.489	21.3	18.2
10/15/01	9:17	0	25.8	20.0	25.9	20.2	19.5	21.6	31.6	9.9	12.0	10.5	0.0	51.9	1.211	1.302	0.554	21.6	16.8
10/15/01	9:18	0	26.0	20.0	25.9	20.2	19.6	23.8	31.5	10.0	14.1	8.4	0.0	51.2	1.191	1.138	0.485	21.2	18.9
10/15/01	9:19	0	25.9	20.0	25.7	20.3	19.8	24.6	31.4	10.0	14.9	7.5	0.0	51.0	1.046	0.995	0.426	21.2	19.7
10/15/01	9:20	0	25.8	20.0	25.5	20.4	19.8	25.2	31.4	9.7	15.9	6.7	0.0	51.1	0.976	0.926	0.399	21.2	20.6
10/15/01	9:21	0	25.7	20.0	25.2	20.5	19.9	26.1	31.9	9.8	16.4	6.2	0.0	50.6	0.893	0.857	0.372	21.0	21.2
10/15/01	9:22	0	25.5	20.0	25.1	20.6	20.0	26.6	31.9	9.9	16.9	5.8	0.0	51.1	0.846	0.807	0.351	21.2	21.7
10/15/01	9:23	0	25.3	20.0	24.9	20.6	20.0	27.1	32.1	9.9	17.1	5.4	0.0	51.2	0.804	0.764	0.335	21.2	22.1
10/15/01	9:24	0	25.2	20.0	24.8	20.7	20.2	21.9	31.8	9.9	12.3	10.4	0.0	51.4	1.211	1.285	0.564	21.3	17.1
10/15/01	9:25	0	25.0	20.0	24.7	20.8	20.3	28.4	41.0	9.2	19.2	13.1	0.0	49.5	1.211	1.397	0.616	20.5	23.8
10/15/01	9:26	0	24.9	20.0	24.6	20.8	20.3	33.0	45.2	9.4	23.7	12.6	0.0	50.4	1.211	1.375	0.607	20.9	28.3
10/15/01	9:27	0	24.8	20.0	24.5	20.9	20.4	35.4	45.4	9.3	25.8	10.5	0.0	49.7	1.211	1.304	0.577	20.6	30.6
10/15/01	9:28	0	24.7	20.0	24.5	20.9	20.4	36.3	44.9	9.5	27.3	9.1	0.0	50.2	1.211	1.229	0.544	20.9	31.8
10/15/01	9:29	0	24.7	20.0	24.4	21.0	20.5	37.3	45.1	9.5	27.8	8.3	0.0	50.2	1.203	1.169	0.519	20.8	32.5
10/15/01	9:30	0	24.6	20.0	24.4	21.0	20.5	37.8	45.2	9.5	28.2	8.0	0.0	50.1	1.156	1.100	0.489	20.8	33.0
10/15/01	9:31	0	24.6	20.0	24.3	21.1	20.6	38.1	45.3	9.5	28.5	7.7	0.0	49.9	1.086	1.042	0.464	20.7	33.3
																		20.8	31.6

Xflow1_101501_0837

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	HI FLTR FLOW (gpm) Q3	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/15/01	9:32	0	24.5	20.0	24.2	21.1	20.6	27.0	30.2	9.5	17.6	3.8	0.0	49.7	0.652	0.606	0.270	20.6	22.3
10/15/01	9:33	0	24.4	20.1	24.0	21.1	20.7	20.6	30.1	9.6	11.0	9.9	0.0	50.7	1.187	1.150	0.516	21.1	15.8
10/15/01	9:34	0	24.3	20.1	24.0	21.1	20.7	20.6	29.9	9.5	11.4	9.8	0.0	50.5	1.211	1.261	0.567	20.9	16.0
10/15/01	9:35	0	24.2	20.1	23.8	21.2	20.8	22.9	30.3	9.6	13.2	7.8	0.0	50.4	1.066	1.023	0.462	20.9	18.1
10/15/01	9:36	0	24.0	20.1	23.7	21.2	20.8	24.1	30.4	9.6	14.6	6.7	0.0	50.2	0.925	0.881	0.399	20.8	19.4
10/15/01	9:37	0	24.0	20.1	23.6	21.2	21.0	24.7	30.2	9.7	15.0	6.1	0.0	50.4	0.854	0.806	0.367	20.9	19.8
10/15/01	9:38	0	23.8	20.1	23.5	21.3	21.0	25.0	30.0	9.6	15.8	5.5	0.0	50.0	0.778	0.746	0.340	20.8	20.4
10/15/01	9:39	0	23.8	20.1	23.4	21.3	21.1	25.8	30.2	9.5	16.1	5.1	0.0	50.3	0.737	0.710	0.324	20.9	20.9
