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OU-1 Annual Report
Pump and Treat, Air Sparge, and Soil Vapor Extraction
December 1998 through December 1999

Volume 1 of 2

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Executive Summary

Operable Unit One (OU-1), or Area B as it was originally called, occupies approximately 4 acres in the southwestern portion of the Mound Plant. The BVA is a designated sole source aquifer that provides drinking water for many cities along the Miami River, as well as the Mound Plant. It encompasses the historic landfill, the site sanitary landfill, the overflow pond, and the three plant production wells situated in the Buried Valley Aquifer (BVA).

The OU-1 Remedial Investigation (RI) characterized the BVA in this area as a shallow wedge-shaped highly permeable sand and gravel aquifer. There are zones of lower permeable silt and clay within the sand and gravel. Due to the high permeability and shallow depths the aquifer tends to be anaerobic. The primary VOC contaminants identified during the RI were PCE, TCE, and DCE. OU-1 has a complex configuration due to the location of the engineered landfill over a portion of the site.

The Mound Plant was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priority List, in 1989. As part of the Mound CERCLA process, a Federal Facility Agreement (FFA) was signed between the Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA) and Ohio EPA. The agreement required DOE to produce a Remedial Investigation Feasibility Study (RI/FS) report, which is based on remedial investigative fieldwork. As a result of the RI process DOE and the U.S. EPA and Ohio EPA signed a CERCLA Record of Decision (ROD) for a remediation remedy to control groundwater VOC contamination in OU-1, and in the adjacent Buried Valley Aquifer (BVA).

The ROD specifies a pump-and-treat system as the remedy to control groundwater VOC contamination in OU-1. In consideration of the estimated amount of time required for the pump-and-treat system to contain the contaminants until eventual termination, the Innovative Technology Remediation Demonstration (ITRD) group was contacted and asked to work with the Mound ER Program to review and evaluate applicable innovative remediation technologies and suggest enhancements to a site-selected baseline pump-and-treat system. The ITRD group is an advisory group composed of DOE, EPA, industry, and regulatory agency representatives.

Based on detailed engineering assessments and cost and performance evaluations, the ITRD group identified two technologies for application at the site. The two technologies are air sparging and soil vacuum extraction (AS/SVE). It has been estimated that clean up could be achieved in approximately three years, based upon simultaneous operation of these systems.

Due to a time differential associated with the implementation of the remediation methods, the pump-and-treat system has been operating the longest. The pump-and-treat system, from February 18, 1997 to January 12, 2000, has removed an estimated 21.29 pounds of contaminants from the aquifer. The SVE system has removed an estimated 3,283.45 pounds of contaminants, from December 18, 1997 to January 12, 2000. The estimated contaminant removal for calendar year 1999 is 793 pounds (SVE: 789.87, P&T: 3.26). Both systems are anticipated to continue remediation efforts and could be shut down as early as December 2000, at which time a rebound test would be initiated.

1.0 Introduction

Operable Unit One (OU-1), or Area B as it was originally called, occupies approximately 4 acres in the southwestern portion of the Mound Plant. It encompasses the historic landfill, the site sanitary landfill, the overflow pond, and the three plant production wells. The Mound Plant began a periodic water-sampling program for Volatile Organic Compounds (VOCs) in 1984. Under the Environmental Restoration (ER) Program, a Remedial Investigation (RI) was started in 1987 and focused on groundwater contamination. Since 1986, VOCs have been detected and monitored in the groundwater in Area B. An extended discussion of Area B history, including waste disposal and construction activities, is provided in the OU-1 RI Report, Section 1, March 1994.

The OU-1 Remedial Investigation (RI) characterized the BVA in this area as a shallow wedge-shaped highly permeable sand and gravel aquifer. There are zones of lower permeable silt and clay within the sand and gravel. Due to the high permeability and shallow depths the aquifer tends to be anaerobic. The primary VOC contaminants identified during the RI were PCE, TCE, and DCE. Generally, contaminants are in the range of 100 ppb but in some areas to levels as high as 7-25 ppm. OU-1 has a complex configuration due to the location of the engineered landfill over a portion of the site.

As a result of the VOC contamination found in OU-1 groundwater, the Mound Plant was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priority List, in 1989. As part of the Mound CERCLA process, a Federal Facility Agreement (FFA) was signed between the Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA) and Ohio EPA. The FFA agreement required DOE to produce a Remedial Investigation Feasibility Study (RI/FS) report, which is based on remedial investigative fieldwork. As a result of the RI process, which took approximately three years (1992-1995), DOE and the U.S. EPA and Ohio EPA signed a CERCLA Record of Decision (ROD) for a remediation remedy to control groundwater VOC contamination in OU-1, and in the adjacent Buried Valley Aquifer (BVA).

The ROD specifies a pump-and-treat system as the remedy to control groundwater VOC contamination in OU-1. In consideration of the treatment time required for the pump-and-treat system to remediate the site, two additional systems were selected for expedition of contaminant removal. An air sparging/soil vacuum extraction (AS/SVE) system was selected for deployment. It has been estimated that clean up could be achieved in approximately three years, based upon simultaneous operation of these systems.

2.0 Scope/Purpose of Report

This report is the second annual report written covering the remedial activities in OU-1. These activities include, but are not limited to, system maintenance (including preventative and problems/failures), sampling, measurements on system operating parameters, and VOC mass removal calculations. The purpose of this annual report is to gather together, in one place, a ready reference of all of the aforementioned data into a coherent package.

3.0 Groundwater (ROD)

A groundwater contaminant plume emanates southward from the OU-1 landfill area and travels toward the Mound Plant drinking water wells. The primary contaminants of concern are cis-1,2-dichloroethene; trans-1,2-dichloroethene; tetrachloroethene; tetrachloromethane; 1,1,1-trichloroethane; trichloroethene; trichlorofluoromethane; chloroform, and vinyl chloride. The chosen remedial method for containment of VOC contaminants was a pump-and-treat system. The pump-and-treat system will prevent further migration of affected groundwater and treat extracted water to acceptable levels for disposal.

A remedial design was developed for the pump and treat system which consists of extraction and monitoring wells and an air stripper system. The extraction and monitoring wells for the OU-1 remediation project were installed in 1996, and the installation of the air stripper and associated equipment was completed and operation started on February 18, 1997. The first 180 days of operation were under a Treatability Test to ensure discharge and air emission requirements were met. Operation of the system following the Treatability Test period has been conducted in accordance with the Authorization to Discharge. The effluent discharge location is also known as Outfall 003. The monitoring for VOC contamination in OU-1 is ongoing and part of the Mound Plant Environmental Monitoring Program. Based upon the monitoring results, the system is fulfilling the criterion set forth by the ROD. Due to the aforementioned, the ROD was considered to be fully implemented.

3.1 Pump-and-Treat System Description

The pump-and-treat system extracts the contaminated groundwater, treats the affected groundwater in a low-profile air stripper, and discharges the treated effluent to a storm drain. The storm drain was installed in 1996 as part of the Miami-Erie Canal remediation and passes along the West boundary of OU-1. The pump-and-treat system consists of a system of pumps, tanks, valves, instruments and electrical controls.

Each of the three pump-and-treat system extraction wells is equipped with submersible pumps and water level controls. The pumps are 480 volt three phase submersible Grundfos pumps with a one horsepower motor. Each well has three level control transducers operating with 120 volts. These transducers feed a switch that prevents the well pump from running dry and burning up the motor. When the individual water level drops below the low-level transducer, the pump is turned off. The pump automatically restarts when water level rises above the operating-level transducer and after a programmable delay. The delay is controlled by a timer, which eliminates the possibility of cycling of the well pump too rapidly. The programmable delay timer is located in Building 300.

The piping system that carries the groundwater from the extraction wells to the air stripper is the influent system. The pipelines conveying the water are constructed of schedule 80 PVC plastic and are attached via a pitless adapter through each well casing. There is an individual pipe from each extraction well to within Building 300 where they are joined in a manifold. Just before before the influent pipes are joined each line has a flow meter with totalizer and control valve. The current flow rate can be read off the meter and the control valve adjusted to achieve the desired flow rate. Two check valves, one in the top of each pump and one in each influent line in Building 300, assures that water cannot flow backward to a well.

Most of the pipe run is approximately three feet below grade, but a small portion of the pipe run where the pipe enters the side of the building is aboveground. The aboveground portion of the influent piping, outside of Building 300, is heat traced and insulated to prevent freezing during very low temperatures.

The piping system within Building 300 is designed to allow for collecting water samples from influent and effluent lines. Water samples can be collected from sampling ports that are located on each influent line as well as the influent manifold (composite sample). An effluent sampling port is also on the discharge line for the air stripper. These ports allow for monitoring of influent and effluent water quality by the Environmental Safeguards and Compliance group. After the influent manifold, the water flows into a low-profile air stripper.

VOCs are removed from the groundwater collected by the extraction wells via the air stripper. The air stripper uses a series of four (4) stainless steel trays with perforated bottoms for the distribution of water, which is met with a countercurrent of forced air. Water enters at the top of the stripper through a diffuser and follows a "U" pattern in each tray while air enters at the bottom. The air stripper blower accomplishes the air induction at the bottom of the stripper and forces the air up through the perforated trays aerating the water (ie. Removing VOCs from the water) as it travels the channels downward. The

system is equipped with air pressure switches and a differential air pressure indicator. The pressure switches shut off the blower in the case of low or excessive pressure at the air injection point of the stripper.

The shutdown of the blower by a pressure switch activates the appropriate alarm and shuts down the three well pumps. A typical cause of excessive pressure is fouling of the stripper tray air holes, indicating a need to clean the trays. A typical cause of low pressure would be the loss of the large port cover.

The water, following treatment in the trays, collects in the air stripper sump. This sump is equipped with an alarm, which is sounded if a high-level indicator is triggered within the stripper sump. If the high level alarm is actuated, the well pumps are all shut down as well as the air stripper blower is shut down. The water in the sump is transported by air pressure into a gravity-flow effluent pipe. The effluent pipe is constructed as an inverted "U" trap of schedule 80 PVC plastic and is adjustable to optimize the water level in the air stripper sump. The effluent pipe flows below-grade to a storm drain that runs along the West boundary of OU-1. The air stripper reduces the water COC concentrations to less than MCLs (typically Not Detectable) before discharge. The air concentration of the contaminants of concern is below OSHA air regulatory limits.

A floor sump inside of Building 300 collects spilled water. Spilled water can be manually returned to the stripper by bailing or by the electric sump pump. An alarm is sounded if a high-level indicator is triggered in the floor sump. Simultaneously, the well pumps are all shut down, which then in turn causes the stripper to shut down.

The treatment system is equipped with an automated dialer and enunciator, which is activated upon any alarm condition. The automatic dialer will call up to eight numbers seeking acknowledgment of the alarm condition. If the alarm condition is not acknowledged, the automatic dialer will continue to cycle through the programmed call list until it receives an acknowledgment. Once the alarm is acknowledged, the alarm condition must be rectified within four hours or the automated dialer will resume automatic calling again.

3.2 System Maintenance

Regular inspection and maintenance of the pump-and-treat system is required for continued effective operation. Regular activities include those performed weekly, monthly, quarterly, and annually. The following describes the maintenance required for the pump-and-treat system. Maintenance and monitoring activities are to be logged in the system logbook, which resides in Building 300. A copy of the aforementioned logbook can be found in Attachment A.

3.3 Compliance Monitoring

The VOC contaminants of concern (COC) have been monitored monthly on both the influent and effluent. The influent data shows that the pump-and-treatment system, in conjunction with the SVE system, is being effective in the removal of the COCs from the groundwater by the rate of which the concentration of contaminants present in the influent is dropping. The effluent data demonstrates the effectiveness of the air stripper in removing the COCs from the water being treated and demonstrates compliance to the Authorization to Discharge from Outfall 003. The Environmental Safeguards and Compliance group performs the monitoring of and monthly reporting on "OU1 Authorization to Discharge Monitoring Results." This report is sent to the DOE and OEPA. A sample group of these reports is contained in Attachment B. A synopsis of the VOC COC data and Water Level Measurement data are in Attachment C.

Another facet of compliance monitoring involves Mound's Quarterly Groundwater Monitoring Program which monitors groundwater contamination concentrations over time. Thirteen existing monitoring wells are located within or near OU-1 (305, 308, 313, 370, 373, 397, 410, 415, 416, 417, 418 422, and 423). These wells are sampled by dedicated bladder pumps or bailers and are analyzed at an off-site contract lab utilizing analytical method SW-846. The samples are collected while pump-and-treat wells are operating. The results from these quarterly events can be found in the "Annual Groundwater Monitoring Report."

3.4 System Performance

The Pump-and-treat system performance is assessed by three different metrics. The first metric is based upon COC mass removal and mass removal rate. Second, the system uptime verse down time is assessed. Third, the hydraulic containment of the contaminant plume/area is assessed. When these three factors are maximized, then the system is operating in an acceptable manner.

3.4.1 Mass Removal

Mass Removal calculations are based upon the analytical test results obtained from the Environmental Safeguards and Compliance group. Examples of the analytical results are contained in Attachment D. The influent COC concentration (reported in ug/L) is mathematically fitted, with respect to liters of water pumped from the extraction wells. The mathematical algorithm fitting is accomplished with TableCurve 2D version four. The equation that best represents the data is selected and integrated with respect to liters of water pumped from the extraction wells and multiplied by the conversion factor of $2.205*10^{-9}$ which converts from micrograms to pounds. The individual COC calculated pounds removed are then summed together to obtain total pounds of VOCs removed. An Example of this can be found in Attachment E.

3.4.2 Uptime/Downtime

The pump-and-treat system is to be on and pumping as much as humanly possible. It is the primary system that contains the contaminant plume and ensures regulatory compliance. The compliance boundaries are the West and South plant roads. The DOE has also established the uptime as an Award Fee related item for BWXTO. The monthly goal for system is to have greater than 95% running time. The pump-and-treat system was operating approximately 99.33% of the time for the reporting period.

The pump-and-treatment system well 414 was shut down from May 25, 1999 to June 1, 1999 and on September 25, 1999 for well redevelopment. The extraction well pump for 414 was pulled and replaced on August 23, 1999 due to lower than acceptable yields. The ½ HP motor on well 412 pump was replaced with a 1 HP motor to make the system more compatible and reduce the number of spare parts kept on reserve.

Additional down periods for filter cleaning/replacement, lubrication, power outages, etceteras can be gleaned from the system logbook copy in Attachment A.

3.4.2.1 System Cleaning

The pump-and-treat system did not require cleaning during the reporting period. The cleaning dates can normally be found in the copy of the system logbook, which is in Attachment A.

3.4.2.2 Sequestering Agent

The use of Drewsperse 752 Antifoulant/sequestering agent was continued since it still prevailed as the most cost-effective treatment that the EPA has approved for use. Drewsperse 752 has been used since 3/18/98. The product is metered in at a rate of approximately 1.5 gallons per day. The Drewsperse, in a 55-gallon drum, requires replacement approximately monthly.

3.5 Hydraulic Containment

The system continues to be assessed on a monthly basis with a three-point calculation performed on data obtained from wells West and South of the capture zone. The wells used to determine the inward gradient along the West compliance boundary are 422, 423, and P003. The wells used to determine the inward gradient along the South compliance boundary are 305, 410, and 417. In an effort to more accurately assess the South compliance boundary, wells CP-1 through CP-6 were installed. Water level measurements are performed monthly in these wells and the results are reviewed by Mr. Mark Gilliat. The monthly gradient results can be found in the FFA Monthly Report.

The system, with respect to the effect to the BVA, is also monitored. This monitoring is performed with Telog data loggers connected to pressure transducers located in wells P001, P003, P005, 313, 370, 412, 413, 414, 415, 416, 417, 418, 422, and 423. The pressure transducers are the means used to determine the BVA water level elevation based upon the water column pressure upon the transducer and knowing the transducer depth with respect to elevation. This data is downloaded on a monthly basis and evaluated. The data is stored to the Common area of the ER server at K:\Shared\Telogers directory, depending upon the data recorder. Examples of the recorder data can be found in Attachment C.

4.0 Soils (ROD Enhancement)

In consideration of the treatment time required for the conventional pump-and-treat system to remediate the site, which included waiting for any contaminate suspended in the unsaturated zone to naturally migrate to the BVA, additional treatment systems were required to expedite the process. The pump-and-treat, on its own, would take more than an estimated 30 years to achieve completion. The Innovative Technology Remediation Demonstration (ITRD) group; an advisory group composed of DOE, EPA, industry, and regulatory agency representatives; was contacted and asked to work with the Mound ER Program to review and evaluate applicable innovative remediation technologies and suggest enhancements to a site-selected baseline pump-and-treat system.

Based on detailed engineering assessments and cost and performance evaluations, the ITRD group identified two technologies for application at the site. The two selected technologies were high vacuum extraction for treatment of the contaminated fill and till material and air sparging/soil vapor extraction for treatment of the contaminated soil and ground water in the high permeability aquifer. Pilot-studies of both technologies were completed in April 1996. The results were very encouraging, with both systems showing quick and cost-effective contaminant removal capabilities. With the implementation of these technologies it was estimated that clean up could be achieved in approximately three years.

Based on the pilot system results, the Mound ER Program decided to install a full-scale air sparging/high vacuum extraction (AS/SVE) system. Construction of the full-scale system started in April 1997 and was completed in November 1997. The system consists of 23 air sparge and 17 vapor extraction wells divided into two zones that can be operated alternately. The soil vapor extraction system is designed to operate at a vacuum of up to 18 inches of mercury (at the intake to blowers) and a flow rate of approximately 500-cfm. The sparging system is designed to operate at nominally 150 cfm. After initial trial operations, the system became operational December 18, 1997.

4.1 System Description (AS/SVE)

The AS/SVE system relies on mass transfer of VOC contaminants from the dissolved-, sorbed-, and non-aqueous-phases to a gaseous phase that is extracted under negative pressure in the subsurface by the soil vapor extraction system. This mass transfer occurs, in accordance with the partitioning laws and vapor densities of the individual contaminant constituents, under a pressure gradient from the deep subsurface, created by the air sparging system, to a negative pressure in the vadose zone, created by the soil vapor extraction system.

The air sparging system operates by injecting air, under pressure, through a diffuser screen into the aquifer through conventionally constructed wells. A Sutorbilt 5H blower accomplishes the air production, which is belt-driven by a 25-horse power 480 volt three phase electric motor. The air intake to the blower is filtered ambient air from outside of Building 301. The blower compresses the air which is fed to either the northern or southern section of the treatment area (Zone 1 or Zone 2 respectively). The diffuser screen, at each air sparge well, forces the air stream into very small bubbles (approximately 50 microns each) just above bedrock. The dissolved-phase and any non-aqueous- and sorbed-phase contamination below the water table should partition into these injected bubbles and be carried up to the vadose zone. In the vadose zone, these gaseous-phase contaminants mix with the soil gas.

The soil vapor extraction system consists of conventionally constructed extraction wells screened above the water table. These wells are connected via manifold to vacuum pumps that create a negative pressure in the vadose zone. Contaminants present as non-aqueous- and sorbed phase are volatilized and mixed with existing soil gas and gaseous-phase contaminants driven upward into the vadose zone from the air sparging system. Contaminated soil gas is extracted via the SVE wells and transported to the offgas treatment system, which is granular activated carbon (GAC). A unique attribute of the vapor extraction system is the use of a relatively high vacuum extraction vacuum, approximately 13 inches of mercury at the wells, to remove VOCs from relatively low permeability, 1×10^{-7} cm/sec, fill and till soils.

General system design parameters were based on two pilot studies conducted at Mound OU-1. The Radian Corporation and Groundwater Technology pilot test reports document the results of these studies. The installed system is divided up into North and South subsystems. The North subsystem has six SVE wells (two were installed during the ITRD pilot study), well points installed in each of the five French drains to function as SVE wells, and fourteen AS wells (six of which were installed at a 45-degree angle (approximately) to sparge the area that is under the landfill). The South subsystem has six SVE wells and nine AS wells. The system can operate with either the North or the South AS and SVE subsystems for variable time periods. Each of the AS and SVE wells have a valve to adjust injection or extraction air flows and pressures as needed to optimize system operation.

Additional details about the AS/SVE construction are found in "Groundwater Treatment System: Air Sparging/Soil Vapor Extraction" United States Department of Energy Mound Plant Final Design Submission R. E. Wright Project No. 97548, March 1997.

A Sutorbilt 5LP (Model: GAELDPA) and Sutorbilt 6LP (Model: GAFLDPA) are used in a two-stage system to provide for the Soil Vapor Extraction system. Both the 5LP and 6LP are driven by a 50-horse power 480 volt three phase electric motor. The system influent goes through a liquid knock out tank, a coalescing filter, an air filter, and carbon filtration prior to input to the 6LP blower. The 6LP blower is the lead blower with its effluent going through a heat exchanger prior to going into the 5LP blower. The average influent temperature to the 6LP blower was approximately 60 degrees Fahrenheit. The average effluent temperature of the 6LP blower was approximately 233 degrees Fahrenheit. The average effluent temperature of the 5LP blower was approximately 226 degrees Fahrenheit.

The average system vacuum, prior to blowers, was approximately –17.62 inches of mercury. The average system flow (5LP+6LP) was approximately 541.84 standard cubic feet per minute. The 6LP operates at 1,667 revolutions per minute while the 5LP operates at 2,368 revolutions per minute. The system has two two-inch vacuum relief valves, prior to the intake of the 5LP and 6LP blowers, that actuate between –18.5 and –19.0 inches of mercury gauge.

4.2 System Maintenance

Regular inspection and maintenance of the AS, SVE, and Gas Chromatography (GC) systems are required for continued effective operation. Regular activities include those performed daily, weekly, monthly, and quarterly as well as on an as needed basis. The following describes the maintenance required for the aforementioned systems. Maintenance and monitoring activities are to be logged in the system logbook (which resides in Building 301-A), in the system calendar book (which resides with the Technician or Engineer), and in the system data tracking spreadsheets (residing on the ER server in the K:\SHARED\SPIVEY\ITRD directory). Example copies of the aforementioned can be found in Attachment F, G, and H respectively.

4.2.1 Air Sparge System

Record readings on all system measuring devices (e.g., temperature, pressure, Magnehelic, etc.) within the treatment building daily.

Grease blowers every 500 hours (every three weeks) of operation.

- Change synthetic oil in blowers every 6,000 hours of operation (every eight months).
- Check and clean/change as required the blower intake filter monthly.
- Record AS well readings monthly and rebalance if necessary, Attachment P.
- Ensure drive belt tension and alignments are correct, adjust as required.
- Change blower drive belts as required due to wear.
- Grease electric blower motor quarterly.
- Note any alarms or reading discrepancies. Determine the underlying cause of the

alarm/reading. Perform necessary maintenance or adjustment(s) to resolve the underlying cause. Perform as required.

- Periodically disassemble gauges and meters and clean according to manufacturers' directions as needed.

- Periodically check AS wells for fouling and clean to permit proper flow of air through sparge points. Perform as indicated by differential pressure (flow) and pressure gauges.
- Determine the underlying cause of any new noises or vibrations then correct the underlying cause as needed.

4.2.2 Soil Vapor Extraction

The SVE lubrication records were changed to primarily being kept on a check sheet, which is maintained in Building 301, and also in a calendar-planning book. A copy of the book can be found in Attachment G. A consolidation of just the lubrication information, on a check sheet that was initiated June 1999, is in Attachment J.

Record readings on all system measuring devices (e.g., temperature, pressure, Magnehelic, etc.) within the treatment building daily.

Grease blowers every 500 hours (every three weeks) of operation.

Change synthetic oil in blowers every 6,000 hours of operation (every eight months).

Check and clean/change as required the intake filters monthly.

Record individual SVE and Piezometer well readings monthly and rebalance if necessary, Attachment P.

Ensure drive belt tension and alignments are correct, adjust as required.

Change blower drive belts as required due to wear.

Grease electric blower motor quarterly.

Note any alarms or reading discrepancies. Determine the underlying cause of the alarm/reading. Perform necessary maintenance or adjustment(s) to resolve the underlying cause. Perform as required.

Periodically disassemble gauges and meters and clean according to manufacturers' directions as needed.

Determine the underlying cause of any new noises or vibrations then correct the

underlying cause as needed.

Drain excess water from carbon tanks with a wet vacuum as required.

Change Vapor Phase Carbon as needed.

4.2.3 Gas Chromatography System

Record measurement and maintenance activities performed in the system logbook.

Replace calibration and carrier gas cylinders when pressure reaches 250 and 500 pounds respectively.

Drain water from coalescing filter prior to pulling a sample for GC analysis.
Clean intake check valves as required.

Bake the oven out at manufactures recommended temperature as indicated by measurement performance.

Periodically set automatic modes to run overnight pulling samples from room to purge input lines and reduce residual carryover.

Replace Tedlar bags as required due to degradation in integrity with use.

Note any alarms or reading discrepancies. Determine the underlying cause of the alarm/reading. Perform necessary maintenance or adjustment(s) to resolve the underlying cause. Perform as required.

Determine the underlying cause of any new noises or vibrations then correct the underlying cause as needed.

4.3 Monitoring

The objective of the monitoring performed on the AS/SVE system is to support the monitoring plan that the ITRD group (including BWXTO personnel) agreed upon. This will ensure that adequate and appropriate data are collected to help optimize the system operation and support evaluation of the cost and performance of the AS/SVE system. Specific objectives include:

Characterizing changes in subsurface hydrogeology and contamination over time,

quantifying the mass removal rates for VOCs achieved by the AS/SVE system,

quantify the cost of removal in units appropriate to the manner of operation,

facilitate optimization of the system,

assess potential interaction with other remedial system components,

assess the ability of the SVE system to capture contaminants volatilized by the AS system,

identify hydraulic impacts under different operating scenarios, and

meet any regulatory requirements for data collection and system performance.

One objective of the monitoring and data collection plan is to ensure that adequate and appropriate data are collected to allow evaluation of the AS/SVE systems ability to remove VOCs and chlorinated VOCs from all contaminated media in the subsurface. To best accomplish this objective, an understanding of the existing contamination and site characteristics is required. Soil samples were collected during system installation to evaluate the extent and nature of contamination and to refine the understanding of the site geology and hydrogeology. Groundwater and soil gas samples were collected and analyzed prior to system start-up to further refine the initial site contamination and geochemistry. The period before start-up and system acceptance is referred to as T_0.

Once the system had begun operating, additional data was collected to evaluate performance and to allow optimization of operations. A number of issues that are of concern in this system include:

The possible formation of an air pocket under a confining glacial till layer that lies atop the groundwater.

The possible formation of preferential pathways for air bubbles in the saturated zone which may hinder system performance.

The ability of the SVE wells to capture contaminants mobilized by the air sparging system.

The effective radius of influence of the SVE wells with large variability in soil air permeability between wells.

The impact of atmospheric air introduced by air sparging on the groundwater geochemistry (e.g., formation of calcite and iron precipitates) and aquifer transmissivity.

The impact of groundwater mounding on the existing hydrodynamics of the site.

The frequency with which the system should be cycling between north and south subsystems.

Once the system construction was completed, a thirty-day start-up period began under the responsibility of the installation contractor. The purpose of this was to insure all the equipment that was installed worked correctly as per the design and to provide a training period for Mound personnel. In addition, the system vacuum/pressures and flow rates were balanced to the extent practicable in order to maximize system performance. This was accomplished by varying the applied vacuum/pressure at each well and adjusting the cycle time on the north and south subsystems to maximize contaminant removal rates. After the system was accepted by Mound, the system was put into continuous operation under Mound personnel responsibility.

4.3.1 Sampling

Activity: Soil Gas Sampling – Static, Attachment N.

Purpose: Monitor soil gas concentrations over time.

Locations: SVE Extraction wells and vadose zone piezometers

Sampling Method: Purge well volume and capture in Tedlar bag or Summa canister.

Analytical Method:

Tedlar bags: On-site Sentex Systems, Inc. continuous monitor Gas Chromatograph (GC).

Summa Canister: TO-14 off-site contract lab.

Frequency: T_0 (Time zero) prior to operation of the AS/SVE system and quarterly, thereafter. Also, after change in SVE system (vacuum or flow in any extraction wells).

Comments: Samples collected with SVE system not active on well while being sampled. A portable GC capable of measuring target contaminants at MDL of ~one ppm Loop Mode, ~10 ppb Preconcentrator Mode.

Activity: Soil Vapor Extraction System Monitoring, Attachment Q.

Purpose: Measure mass of contaminants removed as a function of system operations.

Locations: Extraction manifold(s)

Sampling Method: Automated vapor sampling from extraction manifolds.

Analytical Method: A GC/micro argon ionization detector (10-ppb sensitivity).

Frequency: Twice per week. Possible shorter term tests with higher frequency to facilitate system optimization (cycle lengths).

Comments: Sentex Systems, Inc. Sentoscan System.

Activity: Groundwater Extraction Well Monitoring, Attachment C and D.

Purpose: To assess AS/SVE impacts on groundwater extracted by pump and treat system.

Locations: Three existing extraction wells.

Sampling Method: Traditional, samples from each operating extraction well.

Analytical Method: SW-846 off-site contract lab

Frequency: Monthly.

Comments: Sept. 1997 and earlier samples were composites from all three extraction wells.

4.3.2 Tracer Test

Activity: Tracer Test –AS/SVE Vapor Capture/Mobility, Attachment R.

Purpose: To determine if AS vapors are being effectively captured by SVE wells and if there is potential off-site mobilization of contaminants beyond SVE capture zone.

Locations: Inject tracer gas into AS system. Collect soil gas samples from SVE well influent header and monitor additional wells with screens open above the water table.

Sampling Method: Slow purge gas sampling.

Analytical Method: On-site GC for halon 1211.

Frequency: Once, during a low water table condition.

Comments: Measure of relative AS vapor capture efficiency for individual SVE wells. Check to see if AS and SVE operate properly in tandem. Tracer detection in wells outside the radius of influence would indicate potential for off-site migration of contaminants.

4.3.3 System Optimization

Activity: AS Well Pneumatic Performance.

Purpose: Establish baseline AS well performance (sparge flow rates).

Locations: AS wells.

Method: Establish pressure/flow performance curves for AS wells.

Frequency: Complete during startup phase, postponed to 2000.

Comments: Fluctuations in water table elevations can alter flow rates.

Activity: AS System Pneumatics.

Purpose: Monitor air injection pressures/flows on AS system as well as individual well performance.

Locations: AS header and each injection well.

Method: Pressure gauge and Pitot tube/Magnahelic or a thermal anemometer.

Frequency: Daily on the header, monthly on each well (subject to being shortened to weekly), and after any change in system.

Comments: None.

Activity: SVE System Pneumatics, Attachment H, J, and L.

Purpose: To monitor the vacuum and flows from each extraction well.

Locations: SVE header, all extraction well locations, and all piezometer locations.

Method: Vacuum gauge and Pitot tube/Magnahelic or a thermal anemometer.

Frequency: Daily on the header, monthly on each well (subject to being shortened to weekly), and after any change in system.

Comments: None.

4.4 System Performance

The systems performance is assessed by two metrics. First, the system is evaluated upon the amount of time it is actively remediating verses the amount of time the system is down (off or not actively remediating), which is known as Uptime/Downtime. Second, the system is evaluated upon the amount of contaminants that are removed from the area being remediated, which is known as Mass Removal.

4.4.1 Uptime/Downtime

The SVE system is operated and monitored by BWXTO and overseen by the customer (DOE). Performance is based upon the amount of time, in percent, the system is in operation. Each month the uptime is reported via the FFA Monthly Report. An example of the data reported is contained in Attachment M. Typically the system would be down only for maintenance events described in section 4.2; however, unforeseen equipment failures contribute to this number as well.

The SVE system is interlocked with the Pump-and-Treat (P&T) system air stripper. This means that in order for the SVE system to run the P&T system must be active, or running. If for any reason the P&T system is shut down (i.e., cleaning of air stripper trays) the SVE system is consequently down. This is necessary due to the transport of liquids from the SVE Condensate knockout (KO) tank, which potentially contain contaminants, to the air stripper for treatment.

The SVE system shut down on six extended occasions during the reporting period. First, the lower float switch in the water knock out tank failed on January 13, 1999 for a down time of 32.5 hours. Second, the 50 HP electric motor bearings failed on February 23, 1999 for a down time 50 hours. Third, the small SVE blower (5LP) experienced a failure on May 25, 1999, which resulted in 456 hours of down time. Fourth and fifth, the large SVE blower (6LP) failed twice and resulted in the system being down for approximately 26.25 and 288 hours. The 6LP failure was attributed to bypassing the carbon and going with direct emission, since the tracer test required a bypass of the carbon filtration. The 50 HP electric motor was also replaced during this outage. Sixth, the system was down for the replacement of the float switches in the water knock out tank which resulted in 27.75 hours of down time.

The system total down time for the reporting period was 1044 hours (88.14% uptime). If the downtime is adjusted not to include equipment failure, the total uptime for the reporting period is 98.77% (8808 total hours, 108 hours maintenance, 936 hours equipment failure). A more detailed breakdown of the system uptime/downtime can be gleaned from the copy of the system logbook, calendar book and down time report in Attachment F, G and K respectively.

4.4.2 Mass Removal

Mass removal, for the remediation system, can be estimated in many ways. Two different methods of estimation are utilized for the SVE system. First, Sandia National Laboratory (SNL) method estimates the VOCs removed based upon mathematically fitted functions and an hour by hour calculation of contaminants removed. This method induces a slight positive bias due to calculating on an hourly basis. However, it is negligible when compared to other possible errors and variables within the system.

Second, Mound calculations for mass removal are based upon the analytical test results obtained from Summa and GC data. Examples of the Summa analytical results are contained in Attachment O. The influent contaminant concentration (in PPM) is mathematically fitted, with respect to zone elapsed time. The mathematical algorithm fitting is accomplished with TableCurve 2D version four. The equation that best represents the data is selected and integrated with respect to running time with Mathcad Professional version seven. Two conversion factors are used in the calculation. First, 24.5 is used to convert to mg/m^3. Second, 6.2428E-8 is used to convert to lbs/ft^3. The individually calculated pounds removed for each contaminant are then summed together to obtain total pounds of VOCs removed. An Example of this can be found in Attachment P.

Mass removal calculations are typically performed on a monthly basis, approximately. As time progresses and mass removal rates decline the frequency of calculations will lessen. The approach utilized by SNL and Mound are the same. The only difference is that SNL uses an Excel spreadsheet to calculate verses Mound choosing to use Mathcad to integrate the entire period. Both approaches end up with numbers in good agreement. The two independent calculations act as a cross check on the results obtained. Approximately 789.45 pounds of contaminants were removed by the SVE system from December 31, 1998 to January 12, 2000. This equates to 3,283.45 pounds of contaminates removed by SVE from date of inception.

4.4.3 Notable Events

The functional components of the GC system were shipped back to Sentex Systems on January 13, 1999 for repair. The reworked components were installed on January 21, 1999. The GC has been operating much better since.

SNL has experienced a severe cut in budgetary support for the Mound project and has accordingly curtailed involvement. The current plan for the ITRD group is to complete the cost performance report in FY 2000.

The restart of the AS system has been delayed because the EPA has requested that additional contaminant removal due to the AS be quantified. This requires a stable influent contamination level prior to the initiation of the AS, as well as operation of the GC in purge and trap mode in order to detect the estimated small contaminant influent increase that is expected from air sparging. Details as to the monitoring that will be required are being resolved. The AS is expected to resume in 2000 and the draft plan can be found in Attachment S.

5.0 System Operations Projections

It is anticipated that the P&T will continue full time remediation until the criterion set forth in "CRITERIA FOR INITIATING A REBOUND TEST AT OU-1" is achieved, Attachment T. When cleanup COC levels (agreed upon in concert with the EPA, DOE, ITRD, and BWXTO) are achieved, cycling of the system will be initiated to assess if there will be any rebound effects.

By extrapolation of the mathematical functions for the SVE system, it is estimated that it will take an additional two years of remediation to get the majority of the COCs in the soil below their respective reporting limit of the off-site laboratory. Since this is not a practical approach, a risk based approach will be investigated. It is anticipated that the systems could be shut down for rebound testing as early as December 2000, provided the criterion set forth in Attachment T are met. Miamisburg Environmental Management Project (MEMP), in conjunction with regulators, will oversee and evaluate progress verses ROD compliance as well as the technical performance of the systems.

Attachment A

Pump-and-Treat System Logbook

12-29-98 520
412 - 22106275 - 34875
413 - 39637260 - 60770 > 117980
414 - 27338565 - 22335
All PALAS O/C

12/30/98 DREWSPERSE 21 3/4
07:05 412 = 22145520
413 = 39705660
414 = 27362130
Monthly Measures
Sump + Sight TUBE = OK (@ mid MARK)
Inlet AIR Temp = 50°F
STRIPPER DIA PRESS = 18
Inlet H20 Temp = 58°F
" " PRESS = 6 3/4 psi
412 = APP. 27 GPM
413 = 46
414 = 28
DREWSPERSE = @ 25 1/4" ADDED REMAINDER in BUCKET
12/31/98 Terran service on SVE system
1430 shut down
12/31/98 System turned back on 1530

2nd 1-4-99 440
412 - 22322580 - 174480
413 - 40014900 - 304760 > 582070
414 - 27466450 - 102830
Inlet Air Temp - 47°F
WC - 18
Inlet H2O press 6 1/2 psi
Inlet H2O Temp 58°F
Sump + Sight - OK
DREWSPERSE = @ 22 3/4"
1-5-99 400
412 - 22358260 - 35670
413 - 40077035 - 62135 > 116765
414 27485416 - 18960
All PALAS - OK

1/5/99 DREWSPERSE = @ 21 3/4"
412 = APP 23 GPM
413 = 47
414 = 2°

412 = 22371950
413 = 40100930
414 = 27492610
INLET AIR = 46° F
STRIPPER DIF PRESS = 18
INLET H2O TEMP = 59° F
" " PRESS = 6 3/4 PSI
Sight TUBE = OK @ (MID MARK)
Sump Pump = OK

1-6-99 355
412 - 22394600 - 36340
413 - 40140930 - 63395 } 120075
414 - 27505750 - 20340
All PARAS OK
DREWSPERSE = @ 20 3/4"

1-7-99 405
412 - 22431400 - 36800
413 - 40204640 - 64210 } 120760
414 - 27525500 - 19750
All PARAS OK
DREWSPERSE = @ 19 3/4"

1/11/99 DREWSPERSE = @ 16"
1028 412 22590948 -
413 40482940 -
414 27599482 -

1/12/99 DREWSPERSE = @ 15"
09:30

1/12/99 412 = 22625580
413 = 40542920
414 = 27614811
PH Samps in/out + ISCO
1/13/99 412 = 22656920
413 = 40597610
414 = 27628410
all - OK DH
1-14-99 450
412 - 22694275 - 32355
413 - 40694160 - 56490 / 103985
414 - 27643560 - 15150
all points OK
DREWSPERSE = @ 13"
412 - 22702550
413 - 40677360
414 - 27650340
INLET AIR = 50°F
STRIPPER DIA PRESS = 18
INLET H2O TEMP = 58°F
" " PRESS = 7½ psi
SIGHT TUBE = OK (MID MARK)
SUMP PUMP = OK
412 = APP. 28 GPM
413 = 46
414 = 30
1-18-99 412 = 22837270
413 = 40915210
414 = 27725750
all parameters - OK DH
DREWSPERSE = @ 9"

1-19-99 405
412 - 22860410 - 31140
413 - 40970660 - 55450 > 107340
414 - 27746500 - 26750
All PARAS OK
DREWSPERSE = @ 8"
1-20-99 410
412 - 22903800 - 35380
413 - 41034025 - 63365 > 127635
414 - 27775380 - 28880
All PARAS OK
DREWSPERSE = @ 7"
Inlet AIR = 54° F
STRIPPER DIA PRESS = 18
Inlet H20 Temp = 58° F
" " PRESS = 6½ PSI
SIGHT TUBE = OK @ (MID MARK)
SUMP PUMP = OK
412 - 22908130
413 - 41041850
414 - 27779240

412 = APP. 27 GPM
413 = 47
414 = 28

1-21-99 410
412 - 22938840 - 35040
413 - 41097340 - 63315 > 131035
414 - 27805060 - 32680
All PARAS OK
DREWSPERSE = OK @ 6"

1-25-99 425

412 - 23078450 - 139610

413 - 41352530 - 259490 > 543945

414 - 27956905 - 148845

Inlet air Temp - 57°F

WC - 18.5

Inlet H_2O Temp - 58°F

Inlet H_2O Press - 7 psi

Sump + Sight - OK

DREWSPERSE = @ 1½" Before changing

DREWSPERSE = @ 29" After change

1-26-99 405

412 - 23113430 - 34980

413 - 41417300 - 64470 > 136,555

414 - 27994010 - 37105

All parts OK

DREWSPERSE = @ 28"

412 = 28 APP. GPM

413 = 47

414 = 28

412 = 23118230

413 = 41426270

414 = 27999260

1-27-99 415

412 - 23149100 - 35670

413 - 4148 3340 - 66040 > 140740

414 - 2803 3040 - 39030

All parts OK

DREWSPERSE = @ 27"

Inlet Air = 62°F

Stripper Dia Press = 18

Inlet H2O Temp = 58°F

" " Press = 7 psi

Sight + Sump = OK (@ mid mark)

DREWSPERSE = @ 29¼" ADDED REMAINDER IN BUCKET

1-28-99 405

412 · 23183725 – 34625

413 · 41548140 – 64800) 137780

414 · 28071395 – 38355

All areas ok

DREWSPERSE = @ 28"

2-1-99 420

412 – 23322310 – 138585

413 – 41810365 – 262225) 555205

414 – 28225790 – 154395

Monthly Measures

Inlet Air Temp 60°F

WC – 18¼

Inlet H_2O Press · 6¾

Inlet H_2O Temp 60°F

Sump + Sight · ok

DREWSPERSE = @ 23½"

412 = APP 27 GPM

413 = 48

414 = 28

2-2-99 405

412 – 23355640 – 33330

413 – 41874720 – 64355) 135435

414 – 28263540 – 37750

All areas ok

DREWSPERSE = @ 22¼"

INLET AIR TEMP = 60°F

STRIPPER DIA PRESS = 18¼

INLET H2O TEMP = 60°F

" " PRESS = 6¾

SIGHT TUBE = OK @ (MID MARK)

SUMP PUMP = OK

2-3-99 410

412 – 23389045 – 33405

413 – 41939720 – 65000) 141080

414 – 28306215 – 42675

All areas ok

DREWSPERSE = @ 21¼"

2/3/99 412 - 23394380
413 - 41950030
414 - 28313340

2-4-99 410
412 - 23421970 - 32925
413 - 42004430 - 64710 > 142210
414 - 28350790 - 44575
all parts OK
DREWSPERSE = @ 20¼"

2-5-99 420
412 - 23551540 - 129570
413 - 42242235 - 257805 > 563585
414 - 28527000 - 176210
Inlet Air Temp - 55°F
wc 18.5
Inlet H_2O Temp 58°F
Inlet H_2O Press Typ.
Sump Sight - OK
DREWSPERSE = @ 16"
412 = APP. 27 GPM
413 = 47
414 = 30

2-8-99 400
412 - 23583430 - 31890
413 - 42326555 - 64320 > 139780
414 - 28570570 - 43570
all parts - OK
DREWSPERSE = @ 15"
412 - 23587960
413 - 42335280
414 - 28576810

2-10-99 - 420
412 - 23616090 - 32660
413 - 42391300 - 64745 > 141995
414 - 28615760 - 44590
all parts ok
DREWSPERSE = @ 13¾"

2-11-99 400 2/16/99

412 - 23647815 - 31825

413 - 42455420 - 64120 > 139745

414 - 28058960 - 43500

All gauges ok

DREWSPERSE = @ 12¾"

Inlet Air Temp = 64°F

Stripper Dia Press = 18¼ 2-17

Inlet H20 Temp = 60°F

" " Press = 7 psi

Sight Tube = OK @ (mid mark)

Sump Pump = OK

2-15-99 425

412 - 23776080 - 125165 2-

413 - 42714350 - 258930 > 563540

414 - 28835405 - 176445

Inlet Air Temp 55°F

W C 18 lb

Inlet H2O Press 7 psi

Inlet H2O Temp 58°F 2-

Sump + Sight - OK

DREWSPERSE = @ 8¾"

412 = APP. 27 GPM

413 = 47

414 = 32

412 = 23779875

413 = 42722040

414 = 28840640

2-16-99 405

412 - 23807120 - 31040

413 - 42777975 - 63625 > 157960

414 - 28878700 - 43395

All gauges ok

DREWSPERSE = @ 7¾"

2/16/99

INLET AIR TEMP = 60°F
STRIPPER DIA GRAD = 18 1/4
INLET H2O TEMP = 59°F
" " PRESS = 7 PSI
Sight Tube = OK @ (MID MARK)
SUMP PUMP = OK

2-17-99 405
412 - 23838110 - 30990
413 - 42542500 - 64525 } 139390
414 - 25922575 - 43875
All PARAS OK
DREWSPERSE = @ 6 3/4"

2-18-99 - 400
412 - 23868715 - 30605
413 - 42906990 - 63990 } 138055
414 - 25966035 - 43460
All PARAS OK
DREWSPERSE = @ 5 3/4"

2-22-99 420
412 - 23991570 - 122795
413 - 43164430 - 257940 } 554425
414 - 29135725 - 173690
Inlet Air Temp 53°F
WC - 18.5
Inlet H2O Press 6 3/4 PSI
Inlet H2O Temp 59°F
Sump & Sight - OK
7:25 System Shutdown for maint. (Lube & Filter)
7:41 System Restarted
DREWSPERSE = @ 1 1/4"
412 = APP. 27 GPM
413 = 47
414 = 33

2/22/99 Inlet Air Temp = 51° F
Stripper Dif Press = 18 3/4
Inlet H2O Temp = 59° F
" " Press = 7
Sight Tube = OK @ (mid mark)
Sump Pump = OK

2-23-99 400
412 - 24025300 - 33790
413 - 43227045 - 62615 > 138620
414 - 29181940 - 42215
All parts OK
Drewsperse = @ 1/2" Before Changing
Drewsperse = @ 29" After Change

2-24-99 400
412 - 24060420 - 35120
413 - 43290580 - 63545 > 141280
414 - 29224555 - 42615
All parts OK
Drewsperse = @ 28 1/2" ADDED Remainder in Bucket
412 = 24064960
413 = 43298850
414 = 29230190

2-25-99 400
412 - 24095710 - 35290
413 - 43354375 - 63785 > 141570
414 - 29267050 - 42495
All parts OK
Drewsperse = @ 27 1/2"

Monthly Measures

3-1-99 425
412 - 24237290 - 141580
413 - 43610325 - 255950 > 565550
414 - 29435070 - 168020
Inlet Air Temp 54° F
WC - 18 1/2
Inlet H2O Temp 60° F
Inlet H2O Press 7 psi
Sump + Sight OK

3-1-99

412 = APP. 27 GPM
413 = 47
414 = 32
DrewsPerse = @ 23 3/4"

3-2-99 400

412 - 24272020 - 34730
413 - 43673400 - 63075 > 140235
414 - 29477500 - 42430
All paras ok
DREWSPERSE = @ 22 3/4"
INLET AIR TEMP = 54°F
STRIPPER DIA PRESS = 18 1/2
INLET H2O TEMP = 60°F
" " PRESS = 7 1/4
SIGHT TUBE = OK @ (mid mark)
SUMP PUMP = OK
412 = 24276620
413 = 43681740
414 = 29483140

in Barrel.

3-3-99 410

412 - 24367480 - 35460
413 - 43737605 - 64205 > 143150
414 - 29520985 - 43485
All paras ok
DREWSPERSE = @ 21 3/4"

3-4-99 350

412 - 24342565 - 35085
413 - 43501100 - 63495 > 141560
414 - 29543965 - 42980
All paras ok
DREWSPERSE = @ 20 3/4

3-8-99 355

412 - 24484150 - 141505
413 - 44057910 - 256810 > 571780
414 - 29737300 - 173335
Inlet air temp - 58°F WC - 15 3/4

3/8/99 Inlet H_2O Temp 59°F Inlet H_2O Press 7¼ psi

Sump + Sight Tube - OK

DREWSPERSE = @ 16¾"

412 = APP. 27 GPM

413 = 46

414 = 32

3-9-99 435

412 - 24520620 - 36470

413 - 44124210 - 66300 > 147670

414 - 29782200 - 44960

All PARAS OK ?

DREWSPERSE = @ 15½"

INLET AIR TEMP = 60°F

STRIPPER DIA PRESS = 18½

INLET H20 TEMP = 59°F

" " PRESS = 7¼

SIGHT TUBE = OK @ (mid MARK)

SUMP PUMP = OK

3-10-99 410

412 - 24555125 - 34505

413 - 44187000 - 62790 > 139725

414 - 29824630 - 42430

All PARAS OK

DREWSPERSE = @ 14½"

412 = 24559770

413 = 44195590

414 = 29830360

3-11-99 405

412 - 24590440 - 35315

413 - 44251220 - 64220 > 142780

414 - 29867875 - 43245

All PARAS OK

DREWSPERSE = @ 13½"

3-14-99 900 Dec Press

412 - 24704840 - 114400

413 - 44459630 - 208410 / 462,55

414 - 30007220 - 139345

3-15-99 425
412 - 24731650 - 26810
413 - 44508560 - 48930 > 108285
414 - 30039765 - 32545
Inlet Air Temp 50°F
P.C. 18 3/4
Inlet H2O Temp 59°F
Inlet H2O Press 7 psi
Sump + Sight - OK
DREWSPERSE = @ 9 3/4"
412 = APP. 27 GPM
413 = 46
414 = 31
3-16-99 355
412 - 24766045 - 34395
413 - 44571440 - 62880 > 138800
414 - 30081290 - 41525
All para's OK
DREWSPERSE = @ 8 3/4"
3-17-99 420
412 - 24801335 - 35290
413 - 44636310 - 64870 > 142815
414 - 30124045 - 42755
All para's OK
DREWSPERSE = @ 7 3/4"
Inlet Air Temp = 54°F
Stripper Dia Press = 18 1/2
Inlet H20 Temp = 59°F
" " Press = 7 1/4
Sight Tube = OK @ (mid mark)
Sump Pump = ~~##~~ SUMP PUMPED OUT (OK)
412 = 24805980
413 = 44644790
414 = 30129670

3-18-99 400 — 3/25/99 06:30

412 - 24835670 - 34335

413 - 44699530 - 63220 > 139090

414 - 30165580 - 41535

All paras OK

DREWSPERSE = @ 6 3/4"

3-22-99 350 — 3-29-

412 - 24973200 - 137530

413 - 44954555 - 255025 > 555,400

414 - 30328425 - 162545

Inlet Air Temp 58°F

U.C. 18 1/2

Inlet H_2O Press 7 psi

Inlet H_2O Temp 59°F

Sump + Sight - OK

DREWSPERSE = @ 2 3/4"

412 = APP. 27 GPM

413 = 46

414 = 31

3-23-99 - 430 — 3-30

412 - 25008460 - 35260

413 - 45020150 - 65595 > 140835

414 - 30368405 - 39980

All paras OK — 3-31-9

DREWSPERSE = @ 1 3/4"

INLET AIR TEMP = 54°F

STRIPPER DIA PRESS = 18 1/4

INLET H2O TEMP = 59°F

" " PRESS = 7 1/4

SIGHT TUBE = OK @ (mid Mark) — 4-1-9

SUMP PUMP = OK

3-24-99 410 — MONTHLY MEASURES

412 - 25042740 - 34280

413 - 45083880 - 63720 > 135940

414 - 30406345 - 37940

All paras OK

3/25/99 DREWSPERSE = @ 1/4" Before changing
06:30 DREWSPERSE = @ 29 3/4" after change
412 = 25093270
413 = 45178510
414 = 30462180

3-29-99 355
412 - 25212725 - 135770
413 - 45403520 - 255685 > 535810
414 - 30588405 - 144355
Inlet Air Temp 57°F
WL 18 1/4
Inlet H_2O PRESS 7 psi
Inlet H_2O Temp 59°F
Sump + Sight - OK
DREWSPERSE = @ 25 3/4"
412 = APP. 27 GPM
413 = 46
414 = 31

3-30-99 DREWSPERSE = @ 24 3/4"
412 = 25262540
413 = 45497910
414 = 30637870

3-31-99 350
412 - 25280520 - 33780
413 - 45532215 - 64315 > 131105
414 - 30655285 - 33010
All gages OK
DREWSPERSE = @ 23 3/4"

4-1-99 400
412 - 25314240 - 33720
Monthly Measures 413 - 45596725 - 64510 > 130635
414 - 30687690 - 32405
All gages OK
DREWSPERSE = @ 22

4/1/99

Inlet Air Temp = 60°F
Stripper Dia Press = 18¼
Inlet H2O Temp = 7 psi
" " Press = 59°F
Sight Tube = OK @ (mid mark)
Sump Pump = OK

4/5/99 Inlet pressure = 5psi
Inlet temp = 15°c
pressure gauge air = 18 mmHg
~~Int~~ Air temp = 55°F
Sight tube = OK
Drewsperse = @ 18¾"

4/6/99 all parameters OK
412 = 25482160 - 32800
413 = 45923320 - 64210 } 125950
414 = 30840350 - 28940
Drewsperse = @ 17¾"
412 = APP. 26 GPM
413 = ↓ 47 ↓
414 = 28 *System Lubed at this date

4/7/99 all parameters OK
0650 412 = 25514920 - 32800
OH 413 = 45987390 - 64070 } 125150
414 = 30868030 - 28280
Drewsperse = @ 16¾"
Inlet Air Temp = 58°F
Stripper Dia Press = 18¼
Inlet H2O Temp = 59°F
" " Press = 6¾
Sight Tube = OK @ (mid mark)
Sump = Sump Pumped out

4/8/99 412 = 25545640 - 33060
0650 413 = 46651970 - 64580 } 125830
414 = 30896530 - 28190
all parameters OK
Drewsperse = @ 15¾"

4/8/99

412 = 25549210
413 = 46054320
414 = 30897840

4/10/99 DREWSPERSE = @ 13¾"

4-12-99 425

412 - 25671590 - 127960
413 - 46308300 - 251330) 183205
414 - 31001235 - 104915

Turbine temp 60°F
Water 15°C
Inlet Hyd Press 65 psi
Turbine temp 59°F
Sump + Sight - OK

DREWSPERSE = @ 12"

412 = APP. 26 GPM
413 = 46
414 = 30

THIS DATE 4-13-99 425

412 - 25709540 - 32160
413 - 46367190 - 63890) 121485
414 - 31026670 - 25435

All pumps OK

DREWSPERSE = @ 11"

4-14-99 425

412 - 25739870 - 32230
413 - 46431570 - 64380) 121970
414 - 31052030 - 25360

All pumps OK

DREWSPERSE = @ 10¼"

412 = 25743370
413 = 46438620
414 = 31054830

4/21/99

4-15-99 430

412 - 25772150 - 32280

413 - 46496300 - 64730 > 122425

414 - 31077445 - 25415

All paras OK

DREWSPERSE = @ 9¼"

INLET AIR TEMP = 60° F

STRIPPER DIA PRESS = 18

INLET H2O TEMP = 59° F

" " PRESS = 6¾

SIGHT TUBE = OK @ (MID MARK)

SUMP = PUMPED OUT (OK)

4-19-99 425

412 - 25899150 - 27000

413 - 46754050 - 257750 > 485560

414 - 31178655 - 26120

Inlet Air Temp 60° F

[illegible] 15

4-26-99

Inlet H2O Temp 59° F

Inlet H2O Press 7 psi

Sump + Sight tube - OK

DREWSPERSE = @ 5¼"

4-20-99 425

412 - 25930735 - 31585

413 - 46818760 - 64710 > 122425

414 - 31204785 - 26130

All paras OK

DREWSPERSE = @ 4¼"

412 = 25934120

413 = 46826340

414 = 31207870

4-27-99

4-21-99 425

412 - 25962190 - 31435

413 - 46883360 - 64600 > 122270

414 - 31231000 - 26215

All paras OK

DREWSPERSE = @ 3¼"

4/21/99

Inlet Air Temp = 60° F
Stripper Dia Press = 18 1/4
Inlet H2O Temp = 59°
" " Press = 7 1/4
Sight Tube = OK @ (mid mark)
Sump = OK
Drewsperse = @ 3 3/4" Added Remainder in Bucket

4.22.99 530
412 - 25991780 - 29590
413 - 46945020 - 61660 > 116920
414 - 31254670 - 25670
All paras OK
Drewsperse = @ 3"
412 = 27 App. GPM
413 = 46
414 = 30

4-26-99 Pressure 18 psi
air temp 55°F
inlet H2O 6 psi
temp 44°F
412 = 24115540
413 = 47214250
414 = 31314610
Inlet Air Temp = 70°F
Stripper Dia Press = 18 1/4
Inlet H2O Temp = 59°F
" " Press = 6 1/2
Sight Tube = OK @ (mid mark)
Sump = OK

4-27-99 All parameters - OK
412 = 26147290
413 = 47276 60
414 = 3140 2190
412 = App. 26 GPM
413 = 46

4/27/99 DREWSPERSE 30 7/8"

4/28/99 DREWSPERSE = @ 30"

Monthly Measures

412 = 26177610

413 = 47341680

414 = 31431340

4/29/99 410

412 = 26203650 - 26160

413 = 47398350 - 57620 > 108575

414 = 31456615 - 25385

All gases OK

4/29/99 DREWSPERSE = @ 28 3/4"

412 = 26206920

413 = 47405580

414 = 31459840

Inlet air temp = 60°F

Stripper Dia Press = 18 1/4

Inlet H2O Temp = 59°F

" " Press = 6 1/2

Sight Tube = OK @ (mid MARK)

Sump = OK

5-3-99 410

412 = 26321912 - 118260 08:50

413 = 47657900 - 259560 > 493940

414 = 31572735 - 116120

Inlet Air Temp 57°F 16:4

WC 18

Inlet H2S Press 6 1/2 psi

Inlet H2O Temp 60°F

Sump + Sight - OK

DREWSPERSE = @ 24 1/2"

412 = APP. 25 GPM

413 = 47 5

414 = 28

14:08 System shut down to change filter

14:20 System back on Cleaned Pre filter New main filter

~~16:46 System b~~

5 [illegible] 99 355
412 - 26353860 - 31890
413 - 47719905 - 62005 > 122105
414 - 31600955 - 28220
All DARAS OK
DREWSperse = @ 23½"
412 = 26358640
413 = 47728670
414 = 31605080
5-5-99 420
412 - 26389780 - 35980
413 - 47784990 - 65085 > 130495
414 - 31630385 - 29430
All DARAS OK
DREWSPERSE = @ 22½"
Inlet Air Temp = 66° F
STRIPPER DIA PRESS = 18¼
Inlet H2O Temp = 59° F
" " PRESS = 7
Sight Tube = OK (MID MARK)
Sump = OK
08:50 System Shut down per request of Mark Gilliat for Piezom msmts/eval
LMI, ISCO Shut down also
16:46 System Restarted
5-6-99 420
412 - 26413520 - 23740
413 - 47827800 - 42810 > 86915
414 - 31650750 - 20365
All DARAS OK
DREWSPERSE = @ 21¾"
5-16-99 [illegible]
412 - 26556960 - 113440
413 - [illegible] 085169 - 267305 > 524255
414 - 31764260 - 135[illegible]
Inlet Air Temp 60°F [illegible] Press 7 psi
[illegible] 59°F

5/10/99 DREWSPERSE = @ 17½"
412 = 26562230
413 = 48094690
414 = 31768310
5-11-99 425
412 - 26592460 - 35500
413 - 48148700 - 63555) 126265
414 - 31791430 - 27170
All paras OK
DREWSPERSE = @ 16½"
INLET AIR TEMP = 64° F
STRIPPER DIA PRESS = 18¾
INLET H2O TEMP = 59° F
" " PRESS = 7
SIGHT TUBE = OK @ (MID MARK)
SUMP = OK
5-12-99 920
412 - 26627970 - 35510
413 - 48212345 - 63645) 125705
414 - 31817950 - 26550
All paras - OK
DREWSPERSE = @ 15½"
412 = 28 APP. GPM
413 = 47
414 = 30
5-13-99
412 - 26664135 - 36165
413 - 48277290 - 64945) 127700
414 - 31844570 - 26580
All paras OK
DREWSPERSE = @ 14½"
5/14/99 DREWSPERSE = @ 13½"
412 = 26705420
413 = 48351740
414 = 31876280

5-17-99 1145
412 - 26805800 - 41665
413 - 48533730 - 256440 > 500955
414 - 31947420 - 102950
Inlet Air Temp 64 °F
U.C. 18¼
Inlet H2O Press 6¾ psi
Inlet H2O Temp 59 °F
Sump & Sight - OK
DREWS PERSE = @ 10½"
412 = 27 APR GPM
413 = 47
414 = 29
5-18-99 425
412 - 26840480 - 34680
413 - 48597100 - 63370 > 121165
414 - 31970535 - 23115
All gauges OK
5-19-99 420
412 - 26875400 - 34920
413 - 48661225 - 64125 > 121810
414 - 31993400 - 22765
DREWS Perse = @ 8½"
INLET AIR Temp = 61°F
STRIPPER DIA PRESS = 18½
INLET H2O temp = 59°F
" " PRESS = 6¾
SIGHT Tube = OK @ (MIDMARK)
SUMP = OK
5-20-99 430
412 - 26901000 - 25600
413 - 48725305 - 64080 > 112125
414 - 32015845 - 22445
All gauges OK
DREWS PERSE = @ 7½"
412 = 26917930
413 = 48740150
414 = [illegible]

118

5/21/99

07:25 DREWSPERSE = @ 6½"

5/22/99 09:15 DREWSPERSE = @ 5½"

5-24-99 415

412 - 27045840 - 144800

413 - 48982100 - 256795 > 487800

414 - 32101990 - 84145

Inlet Air Temp - 61°F

W.C. .8

Inlet H_2O Press 5 psi

Inlet H_2O Temp 60°F

Sump + Sight OK

DREWSPERSE = @ 3½"

412 = 27050530

413 = 48991060

414 = 32104930

5-25-99 415

412 - 27079200 - 33390

413 - 49009900 - 63800 > 117690

414 - 32122540 - 20550

All valves OK

09:45 System Shut down for maint.

09:52 Restart without 414

414 Locked out for Redevel.

DREWSPERSE = @ 2¼"

5-26-99 415

Monthly Measures

412 - 27115580 - 36380

413 - 49111355 - 65455 > 106590

414 - 32127245 - 4705

All valves OK

DREWSPERSE = @ 1½"

412 = APP. 27 GPM

413 = 47

Inlet Air Temp = 66°F

Stripper Dia Press = 18

Inlet H2O Temp = 59°F

Inlet Press = 5¾

Sight Tube = OK Below mid mark 1½" app.

5-27-99 410
412 - 27152522 - 36940
413 - 49176610 - 65255) 102195
414 - 32127245 - 0
All gauges o.k.
DREWSPERSE = @ 3/4" Before Changing
412 = 27 APP. GPM.
413 = 46
414 = 0 OFF
DREWSPERSE = @ 29" After Changing
6-1-99 430
412 - 27339360 - 36842
413 - 49507235 - 330629) 517465
414 - 32127245 - 0
Inlet Air Temp 67°F
PC 18
Inlet H2O Temp 59°F
Inlet H2O Press 68/0 psi
Sump + Sight - O.K.
DREWSPERSE = @ 23½"
*414 RESTARTED @
414 = 30 APP. GPM
6-2-99 410
412 - 27374355 - 34995
413 - 49569785 - 62550) 122580
414 - 32152680 - 25435
All gauges o.k.
DREWSPERSE = @ 22½"
SUMP PUMPED OUT
DREWSPERSE = @ 23½" ADDED REMAINDER IN BUCKET
INLET AIR TEMP = 69° F
STRIPPER DIA PRESS = 18½
INLET H2O TEMP = 59° F
" " PRESS = 7
SIGHT TUBE = OK @ (MID MARK)
412 = 27381220
413 = 49582170
414 =

6-3-99 1105
412 - 27409750 - 34395
413 - 49637760 - 61975 > 138170
414 - 32194480 - 41800
All paras - OK
DREWSPEXSE = @ 22½"
412 = 26 APP. GPM
413 = 45
414 = 30
6-7-99 1420
412 - 27546650 - 137900
413 - 49879275 - 247515 > 552965
414 - 32362030 - 167550
Inlet Air Temp 70°F
WC 183
Inlet H_2O press 7 psi
Inlet H_2O Temp 60 °F
Sump + Sight - OK
6-8-99 1100
412 - 27580575 - 33925
413 - 49990530 - 120755 > 135785
414 - 32403135 - 41105
All paras OK
6-9-99 1420
412 - 27615825 - 35230
413 - 50002990 - 62960 > 133080
414 - 32438025 - 34890
All paras OK
6-10-99 1115
412 - 27649865 - 34060
413 - 50064155 - 61165 > 136895
414 - 32479645 - 41620
All paras OK

6/13/99 1035
412 - 27761085 - 111220
413 - 50264480 - 200325 447550
414 - 32615590 - 135545
All gauges OK
6/14/99 430
412 - 27786445 - 25360
413 - 50310310 - 45830 102250
414 - 32646630 - 31040
Inlet Air Temp 64°F
WC 17"
Inlet H2O Press 7 psi
Inlet H2O Temp 59°F
Sump Sight OK
DREWSPERSE = @ 10¼"
SUMP PUMPED OUT
6-15-99 355
412 - 27819655 - 33210
413 - 50370270 - 59960 133260
414 - 32687320 - 40690
All gauges OK
DREWSPERSE = @ 9"
412 = 25 APP. GPM
413 = 45
414 = 30
6/16/99 705
412 - 27853740 - 34055
413 - 50432340 - 62090 138365
414 - 32725510 - 42190
All gauges OK
DREWSPERSE = @ 8¼"
INLET AIR TEMP = 64°F
STRIPPER DIF PRESS = 18¾
INLET H2O TEMP = 59°F
" PRESS = 6¾
SIGHT TUBE = OK @ (MID MARK)
SUMP = OK

6-17-99 410

412 - 27886880 - 53240

413 - 50493800 - 61440) 136270

414 - 32771200 - 41590

All PARAS OK

DREWSPERSE = @ 7¼"

6-21-99 505

412 - 28020460 - 133480

413 - 50741330 - 247530) 549130

414 - 32933320 - 168120

Inlet Air Temp 65 °F

WC 17¾

Inlet H_2O Temp 60 °F

Inlet H_2O Press 6¾ psi

Sump + Sight Tube - OK

DREWSPERSE = @ 3"

412 = 25 APP. GPM

413 = 45

414 = 30

412 = 28025340

413 = 50750470

414 = 32945525

6-22-99 410

412 - 28057280 - 31720

413 - 50800470 - 59140) 130930

414 - 32979390 - 40070

All PARAS OK

DREWSPERSE = @ 2"

INLET AIR TEMP = 66° F

STRIPPER DIA PRESS = 18¾

INLET H20 TEMP = 59° F

" PRESS = 6¾

SIGHT TUBE = OK @ (MID MARK)

SUMP = OK

Monthly Measures

6/30/99

6-23-99 410
412 - 26085050 - 32870
413 - 50841730 - 61260 } 135610
414 - 33020870 - 41480
All PARAS OK
DREWSPERSE = @ 1"
6-24-99 405
412 - 28117655 - 32605
413 - 50922820 - 61090 } 134855
414 - 33062030 - 41160
All PARAS OK
DREWSPERSE = @ 30 1/4" After Changing
6-28-99 415
412 - 28247870 - 130215
413 - 51168330 - 246010 } 540955
414 - 33226760 - 164730
Inlet Air Temp 71°F
WC - 18 1/2
Inlet H2O Press 6 1/2 psi
Inlet H2O Temp 60°F
Sump needs purged + Sight Tube OK
DREWSPERSE = @ 25 3/4"
SUMP PUMPED OUT = OK
412 = 25 APP. GPM
413 = 45
414 = 31
6-29-99 400
Monthly Measures 412 - 28280150 - 32280
413 - 51229470 - 60640 } 33460
414 - 33267300 - 40540
All PARAS OK
DREWSPERSE = @ 24 3/4"
6/30/99 412 = 28317960
413 = 51300810
414 = 33314950
DREWSPERSE = @ 23 3/4"
DREWSPERSE = @ 24 1/2" AFTER ADDER Remainder in Bucket

7-1-99 415
412 - 28345300 - 32190
413 - 51352340 - 60755 } 133505
414 - 33349360 - 40560
All PARAS - OK
DREWSPERSE = @ 23½"
INLET AIR TEMP = 72° F
STRIPPER DIA PRESS = 18½
Inlet H2O TEMP = 59° F
" PRESS = 6¾
Sight TUBE = OK @ (MID MARK)
SUMP PUMPE OUT = OK @ 15:10

7-6-99 425 7/1
412 - 28456333 - 111033
413 - 51561979 - 209639 } 460181
414 - 33488868 - 139529
* Shutdown (High Level Sump)
DREWSPERSE = @ 18"
INLET AIR TEMP = 88° F
STRIPPER DIA PRESS = 18¼
Inlet H2O TEMP = 59° F
" PRESS = 7
Sight TUBE = OK @ (MID MARK)
412 = 26 APP. GPM
413 = 45
414 = 31
* STARTED BACK UP @ 10:00
7-7-99 415
412 - 28482060 - 25727
413 - 51608380 - 46401 } 104609
414 - 33521350 - 32481
Inlet Air Temp 68°F
W.C 18½
Inlet H2O Press 7 psi
Inlet H2O Temp 59°F
Sump + Sight - OK
DREWSPERSE = @ 17"

cont
7-7-99

412 = 28498190
413 = 51637260
414 = 33541410

7-8-99 420
412 - 28516230 - 34170
413 - 51669900 - 61520) 138270
414 - 33563930 - 42580
All gals ok
DREWSPERSE = @ 16"
e) SUMP PUMPED @ 15:10

7/10/99 DREWSPERSE = @ 13½"
SUMP PUMPED = OK @ 15:40 EB
7-12-99 400
412 - 28651485 - 135255
413 - 51914950 - 245050) 543440
414 - 33727065 - 163135
Inlet Air Temp 70°F
WC 18½
Inlet H2O Temp 59°F
Inlet H2O Press 7 psi
Sump & Sight Tube - OK
DREWSPERSE = @ 11¾"
412 = 26 APP. GPM
413 = 45
414 = 30
7-13-99 405
412 - 28685470 - 33985
413 - 51976800 - 61850) 135770
414 - 33767000 - 39935
All gals OK
DREWSPERSE = @ 10¾"
INLET AIR TEMP = 68° F
STRIPPER DIA PRESS = 18½
INLET H2O TEMP = 58° F
" PRESS = 6¾
Sight Tube [illegible] (mid mark) Sump

7-14-99 410 7/20/9
412 - 28719570 - 3400
413 - 52038855 - 62255) 135350
414 - 33806175 - 39175
All PARAS - OK 7/21
DREWSPERSE = @ 9 3/4"
412 = 28734860
413 = 52066710
414 = 33823630
7-15-99 405
412 - 28753460 - 33390
413 - 52100500 - 61645) 134000
414 - 33844640 - 33465 7/24
all PARAS OK
DREWSPERSE = @ 8 3/4" 1244
SUMP PUMPED @ 15:25 13:0

7/17/99 DREWSPERSE = @ 6 1/4"
SUMP PUMPED = OK @ 15:25 EB 7/24/9
08.

7/19/99 412 - 28893380
413 - 52355020 7/26
414 - 33996490
Sight tube OK
inlet H_2O 59°F
inlet H_2O psi 7
inlet air 18" wg
temp. 70°F
DREWSPERSE = @ 4 3/4"
SUMP PUMPED = OK
412 = 27 APP. G.P.M
413 = 45
414 = 28 7-27
7/20/99 all parameters OK - DH 7-28
DREWSPERSE = @ 3 1/2 7/29/9
0700

7/20/99

412 = 28927840
413 = 52417810
414 = 34032060

7/21/99 all parameters OK - DH
DREWSPERSE = @ 2½
INLET AIR TEMP = 74° F
STRIPPER DIA PRESS = 18¼
INLET H20 TEMP = 59° F
" PRESS = 6½
SIGHT TUBE = OK (AT MID MARK)
SUMP = OK PUMPED @ 14:50

7/22/99 all parameters OK
DREWSPERSE = @ 1¾"
12:44 System down for maint
13:05 System Restart
SUMP PUMPED @ 14:15

EB 7/24/99 SUMP PUMPED = OK
08:30 DREWSPERSE Changed OUT = OK @ 28¾"

7/26 all parameters OK - DH
-Monthly Measures — 07:20 AM
Drewsperse @ 26¼"
412 = 29133476 45 gpm
413 = 52790864 25 gpm
414 = 34213928 23 gpm
Sump Pumped
H_2O temp 59°F
" Press 6.5 PSI
DH Press 18.25" H_2O
Inlet Air Temp: 72°F

7-27 all parameters - OK DH
7-28 all parameters - OK DH
7/29/99 0730 412 = 29235926 25 gpm
413 = 52975888 43 gpm
414 = 34314453 22 gpm

H_2O Temp = 59°F
H_2O PRESS = 6.5 psi
Air Intak Temp = 73°F
MAA = 18.25" WC

8-4-99

7/29/99 15:30 Sump pumped

7/31/99 DREWSPERSE = @ 21¼"
SUMP PUMPED = OK
8-2-99 440
412 - 29367985 - 133495
413 - 53214680 - 241360) 499355
414 - 34437552 - 124580
Inlet Air Temp - 70°F
WC 18¼
Inlet H2O Press 6¼ PSI
Inlet H2O Temp 59°F
Sump + Sight Tube - OK
DREWSPERSE = @ 19¼"
SUMP PUMPED = OK
412 = 27 APP GPM
413 = 44
414 = 22
8-3-99 410
412 - 29401160 - 33175
413 - 53274550 - 59870) 124055
414 - 34468560 - 31010
DREWSPERSE = @ 18¼"
INLET AIR TEMP = 66°F
STRIPPER DIA PRESS = 18¼
INLET H2O TEMP = 58°F
" PRESS = 6¼
SIGHT TUBE = OK @ (mid MARK)
SUMP = OK
8-4-99 415
412 - 29435040 - 33880
413 - 53335850 - 61305) 126675
414 34500050 - 31490
All PALAS OK
DREWSPERSE = @ 17½"

8-4-99 412 = 29439510
413 = 53344025
414 = 34504260
8-5-99 400
412 - 29468560 - 33520
413 - 53396455 - 60600) 124850
414 - 34530820 - 30770
All jars OK
DREWSPERSE = @ 16½"
SUMP = OK @ 1400
8-8-99 610
412 - 29572550 - 103990
413 - 53586115 - 189660) 389030
414 - 34626260 - 95380
8-9-99 435
412 - 29603935 - 31385
413 - 53643225 - 57110) 116135
414 - 34653840 - 27640
Inlet Air Temp 65°F
WC 18¼
Inlet H_2O press 6 psi
Inlet H_2O Temp 59°F
Sump Sight - OK
DREWSPERSE = @ 12¾"
SUMP = OK
412 = 27 APP. GPM
413 = 45
414 = 21
8-10-99 410
412 - 29637150 - 33215
413 - 53703720 - 60495) 122145
414 - 34682275 - 28435
All jars OK
DREWSPERSE = @ 11¾"
412 = 29641250
413 = 53711315
414 = 34685810

8-11-99 415
412 - 29671050 - 33900
413 - 53745650 - 61930 > 123875
414 - 34710320 - 28045
All PARAS OK
DREWSPERSE = @ 10 3/4"
INLET AIR TEMP = 67° F
STRIPPER DIA PRESS = 18 1/4
INLET H2O TEMP = 59° F
" PRESS = 6 1/2
Sight TUBE = OK @ (min mark)
SUMP = OK
8-12-99 405
412 - 29704500 - 33450
413 - 53826890 - 61240 > 121185
414 - 34736815 - 26495
All PARAS OK
DREWSPERSE = @ 9 3/4"
SUMP PUMPED @ 14:40
8-16-99 430
412 - 29839590 - 135090
413 - 54074260 - 247370 > 481495
414 - 34835850 - 99035
Inlet Air Temp 64 F
w.c. 18
Inlet H2O PRESS 6 psi
Inlet H2O Temp 58 F
Sump + Sight - OK
DREWSPERSE = @ 6 1/4"
412 = 26 APP. GPM
413 = 46
414 = 18
412 = 29851730
413 = 54096510
414 = 34844415

8-17-99 410
412 - 29872810 - 33220
413 - 54135050 - 60790) 117350
414 - 34859190 - 23340
All gages OK
DREWSPERSE = @ 5 1/4"
DREWSPERSE = @ 5/3/4" ADDED REMAINDER IN BUCKET
8-18-99 405
412 - 29906150 - 33340
413 - 54196040 - 60990) 118130
414 - 34882920 - 23800
All gages OK
DREWSPERSE = @ 5"
8-19-99 355
412 - 29939440 - 33290
413 - 54256920 - 60880) 118590
414 - 34907410 - 24420
All gages OK
DREWSPERSE = @ 4"
Inlet AIR Temp = 68° F
STRIPPER DIA PRESS = 18 1/4
Inlet H2O Temp = 59° F
" PRESS = 6 psi
SIGHT TUBE = OK @ (mid mark)
SUMP = OK
8-23-99 450
412 - 30074460 - 135620
413 - 54503410 - 246690) 492530
414 - 35018630 - 111220
Inlet Air Temp 66° F
WC 18 1/4
Inlet H2O Temp 55° F
Inlet H2O Press 12 psi
Sump + Sight - OK
DREWSPERSE = @ 29" Changed OUT
412 = 27 APP. GPM
413 = 45
414 = 23

7/23/99 @1105 Well 414 Shut down for pump replacement. Lock & Tag out applied (probe replacement)

8-24-99 420
412 - 30106970 - 32510
413 - 5456 3520 - 59710 > 119640
414 - 35046050 - 27420
All PARAS OK
DREWSPERSE = @ 28"
412 = 25 APP GPM
413 = 46
414 = 30
8-25-99 415
412 - 30141440 - 34470
413 - 54624900 - 61580 > 113938
414 - 3506 3930 - 17888
All PARAS OK
DREWSPERSE = @ 27"
INLET AIR TEMP = 66° F
STRIPPER DIA PRESS = 17 3/4
INLET H2O TEMP = 58° F
" PRESS = 5
SIGHT TUBE = OK @ (MID MARK)
SUMP = OK
412 = 27 APP. GPM
413 = 45
414 = 30
DREWSPERSE = @ 27½" ADDED REMAINDER IN BUCKET
8-26-99 415
412 - 30177100 - 35660
413 - 5469 8150 - 63250 > 105034
414 - 3507 3062 - 9124
All PARAS OK
DREWSPERSE = @ 26¾"
412 = 26 APP. GPM
413 = 45
414 = 32

8/26/99

412 = 30182550
413 = 54697910
414 = 35075215

8/30/99 all parameters - OK DH 0600
DRENSPERSE = @ 22 3/4"
412 - 27
413 = 45
414 = 31
412 = 30332640
413 = 54965380
414 = 35142080
SumP = OK

Monthly Measure
8-31-99 1140
412 - 30353330 - 32650
413 - 55002530 - 58550 > 108915
414 - 35153465 - 17655
All parts OK
DRENSPERSE = @ 21 3/4"
Inlet AIR temp = 66°F
STRIPPER DIA PRESS = 18 1/4
INLET H2O TEMP = 59° F
" PRESS = 7 psi
SIGHT TUBE = OK @ (MIDMARK)

8' 9/1/99
sight tube - OK
inlet H_2O press. - 7psi
inlet H_2O temp - 54°F
inlet air press - 18" w.g
inlet air temp - 65°F
DRENSPERSE = @ 20 3/4"

9-2-99
parameters OK JB 0610
DRENSPERSE = @ 19 3/4"

9/2/99 412 = 28 APP. GPM
413 = 46
414 = 32
Sump Pumped = OK @ 13:30

9-7-99 410
412 - 30598875 - 174065
413 - 55437855 - 306457 > 591654
414 - 35328480 - 111132
Inlet Air Temp 65°F
WC 18½
Inlet H2O Press 5 psi
Inlet H2O Temp 59°F
Sump & Sight OK
DREWSPERSE = @ 14¾"

9-8-99 410
412 - 30635280 - 35405
413 - 55500120 - 62265 > 121490
414 - 35332300 - 23820
All pumps OK
DREWSPERSE = @ 13¾"
Inlet Air Temp = 67°F
Stripper DIA Press = 18¼
Inlet H2O Temp = 59°F
" Press = 7 psi
Sight & Sump = OK
412 = 26 APP GPM
413 = 45
414 = 30

9-9-99 410
412 - 30670340 - 36060
413 - 55563700 - 63680 > 123990
414 - 35356500 - 27200
All pumps OK
DREWSPERSE = @ 13"
412 = 30685110
413 = 55590120
414 = 35366170

9-13-99 425
412 - 30810470 - 140132
413 - 55813760 - 250160 } 484955
414 - 35451165 - 94665
Inlet Air Temp 70 °F
WC 15 3/4
Inlet H2O Press 7 psi
Inlet H2O Temp 60 °F
Sump Sight Tube - OK
DREWSPERSE = @ 9 1/4"
412 = 26 APP GPM
413 = 45
414 = 33
9-14-99 420
412 - 30845090 - 34620
413 - 55576260 - 62300 } 121655
414 - 35475800 - 24735
All gauges - OK
DREWSPERSE = @ 8 1/4"
412 = 30849920
413 = 55884940
414 = 35479420
9-15-99 420
412 - 30880190 - 35100
413 - 55939130 - 62870 } 124185
414 - 35502115 - 26215
All gauges OK
DREWSPERSE = @ 7 1/4"
INLET AIR ~~PRESS~~ TEMP = 58° F
STRIPPER DIA PRESS = 18 1/4
INLET H2O TEMP = 59° F
" PRESS = 7 psi
SIGHT & SUMP = OK
9-16-99 415
412 - 30914425 - 34255
413 - 56001560 - 62430 } 121250
414 - 35526700 - 24555

A BUCKET

9/16/99

DREWSPERSE = @ 6¼"

9-20-99 520

412 - 31054030 - 139605

413 - 56256000 - 254440 } 492535

414 - 35625190 - 98490

Inlet Air Temp 60°F

WC - 19

Inlet H2O Press 7 psi

Inlet H2O Temp 60°F

Sump + Sight - OK

DREWSPERSE = @ 2¼

412 = 28 APP. GPM

413 = 46

414 = 31

9-21-99 405

412 - 31886850 - 32820

413 - 56315515 - 59515 } 115745

414 - 35648600 - 23410

All PARAS OK

DREWSPERSE = @ 1½"

412 = 31091160

413 = 56323325

414 = 35651815

9-22-99 420

412 - 31121670 - 34820

413 - 56378530 - 63045 } 123185

414 - 35673950 - 25350

All PARAS OK

DREWSPERSE = @ ¾"

INLET AIR TEMP = 68°F

STRIPPER DIA PRESS = 18¼

INLET H2O TEMP = 59°F

" PRESS = 7 psi

SIGHT & SUMP = OK

9-23-99 435
412 - 31156620 - 34950
413 - 56441920 - 63390 } 123940
414 - 35699550 - 25600
All PARAS OK
DREWSPERSE = @ 28 3/4" After Change OUT

9/25/99
@ 1100 - well 414 shut down for re-developement
1640 - well re-start
9-27-99 - 425
412 - 31287000 - 130380
413 - 56688080 - 246160 } 520,000
414 - 35843010 - 143440
Inlet Air Temp - 62°F
WC 19 1/4
Inlet H2O Press 7 psi
Inlet H2O Temp 60°F
Sump & Seplat - OK
DREWSPERSE = @ 24 1/2"
412 = 27 APP. GPM
413 = 45
414 = 32
9-28-99 415
412 - 31318840 - 31840
413 - 56748760 - 60680 } 137325
414 - 35887515 - 44505
All PARAS OK
DREWSPERSE = @ 23 1/2"
412 = 31323050
413 = 56756820
414 = 35893430
9-29-99 435
412 - 31351050 - 32210
413 - 56810300 - 61540 } 138935
414 - 35932650 - 45175
All PARAS OK

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9/29/99 DREWSPERSE = @ 22½"

PUMPED SUMP INTO STRIPPER @ 14:45

9-30-99 405

412 - 31382315 - 31265

413 - 56870260 - 59960 } 135005

414 - 35976470 - 43780

Monthly Measures

All PARAS OK

DREWSPERSE = @ 21½"

9/29/99 (Transcribed from prev. Log Book Pg. 138)

Drewsperse = @ 22 1/2"

9-30-99 405

412 - 31382315 - 31265

413 - 56870260 - 59960 } 135005

414 - 35976470 - 43780

All Paras OK

Drewsperse = @ 21 1/2"

10-4-99 430 Mgb

412 - 31508860 - 126645

413 - 57115260 - 245000 } 550350

414 - 36155175 - 178705

Inlet Air Temp 64°F

WC 19 1/4

Inlet H2O Temp 60°F

Inlet H2O Press 7 psi

Sump + Sight - OK

DREWSPERSE = @ 17 1/2"

10-5-99 415

412 - 31539765 - 30805

413 - 57175650 - 60390 } 135030

414 - 36195010 - 43835

All PARAS OK

DREWSPERSE = @ 16 1/2

412 = 26 APP. GPM

413 = 46

414 = 31

Inlet Air Temp = 60°F

Stripper DRA Press = 19 1/4

Inlet H2O Temp = 59°F

Inlet Press = 7 psi

Sight + Sump = OK

10-6-99 450
412 - 31571520 - 31755
413 - 57236760 - 61110 } 136610
414 - 36242755 - 43745
All paras OK
DREWSPERSE = @ 15½"
10-7-99 415
412 - 31601550 - 30030
413 - 57296010 - 59250 } 131625
414 - 36285100 - 42345
All paras OK
DREWSPERSE = @ 14½"
412 = 31605770
413 = 57304410
414 = 36291120
10-11-99 450
412 - 31723800 - 122250
413 - 57539650 - 243640 } 539880
414 - 36459090 - 173990
Inlet Air Temp 63°F
WC 1844
Inlet H_2O Temp 59°F
Inlet H_2O Press 61 psi
Sump + Sight - OK
DREWSPERSE = @ 10½"
412 = 25 APP. GPM
413 = 46
414 = 32
DREWSPERSE = @ 11" After adding Remainder in Bucket
10/12/99 DREWSPERSE = @ 10¼"
412 = 31758010
413 = 57607930
414 = 36508115
10-13-99
DREWSPERSE = @ 9¼"

10-13-99

Inlet Air Temp = 64° F
Stripper Dir Press = 19¼
Inlet H2O Temp = 59° F
Inlet Press = 6¾ psi
Sight & Sump = OK

10/14/99

Drewsperse = @ 8¼"

10-18-99 420 hrs

412 - 31933050 - 115570
413 - 5794 3285 - 236275 > 520435
414 - 3676 2070 - 168590

Inlet Air Temp 57°F
WC 19½
Inlet H2O press 6½ psi
Inlet H2O Temp 60°F
Sump + Sight - OK
Drewsperse = @ 4"

412 = 23 App. GPM
413 = 45
414 = 31

10-19-99 415 hrs

412 - 31962730 - 29680
413 - 58023855 - 60570 > 132185
414 - 36804005 - 41935

All paras OK
Drewsperse = @ 3"

412 = 31966440
413 = 58031470
414 = 36809515

10-20-99 445

412 - 31992950 - 30220
413 - 58085600 - 61745 > 136200
414 - 36848240 - 44235

All paras - OK
Drewsperse = @ 2"

10/20/99

Inlet Air Temp = 56° F
Stripper Dia Press = 19½
Inlet H2O Temp = 59° F
" Press = 6¾ psi
Sight + Sump = OK
10-21-99 420
412-32022160 - 29210
413-58145430 - 59830 > 132250
414-36891450 - 43210
All pumps OK
Drensperse = @ 1"
13:15 Drensperse = @ 29" After Changing it out.
10-25-99 420
412 - 32139430 - 117270
413 - 58398330 - 242900 > 535325
414 - 37066605 - 175155
Inlet Air Temp 51 °F
WC 19½
Inlet H2O Press 6¾ psi
Inlet H2O Temp 59 °F
Sump + Sight - OK
Drensperse = @ 24¾"
412 = 21 APP GPM
413 = 44
414 = 31
10-26-99 415 APP
412-32168430 - 29000
413-58448600 - 60270 > 132495
414-37109830 - 43225
All pumps OK
Drensperse = @ 23½"
Inlet Air temp = 66° F
Stripper Dia Press = 19¼
Inlet H2O temp = 59° F
" Press = 6¾ psi
Sight + Sump = OK

10-27-99 Mtb 425
412 - 32197845 - 29415
onthly 413 - 58509580 - 60980 } 135955
asures 414 - 37155390 - 45560
All paras ok
DREWSPERSE = @ 22½"
10-28-99 425 Mtb
412 - 32227155 - 29310
413 - 58570345 - 60765 } 130610
414 - 37195925 - 40535
All paras - ok
DREWSPERSE = @ 21½"
412 = 32230560
413 = 58577420
414 = 37200910
11-1-99 420 Mtb
412 - 32347200 - 120645
413 - 58817730 - 247385 } 511805
414 - 37340300 - 144375
Inlet Air Temp 58°F
WC 19
Inlet H_2O Press 41½ psi
Inlet H_2O Temp 59°F
Sump + Sight Tube - OK
DREWSPERSE = @ 17"
412 = 23 APP GPM
413 = 47
414 = 31
11-2-99 350 Mtb
412 - 32377150 - 29950
413 - 58880020 - 62290 } 123800
414 - 37371860 - 31560
All paras OK
DREWSPERSE = @ 16"
412 = 32381510
413 = 58889120
414 = 37376670

11-3-99 425 hrs
412 - 32406585 - 29435
413 - 5894140 - 60990 } 125065
414 - 37406500 - 34640
All paras OK
DREWSPERSE = @ 16½" After Adding Remainder of Bucket in

11-4-99 415 hrs
412 - 32429405 - 22820
413 - 5902545 - 61535 } 111750
414 - 37433885 - 27395
All paras OK
DREWSPERSE = @ 15½"
Inlet air Temp = 52° F
Stripper Dia Press = 19¼
Inlet H2O Temp = 59° F
" Press = 6 psi
Sight Tube & Sump = OK

11-8-99 415 hrs
412 - 32531060 - 101655
413 - 59247475 - 244930 } 468015
414 - 37555325 - 121430
Inlet Air Temp 51° F
WC 19¼
Inlet H2O Temp 59° F
Inlet H2O Press 4 psi
Sump & Sight - OK
DREWSPERSE = @ 11¼"
412 = 18 App. Gpm
413 = 43
414 = 32

11-9-99 410
412 - 32556210 - 25150
413 - 59308540 - 61065 } 116390
414 - 37585500 - 30175
All paras OK
DREWSPERSE 10¼"

11-,-99 Inlet APR Temp = 61° F
Stripper DPA Press = 19
Inlet H2O Temp = 59° F
" Press = 6¼ psi
Sight Tube & Sump = OK
11-10-99 410 lb
412 - 32581460 - 25250
413 - 59370050 - 61510 } 113290
414 - 37612030 - 26530
All paras OK
Drewsperse = @ 9¼"
412 = 32584570
413 = 59377760
414 = 37616075
11-11-99 420 lb
412 - 32606570 - 25110
413 - 59431940 - 61890 } 113380
414 - 37638410 - 26380
All paras - OK
Drewsperse = @ 8¼"
11-15-99 415 lb
412 - 32704800 - 98230
413 : 59678520 - 246580 } 447253
414 - 37741853 - 103443
Inlet Air Temp - 58°F
W C 19½
Inlet H2O Temp 59°F
Inlet H2O Press - 6¼ psi
Sump Sight Tube OK
Drewsperse = @ 3¾"
412 = 18 APP. GPM
413 = 44
414 = 32
11-16-99 415 lb
412 - 32729050 - 24250
413 - 59740460 - 61940 } 109347
414 - 37765010 - 23157
All paras - OK

11/16/99 DREWSPERSE = @ 2 3/4"
INLET AIR TEMP = 58° F
STRIPPER DIA PRESS = 19 1/4
INLET H20 TEMP = 59° F
" PRESS = 6 1/4 PSI
SIGHT & SUMP = OK
11-17-99 440 MGD
412 - 32753620 - 24570
413 - 59803590 - 63130) 109675
414 - 37786985 - 21975
All paras OK
DREWSPERSE = @ 1 3/4"
11-18-99 430 MGD
412 - 32777420 - 23800
413 - 59865150 - 61560) 106945
414 - 37808570 - 21585
All paras OK
DREWSPERSE = @ 3/4"
DREWSPERSE = @ 29 1/2" after changing
412 = 32782210
413 = 59877625
414 = 37813170
11-22-99 440 MGD
412 - 32872410 - 94990
413 - 60114375 - 249225) 424145
414 - 37889500 - 79930
Inlet Air Temp 60° F
WC 19 1/4
Inlet H_2O Press 6 PSI
Inlet H_2O Temp 59° F
Sump + Sight OK
DREWSPERSE = @ 25"
412 = 18 APP GPM
413 = 45
414 = 30

11-23-99 420 HD
412 - 32895535 - 23125
413 - 60175880 - 61505) 101805
414 - 37905675 - 17175
All PARAS OK
DREWSPERSE = @ 24"
412 = 32898480
413 = 60183890
414 = 37907930
11-24-99 430 HD
412 - 32919075 - 23540
Onthly 413 - 60238460 - 62780) 104640
Pasures 414 - 37923995 - 18320
All PARAS - OK
DREWSPERSE = @ 23"
Inlet Air Temp = 60° F
STRIPPER DIA PRESS = 19
Inlet H20 Temp = 59° F
" PRESS = 6¼ psi
Sight + Sump = OK
11-29-99 435 HD
412 - 33053275 - 114200
413 - 60548580 - 309980) 550815
414 - 38050630 - 126635
Inlet Air Temp 51° F
WC 19 3/4
Inlet H2O Press 6 psi
Inlet H2O Temp 59 °F
Sump + Sight Tube OK
DREWSPERSE = @ 17¾"
412 = 18
413 = 45
414 = 32
11-30-99 425 HD
412 - 33055545 - 22270) 110655
413 - 60609900 - 61310
414 - 38077705 - 27075
All PARAS OK

11/30/99 DREWSPERSE = @ 16½"
412 = 33058010
413 = 60616770
414 = 38080920
DREWSPERSE = @ 17½" after Adding Remainder in Bucket

12-1-99 425 Lb
412 - 33077625 - 22080
413 - 60671745 - 61845 } 110350
414 - 38104130 - 26425
All paras OK
DREWSPERSE = @ 16¾"
Inlet Air Temp = 52°F
Stripper Dia Press = 19¼
Inlet H2O Temp = 59°F
" Press = 6¼ psi
Sight & Sump = OK

12-2-99 410 Lb
412 - 33099410 - 21785
413 - 60733310 - 61565 } 108405
414 - 38129185 - 25055
All paras OK
DREWSPERSE = @ 15¾"

12-6-99 420 Lb
412 - 33186650 - 87240
413 - 60982410 - 249160 } 433020
414 - 38225865 - 96680
Inlet Air Temp 61 F
WC 19¼
Inlet H2O Press 6 psi
Inlet H2O Temp 59 F.
Sump & Sight - OK
DREWSPERSE = @ 11¾"
412 = 16 APP. GPM
413 = 43
414 = 30

12-7-99 415 MD
412 - 3320 8305 - 21655
413 - 61044340 - 61930 } 106520
414 - 38248800 - 22935
All paras OK
DREWSPERSE = @ 10½"
412 = 33211520
413 = 61053630
414 = 38252510
* Shut down 412 Change Pump Out 0800-1200
12-8-99 425 MD
412 - 33231210 - 22905
413 - 61100600 - 56260 } 104705
414 - 38274340 - 25540
All paras OK
DREWSPERSE = @ 9½"
412 = 20 APP. GPM
413 = 44
414 = 30
Inlet Air Temp = 54° F
Stripper Dia Press = 19½
Inlet H20 Temp = 58° F
" Press = 6½ psi
Sight & Sump = OK
12-9-99 425 MD
412 - 33256840 - 25630
413 - 61168300 - 67700 } 117780
414 - 38295790 - 24450
All paras OK
DREWSPERSE = @ 8½"

12/13/99 412 = Shut down over weekend
DREWSPERSE = @ 4½
12/14/99
DREWSPERSE = @ 3½"
412 = 0 APP. GPM
413 = 32
414 = 44

12/14/99

412 = 33308010
413 = 61505225
414 = 38424990
Inlet Air temp = 58° F
Stripper Dia Press = 18 1/4
Inlet H20 Temp = 59° F
" Press = 5 1/4 psi
Sight Tube = OK

12-15-99 435 Rgn

412 - 33309008 - 08
413 - 61548500 - 60600 } 89213
414 - 38445505 - 28605
Sump + Sight - ok 412?
DREWSPERSE = @ 2 1/2"

12-16-99 425 Rgn

33308008 - 0
61613580 - 64680 } 94435
38475260 - 29795
All parts OK 412 - Dead
DREWSPERSE = @ 1 1/2"
DREWSPERSE = @ 30" after Change out.

12/20/99 DREWSPERSE = @ 29 3/4"
412 = 0 app. GPM
413 = 44
414 = 32
Inlet Air temp = 61° F
Stripper Dia Press = 18 3/4
Inlet H20 temp = 59° F
" Press = 5 1/4 psi
Sight + Sump = OK
412 = 33308008
413 = 61880340
414 = 38605950

12-21-99 425 gpd
412-33300800 -0
413-61938720 - 56520 > 79525
414-38629705 - 23005
All areas OK
DREWSPERSE = @ 28½"

04:12 Turned back on 2:45 PM Pumping 136 gpm
12-22-99 610 KWH
412, 33000800 - 0
413, 62009270 - 70550 > 97370
414 38656525 - 26820
All areas ok
DREWSPERSE = @ 27½"
13:45 Shut system off to change out overload protection on 412
13:15 Start system back up

12/25/99 SYSTEM SHUT DOWN @ 3:20 DUE TO high water level IN SUMP. WATER SAMPLER UNIT over filled CAUSING IT TO RUN INTO SUMP. AND SHUTTING TH SYSTEM DOWN.
05:50 SYSTEM TURNED BACK ON.
412 = 33399450
413 = 62187460
414 = 38761430

412 = 27 APP GPM
413 = 46
414 = 30
Inlet Air temp = 46°F
Stripper Dia Press = 19¾
Inlet H20 temp = 59°F
" Press = 7 psi
Sight & Sump = OK

12-27-99 555 MB
412 - 33471000 - 170200
413 - 62312330 - 303060 } 624850
414 - 38808115 - 151590
Inlet Air Temp 54°F
WC 19 3/4
Inlet H2O Press 7 psi
Inlet H2O Temp 59°F
Sump + Sight - OK

12/28/99 14:10
DREWSPERSE = @ 21 1/4"
412 = 27 APP. GPM
413 = 46
414 = 31

412 = 33518850
413 = 62396680
414 = 38835655

12-29-99 600 MB
412 - 33542380 - 30980
413 - 62435450 - 54950 } 103025
414 - 38848495 - 17095
All PARAS OK

1-3-00 430 MB
Monthly Measures
412 - 33715705 - 173325
413 - 62747880 - 309430 } 581640
414 - 38947380 - 98885
Inlet Air Temp 62°F
WC 19 1/2
Inlet H2O Press 7 psi
Inlet H2O Temp 60°F
Sump + Sight - OK
DREWSPERSE = @ 15 1/4"
412 = 33718950
413 = 62753760
414 = 38949470

INLET AIR TEMP = 64°F
STRIPPER DPA PRESS = 18 3/4
INLET H2O TEMP = 59°F
" PRESS = 7 psi
Sight & Sump = OK
412 = 23 APP. GPM
413 = 45
414 = 32

1-4-00 420 MB
412 - 33749140 - 33435
413 - 62801810 - 53930 } 119215
414 - 38972230 - 31850
All PARAS OK
DREWSPERSE = @ 14 1/4"

1-5-00 420 MB
412 - 33785240 - 34150
413 - 62858710 - 56900 } 134090
414 - 39022270 - 43040
All PARAS OK
DREWSPERSE = @ 13"

1-6-00 425 MB
412 - 33817910 - 34620
413 - 62919615 - 60905 } 139615
414 - 39066360 - 44090
All PARAS OK
DREWSPERSE = @ 12"

1-10-00 435 MB
412 - 33954660 - 136750
413 - 63162655 - 243040 } 556,040
414 - 39242610 - 176250
Inlet Air Temp 58°F
WC - 19 1/2
Inlet H2O Press - 7 psi
Inlet H2O Temp - 60°F
Sump + Sight - OK
DREWSPERSE = @ 8"

01/10/00 412 = 26 APP GPM
413 = 44
414 = 31
1440 System Shutdown for tour
1505 Restart
1-11-00 405 lbs
412 - 33988210 - 33550
413 - 63220980 - 58325 > 134165
414 - 39284900 - 42250
All paras ok
DREWSPERSE = @ 7½
INLET APR TEMP = 57° F
STRIPPER DIA PRESS = 19½
INLET H2O TEMP = 59° F
" PRESS = 7 psi
Sight + Sump = OK
1-12-00 425 lbs
412 - 34024440 - 36230
413 - 63282570 - 61580 > 142370
414 - 39329450 - 44550
All paras - OK
DREWSPERSE = @ 6½"
1-13-00 420 lbs
412 - 34059835 - 35445
413 - 63343015 - 60445 > 139610
414 - 39373170 - 43720
All paras OK
DREWSPERSE = @ 5½"
412 = 34064360
413 = 63350680
414 = 39378720
1-14/00 DREWSPERSE = @ 4½"
DREWSPERSE = @ 6¾" After adding remainder in Bucket

Attachment B

OU1 Authorization to Discharge Monitoring Results

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-210/99
December 9, 1999

99-TC/12-09

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for November. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of November. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Dave Rakel at extension 4203.

Sincerely,

JSStapleton

Jeffrey S. Stapleton
Acting Manager, Environmental Safeguards & Compliance

JSS/rpp

Enclosures

cc: DCC
bc: D. A. Rakel
R. P. Paulick
S. L. Howard
M. Spivey
M. Gilliat

NTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 NOV 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI
MIAMISBURG 45343 MONTGOMERY FORM

						MOUND		DENISE HESS	
	1	3	3	2	2	3	2	2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec
	MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.124								
02	0.125	8.0	8.4			AA	AA	AA	AA
03	0.112								
04	0.117								
05	0.117								
06	0.117								
07	0.117								
08	0.116								
09	0.113	8.0	8.5	708.0	AA		AA		
10	0.113								
1	0.112								
	0.112								
13	0.112								
14	0.111								
15	0.109						AA		
16	0.110	8.2	9.1						
17	0.107								
18	0.106								
19	0.106								
20	0.106								
21	0.106								
22	0.102								
23	0.105	7.9	8.9				AA		
24	0.110			725.5	AA				
25	0.110								
26	0.110								
27	0.110								
28	0.110								
29	0.111								
30	0.110	7.9	8.5				AA		
31									
	3.346	40.0	43.2	1433.5	AA	AA	AA	AA	AA
	0.112	8.0	8.6	716.8	AA	AA	AA	AA	AA
	0.125	8.2	9.1	725.5	AA	AA	AA	AA	AA
	0.102	7.9	8.4	708.0	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5.0 ug/L.

REPORTER

)NTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 NOV 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAM
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2	2	2	2	2
	48	48	48	48	48
	Cr	Cu	Ni	Pb	Zn
	Tot Rec	Tot Rec	Tot Rec	Tot Rec	Tot Rec
	ug/L	ug/L	ug/L	ug/L	ug/L
	99985	99989	99984	99988	99983
01					
02	AA	AA	AA	AA	AA
03					
04					
05					
06					
07					
08					
09	AA	AA			
10					
11					
12					
13					
14					
15	AA	AA	AA	AA	AA
16					
17					
18					
19					
20					
21					
22					
23	AA	AA	AA	AA	AA
24					
25					
26					
27					
28					
29					
30	AA	AA	AA	AA	AA
31					
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA

AA: Chromium < 2 ug/L; Copper < 5 ug/L; Nickel < 5 ug/L;
Lead < 1 ug/L; Zinc < 50 ug/L.

REPORTER

)NTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 NOV 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAI
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

3	3	3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1
CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2(
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/
32102	32106	34423	34475	34488	34506	34546	39175	39180	463(
01									
02									
03									
04									
05									
06									
07									
08									
09									
10	AA	AA	AA	AA	AA	AA	AA	AA	AA
11									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethane (39180), trans & cis-1,2-Dichlorethene (34546 & 46363) <1 u

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 4534
(937) 865-4020

ESC-184/99
November 9, 1999

99-TC/11-09

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for October. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of October. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Dave Rakel at extension 4203.

Sincerely,

JSStapleton

Jeffrey S. Stapleton
Acting Manager, Environmental Safeguards & Compliance

JSS/rpp

Enclosures

cc: DCC

bc: D. A. Rakel
R. P. Paulick
M. Spivey
M. Gilliat

ONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 OCT 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY FORM

					MOUND		DENISE HESS		
	1	3	3	2	2	3	2	2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW MGD	PH S.U.	DO mg/L	DSS mg/L	TSS mg/L	CBOD 5 Day mg/L	Hg Tot Rec ug/L	Se Tot Rec ug/L	Ag Tot Rec ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.137								
02	0.138								
03	0.138								
04	0.135					AA	AA	AA	AA
05	0.137	7.9	13.1						
06	0.132								
07	0.136								
08	0.135								
09	0.135								
10	0.135								
11	0.146			758.0	AA		AA		
12	0.136	8.2	8.5						
	0.133								
	0.130								
15	0.130								
16	0.130								
17	0.130								
18	0.132						AA		
19	0.136	8.2	8.7						
20	0.132								
21	0.133								
22	0.134								
23	0.134								
24	0.134								
25	0.132						AA		
26	0.136	7.9	8.3						
27	0.131			712.0	AA				
28	0.128								
29	0.128								
30	0.128								
31	0.128								
	4.139	32.2	38.6	1470.0	AA	AA	AA	AA	AA
	0.134	8.0	9.6	735.0	AA	AA	AA	AA	AA
	0.146	8.2	13.1	758.0	AA	AA	AA	AA	AA
	0.128	7.9	8.3	712.0	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5.0 ug/L.

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 OCT 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2	2	2	2	2
	48	48	48	48	48
	Cr	Cu	Ni	Pb	Zn
	Tot Rec	Tot Rec	Tot Rec	Tot Rec	Tot Rec
	ug/L	ug/L	ug/L	ug/L	ug/L
	99985	99989	99984	99988	99983
01					
02					
03					
04	AA	8			
05					
06					
07					
08					
09					
10					
11	AA	AA	AA	AA	AA
12					
15					
16					
17					
18	AA	AA			
19					
20					
21					
22					
23					
24					
25	AA	AA	AA	AA	AA
26					
27					
28					
29					
30					
31					
	AA	8	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	8	AA	AA	AA
	AA	AA	AA	AA	AA

AA: Chromium < 2 ug/L; Copper, Nickel < 5 ug/L; Lead < 1; Zinc < 50 ug/L.

REPORTER

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 OCT 1999 OH000985

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAM
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	3 1 CC14 ug/L	3 1 CHC13 ug/L	3 1 CH2C12 ug/L	3 1 C2C14 ug/L	3 1 CC13F ug/L	3 1 C2H3C13 ug/L	3 1 C2H2C12 ug/L	3 1 C2H3C1 ug/L	3 1 C2HC13 ug/L	3 1 C2H2C ug/
	32102	32106	34423	34475	34488	34506	34546	39175	39180	4636
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12	AA	AA	AA	AA	AA	AA	AA	AA	AA	
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
	AA	AA	AA	AA	AA	AA	AA	AA	AA	
	AA	AA	AA	AA	AA	AA	AA	AA	AA	
	AA	AA	AA	AA	AA	AA	AA	AA	AA	
	AA	AA	AA	AA	AA	AA	AA	AA	AA	

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L·
Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluorometh
(34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506),
Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) <

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-172/99
October 7, 1999

99-TC/10-07

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for September. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of September. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
D. A. Rakel
R. P. Paulick
M. Spivey
M. Gilliat

REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 SEP 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

						MOUND		DENISE HESS	
	1	3	3	2	2	3	2	2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW MGD	PH S.U.	DO mg/L	DSS mg/L	TSS mg/L	CBOD 5 Day mg/L	Hg Tot Rec ug/L	Se Tot Rec ug/L	Ag Tot Rec ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.121			691.5	1.3		AA	AA	AA
02	0.118								
03	0.118								
04	0.118								
05	0.119								
06	0.119								
07	0.121	8.0	11.0						
08	0.124					AA	AA		
09	0.121								
10	0.121								
	0.121								
	0.122								
13	0.122						AA		
14	0.124	7.8	11.6	731.0	AA				
15	0.121								
16	0.123								
17	0.123								
18	0.123								
19	0.124								
20	0.116						AA		
21	0.123	7.9	11.6						
22	0.124								
23	0.130								
24	0.130								
25	0.130								
26	0.130								
27	0.137						AA		
28	0.139	7.9	10.0	725.0	AA				
29	0.135								
30	0.137								
31									
	3.734	31.5	44.2	2147.5	1.3	AA	AA	AA	AA
	0.124	7.9	11.1	715.8	AA	AA	AA	AA	AA
	0.139	8.0	11.6	731.0	1.3	AA	AA	AA	AA
	0.116	7.8	10.0	691.5	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 5 ug/L; Selenium < 0.5 ug/L.
AA for Mercury on 9/8 was < 1.0 ug/L.

REPORTER

REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 SEP 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L
	99985	99989	99984	99988	99983
01	AA	AA	AA	AA	AA
02					
03					
04					
05					
06					
07					
08	AA	AA			
09					
10					
11					
13	AA	AA	AA	AA	AA
14					
15					
16					
17					
18					
19					
20	AA	AA			
21					
22					
23					
24					
25					
26					
27	AA	AA	AA	AA	AA
28					
29					
30					
31					
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA

AA: Chromium < 2 ug/L; Copper, Nickel < 5 ug/L; Lead < 1 ug/L;
Zinc < 50 ug/L.

REPORTER

REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 SEP 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

3	3	3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1
CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2C12
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
01									
02									
03									
04									
05									
06									
07									
08	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
09									
10									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) < 1

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343
(937) 865-4020

ESC-156/99
September 9, 1999

99-TC/09-09

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for August. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of August. All parameters were within their specified limits as imposed by the Ohio EPA. Please note that the toxicity report is included with the monthly report forms to be submitted to the OEPA. This report also requires your signature, in addition to the monthly report forms.

If you require further information, please contact Ronald Paulick at extension 4080 or Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
D. A. Rakel
R. P. Paulick
M. Spivey
M. Gilliat

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 AUG 1999 3 3 OH0009B5.

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAI
MIAMISBURG 45343 MONTGOMERY

FORM

					MOUND		DENISE HESS		
3	3	3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1
CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2(
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug.
32102	32106	34423	34475	34488	34506	34546	39175	39180	463.
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11	AA	AA	AA	AA	AA	AA	AA	AA	AA
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethan (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46

REPORTER

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 AUG 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	1	3	3	2	2	3	2	2	2	2
	999	1	1	48	48	1	48	48	48	3
	CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec	BIS PHTHAI
	MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079	39100
01	0.125									
02	0.124						AA	AA	AA	
03	0.127	8.1	9.6	755.0	1.9					
04	0.125									
05	0.130									
06	0.130									
07	0.130									
08	0.116									
09	0.122						AA			
10	0.124	8.0	9.9							
11	0.121					AA				A
12	0.120									
13	0.120									
14	0.120									
15	0.121									
16	0.117						AA			
17	0.118	8.0	12.4	727.0	2.9					
18	0.119									
19	0.124									
20	0.123									
21	0.123									
22	0.123									
23	0.120						AA			
24	0.114	8.1	10.0							
25	0.108									
26	0.116									
27	0.116									
28	0.115									
29	0.115									
30	0.109									
31	0.123	8.0	10.1							
	3.738	40.2	51.8	1482.0	4.8	AA	AA	AA	AA	A
	0.121	8.0	10.4	741.0	2.4	AA	AA	AA	AA	A
	0.130	8.1	12.4	755.0	2.9	AA	AA	AA	AA	A
	0.108	8.0	9.6	727.0	1.9	AA	AA	AA	AA	A

AA: CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5 ug/L.
Bis (2-Ethylhexyl) phthalate < 5 ug/L.

REPORTER

U.S. DEPARTMENT OF ENERGY 1IN90010003 AUG 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L	MOUND 2 48 ACUTE TOX CERIODA TUa	2 48 CHRONIC TOX CERIODA TUc	DENISE HESS 2 48 ACUTE TOX PIMEPHA TUa	2 48 CHRONIC TOX PIMEPHA TUc
	99985	99989	99984	99988	99983	61425	61426	61427	61428
01									
02	AA	AA	AA	AA	AA				
03									
04									
05									
06									
07									
08									
09	AA	AA				AA	AA	AA	AA
10									
13									
14									
15									
16	AA	AA	AA	AA	AA				
17									
18									
19									
20									
21									
22									
23	AA	AA							
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Chromium < 2 ug/L; Copper, Nickel < 5 ug/L; Lead < 1 ug/L.
Zinc < 50 ug/L
Toxicity Report Enclosed.

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-140/99
August 5, 1999

99-TC/08-05

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for July. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of July. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Cornpliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
D. A. Rakel
R. P. Paulick
M. Spivey
M. Gilliat

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JUL 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

						MOUND		DENISE HESS	
	1	3	3	2	2	3	2	2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec
	MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.092								
02	0.092								
03	0.092								
04	0.092								
05	0.092								
06	0.105	7.8	1.3						
07	0.138			750.0	1.5	AA	AA	AA	AA
08	0.136								
09	0.136								
10	0.136								
11	0.135								
12	0.136						AA		
13	0.135	8.1	10.0						
14	0.094								
15	0.136								
16	0.136								
17	0.137								
18	0.137								
19	0.127								
20	0.132	8.1	8.7				AA		
21	0.128			760.0	1.8				
22	0.125								
23	0.125								
24	0.125								
25	0.125								
26	0.129						AA		
27	0.130	8.0	9.6						
28	0.129								
29	0.124								
30	0.125								
31	0.125								
	3.806	32.0	29.6	1510.0	3.3	AA	AA	AA	AA
	0.123	8.0	7.4	755.0	1.7	AA	AA	AA	AA
	0.138	8.1	10.0	760.0	1.8	AA	AA	AA	AA
	0.092	7.8	1.3	750.0	1.5	AA	AA	AA	AA

AA: CBOD5 < 4 mg/L; Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JUL 1999 2 3 OH00098

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L
	99985	99989	99984	99988	99983
01					
02					
03					
04					
05					
06					
07	AA	AA			
08					
09					
10					
11					
12	AA	AA	AA	AA	AA
13					
14					
15					
16					
17					
18					
19					
20	AA	AA			
21					
22					
23					
24					
25					
26	AA	AA	AA	AA	AA
27					
28					
29					
30					
31					
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA

AA: Chromium < 2 ug/L; Copper, Nickel < 5 ug/L; Lead < 1 ug/L; Zinc < 50 ug/L

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JUL 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

3	3	3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1
CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2C12
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) < 1 u

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343
(937) 865-4020

ESC-123/99
July 8, 1999

99-TC/07-08

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U. S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for June. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15 of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P. O. Box 1049
Columbus, Ohio 43266-1049

There were no exceptions for the month of June. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
D. A. Rakel
R. P. Paulick
M. Spivey
M. Gilliat

LY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JUN 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI (
MIAMISBURG 45343 MONTGOMERY FORM

					MOUND		DENISE HESS		
3	3	3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1
CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2C12
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) <

REPORTER

U.S. DEPARTMENT OF ENERGY 1IN90010003 JUN 1999 2 3 OH0009857

ND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C
MIAMISBURG 45343 MONTGOMERY

FORM

					MOUND		DENISE HESS.	
2	2	2	2	2	2	2	2	2
48	48	48	48	48	48	48	48	48
Cr	Cu	Ni	Pb	Zn	ACUTE	CHRONIC	ACUTE	CHRONIC
Tot Rec	Tot Rec	Tot Rec	Tot Rec	Tot Rec	TOX	TOX	TOX	TOX
ug/L	ug/L	ug/L	ug/L	ug/L	CERIODA	CERIODA	PIMEPHA	PIMEPHA
					TUa	TUc	TUa	TUc
99985	99989	99984	99988	99983	61425	61426	61427	61428
AA	AA	AA	AA	AA				
AA	AA							
AA	AA	AA	AA	AA				
					AA	AA	AA	AA
AA	AA							
AA	AA	AA	AA	AA				
AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA
AA	AA	AA	AA	AA	AA	AA	AA	AA

: Chromium < 2 ug/L; Copper, Nickel < 5 ug/L; Lead < 1 ug/L.
Zinc < 50 ug/L

REPORT FORM

S. DEPARTMENT OF ENERGY 1IN90010003 JUN 1999 1 3 OH0009857

DU FACILITY
.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
:AMISBURG 45343 MONTGOMERY

FORM

					MOUND		DENISE HESS		
1	3	3	2	2	3	2	2	2	2
999	1	1	48	48	1	48	48	48	3
CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec	BIS PHTHAL
MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L
50050	00400	00300	70301	00530	80082	99992	00981	01079	39100
0.123	8.0	9.9				AA	AA	AA	
0.138									
0.139									
0.138									
0.138									
0.138									
0.136									
0.133	7.7	9.2			AA	AA			
0.137			781.0	AA					
0.149									
0.149									
149									
.102									
0.134									
0.138	8.0	10.2							AA
0.136						AA			
0.138									
0.137									
0.137									
0.137									
0.131									
0.136	8.1	10.0	903.0	AA		AA			
0.135									
0.136									
0.135									
0.135									
0.135									
0.133						AA			
0.137	8.1	10.1							
0.134									
4.073	39.8	49.4	1684.0	AA	AA	AA	AA	AA	AA
0.136	8.0	9.9	842.0	AA	AA	AA	AA	AA	AA
0.149	8.1	10.2	903.0	AA	AA	AA	AA	AA	AA
0.102	7.7	9.2	781.0	AA	AA	AA	AA	AA	AA

A Suspended Solids < 1.0 mg/L; CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5 ug/L.
Bis (2-Ethylhexyl) phthalate < 5 ug/L.

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-106/99
June 9, 1999

99-TC/06-09

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for May. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of May. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Sue Mackey at extension 4013.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
S. A. Mackey
R. P. Paulick
M. Spivey
M. Gilliat

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 MAY 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

3	3	3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1
CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2C12
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
12									
3									
4									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) < 1

REPORTER

ONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 MAY 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	1	3	3	2	2	3	2	2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec
	MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.124								
02	0.124								
03	0.122								
04	0.130	8.0	10.0			AA	AA	AA	AA
05	0.087								
06	0.131								
07	0.131								
08	0.131								
09	0.131								
10	0.136						AA		
11	0.126	8.3	10.1						
	0.128			918.0	1.0				
	0.126								
14	0.125								
15	0.125								
16	0.125								
17	0.121								
18	0.122	7.8	9.7						
19	0.112						AA		
20	0.122								
21	0.122								
22	0.122								
23	0.122								
24	0.118								
25	0.107	7.9	10.1				AA		
26	0.102			741.0	AA				
27	0.104								
28	0.104								
29	0.103								
30	0.103								
31	0.103								
	3.689	32.0	40.0	1659.0	1.0	AA	AA	AA	AA
	0.119	8.0	10.0	829.5	AA	AA	AA	AA	AA
	0.136	8.3	10.1	918.0	1.0	AA	AA	AA	AA
	0.087	7.8	9.7	741.0	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5.0 ug/L.

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 MAY 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2	2	2	2	2
	48	48	48	48	48
	Cr	Cu	Ni	Pb	Zn
	Tot Rec	Tot Rec	Tot Rec	Tot Rec	Tot Rec
	ug/L	ug/L	ug/L	ug/L	ug/L
	99985	99989	99984	99988	99983
01					
02					
03					
04	AA	AA	AA	AA	AA
05					
06					
07					
08					
09					
10	AA	AA			
11					
12					
13					
14					
15					
16					
17					
18					
19	AA	AA	AA	AA	AA
20					
21					
22					
23					
24					
25	AA	AA			
26					
27					
28					
29					
30					
31					
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA

AA: Copper, Nickel < 5 ug/L; Lead < 1 ug/L; Chromium < 2 ug/L.
Zinc < 50 ug/L

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343
(937) 865-4020

ESC-072/99
April 8, 1999

99-TC/04-08

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for March. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of March. All parameters were within their specified limits as imposed by the Ohio EPA. Please note that the toxicity report is included with the monthly report forms to be submitted to the OEPA. This report also requires your signature, in addition to the monthly report forms.

If you require further information, please contact Ronald Paulick at extension 4080 or Sue Mackey at extension 4013.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
S. A. Mackey
R. P. Paulick
M. Spivey
M. Gilliat

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 MAR 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

						MOUND		DENISE HESS		
	1	3	3	2	2	3	2	2	2	2
	999	1	1	48	48	1	48	48	48	3
	CONDUIT FLOW MGD	PH S.U.	DO mg/L	DSS mg/L	TSS mg/L	CBOD 5 Day mg/L	Hg Tot Rec ug/L	Se Tot Rec ug/L	Ag Tot Rec ug/L	BIS PHTHAL ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079	39100
01	0.140									
02	0.143	7.9	12.8							
03	0.142			693.0	AA		AA	AA	AA	
04	0.143									
05	0.143									
06	0.143									
07	0.143									
08	0.148									
09	0.140	8.1	11.1				AA			
10	0.143					AA				
11	0.154									
12	0.154									
3	0.154									
14	0.108									
15	0.139	8.0	11.1							
16	0.143						AA			AA
17	0.139			759.0	1.8					
18	0.138									
19	0.139									
20	0.139									
21	0.139									
22	0.141						AA			
23	0.136	7.8	12.0							
24	0.136									
25	0.134									
26	0.134									
27	0.134									
28	0.134									
29	0.132						AA			
30	0.131	8.5	10.1							
31	0.131									
	4.317	40.3	57.1	1452.0	1.8	AA	AA	AA	AA	AA
	0.139	8.1	11.4	726.0	AA	AA	AA	AA	AA	AA
	0.154	8.5	12.8	759.0	1.8	AA	AA	AA	AA	AA
	0.108	7.8	10.1	693.0	AA	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 4.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5.0 ug/L.
Bis (2-Ethylhexyl) phthalate < 5 ug/L.

REPORTER

NTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 MAR 1999 2 3 _ OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L	MOUND 2 48 ACUTE TOX CERIODA TUa	2 48 CHRONIC TOX CERIODA TUc	DENISE HESS 2 48 ACUTE TOX PIMEPHA TUa	2 48 CHRONIC TOX PIMEPHA TUc
	99985	99989	99984	99988	99983	61425	61426	61427	61428
01									
02									
03	AA	AA	AA	AA	AA				
04									
05									
06									
07									
08									
09	AA	AA							
10									
11									
12									
16	AA	AA	AA	AA	AA				
17									
18									
19						AA	1.4	AA	AA
20									
21									
22	AA	AA	AA	AA	AA				
23									
24									
25									
26									
27									
28									
29	AA	AA	AA	AA	AA				
30									
31									
	AA	AA	AA	AA	AA	AA	1.4	AA	AA
	AA	AA	AA	AA	AA	AA	1.4	AA	AA
	AA	AA	AA	AA	AA	AA	1.4	AA	AA
	AA	AA	AA	AA	AA	AA	1.4	AA	AA

AA: Chromium < 2 ug/L; Copper, Nickel < 5 ug/L; Lead < 1 ug/L.
Zinc < 50 ug/L.
Toxicity Report Enclosed.

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 MAR 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

3 1 CC14 ug/L	3 1 CHC13 ug/L	3 1 CH2C12 ug/L	3 1 C2C14 ug/L	3 1 CC13F ug/L	3 1 C2H3C13 ug/L	3 1 C2H2C12 ug/L	3 1 C2H3C1 ug/L	3 1 C2HC13 ug/L	3 1 C2H2C12 ug/L
32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) < 1

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-057/99
March 4, 1999

99-TC/03-04

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for February. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of February. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Sue Mackey at extension 4013.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
S. A. Mackey
R. P. Paulick
M. Spivey
M. Gilliat

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 FEB 1999 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY FORM

	1	3	3	2	2	MOUND 3	2	DENISE HESS 2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec
	MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.135			724.0	1.4				
02	0.141	8.1	11.5				AA	AA	AA
03	0.142								
04	0.141								
05	0.141								
06	0.141								
07	0.141								
08	0.140					AA	AA		
09	0.142	8.0	11.4						
10	0.140								
11	0.141								
12	0.141								
	0.141								
	0.141								
15	0.138								
16	0.139	8.2	11.7				AA		
17	0.138								
18	0.138								
19	0.138								
20	0.139								
21	0.139								
22	0.139			747.0	AA		AA		
23	0.141	7.8	12.0						
24	0.142								
25	0.142								
26	0.142								
27	0.141								
28	0.141								
29									
30									
31									
	3.925	32.1	46.6	1471.0	1.4	AA	AA	AA	AA
	0.140	8.0	11.7	735.5	AA	AA	AA	AA	AA
	0.142	8.2	12.0	747.0	1.4	AA	AA	AA	AA
	0.135	7.8	11.4	724.0	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 1.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5.0 ug/L.

REPORTER

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 FEB 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAM. C
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L
	99985	99989	99984	99988	99983
01					
02	AA	AA	AA	AA	AA
03					
04					
05					
06					
07					
08	AA	AA	AA	AA	AA
09					
10					
11					
12					
14					
15					
16	AA	AA	AA	AA	AA
17					
18					
19					
20					
21					
22	AA	AA	AA	AA	AA
23					
24					
25					
26					
27					
28					
29					
30					
31					
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA

AA: Chromium, Copper, Nickel, Lead, Zinc < 15 ug/L.

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 FEB 1999 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI (
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

3 1 CC14 ug/L	3 1 CHC13 ug/L	3 1 CH2C12 ug/L	3 1 C2C14 ug/L	3 1 CC13F ug/L	3 1 C2H3C13 ug/L	3 1 C2H2C12 ug/L	3 1 C2H3C1 ug/L	3 1 C2HC13 ug/L	3 1 C2H2C12 ug/L
32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
01									
02									
03									
04									
05									
06									
07									
08									
09	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
10									
11									
12									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) < 1

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-
(937) 865-4020

ESC-028/99
February 4, 1999

99-TC/02-04

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

Attached are copies of the Operable Unit 1 (OU1) Authorization to Discharge monitoring results for January. This report was prepared by staff under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I certify that I have reviewed the reporting forms and based on my inquiry of those persons immediately responsible for obtaining the information, to the best of my knowledge and belief, the information contained in the report is true and complete. Please forward the report to the following agency, ensuring receipt before the 15th of the month.

Ohio Environmental Protection Agency
Division of Surface Water
Permit Compliance Unit
P.O. Box 1049
Columbus, OH 43266-1049

There were no exceptions for the month of January. All parameters were within their specified limits as imposed by the Ohio EPA.

If you require further information, please contact Ronald Paulick at extension 4080 or Sue Mackey at extension 4013.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC

bc: L. R. Bauer
S. A. Mackey
R. P. Paulick
M. Spivey
M. Gilliat

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JAN 1999 1 3 OH0009857

OUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MI
MIAMISBURG 45343 MONTGOMERY

FORM

						MOUND		DENISE HESS	
	1	3	3	2	2	3	2	2	2
	999	1	1	48	48	1	48	48	48
	CONDUIT FLOW	PH	DO	DSS	TSS	CBOD 5 Day	Hg Tot Rec	Se Tot Rec	Ag Tot Rec
	MGD	S.U.	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L
	50050	00400	00300	70301	00530	80082	99992	00981	01079
01	0.116								
02	0.116								
03	0.116								
04	0.117								
05	0.120	8.3	12.4				AA	AA	AA
06	0.121								
07	0.127								
08	0.128								
09	0.128								
10	0.128								
11	0.110			727.0	14.3				
	0.100	8.3	10.9			AA	AA		
	0.104								
14	0.192								
15	0.193								
16	0.193								
17	0.193								
18	0.107						AA		
19	0.128	7.8	12.3						
20	0.131								
21	0.136								
22	0.136								
23	0.136								
24	0.136								
25	0.137			661.0	AA				
26	0.141	8.0	12.0				AA		
27	0.138								
28	0.138								
29	0.139								
30	0.139								
31	0.139								
	4.183	32.4	47.6	1388.0	14.3	AA	AA	AA	AA
	0.135	8.1	11.9	694.0	7.2	AA	AA	AA	AA
	0.193	8.3	12.4	727.0	14.3	AA	AA	AA	AA
	0.100	7.8	10.9	661.0	AA	AA	AA	AA	AA

AA: Suspended Solids < 1.0 mg/L; CBOD5 < 1.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5.0 ug/L.

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JAN 1999 2 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAM
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L
	99985	99989	99984	99988	99983
01					
02					
03					
04	AA	AA	32	AA	AA
05					
06					
07					
08					
09					
10					
11					
12	AA	AA	24	AA	AA
14					
15					
16					
17					
18	AA	AA	36	AA	AA
19					
20					
21					
22					
23					
24					
25					
26	AA	AA	17	AA	AA
27					
28					
29					
30					
31					
	AA	AA	109	AA	AA
	AA	AA	27	AA	AA
	AA	AA	36	AA	AA
	AA	AA	17	AA	AA

AA: Chromium, Copper, Lead, Zinc < 15 ug/L.

REPORTER

MONTHLY REPORT FORM

U.S. DEPARTMENT OF ENERGY 1IN90010003 JAN 1999 3 3 OHOO

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	3 1 CC14 ug/L	3 1 CHC13 ug/L	3 1 CH2C12 ug/L	3 1 C2C14 ug/L	3 1 CC13F ug/L	3 1 C2H3C13 ug/L	3 1 C2H2C12 ug/L	3 1 C2H3C1 ug/L	3 1 C2HC ug/l
	32102	32106	34423	34475	34488	34506	34546	39175	3918(
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	AA	AA	AA	AA	AA	AA	AA	AA	A
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
	AA	AA	AA	AA	AA	AA	AA	AA	A
	AA	AA	AA	AA	AA	AA	AA	AA	A
	AA	AA	AA	AA	AA	AA	AA	AA	A
	AA	AA	AA	AA	AA	AA	AA	AA	A

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 u
Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluorom
(34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506),
Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 4

REPORTER

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-007/99
January 11, 1999

99-TC/01-11

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Arthur W. Kleinrath

SUBJECT: Contract No. DE-AC24-97OH20044
OPERABLE UNIT 1 (OU1) AUTHORIZATION TO DISCHARGE MONITORING RESULTS (Deliverable C.7.2b)

REFERENCE: OU1 Authorization to Discharge Permit 1IN90010*AD requires submittal of the enclosed report forms each month.

Dear Mr. Provencher:

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If you require further information, please contact Ronald Paulick at extension 4080 or Sue Mackey at extension 4013.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/rpp

Enclosures

cc: DCC
Ron H. Church

bc: L. R. Bauer
S. A. Mackey
R. P. Paulick
M. Spivey
M. Gilliat

4500

-ILY REPORT FORM

. DEPARTMENT OF ENERGY 1IN90010003 DEC 1998 1 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

					MOUND		DENISE HESS		
1	3	3	2	2	3	2	2	2	2
999	1	1	48	48	1	48	48	48	3
CONDUIT FLOW MGD	PH S.U.	DO mg/L	DSS mg/L	TSS mg/L	CBOD 5 Day mg/L	Hg Tot Rec ug/L	Se Tot Rec ug/L	Ag Tot Rec ug/L	BIS PHTHAL ug/L
50050	00400	00300	70301	00530	80082	99992	00981	01079	39100
0.121	8.1	11.1	683.0	1.2					
0.120						AA	AA	AA	
0.127									
0.128									
0.128									
0.106									
0.119					AA				AA
0.122	8.3	10.1				AA			
0.121									
0.123									
0.123									
0.123									
0.123									
0.121									
0.123	8.2	12.9	648.0	AA		AA			
0.120									
0.121									
0.121									
0.121									
0.121									
0.120									
0.124	8.4	11.6				AA			
0.128									
0.128									
0.127									
0.127									
0.127									
0.118									
0.139	8.2	11.7				AA			
0.117									
0.117									
3.804	41.1	57.4	1331.0	1.2	AA	AA	AA	AA	AA
0.123	8.2	11.5	665.5	AA	AA	AA	AA	AA	AA
0.139	8.4	12.9	683.0	1.2	AA	AA	AA	AA	AA
0.106	8.1	10.1	648.0	AA	AA	AA	AA	AA	AA

AA: CBOD5 < 1.0 mg/L; TSS < 1.0 mg/L.
Mercury < 0.2 ug/L; Silver < 0.5 ug/L; Selenium < 5 ug/L.
Bis (2-Ethylhexyl) phthalate < 5.0 ug/L.

REPORTER

MONTHLY REPORT FORM

4500

U.S. DEPARTMENT OF ENERGY 1IN90010003 DEC 1998 2 3 OH00098!

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI
MIAMISBURG 45343 MONTGOMERY

FORM

	2 48 Cr Tot Rec ug/L	2 48 Cu Tot Rec ug/L	2 48 Ni Tot Rec ug/L	2 48 Pb Tot Rec ug/L	2 48 Zn Tot Rec ug/L	MOUND 2 48 ACUTE TOX CERIODA TUa	2 48 CHRONIC TOX CERIODA TUc	DENISE HESS 2 48 ACUTE TOX PIMEPHA TUa	2 48 CHRONIC TOX PIMEPHA TUc
	99985	99989	99984	99988	99983	61425	61426	61427	61428
01									
02	AA	AA	AA	AA	AA				
03									
04									
05									
06									
07						AA	1.4	AA	AA
08	AA	AA	26	AA	AA				
09									
10									
11									
12									
13									
14									
15	AA	AA	34	AA	AA				
16									
17									
18									
19									
20									
21									
22	AA	AA	AA	AA	AA				
23									
24									
25									
26									
27									
28									
29	AA	AA	AA	AA	AA				
30									
31									
	AA	AA	60	AA	AA	AA	1.4	AA	AA
	AA	AA	AA	AA	AA	AA	1.4	AA	AA
	AA	AA	34	AA	AA	AA	1.4	AA	AA
	AA	AA	AA	AA	AA	AA	1.4	AA	AA

AA: Chromium, Copper, Nickel, Lead, Zinc < 15 ug/L.
Toxicity Report Enclosed.

REPORTER

MONTHLY REPORT FORM

S. DEPARTMENT OF ENERGY 1IN90010003 DEC 1998 3 3 OH0009857

MOUND FACILITY
P.O. BOX 66 003 GROUNDWATER TREATMENT WORKS DISCHARGE TO MIAMI C.
MIAMISBURG 45343 MONTGOMERY

FORM

MOUND DENISE HESS

	3	3	3	3	3	3	3	3	3	3
	1	1	1	1	1	1	1	1	1	1
	CC14	CHC13	CH2C12	C2C14	CC13F	C2H3C13	C2H2C12	C2H3C1	C2HC13	C2H2C12
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	32102	32106	34423	34475	34488	34506	34546	39175	39180	46363
01										
02										
03										
04										
05										
06										
07	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
08										
09										
10										
11										
14										
15										
16										
17										
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26										
27										
28										
29										
30										
31										
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA

AA: Methylene Chloride (34423) < 10 ug/L; Vinyl Chloride (39175) < 2 ug/L; Carbon Tetrachloride (32102), Chloroform (32106), Trichlorofluoromethane (34488), Tetrachloroethene (34475), 1,1,1-Trichloroethane (34506), Trichloroethene (39180), trans & cis-1,2-Dichloroethene (34546 & 46363) < 1 ug

REPORTER

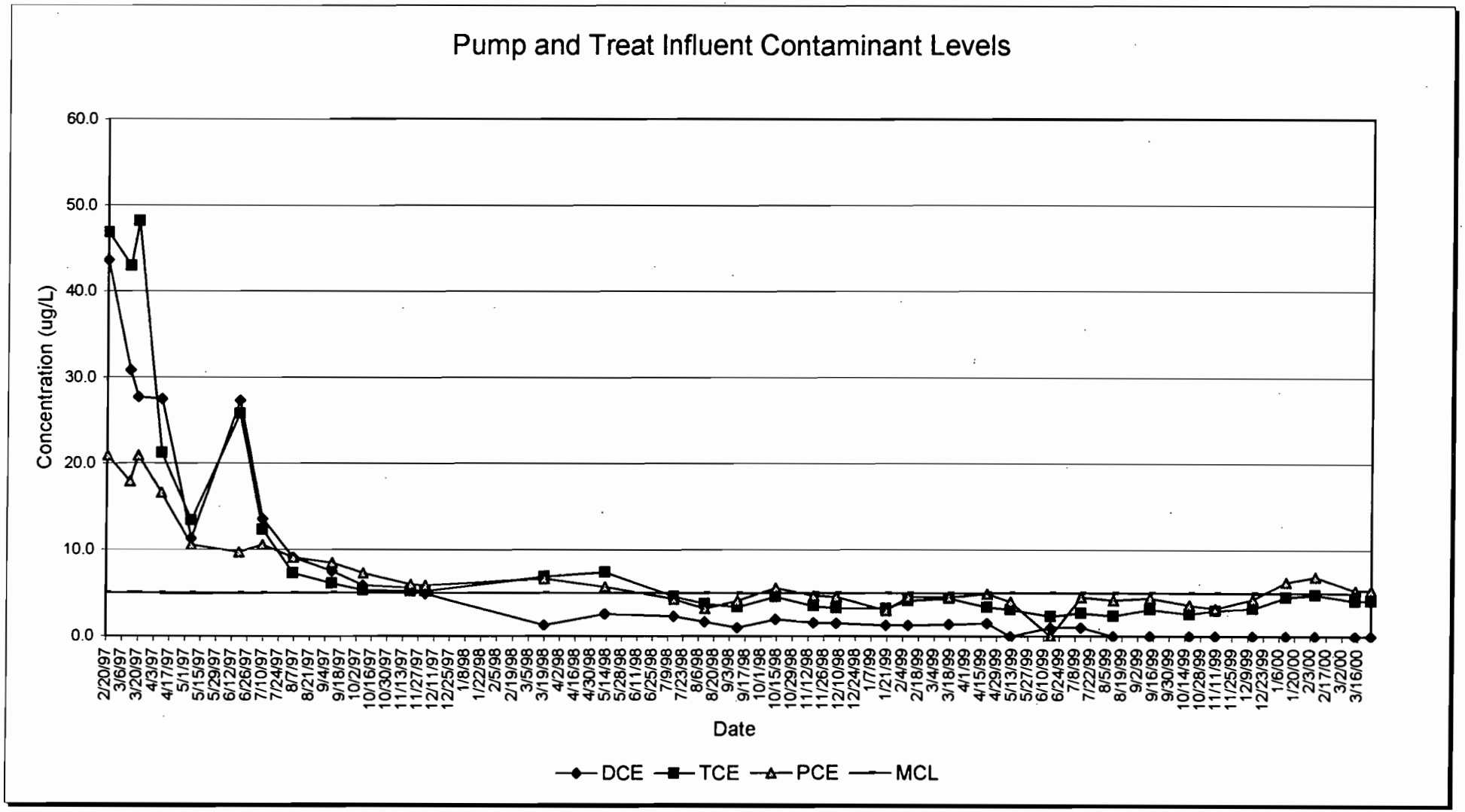
Attachment C

VOC COC Data and Water Level Measurement Data

Pump and Treat Influent Contaminant Levels

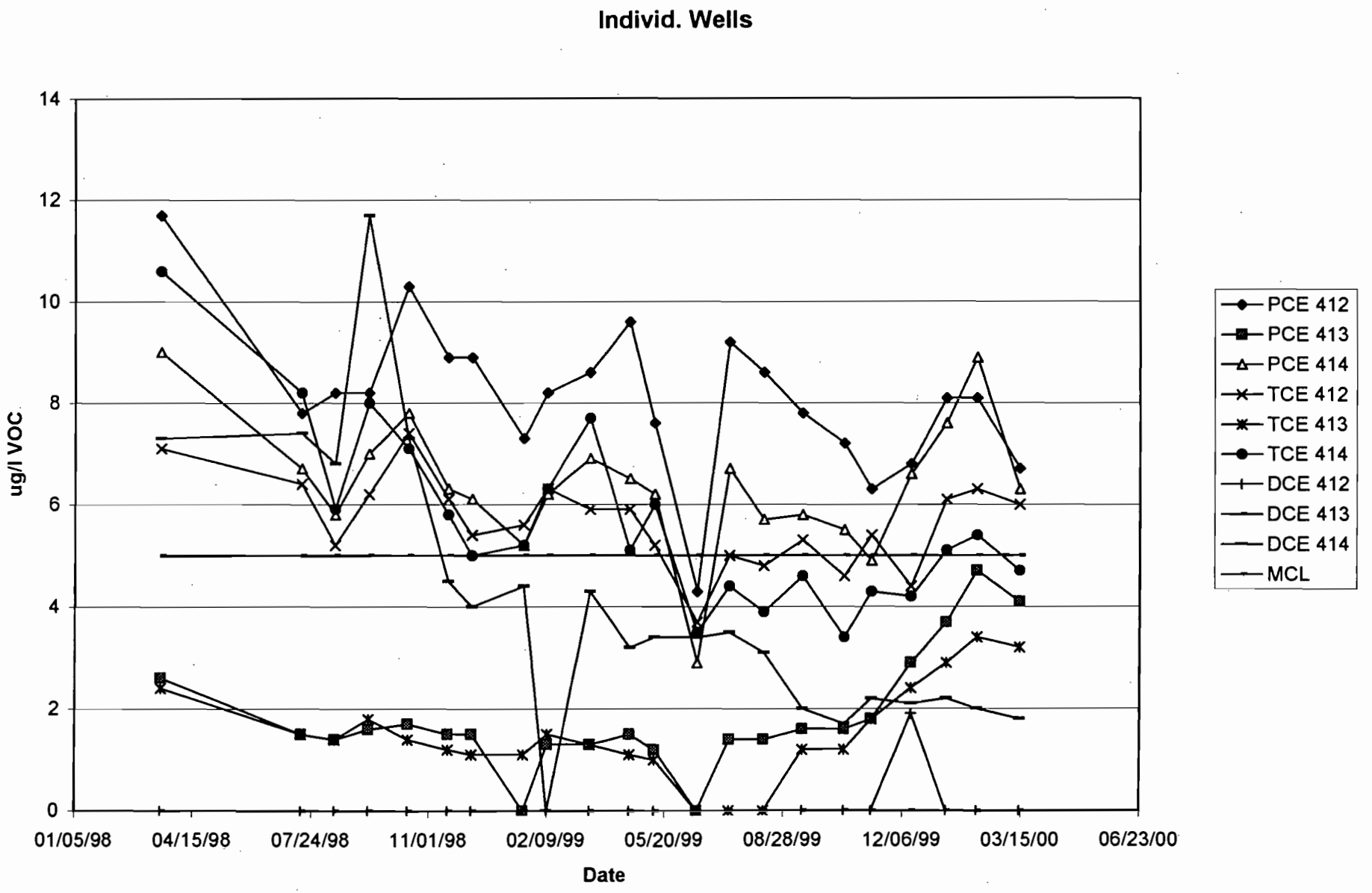
Est. Removal based upon composite

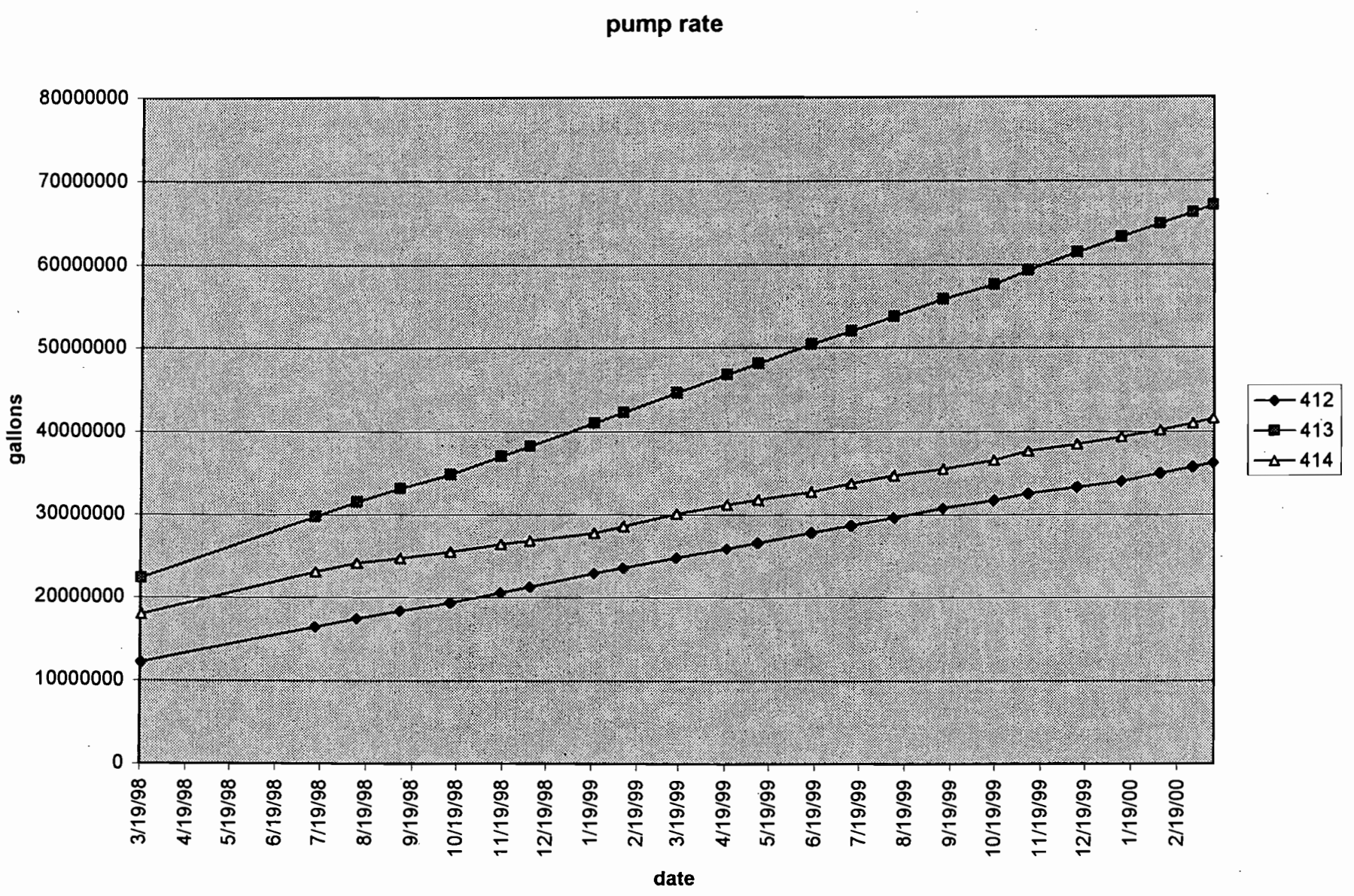
Without SVE influent			ug/l	ug/l	ug/l	0 = <1.0	MCL	With SVE influent			ug/l	ug/l	ug/l	0 = <1.0	PCE	TCE	DCE	Sum
Date	Liters	Gallons	PCE	TCE	DCE	COC Effluent	ug/l	Date	Gallons	Liters	PCA	TCE	DCE	COC Effluent	(lbs)	(lbs)	(lbs)	(lbs)
02/20/97	1127140.492	297759	20.9	46.8	43.6	0	5								0.25	0.56	0.52	1.33
03/12/97	12004052.48	3171135	17.9	42.9	30.8	0	5								0.48	1.12	0.92	2.52
03/19/97	12873595.69	3400844	20.9	48.1	27.7	0	5								0.76	1.76	1.29	3.82
04/09/97	24193204.04	6391168	16.6	21.2	27.5	0	5								1.25	2.38	2.10	5.73
05/06/97	39397795.87	10407796	10.6	13.4	11.3	0	5								1.72	2.98	2.60	7.30
06/18/97	64661287.3	17081704	9.7	25.8	27.3	0	5								2.10	3.98	3.66	9.74
07/09/97	74548306.48	19693578	10.6	12.3	13.6	0	5								2.39	4.32	4.03	10.74
08/06/97	89534029.58	23652387	9.1	7.3	9.1	0	5								2.72	4.59	4.37	11.68
09/10/97	107898055	28503649	8.5	6.1	7.5	0	5								3.03	4.81	4.64	12.48
10/08/97	122636938.9	32397250	7.3	5.3	5.9	0	5								3.32	5.02	4.88	13.22
11/20/97	143839182.9	37998290	6.0	5.2	5.6	0	5								3.51	5.18	5.05	13.73
12/03/97	150546724.8	39770235	5.9	5.2	4.9	0	5								3.55	5.22	5.08	13.85
						0	5	1/7/98	43952710	166379115.9	7.9	78.4	72.3	<1.0				
						0	5	2/12/98	48546654	183769086.6	5	167		<1.0				
3/19/98	198715335.4	52495035	6.7	6.9	1.3	0	5								3.77	5.44	5.13	14.34
5/13/98	228197941	60283515	5.7	7.4	2.6	0	5								4.17	5.96	5.31	15.44
7/15/98	262383107	69314280	4.3	4.6	2.3	0	5								4.40	6.21	5.43	16.04
8/12/98	276716059	73100645	3.2	3.8	1.7	0	5								4.49	6.32	5.48	16.29
9/10/98	288751379	76280040	4.1	3.4	1	0	5								4.60	6.41	5.51	16.52
10/14/98	301567724	79665760	5.6	4.6	2	0	5								4.78	6.56	5.57	16.92
11/17/98	317924868	83986860	4.7	3.5	1.6	0	5								4.97	6.70	5.64	17.31
12/7/98	337709134	89213310	4.6	3.3	1.5	0	5								5.12	6.80	5.68	17.61
1/20/99	347172267	91713205	3	3.2	1.3	0	5								5.19	6.88	5.71	17.77
2/9/99	357721623	94500050	4.6	4.1	1.3	0	5								5.34	7.01	5.76	18.10
3/17/99	376952993	99580440	4.5	4.4	1.4	0	5								5.51	7.18	5.81	18.51
4/20/99	393509779	103954280	4.9	3.4	1.5	0	5								5.66	7.28	5.86	18.79
5/11/99	403269745	106532590	4	3.1	0	0	5								5.77	7.37	5.86	19.00
6/16/99	420239822	111015610	0	2.3	1	0	5								5.77	7.45	5.89	19.11
7/13/99	433161932	114429270	4.5	2.7	1	0	5								5.91	7.53	5.92	19.36
8/11/99	447235147	118147020	4.2	2.4	0	0	5								6.04	7.61	5.92	19.57
9/13/99	462106422	122075595	4.4	3.1	0	0	5								6.18	7.71	5.92	19.81
10/18/99	476485158	125874055	3.6	2.6	0	0	5								6.30	7.79	5.92	20.00
11/10/99	490451379	129563540	3.2	3	0	0	5								6.40	7.88	5.92	20.19
12/13/99	504361576	133238225	4.3	3.2	0	0	5								6.52	7.97	5.92	20.41
01/12/00	517225295	136636460	6.3	4.5	0	0	5								6.70	8.10	5.92	20.72
02/07/00	529956052	139999570	6.9	4.8	0	0	5								6.94	8.26	5.92	21.12
03/14/00	548149178	144805685	5.3	4.1	0	0	5								7.09	8.38	5.92	21.38
03/28/00	555631007	146782175	5.3	4.1	0										7.13	8.42	5.96	21.43


Pump and Treat Influent Contaminant Levels
Concentration (ug/L)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Date
DCE
TCE
PCE
MCL

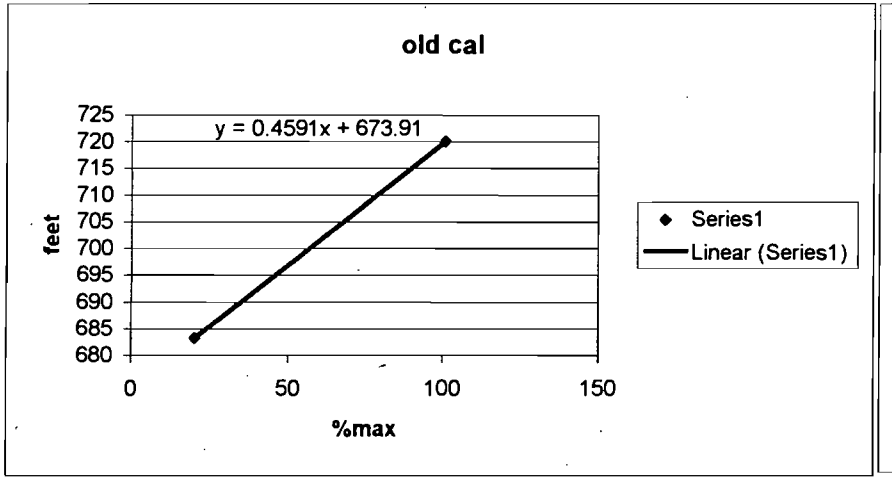
Initial Rate: 25 gpm 45 gpm 40 gpm ug/l 0 = <1

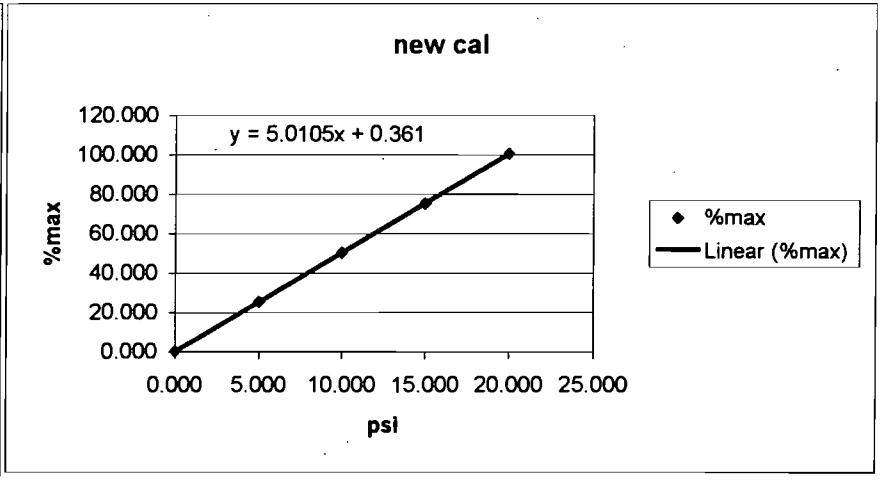
Date	Total Liters	Total Gallons	Gallons 412	Gallons 413	Gallons 414	Liters 412	Liters 413	Liters 414	PCE 412	PCE 413	PCE 414	TCE 412	TCE 413	TCE 414	DCE 412	DCE 413	DCE 414
03/19/98	198715335.4	52495035.0	12183950	22350300	17960785	46121271	84605093.8	67988971	11.7	2.6	9	7.1	2.4	10.6	0	0	7.3
07/15/98	262383107.3	69314280.0	16435640	29768160	23110480	62215669	112684750	87482688	7.8	1.5	6.7	6.4	1.5	8.2	0	0	7.4
08/12/98	276867475.3	73140645.0	17441580	31522955	24176110	66023566	119327372	91516537	8.2	1.4	5.8	5.2	1.4	5.9	0	0	6.8
09/10/98	288751378.8	76280040.0	18387600	33166910	24725530	69604642	125550419	93596318	8.2	1.6	7	6.2	1.8	8	0	0	11.7
10/14/98	301567723.9	79665760.0	19350880	34842820	25472060	73251053	131894429	96422242	10.3	1.7	7.8	7.4	1.4	7.1	0	0	7.3
11/17/98	317924898.0	83986868.0	20576185	36982665	26428018	77889338	139994624	100040936	8.9	1.5	6.3	6.1	1.2	5.8	0	0	4.5
12/07/98	326983282.9	86379840.0	21301900	38237580	26840360	80636468	144744994	101601821	8.9	1.5	6.1	5.4	1.1	5	0	0	4
01/20/99	347172266.8	91713205.0	22903800	41034025	27775380	86700319	155330691	105141257	7.3	0	5.2	5.6	1.1	5.2	0	0	4.4
02/09/99	357647826.7	94480555.0	23583430	42326555	28570570	89272999	160223449	108151379	8.2	1.3	6.2	6.3	1.5	6.3	0	0	0
03/17/99	376882016.1	99561690.0	24801335	44636310	30124045	93883271	168966824	114031921	8.6	1.3	6.9	5.9	1.3	7.7	0	0	4.3
04/20/99	393509779.0	103954280.0	25930735	46818760	31204785	98158515	177228296	118122968	9.6	1.5	6.5	5.9	1.1	5.1	0	0	3.2
05/11/99	403269744.6	106532590.0	26592460	48148700	31791430	100663417	182262667	120343661	7.6	1.2	6.2	5.2	1	6	0	0	3.4
06/16/99	420239822.3	111015610.0	27853740	50432360	32729510	105437882	190907261	123894680	4.3	0	2.9	3.7	0	3.5	0	0	3.4
07/13/99	433161931.8	114429270.0	28685470	51976800	33767000	108586322	196753602	127822007	9.2	1.4	6.7	5	0	4.4	0	0	3.5
08/11/99	447235147.3	118147020.0	29671050	53765650	34710320	112317149	203525137	131392862	8.6	1.4	5.7	4.8	0	3.9	0	0	3.1
09/13/99	462106422.2	122075595.0	30810470	55813960	35451165	116630323	211278834	134197265	7.8	1.6	5.8	5.3	1.2	4.6	0	0	2
10/18/99	476485158.3	125874055.0	31758010	57607930	36508115	120217152	218069750	138198257	7.2	1.6	5.5	4.6	1.2	3.4	0	0	1.7
11/10/99	490451379.1	129563540.0	32581460	59370050	37612030	123334250	224740100	142377030	6.3	1.8	4.9	5.4	1.8	4.3	0	0	2.2
12/13/99	504361575.8	133238225.0	33308010	61505225	38424990	126084541	232822617	145454418	6.8	2.9	6.6	4.4	2.4	4.2	1.9	0	2.1
01/12/00	517225295.3	136636460.0	34024440	63282570	39329450	128796523	239550600	148878172	8.1	3.7	7.6	6.1	2.9	5.1	0	0	2.2
02/07/00	529956052.3	139999570.0	34935930	64889430	40174210	132246889	245633227	152075937	8.1	4.7	8.9	6.3	3.4	5.4	0	0	2
03/14/00	548149177.7	144805685.0	36174290	67112580	41518815	136934591	254048766	157165821	6.7	4.1	6.3	6	3.2	4.7	0	0	1.8
02/29/00	540854102.0	142878530.0	35693635	66251175	40933720	135115114	250787993	154950995									
			24 gpm	43 gpm	29 gpm												


Individ. Wells
14
12
10
8
6
4
2
0
ug/l VOC
01/05/98
04/15/98
07/24/98
11/01/98
02/09/99
05/20/99
08/28/99
12/06/99
03/15/00
06/23/00
Date
PCE 412
PCE 413
PCE 414
TCE 412
TCE 413
TCE 414
DCE 412
DCE 413
DCE 414
MCL

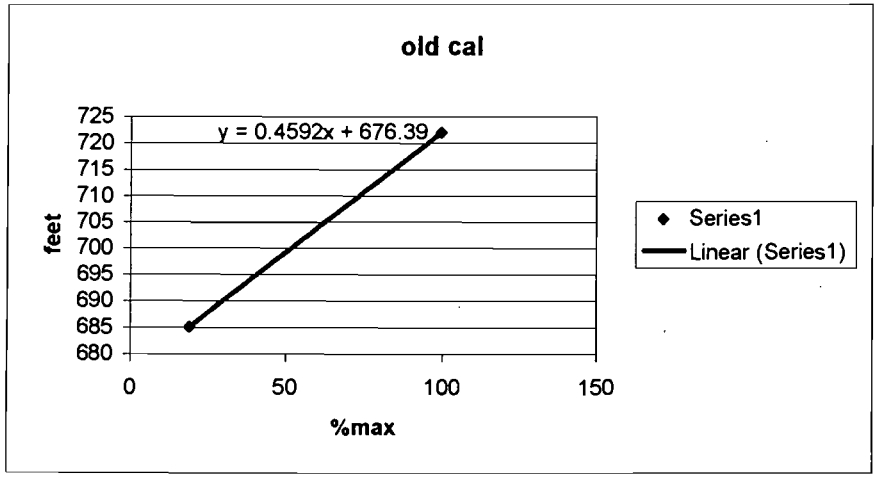

pump rate
80000000
70000000
60000000
50000000
40000000
30000000
20000000
10000000
0
gallons
3/19/98
4/19/98
5/19/98
6/19/98
7/19/98
8/19/98
9/19/98
10/19/98
11/19/98
12/19/98
1/19/99
2/19/99
3/19/99
4/19/99
5/19/99
6/19/99
7/19/99
8/19/99
9/19/99
10/19/99
11/19/99
12/19/99
1/19/00
2/19/00
date
412
413
414

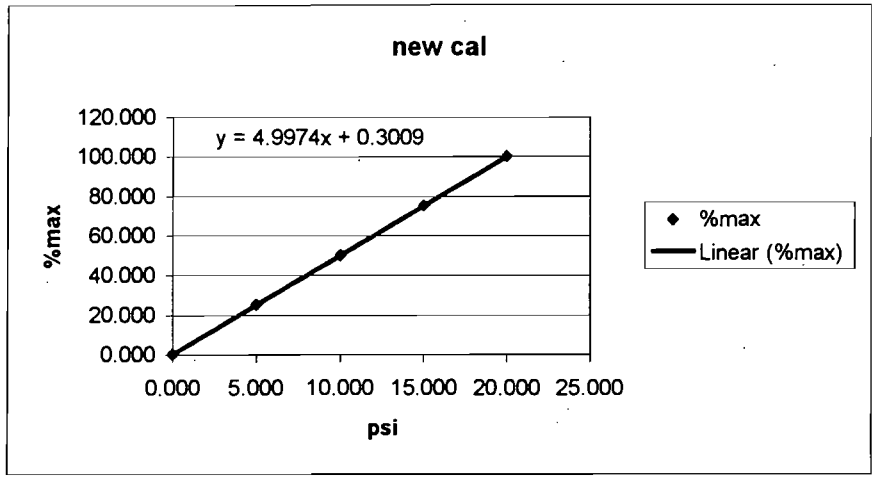
27-Jul-99	Model 2400	716.08					
sn	525787	3067-4	42				
depth	42.22	below toc					
	%max	feet		%max	feet		
prev. cal.	20.3	683.228	new cal.	25	685.2046		
	100.7	720.1398		100	719.7371		
PSI	%max	calc psi	feet H2O	diff	old feet	H2O	Hg
20.000	100.697	20.025	46.198	-0.019	720.140	554.60	40.722
15.004	75.387	14.974	34.544	-0.131	708.520	416.10	30.553
10.000	50.403	9.987	23.041	4.098	697.050	227.31	20.361
5.003	25.506	5.019	11.578	0.017	685.620	138.73	10.188
0.004	0.392	0.006	0.014	0.004	674.090	0.12	0.009



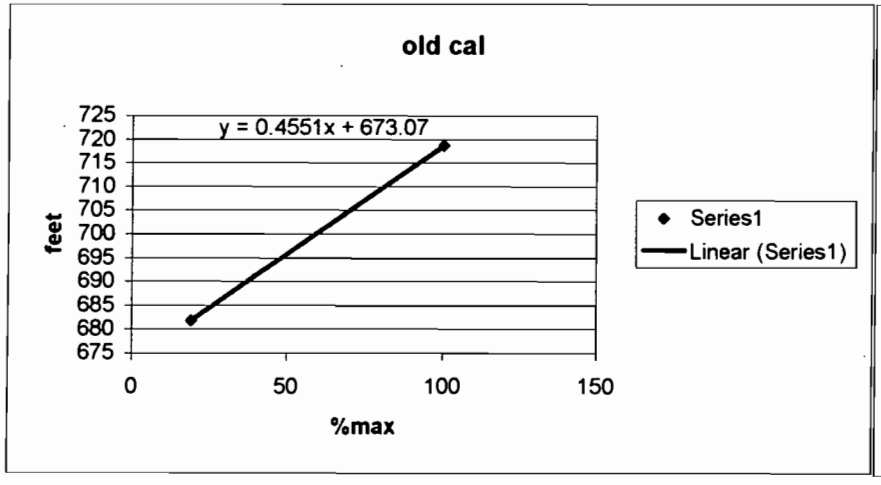


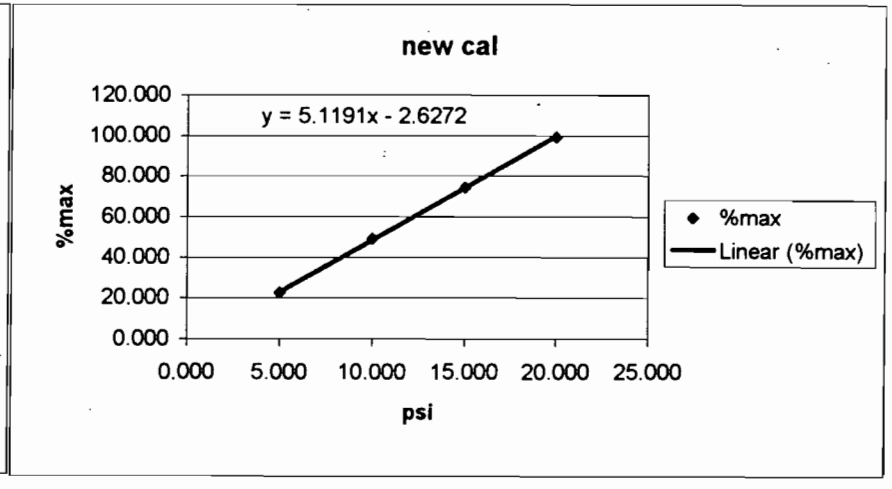
27-Jul-99	Model 2400	718.47					
sn	525781	3067-2	43.5				
depth	42.85	below toc					
	%max	feet		%max	feet		
prev. cal.	19.1	685.16	new cal.	25	687.0221		
	99.5	722.0788		100	721.6451		
PSI	%max	calc psi	feet H2O	diff	old feet	H2O	Hg
20.003	100.305	20.011	46.166	-0.055	722.450	554.65	40.724
15.000	75.196	14.987	34.575	-0.088	710.920	415.95	30.542
10.003	50.305	10.006	23.084	-0.032	699.490	277.39	20.367
5.002	25.305	5.003	11.543	-0.017	688.010	138.72	10.188
0.000	0.305	0.001	0.002	0.002	676.530	0.00	0.000





27-Jul-99	Model 2400	717					
sn	525784	3067-1	43.5				
depth	44.56	below toc					
	%max	feet		%max	feet		
prev. cal.	19.2	681.8086	new cal.	25	684.8906		
	100.3	718.7181		100	718.6905		
PSI	%max	calc psi	feet H2O	diff	feet	H2O	Hg
20.000	99.407	19.932	45.983	-0.234	718.310	554.61	40.718
15.005	74.401	15.047	34.714	0.039	706.930	416.10	30.551
10.005	49.198	10.124	23.356	4.400	695.460	227.47	20.372
5.002	22.501	4.909	11.324	-0.236	683.310	138.72	10.185
			0.000	0.000	673.070	0.00	0.000

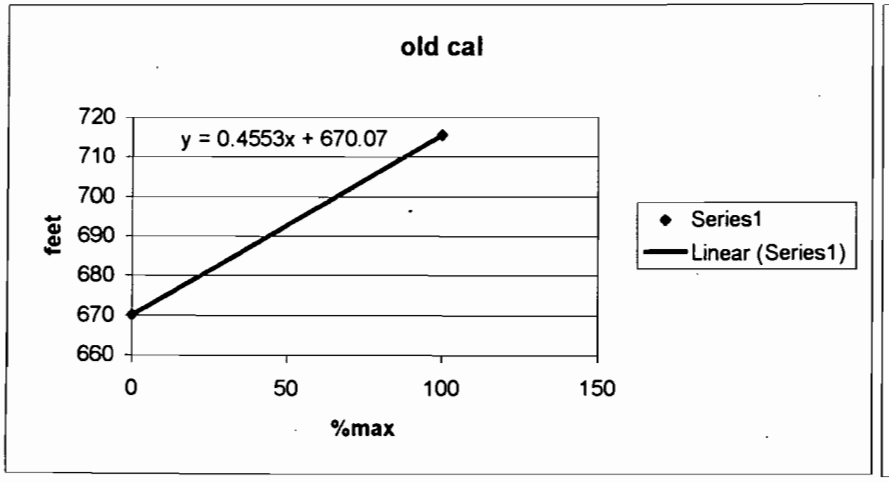


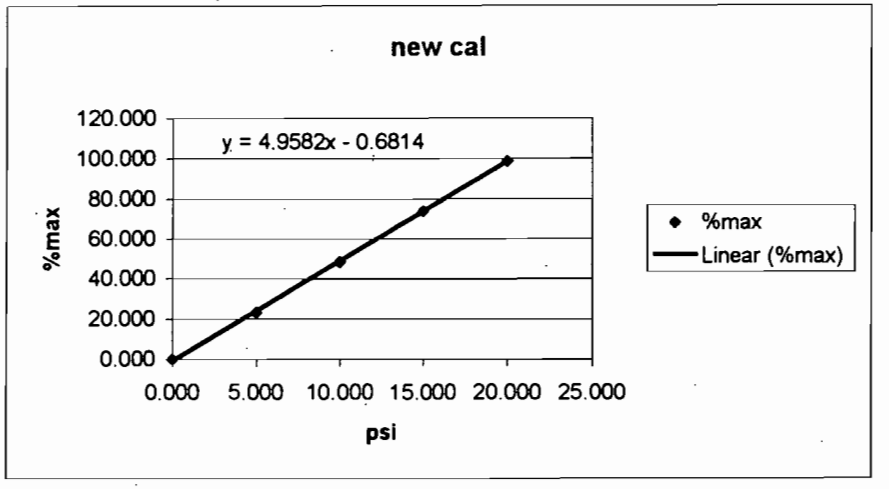


27-Jul-99	Model 2400	704.45	
sn	525780	3070-1	36
depth	36.11	below toc	

	%max	feet		%max	feet
prev. cal.	0	670.0704	new cal.	25	680.2893
	100	715.6031		100	715.186