10/15/01	9:40	0	23.7	20.1	23.3	21.3	21.1	25.9	30.1	9.5	16.6	4.8	0.0	50.0	0.717	0.667	0.305	20.7	21.2
10/15/01	9:41	0	23.6	20.2	23.2	21.4	21.1	18.1	19.9	6.6	12.3	2.3	0.0	40.1	0.482	0.480	0.220	16.6	15.2
10/15/01	9:42	0	23.6	20.2	23.0	21.4	21.2	6.9	16.1	8.8	-1.9	9.7	0.0	47.0	0.022	0.001	0.000	19.5	2.5
10/15/01	9:43	0	23.6	20.2	22.9	21.5	21.3	7.8	15.6	9.8	-1.9	8.2	0.0	50.0	0.01	-0.019	-0.009	20.7	3.0
10/15/01	9:44	0	23.5	20.2	22.7	21.6	21.3	7.6	15.3	9.8	-2.0	8.1	0.0	49.7	0.01	-0.019	-0.009	20.6	2.8
10/15/01	9:45	0	23.5	20.2	22.6	21.6	21.4	7.7	15.4	9.8	-1.9	8.1	0.0	49.7	0.01	-0.019	-0.009	20.6	2.9
10/15/01	9:46	0	23.4	20.2	22.4	21.6	21.4	7.8	15.5	9.6	-1.9	8.1	0.0	49.8	0.01	-0.019	-0.009	20.7	2.9
10/15/01	9:47	0	23.4	20.2	22.4	21.6	21.5	7.4	15.1	9.6	-2.0	8.1	0.0	49.7	0.01	-0.019	-0.009	20.6	2.7
10/15/01	9:48	0	23.3	20.2	22.1	21.7	21.5	6.0	11.7	7.3	-1.3	6.2	0.0	42.8	0.01	-0.019	-0.009	17.8	2.3
10/15/01	9:49	0	23.2	20.2	22.0	21.6	21.6	4.5	15.2	3.9	0.6	11.1	0.0	30.1	0.027	0.045	0.021	12.5	2.6
10/15/01	9:50	0	23.1	20.2	21.8	21.7	21.6	4.6	15.3	3.8	0.7	11.1	0.0	30.1	0.056	0.033	0.016	12.5	2.7
10/15/01	9:51	0	23.0	20.3	21.8	21.7	21.6	4.5	15.3	3.7	0.8	11.2	0.0	29.3	0.061	0.033	0.016	12.1	2.7
10/15/01	9:52	0	22.9	20.2	21.6	21.7	21.7	4.6	15.4	3.8	0.9	11.2	0.0	29.4	0.061	0.033	0.016	12.2	2.7
10/15/01	9:53	0	22.8	20.3	21.6	21.8	21.7	23.4	26.2	6.2	17.1	3.3	0.0	38.6	0.64	0.606	0.292	16.0	20.2
10/15/01	9:54	0	22.1	20.3	21.5	21.7	21.7	26.1	30.0	3.7	22.4	4.4	0.0	29.6	0.768	0.743	0.358	12.3	24.3
10/15/01	9:55	0	21.9	20.3	21.5	21.8	21.7	26.8	30.1	3.8	22.8	3.7	0.0	30.2	0.716	0.676	0.326	12.5	24.8
10/15/01	9:56	0	21.8	20.3	21.5	21.8	21.8	22.2	29.9	3.8	18.5	8.1	0.0	30.6	1.076	1.045	0.505	12.7	20.4
10/15/01	9:57	0	21.8	20.3	21.4	21.9	21.8	24.8	29.9	3.8	21.0	5.6	0.0	30.4	0.751	0.708	0.343	12.6	22.9
10/15/01	9:58	0	21.7	20.3	21.4	21.9	21.8	25.7	30.1	3.8	21.9	4.8	0.0	30.2	0.675	0.638	0.309	12.5	23.8
																	0.396	12.5	23.2
10/15/01	9:59	0	21.7	20.3	21.3	21.9	21.9	17.9	29.9	3.8	14.0	12.4	0.0	30.8	1.051	1.270	0.616	12.8	16.0
10/15/01	10:00	0	21.6	20.4	21.3	22.0	21.9	24.6	29.9	3.8	20.9	5.8	0.0	30.3	0.802	0.759	0.369	12.6	22.8
10/15/01	10:01	0	21.6	20.4	21.2	21.9	21.9	25.6	29.8	3.8	22.0	4.7	0.0	30.3	0.697	0.660	0.321	12.6	23.8
10/15/01	10:02	0	21.5	20.4	21.2	22.0	21.9	36.7	45.7	3.5	33.2	9.3	0.0	29.3	1.044	1.007	0.489	12.2	35.0
10/15/01	10:03	0	21.5	20.4	21.4	22.0	21.9	37.2	44.8	3.7	34.0	8.0	0.0	29.9	0.968	0.930	0.451	12.4	35.6
10/15/01	10:04	0	21.6	20.4	21.4	22.0	21.9	37.9	44.9	3.6	34.7	7.5	0.0	29.9	0.91	0.876	0.424	12.4	36.3
10/15/01	10:05	0	21.6	20.4	21.4	22.0	21.9	38.6	45.1	3.7	35.2	7.0	0.0	29.7	0.877	0.845	0.409	12.3	36.9
10/15/01	10:06	0	21.7	20.4	21.4	22.0	21.9	34.6	39.9	3.3	31.8	5.8	0.0	28.3	0.798	0.767	0.371	11.8	33.2
10/15/01	10:07	0	21.6	20.4	21.4	22.0	21.9	27.3	30.0	3.7	23.7	3.1	0.0	29.8	0.555	0.530	0.257	12.4	25.5
10/15/01	10:08	0	21.6	20.5	21.4	22.0	22.0	22.8	29.9	3.7	19.3	7.5	0.0	30.1	0.911	0.873	0.423	12.5	21.1
10/15/01	10:09	0	21.6	20.5	21.3	22.0	21.9	25.7	30.1	3.7	21.9	4.9	0.0	29.9	0.661	0.630	0.306	12.4	23.8
10/15/01	10:10	0	21.6	20.5	21.3	22.0	22.0	30.3	34.6	4.2	26.0	4.9	0.0	31.9	0.644	0.619	0.301	13.2	28.2
10/15/01	10:11	0	21.6	20.5	21.3	22.0	22.0	36.6	43.8	5.3	31.2	7.7	0.0	35.8	0.829	0.786	0.381	14.9	33.9
10/15/01	10:12	0	21.6	20.5	21.4	22.1	22.0	36.9	43.7	5.0	31.8	7.4	0.0	35.3	0.799	0.772	0.374	14.7	34.3
10/15/01	10:13	0	21.6	20.5	21.4	22.1	22.0	37.8	44.8	3.7	34.4	7.6	0.0	29.9	0.836	0.790	0.382	12.4	36.1
10/15/01	10:14	0	21.6	20.5	21.4	22.1	22.0	38.4	45.1	3.7	34.7	7.2	0.0	30.0	0.803	0.770	0.373	12.5	36.5
10/15/01	10:15	0	21.7	20.6	21.5	22.1	22.0	38.5	45.0	3.7	35.1	7.0	0.0	30.0	0.794	0.761	0.367	12.4	36.8
10/15/01	10:16	0	21.7	20.6	21.5	22.1	22.0	38.7	44.9	3.7	35.3	6.8	0.0	30.0	0.781	0.744	0.359	12.5	37.0
10/15/01	10:17	0	21.7	20.6	21.5	22.1	22.0	39.1	45.3	3.7	35.4	6.6	0.0	29.9	0.771	0.724	0.349	12.4	37.3
10/15/01	10:18	0	21.8	20.6	21.5	22.1	22.1	39.3	45.4	3.7	35.7	6.5	0.0	30.0	0.766	0.730	0.352	12.4	37.5
10/15/01	10:19	0	21.8	20.6	21.6	22.2	22.1	39.1	44.9	3.7	35.5	6.3	0.0	30.0	0.756	0.710	0.342	12.5	37.3

Xflow1_101501_0837

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	HI FLTR FLOW (gpm) Q3	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
10/15/01	10:20	0	21.8	20.6	21.6	22.2	22.1	39.4	45.1	3.7	36.2	6.2	0.0	29.9	0.75	0.727	0.350	12.4	37.8
10/15/01	10:21	0	21.8	20.7	21.6	22.3	22.1	39.5	45.0	3.7	36.1	6.1	0.0	29.9	0.739	0.702	0.338	12.4	37.8
10/15/01	10:22	0	21.9	20.7	21.7	22.3	22.2	39.5	45.0	3.8	35.9	6.0	0.0	30.0	0.738	0.692	0.332	12.4	37.7
10/15/01	10:23	0	21.9	20.7	21.7	22.4	22.2	39.5	44.9	3.7	36.2	6.0	0.0	29.9	0.732	0.690	0.331	12.4	37.8
10/15/01	10:24	0	21.9	20.7	21.7	22.4	22.2	39.5	44.9	3.7	35.9	5.9	0.0	30.0	0.723	0.695	0.334	12.5	37.7
10/15/01	10:25	0	22.0	20.7	21.7	22.4	22.3	39.9	45.1	3.7	36.4	5.8	0.0	30.0	0.715	0.688	0.330	12.4	38.2
10/15/01	10:26	0	22.0	20.7	21.7	22.5	22.3	45.3	52.8	0.4	45.6	8.1	0.0	10.2	0.878	0.846	0.406	4.2	45.5
10/15/01	10:27	0	22.2	20.8	21.7	22.5	22.3	51.0	59.6	0.4	49.9	9.2	0.0	9.6	0.938	0.906	0.435	4.0	50.5
10/15/01	10:28	0	22.3	20.8	21.7	22.6	22.3	51.4	60.0	0.4	50.9	9.2	0.0	10.0	0.996	0.957	0.458	4.1	51.1