PSI	%max	calc psi	feet H2O	diff	feet	H2O	Hg
20.003	98.814	20.067	46.294	0.069	715.060	554.70	40.728
15.001	73.710	15.004	34.613	-0.056	703.630	416.03	30.546
10.000	48.605	9.940	22.933	3.991	692.200	227.30	20.358
5.004	23.413	4.860	11.211	-0.356	680.730	138.80	10.194
0.000	0.000	0.137	0.317	0.315	670.070	0.02	0.001

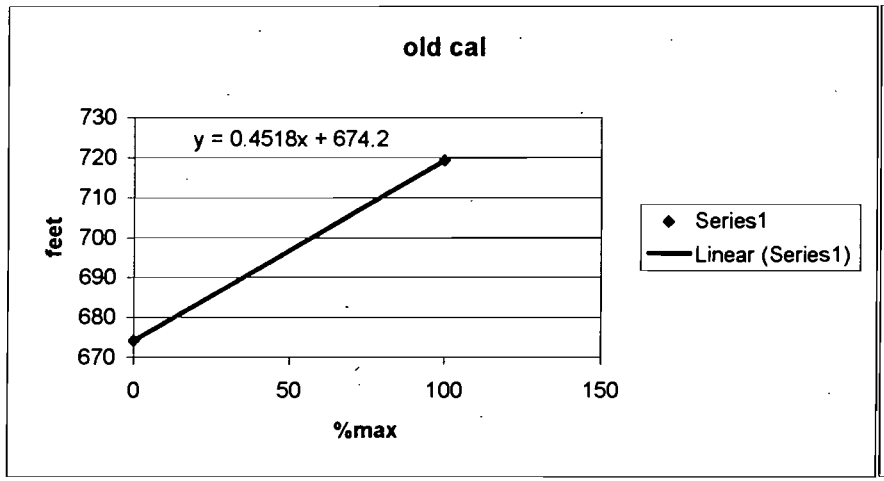


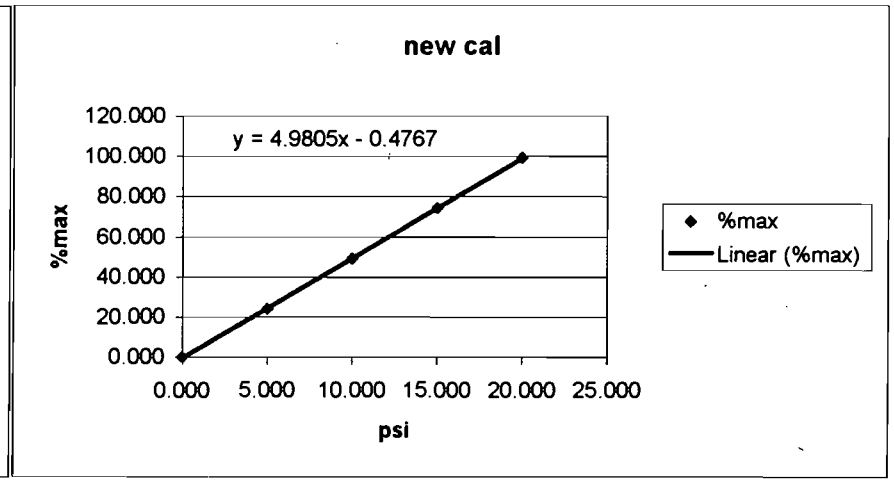


27-Jul-99	Model 2400	705.85	
sn	525790	3070-2	33.5
depth	35.17	below toc	

	%max	feet		%max	feet
prev. cal.	0	674.1979	new cal.	25	682.481
	100	719.3776		100	717.2215

PSI	%max	calc psi	feet H2O	diff	feet	H2O	Hg
20.000	99.402	20.054	46.265	0.047	719.110	554.61	40.719
15.001	74.192	14.992	34.587	-0.079	707.720	415.99	30.543
10.003	49.093	9.953	22.961	-0.156	696.380	277.40	20.370
5.003	23.993	4.913	11.334	-0.225	685.040	138.71	10.187
0.001	0.000	0.096	0.221	0.217	674.200	0.04	0.001

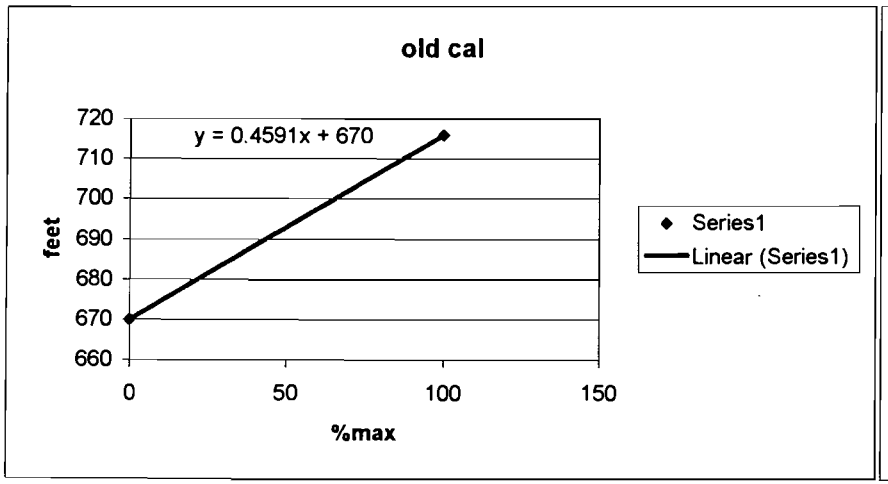


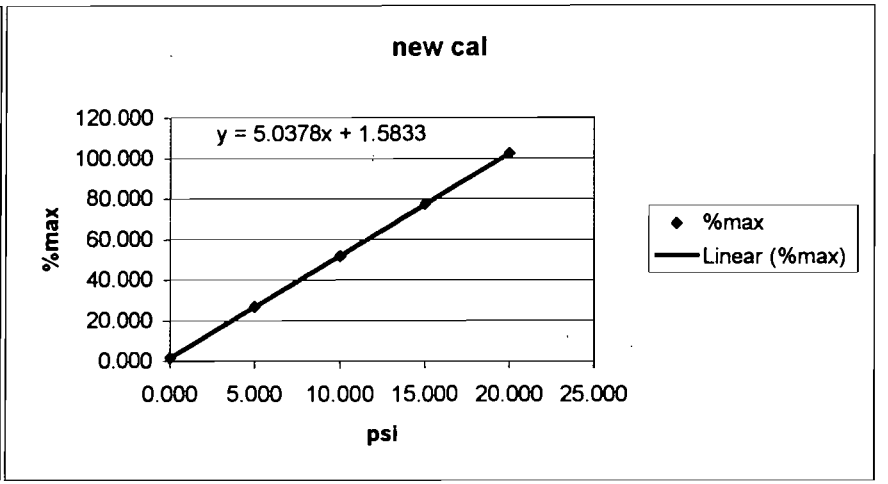


27-Jul-99	Model 2400	706.09	
sn	519126	3070-4	35
depth	35.14	below toc	

	%max	feet		%max	feet
prev. cal.	0	669.9976	new cal.	25	681.6734
	100	715.905		100	716.0187

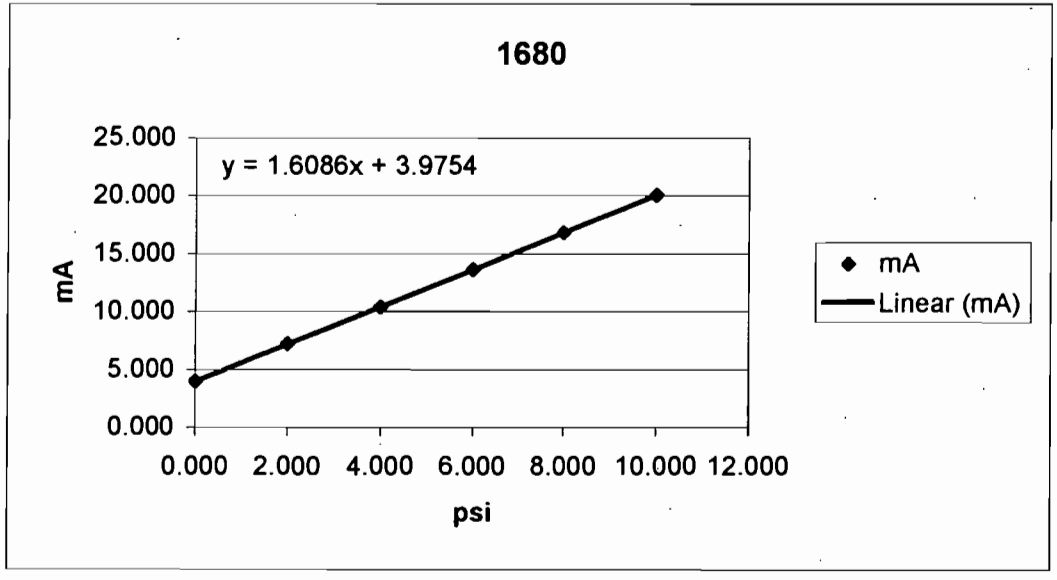
PSI	%max	calc psi	feet H2O	diff	feet	H2O	Hg
20.001	102.287	19.990	46.116	-0.109	716.960	554.70	40.724
15.003	77.391	15.048	34.715	0.043	705.530	416.06	30.550
10.001	51.688	9.946	22.945	-0.166	693.730	277.33	20.367
5.004	26.900	5.025	11.594	0.030	682.350	138.77	10.192
0.001	1.590	0.001	0.003	-0.004	670.730	0.08	0.010





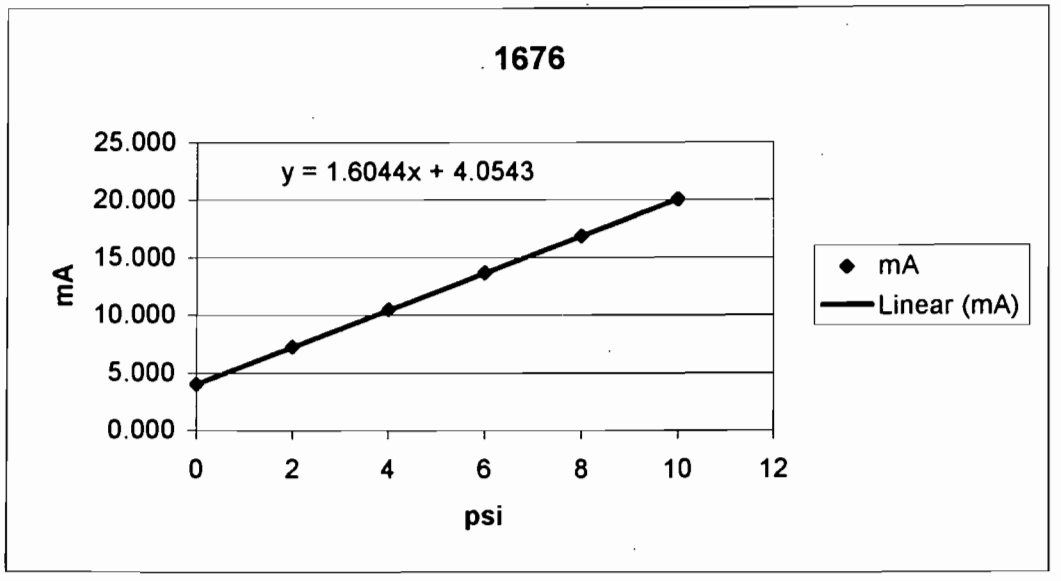
27-Jul-99	Model 2100	704.3		mA	feet elev.
sn	1680		31.5	5	673.76
depth	32.01	below toc		20	695.27

PSI	mA	mA Calc. Ft. H2O	H2O vs H20	H2O	Hg
10.005	20.065	23.082	-0.033	277.38	20.364
8.001	16.845	18.458	-0.031	221.87	16.290
6.004	13.635	13.851	-0.023	166.49	12.224
4.004	10.425	9.237	-0.015	111.03	8.154
2.002	7.195	4.619	-0.009	55.53	4.007
0.000	3.970	0.000	0.000	0.00	0.000



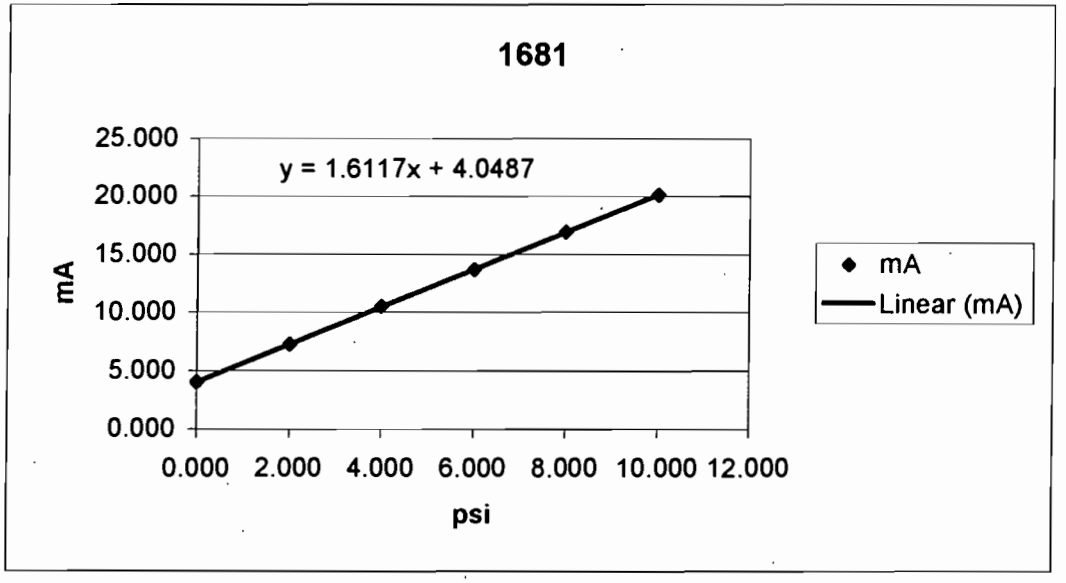
27-Jul-99	Model 2100	705.07		mA	feet elev.
sn	1676		32.5	5	673.92
depth	32.51	below toc		20	695.49

PSI	mA	mA Calc. Ft. H2O	H2O vs H20	H2O	Hg
10.001	20.090	23.072	-0.029	277.22	20.352
8.001	16.890	18.458	-0.029	221.85	16.284
6.004	13.695	13.851	-0.018	166.43	12.219
4.004	10.490	9.237	-0.017	111.05	8.154
2.001	7.270	4.616	-0.003	55.43	4.067
0	4.040	0.000	0.000	0.00	0.000



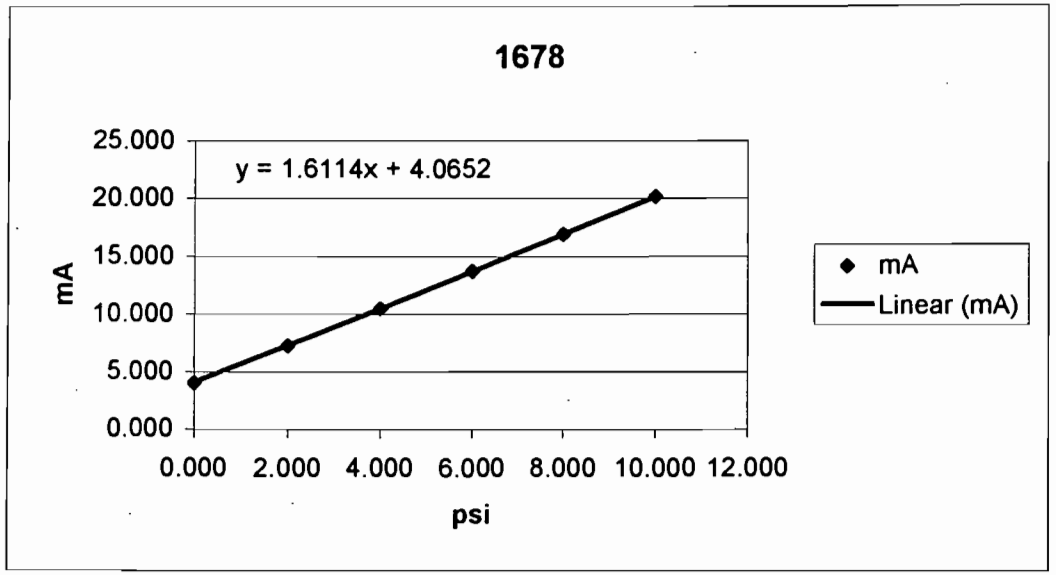
27-Jul-99	Model 2100	709.67		mA	feet elev.
sn	1681		37	5	673.98
depth	37.05	below toc		20	695.45

PSI	mA	mA Calc. Ft. H2O	H2O vs H20	H2O	Hg
10.000	20.160	23.070	-0.039	277.31	20.361
8.003	16.950	18.463	-0.031	221.93	16.295
6.005	13.725	13.854	-0.023	166.52	12.227
4.000	10.505	9.228	-0.017	110.94	8.148
2.001	7.280	4.616	-0.009	55.50	4.078
0.001	4.040	0.002	0.000	0.03	0.002



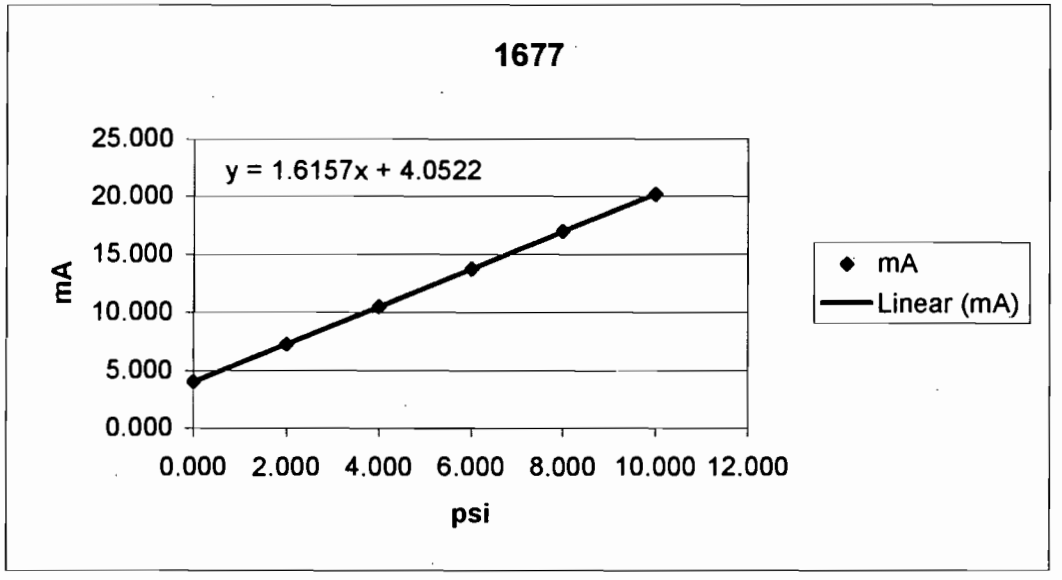
27-Jul-99	Model 2100	715.21		mA	feet elev.
sn	1678		41	5	675.44
depth	41.11	below toc		20	696.91

PSI	mA	mA Calc. Ft. H2O	H2O vs H20	H2O	Hg
10.004	20.175	23.079	-0.040	277.43	20.370
8.001	16.960	18.458	-0.033	221.90	16.295
6.001	13.735	13.844	-0.027	166.46	12.224
4.000	10.530	9.228	-0.021	110.99	8.152
2.002	7.295	4.619	-0.009	55.53	4.082
0.000	4.050	0.000	0.000	0.00	0.000



27-Jul-99	Model 2100	709.12		mA	feet elev.
sn	1677		43	5	666.72
depth	43.75	below toc		20	688.14

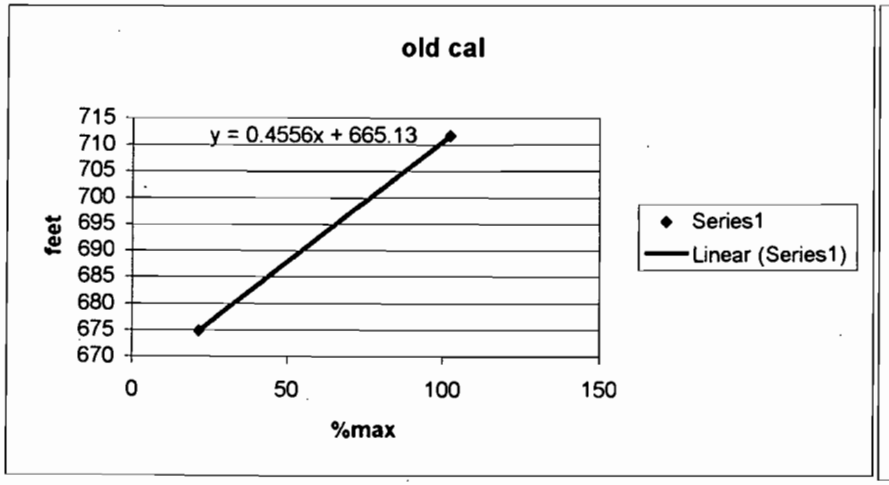
PSI	mA	mA Calc. Ft. H2O	H2O vs H20	H2O	Hg
10.006	20.215	23.084	-0.047	277.57	20.375
8.005	16.985	18.468	-0.042	222.12	16.313
6.002	13.750	13.847	-0.027	166.48	12.233
4.006	10.535	9.242	-0.019	111.13	8.162
2.003	7.285	4.621	-0.008	55.55	4.079
0.001	4.050	0.002	-0.001	0.04	0.003

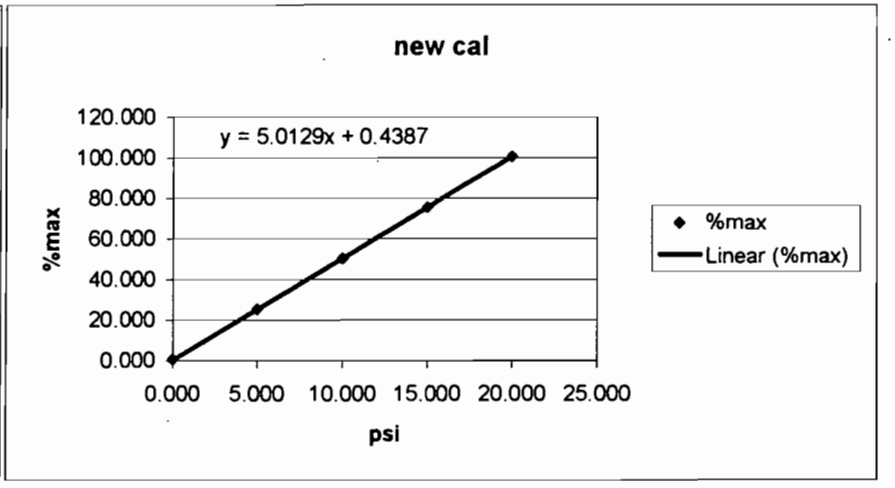


27-Jul-99	Model 2400	717.67	
sn	506885	3067-3	52
depth	51.53	below toc	

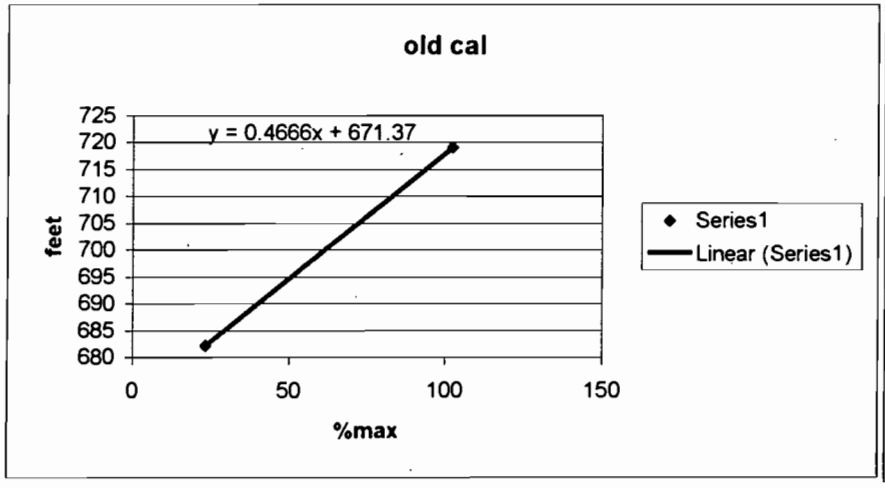
	%max	feet		%max	feet
prev. cal.	21.3	674.8399	new cal.	25	677.4434
	102.3	711.7472		100	711.9594

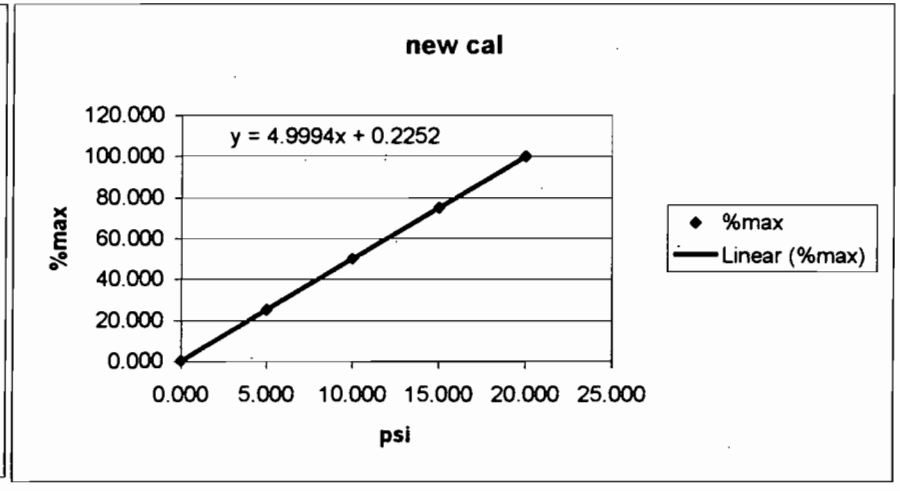
PSI	%max	calc psi	feet H2O	diff	feet	H2O	Hg
20.001	100.724	20.006	46.153	-0.064	711.020	554.60	40.722
15.000	75.615	14.996	34.597	-0.069	699.580	415.99	30.543
10.004	50.615	10.009	23.092	-0.027	688.190	277.42	20.369
5.000	25.417	4.983	11.495	-0.062	676.710	138.69	10.183
0.002	0.505	0.013	0.030	0.025	665.360	0.07	0.005





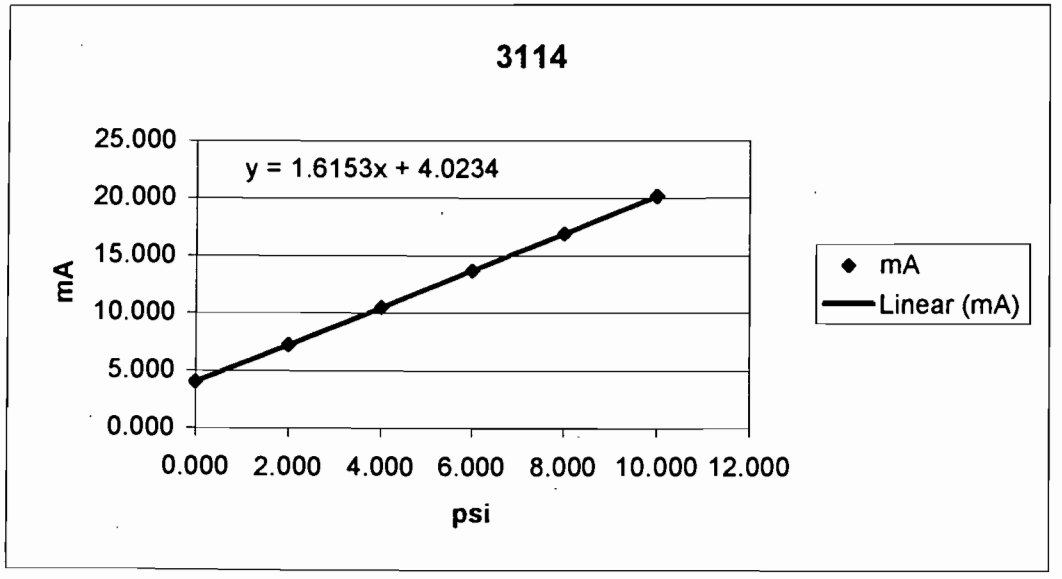
27-Jul-99	Model 2400	707.46					
sn	506876	3070-3	34.5				
depth	34.57	below toc					
	%max	feet		%max	feet		
prev. cal.	23.2	682.1903	new cal.	25	684.3225		
	102.3	719.0979		100	718.9316		
PSI	%max	calc psi	feet H2O	diff	feet	H2O	Hg
20.002	100.171	19.992	46.121	-0.101	718.110	554.66	40.725
15.002	75.268	15.010	34.629	-0.038	706.490	416.00	30.547
10.004	50.257	10.008	23.088	-0.030	694.820	277.41	20.368
5.000	25.268	5.009	11.556	-0.007	683.160	138.76	10.188
0.000	0.171	-0.011	-0.025	-0.026	671.450	0.02	0.001



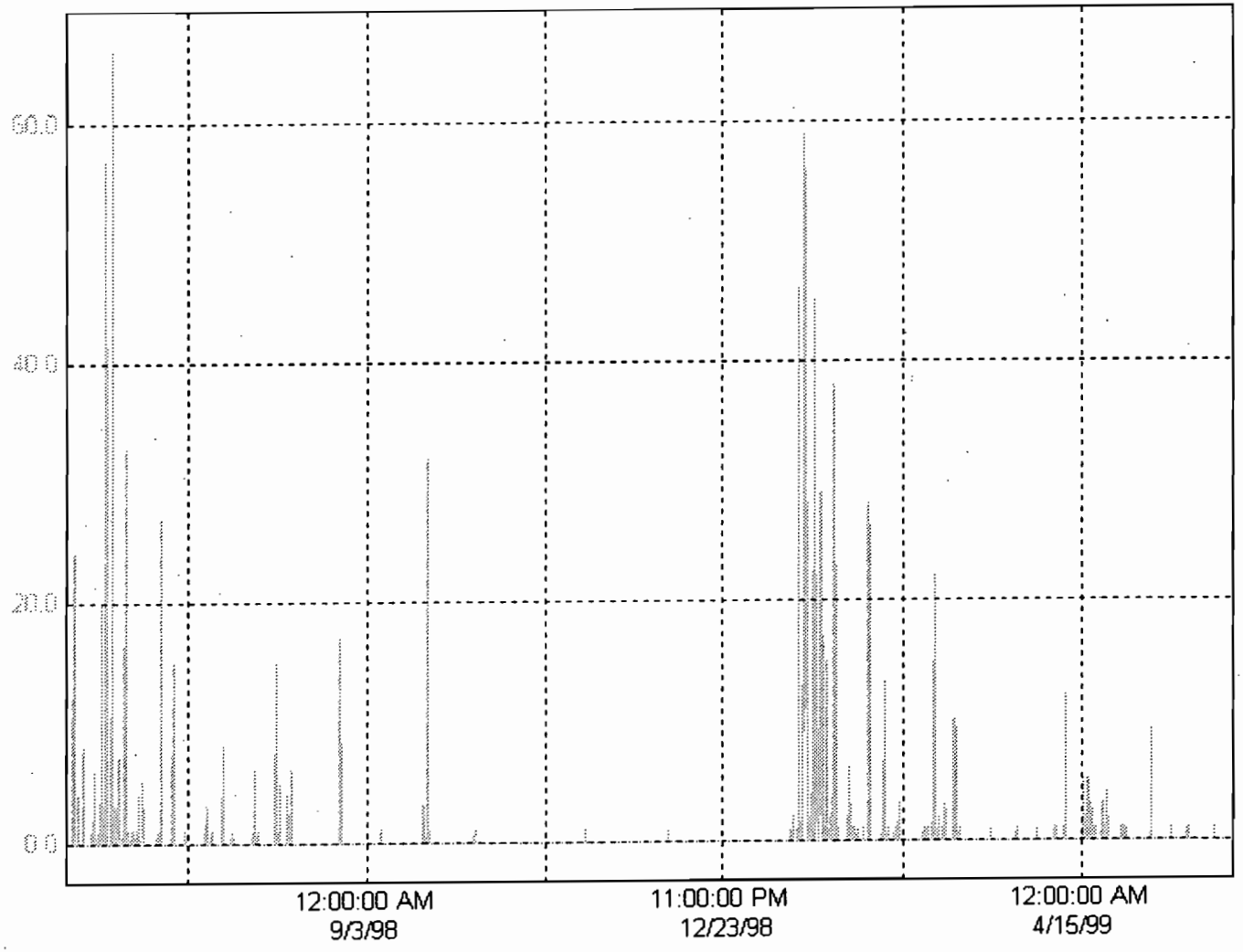


27-Jul-99	Model 2100	738.59		mA	feet elev.
sn	3114		65	5	674.99
depth	64.99	below toc		20	696.42

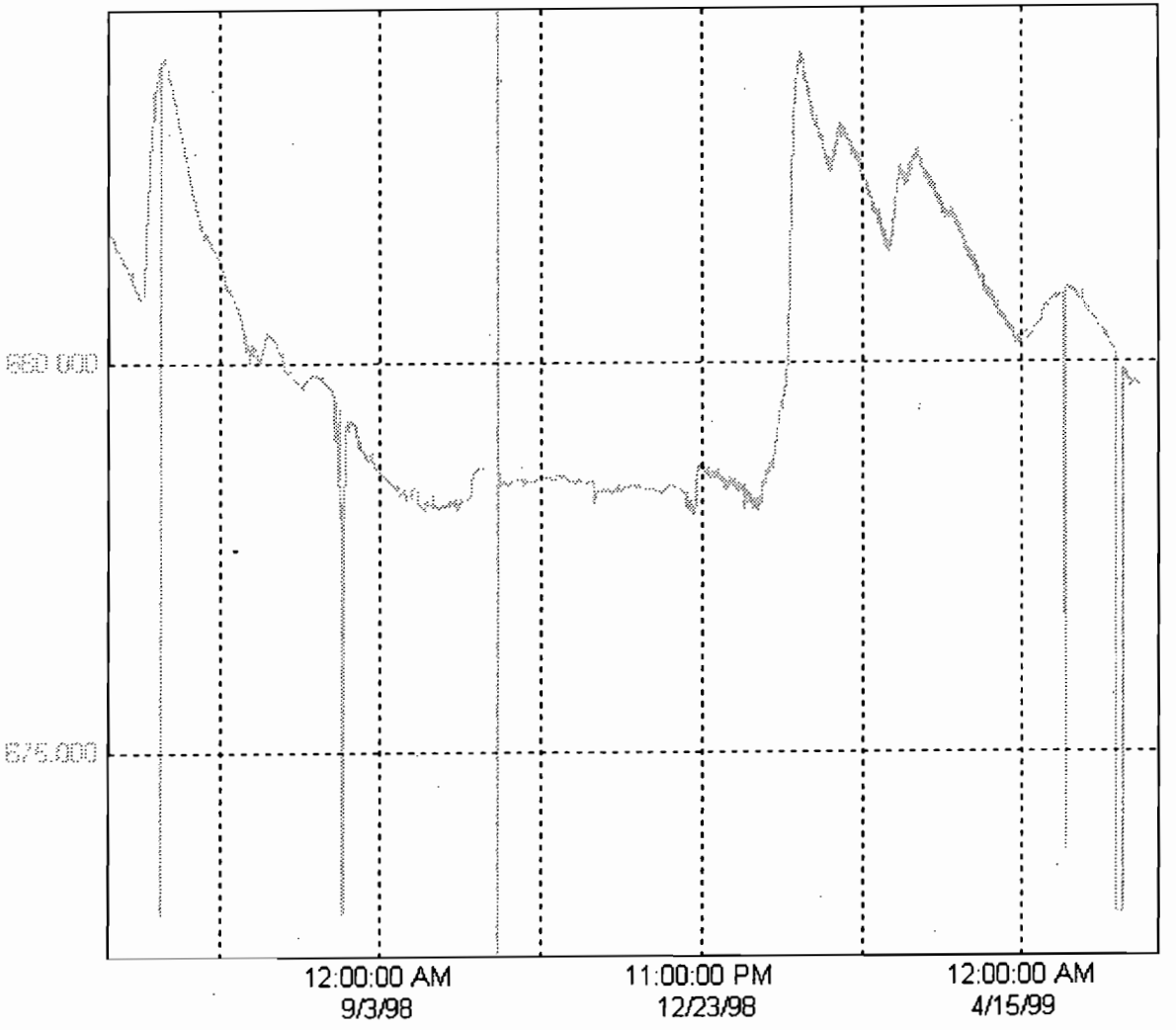
PSI	mA	mA Calc. Ft. H2O	H2O vs H20	H2O	Hg
10.004	20.180	23.079	-0.030	277.31	20.368
8.001	16.950	18.458	-0.031	221.87	16.290
6.004	13.720	13.851	-0.023	166.49	12.224
4.000	10.490	9.228	-0.017	110.94	8.145
2.002	7.260	4.619	-0.011	55.56	4.084
0.001	4.020	0.002	0.001	0.01	0.001



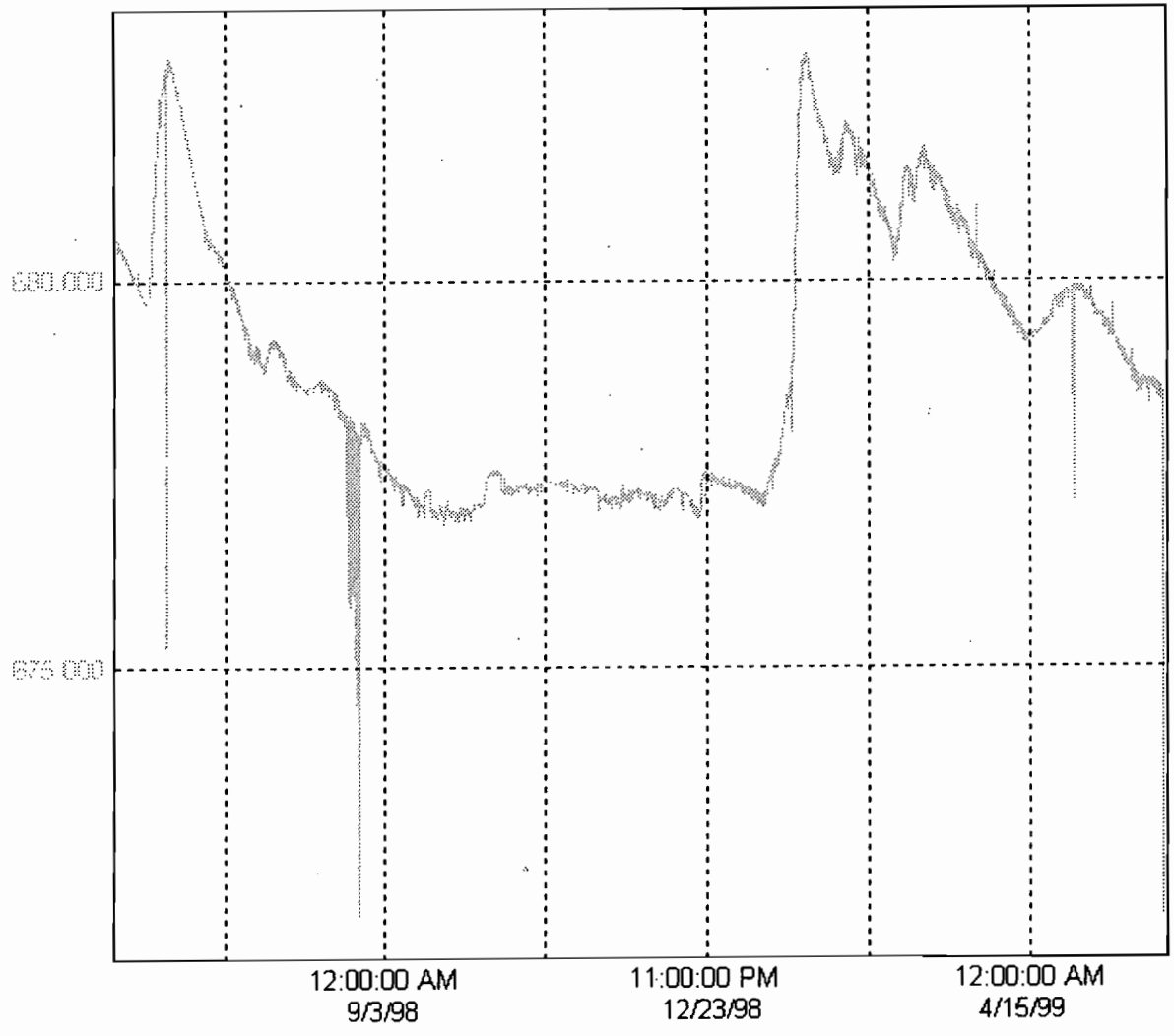
.01 inches vs. Time (0100 Ch4)



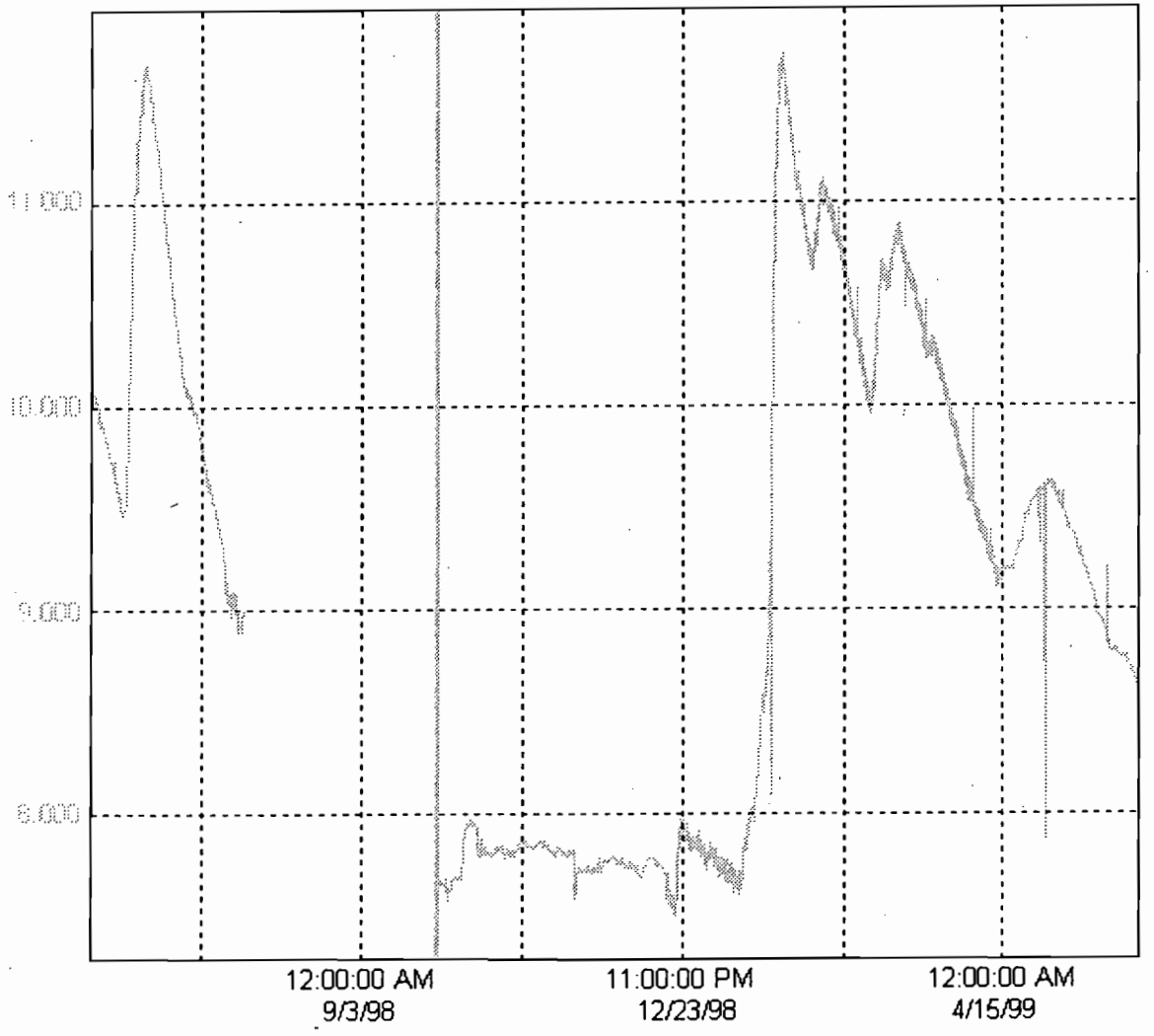
Feet vs. Time (0416 Ch1)



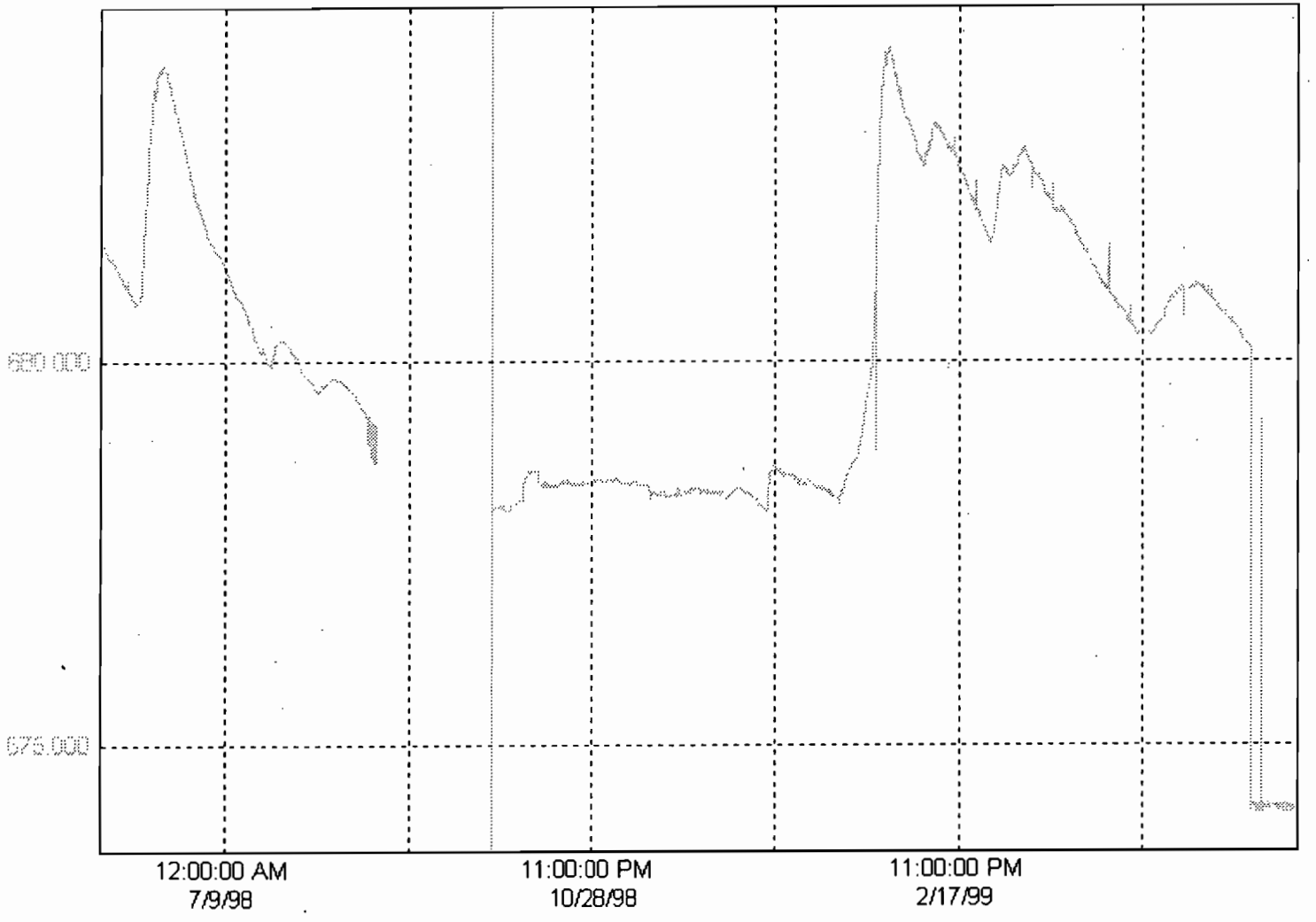
Feet vs. Time (0417 Ch1)



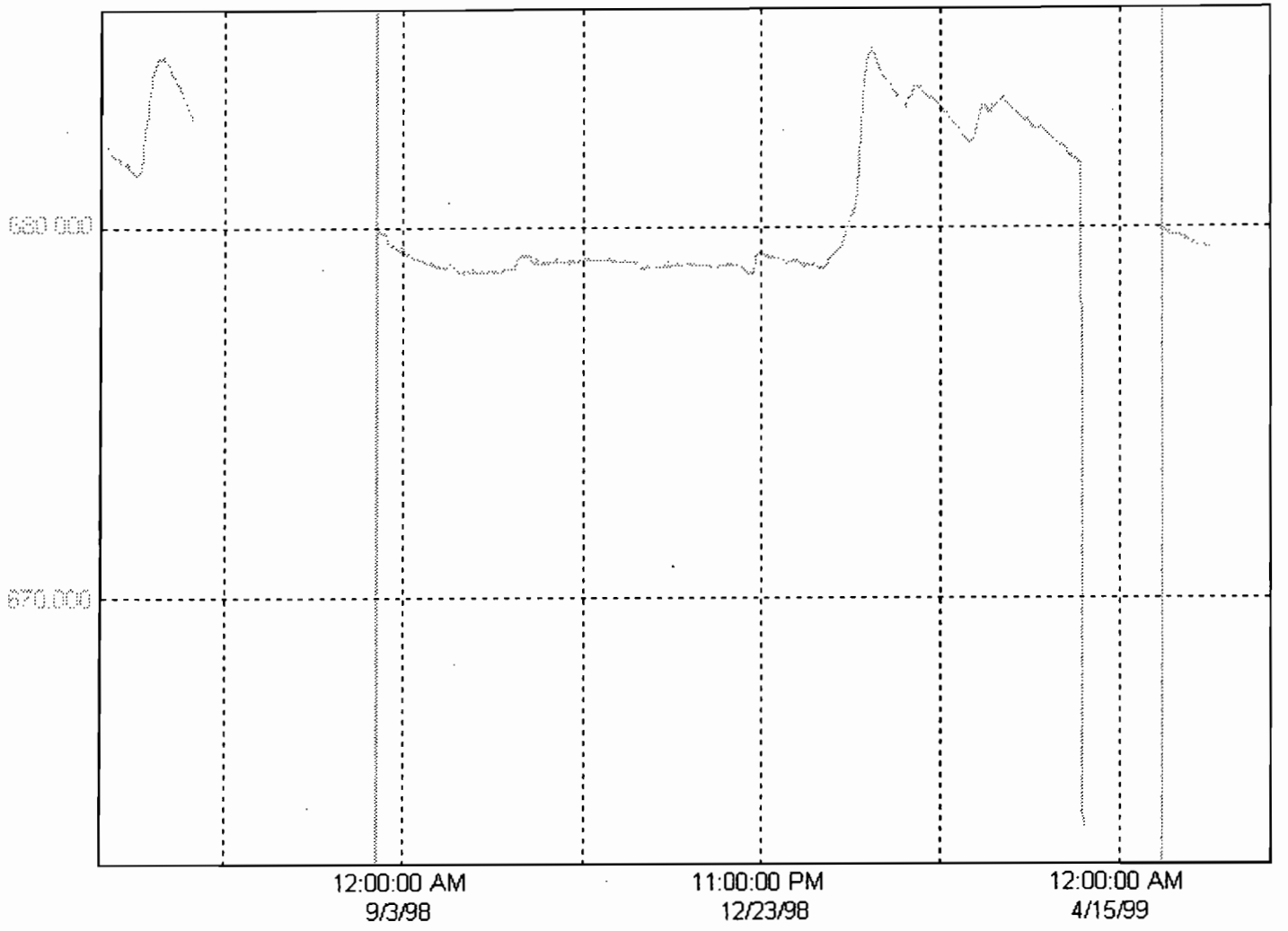
mAmps vs. Time (0418 Ch1)



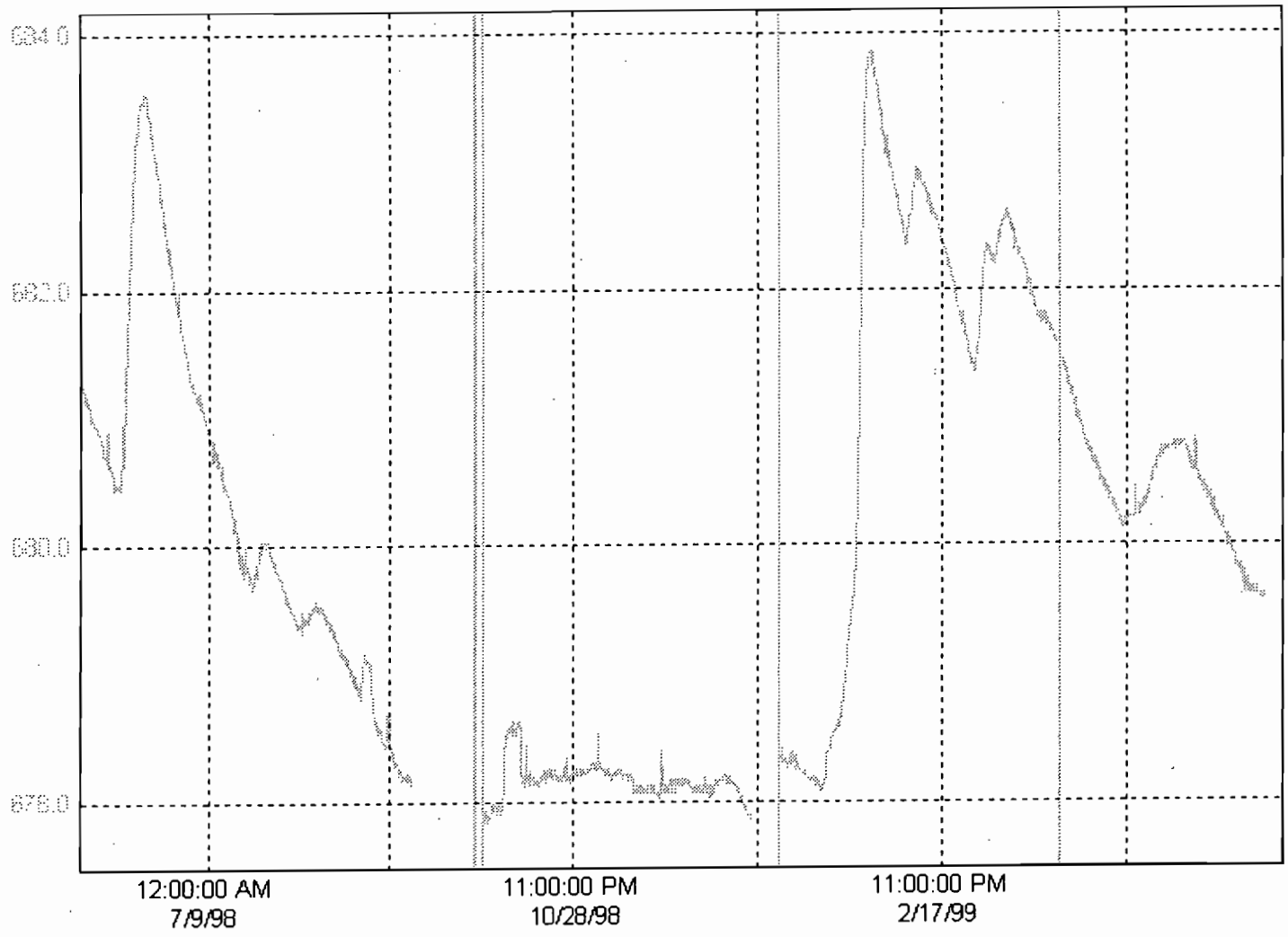
Feet vs. Time (0422 Ch1)



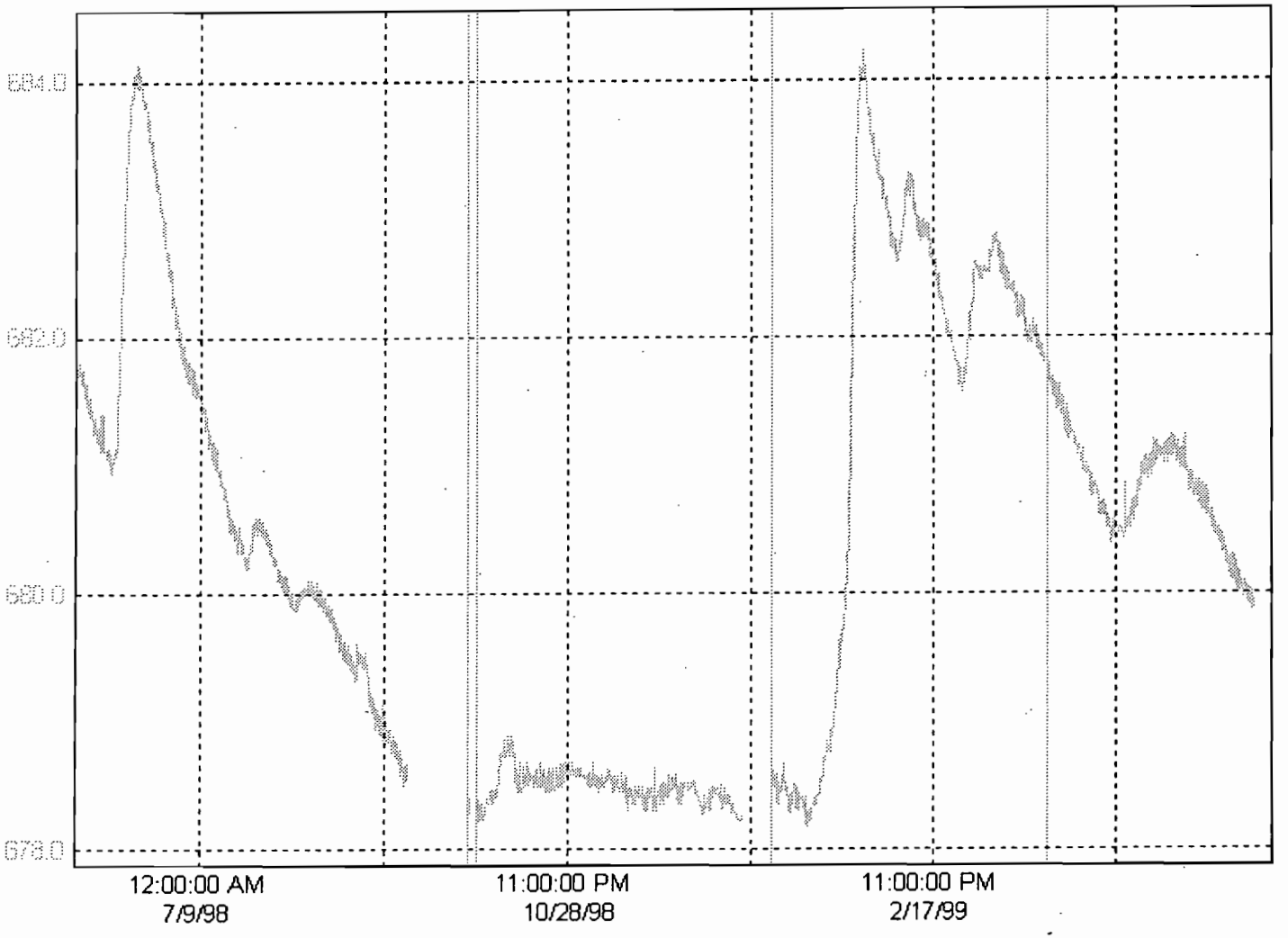
Feet vs. Time (0423 Ch1)



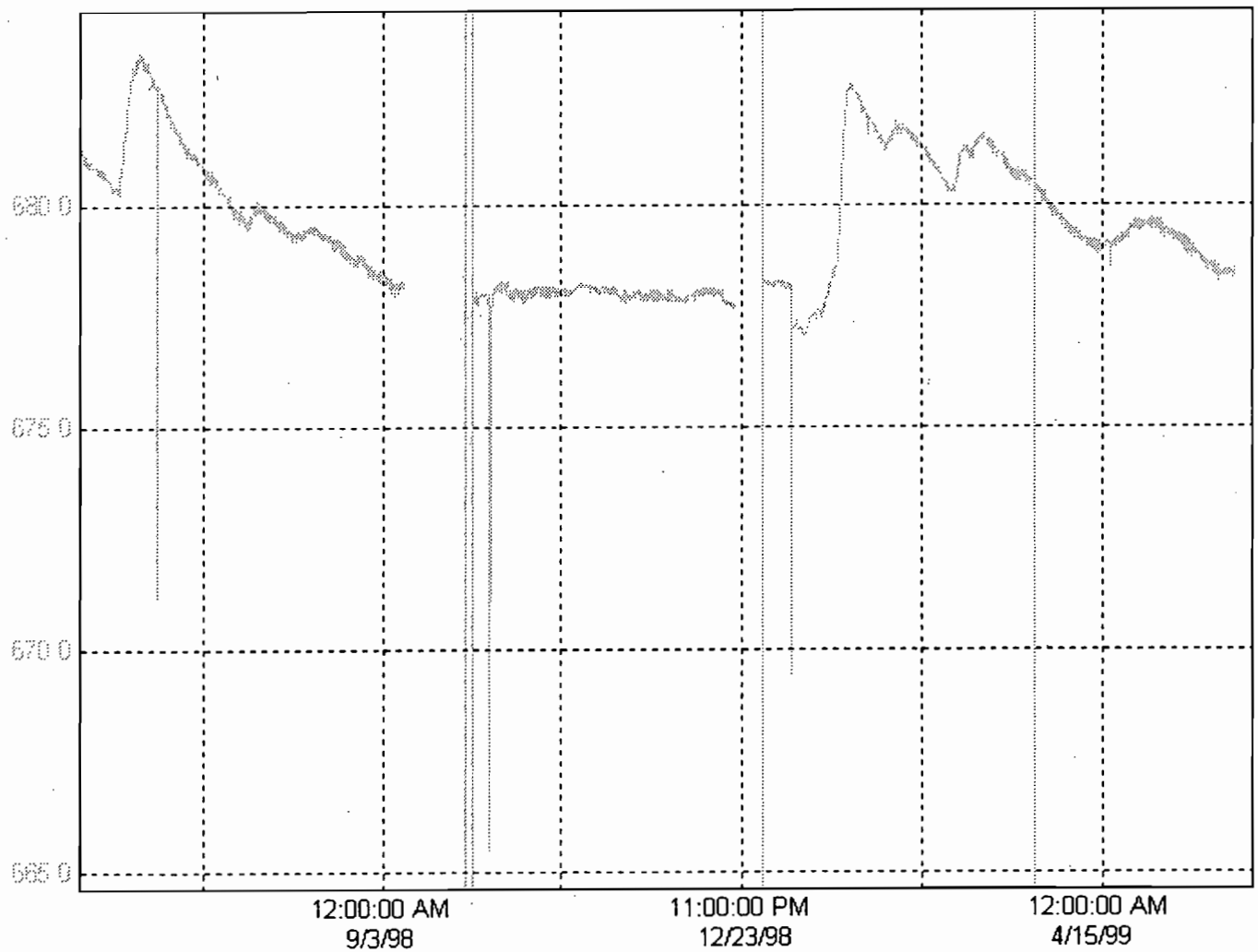
Feet vs. Time (0412)



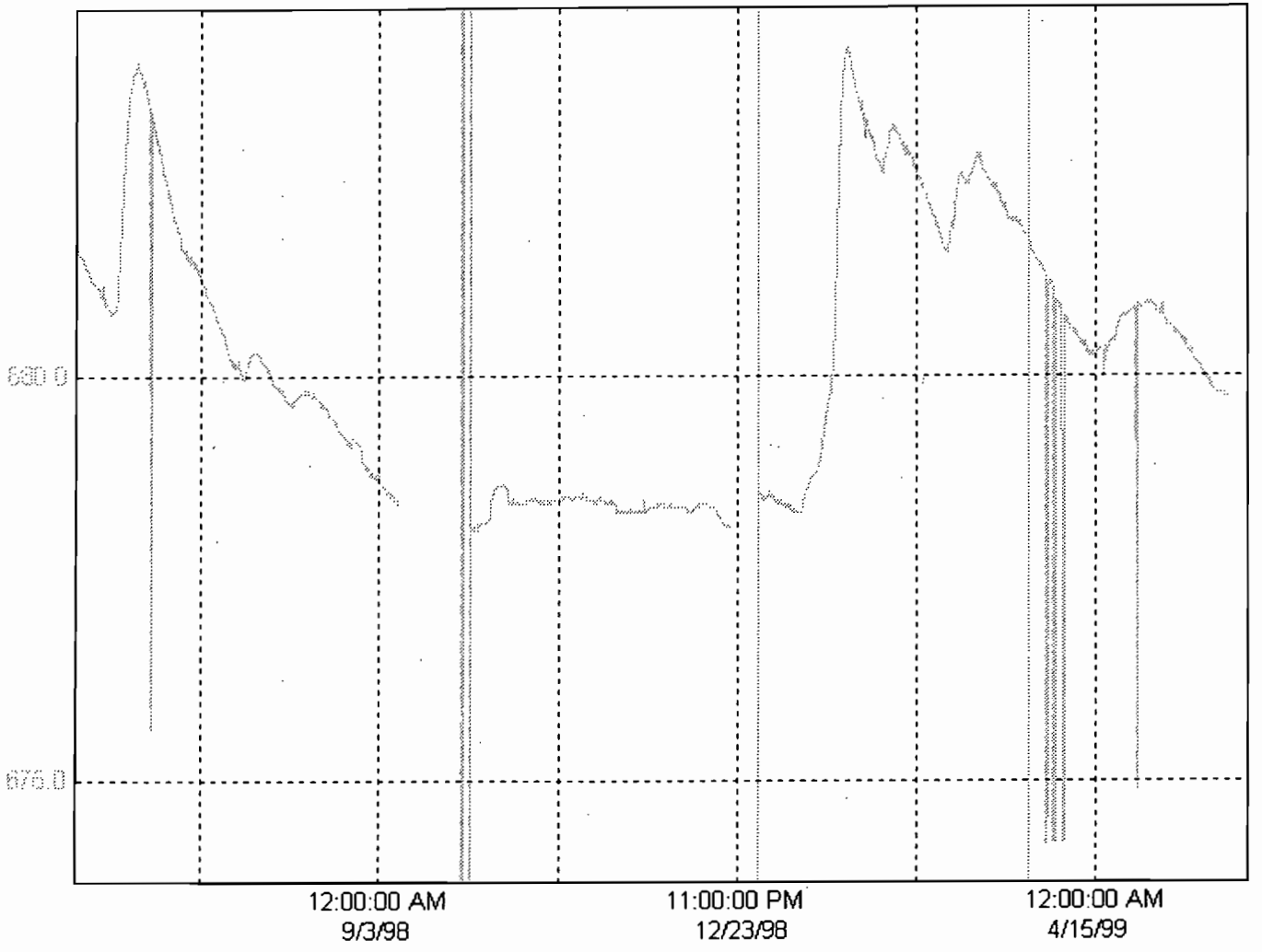
Feet vs. Time (0370)



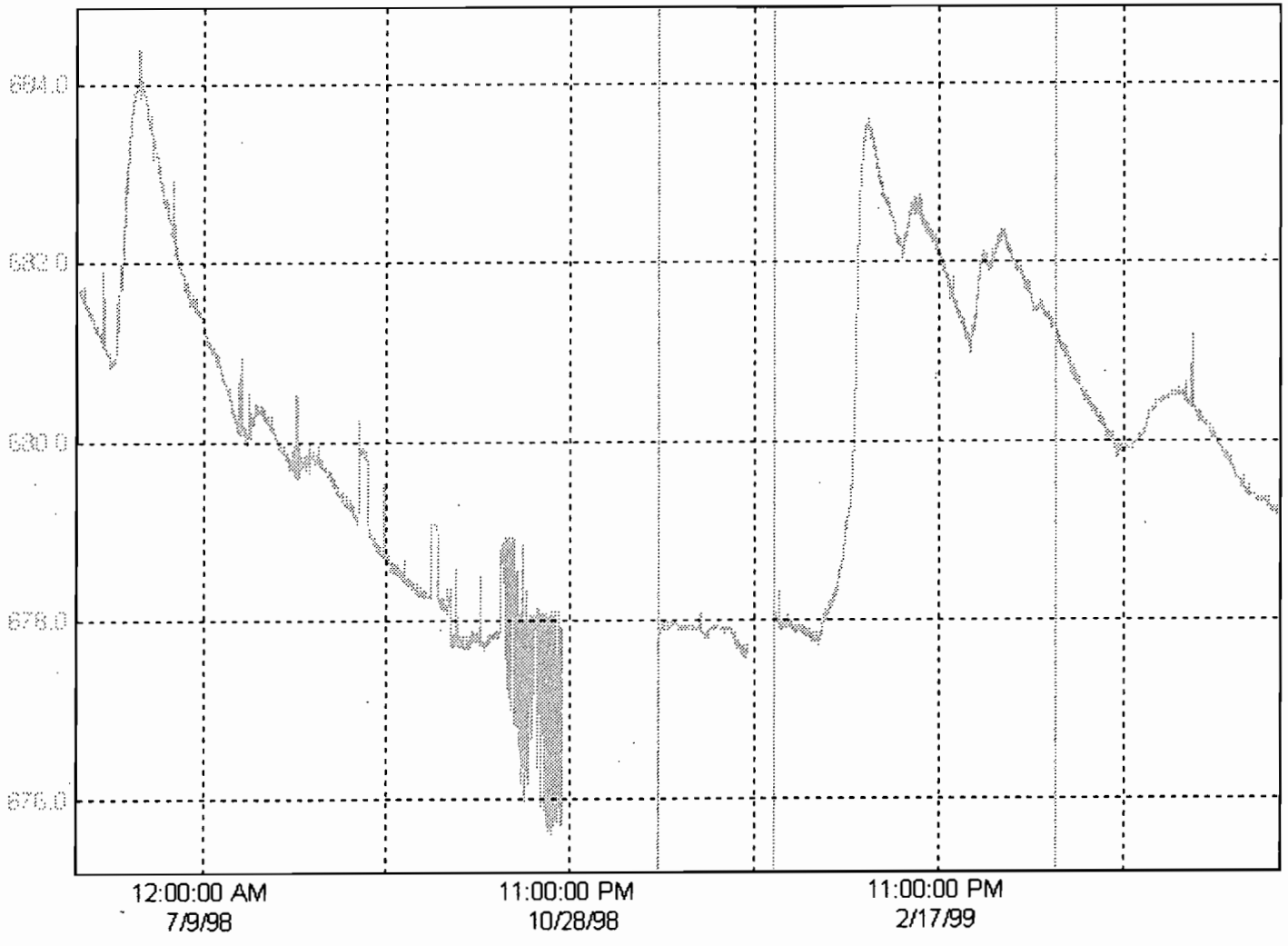
Feet vs. Time (P001)



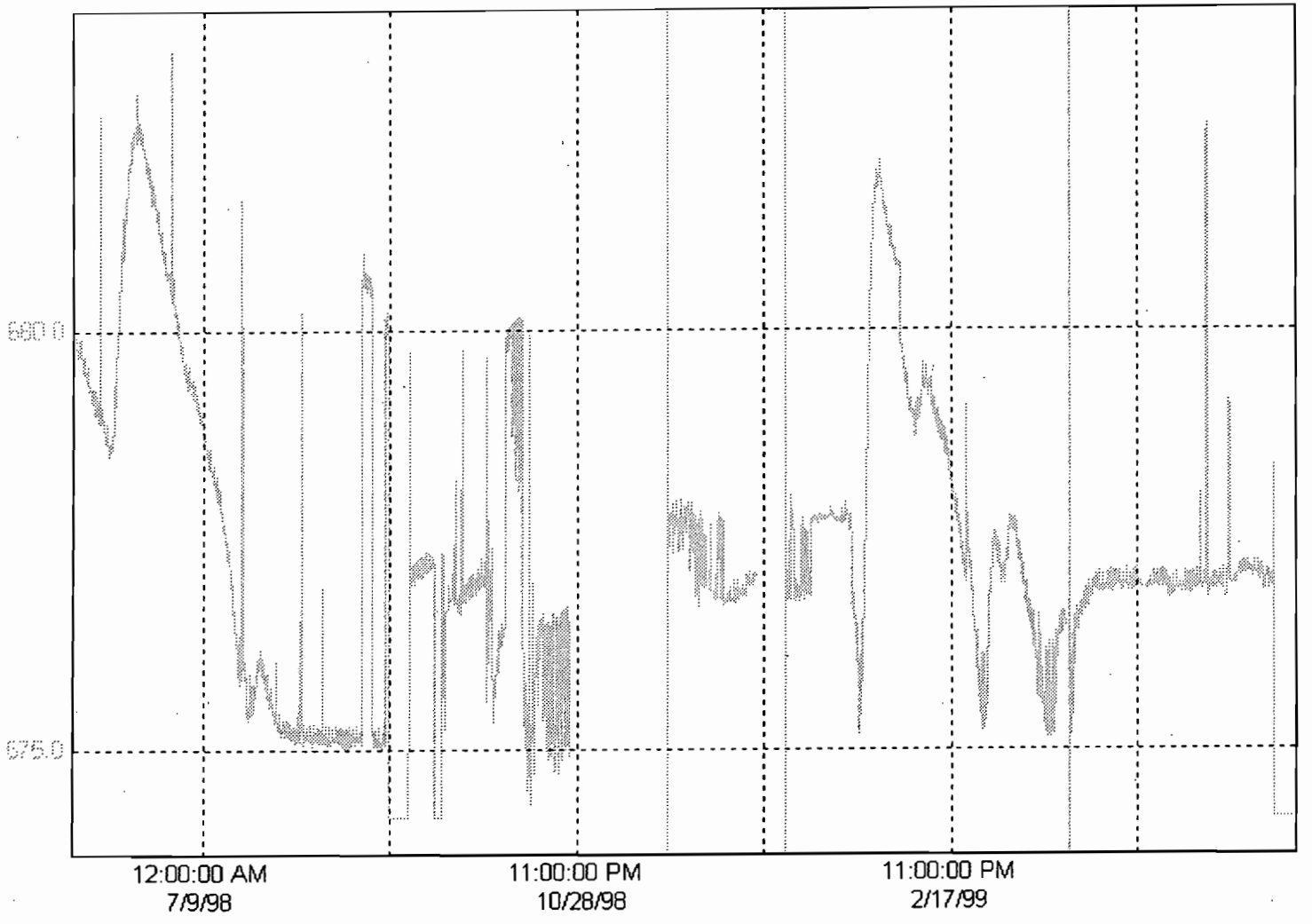
Feet vs. Time (0313)



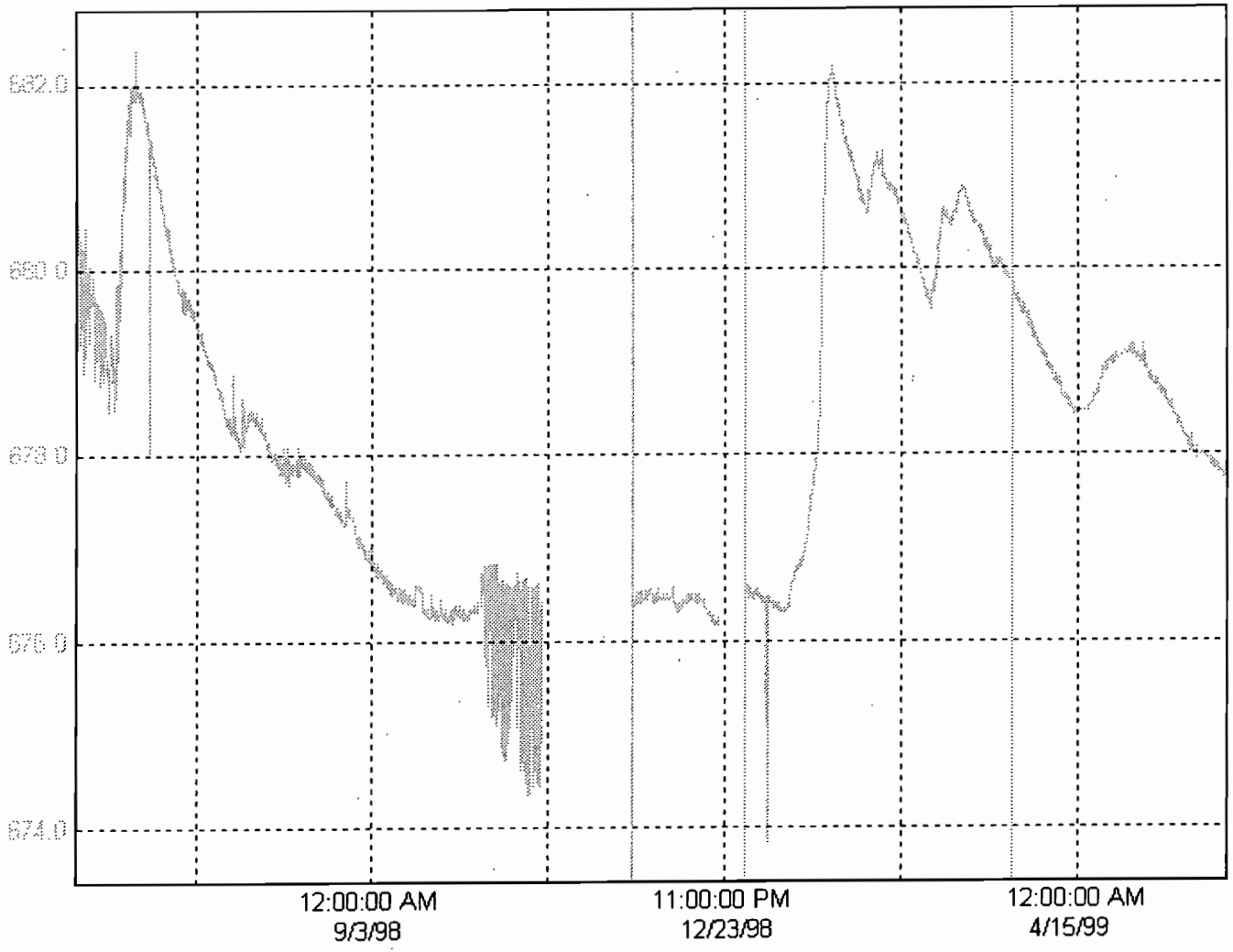
Feet vs. Time (0413)



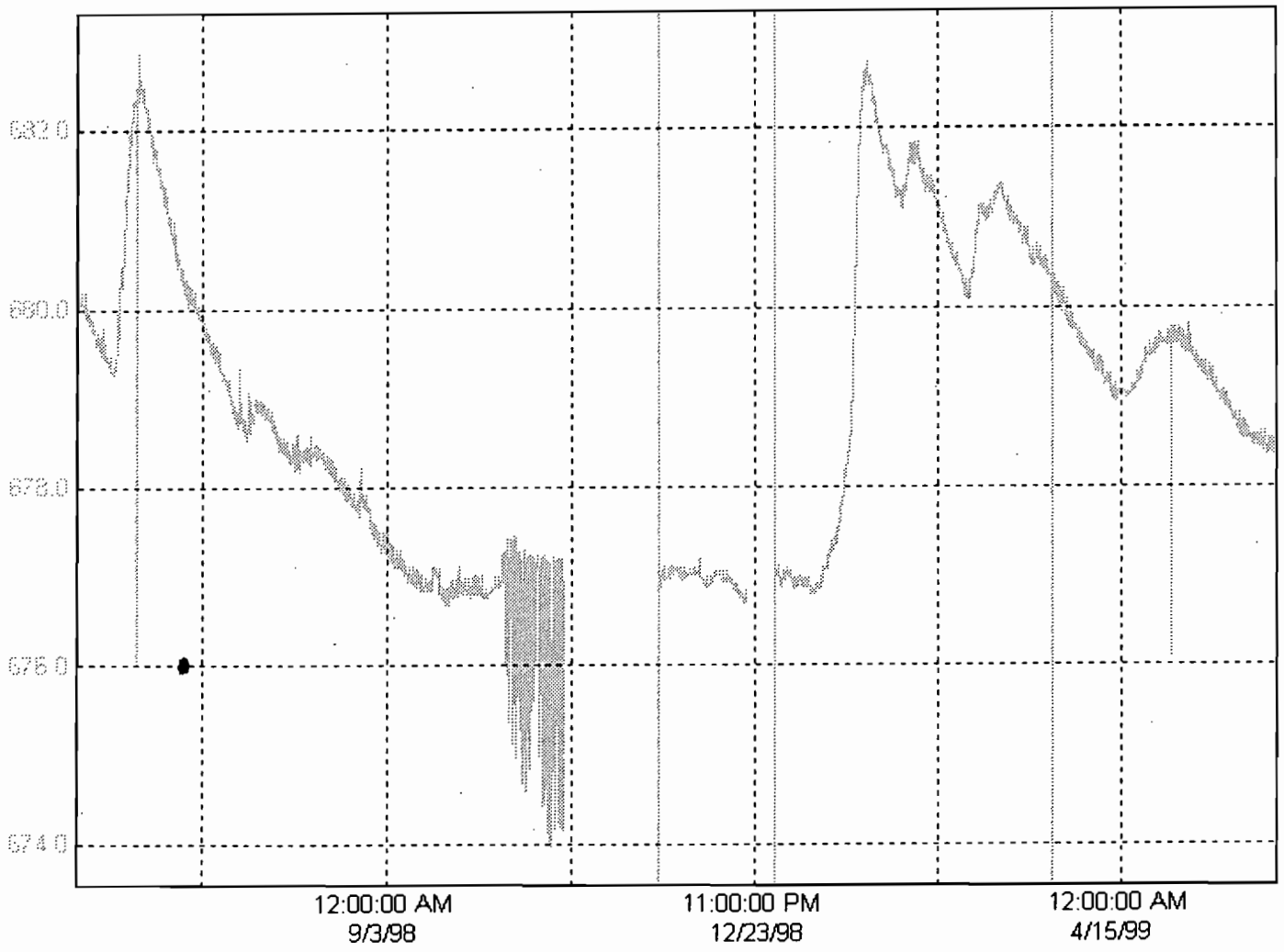
Feet vs. Time (0414)