10/15/01	10:29	0	22.3	20.8	21.8	22.5	22.4	52.2	61.1	0.3	51.7	9.1	0.0	9.5	0.987	0.954	0.456	3.9	52.0
10/15/01	10:30	0	22.5	20.8	21.9	22.6	22.5	52.2	60.9	0.3	51.7	9.0	0.0	9.4	0.99	0.955	0.456	3.9	51.9
10/15/01	10:31	0	22.5	20.8	21.9	22.6	22.4	45.4	52.8	0.3	46.4	7.9	0.0	8.7	0.904	0.860	0.410	3.6	45.9
10/15/01	10:32	0	22.5	20.8	21.9	22.5	22.5	40.7	45.9	0.2	41.0	5.7	0.0	8.0	0.751	0.711	0.339	3.3	40.8
10/15/01	10:33	0	22.5	20.9	21.9	22.6	22.5	40.2	45.1	0.4	39.9	5.5	0.0	10.1	0.736	0.696	0.332	4.2	40.0
10/15/01	10:34	0	22.4	20.9	22.0	22.5	22.5	40.4	45.3	0.4	39.7	5.4	0.0	10.0	0.724	0.692	0.329	4.1	40.1
10/15/01	10:35	0	22.4	20.9	21.9	22.5	22.5	40.7	45.7	0.4	39.4	5.4	0.0	9.9	0.725	0.695	0.331	4.1	40.0
10/15/01	10:36	0	22.4	20.9	21.9	22.5	22.5	40.6	45.5	0.4	40.2	5.4	0.0	10.0	0.72	0.683	0.325	4.1	40.4
10/15/01	10:37	0	22.4	20.9	21.9	22.4	22.5	22.9	30.6	0.2	23.4	8.2	0.0	8.0	0.16	0.102	0.049	3.3	23.1
10/15/01	10:38	1	22.4	20.9	21.8	22.4	22.3	0.8	30.3	0.5	0.3	29.9	53.6	10.0	0.01	-0.019	-0.009	4.2	0.6
10/15/01	10:39	0	22.3	20.9	21.8	22.3	22.3	19.6	30.0	0.5	18.9	10.8	0.0	11.0	1.119	1.084	0.518	4.6	19.2
10/15/01	10:40	0	22.3	21.0	21.7	22.3	22.2	25.9	30.1	0.5	25.4	4.6	0.0	10.5	0.619	0.587	0.281	4.4	25.7
10/15/01	10:41	0	22.2	21.0	21.7	22.2	22.2	26.7	30.3	0.5	26.1	4.0	0.0	10.4	0.575	0.543	0.261	4.3	26.4
10/15/01	10:42	1	22.2	21.0	21.7	22.1	22.1	0.5	30.2	0.4	-0.2	30.2	53.4	9.7	0.337	0.212	0.102	4.0	0.1
10/15/01	10:43	1	22.1	21.0	21.6	22.1	22.0	0.5	30.2	0.5	0.2	30.1	53.6	9.8	0.013	-0.018	-0.009	4.1	0.4
10/15/01	10:44	0	22.0	21.0	21.5	22.0	21.9	17.2	20.0	0.3	16.7	3.3	0.0	8.4	0.58	0.547	0.264	3.5	16.9
10/15/01	10:45	0	22.0	21.0	21.4	22.0	21.8	13.8	15.4	0.5	13.3	2.0	0.0	10.5	0.327	0.295	0.143	4.3	13.5
10/15/01	10:46	0	21.9	21.0	21.3	21.9	21.8	13.6	15.1	0.5	13.2	2.0	0.0	10.1	0.306	0.283	0.137	4.2	13.4
10/15/01	10:47	0	21.8	21.0	21.3	21.9	21.8	13.5	15.0	0.4	13.3	2.0	0.0	10.1	0.3	0.277	0.134	4.2	13.4
10/15/01	10:48	0	21.8	21.1	21.2	21.9	21.8	13.7	15.2	0.5	13.3	1.9	0.0	10.1	0.298	0.271	0.132	4.2	13.5
10/15/01	10:49	0	21.7	21.1	21.1	21.9	21.8	13.8	15.3	0.4	13.3	1.9	0.0	10.0	0.294	0.266	0.130	4.1	13.5
10/15/01	10:50	0	21.6	21.1	21.1	21.9	21.9	13.8	15.3	0.4	13.4	1.9	0.0	10.0	0.289	0.260	0.127	4.2	13.6
10/15/01	10:51	0	21.5	21.1	21.0	22.0	21.9	13.8	15.1	0.5	13.5	1.9	0.0	10.0	0.289	0.258	0.126	4.1	13.6
10/15/01	10:52	0	21.5	21.1	21.0	22.0	21.9	13.9	15.3	0.5	13.3	1.9	0.0	10.0	0.287	0.253	0.124	4.2	13.6
10/15/01	10:53	0	21.4	21.1	20.8	22.1	21.9	19.6	21.9	0.6	18.6	2.6	0.0	11.8	0.315	0.294	0.145	4.9	19.1
10/15/01	10:54	0	21.4	21.1	20.8	22.1	21.9	15.4	16.9	4.6	10.8	1.9	0.0	33.0	0.241	0.223	0.110	13.7	13.1