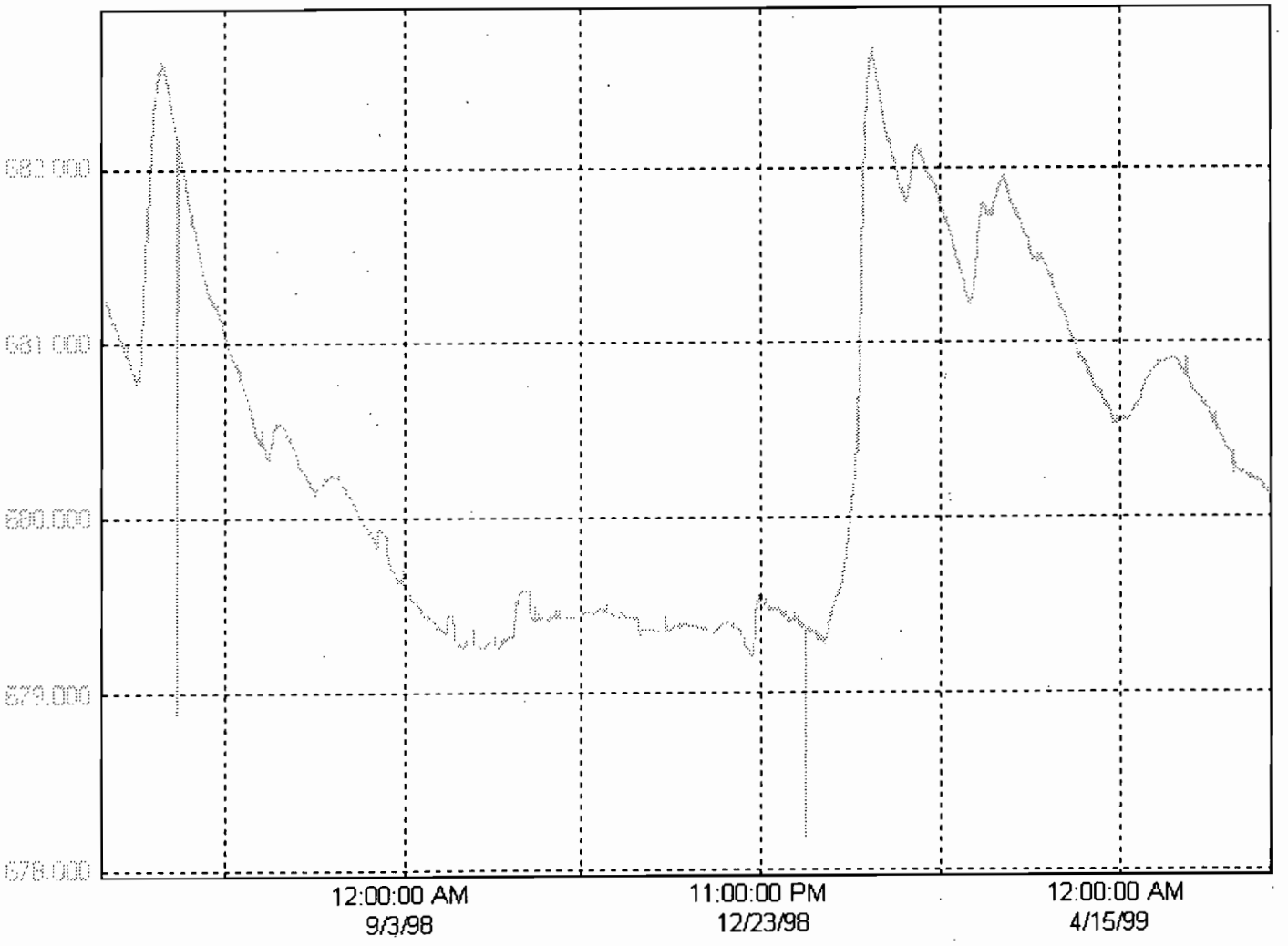
Feet vs. Time (P003)



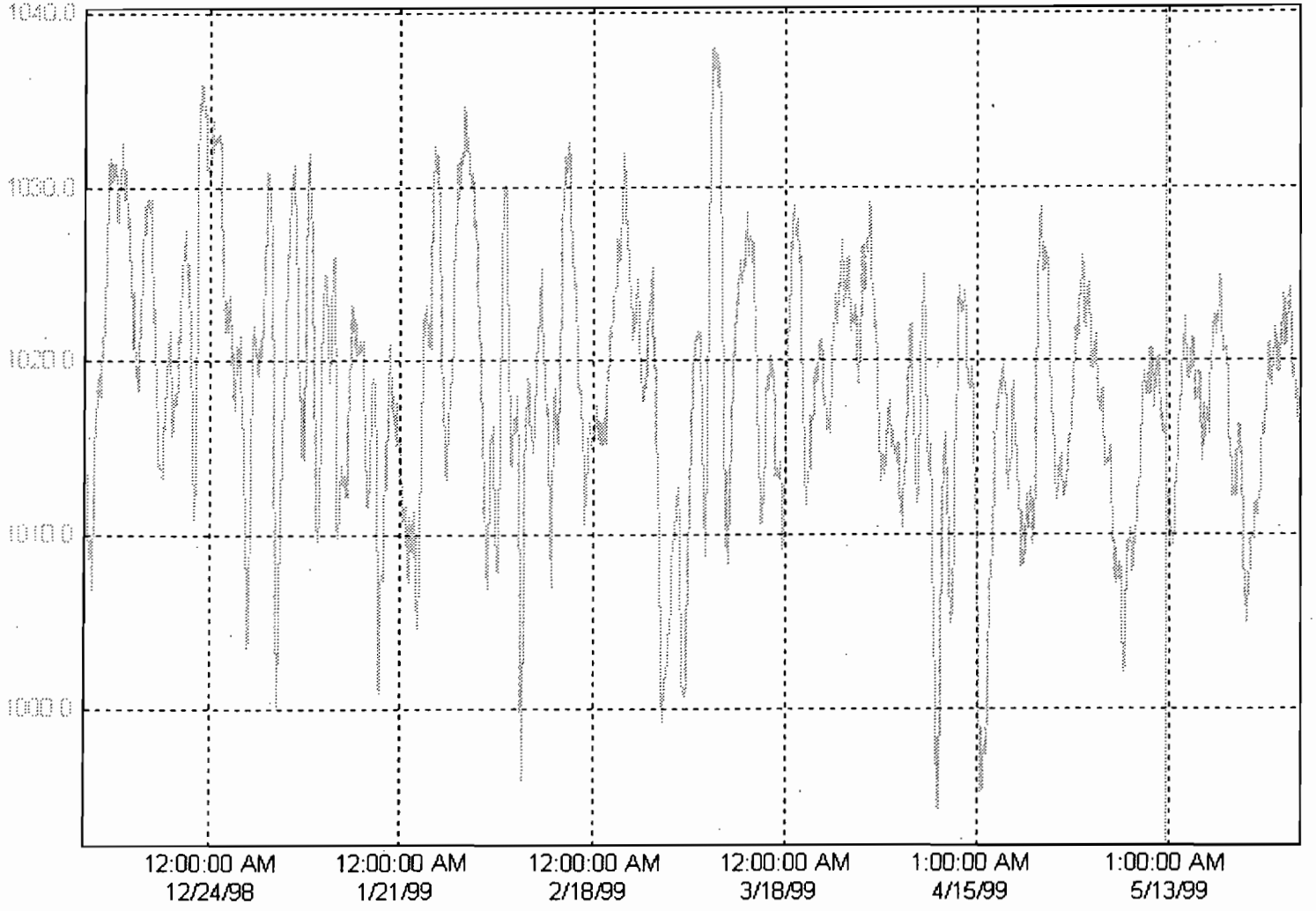
Feet vs. Time (0415)



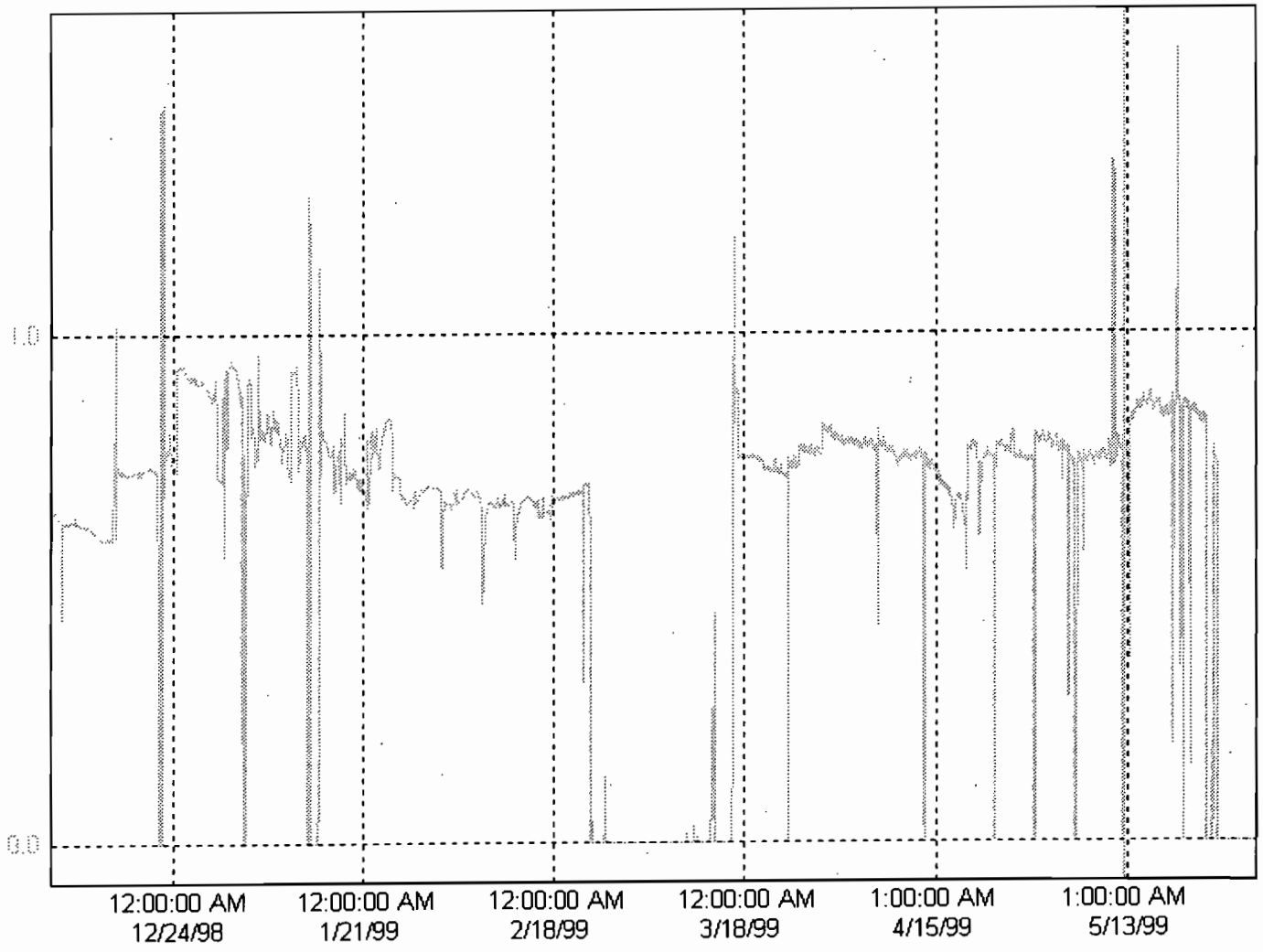
Feet vs. Time (P005 Ch1)



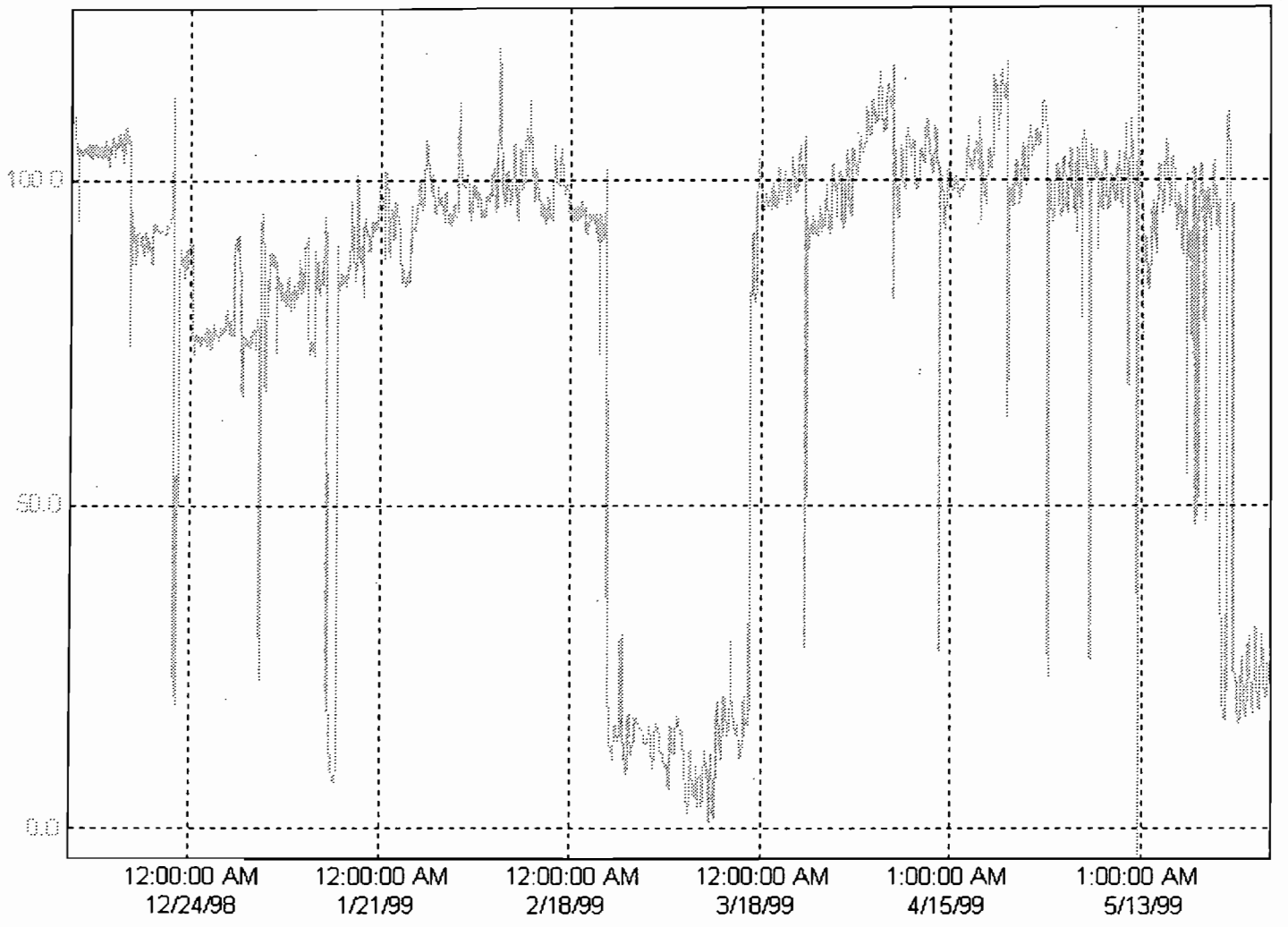
mbar vs. Time (B301 Ch1)

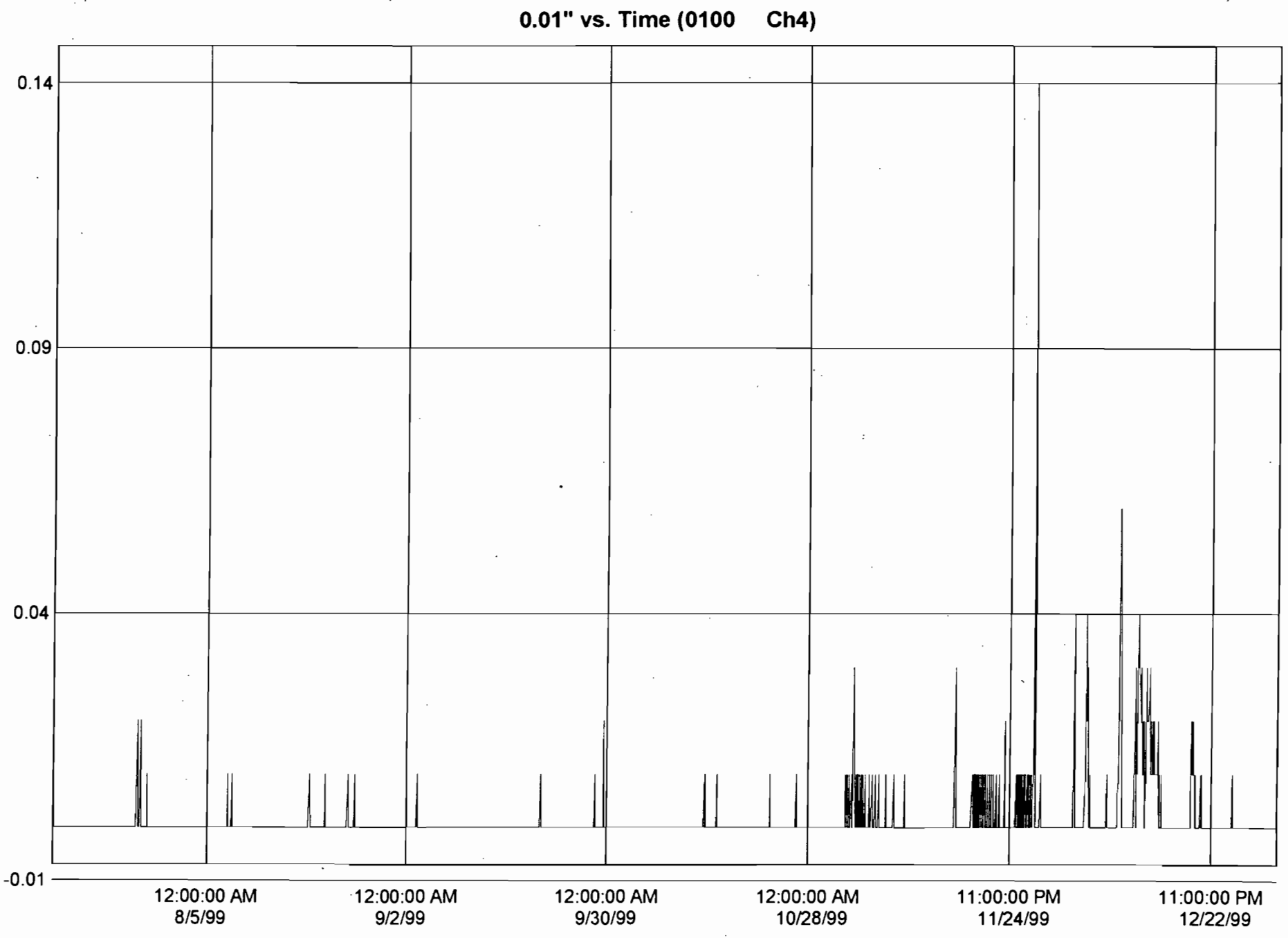


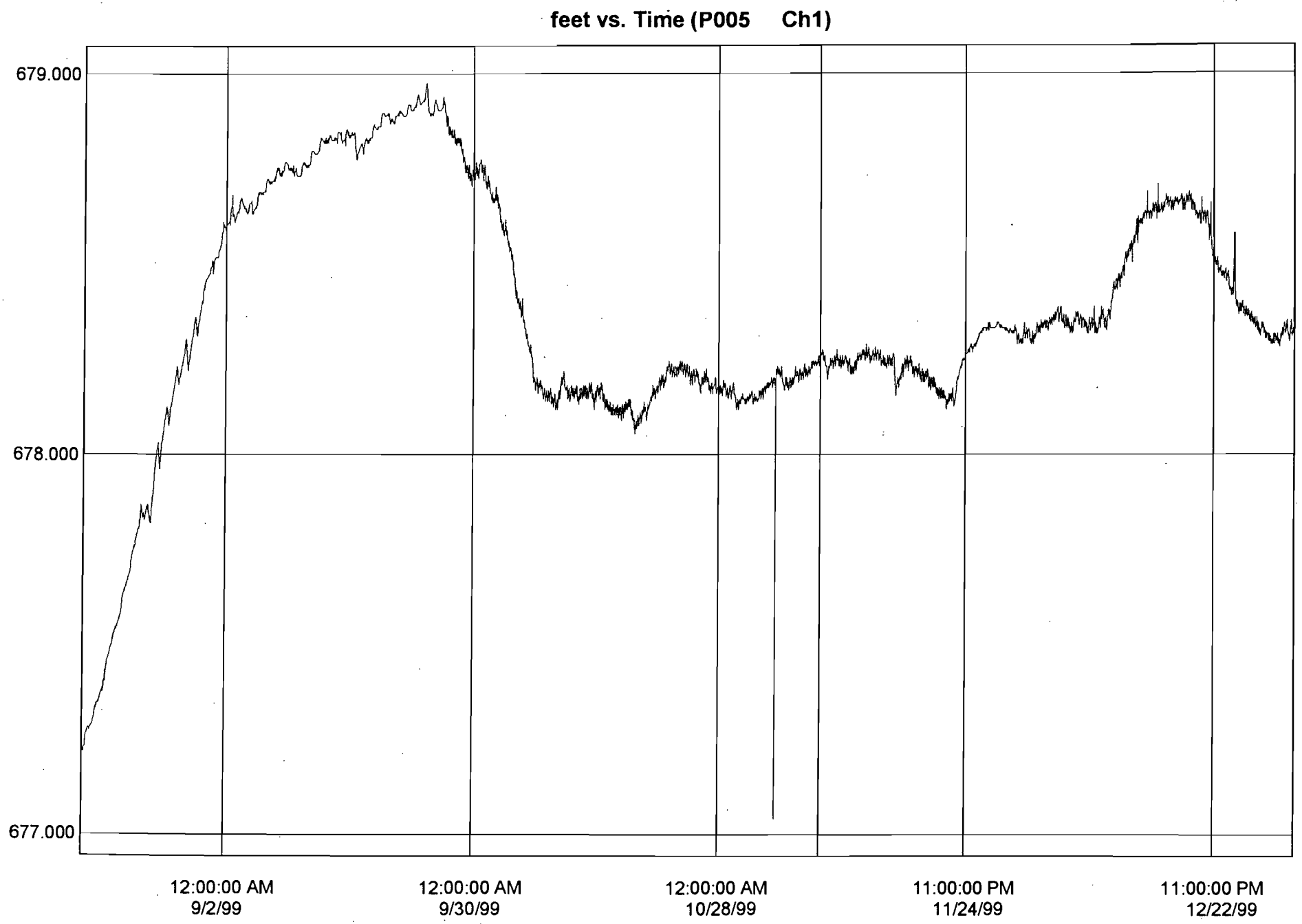
"H2O vs. Time (B301 Ch2)



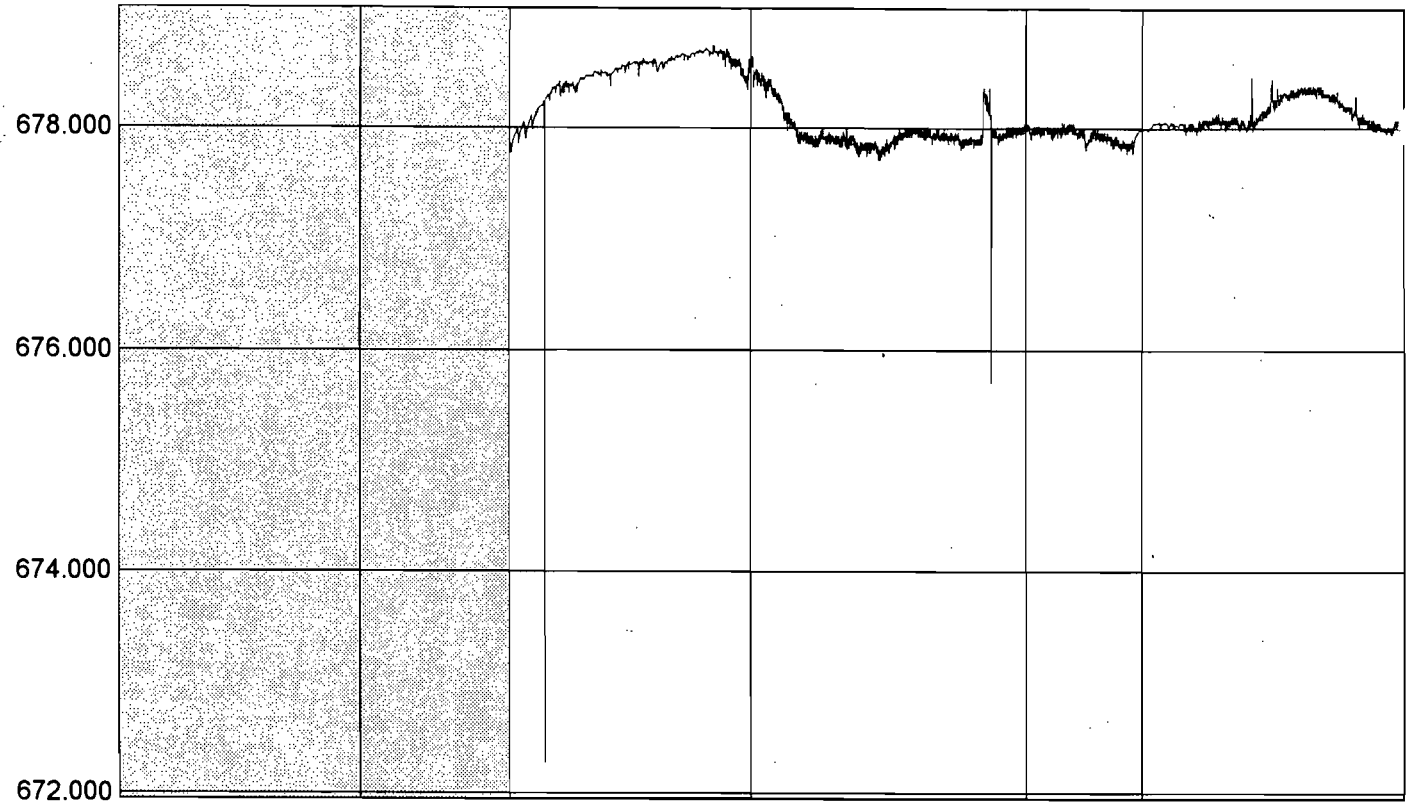
Deg C vs. Time (B301 Ch3)



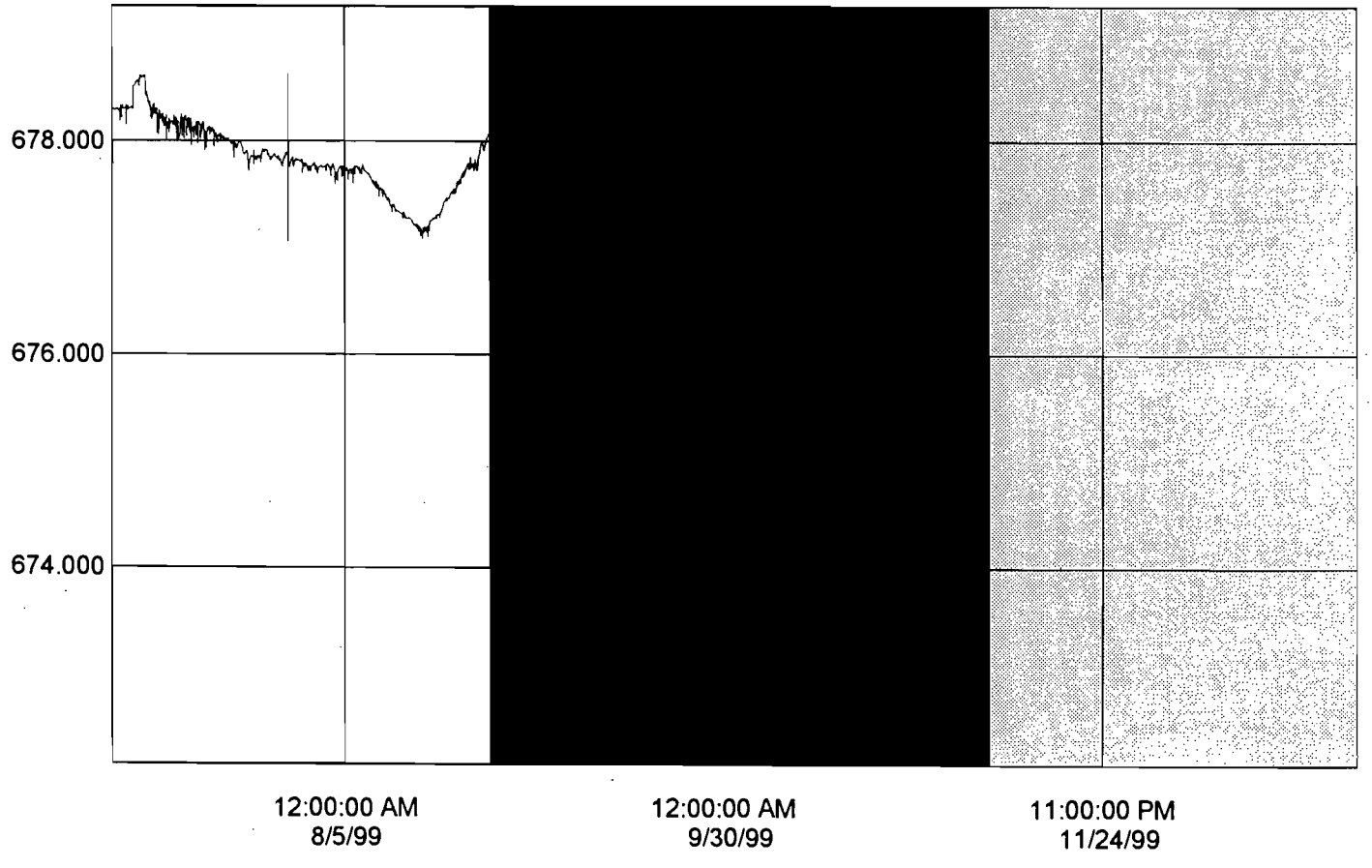

0.01" vs. Time (0100 Ch4)
0.14
0.09
0.04
-0.01
12:00:00 AM
8/5/99
12:00:00 AM
9/2/99
12:00:00 AM
9/30/99
12:00:00 AM
10/28/99
11:00:00 PM
11/24/99
11:00:00 PM
12/22/99

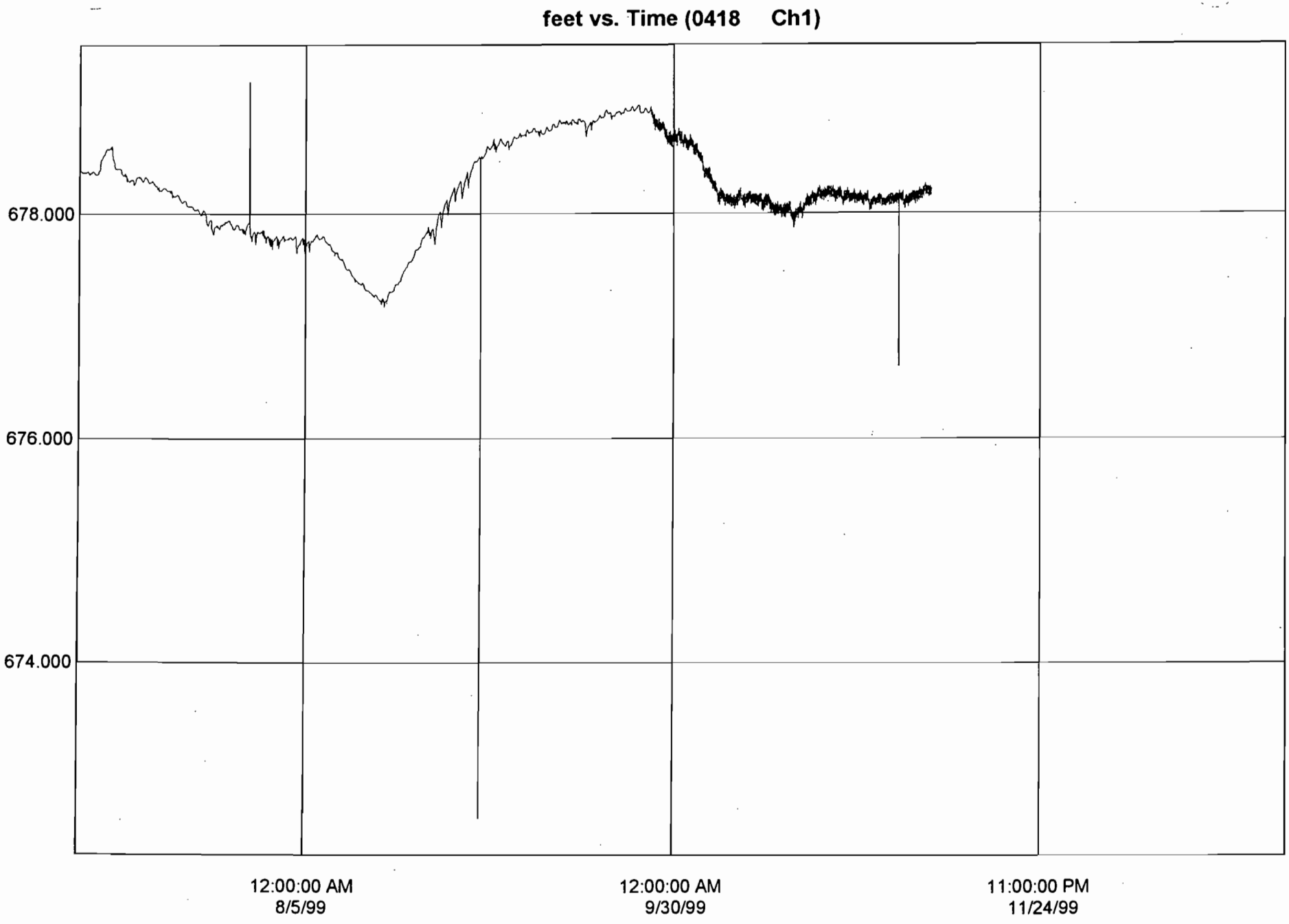

feet vs. Time (P005 Ch1)
679.000
678.000
677.000
12:00:00 AM
9/2/99
12:00:00 AM
9/30/99
12:00:00 AM
10/28/99
11:00:00 PM
11/24/99
11:00:00 PM
12/22/99

feet vs. Time (0416 Ch1)

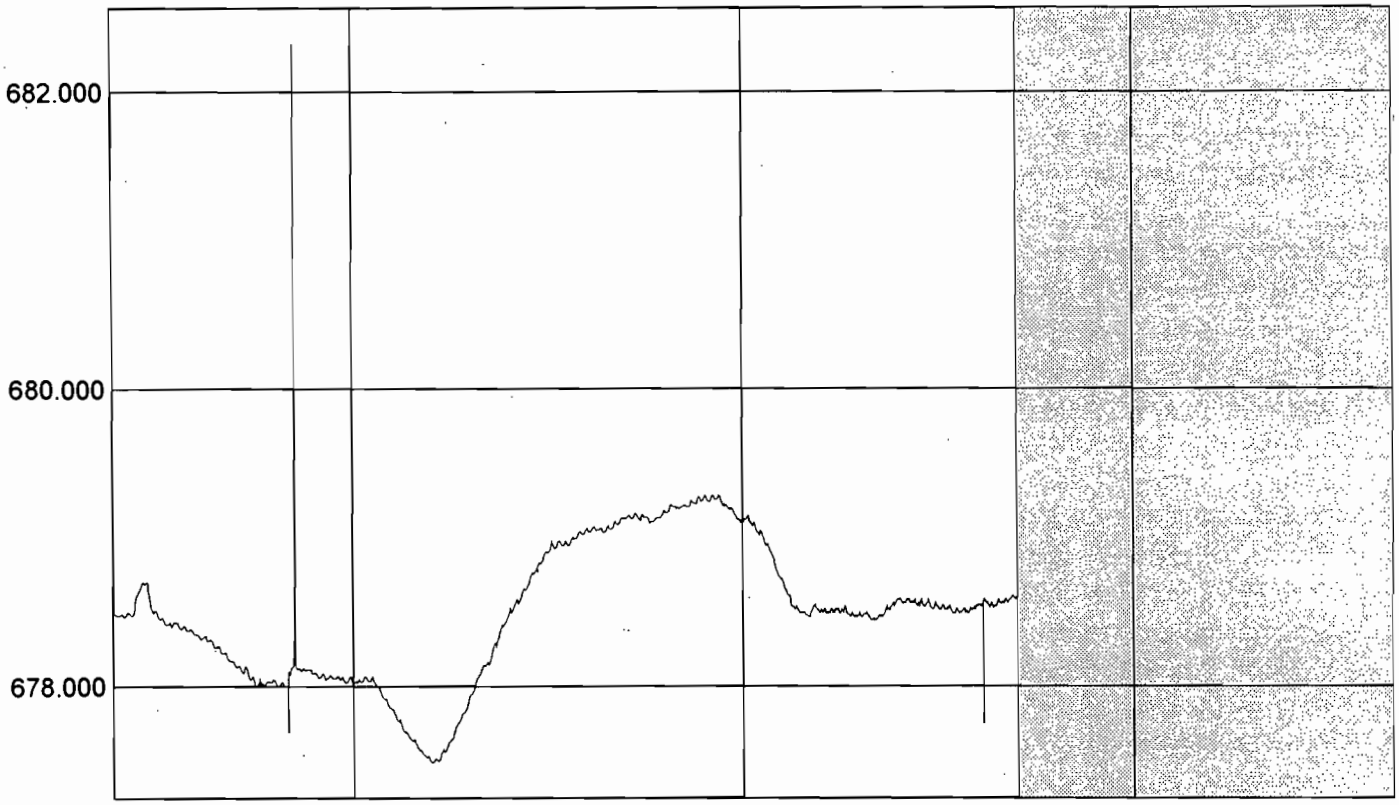


feet vs. Time (0417 Ch1)

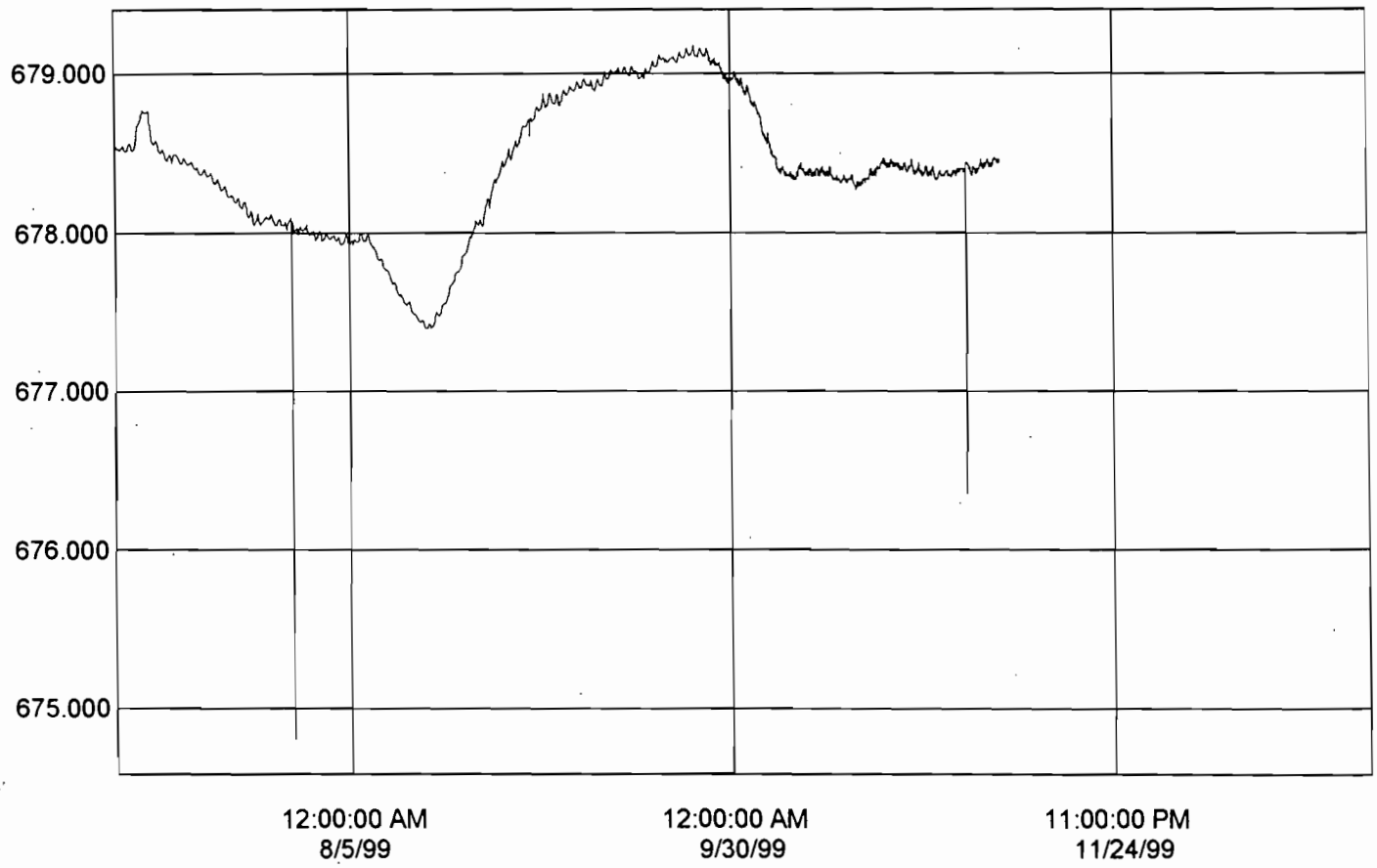


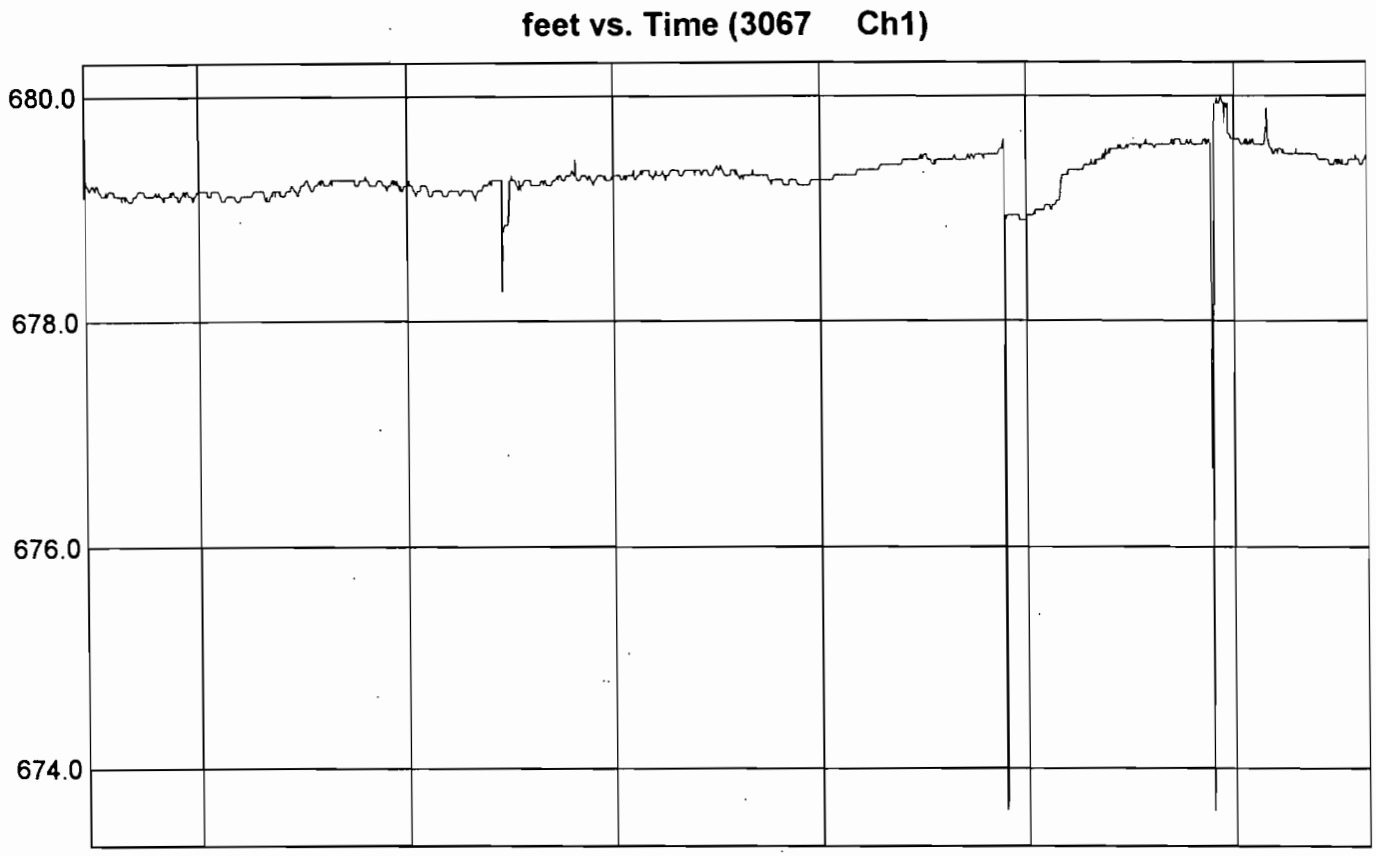

feet vs. Time (0418 Ch1)
678.000
676.000
674.000
12:00:00 AM
8/5/99
12:00:00 AM
9/30/99
11:00:00 PM
11/24/99

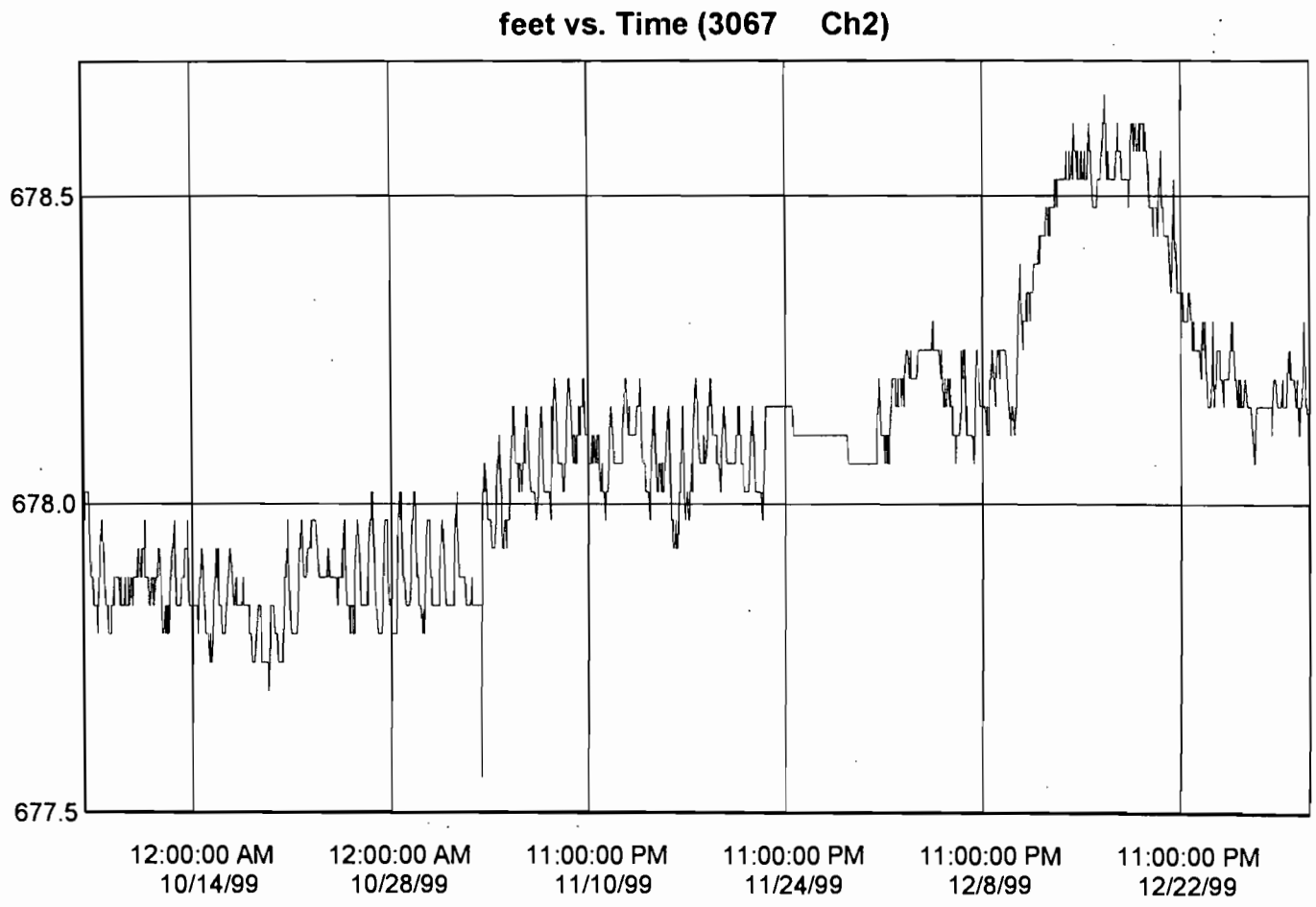
feet vs. Time (0422 Ch1)

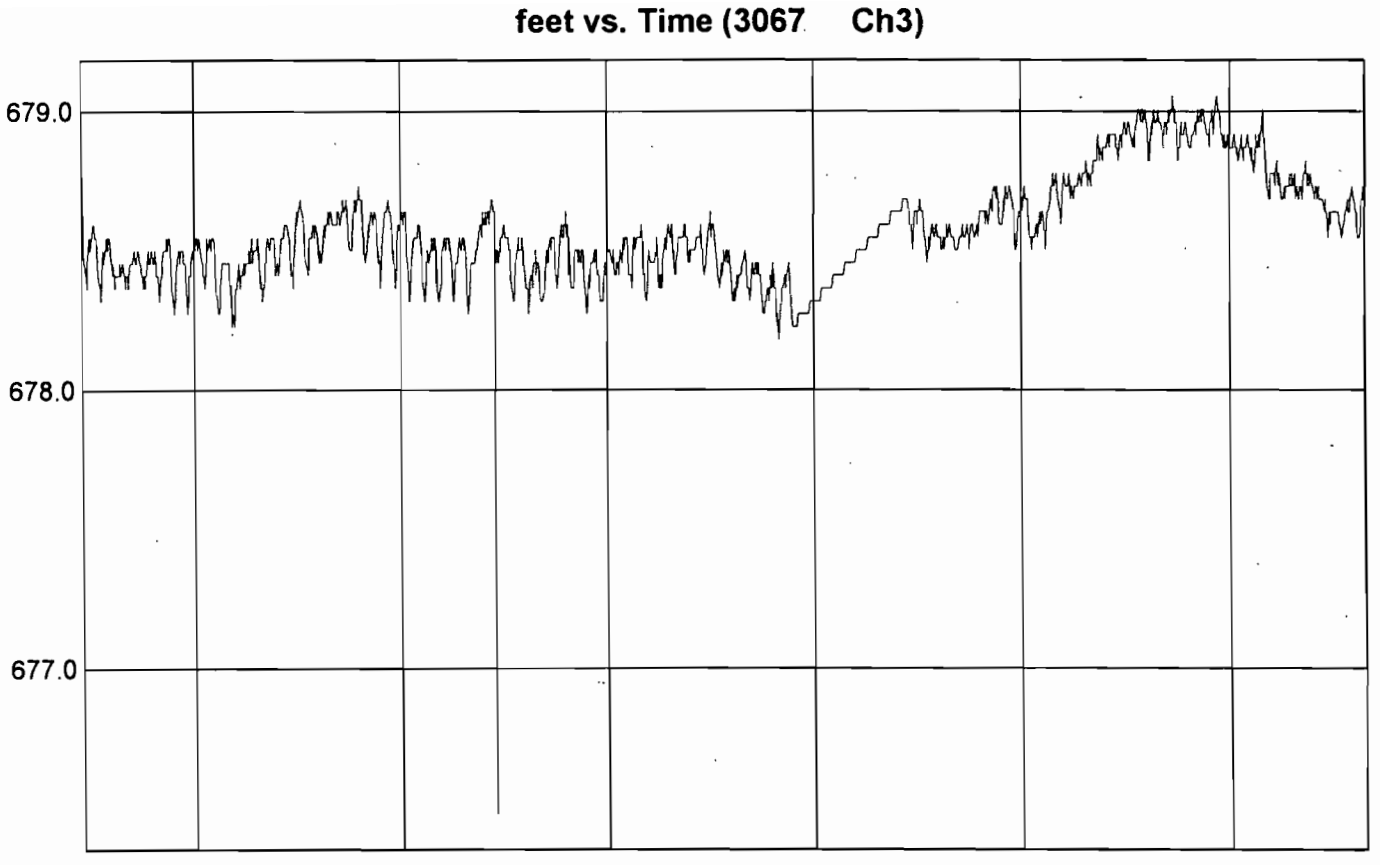


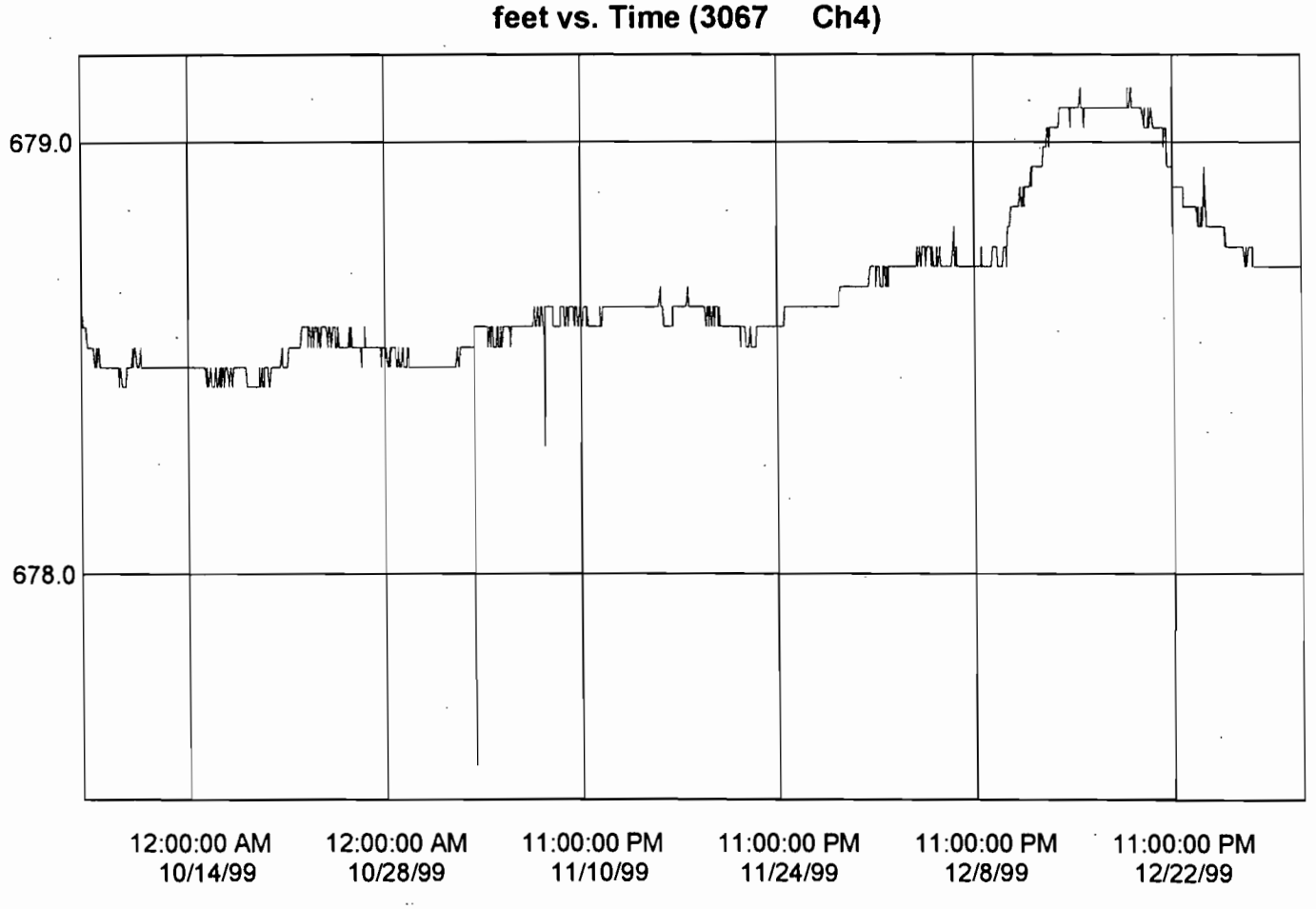
feet vs. Time (0423 Ch1)

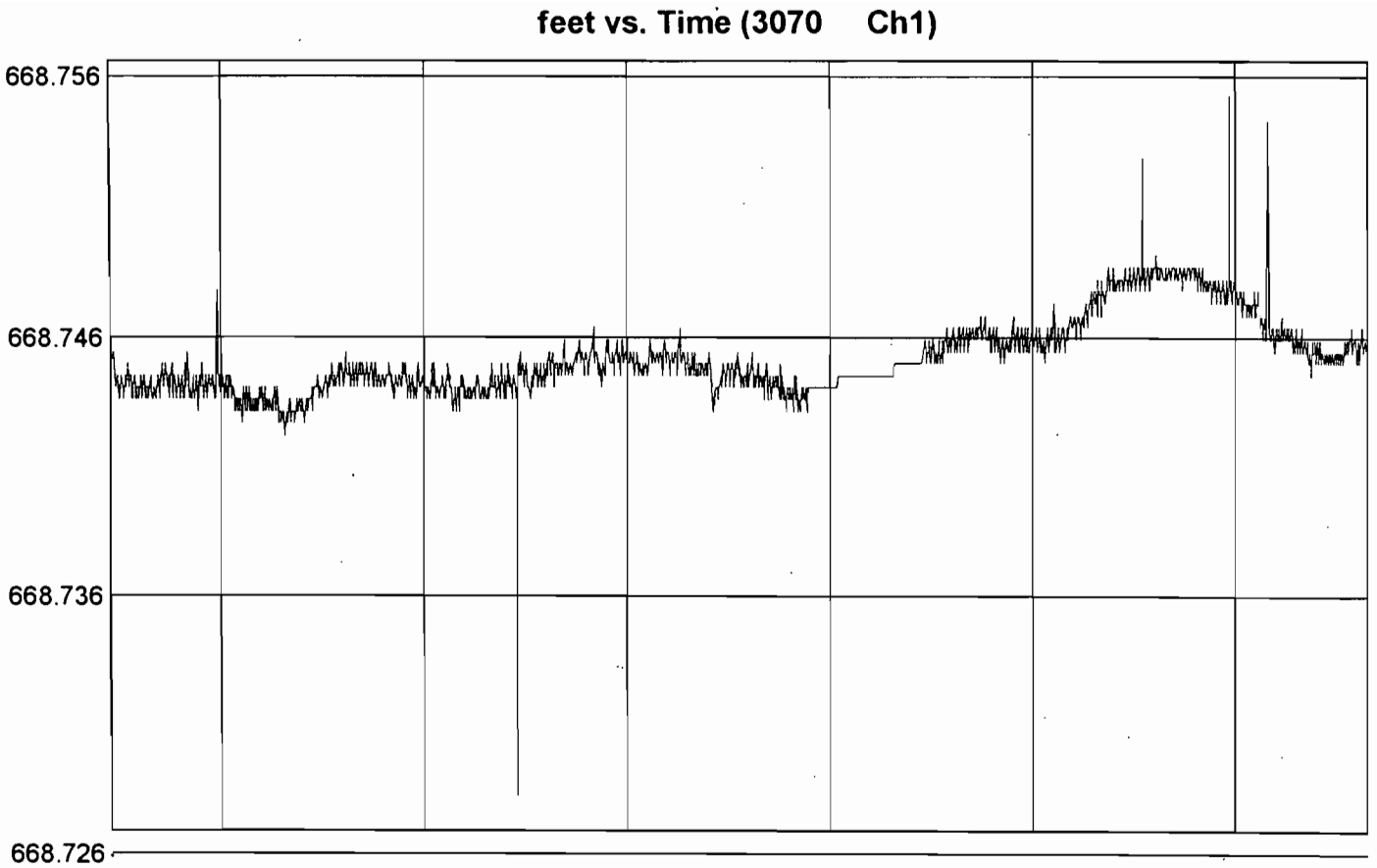


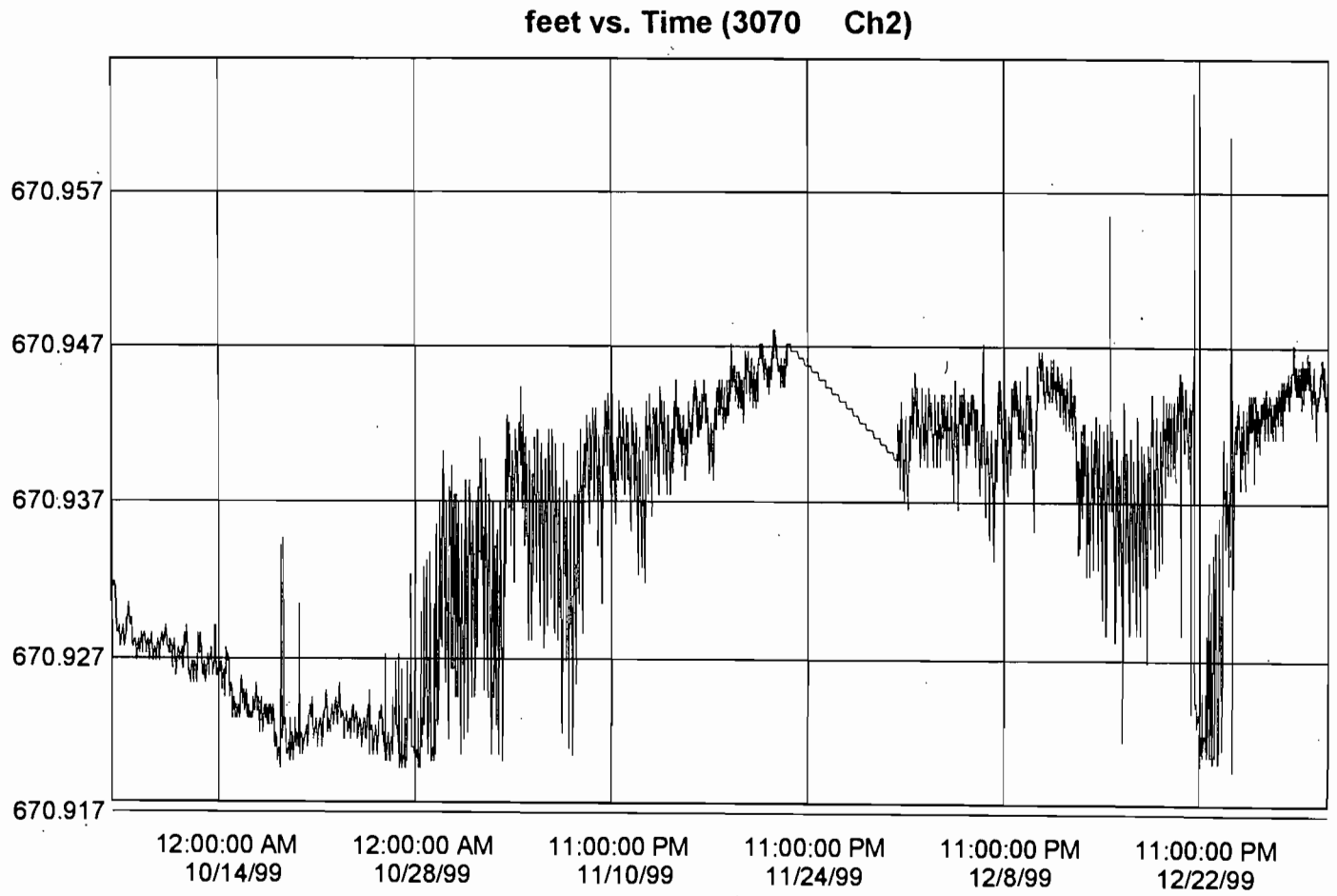

feet vs. Time (3067 Ch1)
680.0
678.0
676.0
674.0

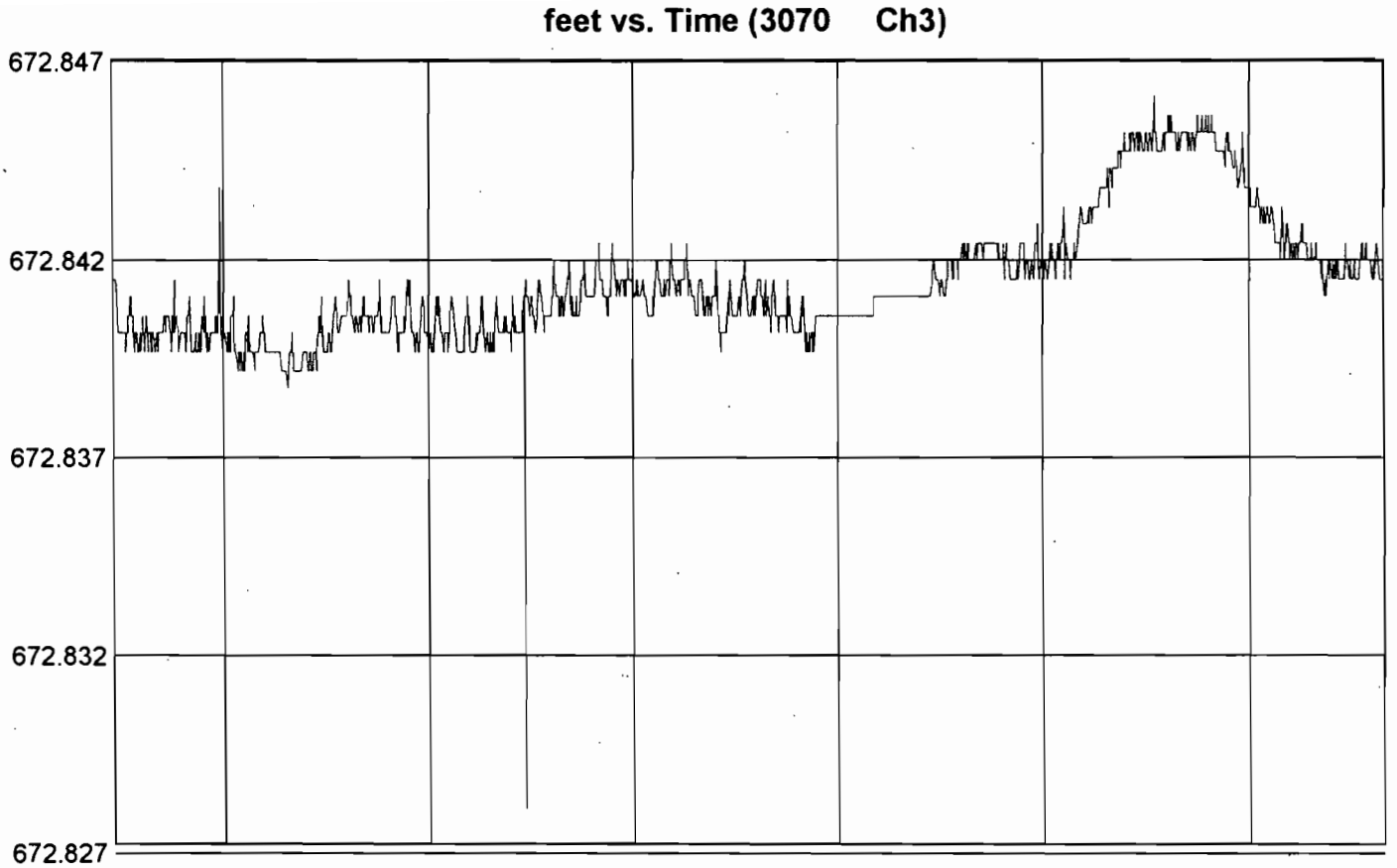

feet vs. Time (3067 Ch2)
678.5
678.0
677.5
12:00:00 AM 10/14/99
12:00:00 AM 10/28/99
11:00:00 PM 11/10/99
11:00:00 PM 11/24/99
11:00:00 PM 12/8/99
11:00:00 PM 12/22/99

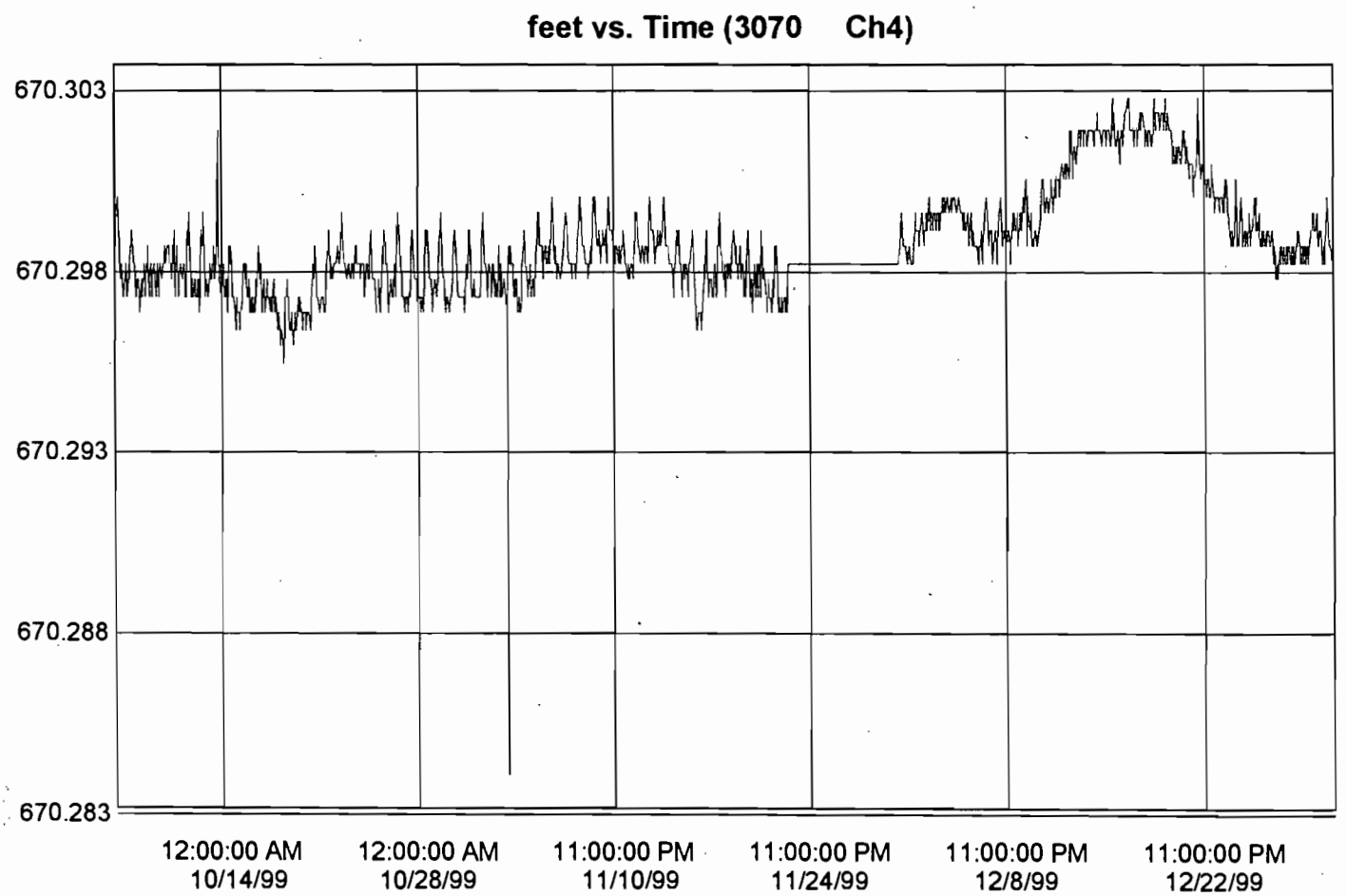

feet vs. Time (3067 Ch3)
679.0
678.0
677.0


feet vs. Time (3067 Ch4)
679.0
678.0
12:00:00 AM 10/14/99
12:00:00 AM 10/28/99
11:00:00 PM 11/10/99
11:00:00 PM 11/24/99
11:00:00 PM 12/8/99
11:00:00 PM 12/22/99

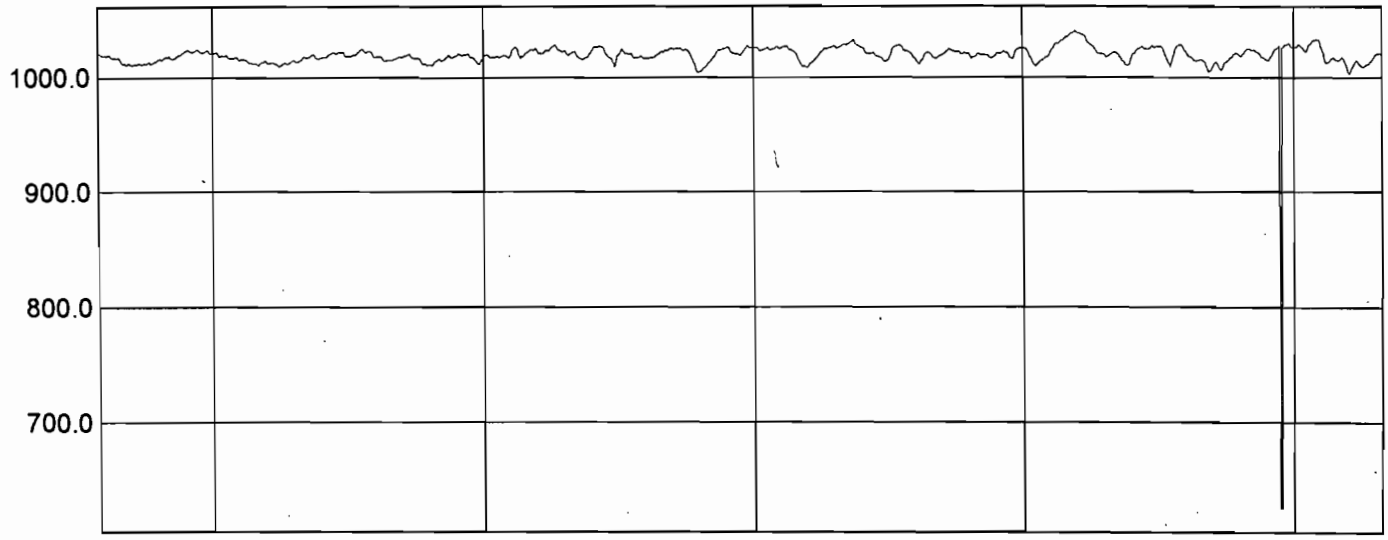

feet vs. Time (3070 Ch1)
668.756
668.746
668.736
668.726


feet vs. Time (3070 Ch2)
670.957
670.947
670.937
670.927
670.917
12:00:00 AM 10/14/99
12:00:00 AM 10/28/99
11:00:00 PM 11/10/99
11:00:00 PM 11/24/99
11:00:00 PM 12/8/99
11:00:00 PM 12/22/99

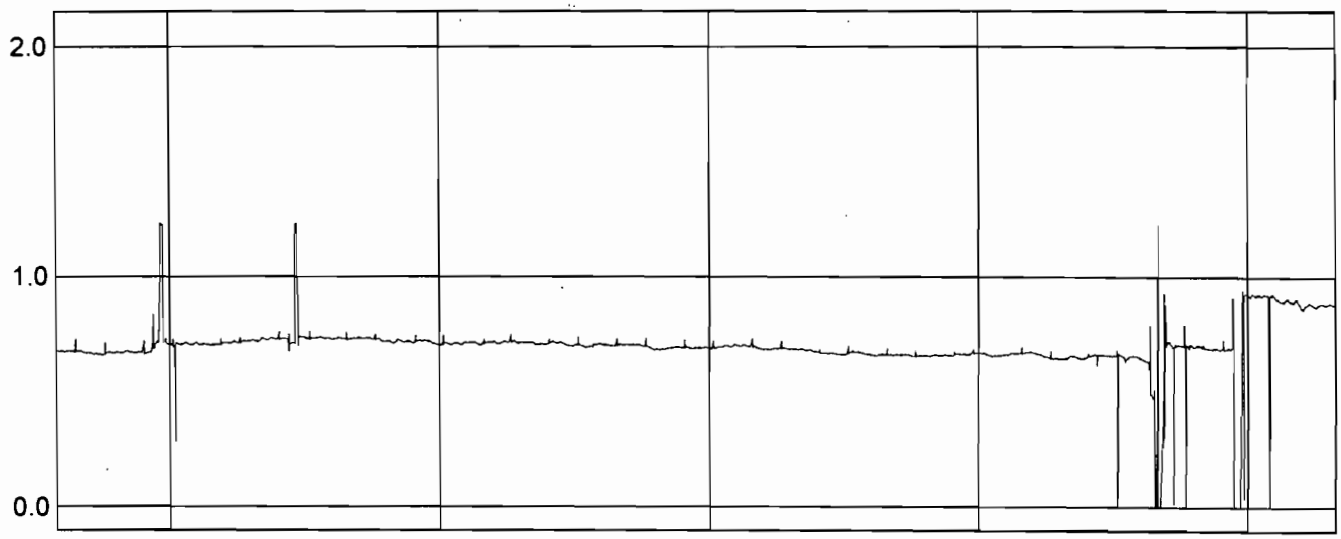

feet vs. Time (3070 Ch3)
672.847
672.842
672.837
672.832
672.827


feet vs. Time (3070 Ch4)
670.303
670.298
670.293
670.288
670.283
12:00:00 AM 10/14/99
12:00:00 AM 10/28/99
11:00:00 PM 11/10/99
11:00:00 PM 11/24/99
11:00:00 PM 12/8/99
11:00:00 PM 12/22/99

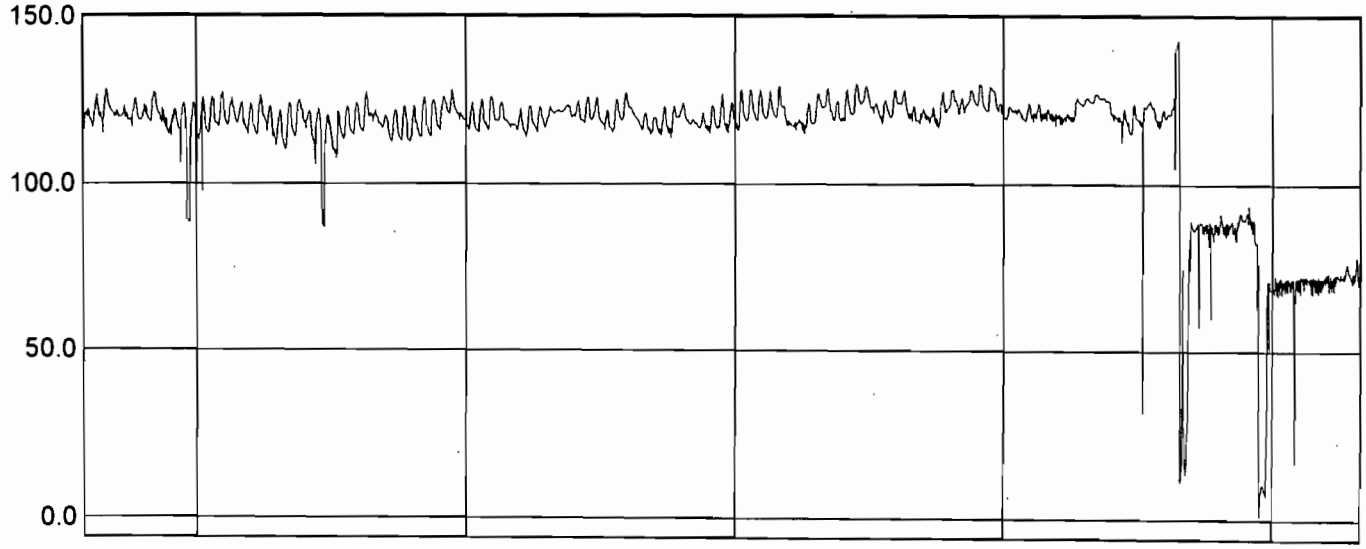
mbar vs. Time (B301 Ch1)



"H2O vs. Time (B301 Ch2)



Deg C vs. Time (B301 Ch3)



Attachment D

Examples of Analytical Results

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579840

Sample Description: 003-Influent

Date Taken: 12/11/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	12/21/1999	jpf
Acrolein (Screen)	<50.0		ug/L	12/21/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	12/21/1999	jpf
Benzene	<1.0		ug/L	12/21/1999	jpf
Bromodichloromethane	<1.0		ug/L	12/21/1999	jpf
Bromoform	<1.0		ug/L	12/21/1999	jpf
Bromomethane	<5.0		ug/L	12/21/1999	jpf
Carbon tetrachloride	<1.0		ug/L	12/21/1999	jpf
Chlorobenzene	<1.0		ug/L	12/21/1999	jpf
Chloroethane	<10.0		ug/L	12/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	12/21/1999	jpf
Chloroform	<1.0		ug/L	12/21/1999	jpf
Chloromethane	<10.0		ug/L	12/21/1999	jpf
Dibromochloromethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	12/21/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
Ethylbenzene	<1.0		ug/L	12/21/1999	jpf
Methylene chloride	<10.0		ug/L	12/21/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	12/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	12/21/1999	jpf
Tetrachloroethene	4.30		ug/L	12/21/1999	jpf
Toluene	<1.0		ug/L	12/21/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
Trichloroethene	3.20		ug/L	12/21/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	12/21/1999	jpf
Vinyl chloride	<2.0		ug/L	12/21/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579841

Sample Description: 003-Effluent

Date Taken: 12/13/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	12/21/1999	jpf
Acrolein (Screen)	<50.0		ug/L	12/21/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	12/21/1999	jpf
Benzene	<1.0		ug/L	12/21/1999	jpf
Bromodichloromethane	<1.0		ug/L	12/21/1999	jpf
Bromoform	<1.0		ug/L	12/21/1999	jpf
Bromomethane	<5.0		ug/L	12/21/1999	jpf
Carbon tetrachloride	<1.0		ug/L	12/21/1999	jpf
Chlorobenzene	<1.0		ug/L	12/21/1999	jpf
Chloroethane	<10.0		ug/L	12/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	12/21/1999	jpf
Chloroform	<1.0		ug/L	12/21/1999	jpf
Chloromethane	<10.0		ug/L	12/21/1999	jpf
Dibromochloromethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	12/21/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
Ethylbenzene	<1.0		ug/L	12/21/1999	jpf
Methylene chloride	<10.0		ug/L	12/21/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	12/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	12/21/1999	jpf
Tetrachloroethene	1.20		ug/L	12/21/1999	jpf
Toluene	<1.0		ug/L	12/21/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
Trichloroethene	<1.0		ug/L	12/21/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	12/21/1999	jpf
Vinyl chloride	<2.0		ug/L	12/21/1999	jpf

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579841

Sample Description: 003-Effluent

Date Taken: 12/13/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	106		%	12/21/1999	jpf
Surrogate: d8-Toluene	97		%	12/21/1999	jpf
Surrogate: BFB	91		%	12/21/1999	jpf

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P. O. Box 3030
Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579843

Sample Description: 003-412

Date Taken: 12/15/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	12/21/1999	jpf
Acrolein (Screen)	<50.0				

Acetone	<20.0	ug/L	12/21/1999	jpf
Acrolein (Screen)	<50.0	ug/L	12/21/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	12/21/1999	jpf
Benzene	<1.0	ug/L	12/21/1999	jpf
Bromodichloromethane	<1.0	ug/L	12/21/1999	jpf
Bromoform	<1.0	ug/L	12/21/1999	jpf
Bromomethane	<5.0	ug/L	12/21/1999	jpf
Carbon tetrachloride	<1.0	ug/L	12/21/1999	jpf
Chlorobenzene	<1.0	ug/L	12/21/1999	jpf
Chloroethane	<10.0	ug/L	12/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	12/21/1999	jpf
Chloroform	<1.0	ug/L	12/21/1999	jpf
Chloromethane	<10.0	ug/L	12/21/1999	jpf
Dibromochloromethane	<1.0	ug/L	12/21/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	12/21/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	12/21/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	12/21/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	12/21/1999	jpf
cis-1,2-Dichloroethene	1.90	ug/L	12/21/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	12/21/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	12/21/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	12/21/1999	jpf
Ethylbenzene	<1.0	ug/L	12/21/1999	jpf
Methylene chloride	<10.0	ug/L	12/21/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	12/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	12/21/1999	jpf
Tetrachloroethene	6.80	ug/L	12/21/1999	jpf
Toluene	<1.0	ug/L	12/21/1999	jpf
1,1,1-Trichloroethane	<1.0	ug/L	12/21/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	12/21/1999	jpf
Trichloroethene	4.4	ug/L	12/21/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	12/21/1999	jpf
Vinyl chloride	<2.0	ug/L	12/21/1999	jpf

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Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579843

Sample Description 003-412

Date Taken: 12/15/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	108		%	12/21/1999	jpf
Surrogate: d8-Toluene	99		%	12/21/1999	jpf
Surrogate: BFB	91		%	12/21/1999	jpf

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12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579842

Sample Description: 003-413

Date Taken: 12/13/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	12/21/1999	jpf
Acrolein (Screen)	<50.0		ug/L	12/21/1999	jpf
Acrylonitrile (Screen	<50.0		ug/L	12/21/1999	jpf
Benzene	<1.0		ug/L	12/21/1999	jpf
Bromodichloromethane	<1.0		ug/L	12/21/1999	jpf
Bromoform	<1.0		ug/L	12/21/1999	jpf
Bromomethane	<5.0		ug/L	12/21/1999	jpf
Carbon tetrachloride	<1.0		ug/L	12/21/1999	jpf
Chlorobenzene	<1.0		ug/L	12/21/1999	jpf
Chloroethane	<10.0		ug/L	12/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	12/21/1999	jpf
Chloroform	<1.0		ug/L	12/21/1999	jpf
Chloromethane	<10.0		ug/L	12/21/1999	jpf
Dibromochloromethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	12/21/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
Ethylbenzene	<1.0		ug/L	12/21/1999	jpf
Methylene chloride	<10.0		ug/L	12/21/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	12/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	12/21/1999	jpf
Tetrachloroethene	2.90		ug/L	12/21/1999	jpf
Toluene	<1.0		ug/L	12/21/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
Trichloroethene	2.40		ug/L	12/21/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	12/21/1999	jpf
Vinyl chloride	<2.0		ug/L	12/21/1999	jpf