10/15/01	10:55	0	21.3	21.1	20.8	22.1	21.9	15.4	16.7	4.6	10.9	1.8	0.0	33.3	0.242	0.224	0.110	13.8	13.1
10/15/01	10:56	0	21.3	21.1	20.7	22.2	21.9	13.3	16.8	4.6	8.6	3.9	0.0	33.3	0.244	0.217	0.107	13.8	11.0
10/15/01	10:57	0	21.2	21.1	20.7	22.2	21.9	15.3	16.8	4.6	10.7	2.0	0.0	33.2	0.241	0.215	0.106	13.8	13.0
10/15/01	10:58	0	21.2	21.1	20.6	22.2	21.9	-6.7	-1.1	-0.1	-9.7	5.5	0.0	-0.1	0.201	0.189	0.094	0.0	-8.2
10/15/01	10:59	0	21.2	21.2	20.6	22.3	21.9	0.2	-1.0	-0.1	0.3	-0.8	0.0	-0.2	0.01	-0.019	-0.009	-0.1	0.2
10/15/01	11:00	0	21.3	21.2	20.6	22.2	21.8	0.3	-1.0	-0.1	0.3	-0.8	0.0	-0.2	0.01	-0.019	-0.009	-0.1	0.3

Xflow2_110101_1045

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	HI FLTR FLOW (gpm) Q3	Temp corr flow (gpm/ft²)	Axial Vel (ft/sec)	Avg TMP (psid)
11/01/01	13:34	0	23.3	21.4	22.8	23.1	21.4	10.4	15.8	10.2	0.5	5.748	0	49.6	0.010	-0.019	0.0047	20.6	5.5
11/01/01	13:35	0	23.2	21.4	23.0	23.1	21.4	15.3	25.3	15.4	0.1	10.185	0	62.1	0.010	-0.019	0.0046	25.8	7.7
11/01/01	13:36	0	23.2	21.4	23.4	23.0	21.4	21.8	33.4	20.2	1.5	11.985	0	73.4	0.311	0.498	0.1420	30.4	11.7
11/01/01	13:37	0	23.4	21.4	23.9	23.0	21.3	21.7	33.6	20.3	2.0	12.103	0	73.2	0.286	0.302	0.1289	30.4	11.9
11/01/01	13:38	0	23.8	21.4	24.3	23.0	21.3	23.3	34.7	18.9	4.9	11.65	0	70.6	0.429	0.354	0.1911	29.3	14.1
11/01/01	13:39	0	24.5	21.4	24.7	22.9	21.3	31.2	43.8	10.5	20.7	12.911	0	52.4	1.211	1.580	0.5340	21.7	25.9
11/01/01	13:40	0	24.9	21.5	25.0	22.9	21.3	33.8	44.7	9.6	24.6	11.194	0	50.6	1.211	1.351	0.5291	21.0	29.2
11/01/01	13:41	0	25.2	21.5	25.3	22.9	21.3	36.4	44.9	9.8	26.8	8.773	0	50.6	1.211	1.246	0.5243	21.0	31.6
11/01/01	13:42	0	25.5	21.5	25.6	22.9	21.2	35.7	45.0	9.7	26.0	9.523	0	50.1	1.074	1.046	0.4609	20.8	30.9
11/01/01	13:43	0	25.8	21.5	25.9	22.9	21.2	29.1	44.6	9.7	20.0	15.879	0	50.7	1.211	1.537	0.5152	21.0	24.5
11/01/01	13:44	0	26.2	21.5	26.2	22.9	21.2	29.1	45.0	9.5	19.5	16.232	0	50.7	1.211	1.535	0.5108	21.0	24.3
11/01/01	13:45	0	26.5	21.5	26.6	22.9	21.2	33.0	44.9	9.3	23.7	12.228	0	50.3	1.211	1.398	0.5063	20.9	28.3
11/01/01	13:46	0	26.8	21.5	26.8	22.9	21.2	36.2	44.9	9.4	27.3	8.904	0	50.1	1.211	1.261	0.5024	20.8	31.8
11/01/01	13:47	0	27.0	21.5	27.2	22.9	21.2	37.5	44.8	9.5	28.7	7.654	0	50.2	1.123	1.090	0.4613	20.9	33.1
11/01/01	13:48	0	27.3	21.5	27.5	22.9	21.2	38.8	45.5	9.5	29.1	6.888	0	49.5	1.012	0.972	0.4124	20.5	33.9
11/01/01	13:49	0	27.6	21.5	27.8	22.9	21.2	39.3	44.8	9.4	30.3	5.938	0	50.2	0.926	0.894	0.3741	20.8	34.8
11/01/01	13:50	0	27.8	21.5	28.0	22.9	21.2	33.8	36.9	10.0	24.0	3.554	0	51.7	0.673	0.659	0.2700	21.4	28.9