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12/23/1999

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

JOB NUMBER: 99.22237

SAMPLE NO.: 579842

Sample Description: 003-413

Date Taken: 12/13/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analys
Surrogate: d4-1,2-DCE	108		%	12/21/1999	jpf
Surrogate: d8-Toluene	98		%	12/21/1999	jpf
Surrogate: BFB	91		%	12/21/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579845

Sample Description: 003-414

Date Taken: 12/1[illegible]/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	12/21/1999	jpf
Acrolein (Screen)	<50.0		ug/L	12/21/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	12/21/1999	jpf
Benzene	<1.0		ug/L	12/21/1999	jpf
Bromodichloromethane	<1.0		ug/L	12/21/1999	jpf
Bromoform	<1.0		ug/L	12/21/1999	jpf
Bromomethane	<5.0		ug/L	12/21/1999	jpf
Carbon tetrachloride	<1.0		ug/L	12/21/1999	jpf
Chlorobenzene	<1.0		ug/L	12/21/1999	jpf
Chloroethane	<10.0		ug/L	12/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	12/21/1999	jpf
Chloroform	<1.0		ug/L	12/21/1999	jpf
Chloromethane	<10.0		ug/L	12/21/1999	jpf
Dibromochloromethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	12/21/1999	jpf
cis-1,2-Dichloroethene	2.1		ug/L	12/21/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	12/21/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	12/21/1999	jpf
Ethylbenzene	<1.0		ug/L	12/21/1999	jpf
Methylene chloride	<10.0		ug/L	12/21/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	12/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	12/21/1999	jpf
Tetrachloroethene	6.6		ug/L	12/21/1999	jpf
Toluene	<1.0		ug/L	12/21/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	12/21/1999	jpf
Trichloroethene	4.2		ug/L	12/21/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	12/21/1999	jpf
Vinyl chloride	<2.0		ug/L	12/21/1999	jpf

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S. Howard
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P. O. Box 3030
Miamisburg, OH 45343-3000

12/23/1999

JOB NUMBER: 99.22237

SAMPLE NO.: 579845

Sample Description: 003-414

Date Taken: 12/15/1999

Date Received: 12/15/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	108		%	12/21/1999	jpf
Surrogate: d8-Toluene	94		%	12/21/1999	jpf
Surrogate: BFB	93		%	12/21/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566006

Sample Description: 003E-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	10/15/1999	jpf
Acrolein (Screen)	<50.0		ug/L	10/15/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	10/15/1999	jpf
Benzene	<1.0		ug/L	10/15/1999	jpf
Bromodichloromethane	<1.0		ug/L	10/15/1999	jpf
Bromoform	<1.0		ug/L	10/15/1999	jpf
Bromomethane	<5.0		ug/L	10/15/1999	jpf
Carbon tetrachloride	<1.0		ug/L	10/15/1999	jpf
Chlorobenzene	<1.0		ug/L	10/15/1999	jpf
Chloroethane	<10.0		ug/L	10/15/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	10/15/1999	jpf
Chloroform	<1.0		ug/L	10/15/1999	jpf
Chloromethane	<10.0		ug/L	10/15/1999	jpf
Dibromochloromethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	10/15/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
Ethylbenzene	<1.0		ug/L	10/15/1999	jpf
Methylene chloride	<10.0		ug/L	10/15/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	10/15/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	10/15/1999	jpf
Tetrachloroethene	<1.0		ug/L	10/15/1999	jpf
Toluene	<1.0		ug/L	10/15/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
Trichloroethene	<1.0		ug/L	10/15/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	10/15/1999	jpf
Vinyl chloride	<2.0		ug/L	10/15/1999	jpf

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S. Howard
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P. O. Box 3030
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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566006

Sample Description: 003E-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	107		%	10/15/1999	jpf
Surrogate: d8-Toluene	103		%	10/15/1999	jpf
Surrogate: BFB	98		%	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566007

Sample Description: 003I-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	10/15/1999	jpf
Acrolein (Screen)	<50.0		ug/L	10/15/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	10/15/1999	jpf
Benzene	<1.0		ug/L	10/15/1999	jpf
Bromodichloromethane	<1.0		ug/L	10/15/1999	jpf
Bromoform	<1.0		ug/L	10/15/1999	jpf
Bromomethane	<5.0		ug/L	10/15/1999	jpf
Carbon tetrachloride	<1.0		ug/L	10/15/1999	jpf
Chlorobenzene	<1.0		ug/L	10/15/1999	jpf
Chloroethane	<10.0		ug/L	10/15/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	10/15/1999	jpf
Chloroform	<1.0		ug/L	10/15/1999	jpf
Chloromethane	<10.0		ug/L	10/15/1999	jpf
Dibromochloromethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	10/15/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
Ethylbenzene	<1.0		ug/L	10/15/1999	jpf
Methylene chloride	<10.0		ug/L	10/15/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	10/15/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	10/15/1999	jpf
Tetrachloroethene	3.6		ug/L	10/15/1999	jpf
Toluene	<1.0		ug/L	10/15/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
Trichloroethene	2.6		ug/L	10/15/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	10/15/1999	jpf
Vinyl chloride	<2.0		ug/L	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566007

Sample Description: 003I-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	107		%	10/15/1999	jpf
Surrogate: d8-Toluene	97		%	10/15/1999	jpf
Surrogate: BFB	95		%	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566008

Sample Description: 003-412-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	10/15/1999	jpf
Acrolein (Screen)	<50.0		ug/L	10/15/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	10/15/1999	jpf
Benzene	<1.0		ug/L	10/15/1999	jpf
Bromodichloromethane	<1.0		ug/L	10/15/1999	jpf
Bromoform	<1.0		ug/L	10/15/1999	jpf
Bromomethane	<5.0		ug/L	10/15/1999	jpf
Carbon tetrachloride	1.1		ug/L	10/15/1999	jpf
Chlorobenzene	<1.0		ug/L	10/15/1999	jpf
Chloroethane	<10.0		ug/L	10/15/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	10/15/1999	jpf
Chloroform	<1.0		ug/L	10/15/1999	jpf
Chloromethane	<10.0		ug/L	10/15/1999	jpf
Dibromochloromethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	10/15/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
Ethylbenzene	<1.0		ug/L	10/15/1999	jpf
Methylene chloride	<10.0		ug/L	10/15/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	10/15/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	10/15/1999	jpf
Tetrachloroethene	7.2		ug/L	10/15/1999	jpf
Toluene	<1.0		ug/L	10/15/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
Trichloroethene	4.6		ug/L	10/15/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	10/15/1999	jpf
Vinyl chloride	<2.0		ug/L	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566008

Sample Description: 003-412-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	107		%	10/15/1999	jpf
Surrogate: d8-Toluene	96		%	10/15/1999	jpf
Surrogate: BFB	95		%	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566009

Sample Description: 003-413-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	10/15/1999	jpf
Acrolein (Screen)	<50.0		ug/L	10/15/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	10/15/1999	jpf
Benzene	<1.0		ug/L	10/15/1999	jpf
Bromodichloromethane	<1.0		ug/L	10/15/1999	jpf
Bromoform	<1.0		ug/L	10/15/1999	jpf
Bromomethane	<5.0		ug/L	10/15/1999	jpf
Carbon tetrachloride	<1.0		ug/L	10/15/1999	jpf
Chlorobenzene	<1.0		ug/L	10/15/1999	jpf
Chloroethane	<10.0		ug/L	10/15/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	10/15/1999	jpf
Chloroform	<1.0		ug/L	10/15/1999	jpf
Chloromethane	<10.0		ug/L	10/15/1999	jpf
Dibromochloromethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	10/15/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
Ethylbenzene	<1.0		ug/L	10/15/1999	jpf
Methylene chloride	<10.0		ug/L	10/15/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	10/15/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	10/15/1999	jpf
Tetrachloroethene	1.6		ug/L	10/15/1999	jpf
Toluene	<1.0		ug/L	10/15/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
Trichloroethene	1.2		ug/L	10/15/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	10/15/1999	jpf
Vinyl chloride	<2.0		ug/L	10/15/1999	jpf

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P. O. Box 3030
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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566009

Sample Description: 003-413-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	107		%	10/15/1999	jpf
Surrogate: d8-Toluene	101		%	10/15/1999	jpf
Surrogate: BFB	94		%	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566010

Sample Description: 003-414-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	10/15/1999	jpf
Acrolein (Screen)	<50.0		ug/L	10/15/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	10/15/1999	jpf
Benzene	<1.0		ug/L	10/15/1999	jpf
Bromodichloromethane	<1.0		ug/L	10/15/1999	jpf
Bromoform	<1.0		ug/L	10/15/1999	jpf
Bromomethane	<5.0		ug/L	10/15/1999	jpf
Carbon tetrachloride	<1.0		ug/L	10/15/1999	jpf
Chlorobenzene	<1.0		ug/L	10/15/1999	jpf
Chloroethane	<10.0		ug/L	10/15/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	10/15/1999	jpf
Chloroform	<1.0		ug/L	10/15/1999	jpf
Chloromethane	<10.0		ug/L	10/15/1999	jpf
Dibromochloromethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	10/15/1999	jpf
cis-1,2-Dichloroethene	1.7		ug/L	10/15/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	10/15/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	10/15/1999	jpf
Ethylbenzene	<1.0		ug/L	10/15/1999	jpf
Methylene chloride	<10.0		ug/L	10/15/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	10/15/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	10/15/1999	jpf
Tetrachloroethene	5.5		ug/L	10/15/1999	jpf
Toluene	<1.0		ug/L	10/15/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	10/15/1999	jpf
Trichloroethene	3.4		ug/L	10/15/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	10/15/1999	jpf
Vinyl chloride	<2.0		ug/L	10/15/1999	jpf

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10/18/1999

JOB NUMBER: 99.17638

SAMPLE NO.: 566010

Sample Description: 003-414-Grab

Date Taken: 10/12/1999

Date Received: 10/12/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	107		%	10/15/1999	jpf
Surrogate: d8-Toluene	98		%	10/15/1999	jpf
Surrogate: BFB	98		%	10/15/1999	jpf

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S. Howard
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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558852

Sample Description: 003E-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	09/10/1999	mrh
Acrolein (Screen)	<50.0		ug/L	09/10/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	09/10/1999	mrh
zene	<1.0		ug/L	09/10/1999	mrh
omodichloromethane	<1.0		ug/L	09/10/1999	mrh
Bromoform	<1.0		ug/L	09/10/1999	mrh
Bromomethane	<5.0		ug/L	09/10/1999	mrh
Carbon tetrachloride	<1.0		ug/L	09/10/1999	mrh
Chlorobenzene	<1.0		ug/L	09/10/1999	mrh
Chloroethane	<10.0		ug/L	09/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	09/10/1999	mrh
Chloroform	<1.0		ug/L	09/10/1999	mrh
Chloromethane	<10.0		ug/L	09/10/1999	mrh
Dibromochloromethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	09/10/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
Ethylbenzene	<1.0		ug/L	09/10/1999	mrh
Methylene chloride	<10.0		ug/L	09/10/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	09/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	09/10/1999	mrh
Tetrachloroethene	<1.0		ug/L	09/10/1999	mrh
Toluene	<1.0		ug/L	09/10/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
chloroethene	<1.0		ug/L	09/10/1999	mrh
chlorofluoromethane	<1.0		ug/L	09/10/1999	mrh
Vinyl chloride	<2.0		ug/L	09/10/1999	mrh

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S. Howard
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P. O. Box 3030
Miamisburg, OH 45343-3000

09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558852

Sample Description: 003E-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	95		%	09/10/1999	mrh
Surrogate: d8-Toluene	98		%	09/10/1999	mrh
Surrogate: BFB	93		%	09/10/1999	mrh

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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558853

Sample Description: 003I-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	09/10/1999	mrh
Acrolein (Screen)	<50.0		ug/L	09/10/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	09/10/1999	mrh
Benzene	<1.0		ug/L	09/10/1999	mrh
Bromodichloromethane	<1.0		ug/L	09/10/1999	mrh
Bromoform	<1.0		ug/L	09/10/1999	mrh
Bromomethane	<5.0		ug/L	09/10/1999	mrh
Carbon tetrachloride	<1.0		ug/L	09/10/1999	mrh
Chlorobenzene	<1.0		ug/L	09/10/1999	mrh
Chloroethane	<10.0		ug/L	09/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	09/10/1999	mrh
Chloroform	<1.0		ug/L	09/10/1999	mrh
Chloromethane	<10.0		ug/L	09/10/1999	mrh
Dibromochloromethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	09/10/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
Ethylbenzene	<1.0		ug/L	09/10/1999	mrh
Methylene chloride	<10.0		ug/L	09/10/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	09/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	09/10/1999	mrh
Tetrachloroethene	4.4		ug/L	09/10/1999	mrh
Toluene	<1.0		ug/L	09/10/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
Trichloroethene	3.1		ug/L	09/10/1999	mrh
Trichlorofluoromethane	<1.0		ug/L	09/10/1999	mrh
Vinyl chloride	<2.0		ug/L	09/10/1999	mrh

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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558853

Sample Description: 003I-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	96		%	09/10/1999	mrh
Surrogate: d8-Toluene	97		%	09/10/1999	mrh
Surrogate: BFB	93		%	09/10/1999	mrh

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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558854

Sample Description: 003-412-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	09/10/1999	mrh
Acrolein (Screen)	<50.0		ug/L	09/10/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	09/10/1999	mrh
Benzene	<1.0		ug/L	09/10/1999	mrh
Bromodichloromethane	<1.0		ug/L	09/10/1999	mrh
Bromoform	<1.0		ug/L	09/10/1999	mrh
Bromomethane	<5.0		ug/L	09/10/1999	mrh
Carbon tetrachloride	1.1		ug/L	09/10/1999	mrh
Chlorobenzene	<1.0		ug/L	09/10/1999	mrh
Chloroethane	<10.0		ug/L	09/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	09/10/1999	mrh
Chloroform	<1.0		ug/L	09/10/1999	mrh
Chloromethane	<10.0		ug/L	09/10/1999	mrh
Dibromochloromethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	09/10/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
Ethylbenzene	<1.0		ug/L	09/10/1999	mrh
Methylene chloride	<10.0		ug/L	09/10/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	09/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	09/10/1999	mrh
Tetrachloroethene	7.8		ug/L	09/10/1999	mrh
Toluene	<1.0		ug/L	09/10/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
Trichloroethene	5.3		ug/L	09/10/1999	mrh
Trichlorofluoromethane	<1.0		ug/L	09/10/1999	mrh
Vinyl chloride	<2.0		ug/L	09/10/1999	mrh

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JOB NUMBER: 99.15237

SAMPLE NO.: 558854

Sample Description: 003-412-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	96		%	09/10/1999	mrh
Surrogate: d8-Toluene	97		%	09/10/1999	mrh
Surrogate: BFB	92		%	09/10/1999	mrh

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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558855

Sample Description: 003-413-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	09/10/1999	mrh
Acrolein (Screen)	<50.0		ug/L	09/10/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	09/10/1999	mrh
Benzene	<1.0		ug/L	09/10/1999	mrh
Bromodichloromethane	<1.0		ug/L	09/10/1999	mrh
Bromoform	<1.0		ug/L	09/10/1999	mrh
Bromomethane	<5.0		ug/L	09/10/1999	mrh
Carbon tetrachloride	<1.0		ug/L	09/10/1999	mrh
Chlorobenzene	<1.0		ug/L	09/10/1999	mrh
Chloroethane	<10.0		ug/L	09/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	09/10/1999	mrh
Chloroform	<1.0		ug/L	09/10/1999	mrh
Chloromethane	<10.0		ug/L	09/10/1999	mrh
Dibromochloromethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	09/10/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
Ethylbenzene	<1.0		ug/L	09/10/1999	mrh
Methylene chloride	<10.0		ug/L	09/10/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	09/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	09/10/1999	mrh
Tetrachloroethene	1.6		ug/L	09/10/1999	mrh
Toluene	<1.0		ug/L	09/10/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
Trichloroethene	1.2		ug/L	09/10/1999	mrh
Trichlorofluoromethane	<1.0		ug/L	09/10/1999	mrh
Vinyl chloride	<2.0		ug/L	09/10/1999	mrh

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JOB NUMBER: 99.15237

SAMPLE NO.: 558855

Sample Description: 003-413-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	97		%	09/10/1999	mrh
Surrogate: d8-Toluene	97		%	09/10/1999	mrh
Surrogate: BFB	92		%	09/10/1999	mrh

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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558856

Sample Description: 003-414-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	09/10/1999	mrh
Acrolein (Screen)	<50.0		ug/L	09/10/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	09/10/1999	mrh
zene	<1.0		ug/L	09/10/1999	mrh
omodichloromethane	<1.0		ug/L	09/10/1999	mrh
Bromoform	<1.0		ug/L	09/10/1999	mrh
Bromomethane	<5.0		ug/L	09/10/1999	mrh
Carbon tetrachloride	<1.0		ug/L	09/10/1999	mrh
Chlorobenzene	<1.0		ug/L	09/10/1999	mrh
Chloroethane	<10.0		ug/L	09/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	09/10/1999	mrh
Chloroform	<1.0		ug/L	09/10/1999	mrh
Chloromethane	<10.0		ug/L	09/10/1999	mrh
Dibromochloromethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	09/10/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	09/10/1999	mrh
cis-1,2-Dichloroethene	2.0		ug/L	09/10/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	09/10/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	09/10/1999	mrh
Ethylbenzene	<1.0		ug/L	09/10/1999	mrh
Methylene chloride	<10.0		ug/L	09/10/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	09/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	09/10/1999	mrh
Tetrachloroethene	5.8		ug/L	09/10/1999	mrh
Toluene	<1.0		ug/L	09/10/1999	mrh
1,1,1-Trichloroethane	1.1		ug/L	09/10/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	09/10/1999	mrh
chloroethene	4.6		ug/L	09/10/1999	mrh
chlorofluoromethane	<1.0		ug/L	09/10/1999	mrh
Vinyl chloride	<2.0		ug/L	09/10/1999	mrh

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09/13/1999

JOB NUMBER: 99.15237

SAMPLE NO.: 558856

Sample Description: 003-414-Grab

Date Taken: 09/08/1999

Date Received: 09/08/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	97		%	09/10/1999	mrh
Surrogate: d8-Toluene	99		%	09/10/1999	mrh
Surrogate: BFB	94		%	09/10/1999	mrh

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S. Howard
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P. O. Box 3030
Miamisburg, OH 45343-3000

08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554149

Sample Description: 003E-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	08/13/1999	jpf
Acrolein (Screen)	<50.0		ug/L	08/13/1999	jpf
[illegible]ylonitrile (Screen)	<50.0		ug/L	08/13/1999	jpf
[illegible]zene	<1.0		ug/L	08/13/1999	jpf
Bromodichloromethane	<1.0		ug/L	08/13/1999	jpf
Bromoform	<1.0		ug/L	08/13/1999	jpf
Bromomethane	<5.0		ug/L	08/13/1999	jpf
Carbon tetrachloride	<1.0		ug/L	08/13/1999	jpf
Chlorobenzene	<1.0		ug/L	08/13/1999	jpf
Chloroethane	<10.0		ug/L	08/13/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	08/13/1999	jpf
Chloroform	<1.0		ug/L	08/13/1999	jpf
Chloromethane	<10.0		ug/L	08/13/1999	jpf
Dibromochloromethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	08/13/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
Ethylbenzene	<1.0		ug/L	08/13/1999	jpf
Methylene chloride	<10.0		ug/L	08/13/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	08/13/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	08/13/1999	jpf
Tetrachloroethene	<1.0		ug/L	08/13/1999	jpf
Toluene	<1.0		ug/L	08/13/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
[illegible]chloroethene	<1.0		ug/L	08/13/1999	jpf
[illegible]chlorofluoromethane	<1.0		ug/L	08/13/1999	jpf
Vinyl chloride	<2.0		ug/L	08/13/1999	jpf

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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554149

Sample Description: 003E-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	99		%	08/13/1999	jpf
Surrogate: d8-Toluene	104		%	08/13/1999	jpf
Surrogate: BFB	98		%	08/13/1999	jpf

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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554150

Sample Description: 003I-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	08/13/1999	jpf
Acrolein (Screen)	<50.0		ug/L	08/13/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	08/13/1999	jpf
Benzene	<1.0		ug/L	08/13/1999	jpf
Bromodichloromethane	<1.0		ug/L	08/13/1999	jpf
Bromoform	<1.0		ug/L	08/13/1999	jpf
Bromomethane	<5.0		ug/L	08/13/1999	jpf
Carbon tetrachloride	<1.0		ug/L	08/13/1999	jpf
Chlorobenzene	<1.0		ug/L	08/13/1999	jpf
Chloroethane	<10.0		ug/L	08/13/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	08/13/1999	jpf
Chloroform	<1.0		ug/L	08/13/1999	jpf
Chloromethane	<10.0		ug/L	08/13/1999	jpf
Dibromochloromethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	08/13/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
Ethylbenzene	<1.0		ug/L	08/13/1999	jpf
Methylene chloride	<10.0		ug/L	08/13/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	08/13/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	08/13/1999	jpf
Tetrachloroethene	4.2		ug/L	08/13/1999	jpf
Toluene	<1.0		ug/L	08/13/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
Trichloroethene	2.4		ug/L	08/13/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	08/13/1999	jpf
Vinyl chloride	<2.0		ug/L	08/13/1999	jpf

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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554150

Sample Description: 003I-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	99		%	08/13/1999	jpf
Surrogate: d8-Toluene	98		%	08/13/1999	jpf
Surrogate: BFB	99		%	08/13/1999	jpf

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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554151

Sample Description: 003-412-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	08/13/1999	jpf
Acrolein (Screen)	<50.0		ug/L	08/13/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	08/13/1999	jpf
Benzene	<1.0		ug/L	08/13/1999	jpf
Bromodichloromethane	<1.0		ug/L	08/13/1999	jpf
Bromoform	<1.0		ug/L	08/13/1999	jpf
Bromomethane	<5.0		ug/L	08/13/1999	jpf
Carbon tetrachloride	1.1		ug/L	08/13/1999	jpf
Chlorobenzene	<1.0		ug/L	08/13/1999	jpf
Chloroethane	<10.0		ug/L	08/13/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	08/13/1999	jpf
Chloroform	<1.0		ug/L	08/13/1999	jpf
Chloromethane	<10.0		ug/L	08/13/1999	jpf
Dibromochloromethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	08/13/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
Ethylbenzene	<1.0		ug/L	08/13/1999	jpf
Methylene chloride	<10.0		ug/L	08/13/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	08/13/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	08/13/1999	jpf
Tetrachloroethene	8.6		ug/L	08/13/1999	jpf
Toluene	<1.0		ug/L	08/13/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
Trichloroethene	4.8		ug/L	08/13/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	08/13/1999	jpf
Vinyl chloride	<2.0		ug/L	08/13/1999	jpf

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554151

Sample Description: 003-412-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	99		%	08/13/1999	jpf
Surrogate: d8-Toluene	98		%	08/13/1999	jpf
Surrogate: BFB	98		%	08/13/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554152

Sample Description: 003-413-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	08/13/1999	jpf
Acrolein (Screen)	<50.0		ug/L	08/13/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	08/13/1999	jpf
Benzene	<1.0		ug/L	08/13/1999	jpf
Bromodichloromethane	<1.0		ug/L	08/13/1999	jpf
Bromoform	<1.0		ug/L	08/13/1999	jpf
Bromomethane	<5.0		ug/L	08/13/1999	jpf
Carbon tetrachloride	<1.0		ug/L	08/13/1999	jpf
Chlorobenzene	<1.0		ug/L	08/13/1999	jpf
Chloroethane	<10.0		ug/L	08/13/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	08/13/1999	jpf
Chloroform	<1.0		ug/L	08/13/1999	jpf
Chloromethane	<10.0		ug/L	08/13/1999	jpf
Dibromochloromethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
cis-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	08/13/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
Ethylbenzene	<1.0		ug/L	08/13/1999	jpf
Methylene chloride	<10.0		ug/L	08/13/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	08/13/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	08/13/1999	jpf
Tetrachloroethene	1.4		ug/L	08/13/1999	jpf
Toluene	<1.0		ug/L	08/13/1999	jpf
1,1,1-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
Trichloroethene	<1.0		ug/L	08/13/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	08/13/1999	jpf
Vinyl chloride	<2.0		ug/L	08/13/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554152

Sample Description: 003-413-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	99		%	08/13/1999	jpf
Surrogate: d8-Toluene	98		%	08/13/1999	jpf
Surrogate: BFB	98		%	08/13/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554153

Sample Description: 003-414-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	08/13/1999	jpf
Acrolein (Screen)	<50.0		ug/L	08/13/1999	jpf
Acrylonitrile (Screen)	<50.0		ug/L	08/13/1999	jpf
Benzene	<1.0		ug/L	08/13/1999	jpf
Bromodichloromethane	<1.0		ug/L	08/13/1999	jpf
Bromoform	<1.0		ug/L	08/13/1999	jpf
Bromomethane	<5.0		ug/L	08/13/1999	jpf
Carbon tetrachloride	<1.0		ug/L	08/13/1999	jpf
Chlorobenzene	<1.0		ug/L	08/13/1999	jpf
Chloroethane	<10.0		ug/L	08/13/1999	jpf
2-Chloroethyl vinyl ether	<5.0		ug/L	08/13/1999	jpf
Chloroform	<1.0		ug/L	08/13/1999	jpf
Chloromethane	<10.0		ug/L	08/13/1999	jpf
Dibromochloromethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,2-Dichloroethane	<1.0		ug/L	08/13/1999	jpf
1,1-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
trans-1,2-Dichloroethene	<1.0		ug/L	08/13/1999	jpf
cis-1,2-Dichloroethene	3.1		ug/L	08/13/1999	jpf
1,2-Dichloropropane	<1.0		ug/L	08/13/1999	jpf
cis-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
trans-1,3-Dichloropropene	<1.0		ug/L	08/13/1999	jpf
Ethylbenzene	<1.0		ug/L	08/13/1999	jpf
Methylene chloride	<10.0		ug/L	08/13/1999	jpf
2-Butanone (MEK)	<10.0		ug/L	08/13/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0		ug/L	08/13/1999	jpf
Tetrachloroethene	5.7		ug/L	08/13/1999	jpf
Toluene	<1.0		ug/L	08/13/1999	jpf
1,1,1-Trichloroethane	1.6		ug/L	08/13/1999	jpf
1,1,2-Trichloroethane	<1.0		ug/L	08/13/1999	jpf
Trichloroethene	3.9		ug/L	08/13/1999	jpf
Trichlorofluoromethane	<1.0		ug/L	08/13/1999	jpf
Vinyl chloride	<2.0		ug/L	08/13/1999	jpf

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554153

Sample Description: 003-414-Grab

Date Taken: 08/11/1999

Date Received: 08/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	98		%	08/13/1999	jpf
Surrogate: d8-Toluene	96		%	08/13/1999	jpf
Surrogate: BFB	95		%	08/13/1999	jpf

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554154

Sample Description: 003-Comp.

Date Taken: 08/11/1999

Date Received: 08/11/1999

BASE NEUTRAL COMPOUNDS - 625

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acenaphthene	<5		ug/L	08/13/1999	jwr
Acenaphthylene	<5		ug/L	08/13/1999	jwr
Anthracene	<5		ug/L	08/13/1999	jwr
Benzidine	<50		ug/L	08/13/1999	jwr
Benzo(a)anthracene	<5		ug/L	08/13/1999	jwr
Benzo(b)fluoranthene	<10		ug/L	08/13/1999	jwr
Benzo(k)fluoranthene	<10		ug/L	08/13/1999	jwr
Benzo(a)pyrene	<5		ug/L	08/13/1999	jwr
Benzo(ghi)perylene	<5		ug/L	08/13/1999	jwr
Benzyl butyl phthalate	<5		ug/L	08/13/1999	jwr
bis(2-Chloroethyl)ether	<5		ug/L	08/13/1999	jwr
bis(2-Chloroethoxy)methane	<5		ug/L	08/13/1999	jwr
bis(2-Ethylhexyl)phthalate	<5		ug/L	08/13/1999	jwr
bis(2-Chloroisopropyl)ether	<5		ug/L	08/13/1999	jwr
4-Bromophenyl phenyl ether	<5		ug/L	08/13/1999	jwr
2-Chloronaphthalene	<5		ug/L	08/13/1999	jwr
4-Chlorophenylphenyl ether	<5		ug/L	08/13/1999	jwr
Chrysene	<5		ug/L	08/13/1999	jwr
Dibenzo(a,h)anthracene	<5		ug/L	08/13/1999	jwr
Di-n-butylphthalate	<5		ug/L	08/13/1999	jwr
1,3-Dichlorobenzene	<5		ug/L	08/13/1999	jwr
1,2-Dichlorobenzene	<5		ug/L	08/13/1999	jwr
1,4-Dichlorobenzene	<5		ug/L	08/13/1999	jwr
3,3'-Dichlorobenzidine	<50		ug/L	08/13/1999	jwr
Diethyl phthalate	<5		ug/L	08/13/1999	jwr
1,2-Diphenylhydrazine	<5		ug/L	08/13/1999	jwr
Dimethyl phthalate	<5		ug/L	08/13/1999	jwr
2,4-Dinitrotoluene	<5		ug/L	08/13/1999	jwr
2,6-Dinitrotoluene	<5		ug/L	08/13/1999	jwr
Di-n-octylphthalate	<5		ug/L	08/13/1999	jwr
Fluoranthene	<5		ug/L	08/13/1999	jwr
Fluorene	<5		ug/L	08/13/1999	jwr
Hexachlorobenzene	<5		ug/L	08/13/1999	jwr

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554154

Sample Description: 003-Comp.

Date Taken: 08/11/1999

Date Received: 08/11/1999

BASE NEUTRAL COMPOUNDS - 625

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Hexachloro-1,3-butadiene	<5		ug/L	08/13/1999	jwr
Hexachlorocyclopentadiene	<20		ug/L	08/13/1999	jwr
Hexachloroethane	<5		ug/L	08/13/1999	jwr
leno(1,2,3-cd)pyrene	<5		ug/L	08/13/1999	jwr
ophorone	<5		ug/L	08/13/1999	jwr
Naphthalene	<5		ug/L	08/13/1999	jwr
Nitrobenzene	<5		ug/L	08/13/1999	jwr
N-Nitrosodimethylamine	<5		ug/L	08/13/1999	jwr
N-Nitrosodiphenylamine	<5		ug/L	08/13/1999	jwr
N-Nitrosodi-n-propylamine	<5		ug/L	08/13/1999	jwr
Phenanthrene	<5		ug/L	08/13/1999	jwr
Pyrene	<5		ug/L	08/13/1999	jwr
1,2,4-Trichlorobenzene	<5		ug/L	08/13/1999	jwr
Surrogate: d5-Nitrobenzene	83		%	08/13/1999	jwr
Surrogate: 2-Fluorobiphenyl	78		%	08/13/1999	jwr
Surrogate: d14-Terphenyl	64		%	08/13/1999	jwr

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

08/18/1999

JOB NUMBER: 99.13485

SAMPLE NO.: 554154

Sample Description: 003-Comp.

Date Taken: 08/11/1999

Date Received: 08/11/1999

ACID COMPOUNDS - 625

Parameter	Result	Flag	Unit	Date Anal.	Analyst
4-Chloro-3-methylphenol	<10		ug/L	08/13/1999	jwr
2-Chlorophenol	<10		ug/L	08/13/1999	jwr
2,4-Dichlorophenol	<10		ug/L	08/13/1999	jwr
2,4-Dimethylphenol	<10		ug/L	08/13/1999	jwr
2,4-Dinitrophenol	<10		ug/L	08/13/1999	jwr
2-Methyl-4,6-dinitrophenol	<10		ug/L	08/13/1999	jwr
2-Nitrophenol	<10		ug/L	08/13/1999	jwr
4-Nitrophenol	<10		ug/L	08/13/1999	jwr
Pentachlorophenol	<10		ug/L	08/13/1999	jwr
Phenol	<10		ug/L	08/13/1999	jwr
2,4,6-Trichlorophenol	<10		ug/L	08/13/1999	jwr
Surrogate: d6-Phenol	73		%	08/13/1999	jwr
Surrogate: 2-Fluorophenol	69		%	08/13/1999	jwr
Surrogate: Tribromophenol	80 note		%	08/13/1999	jwr

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NOTES AND COMMENTS

TestAmerica Job Number: 99.13485

Sample Number: 554154

Analysis: BNA

The recoveries for hexachloroethane and 2-chloronaphthalene in the LCS were below recommended levels.

3601 SOUTH DIXIE DRIVE / DAYTON, OH 45439 / 937-294-6856 / FAX: 937-294-7816

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548689

Sample Description: 003E

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	07/16/1999	mrh
Acrolein (Screen)	<50.0		ug/L	07/16/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	07/16/1999	mrh
Benzene	<1.0		ug/L	07/16/1999	mrh
Bromodichloromethane	<1.0		ug/L	07/16/1999	mrh
Bromoform	<1.0		ug/L	07/16/1999	mrh
Bromomethane	<5.0		ug/L	07/16/1999	mrh
Carbon tetrachloride	<1.0		ug/L	07/16/1999	mrh
Chlorobenzene	<1.0		ug/L	07/16/1999	mrh
Chloroethane	<10.0		ug/L	07/16/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	07/16/1999	mrh
Chloroform	<1.0		ug/L	07/16/1999	mrh
Chloromethane	<10.0		ug/L	07/16/1999	mrh
Dibromochloromethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	07/16/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
Ethylbenzene	<1.0		ug/L	07/16/1999	mrh
Methylene chloride	<10.0		ug/L	07/16/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	07/16/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	07/16/1999	mrh
Tetrachloroethene	<1.0		ug/L	07/16/1999	mrh
Toluene	<1.0		ug/L	07/16/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
Trichloroethene	<1.0		ug/L	07/16/1999	mrh
Trichlorofluoromethane	<1.0		ug/L	07/16/1999	mrh
Vinyl chloride	<2.0		ug/L	07/16/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548689

Sample Description: 003E

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	96		%	07/16/1999	mrh
Surrogate: d8-Toluene	101		%	07/16/1999	mrh
Surrogate: BFB	93		%	07/16/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548690

Sample Description: 003I

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	07/16/1999	mrh
Acrolein (Screen)	<50.0		ug/L	07/16/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	07/16/1999	mrh
Benzene	<1.0		ug/L	07/16/1999	mrh
Bromodichloromethane	<1.0		ug/L	07/16/1999	mrh
Bromoform	<1.0		ug/L	07/16/1999	mrh
Bromomethane	<5.0		ug/L	07/16/1999	mrh
Carbon tetrachloride	<1.0		ug/L	07/16/1999	mrh
Chlorobenzene	<1.0		ug/L	07/16/1999	mrh
Chloroethane	<10.0		ug/L	07/16/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	07/16/1999	mrh
Chloroform	<1.0		ug/L	07/16/1999	mrh
Chloromethane	<10.0		ug/L	07/16/1999	mrh
Dibromochloromethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
cis-1,2-Dichloroethene	1.0		ug/L	07/16/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	07/16/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
Ethylbenzene	<1.0		ug/L	07/16/1999	mrh
Methylene chloride	<10.0		ug/L	07/16/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	07/16/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	07/16/1999	mrh
Tetrachloroethene	4.5		ug/L	07/16/1999	mrh
Toluene	<1.0		ug/L	07/16/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
Trichloroethene	2.7		ug/L	07/16/1999	mrh
Trichlorofluoromethane	<1.0		ug/L	07/16/1999	mrh
Vinyl chloride	<2.0		ug/L	07/16/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548690

Sample Description: 003I

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	94		%	07/16/1999	mrh
Surrogate: d8-Toluene	101		%	07/16/1999	mrh
Surrogate: BFB	91		%	07/16/1999	mrh

3601 SOUTH DIXIE DRIVE / DAYTON, OH 45439 / 937-294-6856 / FAX: 937-294-7816

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548691

Sample Description: 003-412

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	07/16/1999	mrh
Acrolein (Screen)	<50.0		ug/L	07/16/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	07/16/1999	mrh
enzene	<1.0		ug/L	07/16/1999	mrh
romodichloromethane	<1.0		ug/L	07/16/1999	mrh
Bromoform	<1.0		ug/L	07/16/1999	mrh
Bromomethane	<5.0		ug/L	07/16/1999	mrh
Carbon tetrachloride	1.3		ug/L	07/16/1999	mrh
Chlorobenzene	<1.0		ug/L	07/16/1999	mrh
Chloroethane	<10.0		ug/L	07/16/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	07/16/1999	mrh
Chloroform	<1.0		ug/L	07/16/1999	mrh
Chloromethane	<10.0		ug/L	07/16/1999	mrh
Dibromochloromethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	07/16/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
Ethylbenzene	<1.0		ug/L	07/16/1999	mrh
Methylene chloride	<10.0		ug/L	07/16/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	07/16/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	07/16/1999	mrh
Tetrachloroethene	9.2		ug/L	07/16/1999	mrh
Toluene	<1.0		ug/L	07/16/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
Trichloroethene	5.0		ug/L	07/16/1999	mrh
ichlorofluoromethane	<1.0		ug/L	07/16/1999	mrh
nyl chloride	<2.0		ug/L	07/16/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548691

Sample Description: 003-412

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	94		%	07/16/1999	mrh
Surrogate: d8-Toluene	99		%	07/16/1999	mrh
Surrogate: BFB	94		%	07/16/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548692

Sample Description: 003-413

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	07/16/1999	mrh
Acrolein (Screen)	<50.0		ug/L	07/16/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	07/16/1999	mrh
Benzene	<1.0		ug/L	07/16/1999	mrh
omodichloromethane	<1.0		ug/L	07/16/1999	mrh
romoform	<1.0		ug/L	07/16/1999	mrh
Bromomethane	<5.0		ug/L	07/16/1999	mrh
Carbon tetrachloride	<1.0		ug/L	07/16/1999	mrh
Chlorobenzene	<1.0		ug/L	07/16/1999	mrh
Chloroethane	<10.0		ug/L	07/16/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	07/16/1999	mrh
Chloroform	<1.0		ug/L	07/16/1999	mrh
Chloromethane	<10.0		ug/L	07/16/1999	mrh
Dibromochloromethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
cis-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	07/16/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
Ethylbenzene	<1.0		ug/L	07/16/1999	mrh
Methylene chloride	<10.0		ug/L	07/16/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	07/16/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	07/16/1999	mrh
Tetrachloroethene	1.4		ug/L	07/16/1999	mrh
Toluene	<1.0		ug/L	07/16/1999	mrh
1,1,1-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
Trichloroethene	<1.0		ug/L	07/16/1999	mrh
Trichlorofluoromethane	<1.0		ug/L	07/16/1999	mrh
yl chloride	<2.0		ug/L	07/16/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548692

Sample Description: 003-413

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	96		%	07/16/1999	mrh
Surrogate: d8-Toluene	100		%	07/16/1999	mrh
Surrogate: BFB	92		%	07/16/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548693

Sample Description: 003-414

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Acetone	<20.0		ug/L	07/16/1999	mrh
Acrolein (Screen)	<50.0		ug/L	07/16/1999	mrh
Acrylonitrile (Screen)	<50.0		ug/L	07/16/1999	mrh
nzene	<1.0		ug/L	07/16/1999	mrh
omodichloromethane	<1.0		ug/L	07/16/1999	mrh
Bromoform	<1.0		ug/L	07/16/1999	mrh
Bromomethane	<5.0		ug/L	07/16/1999	mrh
Carbon tetrachloride	<1.0		ug/L	07/16/1999	mrh
Chlorobenzene	<1.0		ug/L	07/16/1999	mrh
Chloroethane	<10.0		ug/L	07/16/1999	mrh
2-Chloroethyl vinyl ether	<5.0		ug/L	07/16/1999	mrh
Chloroform	<1.0		ug/L	07/16/1999	mrh
Chloromethane	<10.0		ug/L	07/16/1999	mrh
Dibromochloromethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,2-Dichloroethane	<1.0		ug/L	07/16/1999	mrh
1,1-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
trans-1,2-Dichloroethene	<1.0		ug/L	07/16/1999	mrh
cis-1,2-Dichloroethene	3.5		ug/L	07/16/1999	mrh
1,2-Dichloropropane	<1.0		ug/L	07/16/1999	mrh
cis-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
trans-1,3-Dichloropropene	<1.0		ug/L	07/16/1999	mrh
Ethylbenzene	<1.0		ug/L	07/16/1999	mrh
Methylene chloride	<10.0		ug/L	07/16/1999	mrh
2-Butanone (MEK)	<10.0		ug/L	07/16/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0		ug/L	07/16/1999	mrh
Tetrachloroethene	6.7		ug/L	07/16/1999	mrh
Toluene	<1.0		ug/L	07/16/1999	mrh
1,1,1-Trichloroethane	2.4		ug/L	07/16/1999	mrh
1,1,2-Trichloroethane	<1.0		ug/L	07/16/1999	mrh
Trichloroethene	4.4		ug/L	07/16/1999	mrh
ichloroflubromethane	<1.0		ug/L	07/16/1999	mrh
nyl chloride	<2.0		ug/L	07/16/1999	mrh

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S. Howard
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07/23/1999

JOB NUMBER: 99.11463

SAMPLE NO.: 548693

Sample Description: 003-414

Date Taken: 07/13/1999

Date Received: 07/13/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Flag	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	95		%	07/16/1999	mrh
Surrogate: d8-Toluene	99		%	07/16/1999	mrh
Surrogate: BFB	94		%	07/16/1999	mrh

Babcock & Wilcox of Ohio, Inc.

FACSIMILE TRANSMISSION ROUTING SHEET

FROM: Dee Hess

PHONE: X 3203

TO: Mark Spivey

LOCATION: Bldg 88

PHONE: _____ FAX PHONE NUMBER: Y4454

SPECIAL INSTRUCTIONS:

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543164

Sample Description: 003E

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	06/17/1999	eak
Acrolein (Screen)	<50.0	ug/L	06/17/1999	eak
Acrylonitrile (Screen)	<50.0	ug/L	06/17/1999	eak
nzene	<1.0	ug/L	06/17/1999	eak
omodichloromethane	<1.0	ug/L	06/17/1999	eak
Bromoform	<1.0	ug/L	06/17/1999	eak
Bromomethane	<5.0	ug/L	06/17/1999	eak
Carbon tetrachloride	<1.0	ug/L	06/17/1999	eak
Chlorobenzene	<1.0	ug/L	06/17/1999	eak
Chloroethane	<10.0	ug/L	06/17/1999	eak
2-Chloroethyl vinyl ether	<5.0	ug/L	06/17/1999	eak
Chloroform	<1.0	ug/L	06/17/1999	eak
Chloromethane	<10.0	ug/L	06/17/1999	eak
Dibromochloromethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,2-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethene	<1.0	ug/L	06/17/1999	eak
trans-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
cis-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
1,2-Dichloropropane	<1.0	ug/L	06/17/1999	eak
cis-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
trans-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
Ethylbenzene	<1.0	ug/L	06/17/1999	eak
Methylene chloride	<10.0	ug/L	06/17/1999	eak
2-Butanone (MEK)	<10.0	ug/L	06/17/1999	eak
1,1,2,2-Tetrachloroethane	<1.0	ug/L	06/17/1999	eak
Tetrachloroethene	<1.0	ug/L	06/17/1999	eak
Toluene	<1.0	ug/L	06/17/1999	eak
1,1,1-Trichloroethane	<1.0	ug/L	06/17/1999	eak
1,1,2-Trichloroethane	<1.0	ug/L	06/17/1999	eak
Trichloroethene	<1.0	ug/L	06/17/1999	eak
ichloroflubromethane	<1.0	ug/L	06/17/1999	eak
nyl chloride	<2.0	ug/L	06/17/1999	eak

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INCORPORATED

ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543164

Sample Description: 003E

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	105	%	06/17/1999	eak
Surrogate: d8-Toluene	99	%	06/17/1999	eak
Surrogate: BFB	100	%	06/17/1999	eak

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543165

Sample Description: 003I

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	06/17/1999	eak
Acrolein (Screen)	<50.0	ug/L	06/17/1999	eak
Acrylonitrile (Screen)	<50.0	ug/L	06/17/1999	eak
Benzene	<1.0	ug/L	06/17/1999	eak
Bromodichloromethane	<1.0	ug/L	06/17/1999	eak
Bromoform	<1.0	ug/L	06/17/1999	eak
Bromomethane	<5.0	ug/L	06/17/1999	eak
Carbon tetrachloride	<1.0	ug/L	06/17/1999	eak
Chlorobenzene	<1.0	ug/L	06/17/1999	eak
Chloroethane	<10.0	ug/L	06/17/1999	eak
2-Chloroethyl vinyl ether	<5.0	ug/L	06/17/1999	eak
Chloroform	<1.0	ug/L	06/17/1999	eak
Chloromethane	<10.0	ug/L	06/17/1999	eak
Dibromochloromethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,2-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethene	<1.0	ug/L	06/17/1999	eak
trans-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
cis-1,2-Dichloroethene	1.0	ug/L	06/17/1999	eak
1,2-Dichloropropane	<1.0	ug/L	06/17/1999	eak
cis-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
trans-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
Ethylbenzene	<1.0	ug/L	06/17/1999	eak
Methylene chloride	<10.0	ug/L	06/17/1999	eak
2-Butanone (MEK)	<10.0	ug/L	06/17/1999	eak
1,1,2,2-Tetrachloroethane	<1.0	ug/L	06/17/1999	eak
Tetrachloroethene	<1.0	ug/L	06/17/1999	eak
Toluene	<1.0	ug/L	06/17/1999	eak
1,1,1-Trichloroethane	<1.0	ug/L	06/17/1999	eak
1,1,2-Trichloroethane	<1.0	ug/L	06/17/1999	eak
Trichloroethene	2.3	ug/L	06/17/1999	eak
Trichlorofluoromethane	<1.0	ug/L	06/17/1999	eak
Vinyl chloride	<2.0	ug/L	06/17/1999	eak

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543165

Sample Description: 003I

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	106	%	06/17/1999	eak
Surrogate: d8-Toluene	98	%	06/17/1999	eak
Surrogate: BFB	99	%	06/17/1999	eak

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543166

Sample Description: 003-412

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	06/17/1999	eak
Acrolein (Screen)	<50.0	ug/L	06/17/1999	eak
Acrylonitrile (Screen)	<50.0	ug/L	06/17/1999	eak
nzene	<1.0	ug/L	06/17/1999	eak
romodichloromethane	<1.0	ug/L	06/17/1999	eak
Bromoform	<1.0	ug/L	06/17/1999	eak
Bromomethane	<5.0	ug/L	06/17/1999	eak
Carbon tetrachloride	<1.0	ug/L	06/17/1999	eak
Chlorobenzene	<1.0	ug/L	06/17/1999	eak
Chloroethane	<10.0	ug/L	06/17/1999	eak
2-Chloroethyl vinyl ether	<5.0	ug/L	06/17/1999	eak
Chloroform	<1.0	ug/L	06/17/1999	eak
Chloromethane	<10.0	ug/L	06/17/1999	eak
Dibromochloromethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,2-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethene	<1.0	ug/L	06/17/1999	eak
trans-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
cis-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
1,2-Dichloropropane	<1.0	ug/L	06/17/1999	eak
cis-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
trans-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
Ethylbenzene	<1.0	ug/L	06/17/1999	eak
Methylene chloride	<10.0	ug/L	06/17/1999	eak
2-Butanone (MEK)	<10.0	ug/L	06/17/1999	eak
1,1,2,2-Tetrachloroethane	<1.0	ug/L	06/17/1999	eak
Tetrachloroethene	4.3	ug/L	06/17/1999	eak
Toluene	<1.0	ug/L	06/17/1999	eak
1,1,1-Trichloroethane	<1.0	ug/L	06/17/1999	eak
1,1,2-Trichloroethane	<1.0	ug/L	06/17/1999	eak
richloroethene	3.7	ug/L	06/17/1999	eak
lchlorofluoromethane	<1.0	ug/L	06/17/1999	eak
inyl chloride	<2.0	ug/L	06/17/1999	eak

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543166

Sample Description: 003-412

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	104	%	06/17/1999	eak
Surrogate: d8-Toluene	99	%	06/17/1999	eak
Surrogate: BFB	101	%	06/17/1999	eak

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543167

Sample Description: 003-413

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	06/17/1999	eak
Acrolein (Screen)	<50.0	ug/L	06/17/1999	eak
Acrylonitrile (Screen)	<50.0	ug/L	06/17/1999	eak
nzene	<1.0	ug/L	06/17/1999	eak
romodichloromethane	<1.0	ug/L	06/17/1999	eak
Bromoform	<1.0	ug/L	06/17/1999	eak
Bromomethane	<5.0	ug/L	06/17/1999	eak
Carbon tetrachloride	<1.0	ug/L	06/17/1999	eak
Chlorobenzene	<1.0	ug/L	06/17/1999	eak
Chloroethane	<10.0	ug/L	06/17/1999	eak
2-Chloroethyl vinyl ether	<5.0	ug/L	06/17/1999	eak
Chloroform	<1.0	ug/L	06/17/1999	eak
Chloromethane	<10.0	ug/L	06/17/1999	eak
Dibromochloromethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,2-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethene	<1.0	ug/L	06/17/1999	eak
trans-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
cis-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
1,2-Dichloropropane	<1.0	ug/L	06/17/1999	eak
cis-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
trans-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
Ethylbenzene	<1.0	ug/L	06/17/1999	eak
Methylene chloride	<10.0	ug/L	06/17/1999	eak
2-Butanone (MEK)	<10.0	ug/L	06/17/1999	eak
1,1,2,2-Tetrachloroethane	<1.0	ug/L	06/17/1999	eak
Tetrachloroethene	<1.0	ug/L	06/17/1999	eak
Toluene	<1.0	ug/L	06/17/1999	eak
1,1,1-Trichloroethane	<1.0	ug/L	06/17/1999	eak
1,1,2-Trichloroethane	<1.0	ug/L	06/17/1999	eak
Trichloroethene	<1.0	ug/L	06/17/1999	eak
ichlorofluoromethane	<1.0	ug/L	06/17/1999	eak
vinyl chloride	<2.0	ug/L	06/17/1999	eak

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543167

Sample Description: 003-413

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	108	%	06/17/1999	eak
Surrogate: d8-Toluene	98	%	06/17/1999	eak
Surrogate: BFB	100	%	06/17/1999	eak

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543168

Sample Description: 003-414

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	06/17/1999	eak
Acrolein (Screen)	<50.0	ug/L	06/17/1999	eak
Acrylonitrile (Screen)	<50.0	ug/L	06/17/1999	eak
enzene	<1.0	ug/L	06/17/1999	eak
romodichloromethane	<1.0	ug/L	06/17/1999	eak
Bromoform	<1.0	ug/L	06/17/1999	eak
Bromomethane	<5.0	ug/L	06/17/1999	eak
Carbon tetrachloride	<1.0	ug/L	06/17/1999	eak
Chlorobenzene	<1.0	ug/L	06/17/1999	eak
Chloroethane	<10.0	ug/L	06/17/1999	eak
2-Chloroethyl vinyl ether	<5.0	ug/L	06/17/1999	eak
Chloroform	<1.0	ug/L	06/17/1999	eak
Chloromethane	<10.0	ug/L	06/17/1999	eak
Dibromochloromethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,2-Dichloroethane	<1.0	ug/L	06/17/1999	eak
1,1-Dichloroethene	<1.0	ug/L	06/17/1999	eak
trans-1,2-Dichloroethene	<1.0	ug/L	06/17/1999	eak
cis-1,2-Dichloroethene	3.4	ug/L	06/17/1999	eak
1,2-Dichloropropane	<1.0	ug/L	06/17/1999	eak
cis-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
trans-1,3-Dichloropropene	<1.0	ug/L	06/17/1999	eak
Ethylbenzene	<1.0	ug/L	06/17/1999	eak
Methylene chloride	<10.0	ug/L	06/17/1999	eak
2-Butanone (MEK)	<10.0	ug/L	06/17/1999	eak
1,1,2,2-Tetrachloroethane	<1.0	ug/L	06/17/1999	eak
Tetrachloroethene	2.9	ug/L	06/17/1999	eak
Toluene	<1.0	ug/L	06/17/1999	eak
1,1,1-Trichloroethane	2.1	ug/L	06/17/1999	eak
1,1,2-Trichloroethane	<1.0	ug/L	06/17/1999	eak
Trichloroethene	3.5	ug/L	06/17/1999	eak
richlorofluoromethane	<1.0	ug/L	06/17/1999	eak
inyl chloride	<2.0	ug/L	06/17/1999	eak

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06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543168

Sample Description: 003-414

Date Taken: 06/16/1999

Date Received: 06/16/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	106	%	06/17/1999	eak
Surrogate: d8-Toluene	97	%	06/17/1999	eak
Surrogate: BFB	100	%	06/17/1999	eak

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BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543169

Sample Description: 003

Date Taken: 06/15/1999

Date Received: 06/16/1999

BASE NEUTRAL COMPOUNDS - 625

Parameter	Result	Unit	Date Anal.	Analyst
Acenaphthene	<5	ug/L	06/24/1999	jpf
Acenaphthylene	<5	ug/L	06/24/1999	jpf
Anthracene	<5	ug/L	06/24/1999	jpf
Benzidine	<50	ug/L	06/24/1999	jpf
Benzo(a)anthracene	<5	ug/L	06/24/1999	jpf
Benzo(b)fluoranthene	<10	ug/L	06/24/1999	jpf
Benzo(k)fluoranthene	<10	ug/L	06/24/1999	jpf
Benzo(a)pyrene	<5	ug/L	06/24/1999	jpf
Benzo(ghi)perylene	<5	ug/L	06/24/1999	jpf
Benzyl butyl phthalate	<5	ug/L	06/24/1999	jpf
bis(2-Chloroethyl)ether	<5	ug/L	06/24/1999	jpf
bis(2-Chloroethoxy)methane	<5	ug/L	06/24/1999	jpf
bis(2-Ethylhexyl)phthalate	<5	ug/L	06/24/1999	jpf
bis(2-Chloroisopropyl)ether	<5	ug/L	06/24/1999	jpf
4-Bromophenyl phenyl ether	<5	ug/L	06/24/1999	jpf
2-Chloronaphthalene	<5	ug/L	06/24/1999	jpf
4-Chlorophenylphenyl ether	<5	ug/L	06/24/1999	jpf
Chrysene	<5	ug/L	06/24/1999	jpf
Dibenzo(a,h)anthracene	<5	ug/L	06/24/1999	jpf
Di-n-butylphthalate	<5	ug/L	06/24/1999	jpf
1,3-Dichlorobenzene	<5	ug/L	06/24/1999	jpf
1,2-Dichlorobenzene	<5	ug/L	06/24/1999	jpf
1,4-Dichlorobenzene	<5	ug/L	06/24/1999	jpf
3,3'-Dichlorobenzidine	<50	ug/L	06/24/1999	jpf
Diethyl phthalate	<5	ug/L	06/24/1999	jpf
1,2-Diphenylhydrazine	<5	ug/L	06/24/1999	jpf
Dimethyl phthalate	<5	ug/L	06/24/1999	jpf
2,4-Dinitrotoluene	<5	ug/L	06/24/1999	jpf
2,6-Dinitrotoluene	<5	ug/L	06/24/1999	jpf
Di-n-octylphthalate	<5	ug/L	06/24/1999	jpf
Fluoranthene	<5	ug/L	06/24/1999	jpf
Fluorene	<5	ug/L	06/24/1999	jpf
Hexachlorobenzene	<5	ug/L	06/24/1999	jpf

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06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543169

Sample Description: 003

Date Taken: 06/15/1999

Date Received: 06/16/1999

BASE NEUTRAL COMPOUNDS - 625

Parameter	Result	Unit	Date Anal.	Analyst
Hexachloro-1,3-butadiene	<5	ug/L	06/24/1999	jpf
Hexachlorocyclopentadiene	<20	ug/L	06/24/1999	jpf
Hexachloroethane	<5	ug/L	06/24/1999	jpf
deno(1,2,3-cd)pyrene	<5	ug/L	06/24/1999	jpf
sophorone	<5	ug/L	06/24/1999	jpf
Naphthalene	<5	ug/L	06/24/1999	jpf
Nitrobenzene	<5	ug/L	06/24/1999	jpf
N-Nitrosodimethylamine	<5	ug/L	06/24/1999	jpf
N-Nitrosodiphenylamine	<5	ug/L	06/24/1999	jpf
N-Nitrosodi-n-propylamine	<5	ug/L	06/24/1999	jpf
Phenanthrene	<5	ug/L	06/24/1999	jpf
Pyrene	<5	ug/L	06/24/1999	jpf
1,2,4-Trichlorobenzene	<5	ug/L	06/24/1999	jpf
Surrogate: d5-Nitrobenzene	73	%	06/24/1999	jpf
Surrogate: 2-Fluorobiphenyl	77	%	06/24/1999	jpf
Surrogate: d14-Terphenyl	67 NOTE	%	06/24/1999	jpf

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Miamisburg, OH 45343-3000

06/26/1999

JOB NUMBER: 99.09717

SAMPLE NO.: 543169

Sample Description: 003

Date Taken: 06/15/1999

Date Received: 06/16/1999

ACID COMPOUNDS - 625

Parameter	Result	Unit	Date Anal.	Analyst
4-Chloro-3-methylphenol	<10	ug/L	06/24/1999	jpf
2-Chlorophenol	<10	ug/L	06/24/1999	jpf
2,4-Dichlorophenol	<10	ug/L	06/24/1999	jpf
2,4-Dimethylphenol	<10	ug/L	06/24/1999	jpf
2,4-Dinitrophenol	<10	ug/L	06/24/1999	jpf
2-Methyl-4,6-dinitrophenol	<10	ug/L	06/24/1999	jpf
2-Nitrophenol	<10	ug/L	06/24/1999	jpf
4-Nitrophenol	<10	ug/L	06/24/1999	jpf
Pentachlorophenol	<10	ug/L	06/24/1999	jpf
Phenol	<10	ug/L	06/24/1999	jpf
2,4,6-Trichlorophenol	<10	ug/L	06/24/1999	jpf
Surrogate: d5-Phenol	67	%	06/24/1999	jpf
Surrogate: 2-Fluorophenol	68	%	06/24/1999	jpf
Surrogate: Tribromophenol	74 NOTE	%	06/24/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535163

Sample Description: 003E

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	05/12/1999	jpf
Acrolein (Screen)	<50.0	ug/L	05/12/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	05/12/1999	jpf
Benzene	<1.0	ug/L	05/12/1999	jpf
Bromodichloromethane	<1.0	ug/L	05/12/1999	jpf
Bromoform	<1.0	ug/L	05/12/1999	jpf
Bromomethane	<5.0	ug/L	05/12/1999	jpf
Carbon tetrachloride	<1.0	ug/L	05/12/1999	jpf
Chlorobenzene	<1.0	ug/L	05/12/1999	jpf
Chloroethane	<10.0	ug/L	05/12/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	05/12/1999	jpf
Chloroform	<1.0	ug/L	05/12/1999	jpf
Chloromethane	<10.0	ug/L	05/12/1999	jpf
Dibromochloromethane	<1.0	ug/L	05/12/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	05/12/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	05/12/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
cis-1,2-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	05/12/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	05/12/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	05/12/1999	jpf
Ethylbenzene	<1.0	ug/L	05/12/1999	jpf
Methylene chloride	<10.0	ug/L	05/12/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	05/12/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	05/12/1999	jpf
Tetrachloroethene	<1.0	ug/L	05/12/1999	jpf
Toluene	<1.0	ug/L	05/12/1999	jpf
1,1,1-Trichloroethane	<1.0	ug/L	05/12/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	05/12/1999	jpf
Trichloroethene	<1.0	ug/L	05/12/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	05/12/1999	jpf
Vinyl chloride	<2.0	ug/L	05/12/1999	jpf

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535163

Sample Description: 003E

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	110	%	05/12/1999	jpf
Surrogate: d8-Toluene	98	%	05/12/1999	jpf
Surrogate: BFB	92	%	05/12/1999	jpf

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P. O. Box 3030
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05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535164

Sample Description: 003I

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	05/12/1999	jpf
Acrolein (Screen)	<50.0	ug/L	05/12/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	05/12/1999	jpf
Benzene	<1.0	ug/L	05/12/1999	jpf
Bromodichloromethane	<1.0	ug/L	05/12/1999	jpf
Bromoform	<1.0	ug/L	05/12/1999	jpf
Bromomethane	<5.0	ug/L	05/12/1999	jpf
Carbon tetrachloride	<1.0	ug/L	05/12/1999	jpf
Chlorobenzene	<1.0	ug/L	05/12/1999	jpf
Chloroethane	<10.0	ug/L	05/12/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	05/12/1999	jpf
Chloroform	<1.0	ug/L	05/12/1999	jpf
Chloromethane	<10.0	ug/L	05/12/1999	jpf
Dibromochloromethane	<1.0	ug/L	05/12/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	05/12/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	05/12/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
cis-1,2-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	05/12/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	05/12/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	05/12/1999	jpf
Ethylbenzene	<1.0	ug/L	05/12/1999	jpf
Methylene chloride	<10.0	ug/L	05/12/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	05/12/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	05/12/1999	jpf
Tetrachloroethene	4.0	ug/L	05/12/1999	jpf
Toluene	<1.0	ug/L	05/12/1999	jpf
1,1,1-Trichloroethane	1.3	ug/L	05/12/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	05/12/1999	jpf
Trichloroethene	3.1	ug/L	05/12/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	05/12/1999	jpf
Vinyl chloride	<2.0	ug/L	05/12/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535164

Sample Description: 003I

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	108	%	05/12/1999	jpf
Surrogate: d8-Toluene	97	%	05/12/1999	jpf
Surrogate: BFB	94	%	05/12/1999	jpf

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P. O. Box 3030
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05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535165

Sample Description: 003-412

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	05/12/1999	jpf
Acrolein (Screen)	<50.0	ug/L	05/12/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	05/12/1999	jpf
Benzene	<1.0	ug/L	05/12/1999	jpf
Bromodichloromethane	<1.0	ug/L	05/12/1999	jpf
Bromoform	<1.0	ug/L	05/12/1999	jpf
Bromomethane	<5.0	ug/L	05/12/1999	jpf
Carbon tetrachloride	<1.0	ug/L	05/12/1999	jpf
Chlorobenzene	<1.0	ug/L	05/12/1999	jpf
Chloroethane	<10.0	ug/L	05/12/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	05/12/1999	jpf
Chloroform	<1.0	ug/L	05/12/1999	jpf
Chloromethane	<10.0	ug/L	05/12/1999	jpf
Dibromochloromethane	<1.0	ug/L	05/12/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	05/12/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	05/12/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
cis-1,2-Dichloroethene	<1.0	ug/L	05/12/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	05/12/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	05/12/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	05/12/1999	jpf
Ethylbenzene	<1.0	ug/L	05/12/1999	jpf
Methylene chloride	<10.0	ug/L	05/12/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	05/12/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	05/12/1999	jpf
Tetrachloroethene	7.6	ug/L	05/12/1999	jpf
Toluene	<1.0	ug/L	05/12/1999	jpf
1,1,1-Trichloroethane	<1.0	ug/L	05/12/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	05/12/1999	jpf
Trichloroethene	5.2	ug/L	05/12/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	05/12/1999	jpf
Vinyl chloride	<2.0	ug/L	05/12/1999	jpf

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P. O. Box 3030
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05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535165

Sample Description: 003-412

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	111	%	05/12/1999	jpf
Surrogate: d8-Toluene	98	%	05/12/1999	jpf
Surrogate: BFB	94	%	05/12/1999	jpf

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05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535166

Sample Description: 003-413

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	05/13/1999	dmg
Acrolein (Screen)	<50.0	ug/L	05/13/1999	dmg
Acrylonitrile (Screen)	<50.0	ug/L	05/13/1999	dmg
Benzene	<1.0	ug/L	05/13/1999	dmg
Bromodichloromethane	<1.0	ug/L	05/13/1999	dmg
Bromoform	<1.0	ug/L	05/13/1999	dmg
Bromomethane	<5.0	ug/L	05/13/1999	dmg
Carbon tetrachloride	<1.0	ug/L	05/13/1999	dmg
Chlorobenzene	<1.0	ug/L	05/13/1999	dmg
Chloroethane	<10.0	ug/L	05/13/1999	dmg
2-Chloroethyl vinyl ether	<5.0	ug/L	05/13/1999	dmg
Chloroform	<1.0	ug/L	05/13/1999	dmg
Chloromethane	<10.0	ug/L	05/13/1999	dmg
Dibromochloromethane	<1.0	ug/L	05/13/1999	dmg
1,1-Dichloroethane	<1.0	ug/L	05/13/1999	dmg
1,2-Dichloroethane	<1.0	ug/L	05/13/1999	dmg
1,1-Dichloroethene	<1.0	ug/L	05/13/1999	dmg
trans-1,2-Dichloroethene	<1.0	ug/L	05/13/1999	dmg
cis-1,2-Dichloroethene	<1.0	ug/L	05/13/1999	dmg
1,2-Dichloropropane	<1.0	ug/L	05/13/1999	dmg
cis-1,3-Dichloropropene	<1.0	ug/L	05/13/1999	dmg
trans-1,3-Dichloropropene	<1.0	ug/L	05/13/1999	dmg
Ethylbenzene	<1.0	ug/L	05/13/1999	dmg
Methylene chloride	<10.0	ug/L	05/13/1999	dmg
2-Butanone (MEK)	<10.0	ug/L	05/13/1999	dmg
1,1,2,2-Tetrachloroethane	<1.0	ug/L	05/13/1999	dmg
Tetrachloroethene	1.2	ug/L	05/13/1999	dmg
Toluene	<1.0	ug/L	05/13/1999	dmg
1,1,1-Trichloroethane	1.4	ug/L	05/13/1999	dmg
1,1,2-Trichloroethane	<1.0	ug/L	05/13/1999	dmg
Trichloroethene	1.0	ug/L	05/13/1999	dmg
Trichlorofluoromethane	<1.0	ug/L	05/13/1999	dmg
Vinyl chloride	<2.0	ug/L	05/13/1999	dmg

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535166

Sample Description: 003-413

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	110	%	05/13/1999	dmg
Surrogate: d8-Toluene	96	%	05/13/1999	dmg
Surrogate: BFB	94	%	05/13/1999	dmg

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535167

Sample Description: 003-414

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	05/13/1999	dmg
Acrolein (Screen)	<50.0	ug/L	05/13/1999	dmg
Acrylonitrile (Screen)	<50.0	ug/L	05/13/1999	dmg
Benzene	<1.0	ug/L	05/13/1999	dmg
Bromodichloromethane	<1.0	ug/L	05/13/1999	dmg
Bromoform	<1.0	ug/L	05/13/1999	dmg
Bromomethane	<5.0	ug/L	05/13/1999	dmg
Carbon tetrachloride	<1.0	ug/L	05/13/1999	dmg
Chlorobenzene	<1.0	ug/L	05/13/1999	dmg
Chloroethane	<10.0	ug/L	05/13/1999	dmg
2-Chloroethyl vinyl ether	<5.0	ug/L	05/13/1999	dmg
Chloroform	<1.0	ug/L	05/13/1999	dmg
Chloromethane	<10.0	ug/L	05/13/1999	dmg
Dibromochloromethane	<1.0	ug/L	05/13/1999	dmg
1,1-Dichloroethane	<1.0	ug/L	05/13/1999	dmg
1,2-Dichloroethane	<1.0	ug/L	05/13/1999	dmg
1,1-Dichloroethene	<1.0	ug/L	05/13/1999	dmg
trans-1,2-Dichloroethene	<1.0	ug/L	05/13/1999	dmg
cis-1,2-Dichloroethene	3.4	ug/L	05/13/1999	dmg
1,2-Dichloropropane	<1.0	ug/L	05/13/1999	dmg
cis-1,3-Dichloropropene	<1.0	ug/L	05/13/1999	dmg
trans-1,3-Dichloropropene	<1.0	ug/L	05/13/1999	dmg
Ethylbenzene	<1.0	ug/L	05/13/1999	dmg
Methylene chloride	<10.0	ug/L	05/13/1999	dmg
2-Butanone (MEK)	<10.0	ug/L	05/13/1999	dmg
1,1,2,2-Tetrachloroethane	<1.0	ug/L	05/13/1999	dmg
Tetrachloroethene	6.2	ug/L	05/13/1999	dmg
Toluene	<1.0	ug/L	05/13/1999	dmg
1,1,1-Trichloroethane	2.7	ug/L	05/13/1999	dmg
1,1,2-Trichloroethane	<1.0	ug/L	05/13/1999	dmg
Trichloroethene	6.0	ug/L	05/13/1999	dmg
Trichlorofluoromethane	<1.0	ug/L	05/13/1999	dmg
Vinyl chloride	<2.0	ug/L	05/13/1999	dmg

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

05/17/1999

JOB NUMBER: 99.07095

SAMPLE NO.: 535167

Sample Description: 003-414

Date Taken: 05/11/1999

Date Received: 05/11/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	109	%	05/13/1999	dmg
Surrogate: d8-Toluene	97	%	05/13/1999	dmg
Surrogate: BFB	94	%	05/13/1999	dmg

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ANALYTICAL REPORT

S. Howard
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P. O. Box 3030
Miamisburg, OH 45343-3000

04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530989

Sample Description: 003E

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	04/21/1999	jpf
Acrolein (Screen)	<50.0	ug/L	04/21/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	04/21/1999	jpf
enzene	<1.0	ug/L	04/21/1999	jpf
romodichloromethane	<1.0	ug/L	04/21/1999	jpf
Bromoform	<1.0	ug/L	04/21/1999	jpf
Bromomethane	<5.0	ug/L	04/21/1999	jpf
Carbon tetrachloride	<1.0	ug/L	04/21/1999	jpf
Chlorobenzene	<1.0	ug/L	04/21/1999	jpf
Chloroethane	<10.0	ug/L	04/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	04/21/1999	jpf
Chloroform	<1.0	ug/L	04/21/1999	jpf
Chloromethane	<10.0	ug/L	04/21/1999	jpf
Dibromochloromethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
cis-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	04/21/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
Ethylbenzene	<1.0	ug/L	04/21/1999	jpf
Methylene chloride	<10.0	ug/L	04/21/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	04/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	04/21/1999	jpf
Tetrachloroethene	<1.0	ug/L	04/21/1999	jpf
Toluene	<1.0	ug/L	04/21/1999	jpf
1,1,1-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
Trichloroethene	<1.0	ug/L	04/21/1999	jpf
ichlorofluoromethane	<1.0	ug/L	04/21/1999	jpf
nyl chloride	<2.0	ug/L	04/21/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530989

Sample Description: 003E

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	105	%	04/21/1999	jpf
Surrogate: d8-Toluene	101	%	04/21/1999	jpf
Surrogate: BFB	98	%	04/21/1999	jpf

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S. Howard
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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530990

Sample Description: 003I

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	04/21/1999	jpf
Acrolein (Screen)	<50.0	ug/L	04/21/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	04/21/1999	jpf
Benzene	<1.0	ug/L	04/21/1999	jpf
Bromodichloromethane	<1.0	ug/L	04/21/1999	jpf
Bromoform	<1.0	ug/L	04/21/1999	jpf
Bromomethane	<5.0	ug/L	04/21/1999	jpf
Carbon tetrachloride	<1.0	ug/L	04/21/1999	jpf
Chlorobenzene	<1.0	ug/L	04/21/1999	jpf
Chloroethane	<10.0	ug/L	04/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	04/21/1999	jpf
Chloroform	<1.0	ug/L	04/21/1999	jpf
Chloromethane	<10.0	ug/L	04/21/1999	jpf
Dibromochloromethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
cis-1,2-Dichloroethene	1.5	ug/L	04/21/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	04/21/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
Ethylbenzene	<1.0	ug/L	04/21/1999	jpf
Methylene chloride	<10.0	ug/L	04/21/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	04/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	04/21/1999	jpf
Tetrachloroethene	4.9	ug/L	04/21/1999	jpf
Toluene	<1.0	ug/L	04/21/1999	jpf
1,1,1-Trichloroethane	1.4	ug/L	04/21/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
Trichloroethene	3.4	ug/L	04/21/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	04/21/1999	jpf
Vinyl chloride	<2.0	ug/L	04/21/1999	jpf

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S. Howard
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P. O. Box 3030
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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530990

Sample Description: 003I

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	106	%	04/21/1999	jpf
Surrogate: d8-Toluene	96	%	04/21/1999	jpf
Surrogate: BFB	97	%	04/21/1999	jpf

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S. Howard
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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530991

Sample Description: 003-412

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	04/21/1999	jpf
Acrolein (Screen)	<50.0	ug/L	04/21/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	04/21/1999	jpf
Benzene	<1.0	ug/L	04/21/1999	jpf
Bromodichloromethane	<1.0	ug/L	04/21/1999	jpf
Bromoform	<1.0	ug/L	04/21/1999	jpf
Bromomethane	<5.0	ug/L	04/21/1999	jpf
Carbon tetrachloride	1.0	ug/L	04/21/1999	jpf
Chlorobenzene	<1.0	ug/L	04/21/1999	jpf
Chloroethane	<10.0	ug/L	04/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	04/21/1999	jpf
Chloroform	<1.0	ug/L	04/21/1999	jpf
Chloromethane	<10.0	ug/L	04/21/1999	jpf
Dibromochloromethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
cis-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	04/21/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
Ethylbenzene	<1.0	ug/L	04/21/1999	jpf
Methylene chloride	<10.0	ug/L	04/21/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	04/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	04/21/1999	jpf
Tetrachloroethene	9.6	ug/L	04/21/1999	jpf
Toluene	<1.0	ug/L	04/21/1999	jpf
1,1,1-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
Trichloroethene	5.9	ug/L	04/21/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	04/21/1999	jpf
Vinyl chloride	<2.0	ug/L	04/21/1999	jpf

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S. Howard
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P. O. Box 3030
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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530991

Sample Description: 003-412

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	106	%	04/21/1999	jpf
Surrogate: d8-Toluene	100	%	04/21/1999	jpf
Surrogate: BFB	98	%	04/21/1999	jpf

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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530992

Sample Description: 003-413

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	04/21/1999	jpf
Acrolein (Screen)	<50.0	ug/L	04/21/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	04/21/1999	jpf
Benzene	<1.0	ug/L	04/21/1999	jpf
Bromodichloromethane	<1.0	ug/L	04/21/1999	jpf
Bromoform	<1.0	ug/L	04/21/1999	jpf
Bromomethane	<5.0	ug/L	04/21/1999	jpf
Carbon tetrachloride	<1.0	ug/L	04/21/1999	jpf
Chlorobenzene	<1.0	ug/L	04/21/1999	jpf
Chloroethane	<10.0	ug/L	04/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	04/21/1999	jpf
Chloroform	<1.0	ug/L	04/21/1999	jpf
Chloromethane	<10.0	ug/L	04/21/1999	jpf
Dibromochloromethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
cis-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	04/21/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
Ethylbenzene	<1.0	ug/L	04/21/1999	jpf
Methylene chloride	<10.0	ug/L	04/21/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	04/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	04/21/1999	jpf
Tetrachloroethene	1.5	ug/L	04/21/1999	jpf
Toluene	<1.0	ug/L	04/21/1999	jpf
1,1,1-Trichloroethane	1.4	ug/L	04/21/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
Trichloroethene	1.1	ug/L	04/21/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	04/21/1999	jpf
Vinyl chloride	<2.0	ug/L	04/21/1999	jpf

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S. Howard
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P. O. Box 3030
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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530992

Sample Description: 003-413

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	104	%	04/21/1999	jpf
Surrogate: d8-Toluene	95	%	04/21/1999	jpf
Surrogate: BFB	96	%	04/21/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530993

Sample Description: 003-414

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	04/21/1999	jpf
Acrolein (Screen)	<50.0	ug/L	04/21/1999	jpf
Acrylonitrile (Screen)	<50.0	ug/L	04/21/1999	jpf
Benzene	<1.0	ug/L	04/21/1999	jpf
Bromodichloromethane	<1.0	ug/L	04/21/1999	jpf
Bromoform	<1.0	ug/L	04/21/1999	jpf
Bromomethane	<5.0	ug/L	04/21/1999	jpf
Carbon tetrachloride	<1.0	ug/L	04/21/1999	jpf
Chlorobenzene	<1.0	ug/L	04/21/1999	jpf
Chloroethane	<10.0	ug/L	04/21/1999	jpf
2-Chloroethyl vinyl ether	<5.0	ug/L	04/21/1999	jpf
Chloroform	<1.0	ug/L	04/21/1999	jpf
Chloromethane	<10.0	ug/L	04/21/1999	jpf
Dibromochloromethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,2-Dichloroethane	<1.0	ug/L	04/21/1999	jpf
1,1-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
trans-1,2-Dichloroethene	<1.0	ug/L	04/21/1999	jpf
cis-1,2-Dichloroethene	3.2	ug/L	04/21/1999	jpf
1,2-Dichloropropane	<1.0	ug/L	04/21/1999	jpf
cis-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
trans-1,3-Dichloropropene	<1.0	ug/L	04/21/1999	jpf
Ethylbenzene	<1.0	ug/L	04/21/1999	jpf
Methylene chloride	<10.0	ug/L	04/21/1999	jpf
2-Butanone (MEK)	<10.0	ug/L	04/21/1999	jpf
1,1,2,2-Tetrachloroethane	<1.0	ug/L	04/21/1999	jpf
Tetrachloroethene	6.5	ug/L	04/21/1999	jpf
Toluene	<1.0	ug/L	04/21/1999	jpf
1,1,1-Trichloroethane	2.6	ug/L	04/21/1999	jpf
1,1,2-Trichloroethane	<1.0	ug/L	04/21/1999	jpf
Trichloroethene	5.1	ug/L	04/21/1999	jpf
Trichlorofluoromethane	<1.0	ug/L	04/21/1999	jpf
Vinyl chloride	<2.0	ug/L	04/21/1999	jpf

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

04/27/1999

JOB NUMBER: 99.05589

SAMPLE NO.: 530993

Sample Description: 003-414

Date Taken: 04/20/1999

Date Received: 04/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	108	%	04/21/1999	jpf
Surrogate: d8-Toluene	95	%	04/21/1999	jpf
Surrogate: BFB	97	%	04/21/1999	jpf

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525688

Sample Description: 003

Date Taken: 03/17/1999

Date Received: 03/17/1999

BASE NEUTRAL COMPOUNDS - 625

Parameter	Result	Unit	Date Anal.	Analyst
Acenaphthene	<5	ug/L	03/22/1999	jwr
Acenaphthylene	<5	ug/L	03/22/1999	jwr
Anthracene	<5	ug/L	03/22/1999	jwr
zidine	<53	ug/L	03/22/1999	jwr
zo(a)anthracene	<5	ug/L	03/22/1999	jwr
Benzo(b)fluoranthene	<11	ug/L	03/22/1999	jwr
Benzo(k)fluoranthene	<11	ug/L	03/22/1999	jwr
Benzo(a)pyrene	<5	ug/L	03/22/1999	jwr
Benzo(ghi)perylene	<5	ug/L	03/22/1999	jwr
Benzyl butyl phthalate	<5	ug/L	03/22/1999	jwr
bis(2-Chloroethyl)ether	<5	ug/L	03/22/1999	jwr
bis(2-Chloroethoxy)methane	<5	ug/L	03/22/1999	jwr
bis(2-Ethylhexyl)phthalate	<5	ug/L	03/22/1999	jwr
bis(2-Chloroisopropyl)ether	<5	ug/L	03/22/1999	jwr
4-Bromophenyl phenyl ether	<5	ug/L	03/22/1999	jwr
2-Chloronaphthalene	<5	ug/L	03/22/1999	jwr
4-Chlorophenylphenyl ether	<5	ug/L	03/22/1999	jwr
Chrysene	<5	ug/L	03/22/1999	jwr
Dibenzo(a,h)anthracene	<5	ug/L	03/22/1999	jwr
Di-n-butylphthalate	<5	ug/L	03/22/1999	jwr
1,3-Dichlorobenzene	<5	ug/L	03/22/1999	jwr
1,2-Dichlorobenzene	<5	ug/L	03/22/1999	jwr
1,4-Dichlorobenzene	<5	ug/L	03/22/1999	jwr
3,3'-Dichlorobenzidine	<53	ug/L	03/22/1999	jwr
Diethyl phthalate	<5	ug/L	03/22/1999	jwr
1,2-Diphenylhydrazine	<5	ug/L	03/22/1999	jwr
Dimethyl phthalate	<5	ug/L	03/22/1999	jwr
2,4-Dinitrotoluene	<5	ug/L	03/22/1999	jwr
2,6-Dinitrotoluene	<5	ug/L	03/22/1999	jwr
Di-n-octylphthalate	<5	ug/L	03/22/1999	jwr
Fluoranthene	<5	ug/L	03/22/1999	jwr
rene	<5	ug/L	03/22/1999	jwr
achlorobenzene	<5	ug/L	03/22/1999	jwr

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525688

Sample Description: 003

Date Taken: 03/17/1999

Date Received: 03/17/1999

BASE NEUTRAL COMPOUNDS - 625

Parameter	Result	Unit	Date Anal.	Analyst
Hexachloro-1,3-butadiene	<5	ug/L	03/22/1999	jwr
Hexachlorocyclopentadiene	<21	ug/L	03/22/1999	jwr
Hexachloroethane	<5	ug/L	03/22/1999	jwr
eno(1,2,3-cd)pyrene	<5	ug/L	03/22/1999	jwr
phorone	<5	ug/L	03/22/1999	jwr
Naphthalene	<5	ug/L	03/22/1999	jwr
Nitrobenzene	<5	ug/L	03/22/1999	jwr
N-Nitrosodimethylamine	<5	ug/L	03/22/1999	jwr
N-Nitrosodiphenylamine	<5	ug/L	03/22/1999	jwr
N-Nitrosodi-n-propylamine	<5	ug/L	03/22/1999	jwr
Phenanthrene	<5	ug/L	03/22/1999	jwr
Pyrene	<5	ug/L	03/22/1999	jwr
1,2,4-Trichlorobenzene	<5	ug/L	03/22/1999	jwr
Surrogate: d5-Nitrobenzene	93	%	03/22/1999	jwr
Surrogate: 2-Fluorobiphenyl	90	%	03/22/1999	jwr
Surrogate: d14-Terphenyl	68	%	03/22/1999	jwr

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S. Howard
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P. O. Box 3030
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03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525688

Sample Description: 003

Date Taken: 03/17/1999

Date Received: 03/17/1999

ACID COMPOUNDS - 625

Parameter	Result	Unit	Date Anal.	Analyst
4-Chloro-3-methylphenol	<11	ug/L	03/22/1999	jwr
2-Chlorophenol	<11	ug/L	03/22/1999	jwr
2 4-Dichlorophenol	<11	ug/L	03/22/1999	jwr
-Dimethylphenol	<11	ug/L	03/22/1999	jwr
4-Dinitrophenol	<11	ug/L	03/22/1999	jwr
2-Methyl-4,6-dinitrophenol	<11	ug/L	03/22/1999	jwr
2-Nitrophenol	<11	ug/L	03/22/1999	jwr
4-Nitrophenol	<11	ug/L	03/22/1999	jwr
Pentachlorophenol	<11	ug/L	03/22/1999	jwr
Phenol	<11	ug/L	03/22/1999	jwr
2,4,6-Trichlorophenol	<11	ug/L	03/22/1999	jwr
Surrogate: d6-Phenol	82	%	03/22/1999	jwr
Surrogate: 2-Fluorophenol	78	%	03/22/1999	jwr
Surrogate: Tribromophenol	106 note	%	03/22/1999	jwr

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525689

Sample Description: 003E

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	03/22/1999	mrh
Acrolein (Screen)	<50.0	ug/L	03/22/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	03/22/1999	mrh
[illegible]zene	<1.0	ug/L	03/22/1999	mrh
[illegible]omodichloromethane	<1.0	ug/L	03/22/1999	mrh
Bromoform	<1.0	ug/L	03/22/1999	mrh
Bromomethane	<5.0	ug/L	03/22/1999	mrh
Carbon tetrachloride	<1.0	ug/L	03/22/1999	mrh
Chlorobenzene	<1.0	ug/L	03/22/1999	mrh
Chloroethane	<10.0	ug/L	03/22/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	03/22/1999	mrh
Chloroform	<1.0	ug/L	03/22/1999	mrh
Chloromethane	<10.0	ug/L	03/22/1999	mrh
Dibromochloromethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	03/22/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
Ethylbenzene	<1.0	ug/L	03/22/1999	mrh
Methylene chloride	<10.0	ug/L	03/22/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	03/22/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	03/22/1999	mrh
Tetrachloroethene	<1.0	ug/L	03/22/1999	mrh
Toluene	<1.0	ug/L	03/22/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
Trichloroethene	<1.0	ug/L	03/22/1999	mrh
[illegible]chlorofluoromethane	<1.0	ug/L	03/22/1999	mrh
Vinyl chloride	<2.0	ug/L	03/22/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525689

Sample Description: 003E

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	96	%	03/22/1999	mrh
Surrogate: d8-Toluene	97	%	03/22/1999	mrh
Surrogate: BFB	99	%	03/22/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525690

Sample Description: 003I

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

arameter	Result	Unit	Date Anal.	Analyst
cetone	<20.0	ug/L	03/22/1999	mrh
crolein (Screen)	<50.0	ug/L	03/22/1999	mrh
c lonitrile (Screen)	<50.0	ug/L	03/22/1999	mrh
e ne	<1.0	ug/L	03/22/1999	mrh
romodichloromethane	<1.0	ug/L	03/22/1999	mrh
romoform	<1.0	ug/L	03/22/1999	mrh
romomethane	<5.0	ug/L	03/22/1999	mrh
arbon tetrachloride	<1.0	ug/L	03/22/1999	mrh
hlorobenzene	<1.0	ug/L	03/22/1999	mrh
hloroethane	<10.0	ug/L	03/22/1999	mrh
-Chloroethyl vinyl ether	<5.0	ug/L	03/22/1999	mrh
hloroform	<1.0	ug/L	03/22/1999	mrh
hloromethane	<10.0	ug/L	03/22/1999	mrh
ibromochloromethane	<1.0	ug/L	03/22/1999	mrh
,1-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
,2-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
,1-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
rans-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
is-1,2-Dichloroethene	1.4	ug/L	03/22/1999	mrh
,2-Dichloropropane	<1.0	ug/L	03/22/1999	mrh
is-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
rans-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
thylbenzene	<1.0	ug/L	03/22/1999	mrh
ethylene chloride	<10.0	ug/L	03/22/1999	mrh
-Butanone (MEK)	<10.0	ug/L	03/22/1999	mrh
,1,2,2-Tetrachloroethane	<1.0	ug/L	03/22/1999	mrh
etrachloroethene	4.5	ug/L	03/22/1999	mrh
oluene	<1.0	ug/L	03/22/1999	mrh
,1,1-Trichloroethane	1.1	ug/L	03/22/1999	mrh
,1,2-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
r hloroethene	4.4	ug/L	03/22/1999	mrh
i lorofluoromethane	<1.0	ug/L	03/22/1999	mrh
inyl chloride	<2.0	ug/L	03/22/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525690

Sample Description: 003I

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	96	%	03/22/1999	mrh
Surrogate: d8-Toluene	97	%	03/22/1999	mrh
Surrogate: BFB	99	%	03/22/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525691

Sample Description: 003-412

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	03/22/1999	mrh
Acrolein (Screen)	<50.0	ug/L	03/22/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	03/22/1999	mrh
[illegible]zene	<1.0	ug/L	03/22/1999	mrh
[illegible]omodichloromethane	<1.0	ug/L	03/22/1999	mrh
Bromoform	<1.0	ug/L	03/22/1999	mrh
Bromomethane	<5.0	ug/L	03/22/1999	mrh
Carbon tetrachloride	<1.0	ug/L	03/22/1999	mrh
Chlorobenzene	<1.0	ug/L	03/22/1999	mrh
Chloroethane	<10.0	ug/L	03/22/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	03/22/1999	mrh
Chloroform	<1.0	ug/L	03/22/1999	mrh
Chloromethane	<10.0	ug/L	03/22/1999	mrh
Dibromochloromethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	03/22/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
Ethylbenzene	<1.0	ug/L	03/22/1999	mrh
Methylene chloride	<10.0	ug/L	03/22/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	03/22/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	03/22/1999	mrh
Tetrachloroethene	8.6	ug/L	03/22/1999	mrh
Toluene	<1.0	ug/L	03/22/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
Trichloroethene	5.9	ug/L	03/22/1999	mrh
T[illegible]hlorofluoromethane	<1.0	ug/L	03/22/1999	mrh
V[illegible]yl chloride	<2.0	ug/L	03/22/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525691

Sample Description: 003-412

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	97	%	03/22/1999	mrh
Surrogate: d8-Toluene	96	%	03/22/1999	mrh
Surrogate: BFB	100	%	03/22/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
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03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525692

Sample Description: 003-413

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	03/22/1999	mrh
Acrolein (Screen)	<50.0	ug/L	03/22/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	03/22/1999	mrh
enzene	<1.0	ug/L	03/22/1999	mrh
Bromodichloromethane	<1.0	ug/L	03/22/1999	mrh
Bromoform	<1.0	ug/L	03/22/1999	mrh
Bromomethane	<5.0	ug/L	03/22/1999	mrh
Carbon tetrachloride	<1.0	ug/L	03/22/1999	mrh
Chlorobenzene	<1.0	ug/L	03/22/1999	mrh
Chloroethane	<10.0	ug/L	03/22/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	03/22/1999	mrh
Chloroform	<1.0	ug/L	03/22/1999	mrh
Chloromethane	<10.0	ug/L	03/22/1999	mrh
Dibromochloromethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	03/22/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
Ethylbenzene	<1.0	ug/L	03/22/1999	mrh
Methylene chloride	<10.0	ug/L	03/22/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	03/22/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	03/22/1999	mrh
Tetrachloroethene	1.3	ug/L	03/22/1999	mrh
Toluene	<1.0	ug/L	03/22/1999	mrh
1,1,1-Trichloroethane	1.1	ug/L	03/22/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
Trichloroethene	1.3	ug/L	03/22/1999	mrh
richlorofluoromethane	<1.0	ug/L	03/22/1999	mrh
Vinyl chloride	<2.0	ug/L	03/22/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525692

Sample Description: 003-413

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	97	%	03/22/1999	mrh
Surrogate: d8-Toluene	97	%	03/22/1999	mrh
ogate: BFB	99	%	03/22/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525693

Sample Description: 003-414

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	03/22/1999	mrh
Acrolein (Screen)	<50.0	ug/L	03/22/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	03/22/1999	mrh
Benzene	<1.0	ug/L	03/22/1999	mrh
Bromodichloromethane	<1.0	ug/L	03/22/1999	mrh
Bromoform	<1.0	ug/L	03/22/1999	mrh
Bromomethane	<5.0	ug/L	03/22/1999	mrh
Carbon tetrachloride	<1.0	ug/L	03/22/1999	mrh
Chlorobenzene	<1.0	ug/L	03/22/1999	mrh
Chloroethane	<10.0	ug/L	03/22/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	03/22/1999	mrh
Chloroform	<1.0	ug/L	03/22/1999	mrh
Chloromethane	<10.0	ug/L	03/22/1999	mrh
Dibromochloromethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	03/22/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	03/22/1999	mrh
cis-1,2-Dichloroethene	4.3	ug/L	03/22/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	03/22/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	03/22/1999	mrh
Ethylbenzene	<1.0	ug/L	03/22/1999	mrh
Methylene chloride	<10.0	ug/L	03/22/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	03/22/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	03/22/1999	mrh
Tetrachloroethene	6.9	ug/L	03/22/1999	mrh
Toluene	<1.0	ug/L	03/22/1999	mrh
1,1,1-Trichloroethane	2.2	ug/L	03/22/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	03/22/1999	mrh
Trichloroethene	7.7	ug/L	03/22/1999	mrh
Trichlorofluoromethane	<1.0	ug/L	03/22/1999	mrh
Vinyl chloride	<2.0	ug/L	03/22/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

03/25/1999

JOB NUMBER: 99.03686

SAMPLE NO.: 525693

Sample Description: 003-414

Date Taken: 03/17/1999

Date Received: 03/17/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	97	%	03/22/1999	mrh
Surrogate: d8-Toluene	97	%	03/22/1999	mrh
Surrogate: BFB	101	%	03/22/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520109

Sample Description: 003E

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	02/10/1999	mrh
Acrolein (Screen)	<50.0	ug/L	02/10/1999	mrh
[illegible]ylonitrile (Screen)	<50.0	ug/L	02/10/1999	mrh
[illegible]nzene	<1.0	ug/L	02/10/1999	mrh
Bromodichloromethane	<1.0	ug/L	02/10/1999	mrh
Bromoform	<1.0	ug/L	02/10/1999	mrh
Bromomethane	<5.0	ug/L	02/10/1999	mrh
Carbon tetrachloride	<1.0	ug/L	02/10/1999	mrh
Chlorobenzene	<1.0	ug/L	02/10/1999	mrh
Chloroethane	<10.0	ug/L	02/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	02/10/1999	mrh
Chloroform	<1.0	ug/L	02/10/1999	mrh
Chloromethane	<10.0	ug/L	02/10/1999	mrh
Dibromochloromethane	<1.0	ug/L	02/10/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	02/10/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	02/10/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	02/10/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	02/10/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	02/10/1999	mrh
Ethylbenzene	<1.0	ug/L	02/10/1999	mrh
Methylene chloride	<10.0	ug/L	02/10/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	02/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	02/10/1999	mrh
Tetrachloroethene	<1.0	ug/L	02/10/1999	mrh
Toluene	<1.0	ug/L	02/10/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	02/10/1999	mrh
[illegible] 1,2-Trichloroethane	<1.0	ug/L	02/10/1999	mrh
[illegible]chloroethene	<1.0	ug/L	02/10/1999	mrh
[illegible]richlorofluoromethane	<1.0	ug/L	02/10/1999	mrh
Vinyl chloride	<2.0	ug/L	02/10/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520109

Sample Description: 003E

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	103	%	02/10/1999	mrh
Surrogate: d8-Toluene	97	%	02/10/1999	mrh
Surrogate: BFB	92	%	02/10/1999	mrh

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02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520110

Sample Description: 003I

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	02/10/1999	mrh
Acrolein (Screen)	<50.0	ug/L	02/10/1999	mrh
ylonitrile (Screen)	<50.0	ug/L	02/10/1999	mrh
nzene	<1.0	ug/L	02/10/1999	mrh
Bromodichloromethane	<1.0	ug/L	02/10/1999	mrh
Bromoform	<1.0	ug/L	02/10/1999	mrh
Bromomethane	<5.0	ug/L	02/10/1999	mrh
Carbon tetrachloride	<1.0	ug/L	02/10/1999	mrh
Chlorobenzene	<1.0	ug/L	02/10/1999	mrh
Chloroethane	<10.0	ug/L	02/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	02/10/1999	mrh
Chloroform	<1.0	ug/L	02/10/1999	mrh
Chloromethane	<10.0	ug/L	02/10/1999	mrh
Dibromochloromethane	<1.0	ug/L	02/10/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	02/10/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	02/10/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
cis-1,2-Dichloroethene	1.3	ug/L	02/10/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	02/10/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	02/10/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	02/10/1999	mrh
Ethylbenzene	<1.0	ug/L	02/10/1999	mrh
Methylene chloride	<10.0	ug/L	02/10/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	02/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	02/10/1999	mrh
Tetrachloroethene	4.6	ug/L	02/10/1999	mrh
Toluene	<1.0	ug/L	02/10/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	02/10/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	02/10/1999	mrh
chloroethene	4.1	ug/L	02/10/1999	mrh
chlorofluoromethane	<1.0	ug/L	02/10/1999	mrh
Vinyl chloride	<2.0	ug/L	02/10/1999	mrh

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Miamisburg, OH 45343-3000

02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520110

Sample Description: 003I

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	100	%	02/10/1999	mrh
Surrogate: d8-Toluene	98	%	02/10/1999	mrh
Surrogate: BFB	93	%	02/10/1999	mrh

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02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520111

Sample Description: 003-412

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	02/10/1999	mrh
Acrolein (Screen)	<50.0	ug/L	02/10/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	02/10/1999	mrh
Benzene	<1.0	ug/L	02/10/1999	mrh
Bromodichloromethane	<1.0	ug/L	02/10/1999	mrh
Bromoform	<1.0	ug/L	02/10/1999	mrh
Bromomethane	<5.0	ug/L	02/10/1999	mrh
Carbon tetrachloride	<1.0	ug/L	02/10/1999	mrh
Chlorobenzene	<1.0	ug/L	02/10/1999	mrh
Chloroethane	<10.0	ug/L	02/10/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	02/10/1999	mrh
Chloroform	<1.0	ug/L	02/10/1999	mrh
Chloromethane	<10.0	ug/L	02/10/1999	mrh
Dibromochloromethane	<1.0	ug/L	02/10/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	02/10/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	02/10/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	02/10/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	02/10/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	02/10/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	02/10/1999	mrh
Ethylbenzene	<1.0	ug/L	02/10/1999	mrh
Methylene chloride	<10.0	ug/L	02/10/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	02/10/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	02/10/1999	mrh
Tetrachloroethene	8.2	ug/L	02/10/1999	mrh
Toluene	<1.0	ug/L	02/10/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	02/10/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	02/10/1999	mrh
Trichloroethene	6.3	ug/L	02/10/1999	mrh
Trichlorofluoromethane	<1.0	ug/L	02/10/1999	mrh
Vinyl chloride	<2.0	ug/L	02/10/1999	mrh

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02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520111

Sample Description: 003-412

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	102	%	02/10/1999	mrh
Surrogate: d8-Toluene	96	%	02/10/1999	mrh
Surrogate: BFB	93	%	02/10/1999	mrh

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02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520112

Sample Description: 003-413

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	02/11/1999	mrh
Acrolein (Screen)	<50.0	ug/L	02/11/1999	mrh
[illegible]ylonitrile (Screen)	<50.0	ug/L	02/11/1999	mrh
[illegible]nzene	<1.0	ug/L	02/11/1999	mrh
Bromodichloromethane	<1.0	ug/L	02/11/1999	mrh
Bromoform	<1.0	ug/L	02/11/1999	mrh
Bromomethane	<5.0	ug/L	02/11/1999	mrh
Carbon tetrachloride	<1.0	ug/L	02/11/1999	mrh
Chlorobenzene	<1.0	ug/L	02/11/1999	mrh
Chloroethane	<10.0	ug/L	02/11/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	02/11/1999	mrh
Chloroform	<1.0	ug/L	02/11/1999	mrh
Chloromethane	<10.0	ug/L	02/11/1999	mrh
Dibromochloromethane	<1.0	ug/L	02/11/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	02/11/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	02/11/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	02/11/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	02/11/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	02/11/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	02/11/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	02/11/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	02/11/1999	mrh
Ethylbenzene	<1.0	ug/L	02/11/1999	mrh
Methylene chloride	<10.0	ug/L	02/11/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	02/11/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	02/11/1999	mrh
Tetrachloroethene	1.3	ug/L	02/11/1999	mrh
Toluene	<1.0	ug/L	02/11/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	02/11/1999	mrh
[illegible] 1,2-Trichloroethane	<1.0	ug/L	02/11/1999	mrh
[illegible]chloroethene	1.5	ug/L	02/11/1999	mrh
[illegible]ichlorofluoromethane	<1.0	ug/L	02/11/1999	mrh
Vinyl chloride	<2.0	ug/L	02/11/1999	mrh

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P. O. Box 3030
Miamisburg, OH 45343-3000

02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520112

Sample Description: 003-413

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	18	%	02/11/1999	mrh
Surrogate: d8-Toluene	99	%	02/11/1999	mrh
Surrogate: BFB	97	%	02/11/1999	mrh

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02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520113

Sample Description: 003-414

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	02/11/1999	mrh
Acrolein (Screen)	<50.0	ug/L	02/11/1999	mrh
[illegible]ylonitrile (Screen)	<50.0	ug/L	02/11/1999	mrh
[illegible]nzene	<1.0	ug/L	02/11/1999	mrh
Bromodichloromethane	<1.0	ug/L	02/11/1999	mrh
Bromoform	<1.0	ug/L	02/11/1999	mrh
Bromomethane	<5.0	ug/L	02/11/1999	mrh
Carbon tetrachloride	<1.0	ug/L	02/11/1999	mrh
Chlorobenzene	<1.0	ug/L	02/11/1999	mrh
Chloroethane	<10.0	ug/L	02/11/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	02/11/1999	mrh
Chloroform	<1.0	ug/L	02/11/1999	mrh
Chloromethane	<10.0	ug/L	02/11/1999	mrh
Dibromochloromethane	<1.0	ug/L	02/11/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	02/11/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	02/11/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	02/11/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	02/11/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	02/11/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	02/11/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	02/11/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	02/11/1999	mrh
Ethylbenzene	<1.0	ug/L	02/11/1999	mrh
Methylene chloride	<10.0	ug/L	02/11/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	02/11/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	02/11/1999	mrh
Tetrachloroethene	6.2	ug/L	02/11/1999	mrh
Toluene	<1.0	ug/L	02/11/1999	mrh
1,1,1-Trichloroethane	1.9	ug/L	02/11/1999	mrh
[illegible]1,2-Trichloroethane	<1.0	ug/L	02/11/1999	mrh
[illegible]chloroethene	6.3	ug/L	02/11/1999	mrh
[illegible]richlorofluoromethane	<1.0	ug/L	02/11/1999	mrh
Vinyl chloride	<2.0	ug/L	02/11/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520113

Sample Description: 003-414

Date Taken: 02/09/1999

Date Received: 02/09/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	109	%	02/11/1999	mrh
Surrogate: d8-Toluene	98	%	02/11/1999	mrh
rrogate: BFB	96	%	02/11/1999	mrh

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S. Howard
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02/12/1999

JOB NUMBER: 99.01654

SAMPLE NO.: 520114

Sample Description: 003

Date Taken: 02/08/1999

Date Received: 02/09/1999

Parameter	Result	Unit	Date Anal.	Analyst
Mercury, CVAA	<0.0002	mg/L	02/11/1999	daa

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S. Howard
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P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516843

Sample Description: 003E

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	01/23/1999	mrh
Acrolein (Screen)	<50.0	ug/L	01/23/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	01/23/1999	mrh
Benzene	<1.0	ug/L	01/23/1999	mrh
Bromodichloromethane	<1.0	ug/L	01/23/1999	mrh
Bromoform	<1.0	ug/L	01/23/1999	mrh
Bromomethane	<5.0	ug/L	01/23/1999	mrh
Carbon tetrachloride	<1.0	ug/L	01/23/1999	mrh
Chlorobenzene	<1.0	ug/L	01/23/1999	mrh
Chloroethane	<10.0	ug/L	01/23/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	01/23/1999	mrh
Chloroform	<1.0	ug/L	01/23/1999	mrh
Chloromethane	<10.0	ug/L	01/23/1999	mrh
Dibromochloromethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	01/23/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
Ethylbenzene	<1.0	ug/L	01/23/1999	mrh
Methylene chloride	<10.0	ug/L	01/23/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	01/23/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	01/23/1999	mrh
Tetrachloroethene	<1.0	ug/L	01/23/1999	mrh
Toluene	<1.0	ug/L	01/23/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
Trichloroethene	<1.0	ug/L	01/23/1999	mrh
Trichlorofluoromethane	<1.0	ug/L	01/23/1999	mrh
Vinyl chloride	<2.0	ug/L	01/23/1999	mrh

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Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516843

Sample Description: 003E

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	103	%	01/23/1999	mrh
Surrogate: d8-Toluene	98	%	01/23/1999	mrh
Surrogate: BFB	86	%	01/23/1999	mrh

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S. Howard
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P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516844

Sample Description: 003I

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	01/23/1999	mrh
Acrolein (Screen)	<50.0	ug/L	01/23/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	01/23/1999	mrh
nzene	<1.0	ug/L	01/23/1999	mrh
omodichloromethane	<1.0	ug/L	01/23/1999	mrh
Bromoform	<1.0	ug/L	01/23/1999	mrh
Bromomethane	<5.0	ug/L	01/23/1999	mrh
Carbon tetrachloride	<1.0	ug/L	01/23/1999	mrh
Chlorobenzene	<1.0	ug/L	01/23/1999	mrh
Chloroethane	<10.0	ug/L	01/23/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	01/23/1999	mrh
Chloroform	<1.0	ug/L	01/23/1999	mrh
Chloromethane	<10.0	ug/L	01/23/1999	mrh
Dibromochloromethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
cis-1,2-Dichloroethene	1.3	ug/L	01/23/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	01/23/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
Ethylbenzene	<1.0	ug/L	01/23/1999	mrh
Methylene chloride	<10.0	ug/L	01/23/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	01/23/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	01/23/1999	mrh
Tetrachloroethene	3.0	ug/L	01/23/1999	mrh
Toluene	<1.0	ug/L	01/23/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
Trichloroethene	3.2	ug/L	01/23/1999	mrh
chlorofluoromethane	<1.0	ug/L	01/23/1999	mrh
yl chloride	<2.0	ug/L	01/23/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516844

Sample Description: 003I

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	106	%	01/23/1999	mrh
Surrogate: d8-Toluene	98	%	01/23/1999	mrh
Surrogate: BFB	90	%	01/23/1999	mrh

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P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516845

Sample Description: 003-412

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	01/23/1999	mrh
Acrolein (Screen)	<50.0	ug/L	01/23/1999	mrh
Acrylonitrile (Screen)	<50.0	ug/L	01/23/1999	mrh
enzene	<1.0	ug/L	01/23/1999	mrh
Bromodichloromethane	<1.0	ug/L	01/23/1999	mrh
Bromoform	<1.0	ug/L	01/23/1999	mrh
Bromomethane	<5.0	ug/L	01/23/1999	mrh
Carbon tetrachloride	1.1	ug/L	01/23/1999	mrh
Chlorobenzene	<1.0	ug/L	01/23/1999	mrh
Chloroethane	<10.0	ug/L	01/23/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	01/23/1999	mrh
Chloroform	<1.0	ug/L	01/23/1999	mrh
Chloromethane	<10.0	ug/L	01/23/1999	mrh
Dibromochloromethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	01/23/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
Ethylbenzene	<1.0	ug/L	01/23/1999	mrh
Methylene chloride	<10.0	ug/L	01/23/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	01/23/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	01/23/1999	mrh
Tetrachloroethene	7.3	ug/L	01/23/1999	mrh
Toluene	<1.0	ug/L	01/23/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1,2-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
richloroethene	5.6	ug/L	01/23/1999	mrh
richlorofluoromethane	<1.0	ug/L	01/23/1999	mrh
Vinyl chloride	<2.0	ug/L	01/23/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516845

Sample Description: 003-412

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	103	%	01/23/1999	mrh
Surrogate: d8-Toluene	98	%	01/23/1999	mrh
Surrogate: BFB	90	%	01/23/1999	mrh

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ANALYTICAL REPORT

S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516846

Sample Description: 003-413

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	01/23/1999	mrh
Acrolein (Screen)	<50.0	ug/L	01/23/1999	mrh
ylonitrile (Screen)	<50.0	ug/L	01/23/1999	mrh
nzene	<1.0	ug/L	01/23/1999	mrh
Bromodichloromethane	<1.0	ug/L	01/23/1999	mrh
Bromoform	<1.0	ug/L	01/23/1999	mrh
Bromomethane	<5.0	ug/L	01/23/1999	mrh
Carbon tetrachloride	<1.0	ug/L	01/23/1999	mrh
Chlorobenzene	<1.0	ug/L	01/23/1999	mrh
Chloroethane	<10.0	ug/L	01/23/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	01/23/1999	mrh
Chloroform	<1.0	ug/L	01/23/1999	mrh
Chloromethane	<10.0	ug/L	01/23/1999	mrh
Dibromochloromethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
cis-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	01/23/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
Ethylbenzene	<1.0	ug/L	01/23/1999	mrh
Methylene chloride	<10.0	ug/L	01/23/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	01/23/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	01/23/1999	mrh
Tetrachloroethene	<1.0	ug/L	01/23/1999	mrh
Toluene	<1.0	ug/L	01/23/1999	mrh
1,1,1-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
1,2-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
ichloroethene	1.1	ug/L	01/23/1999	mrh
richlorofluoromethane	<1.0	ug/L	01/23/1999	mrh
Vinyl chloride	<2.0	ug/L	01/23/1999	mrh

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BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516846

Sample Description: 003-413

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	105	%	01/23/1999	mrh
Surrogate: d8-Toluene	98	%	01/23/1999	mrh
Surrogate: BFB	88	%	01/23/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516847

Sample Description: 003-414

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Acetone	<20.0	ug/L	01/23/1999	mrh
Acrolein (Screen)	<50.0	ug/L	01/23/1999	mrh
ylonitrile (Screen)	<50.0	ug/L	01/23/1999	mrh
nzene	<1.0	ug/L	01/23/1999	mrh
Bromodichloromethane	<1.0	ug/L	01/23/1999	mrh
Bromoform	<1.0	ug/L	01/23/1999	mrh
Bromomethane	<5.0	ug/L	01/23/1999	mrh
Carbon tetrachloride	<1.0	ug/L	01/23/1999	mrh
Chlorobenzene	<1.0	ug/L	01/23/1999	mrh
Chloroethane	<10.0	ug/L	01/23/1999	mrh
2-Chloroethyl vinyl ether	<5.0	ug/L	01/23/1999	mrh
Chloroform	<1.0	ug/L	01/23/1999	mrh
Chloromethane	<10.0	ug/L	01/23/1999	mrh
Dibromochloromethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,2-Dichloroethane	<1.0	ug/L	01/23/1999	mrh
1,1-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
trans-1,2-Dichloroethene	<1.0	ug/L	01/23/1999	mrh
cis-1,2-Dichloroethene	4.4	ug/L	01/23/1999	mrh
1,2-Dichloropropane	<1.0	ug/L	01/23/1999	mrh
cis-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
trans-1,3-Dichloropropene	<1.0	ug/L	01/23/1999	mrh
Ethylbenzene	<1.0	ug/L	01/23/1999	mrh
Methylene chloride	<10.0	ug/L	01/23/1999	mrh
2-Butanone (MEK)	<10.0	ug/L	01/23/1999	mrh
1,1,2,2-Tetrachloroethane	<1.0	ug/L	01/23/1999	mrh
Tetrachloroethene	5.2	ug/L	01/23/1999	mrh
Toluene	<1.0	ug/L	01/23/1999	mrh
1,1,1-Trichloroethane	1.8	ug/L	01/23/1999	mrh
1,2-Trichloroethane	<1.0	ug/L	01/23/1999	mrh
ichloroethene	5.3	ug/L	01/23/1999	mrh
rrichlorofluoromethane	<1.0	ug/L	01/23/1999	mrh
Vinyl chloride	<2.0	ug/L	01/23/1999	mrh

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S. Howard
BABCOCK & WILCOX OF OHIO
P. O. Box 3030
Miamisburg, OH 45343-3000

01/26/1999

JOB NUMBER: 99.00504

SAMPLE NO.: 516847

Sample Description: 003-414

Date Taken: 01/20/1999

Date Received: 01/20/1999

VOLATILE COMPOUNDS - 624

Parameter	Result	Unit	Date Anal.	Analyst
Surrogate: d4-1,2-DCE	103	%	01/23/1999	mrh
Surrogate: d8-Toluene	100	%	01/23/1999	mrh
Surrogate: BFB	90	%	01/23/1999	mrh

3601 SOUTH DIXIE DRIVE / DAYTON, OH 45439 / 937-294-6856 / FAX: 937-294-7816

Babcock & Wilcox of Ohio, Inc.

FACSIMILE TRANSMISSION ROUTING SHEET

FROM: D. Hess

PHONE: X3203

TO: Mark Spivey

LOCATION:

PHONE: FAX PHONE NUMBER: Y 4455

SPECIAL INSTRUCTIONS:

NUMBER OF PAGES (excluding cover sheet: 10

DATE: 3/8/99 TIME: 1010

OPERATOR:

ML-8692 (10-97)

Attachment E

P&T Calculated VOC Mass Removal

Pump and
Treat
1-31-00

DCE (pounds)

$a := 0.468268190$ $c := 1.2808495 \cdot 10^{-7}$ $f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091$ $d := 28.68200060$

$$w := \int_0^{526673967.6} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.461$

TCE (pounds)

$a := -3.57499642$ $c := 5868087.7$ $f := 0.158075017$

$b := 51.48726064$ $d := 6750551.2$ $h := 0.359109016$

$$y := \int_0^{526673967.6} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.655$

PCE (pounds)

$a := 21.01220259$ $c := 1.1075411 \cdot 10^8$

$b := 3172252.5$ $d := 0.260457899$

$$z := \int_0^{526673967.6} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d} \right)} - 1 \right] \right]^d} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 8.319$

$w + y + z = 21.436$

Pump and
Treat
1-12-00

DCE (pounds)

$a := 0.468268190$ $c := 1.2808495 \cdot 10^{-7}$ $f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091$ $d := 28.68200060$

$$w := \int_0^{517225295.3} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.45$

TCE (pounds)

$a := -3.57499642$ $c := 5868087.7$ $f := 0.158075017$

$b := 51.48726064$ $d := 6750551.2$ $h := 0.359109016$

$$y := \int_0^{517225295.3} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.6$

PCE (pounds)

$a := 21.01220259$ $c := 1.1075411 \cdot 10^{8}$

$b := 3172252.5$ $d := 0.260457899$

$$z := \int_0^{517225295.3} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d}\right)} - 1 \right] \right]^d} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 8.237$

$w + y + z = 21.287$

Pump and
Treat
12-14-99

DCE (pounds)

$a := 0.468268190 \qquad c := 1.2808495 \cdot 10^{-7} \qquad f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091 \qquad d := 28.68200060$

$$w := \int_0^{504361576} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.434$

TCE (pounds)

$a := -3.57499642 \qquad c := 5868087.7 \qquad f := 0.158075017$

$b := 51.48726064 \qquad d := 6750551.2 \qquad h := 0.359109016$

$$y := \int_0^{504361576} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.522$

PCE (pounds)

$a := 21.01220259 \qquad c := 1.1075411 \cdot 10^{8}$

$b := 3172252.5 \qquad d := 0.260457899$

$$z := \int_0^{504361576} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d} \right) - 1} \right] \right]^d} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 8.125$

$w + y + z = 21.081$

Pump and
Treat
11-10-99

DCE (pounds)

$a := 0.468268190$ $c := 1.2808495 \cdot 10^{-7}$ $f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091$ $d := 28.68200060$

$$w := \int_{0}^{490451379} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.416$

TCE (pounds)

$a := -3.57499642$ $c := 5868087.7$ $f := 0.158075017$

$b := 51.48726064$ $d := 6750551.2$ $h := 0.359109016$

$$y := \int_{0}^{490451379} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.437$

PCE (pounds)

$a := 21.01220259$ $c := 1.1075411 \cdot 10^{8}$

$b := 3172252.5$ $d := 0.260457899$

$$z := \int_{0}^{490451379} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d}\right)} - 1 \right] \right]^{d}} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 8.001$

$w + y + z = 20.855$

Pump and
Treat
10-27-99

DCE (pounds)

$a := 0.468268190$ $c := 1.2808495 \cdot 10^{-7}$ $f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091$ $d := 28.68200060$

$$w := \int_0^{484013434.3} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.408$

TCE (pounds)

$a := -3.57499642$ $c := 5868087.7$ $f := 0.158075017$

$b := 51.48726064$ $d := 6750551.2$ $h := 0.359109016$

$$y := \int_0^{484013434.3} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.397$

PCE (pounds)

$a := 21.01220259$ $c := 1.1075411 \cdot 10^8$

$b := 3172252.5$ $d := 0.260457899$

$$z := \int_0^{484013434.3} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d} \right)} - 1 \right] \right]^d} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 7.944$

$w + y + z = 20.749$

Pump and
Treat
9-30-99

DCE (pounds)

$a := 0.468268190 \qquad c := 1.2808495 \cdot 10^{-7} \qquad f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091 \qquad d := 28.68200060$

$$w := \int_{0}^{470258117.7} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.39$

TCE (pounds)

$a := -3.57499642 \qquad c := 5868087.7 \qquad f := 0.158075017$

$b := 51.48726064 \qquad d := 6750551.2 \qquad h := 0.359109016$

$$y := \int_{0}^{470258117.7} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.31$

PCE (pounds)

$a := 21.01220259 \qquad c := 1.1075411 \cdot 10^{8}$

$b := 3172252.5 \qquad d := 0.260457899$

$$z := \int_{0}^{470258117.7} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d} \right) - 1} \right] \right]^d} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 7.819$

$w + y + z = 20.519$

Pump and Treat

DCE (pounds)

$$a := \int_0^{439631193.3} e^{3.926737225 + -9.8501929 \cdot 10^{-6} \cdot x^{0.5} \cdot \ln(x)} dx \cdot 2.205 \cdot 10^{-9}$$

$a = 6.026$

TCE (pounds)

$$b := \int_0^{439631193.3} 4.347097251 + 47.38747646 \cdot \exp\left(\frac{-x}{3.99806568 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$b = 8.392$

PCE (pounds)

$$c := \int_0^{439631193.3} 4.253306619 + 17.48840310 \cdot \exp\left(\frac{-x}{6.9402585 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$c = 6.795$

$a + b + c = 21.212$

Pump and
Treat
7-13-99

DCE (pounds)

$a := 0.468268190$ $c := 1.2808495 \cdot 10^{-7}$ $f := 1.1222193 \cdot 10^{-8}$

$b := 17.26169091$ $d := 28.68200060$

$$w := \int_0^{433161931.8} a + b \cdot e^{(-c \cdot x)} + d \cdot e^{(-f \cdot x)} dx \cdot 2.205 \cdot 10^{-9}$$

$w = 6.336$

TCE (pounds)

$a := -3.57499642$ $c := 5868087.7$ $f := 0.158075017$

$b := 51.48726064$ $d := 6750551.2$ $h := 0.359109016$

$$y := \int_0^{433161931.8} a + b \cdot \left[1 + \left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right]^2 \right]^{-f} \cdot \frac{e^{\left[-h \cdot \left[\operatorname{atan}\left[\frac{\left[x - d \cdot \frac{h}{(2 \cdot f) - c} \right]}{d} \right] + \operatorname{atan}\left[\frac{h}{(2 \cdot f)} \right] \right] \right]}}{\left[1 + \frac{h^2}{(4 \cdot f^2)} \right]^{-f}} dx \cdot 2.205 \cdot 10^{-9}$$

$y = 6.067$

PCE (pounds)

$a := 21.01220259$ $c := 1.1075411 \cdot 10^8$

$b := 3172252.5$ $d := 0.260457899$

$$z := \int_0^{433161931.8} \frac{a}{\left[1 + 4 \cdot \left[\frac{(x - b)}{c} \right]^2 \cdot \left[2^{\left(\frac{1}{d}\right)} - 1 \right] \right]^d} dx \cdot 2.205 \cdot 10^{-9}$$

$z = 7.473$

$w + y + z = 19.876$

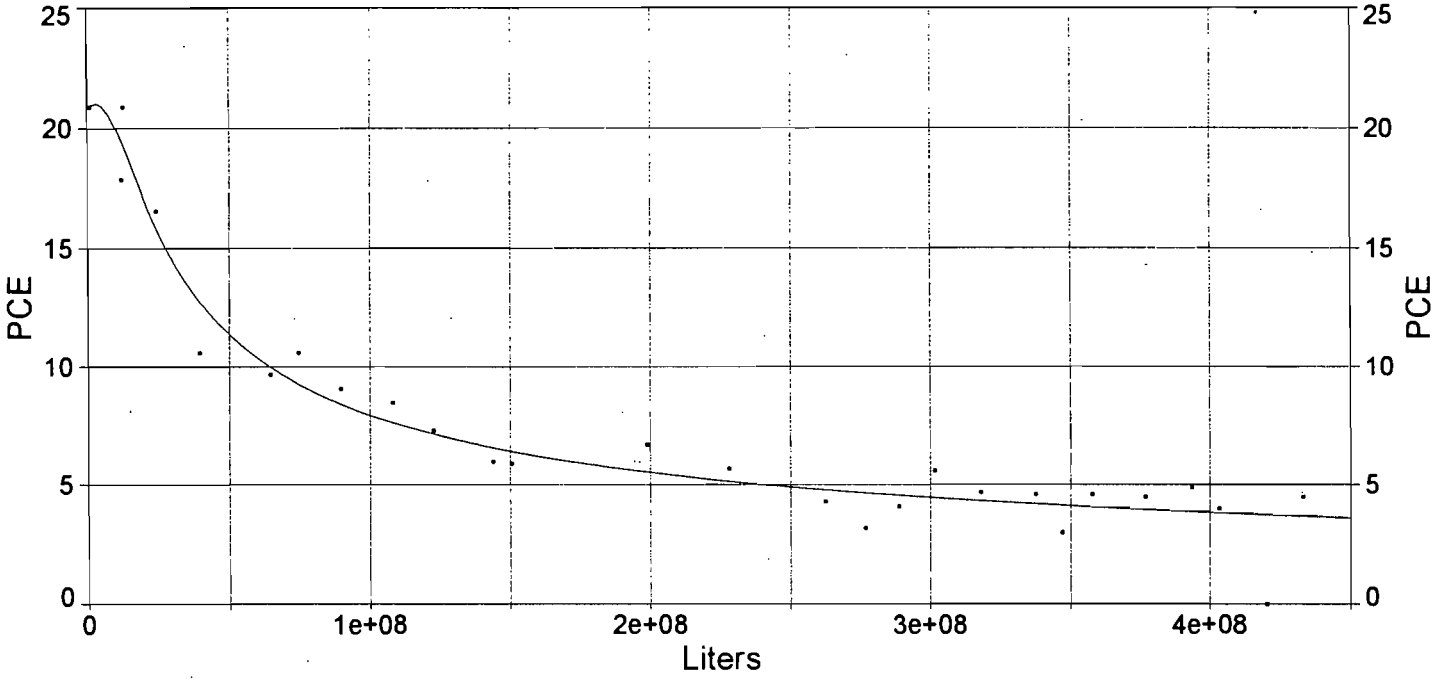
P&T Comp.

Rank 447 Eqn 8044 [Pearson VII_] y=a/(1+4*((x-b)/c)^2*(2^(1/d)-1))^d

r^2=0.95080957 DF Adj r^2=0.94186585 FitStdErr=1.280963 Fstat=148.19019

a=21.012203 b=3172252.5

c=1.1075411e+08 d=0.2604579



Rank 447 Eqn 8044 [Pearson VII_] y=a/(1+4*((x-b)/c)^2*(2^(1/d)-1))^d

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9508095652	0.9418658498	1.2809629839	148.19019247

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	21.01220259	1.083167409	19.39885046	18.77150009	23.25290509
b	3.17225e+06	4.64458e+06	0.683001393	-6.4358e+06	1.27803e+07
c	1.10754e+08	2.1675e+07	5.109763554	6.5916e+07	1.55592e+08
d	0.260457899	0.036188084	7.197338644	0.185597142	0.335318655

Date	Time	File Source
Aug 10, 1999	2:15:44 PM	C:\TCWIN4\CLIPBRD.WK1

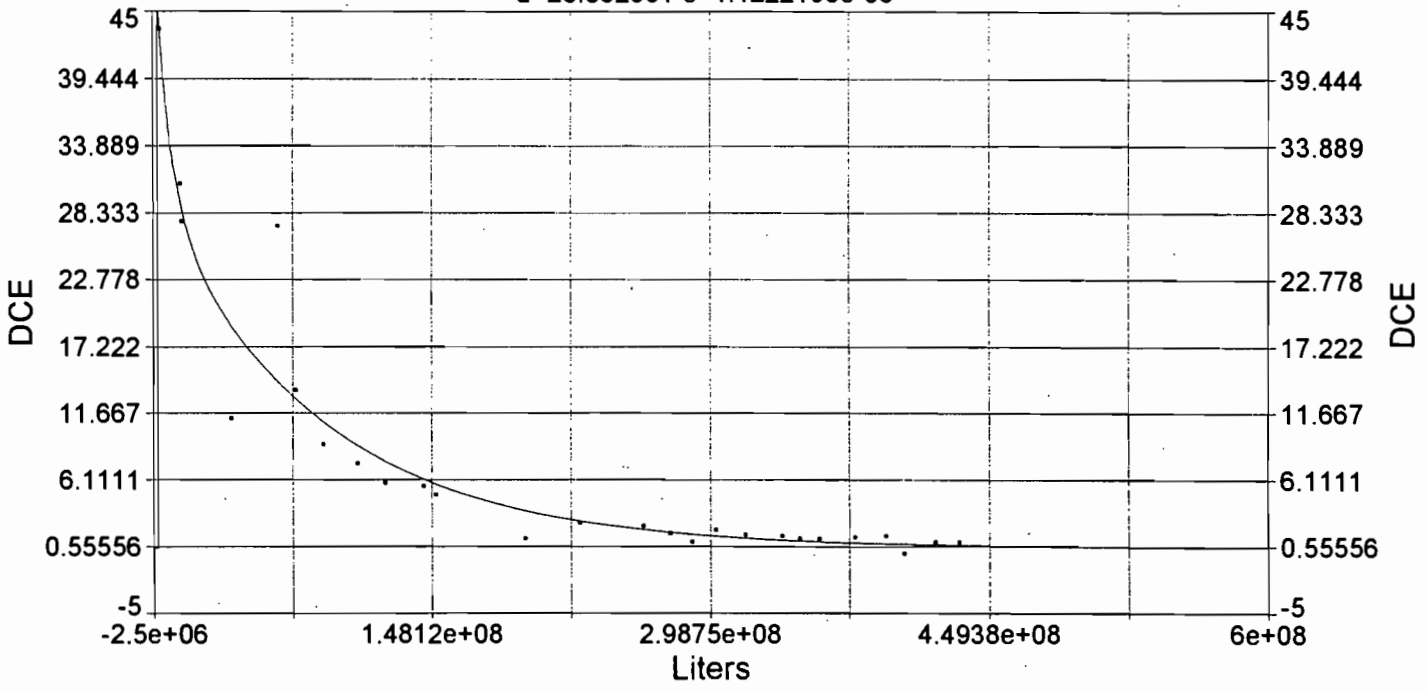
P&T Comp.

Rank 136 Eqn 8145 [Decay1+1] y=a+bexp(-cx)+dexp(-ex)

r^2=0.92377861 DF Adj r^2=0.90472327 FitStdErr=3.4415623 Fstat=63.628307

a=0.46826819 b=17.261691 c=1.2808495e-07

d=28.682001 e=1.1222193e-08



Rank 136 Eqn 8145 [Decay1+1] y=a+bexp(-cx)+dexp(-ex)

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9237786142	0.9047232678	3.4415622971	63.628306889

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	0.468268190	1.445784444	0.323885204	-2.53840516	3.474941536
b	17.26169091	8.755298190	1.971570875	-0.94594842	35.46933024
c	1.28085e-07	1.33449e-07	0.959801290	-1.4944e-07	4.05608e-07
d	28.68200060	7.986764891	3.591191300	12.07261375	45.29138744
e	1.12222e-08	4.36133e-09	2.573115336	2.15232e-09	2.02921e-08

Date	Time	File Source
Aug 10, 1999	2:58:57 PM	C:\TCWIN4\CLIPBRD.WK1

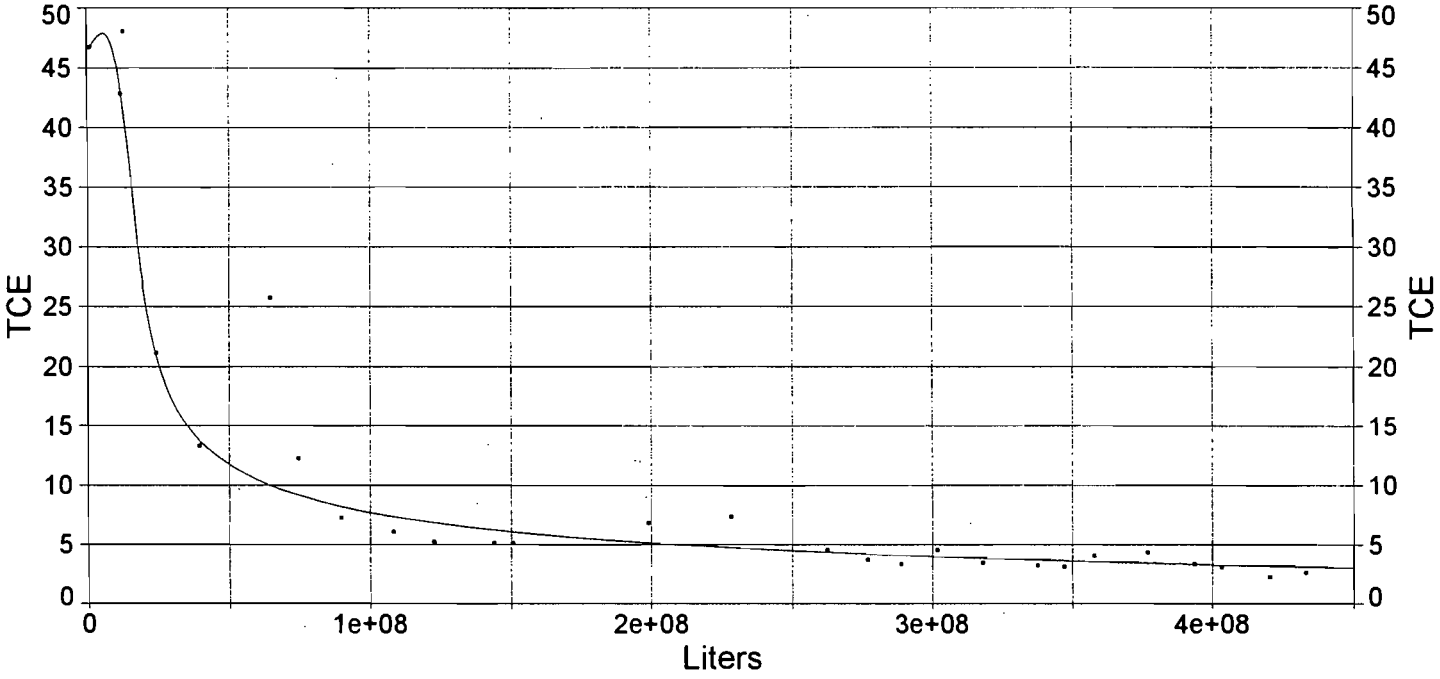
P&T Comp.

Rank 117 Eqn 8187 [Pearson IV] $y=a+b(1+n^2)^{-e}\exp(-f(\mathrm{atan}(n)+\mathrm{atan}(f/(2e))))/(1+f^2/(4e^2))^{-e}$ $n=(x-df/(2e)-c)/d$

r^2=0.99043796 DF Adj r^2=0.98725061 FitStdErr=1.2704857 Fstat=393.60466

a=-3.5749964 b=51.487261 c=5868087.7

d=6750551.2 e=0.15807502 f=0.35910902



Rank 117 Eqn 8187 [Pearson IV] $y=a+b(1+n^2)^{-e}\exp(-f(\mathrm{atan}(n)+\mathrm{atan}(f/(2e))))/(1+f^2/(4e^2))^{-e}$ $n=(x-df/(2e)-c)/d$

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9904379582	0.9872506109	1.2704856789	393.60466125

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	-3.57499642	14.76562744	-0.24211612	-34.4798098	27.32981700
b	51.48726064	9.082124915	5.669076469	32.47815472	70.49636655
c	5.86809e+06	5.69133e+06	1.031057043	-6.044e+06	1.77802e+07
d	6.75055e+06	2.07262e+06	3.257007139	2.4125e+06	1.10886e+07
e	0.158075017	0.274245442	0.576399795	-0.41592729	0.732077324
f	0.359109016	0.096293073	3.729333856	0.157565299	0.560652734

Date	Time	File Source
Aug 10, 1999	2:31:03 PM	C:\TCWIN4\CLIPBRD.WK1

Pump and Treat

DCE (pounds)

$$a := \int_0^{412510881.6} e^{3.926737225 + -9.8501929 \cdot 10^{-6} \cdot x^{0.5} \cdot \ln(x)} dx \cdot 2.205 \cdot 10^{-9}$$

$a = 5.973$

TCE (pounds)

$$b := \int_0^{412510881.6} 4.347097251 + 47.38747646 \cdot \exp\left(\frac{-x}{3.99806568 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$b = 8.131$

PCE (pounds)

$$c := \int_0^{412510881.6} 4.253306619 + 17.48840310 \cdot \exp\left(\frac{-x}{6.9402585 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$c = 6.538$

$a + b + c = 20.642$

Pump and Treat as of 03/17/99

DCE (pounds)

$$a := \int_{0}^{403269745} e^{3.926737225 + -9.8501929 \cdot 10^{-6} \cdot x^{0.5} \cdot \ln(x)} dx \cdot 2.205 \cdot 10^{-9}$$

$a = 5.953$

TCE (pounds)

$$b := \int_{0}^{403269745} 4.347097251 + 47.38747646 \cdot \exp\left(\frac{-x}{3.99806568 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$b = 8.043$

PCE (pounds)

$$c := \int_{0}^{403269745} 4.253306619 + 17.48840310 \cdot \exp\left(\frac{-x}{6.9402585 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$c = 6.45$

$a + b + c = 20.446$

Pump and Treat as of 03/17/99

DCE (pounds)

$$a := \int_{0}^{376952993} e^{3.926737225 + -9.8501929 \cdot 10^{-6} \cdot x^{0.5} \cdot \ln(x)} dx \cdot 2.205 \cdot 10^{-9}$$

$a = 5.89$

TCE (pounds)

$$b := \int_{0}^{376952993} 4.347097251 + 47.38747646 \cdot \exp\left(\frac{-x}{3.99806568 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$b = 7.79$

PCE (pounds)

$$c := \int_{0}^{376952993} 4.253306619 + 17.48840310 \cdot \exp\left(\frac{-x}{6.9402585 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$c = 6.2$

$a + b + c = 19.88$

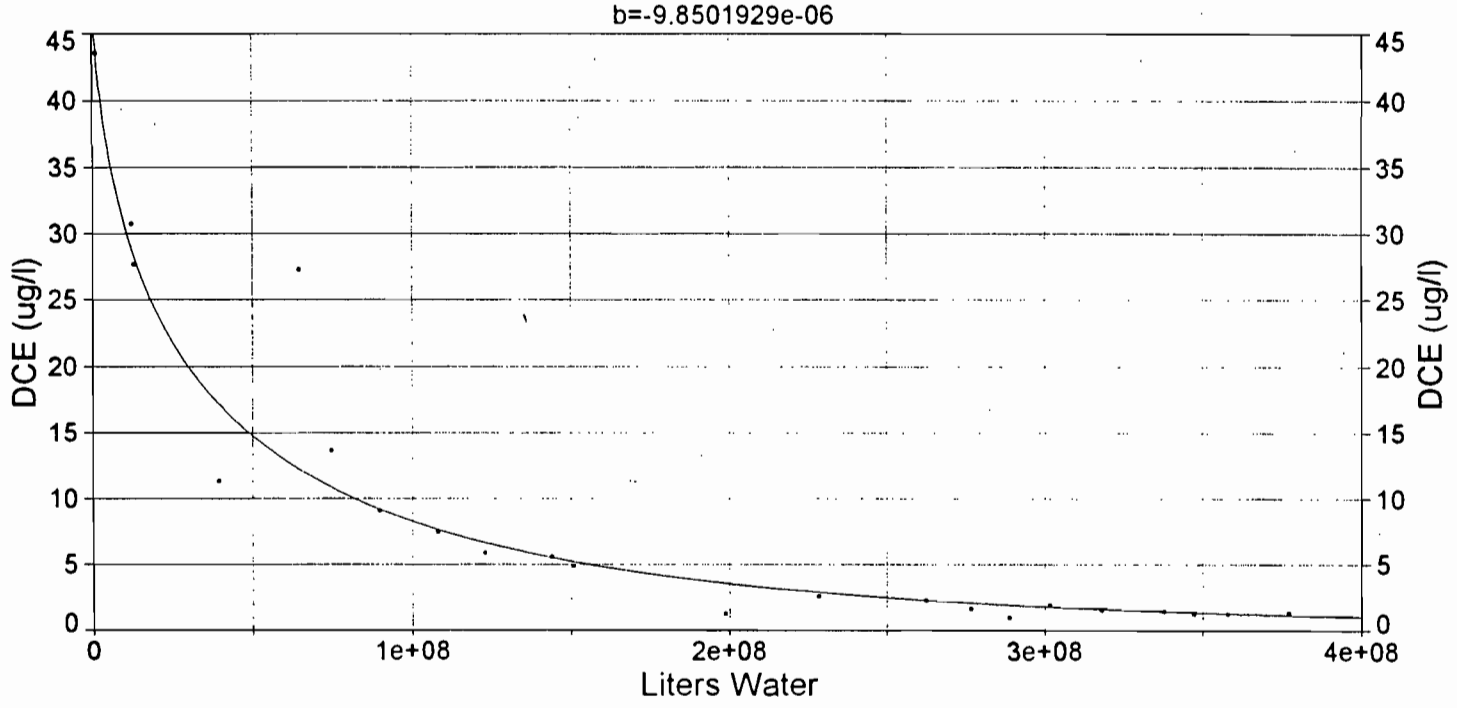
Pump and Treat

Rank 1 Eqn 30 $\ln y = a + bx^{0.5} \ln x$

r^2=0.98020097 DF Adj r^2=0.97800108 FitStdErr=1.6716994 Fstat=940.64307

a=3.9267372

b=-9.8501929e-06



Rank 1 Eqn 30 $\ln y = a + bx^{0.5} \ln x$

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9802009719	0.9780010799	1.6716993520	940.64306634

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	3.926737225	0.036273042	108.2549751	3.850816876	4.002657573
b	-9.8502e-06	4.74232e-07	-20.7708517	-1.0843e-05	-8.8576e-06

Date	Time	File Source
Apr 27, 1999	6:17:20 AM	C:\TCWIN4\CLIPBRD.WK1

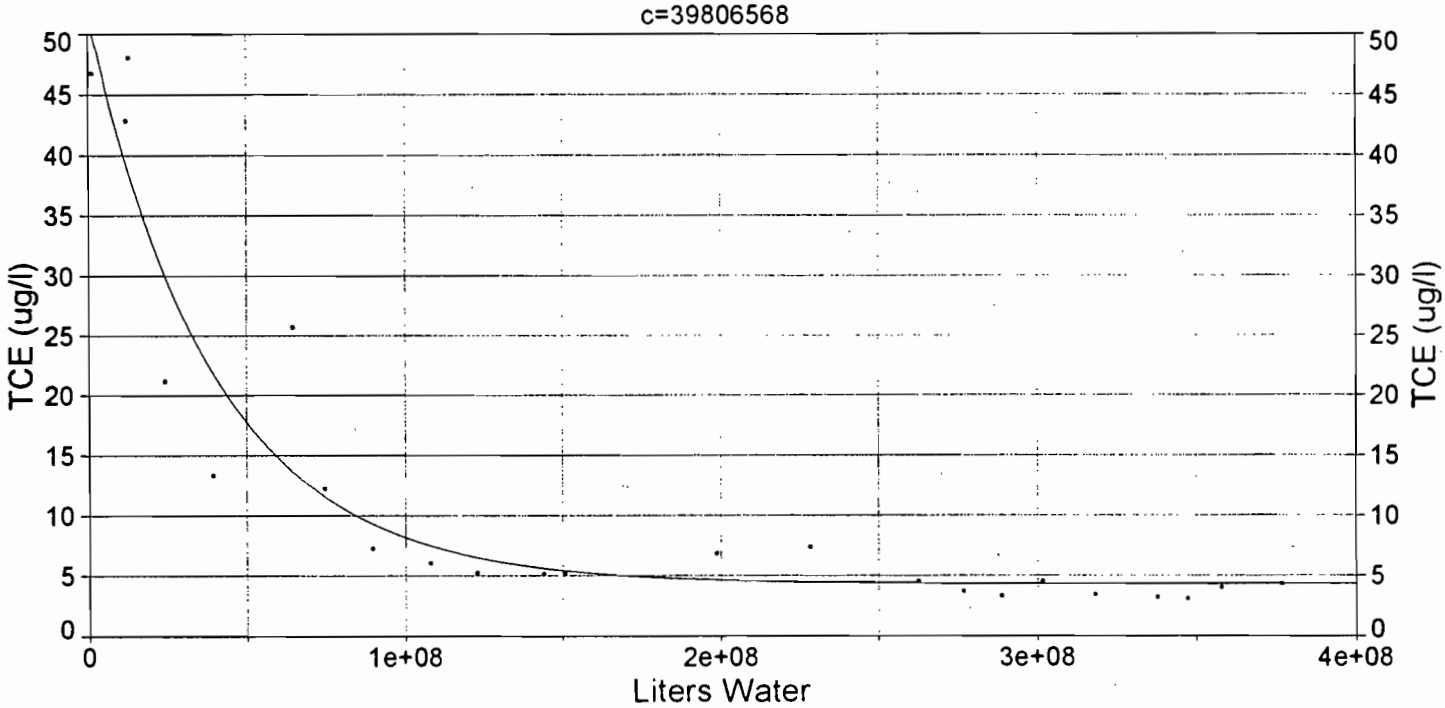
Pump and Treat

Rank 1 Eqn 8002 [Exponential] y=a+bexp(-x/c)

r^2=0.90356263 DF Adj r^2=0.88833567 FitStdErr=4.6977245 Fstat=93.694237

a=4.3470973 b=47.387476

c=39806568



Rank 1 Eqn 8002 [Exponential] y=a+bexp(-x/c)

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9035626255	0.8883356717	4.6977245094	93.694237365

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	4.347097251	1.337751239	3.249555766	1.556597065	7.137597437
b	47.38747646	3.907513874	12.12727017	39.23654535	55.53840758
c	3.98066e+07	7.37664e+06	5.396302922	2.44192e+07	5.5194e+07

Date	Time	File Source
Apr 27, 1999	6:15:47 AM	C:\TCWIN4\CLIPBRD.WK1

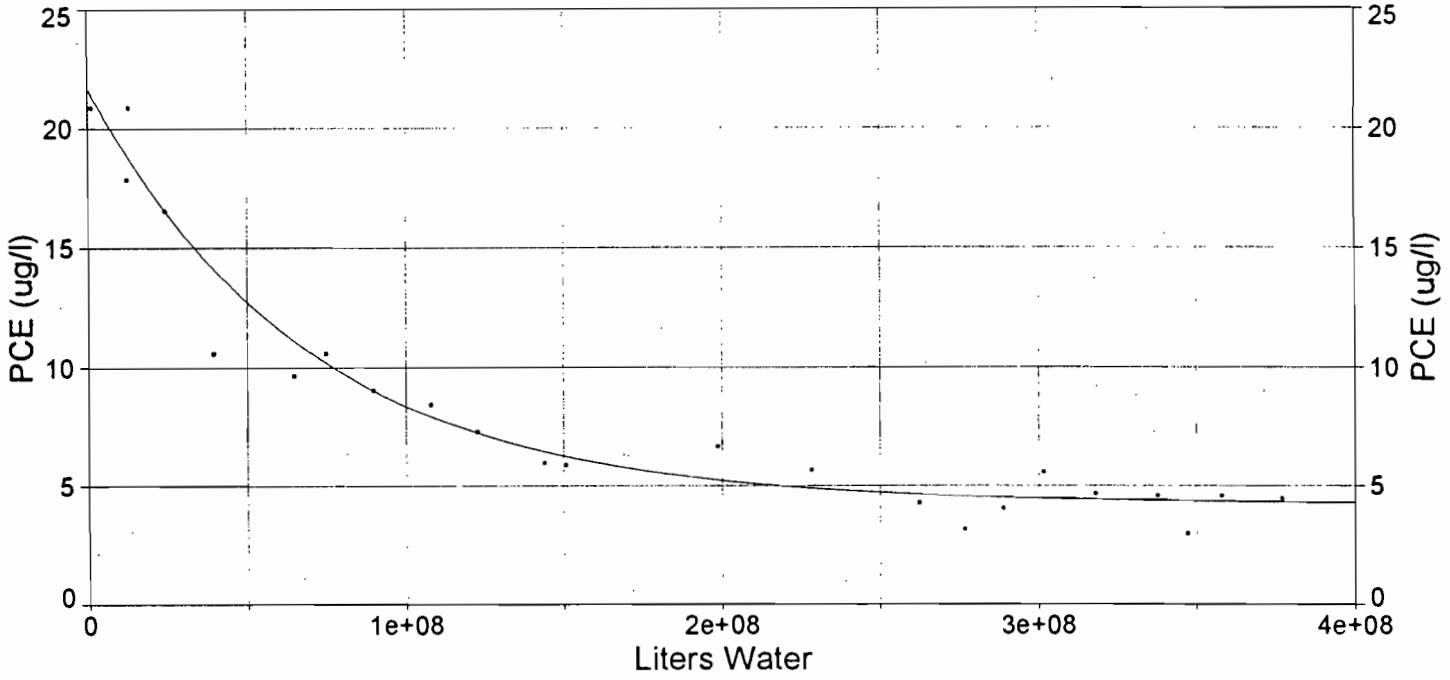
Pump and Treat

Rank 1 Eqn 8002 [Exponential] y=a+bexp(-x/c)

r^2=0.97404658 DF Adj r^2=0.96972101 FitStdErr=0.94771805 Fstat=356.54045

a=4.2533066 b=17.488403

c=69402585



Rank 1 Eqn 8002 [Exponential] y=a+bexp(-x/c)

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9740465840	0.9697210146	0.9477180467	356.54044677

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	4.253306619	0.347370812	12.24428327	3.526251154	4.980362084
b	17.48840310	0.670129697	26.09704236	16.08580552	18.89100067
c	6.94026e+07	6.68101e+06	10.38803351	5.54191e+07	8.33861e+07

Date	Time	File Source
Apr 27, 1999	6:14:21 AM	C:\TCWIN4\CLIPBRD.WK1

Pump and Treat as of 12/31/98

DCE (pounds)

$$a := \int_{0}^{347172267} e^{3.927092383 + -9.8581126 \cdot 10^{-6} \cdot x^{0.5} \cdot \ln(x)} dx \cdot 2.205 \cdot 10^{-9}$$

TCE (pounds)

$$b := \int_{0}^{347172267} 4.493690397 + 47.32379351 \cdot \exp\left(\frac{-x}{3.9382936 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

PCE (pounds)

$$c := \int_{0}^{347172267} 4.420647746 + 17.37660803 \cdot \exp\left(\frac{-x}{6.7500467 \cdot 10^{7}}\right) dx \cdot 2.205 \cdot 10^{-9}$$

$a + b + c = 19.306$

Attachment F

AS/SVE System Logbook

12/18/98

Run# 16 Calibration
Changed to NO precon clean
Run#17 Zone2 14:58 Zone1
Summa Sample @ 14:55 on for.
Run# 18 Port5 @ 15:09 ≈ 12 min
Changed back to 3 clean cycles
Changed scan Purge to 60 sec
Started ~~[illegible]~~ run #19 calib
#20 Cal Gas in tedlar ~~Start of~~ Auto

12/21/98 SYSTEM WENT DOWN @ 3:10 BACK on @ 3:50
DUE TO High Level SWITCH NOT WORKING RIGHT.
19:40 SYSTEM WENT DOWN again, STARTED BACK @ 20:40

12/22/98 12:30 am SYSTEM WENT DOWN, STARTED BACK @ 2:00 AM
5:20 SYSTEM WENT DOWN, STARTED BACK @ 6:00
12:05 SYSTEM WENT DOWN, STARTED BACK @ 12:20

12/23/98 CALIBRATION RUN #135 @ 06:55 MATHESON 10
" RUN # 136 @ 07:14 " "
scanner purge 60 sec " " #137 @ 07:31 " "
ANALYSIS RUN #138 @ 07:53 Effluent Ch/PORT 4
" RUN #139 @ 08:15 HEADER Ch/PORT 2
Changed TO ZONE 1 APP. 4 MIN
CALIBRATION RUN #140 @ 08:36 MATHESON 10

12/30/98 CALIBRATION RUN # 141 @ 06:49 MATHESON 10
" RUN # 142 @ 07:06 " "
scanner purge 60 sec " RUN # 143 @ 07:23 " "
ANALYSIS RUN # 144 @ 07:53 Effluent Ch/PORT 4
" RUN # 145 @ 08:20 HEADER Ch/PORT 2
Changed TO ZONE 1 APP. 4 MIN
CALIBRATION RUN # 146 @ 08:44 MATHESON 10

Happy New Year)

1/3/99	SYSTEM WENT DOWN @ 1:10 AM BACK ON @ 2:AM				
	PUMP LOST PRIM.				
	6:10 AM OFF BACK ON @ 6:50 AM				
	Air make-up on first notch from closed				
1/4/99	CALIBRATION	RUN # 147	@ 08:02	MATHESON	10
	"	RUN # 148	@ 08:20	"	"
Scanner	"	RUN # 149	@ 08:41	"	"
Purge	ANALYSIS	RUN # 150	@ 09:04	EFFLUENT	Ch/PORT 4
60 sec	"	RUN # 151	@ 09:26	HEADER	Ch/PORT 2
	Changed TO ZONE 1 APP. 4 MIN				
	CALIBRATION	RUN # 152	@ 09:47	MATHESON	10
5/99	CALIBRATION	RUN # 153	@ 07:32	MATHENSON	10
	"	RUN # 154	@ 07:52	"	"
Scanner	"	RUN # 155	@ 08:12	"	"
...SC	Analysis	RUN # 156	@ 08:35	Effluent	Ch/PORT 4
60 sec	"	RUN # 157	@ 09:00	HEADER	Ch/PORT 2
	Changed TO ZONE 1 APP. 4 MIN				
	CALIBRATION	RUN # 158	@ 09:20	Matheson	10
6/99	CALIBRATION	RUN # 159	@ 06:58	MATHESON	10
	"	RUN # 160	@ 07:17	"	"
Scanner	"	RUN # 161	@ 07:38	"	"
Purge	Analysis	RUN # 162	@ 07:57	Effluent	Ch/PORT 4
60 sec	"	RUN # 163	@ 08:22	Header	Ch/PORT 2
	Changed TO ZONE 1 APP. 4 MIN				
	CALIBRATION	RUN # 164	@ 08:42	Matheson	10
7/99	CALIBRATION	RUN # 166	@ 07:06	MATHESON	10
	"	RUN # 167	@ 07:28	"	"
Scanner	"	RUN # 168	@ 07:44	"	"
...e	Analysis	RUN # 169	@ 08:03	Effluent	Ch/PORT 4
0 sec	"	RUN # 170	@ 08:23	HEADER	Ch/PORT 2
	Changed TO ZONE 1 APP. 4 MIN				
	CALIBRATION	RUN # 171	@ 08:46	MATHESON	10

1/11/99

8:09 CALIBRATION RUN #172 @ MATHESON 1 ~~10~~

8:21 Calibration Run #173 Matheson 1

0830 Opened EW-N7 & EW-N8 Full open Shut Air make-up value

8:41 Calibration Run #174 Matheson 1 @ 08:48

ANALYSIS RUN# 175 @ 09:05 EFFLUENT ch/PORT 4

Scanner Purge 60 sec

Scanner Purge changed to 180

ANALYSIS RUN# 176 @ 09:23 EFFLUENT ch/PORT 4

Analysis Run# 177 @ 09:46 Influent ch/Port 2

Changed to Zone 1 Approx 4 min

Analysis Run# 178 @ ~~10:07~~ Blank ch/Port 5

Calibration Run#179 @ 10:30 Matheson 1

Analysis Run# 180 @ 1141 Blank ch/Port 5

Started Automatic Run # 181 5 samples (Ports)/cal

Aborted Temp check: Reading = (71°C)

Calibration Run # 183 @ 12:59 Matheson 1

Blank Run # 184 Port 5 — Precon HTR

Failed Shut off System - Power down -

Restarted . Temp Reading < 1400 (55°C)

Calibration Run# 185

FAXED Analysis Run # 186 Cal gas in Tedlar ≈ 66% Rec

1/12/99 Adjusted P3 for 2.048V found @ 2.03

Calibration Run # 187 Matheson 1

Analysis Run # 188 Math. 1 in Tedlar Port 5

Renamed Sentex.idx & Sentex.log to

Sentex19.idx & Sentex19.log Restart Run @ #1

Temp. Reading: 2049 (70°C)

/12/99

Calibration Run #1 @ 07:25 Matheson 1
" Run # 2 @ 07:47 " "
" Run # 3 @ 08:10 " "
Analysis Run # 4 @ 08:32 Effluent C/Port 4
" Run # 5 @ 09:00 ~~Effluent~~ Influent Ch/Port 2
Changed To Zone 1 App. 4 min
Calibration Run # 6 @ 09:25 Matheson 1
Changed Scanner purge to 15 sec
Calibration Run #7 @ Matheson 1 in tedlar
Capped Cal Ex. per Sentex instructions
Note: Sample purge pump did not run
Aborted Run after 120 sec. No peaks!
Temp reading: 4097 (0°c)
Shutdown and powerd off for 1 min. restarted
Note: will attempt to run as first started
(windows not fully installed and no PC Anywhere)
Temp reading: 1694 (62°c) wait for temp rise
Died in process of Equilibration shut down
& let windows finish Restarted
Temp reading 1480 (58°c) wait for temp rise
Calibration Run # 8 @ 12:06 matheson 1 in tedlar
Change display mag. from .1 to .3
Calibration Run #9 @ ≈ 12:20 matheson 1 in Tedlar
Calibration Run # Died! No heat
Shut Down Changed Argon Cyl (down to 350 lbs).
Restarted System & let oven get near op. Temp (70°c)
Calibration Run # 9 @ 13:57 Matheson 1 in tedlar
Some peaks not Identified check temp post Run
Peaks look better than before Temp Rdg: 2051 (70°c)
Note Down ✓ Calibration Run # 10 @ ≈ 14:16 matheson in Bag
1.75 hrs Calibration Run # 11 @ ≈ 14:40 matheson in Bag
Aborted Precon Heater Quit working Temp 4097

1/13/99 Packed Both Boards (Main) Sm. Valve / motor cont. Board & 3 micro controllers. Shipped Fedex to sentex. Edited Sentex.glb changed battery low value from 600 to 400. Weather Bad. Ordered new lower float for KO tank, sys dc

Note Sys Down 22 hrs

1/14/99 Package to Sentex did not go out... plant shut down early - ice. Should go out today Rec. new parts to fix lower Float. System back up ≈ 11:00 but have to use Air makeu Air make up valve shut at approx 16:00.

Note Sys Down 10.75 hrs

1/16/99 Lubed SVE Blowers while system on. Brushed off heat exchanger. Late entry - check values - for Vac. Rel. Changed on 1/14. Checked Vac. Rel. Valve - still Closed.

1/18/99 Down loaded Telog in 301 Noted that Vac Re was active from 1/17/99 @ 14:30 to 1/18/99 07:3

1/21/99 New Sentex Board installed

13:04 Run # 11 Calibration Tedlar bag w/cal Gas

13:12 Run # 12 Calibration Tedlar bag w/ cal Gas

13:31 Run # 13 " " " " " "

Run# 14 Calibration Ted. w/cal Gas Matheson

Run# 15 " " " " "

Run# 16 " " " " "

Bad Run — Run# 17 Effluent port/Ch. 4 System on Zone

~~Run#~~ ~~Influent Port/Ch 2~~ System on Zone ≈ 4m

Run# 18 Blank Port/Ch 5

~~Run#~~ ~~Calibration Ted w/cal Gas Mathes~~

#19 Blank Refilled Cal Tedlar

#20 Auto Run 4 Samp / Cal

Run #30 Blank Aborted
Vac Relief open

1/25/99 AIR MAKE-UP ON FIRST NOTCH FROM Close
Calibration Run# 57 Matheson1 in Tedlar
Display Mag set to 0.5 RTs set to 1:57, 2:77, 3:100
4:119, 5:182, 6:234, 7:340, 8:428
Calibration Run# 58 Matheson1 in Tedlar
Missed 1st Peak (Meth cal @ 57 RT)
Calibration Run# 59 Matheson1 in Tedlar
Calibration Run# 60 Matheson1 in Tedlar
Calibration Run# 61 " " "
Analysis Run# 62 " " "
11:38 Calibration " 63 " " "
Calibration " 64
Blank " 65
Calibration " 66
Blank " 67
Calibration " 68
Skipped Anal of Peak 2 CDCE Why?
Calibration Run# 69 IDa all
Analysis Run# 70 Math in Ted Missed (Valve & ID) on dcm

1/26/99 AIR MAKE-UP Valve Fully Closed.
07:30
9:30 Calibration Run# 74 Matheson1 in Tedlar Low
9:55 " " 75 " " " New Tedlar (Fresh Fill)
Automatic Run Cal/Cal Run 76 " " " for Cal & Anal
Scan purge = 5 sec

Run # 87 Argon
Run # 88 ~~Argon~~ Blank Scan Purge = 60 sec
Automatic Run Cal/Cal matheson1 in Tedlar Cal & Anal
Scanner Purge = 5 sec

Run# 89 → 100 Automatic Tedlars w/Matheson 1
Run # 101 Blank Room Air
1/27/99 Run# 102 Blank Room Air
Run# 103 Calibration Matheson 1 Cyl.
Run# 104 Automatic cyl. Cal Gas w/ Cal Gas in Tedla
Changed to 2pt (50 & 150) for bkgd. to see if will help with first peak (dcm) detect. Run 104 Cal.
Reset to constant Bkg. Still didn't detect & base not Representative
Run# 105 → 114 Automatic cyl. Cal Gas w/cal in bag on
Run # 115 Analysis Argon Blank port 5
Run# 116 → 127 Auto. cyl. Cal/bag 1 samp/hour
Run # 128 Room Blank

1/28/99 Calibration Run # 129 Matheson 1 in Tedlar
" Run # 130 " " "
" Run # 131 " " "
Analysis Run # 132 Effluent ch/port 4 5 sec purge
" Run # 133 influent ch/port 2
Changed to Zone 1 App. 4 min
Calibration Run # 134 Matheson 1 in Tedlar
Blank Run # 135 Room Air ch/Port 5
Scanner Purge set to 180 sec
Blank Run # 136 Room Air ch/Port 5
~~Calibrate~~ Blank Run # 137 " "
Argon Blank Run # 138 Argon on ch/port 5
Calibrate Run # 139 Matheson 1 in Tedlar
Analysis Run # # 140 Effluent ch/port 4
Argon Blank Run # # 141 Argon on ch/port 5
Analysis Run # 142 influent ch/port 2
Changed to Zone 1 App. 4 min

Died on Precon Clean.

1/28/99 ARGON BLANK RUN# ARGON ON ch/PORT 5
~~Calibrate Run# Matheson 1 in Tedlar~~

2/1/99 Calibrate Run # 145 Matheson 1 in Tedlar Ragged!
" " 146 " " " Looks much better.
Analysis Run # 147 Argon Blank via port 5 (Cyl.)
Aborted -
Analysis Run # 147 Argon Blank via Port 5 Scan Purge 30
Calibrate " 148 Matheson 1 in Tedlar
Analysis " 149 Effluent Port 4 @ 295 RT Scanner Purge 180 Went wierd
Analysis " 150 Argon Blank via 5
Analysis " 151 " " " TCA 150 Looks ugly

2/2/99 Calibrate Run # 156 Matheson 1 in Tedlar Sucking Air? Tedlar Valve open more than 1.5 Turns
" Run # 157 " " "
" Run # 158 " " "
Analysis Run # 159 Argon Blank via Port 5 (cyl.)
Analysis Run # 160 " " " " "
Analysis Run # 161 Effluent - Port/Ch 4 Aborted @ 300 RT
Analysis Run # 162 Argon blank via port 5
S.P. Time 30 " " # 163 " " " "
Calibration Run # 164 Matheson 1 in Tedlar
Calibration Run # 165 " " "
S.P. Time 30 Analysis Run # 166 Argon blank via port 5
S.P. Time 180 Analysis Run # 167 Effluent Port/Ch 4
S.P. Time 30 Analysis Run # 168 Argon blank via Port 5
Analysis Run # 169 Argon blank " "
SP Time 180 Analysis Run # 170 Influent Port/Ch 2
SP Time 30 Analysis Run # 171 Argon Blank Port/ch 5
" " # 172 " " "
Calibration Run # 173 Matheson 1 in Tedlar
Analysis Run # 174 " " " Bad Run

2/3/98	Sentex.idx & Sentex.log Rename to Sentex20.idx and Sentex20.log
	- Analysis Run#1 Blank (Argon)
	Tedlar Bags Refilled with Matheson 1
#168	- Calibration Run#~~2~~ 167 Matheson 1 in tedlar
	• Calibration Run# 168 Matheson 1 in tedlar
	• Calibration Run# 169 " " "
S.P.T. = 30	• Analysis Run# 170 Argon Port/Ch 5
S.P.T. = 30	• Analysis Run# 171 Matheson 1 in Tedlar Port/Ch 5
S.P.T. = 180	• Analysis Run# 172 Effluent Port/Ch 4
S.P.T. = 30	• Analysis Run# 173 Argon Port/Ch 5
" = 30	• Analysis Run# 174 Argon Port/Ch 5
" = 30	• Analysis Run# 175 Argon Port/Ch 5
" = 30	• Calibration Run# 176 Matheson 1 in Tedlar
" = 180	• Analysis Run# 177 Influent Port/Ch 2
* " = 30	Calibration Run# 1
*	Sentex.idx & Log goofy filed as Sentex21.*
S.P.T. = 30	Calibration Run# 1 Matheson 1 in Tedlar
" = 30	Analysis Run# Argon Port/Ch 5
02/9/99	Calibration Run# 2 Matheson in Tedlar
	Note voltage @ CX5 12.24 - 12.33, U18 pin 6 = 0.912 V A/D 2.05V
	CX7 6.45 max Temp Reading 1973 (68°C)
	Analysis Run# 3 Argon Port/Ch 5
	Calibration Run# 4 Matheson in Tedlar
	Changed Main Board & Power Supply
9:49	Begin Voltage CX5 ≈ 13.52V 12.6 under load of Col. HH
	being cold. looks good ... let thermally equil.
	OM+ & - ok OF+ & - ok in Dumb Term
	Temp @ 1980 (67°) Start Blank!
	Analysis Run# 5 Argon Blank Scanner Purge pump Fluttered
	U18 pin 6 = 0.91V A/D ≈ 2.05V
	System Powered Down Swapped U1 & U2

Trap mode

02/9/99 Temp. Reading: 2006 (69°c)

Analysis Run# 6 Argon Blank NO Flutter - Good heating of precon.

TCE 16.31 PPB PCE 0.67 PPB Temp. Reading: 2020 (69°c)

Calibration Run # 7 Matheson1 in Tedlar

Calibration Run # 8 Matheson1 in Tedlar

Analysis Run # 9 Argon Blank Port/ch5

Calibration Run # 10 Matheson 1 in Tedlar

Calibration Run # 11 Matheson 1 in Tedlar

Calibration Run # 12 Matheson 1 in Tedlar

SP 30 sec Analysis Run # 13 Argon Blank Port/ch5

S.P. 15 sec Analysis Run # 14 Matheson 1 in Tedlar port/ch5

S.P. 15 sec Analysis Run # 15 Matheson 1 in Tedlar port/ch5

SP 30 sec Analysis Run # 16 Argon Blank port/ch 5

SP 180 Analysis Run # 17 Ch/Port 2 Influent on zone1: Zone2 off 2.4 min

30 sec Analysis Run # 18 Argon Blank port/ch 5

Auto Oper start @ Run#19 Anal/Cal set to 3 Port5

open to Room Cal = Tedlar bag with Matheson1

Over ride Cal to start! Temp Rdg: 2002 (69°c)

2/10/99 Run # 62 Calibration - Fresh Cal Gas in Tedlar

Run # 63 ~~Argon Blank Ch/Port 5~~ ch/Port 5 Matheson1 in Tedlar

Run # 64 Argon Blank ch/Port 5 Aborted @ 520

Temp. Reading: 1941 (68°c)

2/10/99

(stored) set @	Peak	RT (Data from 2/9/99)							set to?
57 54	1:	57,	57,	57,	56,	57,	57,	57	57
78 74	2:	76,	77,	77,	76,	77,	77,	77	77
102 100	3:	101,	101,	101,	100,	101,	101,	101	101
121 119	4:	120,	120,	120,	120,	121,	120,	120	120
187 184	5:	184,	184,	184,	184,	185,	184,	185	184
240	6:	238,	238,	238,	238,	238,	238,	238	238
355	7:	346,	347,	347,	347,	347,	346,	347	347
447	8:	435,	437,	437,	438,	437,	436,	437	437

SP30 Blank - Argon #61
Cal. Math 1 in Tedlar #62
Anal. Cal bag ch Port 5 #63
Blank - Argon #64

S.P. 180

2/10/99	Analysis	Run # 65	Influent Zone 2 Changed to Zone 1 ≈ 4 min
S.P. 30	Analysis	Run # 66	Argon Blank ch/Port 5
S.P. 30	Analysis	Run # 67	Argon Blank ch/Port 5
Temp Read: 2022 (69°c)	Calibrate	Run # 68	Matheson 1 in Tedlar
SP 30	Analysis	Run # 69	Matheson 1 in Tedlar
SP30	Analysis	Run # 70	Argon Blank ch/Port 5
SP 180	Analysis	Run # 71	Influent Zone 2 change to zone ≈ 4 min
SP30	Analysis	Run # 72	Argon Blank ch/Port 5
SP30	Analysis	Run # 73	Argon Blank ch/Port 5
Temp. Read: 2029 (69°c)	Calibrate	Run # 74 & 75 (checked Ted valve)	Matheson 1 in Tedlar
SP30	Analysis	Run # 76	Matheson 1 in Tedlar ch/Port 5
SP30	Analysis	Run # 77	Argon Blank ch/Port 5
SP180	Analysis	Run # 78	Influent Zone 2 Changed to Zone 1 ≈ 4 min
SP30	Analysis	Run # 79	Argon Blank ch/port 5
SP30	Analysis	Run # 80	Argon Blank ch/port 5
Temp Read: 1995 (69°c)	Calibrate	Run # 81	Matheson 1 in Tedlar
SP 30	Analysis	Run # 82	Matheson 1 in Tedlar ch Port 5
SP30	Analysis	Run # 83	Argon Blank ch/Port 5
SP180	Analysis	Run # 84	Influent Zone 2 change to Zone 1 ≈ 4 min
SP30	Analysis	Run # 85	Argon Blank ch/Port 5
SP30	Analysis	Run # 86	Argon Blank ch/port 5
Temp. Read. 2024 (69°c)	Calibrate	Run # 87	Matheson 1 in Tedlar
	"	" 88	" " "

Start automatic operation Cal in Ted / 3 Room Air on 5

2/11/99 System Died, Temp Rdg: 1(0°c) Voltage ≈ 12.5
System was at Run # 92 Calibration when
Stopped - Alarm Sounded - No Calibration Peaks.