11/01/01	13:51	0	28.0	21.5	28.3	23.0	21.3	34.0	36.9	9.5	24.5	3.265	0	50.1	0.638	0.604	0.2542	20.8	29.3
																		20.9	30.1
11/01/01	13:52	0	28.4	21.5	28.5	23.0	21.3	32.4	34.9	9.6	22.8	2.82	0	50.5	0.583	0.553	0.2309	20.9	27.6
11/01/01	13:53	0	28.5	21.5	28.7	23.1	21.3	19.7	32.2	9.3	10.8	12.674	0	49.1	0.243	0.220	0.0956	20.4	15.3
11/01/01	13:54	0	28.6	21.5	28.9	23.1	21.4	20.5	30.4	9.8	11.1	10.236	0	50.9	0.290	0.277	0.1135	21.1	15.8
11/01/01	13:55	1	28.6	21.5	29.1	23.1	21.4	6.9	30.7	9.6	-2.8	23.969	74	49.6	0.214	0.111	0.0833	20.6	2.1
11/01/01	13:56	1	28.9	21.5	29.3	23.1	21.5	7.8	30.0	9.6	-1.6	22.676	74	49.8	0.014	-0.018	0.0054	20.7	3.1
11/01/01	13:57	0	29.3	21.5	29.5	23.2	21.6	22.0	30.2	9.6	12.5	8.532	0	51.3	1.131	1.063	0.4364	21.3	17.2
11/01/01	13:58	0	29.6	21.6	29.7	23.3	21.6	22.9	30.0	9.5	13.8	7.358	0	50.8	0.941	0.892	0.3610	21.1	18.4
11/01/01	13:59	0	29.7	21.5	29.9	23.3	21.6	24.0	30.1	9.7	14.9	6.387	0	50.6	0.787	0.745	0.3004	21.0	19.5
11/01/01	14:00	0	29.8	21.5	29.8	23.4	21.7	25.2	30.2	9.6	15.8	5.382	0	50.6	0.700	0.661	0.2679	21.0	20.5
11/01/01	14:01	0	29.8	21.5	29.4	23.6	21.8	26.0	30.3	9.7	16.6	4.6	0	50.3	0.622	0.605	0.2406	20.9	21.3
11/01/01	14:02	0	29.5	21.6	28.9	23.9	21.9	26.5	30.2	9.7	17.0	4.038	0	51.0	0.578	0.544	0.2265	21.2	21.8
11/01/01	14:03	0	29.3	21.6	28.3	24.2	22.0	11.4	20.4	9.5	2.2	9.225	0	49.8	0.120	0.090	0.0478	20.7	6.8
11/01/01	14:04	0	29.2	21.6	27.7	24.5	22.1	9.0	16.8	9.3	0.0	8.052	0	49.3	0.060	0.038	0.0243	20.4	4.5
11/01/01	14:05	0	29.1	21.6	27.0	24.7	22.1	8.7	16.3	10.0	-1.2	7.787	0	50.5	0.030	0.002	0.0124	20.9	3.8
11/01/01	14:06	0	28.8	21.6	26.2	24.7	22.1	7.9	15.1	9.8	-1.3	7.492	0	49.6	0.027	-0.007	0.0114	20.6	3.3
11/01/01	14:07	0	28.5	21.6	25.5	24.7	22.1	7.9	15.1	9.6	-1.4	7.55	0	50.3	0.020	-0.017	0.0086	20.9	3.2
11/01/01	14:08	0	28.1	21.6	24.8	24.7	22.1	8.1	15.3	9.7	-1.5	7.511	0	49.9	0.013	-0.019	0.0057	20.7	3.3
11/01/01	14:09	0	27.6	21.6	24.1	24.7	22.1	8.1	15.3	9.7	-1.6	7.525	0	49.8	0.024	-0.011	0.0108	20.7	3.3
11/01/01	14:10	0	27.1	21.6	23.4	24.6	22.1	8.1	15.3	9.8	-1.6	7.527	0	50.0	0.013	-0.019	0.0059	20.7	3.2
11/01/01	14:11	0	26.5	21.7	22.8	24.5	22.1	6.3	12.3	8.1	-1.5	6.22	0	44.5	0.010	-0.018	0.0046	18.5	2.4
11/01/01	14:12	0	26.0	21.7	22.2	24.5	22.1	5.7	15.7	4.1	1.7	10.244	0	31.0	0.010	-0.018	0.0047	12.9	3.7
11/01/01	14:13	0	25.4	21.7	21.7	24.4	22.1	5.9	15.6	4.0	2.1	9.973	0	30.5	0.076	0.056	0.0365	12.6	4.0
11/01/01	14:14	0	24.7	21.7	21.1	24.4	22.0	5.8	15.3	3.9	2.1	9.627	0	30.3	0.070	0.044	0.0341	12.6	4.0
11/01/01	14:15	0	24.3	21.7	20.7	24.3	22.0	5.8	15.2	3.9	2.3	9.609	0	30.0	0.075	0.046	0.0371	12.5	4.0