2/11/99 A smell of something getting hot was noted after system was shut down (incl. Power strip) and restarted. Allowing to come up to temp. (oven) Ran Argon on Port 5 to clear out precon. Precon. Filament (heater) cherry red on clean cycles. Baseline shifted high and No TCE peak observed on Run #92 Replaced U23 + U24 to Fix

Calibration Run #93 Matheson1 in Tedlar (fresh Fill)

Test Runs 93-99

Calibration Run #100 Matheson1 in Tedlar

Test Runs Blank 101-102 cal

Analysis Run # 103 Blank (Argon)

Calibration " 104 Matheson1 in Tedlar

Matheson1 Cyl. Hooked to Cal Port of GC

→ 3 Clean cycles

Calibration Run # 105 TCE 8718816 $\bar{x}$ = 8,949,637 87

" " 106 TCE 8864776 σn-1

" " 107 TCE 9265321 282943

→ 2 clean cycles ★

Calibration run # 108 TCE 8957976

2/12/99 Calibration run # 109 TCE 8983269

1:54, 2:74, 3:99, 4:117, 5:181, 6:237, 7:348, 8:439

Temp Reading: 2001 (69 °C) $\bar{x}$ = 9025419 | σn-1 95749

Calibration run # 110 TCE 9,135012

→ 1 clean cycle

Calibration run # 111 TCE 9677761 $\bar{x}$ = 9895535

" " 112 TCE 9794423 σn-1 = 282256

" " 113 TCE 10214421

~~0 clean cycles~~ Set to 2 clean cycles

Analysis Run # 114 Argon Blank

8:45 Filled Tedlar with Cal Gas (Matheson1 SX-33599)

Cal Gas = Matheson 1 (SX-33599) in Tedler bag

2/12/99 Calibrate Run# 115 Matheson1

30 sec. S.P. Analysis Run# 116 ABORT ch/Port 5 Matheson 1 Note: didn't Full Sample

" Analysis Run# ch/Port 5 Argon

Sentex Screwed up again Not Sampling on Port 5

3/13/99 run # 120, 121 Abort

run #121 1ppm halon, 1ppm matheson

- temp 60°
- inhibit 0°
- 60sec desorb
- 1.0 mag

run # 122 60ppm halon, 1ppm matheson

- temp 55°

run #123 60ppm halon, 1ppm matheson

- temp 70°
- run time 15 min
- mag 0.7

→ halon RT 38 sec

run #124 calibration

- 60ppm halon, 1ppm matheson
- chart duration 8 min
- mag 0.7
- inhibit 35 sec

run# 125 calibration (1ppm)

run# 126 calibration (1ppm)

run# 127 " " abort valve closed

run #128 " "

run #129 calibration (1ppm)

-/15/98 Anal. Ch 1 = Port 2 Run # 130 Abort @ 145
Ch 2 = Port 2 Run # 131 Abort @ 145
Ch 3 = Port 4 Run # 132 Abort @ 145
ch 4 = Port 4 Run # 133 Abort @
Ch 5 = Port 6 Run # 134 Abort
power down ch 6 = Port 6 Run # 135 Abort
Ch 7 = Port 8 Run # 136 Abort
ch 8 Port 8 Run # 137 Abort
ch 9 Port 10 Run # 138 Aborted
ch 10 Port 10 Run # 139 Abort
Analysis Run # 140 Argon Port 10 Abort
x22. * Calibration Run # 141 Matheson 1 in Tedlar (filled 2/15)
ntex23. * Calibration Run # 1 " " "
Analysis Run # 2 port 10 ~~room air~~ argon
calibration run # 3 matheson 1 in tedlar
analysis run # 4 port 10 / argon
calibration run # 5 matheson 1 ppm tedlar
analysis run # 6 port 10 / argon
analysis run # 7 port 10 / matheson 1 ppm tedlar
analysis run # 8 port 10 / argon
Calibration run # 9 matheson 1 ppm tedlar
analysis run # 10 " " " , 10 s purge
ED-1, 2, 4, & 5 SET NOM. @ 0.3" wc EW-7 & 8 set to Nom. 3.2" wc
analysis run # 12 port 4 / Zone 2 System switched to Zone 1 approx 4 min.
analysis run # 13 port 10 / argon
analysis run # 14 port 4 / zone 2
Analysis Run # 15 port 10 / argon repositioned col. insertion to detector
moved again Run # 16
Run # 17
Calibration Run # 18 Inh. 20 Matheson in Ted
Analysis Run # 19 Zone 2 ok!
Analysis Run # 20 Argon

2/15/99 Calibration Run # 21 Matheson 1 in Tedlar
Analysis Run # 22 Port/ch 10 Matheson 1 in Tedlar
Run came up w/mo IDS due to 10 sec inhibit initiated following Cal. Fresh fill on Cal Tedlar
Automatic Analysis / cal / 3 samp (10 sec S.P.)
Started at Run # 23
Cals: 23, 27, 31, 35, 39, 43, 47, 51, 55, 59, 63, 67
Blanks: 24, 25, 26, 28, 29, 30, 32, 33, 34, 36, 37, 38, 40, 41, 42, 44
45, 46, 48, 49, 50, 52, 53, 54, 56, 57, 58, 60, 61, 62
64, 65, 66, 68, 69

2/16/99 Calibration Run # 70 Matheson 1 in Tedlar
Calibration Run # 71 Matheson 1 in Tedlar Temp Reading: 1987 (69 °C)
S.P.@ 10 sec Analysis Run # 72 ch/Port 10 matheson in Tedlar
~~Analysis Run # ch/Port 4 Zone 2 Inflvent~~
~~Analysis Run # Argon Blank ch/Port 10~~
SP@ 10 sec Analysis Run # 73 ch/Port 10 Matheson in Tedlar
SP@ 180 sec Analysis Run # 74 ch/Port 4 Zone 2 influent
Bad Run - System on Zone 2 & only 10 sec Scan Purge
Analysis Run # 75 Aborted ch/Port 4 Zone 2 influent
Shifted Why? Temp 1981 (68°C) Selected wrong Cal.
Analysis Run # 76 Room Air Blank ch/port 10
Analysis Run # 77 Argon ch/Port 10
Calibration Run # 78 Matheson 1 (Filled 2/16) in Tedlar
Calibration Run # 79 " "
calibration run # 80 " " abort
calibration run # 81 matheson 1 tedlar
matheson 1 ted run # 82 port 10

---

zone 2 run # 83 port 4 / trap Zone 2
argon blk run # 84 port 10
argon blnk run # 85 "

zone 4	run #86	TCE saturated	port 8	S.P. 180
Argon Blank	run # 87		port 10	S.P. 10
Argon Blank	run # 88		port 10	S.P. 10
Calibration	run # 89	Matheson 1 in Tedlar		
matheson 1ppm	run # 90		port 10	
argon blank	run # 91		"	
ED-N1	run #92			
ED-N1	run #93			
ED-N2	run #94			
ED-N2	run #95			
ED-N3	run #96			
ED-N3	run #97			
ED-N4	run #98			
ED-N4	run #99			
ED-N5	run #100			
ED-N5	run #101			
ITRD-1(N7)	run #102	20ppm cis, 5 tce		
argon blank	run #103			
argon blank	run #104			
2/17/99 argon blank	run #105	port/ch 10		
Calibration	run #106	Matheson 1 in Tedlar		
Calibration	run #107	"	"	"
Analysis ch10	run #108	"	"	"
Argon blank	run #109	Port/ch 10 cyl.		
...nge to ...e 1x4min Zone 2	run #110	S.P. 180, Port/ch 4 Influent		
Argon blank	run #111	S.P. 15, Port/ch 10 Cyl.		
Argon blank	run #112	"	"	"
argon blank	run #113	"	"	"
EW-N10	run #114	"	"	"
EW-N10	run #115			

	ITRD2 (N9)	run #116	port 10
09:42	Change to Zone 1	full time	
	ITRD2 (N9)	run #117	Port 10
	EW-N9	run #118	
	EW-N9	run #119	
	EW-N8	run #120	
	EW-N8	run #121	
	VPMP-1S	run #122	
	VPMP-1S	run #123	
	VPMP-1M	run #124	
	VPMP-1M	run #125	
	VPMP-3	run #126	
	calibration 1ppm	run #~~128~~ 128	cal port
	~~VPMP~~		
	VPMP-3	run #127	port 10
	calibration 1ppm	run #129	cal port
	matheson 1ppm	run #130	port 10
	argon blank	run #131	"
	VPMP-2S	run #132	
	VPMP-2S	run #133	
	VPMP-2M	run #134	
	VPMP-2M	run #135	1 clean cycle
	VPMP-4S	run #136	
	VPMP-4S	run #137	
16:35 BACK to Zone1	Zone 1	run #138	PORT 2, SP 180
	Zone 1	run #139	" , SP 180

2/18/99	Calibration	Run # 140	Matheson 1 (2/17) Tedlar
	Analysis	Run # 141	" " "
	Argon Blank	Run # 142	ch/port 10 cyl.
	Calibration	Run # 143	Matheson 1 (2/18) Tedlar
	Calibration	Run # 144	" " "
	Matheson 1	Run # 145	Analysis ch 10
	Matheson 1	Run # 146	Analysis ch 10
Aborted	Argon Blank	Run # 147	ch/port 10 cyl. cyl. off OOPS!
	Argon Blank	Run # 148	ch/port 10 cyl.
	EW-N1	Run # 149	ch/port 10 (CF)
	EW-N1	Run # 150	ch/port 10 (CF+)
	Argon Blank	Run # 151	ch/port 10
	EW-N2	Run # 152	ch/port 10
	EW-N2	Run # 153	"
(CF)	EW-N3	Run # 154	"
	argon blank	Run # 155	
(CF)	EW-N3	Run # 156	
	argon blank	run # 157	
	EW-N4	Run # 158	
	EW-N4	Run # 159	
	EW-N5	Run # 160	
	Argon Blank	Run # 161	
	EW-N5	Run # 162	
	argon blank	Run # 163	
	EW-N6	Run # 164	
	EW-N6	Run # 165	
	Calibration	Run # 166	Matheson 1 Tedlar
	~~Matheson~~ Calibration	Run # 167	~~port 10~~
	matheson 1	run # 168	
	argon	run # 169	

system to loop mode - 70°C
matheson 10 ppm cal gas + 10 ppm halon 2/18

bad!	Calibration	run #170	cal port
	Calibration	run #171	
	calibration	run #173	
	calibration	run #174	105 in lib
	calibration	run #175	3105 in lib
	calibration	run #176	20 ppm halon
loop mode	halon cal	run #177	
	calibration	run #178	
	calibration	run #187	10 ppm matheson
	calibration	run #188	cal port
	matheson 10 ppm	run #189	port 10
2/19/99	init Calib. wrong conv. WASH	run #190	10 PPM Matheson
	Calibration not meas yet	run #191	" " "
	Calibration forgot to open valve	run #192	" " "
	Calibration	run #193	" " "
	calibration 10	run #198	10 psi carrier/loop
	calibration 10	run #199	
	argon blank	run #200	port 10
bad!	ITRD1 (N7)	run #201	"
abort	ITRD1 (N7)	run #202	
"	EW-N7	run #203	
	EW-N7	run #204	
	matheson 10	run #205	
	GC Dead (detector AMP)		
	Julie to SWP		

97 8 2533

871 MSR 65526

2/20/99 9:30 Replaced CA3260E Amp and restarted System
Set clean cycles to 3 and Started Analysis run to purge
9:38 Analysis - Argon Blank Run#

run #5 cal [matheson 10 tedlar + 10 ppm halon]
10:34 run #6 room air
10:52 run #7 cal MTH10 [matheson 10 tedlar + 10 ppm halon]
11:11 run #8 cal MTH10 sample purge @ 5 sec
11:30 run #9 cal MTH10 sample purge @ 7 sec
16:06 run #10 Room air
16:17 run #11 cal MTH10
Died!

.5 hrs

2/22/99 System Shut down @ 07:15 for sched. maint.
System Restart @ 07:49 Blowers lubed
Run# 14 Test Run on GC with last chip with all less

2/23/99 System Down Blower Motor overload ≈ 7:55 Am
Final Death ≈ 13:30

2/24 Bearings Removed from 50 hp motor

2/25 New Bearings Being installed EST. on @ 1:30
for monthly measures

Approx 30 min after restart 5LP Blower Started
Squeeling (bearings).

3/1 - 3/4 System Down NO advancement to report Progress/
5LP on order as Advance Replacement

3/9/99 Carbon Changed in tank B, Removed Carbon tank A
Steam Cleaned Screns in A & B. Tank B had ≈ 55 gal H2O in it.

3/10/99 5LP Blower Replaced by Mound Trades

3/16/99 System cleaned with steam from bypass valve flange to other side of Heat exchanger. Silencer (upper following 6LP) Emptied of carbon, Heat exchanger cleared (as good as poss.) of carbon. 6LP Thouroughly rinsed with Diesel. System Restarted at Approx 12:30 pm 6LP Ex. ≈ 26° warmer Than 5LP. Air make-up on next to last position

3/17/99 Closed air make-up value at 5:50 am.

3/18/99 10:00 GC installed & Powered up
Shut down @ 10:45 changed from Trap to Loop
11:00 up in Loop
12:25 Temp Reading 1969 (68°C)
Loop Mode
12:27 Calibration Run#1 Matheson 10 in Tedlar
12:37 " " #2 " " " "
Changed Inhibit to 55, Display mag 3, Duration 10
12:51 Calibrate Run#3 Matheson 10 in Tedlar
Changed Inhibit to 60, Disp. Mag 10, duration 9
13:03 Calibrate Run#4, Matheson 10 in Tedlar
Test Run Changed Inhibit to 56, Disp. Mag 15, duration 9.5
" " " 45 " " 12, " 10
Abort 13:24 Calibrate Run#6, Matheson 10 in Tedlar
Chg inh. to 50, Disp. mag 10
13:30 Calibrate Run#7 Mat. 10 Ted.
Disp mag = 1
13:45 Calibrate Run#8 Mat. 10 Ted.
inh = 62 mag = 10
1356 Calibrate Run#9 Mat 10 Ted.
Chart duration 9 Strn Mag = 12

3/18/99

14:08 Calibrate Run #10 Matheson 10 in Tedlar

~~1, Dcm, 69; 2, c12dce,~~

Peak	Contam.	RT	Conc (PPM)	
1	dcm	69	7.00	68
2	c12dce	96	7.3	94
3	benzene	127	7.9	126
4	tce	154	7.1	152
5	toluene	240	7.2	237
6	pce	312	6.9	311
7	eth benz	458	7.2	455
8	xylene	578	6.7	572

Chart duration set to 9.5

14:20 Calibrate Run #11 Matheson 10 in Tedlar ~ noting set back to 10

14:30 Calibrate Run #12 Matheson 10 in Tedlar

14:43 Analyze Run #13 Matheson 10 in Tedlar Port 5

14:55 Analyze Run #14 " " " " "

15:07 Analyze Run #15 Port/Zone 4 Effluent Scan Purge 60 sec

Note system operating on tank A, which may not be saturated

Port 15:19 Analyze Run #16 Port/Zone 2 Influent SP. 60

Look like check valve stuck - Re-Run

15:29 Analyze Run #17 Port/Zone 2 influent Abort

15:45 Analyze Run #18 Port/Zone 2 SP set to 180

1599 Calibrate Run #19 Matheson 10 in Tedlar

Analyze Run #20 Matheson 10 in Tedlar

Port 10 with Zone 2 check valve in line

Scanner purge set to 15 sec — clamp

Shut --- Re-run!

16:13 Analyze Run #21 Repeat of Above

16:25 Analyze Run #22 Matheson 10 in Tedlar Port 5

Auto Analyze starting with Run #23 Cals Math 10 Tel

5 anal / Cal port 5 = anal SP 15 room air

3/22/99

07:24	CALIBRATION	RUN # 61	MATHESON 10 in Tedlar	
07:39	CALIBRATION	" # 62	" " " "	
07:51	CALIBRATION	" # 63	" " " "	
08:14	Analysis	RUN # 64	MATHESON 10 PORT/ch 5	
08:28	Analysis	RUN # 65	Effluent PORT/ch 4	
09:10	Analysis	RUN # 66	Influent PORT/ch 2	
	Changed TO Zone 1 APP. 4 min			
09:25	CALIBRATION	RUN # 67	MATHESON 10 in Tedlar	
09:38	Analysis	RUN # 68	MATHESON 10 PORT/ch 5	
13:32	CALIBRATION	RUN # 69	MATHESON 10 in Tedlar	
13:44	CALIBRATION	RUN # 70	" " " "	
13:56	CALIBRATION	RUN # 71	" " " "	
14:10	Analysis	RUN # 72	MATHESON 10 PORT/ch 5	
14:24	Analysis	RUN # 73	Effluent PORT/ch 4	
14:43	Analysis	RUN # 74	Influent PORT/ch 2	
	Changed TO Zone 1 APP. 4 min			
14:59	CALIBRATION	RUN # 75	MATHESON 10 in Tedlar	
15:13	Analysis	RUN # 76	MATHESON 10 PORT/ch 5	
3/23/99 07:20	CALIBRATION	RUN # 77	MATHESON 10 in Tedlar	
07:32	CALIBRATION	RUN # 78	" " " "	
07:43	CALIBRATION	RUN # 79	" " " "	
08:02	Analysis	RUN # 80	MATHESON 10 PORT/ch 5	(Time 180)
08:14	Analysis	RUN # 81	Effluent PORT/ch 4	(Time 180)
08:56	Analysis	RUN # 82	Influent PORT/ch 2	"
	Changed TO Zone 1 APP. 4 min			
09:33	CALIBRATION	RUN # 83	MATHESON 10 in Tedlar	
09:50	Analysis	RUN # 84	MATHESON 10 PORT/ch 5	

3/24/99

07:13	CALIBRATION	RUN #85	MATHESON 10 IN Tedlar	
07:25	CALIBRATION	RUN #86	" " " "	
07:39	CALIBRATION	RUN #87	" " " "	
07:53	ANALYSIS	RUN #88	MATHESON 10 PORT/Ch5	(Time 15 sec)
08:06	ANALYSIS	RUN #89	EFFLUENT PORT/Ch 4	(time 180)
08:23	ANALYSIS	RUN #90	INFLUENT PORT/Ch 2	"
	Changed TO ZONE 1 APP. 4 MIN			
08:42	CALIBRATION	RUN #91	MATHESON 10 IN Tedlar	
09:01	ANALYSIS	RUN #92	MATHESON 10 PORT/Ch 5	

3/25/99

06:32	CALIBRATION	RUN #93	MATHESON 10 IN Tedlar	
06:43	CALIBRATION	RUN #94	" " " "	
06:57	CALIBRATION	RUN #95	" " " "	
07:22	ANALYSIS	RUN #96	MATHESON 10 PORT/Ch 5	(Time 15 sec)
07:47	ANALYSIS	RUN #97	EFFLUENT PORT/Ch 4	(Time 180 sec)
08:15	ANALYSIS	RUN #98	INFLUENT PORT/Ch 2	"
	Changed TO ZONE 1 APP. 4 MIN			
08:35	CALIBRATION	RUN #99	MATHESON 10 IN Tedlar	
08:48	ANALYSIS	RUN #100	MATHESON 10 PORT/Ch 5	
13:07	CALIBRATION	RUN #101	MATHESON 10 IN Tedlar	
14:27	CALIBRATION	RUN #102	" " " "	
14:39	CALIBRATION	RUN #103	" " " "	
14:52	ANALYSIS	RUN #104	MATHESON 10 PORT/Ch 5	
15:06	ANALYSIS	RUN #105	EFFLUENT PORT/Ch 4	
15:26	ANALYSIS	RUN #106	INFLUENT PORT/Ch 2	
	Changed TO ZONE 1 APP. 4 MIN			
15:42	CALIBRATION	RUN #107	MATHESON 10 IN Tedlar	
15:56	ANALYSIS	RUN #108	MATHESON 10 PORT/Ch5	

3/29/99

07:26	CALIBRATION	RUN # 109	MATHESON 10 in Tedlar	
07:40	CALIBRATION	RUN # 110	" " " "	
07:52	CALIBRATION	RUN # 111	" " " "	
08:06	Analysis	RUN # 112	MATHESON 10 PORT/Ch 5	(15 sec tim
08:19	Analysis	RUN # 113	Effluent PORT/Ch 4	(time 180
08:39	Analysis	RUN # 114	Influent PORT/Ch 2	"
09:10	CALIBRATION	RUN # 115	MATHESON 10 in Tedlar	
09:24	Analysis	RUN # 116	MATHESON 10 PORT/Ch5	(time 15 sec
09:37	Analysis	RUN # 117	Effluent PORT/Ch 4	(time 180)
09:54	Analysis	RUN # 118	Influent PORT/Ch 2	"
	Changed TO ZONE 1 APP. 4 min			
10:09	CALIBRATION	RUN # 119	MATHESON 10 in Tedlar	
10:21	Analysis	RUN # 120	MATHESON 10 PORT/Ch 5	
12:59	CALIBRATION	RUN # 121	MATHESON 10 in Tedlar	
13:15	Analysis	RUN # 122	Influent PORT/Ch 2	(time 180)
	Changed TO ZONE 1 APP. 4 min			
13:31	Analysis	RUN # 123	MATHESON 10 PORT/Ch5	(Time 15 Sec

3/30/99

07:10	CALIBRATION	RUN # 124	MATHESON 10 in Tedlar	
07:22	CALIBRATION	RUN # 125	" " " "	
07:33	CALIBRATION	RUN # 126	" " " "	
07:52	Analysis	RUN # 127	MATHESON 10 PORT/Ch 5	(Time 15 Sec)
08:05	Analysis	RUN # 128	Effluent PORT/Ch 4	(Time 180)
08:21	Analysis	RUN # 129	Influent PORT/Ch 2	"
08:37	CALIBRATION	RUN # 130	MATHESON 10 in tedlar	
08:50	Analysis	RUN # 131	MATHESON 10 PORT/Ch 5	

1/99

06:50 CALIBRATION RUN # 132 MATHESON 10 IN Tedlar
07:02 CALIBRATION RUN # 133 " " " "
07:16 CALIBRATION RUN # 134 " " " "
07:29 ANALYSIS RUN # 135 MATHESON 10 PORT/ch 5 (TIMY 15 sec)
07:55 ANALYSIS RUN # 136 EFFLUENT PORT/ch 4 (TIMY 180)
08:11 ANALYSIS RUN # 137 INFLUENT PORT/ch 2 "
Changed TO ZONE 1 APP. 5 min
08:16 SUMMA SAMPLE CAN. # 04322 TAKEN ON ZONE 2
08:25 CALIBRATION RUN # 138 ABORT CAL GAS NOT ON PORT
08:37 CALIBRATION RUN # 139 MATHESON 10 in Tedlar
08:55 CALIBRATION RUN # 140 " " " "
09:08 CALIBRATION RUN # 141 " " " " BAD Run
9:22 Calibration Run # 142 " " " "
9:35 Analyze Run # 143 " " " " Port 5
9:47 Calibrate Run # 144 Argon Purge
~~Analyze Run # 145 " "~~
filed out Data to sentex 24. idx & .log
Changed to Trap mode

10:14 Calibrate Run # 1 Matheson 1 in Tedlar
2 clean cycles 6 sec desorption
changed Disp Mag From 0.3 to 0.5
10:33 Calibrate Run # 2 Matheson 1 in tedlar
Change display Mag. to 0.2
10:51 Calibrate Run # 3 Matheson 1 in Tedlar
11:42 Analize Run # 4 Matheson 1 in Tedlar Port 5
12:00 Analize Run # 5 Room Blank
Analize Run # 6 Argon Blank
12:35 Auto Analize 6 Anal. / cal started with cal. as Run # 7 Port 5 select. as Anal.

4/1/99

08:17	CALIBRATE	RUN # 74	MATHESON 1 IN Tedlar	
08:35	CALIBRATE	RUN # 75	" " " "	
08:53	CALIBRATE	RUN # 76	" " " "	
09:13	ANALIZE	RUN # 77	MATHESON 1 PORT/CH 5	(Tim 15 S
09:32	ANALIZE	RUN # 78	EFFLUENT PORT/CH 4	(tim 180
09:56	ANALIZE	RUN # 79	INFLUENT PORT/CH 2.	
	Changed TO ZONE 1 APP. 4 MIN			
10:19	CALIBRATION	RUN # 80	MATHESON 1 IN Tedlar	
10:44	ANALIZE	RUN # 81	MATHESON 1 PORT/CH 5	(BAD RUN
12:16	CALIBRATION	RUN # 82	MATHESON 1 IN Tedlar	
12:33	CALIBRATE	RUN # 83	" " " "	
12:51	CALIBRATE	RUN # 84	" " " "	
13:10	ANALIZE	RUN # 85	MATHESON 1 PORT/CH5	
13:36	ANALIZE	RUN # 86	ARGON BLANK PORT 5	
14:02	ANALIZE	RUN # 87	" " " "	15
14:17	ANALIZE	RUN # 88	ARGON BLANK " "	(30
14:36	ANALIZE	RUN # 89	ARGON BLANK " "	30
14:57	ANALIZE	RUN # 90	INFLUENT PORT/CH2	(180
	Changed TO ZONE 1 APP. 4 MIN			
15:18	CALIBRATION	RUN # 91	MATHESON 1 IN Tedlar	
15:36	ANALIZE	RUN # 92	MATHESON 1 PORT/CH5	(Time 15 sec

4/5/99

~~07:30~~	~~CALIBRATE~~ ER	~~RUN # 93~~	(NO DATA) ~~MATHESON 1 IN Tedlar~~	(BAD RUN
08:07	ANALIZE	RUN # 93	ARGON BLANK PORT/CH5	(15 se
08:28	CALIBRATE	RUN # 94	MATHESON 1 in Tedlar	
08:45	CALIBRATE	RUN # 95	" " " "	
09:25	CALIBRATE	RUN # 96	MATHESON 1 IN Tedlar	
09:47	ANALIZE	RUN # 97	ARGON BLANK PORT/CH 5	
10:06	ANALIZE	RUN # 98	EFFLUENT PORT/CH 4	(180 tim
10:31	ANALIZE	RUN # 99	ARGON BLANK PORT/CH 5	
10:50	ANALIZE	RUN # 100	ARGON BLANK PORT/CH 5	

4/5/99 *

11:11	ANALIZE	RUN # 101	INFLUENT PORT/ch 2	
	Changed TO Zone 1 APP. 5 min			
11:16	SUMMA SAMPLE	CAN # 93013	TAKEN ON Zone 2	
14:03	Analize	RUN # 102	argon BLANK PORT/Ch 5	
14:25	Analize	RUN # 103	argon BLANK PORT/ch5	
14:47	CALIBRATE	RUN # 104	MATHESON 1 in Tedlar	
15:05	CALIBRATE	RUN # 105	" " " "	
15:32	Analize	RUN # 106	MATHESON 1 in Tedlar PORT/ch5	BAD RUN
4/6/99		RUN # 107, 108, 109 BAD RUN EB		
06:43	CALIBRATE	RUN # 110	MATHESON 1 in Tedlar	
07:01	CALIBRATE	RUN # 111	" " " "	
07:22	CALIBRATE	RUN # 112	" " " "	
07:42	Analize	RUN # 113	MATHESON 1 PORT/Ch 5	(time 15 sec)
08:04	Analize	RUN # 114	ARGON BLANK PORT/Ch 5	(time 30 sec)
08:24	Analize	RUN # 115	" " " "	(")
08:46	Analize	RUN # 116	EFFLUENT PORT/Ch 4	(time 180)
09:16	Analize	RUN # 117	ARGON BLANK PORT/Ch 5	(time 30)
09:36	Analize	RUN # 118	" " " "	"
09:55	CALIBRATE	RUN # 119	MATHESON 1 in Tedlar	
13:04	Analize	RUN # 120	MATHESON 1 PORT/Ch 5	
14:05	Analize	RUN # 121	argon BLANK PORT/Ch 5	(NOT GOING TO USE)
14:36	Analize	RUN # 122	" " " "	
15:03	Analize	RUN # 123	EFFLUENT PORT/Ch 4	(time 180)
15:27	Analize	RUN # 124	ARGON BLANK PORT/Ch 5	(30 sec)
15:46	Analize	RUN # 125	ARGON BLANK PORT/Ch 5	BAD RUN "
16:05	Analize	RUN # 126	" " " "	

TO * • SYSTEM SHUT down @ 13:10 Blower MOTOR overload.
• Blowers + ELECT Blower MOTOR lubed while down.
• 14:00 SYSTEM RESTARTED.

4/8/99 06:54	CALIBRATE	RUN # 127	MATHESON 1 IN Tedlar	
07:13	CALIBRATE	RUN # 128	" " " "	
07:32	CALIBRATE	RUN # 129	" " " "	
07:58	ANALIZE	RUN # 130	~~ARGON B~~ MATHESON 1 PORT/CH5	
08:18	ANALIZE	RUN # 131	ARGON BLANK PORT/CH5	(Ti 30
08:37	ANALIZE	RUN # 132	ARGON BLANK PORT/CH5	"
08:57	ANALIZE	RUN # 133	EFFLUENT PORT/CH4	(Time 180
09:20	ANALIZE	RUN # 134	ARGON BLANK PORT/CH5	(Time 30 sec
09:42	ANALIZE	RUN # 135	ARGON BLANK PORT/CH5	"
10:04	ANALIZE	RUN # 136	INFLUENT PORT/CH2	(time 180)
	Changed TO ZONE 1		APP. 4 min	
13:26	ANALIZE	RUN # 137	ARGON BLANK PORT/CH5	(Time 30 sec)
13:50	ANALIZE	RUN # 138	ARGON BLANK PORT/CH5	"
14:09	CALIBRATE	RUN # 139	MATHESON 1 IN Tedlar	(time 15 sec)
14:48	CALIBRATE	RUN # 140	" " " "	"
15:15	ANALIZE	RUN # 141	MATHESON 1 PORT/CH5	"
15:38	ANALIZE	RUN # 142	ARGON BLANK PORT 5	(time 30 sec)
4/8/99				
06:42	CALIBRATE	RUN # 143	MATHESON 1 IN Tedlar	(time 15 sec)
07:00	CALIBRATE	RUN # 144	" " " "	(")
07:18	CALIBRATE	RUN # 145	" " " "	(")
07:37	ANALIZE	RUN # 146	MATHESON 1 PORT/CH5	(Time 15 sec)
08:01	ANALIZE	RUN # 147	ARGON BLANK PORT/CH5	(time 30 sec)
08:20	ANALIZE	RUN # 148	ARGON BLANK PORT/CH5	"
08:42	ANALIZE	RUN # 149	EFFLUENT PORT/CH4	(time 180)
09:06	ANALIZE	RUN # 150	ARGON BLANK PORT/CH5	(Time 30 sec)
09:25	ANALIZE	RUN # 151	ARGON BLANK PORT/CH5	"
09:46	ANALIZE	RUN # 152	INFLUENT PORT/CH 2	(time 180)
	Changed TO ZONE 1		APP. 4 min	
10:08	ANALIZE	RUN # 153	ARGON BLANK PORT/CH5	(time 30 sec)
10:26	ANALIZE	RUN # 154	ARGON BLANK PORT/CH5	"
12:48	CALIBRATE	RUN # 155	MATHESON 1 IN Tedlar	(time 15 sec)
13:07	CALIBRATE	RUN # 156	MATHESON 1 IN Tedlar	(")

4/8/99

13:26	CALIBRATE	RUN# 157	MATHESON 1 in Tedlar	(Time 15 sec)
13:47	ANALIZE	RUN# 158	MATHESON 1 PORT/ch5	(")
14:05	ANALIZE	RUN# 159	ARGON BLANK PORT/ch5	(time 30 sec)
14:27	ANALIZE	RUN# 160	INFLUENT PORT/CH 2	(time 180)
	Changed TO ZONE 1	APP. 4 min		
14:51	ANALIZE	RUN# 161	ARGON BLANK PORT/ch 5	(time 30 sec)
15:10	ANALIZE	RUN# 162	ARGON BLANK PORT/ch 5	"

4/12/99

07:25	CALIBRATE	RUN# 163	MATHESON 1 IN Tedlar	
07:44	CALIBRATE	RUN# 164	" " " "	
08:02	CALIBRATE	RUN# 165	" " " "	
08:20	ANALIZE	RUN# 166	MATHESON 1 PORT/ch 5	(time 15 sec)
08:41	ANALIZE	RUN# 167	ARGON BLANK PORT/ch5	(30 sec)
08:59	ANALIZE	RUN# 168	EFFLUENT PORT/ch 4	(Time 180)
9:21	ANALIZE	RUN# 169	ARGON BLANK PORT/ch 5	(time 30 sec)
09:40	ANALIZE	RUN# 170	ARGON BLANK PORT/ch 5	(")
10:00	ANALIZE	RUN# 171	INFLUENT PORT/CH 2	(time 180)
	Changed TO ZONE 1	APP. 4 min		
10:21	ANALIZE	RUN# 172	ARGON BLANK / PORT/ch 5	(time 30 sec)

Sentex.idx & .log filed out to C:\SNXdata\
sentex25.idx & .log

12:24	ANALIZE	RUN# 1	ARGON BLANK PORT/ch	(Time 30 sec) BAD RUN
12:42	CALIBRATE	RUN# 167	MATHESON 1 in Tedlar	

Lost Runs (2 above)

4/13/99 shut down from ≈ 8:00 to 10:10 adjust GLP alignment and belt tension, checked oil level, pumped ≈ 12-15 gal H_2O from tank A via wet vac.

4/13/99

12:49	CALIBRATE	RUN# 1	MATHESON 1 IN Tedlar	
13:07	CALIBRATE	RUN# 2	" " " "	
13:25	ANALIZE	RUN#3	MATHESON 1 PORT/CH5	(time 30sec)
13:44	ANALIZE	RUN#4	EFFLUENT PORT/CH4	(time 180)
14:06	ANALIZE	RUN# 5	ARGON BLANK PORT/CH5	(time 30 sec)
14:24	ANALIZE	RUN#6	ARGON BLANK PORT/CH5	(")
14:45	ANALIZE	RUN#7	INFLUENT PORT/CH2	(time 180)
		~~RUN#~~	~~ARGON BLANK PORT/CH5~~	
	Changed TO ZONE 1		APP. 4 MIN	
15:07	ANALIZE	RUN# 8	ARGON. BLANK PORT/CH5	(time 30sec)
15:26	ANALIZE	RUN#9	ARGON BLANK PORT/CH5	(")
15:44	CALIBRATE	RUN#10	MATHESON 1 IN Tedlar	(time 15sec)
16:02	CALIBRATE	RUN# 11	MATHESON 1 IN Tedlar	(")

4/14/99

06:28	CALIBRATE	RUN#12	MATHESON 1 IN Tedlar	
06:46	CALIBRATE	RUN#13	" " " "	
07:08	~~ANALIZE~~	~~RUN#14~~ BAD RUN	~~MATHESON 1 PORT/CH5~~	~~(time 15 sec)~~ NO DATA
	~~ANALIZE~~	~~RUN#~~	~~EFFLUENT PORT/CH4~~	~~(time 180)~~
07:26	ANALIZE	RUN#15	MATHESON 1 PORT/CH	(time 15sec)
07:47	ANALIZE	RUN#16	EFFLUENT PORT/CH4	(time 180)
08:08	ANALIZE	RUN#17	ARGON BLANK PORT/CH5	(time 30sec)
08:27	ANALIZE	RUN#18	ARGON BLANK PORT/CH5	(")
	ANALIZE	RUN#19	INFLUENT PORT/CH2	(time 180)
	Changed TO ~~RUN#~~ ZONE 1		APP. 4 MIN	
09:12	ANALYZE	RUN#20	ARGON BLANK PORT/CH5	(time 30 sec)
09:30	ANALYZE	RUN#21	ARGON BLANK PORT/CH5	(")
09:49	CALIBRATE	RUN#22	MATHESON 1 IN Tedlar	(time 15sec)
10:07	CALIBRATE	RUN#23	MATHESON 1 IN Tedlar	(")
12:52	~~ANALIZE~~	~~RUN#24~~ BAD RUN	~~MATHESON 1 PORT/CH5~~ NO DATA	~~(")~~
13:13	ANALIZE	RUN#25	MATHESON 1 PORT/CH5	(")
13:35	ANALIZE	RUN#26	EFFLUENT PORT/CH4	(time 180)
13:57	ANALIZE	RUN#27	ARGON BLANK PORT/CH5	(time 30sec)

4/14/99				
14:17	Analize	Run# 28	Argon Blank Port/ch5	(Time 30sec)
14:38	Analize	Run# 29	Influent Port/ch 2	(Time 180)
	Changed to Zone 1	App. 4 min.		
15:02	Analize	Run# 30	Argon Blank Port/ch5	(time 30sec)
15:21	Analize	Run# 31	Argon Blank Port/ch5	(")
15:39	Calibrate	Run# 32	Matheson 1 in Tedlar	(time 15sec)
15:57	Calibrate	Run# 33	Matheson 1 in Tedlar	(")
1/15/99				
06:43	Calibrate	Run# 34	Matheson 1 in Tedlar	
07:01	Calibrate	Run# 35	" " " "	
07:20	Analize	Run# 36	Matheson 1 Port/ch5	(Time 15sec)
07:39	Analize	Run# 37	Effluent Port/ch4	(time 180)
08:00	Analize	Run# 38	Argon Blank Port/ch5	(Time 30sec)
08:20	Analize	Run# 39	Argon Blank Port/ch5	(")
08:40	Analize	Run# 40	Influent Port/ch 2	(time 180)
	Changed to Zone 1	App. 4 min		
09:04	Analize	Run# 41	Argon Blank Port/ch5	(time 30sec)
09:22	Analize	Run# 42	Argon Blank Port/ch5	"
09:39	Calibrate	Run# 43	Matheson 1 in Tedlar	(time 15sec)
09:59	Calibrate	Run# 44	Matheson 1 in Tedlar	(")
12:22	Analize	Run# 45	Matheson 1 Port/ch5	(")
12:41	Analize	Run# 46	Effluent Port/ch4	(time 180)
13:02	Analize	Run# 47	Argon Blank Port/ch5	(time 30sec)
13:26	Analize	Run# 48	Argon Blank Port/ch5	(")
13:44	Analize	Run# 49	Argon Blank Port/ch5	(")
14:04	Analize	Run# 50	Influent Port/ch2	(time 180)
	Changed to Zone 1	App. 4 min		
14:26	Analize	Run# 51	Argon Blank Port/ch5	(Time 30sec)
14:47	Analize	Run# 52	Argon Blank Port/ch5	(")
:05	Calibrate	Run# 53	Matheson 1 in Tedlar	(time 15sec)
15:23	Calibrate	Run# 54	" " " "	(")

4/19/99

07:23 CALIBRATE RUN# 55 MATHESON 1 in Tedlar
07:41 CALIBRATE RUN# 56 " " " "
08:02 Analize RUN# 57 MATHESON 1 PORT/Ch5 (Time 15 sec)
08:22 Analize RUN# 58 Effluent PORT/Ch4 (Time 180)
08:46 Analize RUN# 59 ARGON BLANK PORT/Ch5 (time 30 sec)
09:07 Analize RUN# 60 ARGON BLANK PORT/Ch5 (")
09:33 Analize RUN# 61 ARGON BLANK PORT/Ch5 (")
10:34 System shut down, inspect for liquid in tank A
No significant amount found. Filters/screens clog?
11:58 System Restart
Automatic Run# 62 Port 5
Automatic Run # 78 Aborted
Calibrate Run# 79 Matheson 1 Tedlar
15:13 Analize Run# 80 Port/Ch 2 Influent ≈ 1 4 min
1532 Analize Run # 81 Port/Ch 5 ROOM
1552 " " 82 " " "
16:16 Analize Run# 83 Matheson 1 in tedlar ~~port 5~~
Readings:
Temp = 226° mag = 0.68 Back Press = 0
Ht exchang = 11.1 GLP = 208° Main -18.7
Post filter = -12.7 pre = -11.5 zone = -10.2
Room temp = 91° H_2O = 113 328
16:30 Changed to Tank B

4/20/99

06:46 CALIBRATE RUN# 84 MATHESON 1 in Tedlar
07:06 CALIBRATE RUN# 85 " " " "
07:28 Analize RUN# 86 MATHESON 1 PORT/Ch5 (time 15 sec)
07:49 ~~Analize Run# 87 Effluent PORT/Ch4~~ (Time 180) BLANK RUN
08:19 Analize RUN# 88 ARGON BLANK PORT/Ch5 (Time 30 sec)
08:37 ~~Analize Run# 89 Effluent PORT/Ch4~~ (Time 180) BLANK RUN
08:59 Analize RUN# 90 ARGON BLANK PORT/Ch5 (Time 30 sec)
09:21 Analize RUN# 91 Influent PORT/Ch 2 (Time 180)
Changed to ZONE 1 APP. 4 MIN

4/20/99 09:42	Analize	RUN# 92	ARGON BLANK PORT/ch 5	(Time 30 sec)
11:44	Analize	RUN# 93	ARGON BLANK PORT/ch 5	(Time 30 sec)
12:04	Analize	RUN# 94	ARGON BLANK PORT/ch	(Time 60 sec)
13:14	Analize	RUN# 95	INFLUENT PORT/ch 2	(Time 180)
	Changed to ZONE 1 APP. 4 min			
13:37	Analize	RUN# 96	ARGON BLANK PORT/ch5	(30 sec)
14:00	Analize	RUN# 97	" " " "	(")
14:19	Calibrate	RUN# 98	MATHESON 1 in Tedlar	
14:36	Calibrate	RUN# 99	" " " "	
4/21/99				
07:06	Calibrate	RUN# 100	MATHESON 1 in Tedlar	
07:23	Calibrate	RUN# 101	" " " "	
07:49	Analize	RUN# 102	MATHESON 1 PORT/ch5	(Time 15 sec)
*	AIR MAKE-UP ON first NOTCH from close.			
08:20	Analize	RUN# 103	ARGON BLANK PORT/ch5	(30 sec)
08:40	Calibrate	RUN# 104	MATHESON 1 in Tedlar	
09:02	Calibrate	RUN# 105	MATHESON 1 in Tedlar	
09:53	Analize	RUN# 106	ARGON BLANK PORT/ch5	(Time 30 sec)
13:00	AIR MAKE-UP Valve Fully CLOSED.			
13:10	Analize	RUN# 107	ARGON BLANK PORT/ch5	(Time 30 sec)
13:32	Analize	RUN# 108	EFFLUENT PORT/ch 4	(Time 180)
14:03	Analize	RUN# 109	ARGON BLANK PORT/ch5	(Time 30 sec)
14:25	Analize	RUN# 110	INFLUENT PORT/ch 2	(Time 180)
	Changed to ZONE 1 APP. 4 min			
14:46	Analize	RUN# 111	ARGON BLANK PORT/ch5	(Time 30 sec)
15:05	Analize	RUN# 112	ARGON BLANK PORT/ch5	(")
15:23	Calibrate	RUN# 113	MATHESON 1 in Tedlar	
15:41	Calibrate	RUN# 114	MATHESON 1 in Tedlar	

4/22/99

06:44	Calibrate	RUN# 115	MATHESON 1 in Tedlar	
07:04	Calibrate	RUN# 116	" " " "	
07:23	Analize	RUN# 117	MATHESON 1 Port/ch 5	(Time 15 sec)
07:46	Analize	RUN# 118	ARGON Blank Port/ch5	(time 30)
08:06	Analize	RUN# 119	ARGON Blank Port/ch5	(Time 60)
08:25	Analize	RUN# 120	Effluent Port/ch4	(Time 180)
08:47	Analize	RUN# 121	ARGON Blank Port/ch5	(time 30 sec)
09:08	Analize	RUN# 122	influent Port/ch2	(Time 180)
		Changed to zone 1 App 4 min		
09:30	Analize	RUN# 123	ARGON Blank Port/ch5	(time 30 sec)
09:50	Analize	RUN# 124	ARGON Blank Port/ch5	(")
12:49	Analize	RUN# 125	influent Port/ch2	(time 180)
		Changed to zone 1 App. 4 min		
13:15	Analize	RUN# 126	ARGON Blank Port/ch5	(time 30 sec)
13:37	Analize	RUN# 127	ARGON Blank Port/ch5	(time 30 sec)
14:01	Calibrate	RUN# 128	MATHESON 1 in Tedlar	
14:25	Calibrate	RUN# 129	MATHESON 1 in Tedlar	

4/23/99

14:50 • SYSTEM AUTO Shut down Blower MOTOR Over-load.

• Blowers + Elect Blower MOTOR lubed While down.

16:20 • SYSTEM RESTARTed.

4/26/99

07:00	Calibrate	RUN# 130	MATHESON 1 in Tedlar	
07:18	Calibrate	RUN# 131	" " " "	
07:39	Analize	RUN# 132	MATHESON 1 Port/ch5	(Time 15 sec)
08:10	Analize	RUN# 133	ARGON Blank Port/ch5	(Time 30 sec)
08:31	Analize	RUN# 134	Effluent Port/ch4	(time 180)
	~~Analize~~	~~RUN#~~	~~ARGON Blank Port/ch5~~	~~(time 30 sec)~~
08:54	Analize	RUN# 135	influent Port/ch2	(Time 180)
		Changed to zone 1 App 4 min		
09:18	Analize	RUN# 136	ARGON Blank Port/ch5	(Time 30 sec)
09:41	Analize	RUN# 137	ARGON Blank Port/ch5	(")
13:15	Analize	RUN# 138	influent Port/ch2	(time 180)

Changed to zone 1 App. 4 min.

4/26/99

13:40	Analize	RUN# 139	Argon Blank	Port/ch5	(time 30sec)
14:06	Analize	RUN# 140	Argon Blank	Port/ch	(")
14:26	Calibrate	RUN# 141	Matheson 1	in Tedlar	
14:46	Calibrate	RUN# 142	Matheson 1	in Tedlar	

Monthly Measure 2 do.

4/28/99	Calibrate	RUN# 143	Matheson 1	in Tedlar	
07:10	Calibrate	RUN# 144	" " " "		
07:29	Analize	RUN# 145	Matheson 1	Port/ch 5	(Time 15sec)
07:48	Analize	RUN# 146	Argon Blank	Port/ch5	(Time 30sec)
08:09	Analize	RUN# 147	Effluent	Port/ch 4	(time 180)
08:36	Analize	RUN# 148	Influent	Port/ch 2	(")
		Changed to Zone 1 App. 4 min.			
08:59	Analize	RUN# 149	Argon Blank	Port/ch5	(Time 30sec)
09:20	Analize	RUN# 150	Argon Blank	Port/ch5	(")
09:40	Calibrate	RUN# 151	Matheson 1	in Tedlar	
1:57	Calibrate	RUN# 152	Matheson 1	in Tedlar	
13:02	Analize	RUN# 153	Matheson 1	Port/ch5	(time 15sec)
13:23	Analize	RUN# 154	Argon Blank	Port/ch5	(Time 30sec)
14:16	Analize	RUN# 155	Influent	Port/ch 2	(time 180)
		Changed to Zone 1 App. 4 min.			
14:39	Analize	RUN# 156	Argon Blank	Port/ch5	(time 30sec)
14:57	Analize	RUN# 157	Argon Blank	Port/ch5	(time 30sec)
15:15	Calibrate	RUN# 158	Matheson 1	in Tedlar	
15:33	Calibrate	RUN# 159	" " " "		

4/29/99 System Shut Down for Maint. Checked belt tension
7:45 AM and alignment - OK Spray Lithium lubricant Blower
Chambers (6LP & 5LP), Greased Blowers (5LP & 6LP)
MB checked synthetic oil level - ok, cleaned heat
EB exchanger inside and out, Ran System (AS+SVE)
10 min off line to warm up and spread spray
Lithium. System seemed to run as expected.
10:30 Shut system down in bypass for pez.
(capture) test of OU-1 Pump & Treat.
1545 Restart & Transition to Full on by 15:50

P889-106 Faxed
5/3/99

106
5/3/99

07:18	CALIBRATE	RUN# 160	MATHESON 1 IN Tedlar	
07:35	CALIBRATE	RUN# 161	" " " "	
07:53	ANALIZE	RUN# 162	MATHESON 1 PORT/ch5	(time 15 sec)
08:15	ANALIZE	RUN# 163	ARGON BLANK PORT/ch5	(Time 30 sec)
08:36	ANALIZE	RUN# 164	EFFLUENT PORT/ch4	(time 180)
08:58	ANALIZE	RUN# 165	ARGON BLANK PORT/ch5	(time 30 sec)
09:19	ANALIZE	RUN# 166	INFLUENT PORT/ch2	(time 180)
	Changed to Zone 1 APP 4 min			
09:42	ANALIZE	RUN# 167	ARGON BLANK PORT/ch5	(time 30 sec)
↑ 10:00	ANALIZE	RUN# 168	ARGON BLANK PORT/ch5	(")
14:08	System shutdown for P&T Filter Maint.			
14:25	System back on full zone 2			

5/4/99 0641

	CALIBRATE	RUN# 169	MATHESON 1 IN Tedlai	
06:59	CALIBRATE	RUN# 170	" " " "	
07:19	ANALIZE	RUN# 171	MATHESON 1 PORT/ch5	(time 15 sec)
07:41	ANALIZE	RUN# 172	ARGON BLANK PORT/ch5	(time 30 sec)
08:00	ANALIZE	RUN# 173	EFFLUENT PORT/ch4	(Time 180)
08:21	ANALIZE	RUN# 174	ARGON BLANK PORT/ch5	(Time 30 sec)
08:44	ANALIZE	RUN# 175	INFLUENT PORT/ch2	(Time 180)
	changed to Zone 1 APP 4 min.			
09:06	ANALIZE	RUN# 176	ARGON BLANK PORT/ch5	(Time 30 sec)
12:59	ANALIZE	RUN# 177	ARGON BLANK PORT/ch5	(")
* 09:10	DOWN FOR INST. OF POST CARBON FILTER			
10:10	RESTART @			
13:22	ANALIZE	RUN# 178	INFLUENT PORT/ch2	(Time 180)
	Changed TO ZONE 1 APP. 4 min			
13:45	ANALYZE	RUN# 179	ARGON BLANK PORT/ch5	(Time 30)
14:04	ANALIZE	RUN# 180	ARGON BLANK PORT/ch5	(")
★BAD★	CALIBRATE	RUN# 181	MATHESON 1 IN Tedlar	★BAD★
14:44	CALIBRATE	RUN# 182	MATHESON 1 in Tedlar	
15:05	CALIBRATE	RUN# 183	MATHESON 1 IN Tedlar	

5/5/99 SVE Shut down @ 08:45 for Piezom. Readings
- Mark Gilliat Request -
Renamed Sentex.idx & .log to Sentex26.idx & .log
SVE Restart @ 16:48

5/6/99

07:01	Calibrate	Run #1	Matheson 1	in Tedlar	
07:24	Calibrate	Run #2	" "	" "	
07:46	Analize	Run #3	Matheson 1	Port/ch5	(Time 15sec)
08:08	Analize	Run #4	Argon Blank	Port/ch5	(Time 30sec)
08:30	Analize	Run #5	Effluent	Port/ch4	(Time 180)
08:54	Analize	Run #6	Argon Blank	Port/ch5	(Time 30sec)
09:42	Analize	Run #7	Influent	Port/ch 2	(Time 180)
	Changed	to ~~Run#~~ Zon 1	App. 4 min		
10:10	Analize	Run #8	Argon Blank	Port/ch5	(Time 30sec)
51	Calibrate	Run #9	Matheson 1	in Tedlar	
13:09	Calibrate	Run #10	Matheson 1	in Tedlar	

15:15 Started removing Carbon from Tank (A)
17:26 Work Done Switch to Tank A System off
17:41 Restart System.

/10/99

06:55	Calibrate	Run #11	Matheson 1	in Tedlar	
07:13	Calibrate	Run #12	" "	" "	
07:37	Analize	Run #13	Matheson 1	Port/ch5	(Time 15sec)
07:58	Analize	Run #14	Argon Blank	Port/ch5	(Time 30sec)
08:17	Analize	Run #15	Effluent	Port/ch4	(Time 180)
08:45	Analize	Run #16	Argon Blank	Port/ch5	(Time 30sec)
09:05	Analize	Run #17	Argon Blank	Port/ch5	(")
25	Analize	Run #18	Influent	Port/ch 2	(Time 180)
	changed	~~Run #~~ to Zone 1	App. 4 min		
09:46	Analize	Run #19	Argon Blank	Port/ch5	(Time 30sec)
0:05	Analize	Run #20	Argon Blank	Port/ch	(")

Ave Flow Z1 & Z2
5/11/99 00:00 → 07:05
329 scfm

5/10/99					
10:24	CALIBRATE	RUN #21	MATHESON 1	in Tedlar	
10:42	CALIBRATE	RUN #22	MATHESON 1	in Tedlar	
16:05	Changed to Zone 1				
	* ZONE 2 came ON @ midnight until 07:05				
5/11/99	Both Zone 1 & 2 were ON. Zone 1 only after 07:05				
06:50	CALIBRATE	RUN #23	MATHESON 1	in Tedlar	
07:09	CALIBRATE	RUN #24	" "	" "	
07:31	ANALIZE	RUN #25	MATHESON 1	PORT/ch 5	(time 15sec)
07:56	ANALIZE	RUN #26	ARGON BLANK	PORT/ch5	(time 30sec)
	ANALYZE	Run #27	argon blnk	"	"

	Sample id	run #	port (MAY99)	
Quarterly Soil Gas Survey				
	ED-N1	28	5	tedlar
	ED-N1	29	5	"
	ED-N2	30	"	"
	ED-N2	31	"	"
low vol	ED-N3	32	"	"
	ED-N4	33		
	ED-N4	34		
	ED-N5	35		
	ED-N5	36		
	EW-N10	37		
	Blank	38		
	EW-N10	39		
	Calibrate	40	calport	—
	"	41	"	—
	JPMP-1S	42	port 5	tedlar
	JPMP-1S	43		
	JPMP-1M	44		
	JPMP-1M	45		
	JPMP-3	46		
	JPMP-3	47		

sample id	run #	comment
ITRD-2(N9)	48	port 5
blank (argon)	49	" >1 ppm
ITRD-2(N9)	50	"
blank argon	51	port 5
blank	52	
Zone 1 16:30	53	port 1 15s purge!
Zone 1	54	port 1 90s purge
calibration	55	cal port
calibration	56	"
calibration	57	port 5

-/12/99

06:59	CALIBRATE	RUN# 58	MATHESON 1	in Tedlar	
07:17	CALIBRATE	RUN# 59	" "	" "	
17:38	Analize	RUN# 60	MATHESON 1	PORT/CH5	(Time 15 sec)
07:51	Analize	RUN# 61	ARGON Blank	PORT/CH	(time 30 sec)

08:00 Shut down SVE Equip Inst. for AS

sample id	run #	comment
ITRD-1(N7)	62	port 5
blank	63	port 5 room air
ITRD-1(N7)	64	port 5
blank	65	argon
EW-N9	66	port 5
blank	67	room air

10:00 Re Start SVE Equip inst Comp.

EW-N9	68	port 5
blank	69	room air
EW-N8	70	port 5
EW-N8	71	"

Sample id	run #	comment
~~EW-N7~~	72	port 5
Blank	73	|
Blank	74	|
EW-N7	75	|
Blank	76	argon
blank	77	"
EW-N1	78	port 5
EW-N1	79	|
EW-N2	80	|
EW-N2	81	|
EW-N3	82	|
EW-N3	83	|
EW-N4	84	|
EW-N4	85	|
EW-N5	86	|
EW-N5	87	|
EW-N6	88	|
EW-N6	89	|
VPMP-2S	90	|
VPMP-2S	91	|
VPMP-2M	92	|
VPMP-~~4S~~ 2M	93	|
VPMP-4S	94	|
VPMP-4S	95	|
VPMP-4M	96	|
VPMP 4M	97	|
calibrate	98	~~calport~~ tedlar port 5

5/12/99 5LP & 6LP Blowers Lubed (Grease)

5/13/99

06:59	Calibrate	Run# 99	Matheson 1 in Tedlar	
07:17	Calibrate	Run# 100	" " " "	
07:39	Analize	Run# 101	Matheson 1 Port/ch 5	(time 30 sec)
08:01	Analize	Run# 102	Argon Blank Port/ch5	(time 30 sec)
08:21	Analize	Run# 103	Influent Port/ch 2	(time 180)
—	Changed to Zone 1 App. 4 min			
08:25	System Shut Down @ 825-9:05 Carbon off line			
09:09	Blank	Run# 104	argon port 5	(15 sec purge)
09:41	Zone 4	Run# 105	port 4	(180 sec purge)
10:04	Blank	Run# 106	argon Port 5	(30 sec Purge)
10:25	Blank	Run# 107	argon Port 5	(30 sec Purge)
	Blank	Run# 108	argon Port 5	(30 sec Purge)
11:17	Zone 2	Run# 109	Port 2	(180 sec Purge)
11:37	Blank (Air)	Run# 110	Port 5 Air	(30 sec Purge)
11:56	Blank	Run# 111	Port 5 Air	(")
12:17	Blank	Run# 112	Port 5 "	"
12:36	Blank	Run# 113	Port 5 "	"
12:57	Zone 4	Run# 114	Port 4	(180 sec Purge)
13:17	blank	run# 115	port 5	room air
13:38	blank	run# 116	"	"
13:59	blank	run# 117	"	"
14:20	blank	run# 118	"	"
14:44	Zone 2	run# 119	port 2	
15:05	blank	run# 120	room air	
~~15:25~~	~~blank~~	~~#121~~	"	

Rename Sentex.log, Sentex.idx to
→ Sentex27.log, Sentex27.idx

~~15:35~~ Start automode
channel sequence → 4 5 5 5 5 5
cal after 12 analyses

16:16 Start Automatic on Run#1 Cal, Port4, Port5 x5

5/14/99 Zone SVE/PIZ Readings

07:50 AS on Line Zone 2 Rough Balance until Warm. GC on Run # 38 Let GC Continue in Auto Mode After AS start Went to manual after Run 40

Effluent Zone 4 Run # 41

09:29 Restart auto mode

Channel Sequence 4 5 5 5 5 5 ←

5/17/99 Stop auto mode - AS baseline

prepare 1ppm cal standard

- 10 l matheson 1ppm cal gas
- 10 µl halon

0828 halon cal (1ppm) run # 212 [lo value]

halon test run # 213 port 5

0854 halon cal (1ppm) run # 214

0914 blank # 215 room air

blank # 216 argon

halon cal (1ppm) # 217

halon tedlar (1ppm) # 218

1005 Change mode trap → loop

halon 10ppm run # 219 cal port ↑

5/18/99 Halon calibration

New OMEG.PRN

loop mode - rename .idx, .log → sentex28.*

	Sample id	run #	comment
	1,000 ppm halon	1	cal port tedlar
1248	1,000 ppm halon	2	"
1257	1,000 ppm halon	3	
1307	argon blank	4	
1317	500 ppm halon	5	
1327	500 ppm halon	6	
1337	500 ppm halon	7	

	sample id	run #	comment
	argon blank	8	cal port Tedlar
1357	100 ppm halon	9	
1408	100 ppm halon	10	
1418	100 ppm halon	11	
1428	argon blank	12	
1438	10 ppm halon	13	
1448	10 ppm halon	14	
1458	10 ppm halon	15	
1509	100 halon - 10 math	16	
1522	zone 4 + 100 halon	17	cal port

5/19/99 AS/SVE TRAILER TEST

GC column temp 50°C (set @ 40°C)

	sample id	run #	comment
10 ppm	math + 100 ppm halon	35	calibration
	"	36	" abort
	"	37	bad cal
→	M10H100	38	cal port
	"	39	"
	"	40	"

→ Rename *.idx, *.log → Sentex29.*

	sample id	run #	comment
	M10H100	1	cal port
start	zone 4 + halon	2	port 5
same	m10h100	3	fresh 0745
at min	~~m10h100~~ zone4	4	
0802	m10h100	5	cal
	m10h100	6	port 5
	zone 4 + halon	7	"

auto sample mode

zone 4

0834 halon injection (11:41.85 inj period)
0834 Zone 4 post injection run #8
auto mode - 15 min sample period
1440 #33 1000 ppm halon check OK!
1443 Return to auto mode
* System Shutdown between 19:00 & 19:15 (≈19:10)
* Lubed (Greased) Motor & Blowers (SVE)
SVE System Restarted ≈ 20:40
20:53 RESTART AUTO mode - no halon 8-58
Run # 59
Run # 60 calibration
5/20/99 07:30 Put 0-0.25" H_2O Mag. Ga. on 422 - No reading after 15 min. - Concern = Not Conn. to Aquafire w/SVE
#109 calibration (auto mode shutdown)
#110 argon blank
#111 Well 422-1
#112 Well 422-2
#113 ~~Well 422-3~~ VPMP-1M
#114 Well 422-3
1016 #115 Zone 4 auto mode
1046 #118 PET-1
1201 Zone 1 off
1203 Air Sparge on Run # 121 End
sentry.idx, .log → sentry.30.*

Sample	Run#	comment
PET(D)	123	
	124	abort
PET(A)	125	purts
PET(B)	126	"

Sample id	run #	comment
halon 1	127	port 5
halon 2	128	
halon 3	129	
halon 4	130	
halon 5	131	
halon 6	132	
halon 7	133	
halon 8	134	
halon 9	135	
halon 100 ppm	136	
halon 10	137	
halon 11	138	
halon 12	139	
halon 13	140	
halon 10 ppm	141	
halon 14	142	
p&t (B)	143	

16:07 auto mode port 4
144 - 194
Abort file out Sentex.idx & .log as Sentex31.idx&log
(937) 470-5830
Ed Brummett 866-4565
* Mark Spivey 371-7292
8:20 pm SYSTEM AUTO SHUT DOWN BLOWER MOTOR OVER-
20:20 load. (SVE SYSTEM)
22:00 SYSTEM RESTARTED @
5/21/99
05:00 SYSTEM AUTO SHUT DOWN DUE TO High WATER Level
Switch NOT Being activated.
6:30 SYSTEM BACK ON.

06:45 SYSTEM SHUT DOWN FOR MAINT ON The 6LP Blower
HAD TO Tighten Bolts ON BOTTOM FLANGE OF Blower To Pipe.

07:05 System Turned Back on.

5/21/99 Renamed sentry.idx, x.log → Sentex32.*

	Sample id	run	comment
	10 ppm cal (hal)	1	100 ppm halon
		2,3	bad
	calibration	4	port cal
	halon 16	5	port 5
	halon 17	6	"
1044	halon 18	7	"
1051	halon 19	8	"
	halon 20	9	"
	halon 21	10	"
	halon 22	11	"
	halon 23	12	"

1120 GC to trap mode

calibration standard - 1 ppm meth + 1 ppm halon

	Sample id	run	comment
	1 ppm cal	13	trap mode
	"	14	"
	halon 23	15	port 5
	zone 4	16	port 4
	~~GC automode trap~~		
	376-1	17	port 5
	376-2	18	
	376-3	19	
	376-4	20	
	377-1	21	
	377-2	22	
	377-3	23	
	377-4	24	

	sampleid	run#	comment
	422-1	25	port 5
	422-2	26	"
	422-3	27	
	422-4	28	
	~~1ppm cal~~	~~29~~	bad ~~cal port~~
bad	1ppm cal	30	cal port ~~port 5~~
bad	1ppm cal	31	cal port
	1ppm cal	32	"
	Zone 4	33	
	halon 1	34	
	halon 5	35	
	halon 10	36	
	halon 15	37	
	halon 1820	38	
	halon 23	39	
	halon 2322	40	
	1ppm cal	41	PORT 5
	1ppm cal	42	PORT 5
	~~1ppm cal~~	~~43~~	~~PORT 5~~
	halon 17	43	port 5
	halon 18	44	
	halon 19	45	
	halon 21	46	
	halon 3	47	
	10ppm halon	48	
pulse	P&T-1	49	
	P&T-2	50	
pulse	PTT(B) 5/20	51	
	376-5	52	
	377-5	53	
	422-5	54	
	argon blank	55	

System in auto trap mode
sample zone 4 every 30 minutes

05/22/99
07:10 SYSTEM AUTO SHUT DOWN BLOWER MOTOR Overload.
* LUBED (GREASED) 6LP Blower. (SVE)
08:40 SYSTEM RESTARTED.

5/24/99 Run# 166 Argon Blank Port 5 File out. idt
Run# 167 " " " sentex 33.109
sentex 33.
Line looks contaminated will Hook up & set up
13:45 purge Runs
~~1400~~ Blower (6LP) Seized! System down

5/25/99 Calibration Run# 13
Calibration Run# 14
Bag on Port 5 Anal Run# 15
Argon Blank Run# 16
#17-22 BLANKS
1600
~~3:45pm~~ SVE System Restarted

05/26/99
07:04 CALIBRATE RUN# 23 MATHESON 1 in Tedlar
Calibrate Run # 24 " + Halon in "
7:58 Argon Run# 25
System Shut down @ ≈ 7:30 A.M. Vibration & Noise
Monthly Measures Inspection showed that internal damage too
great to continue operation
Analyze well 377-6 Run# 26 Port 5
" " " Run# 27 Port 5
Analyze Argon Blank Run# 28 Port 5

/26/99

Analyze well # 376-6 Run # 29 Port 5
" " " Run # 30 "
Analyze Argon Blank Run # 31 "
Analyze Well # 422-6 Run # 32 "
" " " Run # 33 "
Analyze Argon Blank Run # 34 "
Calibrate Matheson 1 + Halon Run # 35
Analyze Matheson 1 + Halon Run # 36 PORT 5
" Argon Blank Run # 37 "
Purged Cal Gas Bag (Argon) Run # 38 "
New Cal Gas Bag Matheson 1 + Halon Run # 39 " Summary, Halon looks Low ?! 8 #
Calibration Matheson 1 + Halon Run # 40
Analyze Math. 1 + Halon Run # 41 Port 5
/99 Calibrate Math. 1 + Halon (made from orig Master) Run # 42 Peaks Shifted Temp low
Analyze Argon Blank Run # 43 Port 5
Calibrate Math. 1 + Halon Run # 44 Peaks still shifted
Calibrate " Run # 45 H1211 Peak low
★ Empty Pure Halon Bags and eak out last gas from Cyl & Can
Make new Stds.
Analyze New std. Math. 1 + Halon Run # 46 Yo Baby!
~~Argon~~ Analyze Argon Blank Run # 47 Port 5
" " " " 48 "
Calibration Math. 1 + H1211 Run # 49 New Std
Analyze Argon Blank Run # 50 Port 5
Calibration Math. 1 + H1211 Run # 51
Calibration " " 52 Trap Heat ≈ 5.25s.
Analyze Math. 1 + Halon " 53 Trap Heat ≈ 5.35s.
SON BLANK Analyze Argon Run # 54 Port 5
2 Calibrate Math. 1 + Halon Run # 55 ★
Analyze Well 376-7 Run # 56 Port 5
" " " " # 57 "
SON Analyze Well 377-7 Run # 59 Port 5
VK #61 " " " " # 60 "

5/27/99

Analyze well # 422-7 Run # 62 Port 5
" " " " # 63 "
Analyze Argon Blank Run # 64 "
Calibrate Math. 1 + Halon Run # 65

6/1/99

Calibrate Run # 66 Matheson-1 + Halon 1211
Calibrate Run # 67 " " + " "
Calibrate Run # 68 " " + " "
Analyze Argon Blank Run # 69 Port 5
Analyze Run # 70 Well # 376-8 Port 5
Analyze Run # 71 " " " "
Analyze Run # 72 Well # 377-8 Port 5
Analyze Run # 73 " " " "
Analyze Run # 74 Well # 422-8 Port 5
Analyze Run # 75 " " "
Analyze Run # 76 Argon Blank Port 5
Analyze Run # 77 Matheson 1 + Halon Port 5
Analyze Run # 78 Argon Blank Port 5
Calibrate Run # 79 Matheson-1 + Halon 1211 (Bad Run)
Calibrate Run # 80 " " (Bad Run)
Calibrate Run # 81 Matheson-1 + Halon 1211

6/3/99

Calibrate Run # 82 Matheson-1 + Halon 1211
Calibrate Run # 83 " "
Calibrate Run # 84 " "
Calibrate Run # 85 " "
Calibrate Run # 86 " "
Analyze Run # 87 Argon Blank Port 5
Analyze Run # 88 Well # 376-9 Port 5
Analyze Run # 89 " " " "

aqut

/13/99	Analyze	Run # 90	Argon Blank Port 5
	Analyze	Run # 91	Well # 377-9 Port 5
	Analyze	Run # 92	" " " "
	Analyze	Run # 93	Well # 422-9 " "
	Analyze	Run # 94	" # 422-9 " "
	Analyze	Run # 95	Argon Blank Port 5
	Analyze	Run # 96	Matheson-1 + Halon 1211 Port 5
	Analyze	Run # 97.	Argon Blank Port 5
	Calibrate	Run # 98	Matheson 1 + Halon 1211

/7/99	Analyze	Run # 99	Argon Blank Port 5
	Calibrate	Run # 100	Matheson 1 + Halon 1211 (Fresh!)
	"	Run # 101	↓
	"	Run # 102	↓
	Analyze	Run # 103	↓ Failed to ID Halon
	Analyze	Run # 104	Argon Blank
	Analyze	Run # 105	Well # 378-10 Port 5
	"	" # 106	" "
	Analyze	Run # 107	Well # 377-10 Port 5
	"	" # 108	" " "
	Analyze	Run # 109	Well # 422-10 Port 5
	"	" 110	" " "
	Analyze	Run # 111	Matheson 1 + Halon 1211
	Calibrate	Run # 112	" "
	"	" 113	" "
	"	" 114	" "

Sentex.idx & .log saved to C:\SNXDATA sentex34.idx & .log

/18/99	Calibration	Run # 1	Old cal gas - No Good

Restarted System ≈ 1900 hrs Ran till ≈ 19:30
GCP Too Hot check Belts on 6/9
System Shut down

6/9/99	Calibrate	Run# 2	Matheson1 (Fresh)	
	Calibrate	Run# 3	"	Entered in Meas Vals.
	Calibrate	Run# 4	"	
0820	SVE System Restart			
	Run# 4 didn't ID dcm on CDCE Changed RT			
	Calibrate	Run# 5	Matheson1 Bag	
	Analyze	Run# 6	"	" Port 5
	Analyze	Run# 7	Room AIR	
	NOTE: Shut GC down (incl. Power) time was not CORR for precon heat >6 sec. Done Prior to Run # 7			
	Calibrate	Run# 8	Matheson1 Bag.	
	Calibrate	Run# 9	"	"
	Calibrate	Run# 10	"	"
	Analyze	Run# 11	Room Air Blank	
	Analyze	Run# 12	Argon Port 5	
	Analyze	Run# 13	Zone 2 Influent	
	OOPS! 8 sec. Scanner Purge Zones Not Switched			
	Analyze	Run# 14	Zone 2 Influent SP. 180	
	Analyze	Run# 15	Argon Port 5	
	"	" 16		
	"	" 17	"	Aborted
	Calibrate	Run# 18	Matheson1 bag	
	Analyze	Run# 19	"	" Port 5
6/10/99	Calibrate	Run# 20	"	" (Fresh)
	"	" 21	"	"
	"	" 22	"	"
	"	" 23	"	"
	"	" 24	"	"

6/14/99	CALIBRATE	RUN # 25	MATHESON 1	in Tedlar Bag	
	CALIBRATE	RUN # 26	" "	" "	"
	CaliBRATE	RUN # 27	" "	" "	"
	ANALYZE	RUN # 28	ARGON Blank	PORT/5	
	ANALYZE	RUN # 29	Eff/uent	PORT/ch 4	Time 180
	ANALYZE	RUN # 30	ARGON Blank	PORT/ch5	(sec 5)
	ANALYZE	RUN # 31	ARGON Blank	PORT/ch5	(")
	ANALYZE	RUN # 32.	" "	PORT/ch5	(")
	ANALYZE	RUN # 33	" "	" "	(")
	ANALYZE	RUN # 34	INfluent	PORT/ch2	(time 180)
	Changed TO ZONE 1	APP. 4 min.			
	ANALYZE	RUN # 35	ARGON BLANK	PORT/5	(sec 15)
	ANALYZE	RUN # 36	" "	" "	"
	ANALYZE	RUN # 37	MATHESON 1	PORT/5	(sec 8)
	ANALYZE	RUN # 38	ARGON Blank	PORT/5	(sec 15)
	CALIBRATE	RUN # 39	MATHESON 1	in Tedlar Bag	(sec 8)
	CALIBRATE	RUN # 40	" "	" "	" (")
6/16/99	CaliBRATE	RUN # 41	MATHESON 1 + H 1211		
	CaliBRATE	RUN # 42	" " +	"	
	CaliBRATE	RUN # 43	" " +	"	
	CaliBRATE	RUN # 44	" " +	"	
	ANALYZE	RUN # 45	ARGON Blank	PORT/5	(Time 15 sec)
	ANALYZE	RUN # 46	Well # 376-11	PORT/5	(8 sec)
	ANALYZE	RUN # 47	" "	"	(")
	ANALYZE	RUN # 48	Well # 377-11	PORT/5	(")
	ANALYZE	RUN # 49	" "	"	(")
NO RUN	ANALYZE	RUN # 50	well # 422-11	PORT/5	Bad Run (")
	ANALYZE	RUN # 51	" "	"	(")
	ANALYZE	RUN # 52	" "	"	(")
	CALIBRATE	RUN # 53	MATHESON 1 + H 1211		
	ANALYZE	RUN # 54	INfluent	PORT/ch2	(time 180)
	Changed TO ZONE 1	APP. 4 min			
	ANALYZE	RUN # 55	ARGON BLANK	PORT/5	(time 15 sec)

6/16/99	Analyze	Run #56	Argon Blank	Port/5	(15 sec)
	Analyze	Run #57	Matheson 1 + H 1211	Port/5	(8 sec)
	Calibrate	Run #58	Matheson 1	in Tedlar Bag	(")
	Calibrate	Run #59	"	" " "	(")
6/17/99	Calibrate	Run #60	Matheson 1	in Tedlar	(fresh)
	Calibrate	Run #61	" "	" "	
	Calibrate	Run #62	" "	" "	
	Analyze	Run #63	argon Blank	Port/5	
	Analyze	Run #64	influent	Port/ch 2	(time 180)
	Changed	to Zone 1	App. 4 min		
	Analyze	Run #65	argon Blank	Port/5	(15 sec)
	Analyze	Run #66	" "	" Bad Run	(")
	Analyze	Run #67	" "	"	(")
	Analyze	Run #68	Matheson 1	in Tedlar P/5	(8 sec)
	Calibrate	Run #69	Matheson 1	in Tedlar	(")
6/21/99	Calibrate	Run # 70	Matheson 1	in Tedlar	(fresh)
	Calibrate	Run #71	" "	" "	
	Calibrate	Run #72	" "	" "	
	Analyze	Run #73	Argon Blank	Port/5	(15 sec)
	Analyze	Run #74	influent	Port/ch 2	(time 180)
	Changed	to ~~Run #~~ Zone 1	App. 4 min		
	Analyze	Run #75	Argon Blank	Port/5	(15 sec)
	Analyze	Run #76	" "	" "	"
	Analyze	Run #77	Matheson 1	Port/5	(8 sec)
	Analyze	Run #78	Argon Blank	Port/5	(15 sec)
	Calibrate	Run #79	Matheson 1	in Tedlar	(8 sec)
	Calibrate	Run # 80	" "	" "	(")

6/24/99	Calibrate	Run # 81	Matheson-1 in Tedlar	(fresh)
	Calibrate	Run # 82	" " " "	
	Calibrate	Run # 83	" " " "	
	Analyze	Run # 84	argon Blank Port/5	(15 sec)
	Analyze	Run # 85	influent Port/ch2	(Time 180)
	Changed	to Zone 1	APP. 4 min	
	Analyze	Run # 86	argon Blank Port/5	(15 sec)
	Analyze	Run # 87	" " Tedlar " "	(")
	Analyze	Run # 88	Matheson-1 in Tedlar Port/5	(8 sec)
	Analyze	Run # 89	argon Blank Port/5	(15 sec)
	Calibrate	Run # 90	Matheson 1 in Tedlar	(8 sec)
	Calibrate	Run # 91	" " " "	(")
6/28/99	Calibrate	Run # 92	Matheson-1 in Tedlar	(Fresh)
	Calibrate	Run # 93	" " " "	(8 sec)
	Calibrate	Run # 94	" " " "	(")
	Analyze	Run # 95	Argon Blank Port/5	(15 sec)
	Analyze	Run # 96	influent Port/ch 2	(Time 180)
	Changed	to ~~Run~~ # Zone 1	APP. 4 min	
	Analyze	Run # 97	Argon Blank Port/5	(15 sec)
	Analyze	Run # 98	Argon Blank Port/5	(")
	Analyze	Run # 99	Matheson-1 Port/5 in Tedlar	(Time 8 sec)
29 Monthly meas Rpt'y	Analyze	Run # 100	Argon Blank Port/5	(Time 15 sec)
	Calibrate	Run # 101	Matheson-1 in Tedlar	(Time 8 sec)
	Calibrate	Run # 102	" " " "	(")
6/30/99	SVE Blowers	5LP + 6LP + 5 HP	Lubed (Greased)	
7/1/99	Calibrate	Run # 103	Matheson-1 in Tedlar	(fresh)
	Calibrate	Run # 104	" " " "	(8 sec)
	Calibrate	Run # 105	" " " "	(")
	Analyze	Run # 106	Argon Blank Port/5	(15 sec)
	Analyze	Run # 107	influent Port/ch 2	(Time 180)
*	Changed	to Zone 1	APP. 4 min	
	Analyze	Run # 108	Argon Blank Port/5	(15 sec)
	Analyze	Run # 109	" " " "	(")

CONT

7/1/99	Analyze	RUN # 110	MATHESON-1	PORT/5	(TIME 8 SEC)
	Analyze	RUN # 111	ARGON BLANK	PORT/5	(15 SEC)
	CALIBRATE	RUN # 112	MATHESON-1	IN Tedlar	(8 SEC)
	CALIBRATE	RUN # 113	MATHESON-1	IN Tedlar	(8 SEC)
* 7/6/99	SYSTEM SHUT DOWN Sometime over weekend.				
7/6/99	CALIBRATE	RUN # 114	MATHESON 1	IN Tedlar	(FRESH)
	CALIBRATE	RUN # 115	" "	" "	(TIME 8 SEC)
	CALIBRATE	RUN # 116	" "	" "	(")
	ANALYZE	RUN # 117	ARGON BLANK	PORT/5	(15 SEC)
*	SYSTEM BACK ON @ 10:00				
	ANALYSIS	RUN # 118	INFLUENT	PORT/CH 2	(TIME 180)
	Changed TO ZONE 1		APP. 4 MIN		
	ANALYSIS	RUN # 119	ARGON BLANK	PORT/5	(15 SEC)
	ANALYZE	RUN # 120	" "	" / "	(")
	ANALYZE	RUN # 121	MATHESON-1	PORT/5	(8 SEC)
	ANALYZE	RUN # 122	ARGON BLANK	PORT/5	(15 SEC)
	CALIBRATE	RUN # 123	MATHESON-1	IN Tedlar ~~PORT/5~~	(8 SEC)
	CALIBRATE	RUN # 124	MATHESON-1	IN Tedlar ~~" / "~~	(")
7/8/99	CALIBRATE	RUN # 125	MATHESON-1	IN Tedlar (BAD RUN)	(FRESH)
	CALIBRATE	RUN # 126	" "	" "	(8 SEC)
	CALIBRATE	RUN # 127	" "	" "	(")
	CALIBRATE	RUN # 128	" "	" "	(")
	ANALYZE	RUN # 129	ARGON BLANK	PORT/5	(15 SEC)
	ANALYZE	RUN # 130	INFLUENT	PORT/CH 2	(TIME 180)
	Changed TO ZONE 1		APP. 4 MIN		
	ANALYZE	RUN # 131	ARGON BLANK	PORT/5	(15 SEC)
	ANALYZE	RUN # 132	" "	" / "	(")
	ANALYZE	RUN # 133	MATHESON-1	PORT/5	(8 SEC)
	ANALYZE	RUN # 134	ARGON BLANK	PORT/5	(15 SEC)
	CALIBRATE	RUN # 135	MATHESON 1	IN Tedlar	(8 SEC)
	CALIBRATE	RUN # 136	" "	"	(")

/99	Calibrate	Run# 137	Matheson-1	in Tedlar	(Fresh)
	Calibrate	Run# 138	"	" " "	(8 Sec)
	Calibrate	Run# 139	"	" " "	(")
	Analyze	Run# 140	Argon Blank	Port/5	(15 sec)
	Analyze	Run# 141	influent	Port/ch2	(Time 180)
	Changed	to Zone 1	APP. 4 min		
	Analyze	Run# 142	Argon Blank	Port/5	(15 sec)
	Analyze	Run# 143	"	" " / "	(")
	Analyze	Run# 144	Matheson-1	Port/5	(8 sec)
	Analyze	Run# 145	Argon Blank	Port/5	(15 sec)
	Calibrate	Run# 146	Matheson-1	in Tedlar	(8 sec)
	Calibrate	Run# 147	"	" "	(")
5/99	Calibrate	Run# 148	Matheson-1	in Tedlar	(Fresh)
	Calibrate	Run# 149	"	" "	(8 sec)
	Calibrate	Run# 150	"	" "	(")
	Analyze	Run# 151	Argon Blank	Port/5	(15 sec)
	Analyze	Run# 152	influent	Port/ch 2	(Time 180)
	Changed	to Zone 1	APP. 4 min		
	Analyze	Run# 153	Argon Blank	Port/5	(15 sec)
	Analyze	Run# 154	"	" "	(")
	Analyze	Run# 155	Matheson-1	Port/5	(8 sec)
	Analyze	Run# 156	Argon Blank	Port/5	(15 sec)
	Calibrate	Run# 157	Matheson-1	in Tedlar	(8 sec)
	Calibrate	Run# 158	"	" "	(")
/19/99	Calibrate	Run# 159	Matheson-1	in Tedlar	(Fresh)
	Calibrate	Run# 160	"	" "	(8 sec)
	Calibrate	Run# 161	"	" "	(")
	Analize	Run# 162	Argon Blank	Port/5	(15 sec)
	Analize	Run# 163	Influent	Port/ch2	(Time 180)
	Changed	~~Run#~~ to Zone 1	APP. 4 min		
	Analyze	Run# 164	Argon Blank	Port/5	(15 sec)
	Analyze	Run# 165	Argon Blank	Port/5	(")

7/19/99	Analyze	Run #166	Matheson-1	Port/5	(8 sec)
	Analyze	Run #167	Argon Blank	Port/5	(15 sec)
	Calibrate	Run #168	Matheson-1	in Tedlar	(8 sec)
	Calibrate	Run #169	"	" "	(")

7/20/99 Filed out data sentex.idx & .log saved as C:\SNXdata\sentex35.idx & .log

→ FAXED ← 7/22/99 SVE Blowers 5LP & 6LP, 5 HP Lubed (Greased)

7/22/99	Calibrate	Run #1	Matheson-1	in Tedlar	(Fresh)
	Calibrate	Run #2	"	" "	(8 sec)
	Calibrate	Run #3	"	" "	(")
	Analyze	Run #4	Argon Blank	Port/5	(15 sec)
	Analyze	Run #5	Influent	Port/2	(Time 180)
	Changed to Zone 1		App. 4 min		
	Analyze	Run #6	Argon Blank	Port/5	(15 sec)
	Analyze	Run #7	Argon Blank	Port/5	(")
	Analyze	Run #8	Matheson-1	Port/5	(8 sec)
	Analyze	Run #9	Argon Blank	Port/5	(15 sec)
	Calibrate	Run #10	Matheson-1	in Tedlar	(8 sec)
	Calibrate	Run #11	Matheson-1	in Tedlar	(8 sec)

12:42 System shut down for maint (auto dialer)

13:10 System Restart

7/26/99	Calibrate	Run #12	Matheson-1	in Tedlar	(Fresh)
Monthly Meas. Rpt	Calibrate	Run #13	"	" "	(8 sec)
	Calibrate	Run #14	"	" "	(8 sec)
	Analyze	Run #15	Argon Blank	Port 5	(15 sec)
	Analyze	Run #16	Influent	Port 2	(180 sec)
	Changed to Zone 1		approx 4 min		
	Analyze	Run #17	Argon Blank	Port 5	(30 sec)
	Calibrate	Run #18	Matheson 1	in tedlar	(8 sec)
	Analyze	Run #19	Matheson 1	in Tedlar	Port 5 (15 se

7/29/99 Room Air Blank Run # 20 Aborted
Calibrate Run # 21 Matheson 1 in Tedlar (fresh)
Calibrate Run # 22 " " " (8 sec)
Calibrate Run # 23 " " " "
Analyze Run # 24 Argon Blank Port 5 (30 sec)
Analyze Run # 25 Influent Port/Zone 2 (180 sec)
Changed to Zone 1 approx 4 min
Analyze Run # 26 Argon Blank Port 5 (30 sec)
Analyze Run # 27 " " " "
Analyze Run # 28 " " " "
Calibration Run # 29 Matheson 1 in Tedlar (8 sec)
Analysis Run # 30 Matheson 1 in Tedlar Port 5 (30 sec)

8/2/99 Calibrate RUN # 31 MATHESON 1 in Tedlar (fresh)
Calibrate RUN # 32 " " " (8 sec)
Calibrate RUN # 33 " " " (")
Analyze RUN # 34 ARGON BLANK PORT 5 (30 sec)
Analyze RUN # 35 INFLUENT PORT/2 (time 180)
Changed TO ZONE 1 APP. 4 MIN
Analyze RUN # 36 ARGON BLANK PORT/5 (30 sec)
Analyze RUN # 37 ARGON BLANK PORT/5 (")
Analyze RUN # 38 MATHESON-1 PORT/5 (8 sec)
Calibrate RUN # 39 MATHESON-1 in Tedlar (")
Calibrate RUN # 40 " " " (")

8/5/99 Calibrate RUN # 41 MATHESON 1 in Tedlar (fresh)
Calibrate RUN # 42 " " " (8 sec)
Calibrate RUN # 43 " " " (")
Analyze RUN # 44 ARGON BLANK PORT/5 (30 sec)
Analyze RUN # 45 INFLUENT PORT/CH 2 (time 180)
Changed TO ZONE 1 APP. 4 MIN
Analyze RUN # 46 ARGON BLANK PORT/5 (30 sec)