11/01/01	14:16	0	23.8	21.7	20.2	24.2	22.0	5.9	15.2	3.9	2.2	9.556	0	30.2	0.054	0.044	0.0270	12.5	4.1
11/01/01	14:17	0	23.1	21.7	19.8	24.1	22.0	5.9	15.3	3.9	2.2	9.533	0	30.1	0.076	0.042	0.0385	12.5	4.1
11/01/01	14:18	0	23.3	21.7	19.4	24.1	22.0	16.4	28.8	3.6	12.9	12.659	0	29.4	0.272	0.266	0.1393	12.2	14.6
11/01/01	14:19	0	21.9	21.7	19.2	24.0	21.9	18.4	28.5	4.0	14.6	10.434	0	30.6	0.309	0.288	0.1596	12.7	16.5
11/01/01	14:20	0	21.4	21.7	18.8	24.1	21.9	20.3	29.9	3.9	16.3	9.936	0	30.2	0.303	0.285	0.1580	12.5	18.3
11/01/01	14:21	1	19.9	21.7	18.6	24.0	21.9	2.9	29.7	3.9	-0.8	27.067	74	29.7	0.018	-0.018	0.0094	12.3	1.0
11/01/01	14:22	0	19.6	21.7	18.3	24.0	21.8	24.7	29.8	3.8	21.1	5.368	0	29.6	0.672	0.633	0.3555	12.3	22.9
11/01/01	14:23	0	19.4	21.7	18.1	24.0	21.8	26.8	29.8	3.7	23.2	3.347	0	29.5	0.443	0.414	0.2359	12.3	25.0
11/01/01	14:24	0	19.3	21.7	18.1	24.0	21.8	27.0	30.0	3.7	23.3	3.19	0	29.5	0.394	0.361	0.2099	12.3	25.2
11/01/01	14:25	0	18.8	21.8	18.4	24.0	21.8	27.2	30.0	3.8	23.3	3.092	0	29.3	0.372	0.341	0.1967	12.2	25.2
11/01/01	14:26	0	18.7	21.8	18.6	24.0	21.8	29.9	32.8	4.0	25.6	3.184	0	30.3	0.361	0.334	0.1896	12.6	27.8
																		12.3	25.2

Xflow2_110101_1045

DATE	TIME	Sol	FLTRT (°C) T2	CL LOOP (°C) T3	SL LOOP (°C) T1	UP AMB (°C) T4	BOT AMB (°C) T5	BOT DP (psid) dP2	FLTR (psig) P1	FLTR DP (psid) dP1	TOP DP (psig) dP3	FLTRATE (psig) P2	BP (psig) P3	SL FLOW (gpm) Q1	FLTR FLOW (gpm) Q2	HI FLTR FLOW (gpm) Q3	Temp corr flow (gpm/ft^2)	Axial Vel (ft/sec)	Avg TMP (psid)
11/01/01	14:27	0	18.9	21.8	18.9	23.9	21.7	39.1	44.9	3.8	35.5	6.05	0	30.0	0.528	0.477	0.2751	12.4	37.3
11/01/01	14:28	0	19.2	21.7	19.1	23.8	21.7	37.3	45.1	3.3	34.1	8.242	0	30.1	1.211	1.232	0.6256	12.5	35.7
11/01/01	14:29	0	19.4	21.8	19.4	23.7	21.6	27.0	44.7	3.8	23.1	17.859	0	30.8	1.211	1.581	0.6201	12.8	25.1
11/01/01	14:30	0	19.6	21.8	19.7	23.6	21.6	37.6	44.9	3.8	34.0	7.65	0	30.0	0.719	0.671	0.3654	12.5	35.8
11/01/01	14:31	0	20.0	21.8	20.0	23.6	21.6	40.7	44.7	3.8	37.4	4.381	0	30.0	0.578	0.544	0.2912	12.4	39.1
11/01/01	14:32	0	20.2	21.8	20.3	23.6	21.6	41.3	44.9	3.8	37.5	4.017	0	30.0	0.550	0.524	0.2747	12.4	39.4
11/01/01	14:33	0	20.4	21.8	20.5	23.6	21.5	48.4	53.5	0.3	48.4	5.554	0	8.8	0.674	0.642	0.3352	3.7	48.4
11/01/01	14:34	0	20.7	21.8	20.6	23.6	21.5	53.3	59.1	0.5	53.0	6.324	0	10.4	0.713	0.679	0.3528	4.3	53.1
11/01/01	14:35	0	21.1	21.8	20.8	23.6	21.5	54.5	60.3	0.5	53.9	6.211	0	10.2	0.706	0.679	0.3475	4.2	54.2
11/01/01	14:36	1	21.2	21.8	21.1	23.5	21.5	0.5	60.5	0.4	0.3	60.327	74	9.3	0.010	-0.018	0.0049	3.8	0.4
11/01/01	14:37	0	21.5	21.8	21.3	23.5	21.4	55.1	58.9	0.4	55.8	4.348	0	10.2	0.969	0.930	0.4703	4.2	55.4
11/01/01	14:38	0	21.9	21.8	21.5	23.5	21.4	57.1	59.7	0.4	57.0	3.171	0	10.1	0.817	0.789	0.3938	4.2	57.0
11/01/01	14:39	0	22.0	21.8	21.8	23.4	21.3	57.6	59.9	0.4	57.2	2.916	0	10.1	0.786	0.748	0.3764	4.2	57.4
11/01/01	14:40	0	22.3	21.8	22.0	23.4	21.3	38.6	46.4	0.3	38.2	7.981	0	8.6	0.514	0.482	0.2447	3.5	38.4
11/01/01	14:41	0	22.4	21.8	22.2	23.4	21.4	40.2	44.9	0.5	39.9	5.045	0	10.4	0.517	0.486	0.2447	4.3	40.1
11/01/01	14:42	1	22.4	21.8	22.3	23.4	21.4	0.1	45.0	0.4	0.5	45.127	74	9.4	0.010	-0.018	0.0047	3.9	0.3
11/01/01	14:43	1	22.6	21.8	22.5	23.4	21.4	0.5	45.4	0.4	0.3	44.865	74	9.3	0.015	-0.018	0.0070	3.9	0.4
11/01/01	14:44	0	22.8	21.8	22.7	23.4	21.4	39.8	45.1	0.4	39.4	5.75	0	9.9	0.660	0.622	0.3081	4.1	39.6
11/01/01	14:45	0	23.0	21.8	22.8	23.4	21.4	41.5	45.7	0.4	41.0	4.563	0	9.8	0.582	0.547	0.2708	4.1	41.3
11/01/01	14:46	0	23.1	21.8	22.9	23.5	21.5	41.5	45.4	0.4	41.0	4.346	0	9.8	0.562	0.528	0.2602	4.1	41.2
11/01/01	14:47	0	23.2	21.8	23.1	23.5	21.5	19.0	31.4	0.3	18.6	12.614	0	7.8	0.245	0.218	0.1130	3.3	18.8
11/01/01	14:48	0	23.2	21.8	23.2	23.6	21.6	18.8	30.2	0.4	18.7	11.852	0	10.0	0.247	0.218	0.1136	4.2	18.7
11/01/01	14:49	0	23.3	21.8	23.3	23.7	21.6	23.1	30.2	0.5	22.5	7.345	0	10.9	1.089	1.041	0.4995	4.5	22.8
11/01/01	14:50	0	23.5	21.8	23.4	23.7	21.6	26.2	29.8	0.5	26.5	3.95	0	10.7	0.829	0.800	0.3792	4.4	26.3
11/01/01	14:51	0	23.5	21.8	23.4	23.8	21.7	19.1	30.5	0.5	18.6	11.482	0	10.3	0.304	0.275	0.1387	4.3	18.8
11/01/01	14:52	0	23.5	21.8	23.5	23.8	21.7	20.0	30.8	0.5	19.3	10.984	0	10.2	0.293	0.265	0.1333	4.3	19.6
11/01/01	14:53	0	23.7	21.8	23.6	23.9	21.8	19.2	29.6	0.4	19.0	10.635	0	10.1	0.289	0.261	0.1312	4.2	19.1
11/01/01	14:54	0	23.8	21.8	23.7	23.9	21.8	11.7	16.9	0.5	11.4	5.39	0	10.3	0.167	0.138	0.0757	4.3	11.6
11/01/01	14:55	0	23.8	21.8	23.7	23.9	21.9	11.1	16.2	0.4	10.8	5.441	0	10.1	0.158	0.128	0.0715	4.2	11.0
11/01/01	14:56	0	23.8	21.8	23.8	24.0	21.9	10.1	14.9	0.5	9.8	5.008	0	10.6	0.137	0.103	0.0620	4.4	9.9
11/01/01	14:57	0	23.8	21.8	23.8	23.9	21.9	10.0	14.8	0.5	9.8	5.127	0	10.1	0.140	0.106	0.0633	4.2	9.9
11/01/01	14:58	0	23.9	21.9	23.8	23.9	21.9	10.1	15.1	0.5	9.7	5.153	0	10.1	0.141	0.111	0.0636	4.2	9.9
11/01/01	14:59	0	23.8	21.9	23.9	23.8	21.9	10.1	15.0	0.5	9.7	5.186	0	10.1	0.137	0.110	0.0618	4.2	9.9
11/01/01	15:00	0	23.9	21.9	23.9	23.7	21.8	17.1	24.0	3.0	14.2	7.106	0	26.1	0.157	0.126	0.0707	10.8	15.7
11/01/01	15:01	0	23.9	21.9	24.0	23.7	21.8	-1.3	-1.1	-0.1	-1.1	0.475	0	-0.2	0.010	-0.019	0.0045	-0.1	-1.2
11/01/01	15:02	0	23.8	21.9	24.0	23.7	21.8	0.0	-1.1	-0.1	0.2	-0.851	0	-0.2	0.010	-0.019	0.0045	-0.1	0.1