8/5/99	Analyze	RUN # 47	ARGON BLANK	PORT/5 (30 sec
	Analyze	RUN # 48	MATHESON 1	PORT/5 (15 sec
	CaliBRATE	RUN # 49	MATHESON 1	in Tedlar (8 sec
	CaliBRATE	RUN # 50	"	" " ("
8/9/99	CaliBRATE	RUN # 51	MATHESON 1	in Tedlar (fresh
	CaliBRATE	RUN # 52	"	" " (8 sec
	CaliBRATE	RUN # 53	"	" " ("
	Analyze	RUN # 54	ARGON BLANK	PORT/5 (30 sec
	Analyze	RUN # 55	INFLUENT	PORT/ch2 (time 180
	Changed to Zone 1		APP. 4 min	
	Analyze	RUN # 56	ARGON BLANK	PORT/5 (30 sec
	Analyze	RUN # 57	MATHESON 1	PORT/5 (15 sec
	Analyze	RUN # 58	ARGON BLANK	PORT/5 (30 sec
	CaliBRATE	RUN # 59	MATHESON 1	in tedlar (8 sec
	CaliBRATE	RUN # 60	"	" " ("
8/11/99	DOE TOUR, System off @ 12:55 ON @ 1307			
8/12/99	CaliBRATE	RUN # 61	MATHESON 1	in Tedlar (fresh
	CaliBRATE	RUN # 62	"	" " (8 sec
	CaliBRATE	RUN # 63	"	" " ("
	Analyze	RUN # 64	ARGON BLANK	PORT/5 (30 sec
	Analyze	RUN # 65	INFLUENT	PORT/ch2 (180 s
	Changed to Zone 1		APP. 4 min	
	Analyze	RUN # 66	ARGON BLANK	PORT/5 (30 sec
	Analyze	RUN # 67	"	" " ("
	Analyze	RUN # 68	MATHESON 1	PORT/5 (15 sec
	Analyze	RUN # 69	ARGON BLANK	PORT/5 (30 sec
	CaliBRATE	RUN # 70	MATHESON 1	in Tedlar (8 sec
	CaliBRATE	RUN # 71	"	" " ("

07/16/99	Calibrate	Run# 72	Matheson 1 in Tedlar	(fresh)
	Calibrate	Run# 73	" " "	(8 sec)
	Calibrate	Run# 74	" " "	(")
	Calibrate	Run# 75	" " "	(")
	Analyze	Run# 76	Argon Blank Port/5	(30 sec)
	Analyze	Run# 77	influent Port/Ch2	(Time 180)
	Changed	To Zone 1	App. 4 min	
	Analyze	Run# 78	Argon Blank Port/5	(30 sec)
	Analyze	Run# 79	~~Matheson~~ Argon Blank Port/5	(")
	Analyze	Run# 80	Matheson 1 in Tedlar Port/5	(15 sec)
	Calibrate	Run# 81	BAD RUN ~~Matheson 1~~ in Tedlar	(8 sec)
	Calibrate	Run# 82	Matheson 1 in Tedlar	(") was 8? (600)
	Calibrate	Run# 83	Matheson 1 "	Chart dur = 10
	"	Run# 84	" "	chart dur 15

NOTE: dcm 59 925PPb, c1zdce 90 931, benzene 127 987, tce 161 952, toluene 272 956, PCE 367 947; ebz 575 981, xylene 748 961 (7%)

	Calibrate	Run# 85	Matheson 1 in Tedlar	disp Mag .25 → .5 chart dur 15 → 14
	Analyze	Run# 86	Argon Port 5	chart dur 14 → 13.5 disp Mag 0.5 → 1
12:05	Calibrate	Run# 87	Matheson 1 in Tedlar	
12:26	Analyze	Run# 88	Argon Port 5	(8 sec)
12:49	Analyze	Run# 89	Matheson 1 Port 5	
13:11	Analyze	Run# 90	Argon Port 5	(8 sec)
	~~Calibrate~~	~~Run#~~	~~Matheson~~	

JMPS

8/17/99	Reading 1052 Temp 49°C		
05:34	Calibration	Run# 91	Matheson 1 in Tedlar (8sec
05:55	Calibration	Run# 92	" " " " "
06:20	Calibration	Run# 93	" " " " "
06:42	Analysis	Run# 94	Argon Blank Port 5 (8s
	Calibration	Run# 95	Matheson 1 in Tedlar (8s
	Analysis	Run# 96	Argon Blank Port 5 (8se ~~Matheson 1 in Tedlar (8s~~
	~~Calibration~~ Analysis MPS	Run# 97	Matheson 1 Tedlar Port5 (8s
	Analysis	Run# 98	Argon Blank Port5 (8s
	Calibration	Run# 99	Matheson 1 Tedlar (8
	Analysis	Run# 100	Argon Blank Port5 (8
	Analysis	Run# 101	Matheson 1 Tedlar Po
	Analysis	Run# 102	Argon Blank Port5 (8
8/18/99	Reading 1079 Temp 49°C		
03:58	Calibration	Run# 103	Matheson 1 in Tedlar (5
04:20	"	Run# 104	" " " "
04:42	"	Run# 105	" " " "
05:04	Analysis	Run# 106	Argon Blank Port5 (8se
05:26	Calibration	Run# 107	Matheson 1 in Tedlar
05:48	Analysis	Run# 108	Argon Blank Port5 (
06:10	Analysis	Run# 109	Matheson 1 Ted. Port5
06:33	Analysis	Run# 110	Argon Blank Port5
06:56	Calibration	Run# 111	Matheson 1 in tedla
07:19	Analysis	Run# 112	Argon Blank Port5
07:43	Analysis	Run# 113	Matheson 1 Port5
08:06	Analysis	Run# 114	Argon Blank Port5
08:36	Calibration	Run# 115	Matheson 1 in Tedlar (
08:59	Analysis	Run# 116	Argon Blank Port5
	Analysis	Run# 117	#6' 1st Bag
	"	Run# 118	Lab bag
	"	Run# 119	Lab Split
	"	Run# 120	Ambient Air Port 5 (

Cont

8/18/99	Analysis	Run# 121	Argon Blank Port/5	(8 sec)
	Calibration	Run# 122	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 123	Argon Blank Port/5	(8 sec)
	Analysis	Run# 124	Matheson 1 Ted. Port/5	(8 sec)
	Analysis	Run# 125	Argon Blank Port/5	(8 sec)
	Analysis	Run# 126	Lab bag Port/5	(8 sec)
	Analysis	Run# 127	Lab dupe Port/5	(8 sec)
	Analysis	Run# 128	Ambient Air Port/5	(8 sec)
	Calibration	Run# 129	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 130	Argon Blank Port/5	(8 sec)
	Analysis	Run# 131	Matheson 1 Ted. Port/5	(8 sec)
8/19/99	Calibration	Run# 132	Matheson 1 in Tedlar	(fresh)
	Calibration	Run# 133	" " "	(8 sec)
	Calibration	Run# 134	" " "	(")
	Analysis	Run# 135	Argon Blank Port/5	(8 sec)
	Analysis	Run# 136	influent Port/ch 2	(180 sec)
	Changed to Zone 1		App. 4 min	
	Analysis	Run# 137	Argon Blank Port/5	(8 sec)
	Analysis	Run# 138	" " "	(15 sec)
	Calibration	Run# 139	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 140	Matheson 1 in Tedlar Port/5	(15 sec)
8/23/99	Calibration	Run# 141	Matheson 1 in Tedlar	(fresh)
	Calibration	Run# 142	" " " "	(8 sec)
	Calibration	Run# 143	" " " "	(")
	Analysis	Run# 144	Argon Blank Port/5	(8 sec)
	Analysis	Run# 145	influent Port/ch 2	(180 sec)
	Changed to Zone 1		App. 4 min	
	Analysis	Run# 146	Argon Blank Port/5	(30 sec)
	Calibration	Run# 147	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 148	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 149	" " " "	(")

8/23/99 Analysis Run# 150 Argon Blank Port/5 (15 sec
Calibration Run 151 Matheson 1 in Tedlar (8 sec
Analysis ~~Run# 152~~ Bad Run ~~Matheson 1 in Tedlar Port/5~~ (8 sec
Analysis Run# 153 " " " " (8 sec

8/26/99 Calibration Run# 154 Matheson 1 in Tedlar (fresh
Calibration Run# 155 " " " (8 sec
Calibration Run# 156 " " " ("
Analysis Run# 157 Argon Blank Port/5 (8 sec
Analysis Run# 158 Influent Port/2 (180 sec
Changed to ~~Run#~~ Zone 1 App. 4 min
Analysis Run# 159 Argon Blank Port/5 (30 sec
Calibration Run# 160 Matheson 1 in Tedlar (8 sec
Analysis Run# 161 Matheson 1 Port/5 (" "
Analysis Run# 162 Argon Blank Port/5 (85 sec
Analysis ~~Analysis Calibration~~ Run# 163 Matheson 1 in Tedlar/5 8 sec
Sentex.idx & Sentex.log Renamed to Sentex36 & Sentex36.log respectively and moved to C:\snxdata\

Quarterly Soil Gas Survey [9/99]

8/30/99 Calibration Run# 1 Matheson 1 in Tedlar (fresh
Calibration Run# 2 " " " " (8 sec
Calibration Run# 3 " " " " ("
Analysis Run# 4 Argon Blank Port 5 (8 sec
Analysis Run# 5 Influent Port/2 (180 sec
Changed to Zone 1 App. 4 min
Analysis Run# 6 Argon Blank Port/5 (30 sec
Analysis Run# 7 " " " ("
Calibration Run# 8 Matheson 1 in Tedlar (8 sec
Analysis Run# 9 Argon Blank Port/5 (15 sec
Analysis Run# 10 Matheson 1 in Ted Port/5 (8 sec
Analysis Run# 11 Argon Blank Port/5 (15 sec

	VPMP-1S	Run# 12	port 5
	VPMP-1S	Run# 13	"
	VPMP-1M	Run# 14	"
	VPMP-1M	Run# 15	"
	VPMP-3	Run# 16	"
	VPMP-3	Run# 17	
	VPMP-4S	Run# 18	
	VPMP-4S	Run# 19	
	VPMP-2S	Run# 20	
	VPMP-2S	Run# 21	
	VPMP-2M	Run# 22	
	VPMP-2M	Run# 23	
	VPMP-4M	Run# 24	
	VPMP-4M	Run# 25	
	blank	Run# 26	
	1ppm math	Run# 27	port 5
8/31/99	Calibration	Run# 28	Matheson 1 in Tedlar (fresh)
	Analysis	Run# 29	Argon Blank Port/5 (8 sec)
	Calibration	Run# 30	Matheson 1 in Tedlar (")
	Analysis	Run# 31	Argon Blank Port/5 (")
	Analysis	Run# 32	Matheson 1 Port/5 (")
	Analysis	Run# 33	Argon Blank Port/5 (")
	EW-N10	Run# 34	port 5
	EW-N10	Run# 35	
	EW-N8	Run# 36	abort Run# 37
	1ppm math	Run# 38	port 5
	EW-N8	Run# 39	
10:55	Change SVE To Zone 1		
	ED-N1	Run# 40	
	ED-N1	Run# 41	
	ED-N2	Run# 42	
	ED-N2	Run# 43	

Sample id	Run #	Port
ED-N3	44	5
ED-N3	45	"
ED-N4	46	"
ED-N4	47	"
ED-N5	48	
ED-N5	49	
EW-N9	50	
EW-N9	51	abort
blank	52	
EW-N9	53	
blank	54	
ITRD-2(N9)	55	
ITRD-2(N9)	56	
blank	57	
1ppm Matheson	58	port 5 (tedlar)

9/1/99	CALIBRATION	RUN # 59	MATHESON 1 in Tedlar	(fresh
	ANALYSIS	RUN # 60	ARGON BLANK PORT/5	(8 sec
	CALIBRATION	RUN # 61	MATHESON 1 in Tedlar	("
	ANALYSIS	RUN # 62	ARGON BLANK PORT/5	("
	ITRD-1 (N7)	#63	port 5	
	ITRD-1 (N7)	#64		
	EW-N7	#65		
	blank	#66		
	EW-N7	#67		
	blank	#68		
	blank	#69		
tedlar →	~~1ppm cal~~ blank	#70	~~cal port~~ port 5	
	bad cal	#71		
	blank	#72		
	blank	#73		
	blank	#74		

* Zone 2 came on @ midnight turned off @ 7:10

chart time

	~~math 1ppm~~	#75	cal port
	~~(EW-N7)/1000~~	~~#76~~	port 5
	math 1ppm	#76	
	EW-N7/1000	#77	
	EW-N1	#78, large early	
	EW-N1	#79 unk peaks	
	EW-N2	#80	
	EW-N2	#81	
	EW-N3	#82, large early	
	EW-N3	#83 unk peak	
1430	Change SVE BACK TO ZONE 2		
	EW-N4	#84	
	EW-N4	#85	
	EW-N5	#86	
	EW-N5	#87	
	EW-N6	#88	
	EW-N6	#89	
	1ppm Math	#90	port 5 tedlar

9/2/99	CALIBRATION Run # 91	MATHESON 1 in Tedlar	(fresh)
	Analysis Run # 92	ARGON BLANK PORT/5	(8 sec)
	Calibration Run # 93	MATHESON 1 in Tedlar	(")
	Analysis Run # 94	ARGON BLANK PORT/5	(")
	Analysis Run # 95	INFLUENT PORT/2	(180 sec)
	Changed TO ZONE 1	APP. 4 MIN	
	Analysis Run # 96	ARGON BLANK PORT/5	(30 sec)
	Analysis Run # 97	ARGON BLANK PORT/5	(15 sec)
Analysis	~~Calibration~~ EB Run # 98	matheson 1ppm port/5	
	System Maint Down 2:20 - 2:31 pm		

9/7/99	Calibration	Run# 99	Matheson 1 in Tedlar	(fresh)
	Analysis	Run# 100	Argon Blank Port/5	(8 sec)
	Calibration	Run# 101	Matheson 1 in Tedlar	(")
	Analysis	Run# 102	Argon Blank Port/5	(")
	Analysis	Run# 103	Influent Port/ch2	(time 180)
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 104	Argon Blank Port/5	(30 sec)
	Analysis	Run# 105	Argon Blank Port/5	(15 sec)
	Analysis	Run# 106	Matheson 1 in Tedlar Port/5	(8 sec)
	Analysis	Run# 107	Argon Blank Port/5	(15 sec)
*	Filed out Sentex.idx & .log as Sentex37.idx & .log			
9/9/99	Calibration	Run# 1	Matheson 1 in Tedlar	(fresh)
	Analysis	Run# 2	Argon Blank Port/5	(8 sec)
	Calibration	Run# 3	Matheson 1 in Tedlar	(")
	Analysis	Run# 4	Argon Blank Port/5	(")
	Analysis	Run# 5	Influent Port/ch2	(time 180)
	Changed to ~~Run#~~ Zone 1 App. 4 min			
	Analysis	Run# 6	Argon Blank Port/5	(30 sec)
	Analysis	Run# 7	Argon Blank Port/5	(15 sec)
	Analysis	Run# 8	Matheson 1 in Ted Port/5	(8 sec)
	Analysis	Run# 9	Argon Blank Port/5	(15 sec)
9/13/99	Calibration	Run# 10	Matheson 1 in Tedlar	(fresh)
	Analysis	Run# 11	Argon Blank Port/5	(8 sec)
	Calibration	Run# 12	Matheson 1 in Tedlar	(")
	Analysis	Run# 13	Argon Blank Port/5	(")
	Analysis	Run# 14	Argon Blank Port/5	(")
	Analysis	Run# 15	Influent Port/ch2	(time 180)
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 16	Argon Blank Port/5	(30 sec)
	Analysis	Run# 17	Argon Blank Port/5	(15 sec)
	Analysis	Run# 18	Matheson 1 in Tedlar Port/5	(8 sec)
	Analysis	Run# 19	Argon Blank Port/5	(15 sec)

4/14/99	Calibration	Run # 20	Matheson 1, in Tedlar	(fresh)
	~~Analysis~~ Calibration	Run # 21	~~Argon Blank Port/5~~ Matheson 1 in "	(8 sec)
	Analysis	Run # 22	Argon Blank Port/5	(")
	Calibration	Run # 23	Matheson 1 in Tedlar	(")
	Analysis	Run # 24	Argon Blank Port/5	(")
08:39	Analysis	Run # 25	Effluent Port/on 4	(Time 180)
08:49	Summa, DataChem Labs		#108111	
09:00	Changed SVE to Zone 1			
	Analysis	Run # 26	Argon Blank Port/5	(30 sec)
	Analysis	Run # 27	" " "	(")
	Analysis	Run # 28	" " "	(")
	Analysis	Run # 29	Blank Port/5	(")
	Analysis	Run # 30	Matheson 1 in Tedlar Port/5	(30 sec)
	Analysis	Run # 31	Blank Port/5	(8 sec)
	Analysis	Run # 32	Blank Port/5	(30 sec)
	Analysis	Run # 33	Matheson 1 in Tedlar Port/5	(8 sec)
	Analysis	Run # 34	Blank Port/5	(30 sec)
	Analysis	Run # 35	" "	(")
*	Zone 2 came on @ midnight auto timer.			
4/15/99	Calibration	Run # 36	Matheson 1 in Tedlar	(fresh)
*	Turned Zone 2 off @ 06:30			
	Analysis	Run # 37	Blank Air Port/5	(15 sec)
	Calibration	Run # 38	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 39	Blank Air Port/5	(15 sec)
08:07	Analysis	Run # 40	Influent Port/ch 2	(180)
08:11	Summa, DataChem Labs		#105695 Zone 1	
	Analysis	Run # 41	Blank Air Port/5	(30 sec)
	Analysis	Run # 42	Influent Port/ch 2	(180)
	Analysis	Run # 43	Blank Air Port/5	(30 sec)
*	Changed back to Zone 2 @ 09:15			
	Analysis	Run # 44	Blank Air Port/5	(30 sec)
	Analysis	Run # 45	" " "	(")
	Analysis	Run # 46	Matheson 1 in Tedlar Port/5	(8 sec)
	Analysis	Run # 47	Blank Air Port/5	(30 sec)

9/16/99	Calibration	Run# 48	Matheson 1	in tedlar	(fresh)
	Analysis	Run# 49	Blank	Air Port/5	(15 sec)
*	Calibration	Run# 50	Matheson 1	in Tedlar	(8 sec)
	Analysis	Run# 51	Blank	Air Port/5	(30 sec)
	Calibration	Run# 52	Matheson 1	in tedlar	(8 sec)
	Analysis	Run# 53	Blank	Air Port/5	(30 sec)
	Analysis	Run# 54	influent	Port/ch 2	(180 sec)
	Changed To ~~[illegible]~~ ZONE 1				APP. 4 min
	Analysis	Run #55	Blank, Clean	Air Port/5	(30 sec)
	Analysis	Run #56	Blank	Air Port/5	(30 sec)
	Analysis	Run# 57	Blank	Air Port/5	(30 sec)
	Analysis	Run# 58	Matheson 1	in Ted Port/5	(8 sec)
	Analysis	Run# 59	Blank	Air Port/5	(30 sec)
9/20/99	SVE Blowers 5LP+6LP, 5HP Lubed (Greased)				
9/20/99	Calibration	Run# 60	Matheson 1	in tedlar	(fresh)
	Analysis	Run# 61	Blank	Air Port/5	(15 sec)
	~~Calibration~~	~~Run#~~	~~Matheson 1~~	~~in tedlar~~	~~(8 sec~~
	Analysis	Run# 62	Blank	Air Port/5	(30 sec)
	Calibration	Run# 63	Matheson 1	in tedlar	(8 sec)
	Analysis	Run# 64	Blank	Air Port/5	(30 sec)
	Analysis	Run# 65	influent	Port/ch 2	(180 sec)
	Analysis	Run# 66	Blank	Air	(30 sec)
Changed To ZONE 1 APP 4 min	Analysis	Run# 67	Blank	Air Port/5	(")
	Analysis	Run# 68	Blank	Air Port/5	(")
	Analysis	Run# 69	Matheson 1	in Tedlar Port/5	(8 sec)
	Analysis	Run# 70	Blank	Air Port/5	(30 sec)
	Analysis	Run# 71	Blank	Air Port/5	(")

4/23/99	Calibration	Run# 72	Matheson 1 in Tedlar	(fresh)
	Analysis	Run# 73	Blank Air Port/5	(30 sec)
	Calibration	Run# 74	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 75	Blank Air Port/5	(30 sec)
	Calibration	Run# 76	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 77	Blank Air Port/5	(30 sec)
	Analysis	Run# 78	Influent Port/ch 2	(180 sec)
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 79	Blank Air Port/5	(30 sec)
	Analysis	Run# 80	Blank Air Port/5	(")
	Analysis	Run# 81	Blank Air Port/5	(")
	Analysis	Run# 82	Matheson 1 in Tedlar Port/5	(8 sec)
	Analysis	Run# 83	Blank Air Port/5	(30 sec)
	Analysis	Run# 64	Blank Air Port/5	(30 sec)
1/27/99	Calibration	Run# 85	Matheson 1 in Tedlar	(fresh)
	Analysis	Run# 86	Blank Air Port/5	(30 sec)
	Analysis	Run# 87	Blank Air Port/5	(")
	Calibration	Run# 88	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 89	Blank Air Port/5	(30 sec)
	Calibration	Run# 90	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 91	Blank Air Port/5	(30 sec)
	Analysis	Run# 92	Blank Air Port/5	(")
	Analysis	Run# 93	Influent Port/ch 2	(180 sec)
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 94	Blank Air Port/5	(30 sec)
	Analysis	Run# 95	Blank Air Port/5	(")
	Analysis	Run# 96	Blank Air Port/5	(")
	Analysis	Run# 97	Blank Air Port/5	(")
	Analysis	Run# 98	Argon Blank Port/5	(15 sec)
	Analysis	Run# 99	Blank Air Port/5	(30 sec)
	Analysis	Run# 100	Matheson 1 in Tedlar Port/5	(8 sec)
9/28/99	Analysis	Run# 101	Blank Air Port/5	(30 sec)
	Analysis	Run# 102	" " "	(")

9/30/99 Calibration Run# 103 Matheson 1 in tedlar (fresh)
Analysis Run# 104 Blank Air Port/5 (30 sec)
Analysis Run# 105 Blank " " ("
Calibration Run# 106 Matheson 1 in Tedlar (8 sec)
Analysis Run# 107 Blank Air Port/5 (30 sec)
Calibration Run# 108 Matheson 1 in tedlar (8 sec)
Analysis Run# 109 Blank Air Port/5 (30 sec)
Analysis Run# 110 influent Port/2 (180 sec)
Changed to Zone 1 App 4 min
* Look on other Port Analysis Run# 111 Blank Air Port/5 (30 sec)
Analysis Run# 112 Argon Blank Port/5 ("

Set oven to 150°C & Bake overnight
10/1/99 Set oven back to 40°C Set to Run Auto Mode Pulling Room Air Blanks on 2 hr int.
Run # 113 → 155. (when Aborted on 10/4

10/4/99 Analysis Run# 153 Argon Blank Port/5 (180 sec
filed out Data sentex.idx & .log to Sentex 38.idx & .log
Calibration Run# 1 Matheson 1 in Tedlar (fresh
Analysis Run# 2 Argon Blank Aborted
" Run# 3 Room " "
" Run# 4 " "
Calibration Run# 5 Matheson 1 in tedlar
Analysis Run# 6 Room Blank 60 sec. 2 cln.c
" Run# 7 " " " 0 cln.c
Calibration Run# 8 Matheson 1 in Tedlar
Analysis Run# 9 Room Blank 60 sec
Analysis Run# 10 Room Blank " Abort
Analysis Run# 11 Room Blank
Calibration Run# 12 Matheson 1
Analysis Run# 13 Room Blank
Analysis Run# 14 Zone 2 on zone 1 x 4 (180 sec)
Changed to Zone 1 App. 4 min

Cont

10/4/99	Analysis	Run# 15	Room Blank	P/5	(180 sec)
"	Analysis	Run# 16	Room Blank	P/5	(")
	Analysis	Run# 17	Matheson 1 in Tedlar		(8 sec)
10/5/99	Analysis	Run# 18	Room Blank	P/5	(180 sec)
	Analysis	Run# 19	Room Blank	P/5	(30 sec)

Cont

9/30/99	Analysis	Run# 113	Blank Air	Port/5	(30 sec)
	Analysis	Run# 114	Argon Blank	"	(")
	Analysis	Run# 115	Blank Air	"	(")
	Analysis	Run# 116	" "	"	(")
	Analysis	Run# 117	" "	"	(15 sec)
	Analysis	Run# 118	Argon Blank	"	(")
	Analysis	Run# 119	Blank Air	"	(180 sec)
	Analysis	Run# 120	Matheson 1 in tedlar	"	(8 sec)
10/7/99	Calibration	Run# 20	Matheson 1 in Tedlar		(fresh)
	Analysis	Run# 21	Blank Air	P/5	(180 sec)
	Calibration	Run# 22	Matheson 1 in Tedlar		(8 sec)
	Analysis	Run# 23	Room Blank	P/5	(60 sec)
	Calibration	Run# 24	Matheson 1 in Tedlar		(8 sec)
	Analysis	Run# 25	Room Blank	P/5	(30 sec)
	Analysis	Run# 26	Influent	Port/ch 2	(180 sec)
	Changed to Zone 1		App. 4 min		
	Analysis	Run# 27	Room Blank	P/5	(180 sec)
	Analysis	Run# 28	" "	"	(")
	Analysis	Run# 29	Matheson 1 in Tedlar	P/5	(8 sec)
	Analysis	Run# 30	Room Blank	P/5	(180 sec)
	Analysis	Run# 31	" "	"	(")
	Analysis	Run# 32	Matheson 1 in Tedlar	P/5	(8 sec)
	Analysis	~~Run 33~~	Room Blank		(180 sec) Abort

10/11/99	05:34 Analysis	Run# 33	Blank - Room Air	(180 sec Scan Purge)
	Calibration	Run# 34	Matheson 1 (Fresh)	(8 sec)
	Analysis	Run# 35	Blank Room Air	(180 sec S.P.)
	Calibration	Run# 36	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 37	Blank - Room Air	(180 sec)
	Calibration	Run# 38	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 39	Blank - Room Air	(180 sec)
	Analysis	Run# 40	Influent Port/2	(")
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 41	Blank - Room Air	(180 sec)
	Analysis	Run# 42	" "	(")
	Analysis	Run# 43	Matheson 1 in Tedlar P/5	(8 sec)
	Analysis	Run# 44	Blank - Room Air P/5	(180 sec)
10/14/99	Analysis	Run# 45	Blank - Room Air	(180 sec)
	Calibration	Run# 46	Matheson 1 in tedlar (fresh)	(8 sec)
	Analysis	Run# 47	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 48	Matheson 1 in tedlar	(8 sec)
	Analysis	Run# 49	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 50	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 51	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 52	Influent Port/2	(")
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 53	Blank - Room Air Port/5	(180 sec)
	Analysis	Run# 54	Blank - " " "	(")
	Analysis	Run# 55	Matheson 1 in Tedlar P/5	(8 sec)
	Analysis	Run# 56	Blank - Room Air P/5	(180 sec)

10/18/99 SVE Blowers 5HP, 5LP, + 6LP, and 25HP, 50HP Elect motors Lubed (Greased).

1/18/99	Analysis	Run# 57	Blank - Room Air	(180 Sec)
	Calibration	Run# 58	Matheson 1 (fresh)	(8 Sec)
	Analysis	Run# 59	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 60	Matheson 1 in tedlar	(8 Sec)
	Analysis	Run# 61	Blank - Room Air P/5	(180 Sec)
	Calibration	Run# 62	Matheson 1 in Tedlar	(8 Sec)
	Analysis	Run# 63	Blank - Room Air P/5	(180 Sec)
	Analysis	Run# 64	Influent Port/2	(")
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 65	Blank - Room Air P/5	(180 Sec)
	Analysis	Run# 66	" " " "	(")
	Analysis	Run# 67	Matheson 1 in tedlar P/5	(8 Sec)
	Analysis	Run# 68	Blank - Room Air P/5	(180 Sec)
10/21/99	Analysis	Run# 69	Blank - Room Air	(180 Sec)
	Calibration	Run# 70	Matheson 1 in Tedlar (fresh)	(8 Sec)
	Analysis	Run# 71	Blank - Room Air P/5	(180 Sec)
EB	~~Calibration~~	~~Run#~~	~~Matheson 1 in tedlar P/5~~	~~(8 Sec)~~
	Analysis	Run# 72	Blank - Room Air P/5	(180 Sec)
	Calibration	Run# 73	Matheson 1 in tedlar	(8 Sec)
	Analysis	Run# 74	Blank - Room Air P/5	(180 Sec)
	Calibration	Run# 75	Matheson 1 in tedlar	(8 Sec)
	Analysis	Run 76	Blank - Room Air P/5	(180 Sec)
	Analysis	Run 77	Influent Port/2	(")
	Changed to Zone 1 App. 4 min			
	Analysis	Run# 78	Blank - Room Air P/5	(180 Sec)
	Analysis	Run# 79	Blank - " " "	(")
	Analysis	Run# 80	Matheson 1 in Tedlar P/5	(8 Sec)
	Analysis	Run# 81	Blank - Room Air P/5	(180 Sec)

10/25/99	Analysis	Run # 82	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 83	Matheson 1 in Tedlar (fresh)	(8 sec)
	Analysis	Run # 84	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 85	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 86	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 87	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 88	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 89	Influent Port/2	(")
	Changed to Zone 1 App. 4 min			
	Analysis	Run # 90	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 91	" " " "	(")
	Analysis	Run # 92	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 93	Blank - Room Air P/5	(180 sec)
10/28/99	Analysis	Run # 94	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 95	Matheson 1 in Tedlar (fresh)	(8 sec)
	Analysis	Run # 96	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 97	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 98	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 99	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 100	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 101	Influent Port/2	(180 sec)
	Changed to Zone 1 App. 4 min			
	Analysis	Run # 102	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 103	Blank - Room Air P/5	(")
	Analysis	Run # 104	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 105	Blank - Room Air	(180 sec)

11/01/99	Analysis	Run# 106	Blank - Room Air	P/5	(180 sec)
	Calibration	Run# 107	Matheson 1 in tedlar (fresh)		(8 sec)
	Analysis	Run# 108	Blank - Room Air	P/5	(180 sec)
	Calibration	Run# 109	Matheson 1 in Tedlar		(8 sec)
	Analysis	Run# 110	Blank - Room Air	P/5	(180 sec)
	Calibration	Run# 111	Matheson 1 in Tedlar		(8 sec)
	Analysis	Run# 112	Blank - Room Air	P/5	(180 sec)
	Analysis	Run# 113	influent	P/2	(")
	Changed to Zone 1 App. 4 min				
	Analysis	Run# 114	Blank - Room Air	P/5	(180 sec)
	Analysis	Run# 115	" " "	"	(")
	Analysis	Run# 116	Matheson 1 in tedlar		(8 sec)
	Analysis	Run# 117	Blank - Room Air	P/5	(180 sec)
11/02/99	Analysis	Run# 118	Blank - Room Air	P/5	(180 sec)
11/04/99	Analysis	Run# 119	Blank - Room Air	P/5	(180 sec)
	Calibration	Run# 120	Matheson 1 in Tedlar (fresh)		(8 sec)
	Analysis	Run# 121	Blank - Room Air	P/5	(180 sec)
	Calibration	Run# 122	Matheson 1 in tedlar		(8 sec)
	Analysis	Run# 123	Blank - Room Air	P/5	(180 sec)
	Calibration	Run# 124	Matheson 1 in tedlar		(8 sec)
	Analysis	Run# 125	Blank - Room Air	P/5	(180 sec)
	Analysis	Run# 126	influent Port 12		(")
	Changed to Zone 1 App. 4 min				
	Analysis	Run# 127	Blank - Room Air	P/5	(180 sec)
	Analysis	Run# 128	Blank - Room Air	P/5	(")
	Analysis	Run# 129	Matheson 1 in Tedlar		(8 sec)
	Analysis	Run# 130	Blank - Room Air	P/5	(180 sec)

11/08/99	Analysis	Run# 131	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 132	Matheson 1 in Tedlar (fresh)	(8 sec)
	Analysis	Run# 133	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 134	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 135	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 136	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 137	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 138	Influent Port/2	(")
	Changed to Zone 1		App. 4 min	
	Analysis	Run# 139	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 140	Blank - Room Air P/5	(")
	Analysis	Run# 141	Matheson 1 in Tedlar	(8 sec)
11/09/99	Analysis	Run# 142	Blank - Room Air P/5	(180 sec)
11/11/99	Sentex.idx & Sentex.log		filed out as sentex39.idx & .log	
	Restart Run # at 1		with next run as a Calibration	
	Calibration	Run# 1	Matheson 1 in Tedlar (fresh)	
	Analysis	Run# 2	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 3	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 4	Blank - Room Air P/5	(180 sec)
	Calibration	Run# 5	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 6	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 7	Influent Port/2	(180 sec)
	Changed to Zone 1		App. 4 min	
	Analysis	Run# 8	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 9	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 10	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run# 11	Blank - Room Air P/5	(180 sec)
	Analysis	Run# 12	Matheson 1 in Tedlar	(8 sec)

11/15/99	Analysis	Run #13	Blank - Room Air P/5	(180 sec)
	Calibration	Run #14	Matheson-1 in Tedlar (fresh)	(8 sec)
	Analysis	Run #15	Blank - Room - Air P/5	(180 sec)
	Calibration	Run #16	Matheson - 1 in Tedlar	(8 sec)
	Analysis	Run #17	Blank - Room Air P/5	(180 sec)
	Calibration	Run #18	Matheson - 1 in Tedlar	(8 sec)
	Analysis	Run #19	Blank - Room Air P/5	(180 sec)
	Analysis	Run #20	Influent P/2	(")
	Changed to Zone 1 App. 4 min.			
	Analysis	Run #21	Blank - Room Air P/5	(180 sec)
	Analysis	Run #22	" " " "	(")
	Analysis	Run #23	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #24	Blank - Room Air P/5	(180 sec)
11/18/99	Analysis	Run #25	Blank - Room Air P/5	(180 sec)
	Calibration	Run #26	Matheson 1 in Tedlar (fresh)	(8 sec)
	Analysis	Run #27	Blank - Room Air P/5	(180 sec)
	Calibration	Run #28	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #29	Blank - Room Air P/5	(180 sec)
	Calibration	Run #30	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #31	Blank - Room Air P/5	(180 sec)
* EB Bad Run	Analysis	Run #32	Influent Port 2	(180 sec)
	Changed to Zone 1 App. 4 min			
	Analysis	Run #33	Blank - Room Air P/5	(180 sec)
	Analysis	Run #34	Influent Port 2	(180 sec)
	Changed to Zone 1 App. 4 min			
	Analysis	Run #35	Blank - Room Air P/5	(180 sec)
	Analysis	Run #36	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #37	Blank - Room Air P/5	(180 sec)

11/22/99	Analysis	Run # 38	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 39	Matheson 1 in tedlar (fresh)	(8 Sec)
	Analysis	Run # 40	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 41	Matheson 1 in tedlar	(8 Sec)
	Analysis	Run # 42	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 43	Matheson 1 in Tedlar	(8 Sec)
	Analysis	Run # 44	Blank - Room Air P/5	(180 Sec)
	Analysis	Run # 45	Influent P/2	(")
	Changed to Zone 1		APP. 4 min	
	Analysis	Run # 46	Blank - Room Air P/5	(180 Sec)
	Analysis	Run # 47	Matheson 1 in Tedlar P/5	(8 Sec)
	Analysis	Run # 48	Blank - Room Air P/5	(180 Sec)
11/24/99	Analysis	Run # 49	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 50	Matheson 1 in Tedlar (fresh)	(8 Sec)
	Analysis	Run # 51	Blank - Room - Air P/5	(180 Sec)
	Calibration	Run # 52	Matheson - 1 in Tedlar	(8 Sec)
	Analysis	Run # 53	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 54	Matheson 1 in Tedlar	(8 Sec)
	Analysis	Run # 55	Blank - Room Air P/5	(180 Sec)
	Analysis	Run # 56	Influent P/2	(")
	Changed to Zone 1		APP. 4 min	
	Analysis	Run # 57	Blank - Room Air P/5	(180 Sec)
	Analysis	Run # 58	Matheson 1 in tedlar	(8 Sec)
11/29/99	Analysis	Run # 59	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 60	Matheson 1 in tedlar (fresh)	(8 Sec)
	Analysis	Run # 61	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 62	Matheson 1 in tedlar	(8 Sec)
	Analysis	Run # 63	Blank - Room Air P/5	(180 Sec)
	Calibration	Run # 64	Matheson 1 in tedlar	(8 Sec)
	Analysis	Run # 65	Blank - Room Air P/5	(180 Sec)
	Analysis	Run # 66	Influent P/5	(")
	Changed to Zone 1		APP. 4 min	

11/29/99	Analysis	Run #67	Blank - Room Air P/5	(180 sec)
	Analysis	Run #68	" " " "	"
	Analysis	Run #69	Matheson 1 in Tedlar	(8 sec)
12/02/99	Analysis	Run #70	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 71	Matheson 1 in Tedlar (fresh)	(8 sec)
	Analysis	Run # 72	Blank - Room Air P/5	(180 sec)
	Calibration	Run # 73	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #74	Blank - Room Air	(180 sec)
	Calibration	Run # 75	Matheson 1 in tedlar	(8 sec)
	Analysis	Run # 76	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 77	Influent P/2	"
	Changed To Zone 1		App. 4 min	
	Analysis	Run # 78	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 79	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run # 80	Blank - Room Air P/5	(180 sec)
12/06/99	Analysis	Run #81	Blank - Room Air P/5	(180 sec)
	Calibration	Run #82	Matheson 1 in Tedlar (fresh)	(8 sec)
	Analysis	Run # 83	Blank - Room Air P/5	(180 sec)
	Calibration	Run #84	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #85	Blank - Room Air P/5	(180 sec)
	Calibration	Run #86	Matheson 1 in tedlar	(8 sec)
	Analysis	Run #87	Blank - Room Air P/5	(180 sec)
	Analysis	Run #88	Influent P/2	(180 sec)
	Changed To Zone 1		App. 4 min	
	Analysis	Run # 89	Blank - Room Air P/5	(180 sec)
	Analysis	Run # 90	Matheson 1 in Tedlar	(8 sec)
	Analysis	Run #91	Blank - Room Air P/5	(180 sec)

12/09/99 ANALYSIS RUN#92 Blank - Room Air P/5 (180 sec)
Calibration RUN#93 Matheson 1 in Tedlar (fresh) (8 sec)
ANALYSIS RUN#94 Blank - Room Air P/5 (180 sec)
Calibration RUN#95 Matheson 1 in Tedlar (8 sec)
ANALYSIS RUN#96 Blank - Room Air P/5 (180 sec)
Calibration RUN#97 Matheson 1 in Tedlar (8 sec)
ANALYSIS RUN#98 Blank - Room Air P/5 (180 sec)
ANALYSIS RUN#99 Influent P/2 (")
Changed to Zone 1 App. 4 min
ANALYSIS RUN#100 Blank - Room Air P/5 (180 sec)
ANALYSIS RUN#101 " " " " (")
ANALYSIS RUN#102 Matheson 1 in Tedlar (8 sec)
ANALYSIS RUN#103 Blank - Room Air P/5 (180 sec)

12/09/99 SVE Blowers 5HP, 5LP, + 6LP and 25HP, 50HP Elect Motors Lubed Grease
System Shut down for maint, Changed oil @ 10:00 AM
System Back on @ 12:30 pm, oil Changed in 5HP, 5LP, + 6LP Blowers.

12/13/99 ANALYSIS RUN#104 Blank - Room Air P/5 (180 sec)
Calibration RUN#105 Matheson 1 in Tedlar (fresh) (8 sec)
Switched to Tank B Tank B full of H_2O
TOP (HL) Sensor/switch malfunction -
System Shut down for clean-out & change over

12/14/99 SYSTEM RESTARTED @ 05:30

12/16/99	~~Calibration~~ Analysis EB	RUN# 106	Blank - Room Air P/5	(180 sec)
	Calibration	RUN# 107	Matheson 1 in Tedlar (flush)	(8 sec)
	Analysis	RUN# 108	Blank - Room Air P/5	(180 sec)
	Calibration	RUN# 109	Matheson 1 in Tedlar	(8 sec)
	Analysis	RUN# 110	Blank - Room Air P/5	(180 sec)
	Calibration	RUN# 111	Matheson 1 in Tedlar	(8 sec)
	Analysis	RUN# 112	Blank - Room Air	(180 sec)
	Analysis	RUN# 113	Influent P/2	(")
	Changed to Zone 1		APP. 8 min	
	Analysis	RUN# 114	Blank - Room Air P/5	(180 sec)
	Analysis	RUN# 115	" " "	(")
	Analysis	RUN# 116	Matheson 1 in Tedlar	(8 sec)
	Analysis	RUN# 117	Blank - Room Air P/5	(180 sec)
12/20/99	Analysis	RUN# 118	Blank - Room Air P/5	(180 sec)
	Calibration	RUN# 119	Matheson 1 in Tedlar (flush)	(8 sec)
	Analysis	RUN# 120	Blank - Room Air P/5	(180 sec)
	Calibration	RUN# 121	Matheson 1 in Tedlar	(8 sec)
	Analysis	RUN# 122	Blank - Room Air P/5	(180 sec)
	Calibration	RUN# 123	Matheson 1 in Tedlar	(8 sec)
	Analysis	RUN# 124	Blank - Room Air P/5	(180 sec)
	Analysis	RUN# 125	Influent P/2	(")
	Changed to Zone 1		APP. 4 min	
	Analysis	RUN# 126	Blank - Room Air P/5	(180 sec)
	Analysis	RUN# 127	Blank - Room Air P/5	(")
	Analysis	RUN# 128	Matheson 1 in Tedlar	(8 sec)
12/21/99	Analysis	RUN# 129	Blank - Room Air P/5	(180 sec)

07:30 Started Removing Carbon from Tank (B). System on.
10:10 Finished Carbon Removeable + Cleaned out Tank.
10:20 Started Filling w/ New Carbon.
* Air make-up on next to last position.
11:15 Shut system down to change sensors/switches - out.

12/22/99
08:30 STARTED SYSTEM UP again.

12/25/99
3:20 SYSTEM SHUT down DUE TO HIGH water level in sump @ 300 bbl
05:50 System Back on and Runing.

01/03/2000 Analysis RUN # 130 Blank - Room Air P/5 (180 Sec)
Calibration RUN # 131 MATHESON-1 in Tedlar (fresh) (8 Sec)
Analysis RUN # 132 Blank - Room Air P/5 (180 Sec)
Calibration RUN # 133 MATHESON-1 in Tedlar (8 Sec)
Analysis RUN # 134 Blank - Room Air P/5 (180 Sec)
Calibration RUN # 135 MATHESON-1 in Tedlar (8 Sec)
Calibration RUN # 136 " " " (")
Analysis " RUN # 137 Blank - Room Air (180 Sec)
Analysis Run # 138 Zone/Port 2 (180 sec)
System on Zone 1 approx 4 min.
Analysis Run # Blank - Room Air (180 sec)
Analysis Run # 139 oops - Did a cal
Analysis Run # 140 Room Blank Port 5
~6:30 System Down Ed in to restart
~9:00 " " Mark in to " Massive amount of rain set on second notch of air make up header @ ~ -5.5" Hg
1/4/00 5:15 Reduced air makeup to 1ST notch
System went down @ 5:40
System Back on @ 6:10
System cycled number of times clean strainer & site tube, Changed to Carbon Tank (B)
System Air make-up closed @ 11:15 vac Relief active
System Back Runing on Carbon Tank (B)

1/5/00 System Down Due to high separator level (Pump lost prime) ≈ 10:00 back on at ≈ 10:20

10:25 pm SYSTEM DOWN PUMP LOST PRIME (AUTO)
11:00 pm SYSTEM BACK ON.

1/6/00 SYSTEM DOWN PUMP LOST PRIME (AUTO) @ 03:55
04:45 SYSTEM BACK ON

Analysis Run # 141 Blank - Room Air P/5 (180 sec)
Calibration Run # 142 Matheson-1 in Tedlar (fresh) (8 sec)
Analysis Run # 143 Blank - Room Air P/5 (180 sec)
Calibration Run # 144 Matheson-1 in Tedlar (8 sec)
Analysis Run # 145 Blank - Room Air P/5 (180 sec)
Calibration Run # 146 Matheson-1 in Tedlar (8 sec)
Analysis Run # 147 Blank - Room Air P5 (180 sec)
Analysis Run # 148 Influent P/2 (")
Changed to Zone 1 APP. 4 min
Analysis Run # 149 Blank - Room Air P/5 (180 sec)
Analysis Run # 150 Matheson 1 in Tedlar P/5 (8 sec)
Analysis Run # 151 Blank - Room Air P/5 (180 sec)

14:00 System was shut down due to pump losing prime.
14:05 System was turned back on.

01/08/00 System Down lost prime. @ 12:30
System Back on @ 01:25

~~11:35~~ ≈ 10:40 AM In System down - high level Pump lost prime
11:40 Restarted
~~21:37~~ Sys Down high level lost prime 21:10
21:55 Restarted

01/09/00 System Down / AUTO / lost Prime @ 08:40
System Back on @ 09:35

Manual System Down @ 1300 Prime pump
Back on @ 1305
Manual System Down @ 20:22 check prime
pump down manually Back on @ 20:25

01/10/00 Analysis Run# 152 Blank - Room Air P/5 (180 sec
Calibration Run# 153 Matheson 1 in Tedlar (fresh) (8 sec
Analysis Run# 154 Blank - Room Air P/5 (180 sec
Calibration Run# 155 Matheson 1 in Tedlar (8 sec
Analysis Run# 156 Blank - Room Air P/5 (180 sec
Calibration Run# 157 Matheson 1 in Tedlar (8 sec
Analysis Run# 158 Blank - Room Air P/5 (180 sec
Analysis Run# 159 Zone 2 P/2 (")
Changed to Zone 1 Aff. 5 min
Summa stimple on Zone 2 Directly after GC
Analysis Run# 160 Blank - Room Air P/5 (180 sec)
Analysis Run# 161 Blank - Room Air P/5 (180 sec)
Analysis Run# 162 Matheson 1 in Tedlar (8 sec)
Analysis Run# 163 Blank - Room Air P/5 (180 sec)
System off for Tour 14:40
Restart 15:05
2038 system off primed pump pump to Low end
sight Tube Restart system 2036

01/11/00 Analysis Run# 164 Blank - Room Air P/5 (180 sec
* Senter.idx & .log files moved to data senter40.idx &
Calibration Run# 1 Matheson 1 in tedlar fresh (
~ 07:00 System Down to relocate LL KP. Ser.
1300 Restart
15:00 System DOWN TO Wire Switch up.
16:00 RESTART

NOTE Precon ≈ 9 min
Analysis ≈

1/12/00 Change to Zone 1 @ 07:00
12:45 Calibration Run# 2 Matheson 1 in Tedlar Abort 545
Change display Mag from 1 to 2
13:06 Calibration Run# 3 Matheson 1 in Tedlar
Analysis Room Blank Run# 4 Ambient Air
Analysis Zone 1 Run# 5 Port 1 180 sec
Summa taken on Port 1/Zone 1 @ ≈ 2:03
System back on Zone 2 FT @ ≈ 1400
Analysis Run# 6 Blank Tedlar
Calibration Run# 7 Matheson 1
System [PC/sentex] shut down & Restarted
Calibration Run# 8 Aborted
Auto Anal port 5

1/13/00 Analysis Run# 16 Blank - Room Air P/5 (180 sec)
Calibration Run# 17 Matheson 1 in Tedlar fresh (8 sec)
Analysis Run# 18 Blank - Room Air P/5 (180 sec)
Calibration Run# 19 Matheson 1 in Tedlar (8 sec)
Analysis Run# 20 Blank - Room Air P/5 (180 sec)
VPMP-4M Run# 21 P/5 (15 sec)
VPMP-4M Run# 22 " (")
VPMP-4S Run# 23 " (")
VPMP-4S Run# 24 " (")
EW-N1 Run# 25 " Abort (")
Chg Gen Tank Room Blank Run# 26 Abort " (15 sec)
EW-N1 Run# 27 P/5 (15 sec)
Room Blank Run# 28 " (")
EW-N2 Run# 29 " (")
Room Blank Run# 30 " (15 sec)
EW-N2 Run# 31 " (8 sec)
EW-N3 Run# 32 " (15 sec)
EW-N3 Run# 33 " (")

Attachment G

AS/SVE System Calendar Book

Zone 1= 1195.45
Zone 2= 6614.12

1998

to JANUARY 3

1999			JANUARY			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24/31	25	26	27	28	29	30

7	7 1999 New Year's Day	7 New Year's Bank Holiday (Scotland)
7:15	7:15 System Down @ 1:10 AM	7:15
7:30	7:30 Back on @ 2:00 AM	7:30
7:45	7:45	7:45
8	8 Oil in Blowers is	8
8:15	8:15 @ 3,434	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
Blowers Greased Terran	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15 0/24
5:30	5:30	5:30
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	0/24

AT-A-GLANCE

1999			JANUARY			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

ZZ= 6685.67

from JANUARY 4

ZZ=6733.53

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15 GC Run# 163 Zone 2
8:30	8:30	8:30
8:45	8:45	8:45
9	9 GC Run# 157 Zone 2	9
9:15	9:15	9:15
9:30 GC Run # 151 Zone 2	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0.07 / 23.93	8:45 0.07 / 23.93	8:45 0.07 / 23.93

to JANUARY 10

1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30 GC Run# 170 Zone 2	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 0/24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
[illegible]	7	
[illegible]15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0.07 / 23.93	8:45 0/24	0/24

AT-A-GLANCE

1999	JANUARY					1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

Z1 = 1195.73
Z2 = 6853.39

from JANUARY 11

7	7 Sentex 19.idx & .log	7 Broken Level Sens.
7:15	7:15	7:15 in K.O. Tank
7:30	7:30	7:30 System Down
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9 GC Run#5 Zone 2	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45 GC Run# 177 Zone 2	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11 All boards for GC
11:15	11:15	11:15 Packed & To Go for
11:30	11:30	11:30 FEDEX to SENTEX
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30 Plant Shut Down
2:45	2:45	2:45 ICE STORM
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15 H2O High Level @ ≈	8:15
8:30	8:30 22:15 hrs	8:30
8:45 0.07/23.93	8:45 0.07/22.18	8:45 0/2

to JANUARY 17

1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

7 Replace Sensor	7	7
7:15 in K.O. Tank	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8 Swap of Vac. Rel.	8	8
8:15 Valves	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10 SVE Blowers Greased (while running)
10:15	10:15	10:15 TMRS
10:30	10:30	10:30
10:45 System Restarted	10:45	10:45
11 Air Make-up	11	11
11:15 Valve on Next to	11:15	11:15
11:30 last Notch	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3 Package to SENTEX	3	3
3:15 Next Day FEDEX	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 0/24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	Vac. Relief active @ 14:30
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0/13.25	8:45 0/24	0/24

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1999			JANUARY			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Z1 = 1195.87
Z2 = 6986.75

from JANUARY 18

7 Martin Luther King, Jr. Day (US)	**7**	**7**
7:15	7:15	7:15
7:30 Vac. Relief Reset	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	**9**	**9**
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	**10**	**10**
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	**11**	**11**
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	**12**	**12**
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	**1**
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	**2**	**2**
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	**3**	**3**
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	**4**	**4**
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	**5**	**5**
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	**6**	**6**
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	**7**	**7**
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0124	8:45 0124	8:45 0124

to JANUARY 24

1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 01/24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
[illegible]	7	
[illegible]5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 01/24	8:45 01/24	01/24

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1999			JANUARY			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

Z1 = 1195.87
Z2 = 7154.75

from JANUARY 25

7	7 Australia Day (Australia)	7
7:15 VAC. Relief RESET	7:15 AIR	7:15
7:30 AIR MAKE-UP VALVE ON	7:30 MAKE-UP Valve Fully Closed	7:30
7:45 NEXT TO last NOTCH.	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0124	8:45 0124	8:45 0124

7226.75

to JANUARY 31

1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

7	**7**	**7**
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	**9**	**9**
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	**10**	**10**
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	**11**	**11**
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12 GC	**12**	**12**
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	**1**
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	**2**	**2**
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	**3**	**3**
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4 DUE, SVE Blowers Grease	**4**	**4**
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	**5**	**5**
5:15	5:15	5:15
5:30	5:30	5:30 0/24
5:45	5:45	
6	**6**	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	**8**	
8:15	8:15	
8:30	8:30	
8:45 0.07/93.93	8:45 0/24	0/24

AT-A-GLANCE

1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

7346.75

Z1 = 1195.94

from FEBRUARY 1

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12 GC	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30 SVE BLOWERS GREASED (while running)	2:30	2:30
2:45 EB	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0/24	8:45 0.07/23.93	8:45 [illegible]24

to FEBRUARY 7

1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

7	7	7 Waitangi Day (New Zealand)
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 0124
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
[illegible]	7	
[illegible]15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0124	8:45 0124	0124

AT-A-GLANCE

1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Z1 = 1196.01

Z2 = 7514.75

from FEBRUARY 8

7538.75

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12 GC	12 GC
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0/24	8:45 0.07/23.93	8:45 0.07/23.93

to FEBRUARY 14

1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

7	7 Lincoln's Birthday (US)	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 0/24
5:45	5:45	
6	6	Valentine's Day (US, C, UK)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0/24	8:45 0/24	0/24

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1999			FEBRUARY			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Z1 = 1196.15

7658.75

from FEBRUARY 15

7 Washington's Birthday, Observed (US)	7	7 Ash Wednesday
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9 SYSTEM SET ON ZONE 1 FOR
9:15	9:15	9:15 SAMPLING, GROUND CONDITION
9:30	9:30	9:30 ARE WET.
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15 GC [7696]	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30 GC ZONE 1
4:45	4:45	4:45 [1204.22]
5	5	5 SYSTEM SET BACK TO ZONE
5:15	5:15	5:15 2 AFTER SETTING SAMPLES
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7 GC (Date/Time)	7	7
7 (7677.75)	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0/24	8:45 0.07/23.93	8:45 8/16

to FEBRUARY 21

1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 0/24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0/24	8:45 0/24	0/24

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1999	FEBRUARY					1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Z1 = 1204.22

Z2 = 794.75

from FEBRUARY 22

7	7	7 Bearings removed
7:15 SVE Blowers GREASED (EB)	7:15	7:15 - NOT Closed -
7:30 System Shut down @ 07:15	7:30	7:30 No grease fittings
7:45 For Sched. MAINT. Blowers lubed	7:45	7:45 on motor!
8 System Restarted @ 07:49	8 System Shut Down @ 7:55, System	8
8:15 Blowers, oil Checked also. (OK)	8:15 Not Sounding Right. Auto	8:15
8:30	8:30 Shutdown (8)	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10 mounds Elect + MAINT checked	10
10:15	10:15 System.	10:15
10:30	10:30 System Back ON @ 10:30 A.M.	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30 (15)	11:30
11:45	11:45	11:45
12	12 System auto shut down @ 12:00 Pm	12
12:15	12:15 mounds Elect. Checked System	12:15
12:30	12:30 Back ON @ 12:25 PM.	12:30
12:45	12:45	12:45
	1 (1)	1
1:15	1:15 System Did NOT Sound Right	1:15
1:30	1:30 Shut down @ 1:30 PM.	1:30
1:45	1:45 manual Squeel under	1:45
2	2 load change	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30 New Bearings Delivered
3:45	3:45	3:45 MRS picked up in
4	4	4 Middletown
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0/23.5	8:45 0/10.5	8:45 0

to FEBRUARY 28

1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12 New Bearings installed	12	12
12:15 and Grease fittings To.	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
System STARTed up RUN	1	1
1:15 for about 30 min and	1:15	1:15
1:30 was Shut down.	1:30	1:30
1:45 The Small SVE Blower SLP	1:45	1:45
2 Failed. System is Shut down.	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5 New Advance Replacement	5	5
5:15 Blower ordered	5:15	5:15
5:30	5:30	5:30 0
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0/0.5	8:45 0	0

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1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

from MARCH 1

MONDAY, MARCH [illegible]	TUESDAY, MARCH [illegible]	WEDNESDAY, MARCH [illegible]
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to MARCH 7

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

[illegible]	[illegible]	[illegible]
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
[illegible]	7	
[illegible]:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999		MARCH				1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

from MARCH 8

7 Carbon Change in	7 Carb. chg	7 New Blower installed
7:15 Tank B	7:15 Scrn. Clean.	7:15 by mound Trades
7:30	7:30	7:30 System Restarted.
7:45 Screens Cleaned in	7:45	7:45 When system started
8 A & B	8	8 SVE Bogged. water
8:15	8:15	8:15 with carbon dust
8:30 GLCT	8:30 GLCT	8:30 Came out of upper
8:45	8:45	8:45 Collar on GLP.
9	9	9 System Shut down
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0	8:45 0	8:45 0 / 0:25

to MARCH 14

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

[illegible]	[illegible]	[illegible]
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12 Trades Can't or	12	12
12:15 Wont Fix	12:15	12:15
12:30 LCP	12:30	12:30
12:45 Blower Pickled	12:45	12:45
with Diesel	1	1
1:15 Fuel	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	[illegible]
6	6	Mothering Sunday (United Kingdom)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Z1 = 1204.22
Z2 = 7829.5

from MARCH 15

7	Canberra Day (Australia)	7	Put System together	7	St. Patrick's Day (Ireland, US)
7:15	GLCT in to	7:15	attempted restart	7:15	
7:30	Fix System	7:30	6LP Blower Bogg	7:30	
7:45		7:45	(Belt squeel)	7:45	
8	Pipe from bypass	8	Heat Exchanger and	8	
8:15	valve to 6LP	8:15	Silencer Cleaned	8:15	
8:30	Steam Cleaned	8:30	from Carbon	8:30	
8:45	Blower Further	8:45		8:45	
9	Treated with	9		9	
9:15	Diesel fuel	9:15		9:15	
9:30	let pipes dry	9:30		9:30	
9:45	overnight	9:45		9:45	
10		10		10	
10:15		10:15		10:15	
10:30		10:30		10:30	
10:45		10:45		10:45	
11		11		11	
11:15		11:15		11:15	
11:30		11:30		11:30	
11:45		11:45		11:45	
12		12		12	
12:15		12:15		12:15	
12:30		12:30	System Restart	12:30	
12:45		12:45		12:45	
		1	Grrreat!	1	
1:15		1:15	Note Surface temp	1:15	
1:30	GLCT Arrives	1:30	Gauge = T + 26°F	1:30	
1:45	Cant find steam/freni	1:45	as tested on Effluent	1:45	
2	Wand off looking for	2	Stack internal temp	2	
2:15	it! To Buy	2:15	to surface Temp.	2:15	
2:30		2:30		2:30	
2:45		2:45		2:45	
3		3		3	
3:15	GLCT Back	3:15		3:15	
3:30	Start Work on Sys.	3:30		3:30	
3:45		3:45		3:45	
4	GC & Filters for	4		4	GC delivered to 301
4:15	301 in Rec.	4:15		4:15	Air filters deliverd to
4:30		4:30		4:30	301
4:45		4:45		4:45	
5		5		5	
5:15		5:15		5:15	
5:30		5:30		5:30	
5:45		5:45		5:45	
6		6		6	
6:15		6:15		6:15	
6:30		6:30		6:30	
6:45		6:45		6:45	
7		7		7	
7		7:15		7:15	
7:30		7:30		7:30	
7:45		7:45		7:45	
8		8		8	
8:15		8:15		8:15	
8:30		8:30		8:30	
8:45	0	8:45	0/11.5	8:45	0/24

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

to MARCH 21

THURSDAY MARCH 18 1999	FRIDAY MARCH 19 1999	SATURDAY MARCH 20 1999
7 Install GC	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30 Bring GC up to	10:30	10:30
10:45 Operational Status	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30 Run GC	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 0/24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0/1/23.9	8:45 0/24	0/24

AT-A-GLANCE

1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Z1 = 1204.32
Z2 = 7960.9

from MARCH 22

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30 GC 8020.4
11:45	11:45	11:45
12	12 GC 7996.9	12
12:15 GC 7973.15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45 GC 7978.65	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to MARCH 28

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15 GC 8044,15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
[illegible]:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	Palm Sunday
6:15	6:15	
6:30 GC 8051,4	6:30	
6:45	6:45	
[illegible]	7	
[illegible]:15	7:15	
[illegible]:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

0.14 / 23.86

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1999			MARCH			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Z1 = 1204,67

8128,9

from MARCH 29

7	7	7 Passover begins at sundown
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15 GC 8188,15
11:30	11:30 GC 8164,4	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
GC 8141,9	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30 GC 8145,4	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30 Monthly Measures
7:45	7:45	7:45 #20 110639 / 107276 / 31 / 3363
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

8200.9

to APRIL 4

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

THURSDAY APRIL 1	FRIDAY APRIL 2	SATURDAY APRIL 3
7 Passover	7 Good Friday	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 8210.9	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3 GC 8213.9	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	SUNDAY APRIL 4
6	6	Easter Sunday
6:15	6:15	Daylight Saving Time begins (US)
6:30	6:30	
6:45	6:45	
[illegible]	7	
[illegible]5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

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[illegible] 7201.

24

24

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Z1=1205.09

8296.9

from APRIL 5

8343.99

7 Easter Monday (C, UK, A, NZ)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10 GC 8353.99
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15 GC 8308.15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30 SVE Blowers Due for	12:30
12:45	12:45 Grease MSR# 66114	12:45
	1 SVE Blowers + Elect Blower	1
1:15	1:15 motor Greased.	1:15
1:30	AUTO System shut down 13:10 PM	1:30
1:45	1:45 Blower motor overload.	1:45
2	2 System BACK ON 14:00	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

8367.92

to APRIL 11

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45 GC 8377.67	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30 GC 8382.42	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Z1=1205.37

Z2=8463.79

from APRIL 12

8511.48

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8 Sys Down for	8
8:15	8:15 Maint.	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9 GC 8520.48
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 8473.79	10 10:10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30 GC 8525.98
2:45	2:45 GC 8502.47	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

8535.34

to APRIL 18

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 GC 8544.09	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2 GC 8549.34	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25			28	29	30	

Z1=1206.21

Z2=8631.2

from APRIL 19

8677.69

7	8653.83	7 Professional Secretaries Day® (US)
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15 GC 8663.08	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15 GC 8667.08	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30 GC 8692.19
2:45	2:45	2:45
3	3	3
3:15 GC 8646.45	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

8701.62

to APRIL 25

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GC 8710.87	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45 GC 8714.37	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45 AUTO SYSTEM SHUT DOWN @	2:45
3	3 14:50 Blower MOTOR over-	3
3:15	3:15 Load.	3:15
3:30	3:30 SYSTEM BACK ON @ 16:20	3:30
3:45	3:45 SVE Blowers + Elect. Blower	3:45
4	4 MOTOR Greased @ this time.	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	Anzac Day (A, NZ)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

Z1= 1206.56

Z2= 8796.98

1999			APRIL			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

from APRIL 26

8844.84

7	7	7 National Day of Mourning (Canada)
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30 GC 8853.34
8:45	8:45	8:45
9 GC 8805.98	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15 GC 8810.23	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15 GC 8859.09
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to MAY 2

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45 Sys. Shut down	7:45	7:45
8 for maint	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

Z1 = 1206.84

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

Z2 = 8956.62

from MAY 3 8980.27

7	May Day (United Kingdom)	7		7	
7:15		7:15		7:15	
7:30		7:30		7:30	
7:45		7:45		7:45	
8		8		8	
8:15		8:15		8:15	
8:30		8:30		8:30	
8:45		8:45	GC 8989.02	8:45	Sys Down for
9		9	Filter Instal.	9	Piz. Readings
9:15	GC 8965.87	9:15	Sys. Down	9:15	
9:30		9:30		9:30	
9:45		9:45		9:45	
10		10		10	
10:15		10:15		10:15	
10:30		10:30		10:30	
10:45		10:45		10:45	
11		11		11	
11:15		11:15		11:15	
11:30		11:30		11:30	
11:45		11:45		11:45	
12		12		12	
12:15		12:15		12:15	
12:30		12:30		12:30	
12:45		12:45		12:45	
		1		1	
1:15		1:15	GC 8993.52	1:15	
1:30		1:30		1:30	
1:45		1:45		1:45	
2		2		2	
2:15		2:15		2:15	
2:30		2:30		2:30	
2:45		2:45		2:45	
3		3		3	
3:15		3:15		3:15	
3:30		3:30		3:30	
3:45		3:45		3:45	
4		4		4	
4:15		4:15		4:15	
4:30		4:30		4:30	
4:45		4:45		4:45	
5		5		5	
5:15		5:15		5:15	
5:30		5:30		5:30	
5:45		5:45		5:45	
6		6		6	
6:15		6:15		6:15	
6:30		6:30		6:30	
6:45		6:45		6:45	
7		7		7	
7		7:15		7:15	
7:30		7:30		7:30	
7:45		7:45		7:45	
8		8		8	
8:15		8:15		8:15	
8:30		8:30		8:30	
8:45		8:45		8:45	

9019.08

to MAY 9

1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45 GC 9028.83	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	Mother's Day (US, C)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

Z1 = 1207.12

Z2 9114.83

Z1 & 2 on-
000 → 0705

Z1 = 3.54 hrs Adj

Δ-6
Z2

from MAY 10

7	9130.98	7
7:15	7:15 Zone 1 only	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30 GC 9124.33	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4 Chg to Zone 1 (1605)	4 GC Zone 1 [1228.07]	4 5hP & 6hP Blowers
4:15	4:15	4:15 Lubed (Grease)
4:30	4:30 Chg to Zone 2	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

7.09 / 110.01 12.91 / 11.04 0.144

9167.56

to MAY 16

1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

7	7	7 Armed Forces Day (US)
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15 8:25	8:15	8:15
8:30 Sys Down (40 min)	8:30	8:30
8:45	8:45	8:45
9 9:05	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30 AVE GC 9179.06	11:30	11:30
11:45	11:45	11:45
12 3 GC Runs	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

Z1 = 1228.28
Z2 = 9262.82

from MAY 17

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to MAY 23

1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 225
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	AT-A-GLANCE

1999			MAY			1999
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

ZZ=9424.32 from **MAY 24**

7 Victoria Day (Canada)	**7**	**7**
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	**9**	**9**
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	**10**	**10**
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	**11**	**11**
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	**12**	**12**
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
	1	**1**
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	**2**	**2**
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	**3**	**3**
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	**4**	**4**
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	**5**	**5**
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	**6**	**6**
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
[illegible]	**7**	**7**
	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to MAY 30

1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

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1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

9462.57

from MAY 31

7	Memorial Day, Observed (US)	7	7
7:15	Spring Bank Holiday (United Kingdom)	7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45
9		9	9
9:15		9:15	9:15
9:30		9:30	9:30
9:45		9:45	9:45
10		10	10
10:15		10:15	10:15
10:30		10:30	10:30
10:45		10:45	10:45
11		11	11
11:15		11:15	11:15
11:30		11:30	11:30
11:45		11:45	11:45
12		12	12
12:15		12:15	12:15
12:30		12:30	12:30
1[illegible]		12:45	12:45
[illegible]		1	1
1:15		1:15	1:15
1:30		1:30	1:30
1:45		1:45	1:45
2		2	2
2:15		2:15	2:15
2:30		2:30	2:30
2:45		2:45	2:45
3		3	3
3:15		3:15	3:15
3:30		3:30	3:30
3:45		3:45	3:45
4		4	4
4:15		4:15	4:15
4:30		4:30	4:30
4:45		4:45	4:45
5		5	5
5:15		5:15	5:15
5:30		5:30	5:30
5:45		5:45	5:45
6		6	6
6:15		6:15	6:15
6:30		6:30	6:30
6:45		6:45	6:45
7		7	7
7:[illegible]		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45

to JUNE 6

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

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1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Z1 = 1228.28

9262.57

from JUNE 7

7 Holiday (Ireland)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to JUNE 13

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

THURSDAY JUNE 10	FRIDAY JUNE 11	SATURDAY JUNE 12
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999 JUNE 1999

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

1) 1228.35
2) 9574.74

from JUNE 14

7 Flag Day (US)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30 GC 9585.24	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45 GC 9636.42
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

9646.6

to JUNE 20

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

7	**7**	**7**
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30 GC 9655.1	8:30	8:30
8:45	8:45	8:45
9	**9**	**9**
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	**10**	**10**
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	**11**	**11**
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	**12**	**12**
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	**1**	**1**
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	**2**	**2**
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	**3**	**3**
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	**4**	**4**
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	**5**	**5**
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	**6**	Father's Day (US, C, UK)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	**7**	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	**8**	
8:15	8:15	
8:30	8:30	
8:45	8:45	AT-A-GLANCE®

1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Z1=1228.56
Z2=9742.53

from JUNE 21

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GC 9751.78	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
2	12:45	12:45
1	1	1
:15	1:15	1:15
:30	1:30	1:30
:45	1:45	1:45
2	2	2
:15	2:15	2:15
:30	2:30	2:30
:45	2:45	2:45
3	3	3
:15	3:15	3:15
:30	3:30	3:30
:45	3:45	3:45
4	4 DUE, SVE Blower Grease	4
:15	4:15	4:15
:30	4:30	4:30
:45	4:45	4:45
5	5	5
:15	5:15	5:15
:30	5:30	5:30
:45	5:45	5:45
6	6	6
:15	6:15	6:15
:30	6:30	6:30
:45	6:45	6:45
7	7	7
:15	7:15	7:15
:30	7:30	7:30
:45	7:45	7:45
8	8	8
:15	8:15	8:15
:30	8:30	8:30
:45	8:45	8:45

9814.46

to JUNE 27

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

7 St-Jean (Québec)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GL 9823.71	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			JUNE			1999
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

12287
9910.39

from JUNE 28

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GL 9919.64	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30 SVE Blowers (GreaSED)
[illegible]	12:45	12:45 5LP + 6LP, 5HP
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

9982.32

to JULY 4

1999			JULY			1999
S	M	T	W	T.	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

7 Canada Day (Canada)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GL 9991.57	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	Independence Day (US)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	14 30 System Shutdown
7:15	7:15	High Sump in 300
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1228.84

10068.75

from JULY 5

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10 System Restart	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15 GC 10072	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

10106.75

to JULY 11

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15 GC 10115	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1228.98
10202.68

from JULY 12

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 GL 10211.43	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12 DUE SVE Blowers Grease	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

0.07 / 12.02

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

to JULY 18

10274.61

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15 GL 10282.86	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1229.12
10370.54

from JULY 19

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30 GC 10380.04	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to JULY 25

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 10452.47	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45 System Down 20	12:45	12:45
min for RACO removal	1	1
1:15 (Autodialer)	1:15	1:15
1:30	[illegible]	[illegible]
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
[illegible]5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	24

1999			JULY			1999
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1229.26

10,538.07

from JULY 26

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 10548.07	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

0.07 / 23.93

to AUGUST 1

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 10620	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30 Autodialer Back in	2:30	2:30
2:45 service - Programmed	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1229.4

10,705.93

from AUGUST 2

7	Civic Holiday (Canada)	7	7
7:15	Holiday (Ireland)	7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45
9		9	9
9:15		9:15	9:15
9:30		9:30	9:30
9:45	GC 10715.68	9:45	9:45
10		10	10
10:15		10:15	10:15
10:30		10:30	10:30
10:45		10:45	10:45
11		11	11
11:15		11:15	11:15
11:30		11:30	11:30
11:45		11:45	11:45
12		12	12
12:15		12:15	12:15
12:30		12:30	12:30
1		12:45	12:45
		1	1
1:15		1:15	1:15
1:30		1:30	1:30
1:45		1:45	1:45
2		2	2
2:15		2:15	2:15
2:30		2:30	2:30
2:45		2:45	2:45
3		3	3
3:15		3:15	3:15
3:30		3:30	3:30
3:45		3:45	3:45
4		4	4
4:15		4:15	4:15
4:30		4:30	4:30
4:45		4:45	4:45
5		5	5
5:15		5:15	5:15
5:30		5:30	5:30
5:45		5:45	5:45
6		6	6
6:15		6:15	6:15
6:30		6:30	6:30
6:45		6:45	6:45
7		7	7
7		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45

to AUGUST 8

1999			SEPTEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 GC 10786.161	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
2:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
.5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1,229.54
10,873.79

from AUGUST 9

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9 GL 10882.79	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
[illegible]	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to AUGUST 15

1999			SEPTEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9 GC 10954.52	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1,229.68
11,041.65

from AUGUST 16

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30 GC 11051.15	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

07/23/03

to AUGUST 22

1999			SEPTEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

7	**7**	**7**
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	**8**	**8**
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	**9**	**9**
9:15 GC 11/22.83	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	**10**	**10**
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	**11**	**11**
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	**12**	**12**
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	**1**
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	**2**	**2**
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	**3**	**3**
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	**4**	**4**
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	**5**	**5**
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	**6**	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	**8**	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999			AUGUST			1999
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1,229.82
11,209.51

from AUGUST 23

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GC 11,218.76	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12	12:45	12:45
1	1	1
1:15	1:15	1:15
:30	1:30	1:30
:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4 DUE, SVE Blowers Grease	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:1	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to AUGUST 29

1999		SEPTEMBER				1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GC 11290.69	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999		SEPTEMBER				1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1,229.96
11,377.37

from AUGUST 30

@ midnight Zone 1 & 2 on till ≈ 7:10
Z1 = 1246.7
Time end Z2 = 1415.81

7 Summer Bank Holiday (United Kingdom)	7	7 ½ Time on 3.59 hrs
7:15	7:15	7:10 Zone 1 on F.T.
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GC 11386.62	9:15	9:15 Z1 = 7.33 hrs
9:30	9:30	9:30 + 3.59
9:45	9:45	9:45 10.92
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45 Zone 1 on F.T.	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30 Zone 2 on F.T.
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30 9.5
3:45	3:45	3:45 + 3.59
4	4	4
4:15	4:15	4:15 13.09
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

0.07 / 12.92 12.09 / 10.09

to SEPTEMBER 5

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24/31	25	26	27	28	29	30

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30 GC 11434,81	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999			SEPTEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1254.02
11521.06

from SEPTEMBER 6

7 Labor Day (US, C)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30 GC 11554.56	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to SEPTEMBER 12

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24/31	25	26	27	28	29	30

7	7 Rosh Hashanah begins at sundown	7 Rosh Hashanah
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15 GL 11602.24	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

1999		SEPTEMBER				1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1254.16
11688.92

from SEPTEMBER 13

Zone 1 & 2 on @ midnight 7.11
6:30

7	7	7 6:30 Zone 1
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8 21 = 2.75 (1/2 21+22)
8:15	8:15	8:15 + 3.25
8:30	8:30	8:30 6.00
8:45	8:45	8:45
9	9 Zone 1 on F.T. Summa	9
9:15	9:15 @ 11721.85	9:15 Zone 2 on F.T.
9:30	9:30	9:30
9:45	9:45	9:45 22
10 GC 11698.92	10	10
10:15	10:15	10:15 3.25 GC 11732.1
10:30	10:30	10:30
10:45	10:45	10:45 + 14.75
11	11	11
11:15	11:15	11:15 18.00
11:30	11:30	11:30
11:45	11:45	11:45
12 DUE, SVE Blowers Grease	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to SEPTEMBER 19

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24/31	25	26	27	28	29	30

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2 GL 11753.85	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	Yom Kippur begins at sundown
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999		SEPTEMBER				1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1275.3
11835.78

from SEPTEMBER 20

7	Yom Kippur	7	7
7:15		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45
9		9	9
9:15		9:15	9:15
9:30		9:30	9:30
9:45		9:45	9:45
10	GC 11845.78	10	10
10:15		10:15	10:15
10:30		10:30	10:30
10:45		10:45	10:45
11		11	11
11:15		11:15	11:15
11:30		11:30	11:30
11:45		11:45	11:45
12		12	12
12:15		12:15	12:15
12:30		12:30	12:30
[illegible]		12:45	12:45
[illegible]		1	1
1:15		1:15	1:15
1:30		1:30	1:30
1:45		1:45	1:45
2		2	2
2:15		2:15	2:15
2:30		2:30	2:30
2:45		2:45	2:45
3		3	3
3:15		3:15	3:15
3:30		3:30	3:30
3:45		3:45	3:45
4		4	4
4:15		4:15	4:15
4:30		4:30	4:30
4:45		4:45	4:45
5		5	5
5:15		5:15	5:15
5:30		5:30	5:30
5:45		5:45	5:45
6		6	6
6:15		6:15	6:15
6:30		6:30	6:30
6:45		6:45	6:45
7		7	7
[illegible]		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45

to SEPTEMBER 26

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15 GC 11917.96	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999			SEPTEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1275.44
12,003.64

from SEPTEMBER 27

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15 GC 12017.89	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:80	8:30	8:30
8:45	8:45	8:45

Z1 = 1275.51
22 = 12082.57

to OCTOBER 3

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

7 Download Telog	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45 GL 12086.32	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	24

AT-A-GLANCE

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

1,275.58

12,171.5

from OCTOBER 4

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8 DUE, SVE Blowers Grease	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45 GC 12186.25	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to OCTOBER 10

1999			NOVEMBER			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30 GC 12252.93	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

24

AT-A-GLANCE®

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

1275.72

12339.36

from OCTOBER 11

7	Columbus Day, Observed (US)	7	7
7:15	Thanksgiving Day (Canada)	7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45
9		9	9
9:15		9:15	9:15
9:30		9:30	9:30
9:45		9:45	9:45
10		10	10
10:15		10:15	10:15
10:30		10:30	10:30
10:45		10:45	10:45
11		11	11
11:15	GC 12350.61	11:15	11:15
11:30		11:30	11:30
11:45		11:45	11:45
12		12	12
12:15		12:15	12:15
12:30		12:30	12:30
[illegible]		12:45	12:45
[illegible]		1	1
1:15		1:15	1:15
1:30		1:30	1:30
1:45		1:45	1:45
2		2	2
2:15		2:15	2:15
2:30		2:30	2:30
2:45		2:45	2:45
3		3	3
3:15		3:15	3:15
3:30		3:30	3:30
3:45		3:45	3:45
4		4	4
4:15		4:15	4:15
4:30		4:30	4:30
4:45		4:45	4:45
5		5	5
5:15		5:15	5:15
5:30		5:30	5:30
5:45		5:45	5:45
6		6	6
6:15		6:15	6:15
6:30		6:30	6:30
6:45		6:45	6:45
7		7	7
7:[illegible]		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45	.07/23.93	8:45 24	8:45 24

to OCTOBER 17

1999			NOVEMBER			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

7	7	7 National Boss Day (US)
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45 GC 12421.04	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 .07/23.93	8:45 24	

AT-A-GLANCE

1999			OCTOBER			1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24		26	27	28	29	30

1275.86
12507.22

from OCTOBER 18

7 Lube Blowers	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30 GC 12517.72	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
1	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0.07 / 23.93	8:45 24	8:45 24

to OCTOBER 24

1999			NOVEMBER			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30 GC 12589.65	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	United Nations Day (US)
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0.07/23.93	8:45 24	24

AT-A-GLANCE®

1999		OCTOBER				1999
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

1276

12,675.08 from **OCTOBER 25**

7	Holiday (Ireland)	7	7
7:15		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45		8:45	8:45
9		9	9
9:15		9:15	9:15
9:30		9:30	9:30
9:45		9:45	9:45
10		10	10
10:15		10:15	10:15
10:30	GC 12685.58	10:30	10:30
10:45		10:45	10:45
11		11	11
11:15		11:15	11:15
11:30		11:30	11:30
11:45		11:45	11:45
12		12	12
12:15		12:15	12:15
12:30		12:30	12:30
1[illegible]		12:45	12:45
[illegible]		1	1
1:15		1:15	1:15
1:30		1:30	1:30
1:45		1:45	1:45
2		2	2
2:15		2:15	2:15
2:30		2:30	2:30
2:45		2:45	2:45
3		3	3
3:15		3:15	3:15
3:30		3:30	3:30
3:45		3:45	3:45
4		4	4
4:15		4:15	4:15
4:30		4:30	4:30
4:45		4:45	4:45
5		5	5
5:15		5:15	5:15
5:30		5:30	5:30
5:45		5:45	5:45
6		6	6
6:15		6:15	6:15
6:30		6:30	6:30
6:45		6:45	6:45
7		7	7
7:[illegible]		7:15	7:15
7:30		7:30	7:30
7:45		7:45	7:45
8		8	8
8:15		8:15	8:15
8:30		8:30	8:30
8:45	0.07/23.93	8:45 24	8:45 24

to OCTOBER 31

1999			NOVEMBER			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 12757.01	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	Halloween
6:15	6:15	Daylight Saving Time ends (US)
6:30	6:30	
6:45	6:45	
	7	
15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 0.07/23.93	8:45 24	24

AT-A-GLANCE®

1999			NOVEMBER			1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1276.14

12842.94

from NOVEMBER 1

7	7 Election Day (US)	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30 GC 12853.44	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
[illegible]	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:[illegible]	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 0.07 / 23.93	8:45	8:45

to NOVEMBER 7

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15 GC 12925.12	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

1999	NOVEMBER					1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1276.28

13010.8 from **NOVEMBER 8**

7 Lube Blowers	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15 GC 13021.05	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

007 / 13.03

to NOVEMBER 14

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

7 Veterans Day (US)	7	7
7:15 Remembrance Day (Canada)	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC 13092.73	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE®

1999		NOVEMBER				1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1276.42
13178.66

from NOVEMBER 15

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15 GC 13188.91	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

0.07 / 23.03

to NOVEMBER 21

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

[illegible]	[illegible]	[illegible]
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15 GC 13261.84	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	[illegible]
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
[illegible]5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	AT-A-GLANCE

A 17 / 22 97 24 24

1999		NOVEMBER				1999
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1276.62

13346.46 from **NOVEMBER 22**

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9 Changed all the Descent	9
9:15	9:15 OUT IN Telogs	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30 GC 13404.89
10:45 GC 13357.21	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

P.07 / 12 02

to NOVEMBER 28

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

7 Thanksgiving Day (US)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

AT-A-GLANCE

1999		DECEMBER				1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1276.76
13514.32

from NOVEMBER 29

MONDAY NOV 29	TUESDAY NOV 30	WEDNESDAY DEC 1
7 Lube Blowers, Change oil - !	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15 GC 13524.57	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

8:27 / 7:30

to DECEMBER 5

2000			JANUARY			2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

[illegible]	[illegible]	[illegible]
7	7 Hanukkah begins at sundown	7 Hanukkah
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30 GC 13596.75	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	[illegible]
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1276.9

13682.18

from DECEMBER 6

7	7	7 Change Oil in Blowers
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45 GC 13692.93	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

0.07 / 23.93

to DECEMBER 12

2000			JANUARY			2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45 GC 137163.816	9:45	9:45
10 System shutdown	10	10
10:15 Chg oil	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30 System restart	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	24

AT-A-GLANCE®

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1277.04

13847.54

from DECEMBER 13

7	10530 System on	7
7:15	7:15	7:15
7:30 System off	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 H_2O in	8:45	8:45
9	9	9
9:15 Tank B	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 Switch	10	10
10:15 to tank A	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15 KO High level	11:15	11:15
11:30	11:30	11:30
11:45 sens fail	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30 7.0	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30 System on	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45 System off	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6 7.25	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45 9.75	8:45 18.5	8:45 26

13899.79

to DECEMBER 19

2000			JANUARY			2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30 GC 13909.29	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
[illegible]	7	
[illegible]:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	

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[illegible] / [illegible] 24 24

1999		DECEMBER				1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1277.17
13995.66

from DECEMBER 20

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30 System on
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15 GC 14005.91	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11 System off	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45 Replace	11:45
12	12 RO Tank	12
12:15	12:15 float switches	12:15
12:30	12:30	12:30
12:45	12:45 and carbon	12:45
1	1 change	1
1:15	1:15 by Great	1:15
1:30	1:30 Lakes	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to DECEMBER 26

2000			JANUARY			2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

7	7	0315 Christmas Day Sys off
7:15	7:15	7:~~30~~ 0545 Sys on
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15 21.5
5:30	5:30	5:30
5:45	5:45	
6	6	Boxing Day (A, C, NZ, UK)
6:15	6:15	St. Stephen's Day (Ireland)
6:30	6:30	
6:45	6:45	
7	7	
7:15	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	24

24 24

AT-A-GLANCE

1999			DECEMBER			1999
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1277.24

14 139.59 from **DECEMBER 27**

7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

24 24 24

to JANUARY 2

2000			JANUARY			2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

	7	7 New Year's Day
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
[illegible]	1	1
[illegible]5	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	New Year's Bank Holiday (Scotland)
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
[illegible]5	7:15	
[illegible]0	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45	8:45	
24	24	24

End of CY
Zone1 Cum 127.24
Zone2 Cum 14 259.59

AT-A-GLANCE

2000	JANUARY					2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 30	24 31	25	26	27	28	29

1277.24
14 307.59

from JANUARY 3

7	7 0540 Sys off	7
7:15	7:15 0610 " ON (0.5)	7:15
7:30	7:30 Sys off	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15 (1.25)	8:15
8:30	8:30	8:30
8:45	8:45 Sys on	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45 Sys off
10	10	10 ~~Sys Down~~ 0.5
10:15	10:15	10:15 Sys on
10:30	10:~~25~~	10:30 ~~25 Sys off~~
10:45	10:45	10:45
11	11	11 ~~Sys on~~
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2 GC Z1 4min (.07)	2	2
2:15 14321.59	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15 System Down	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6 1.25 hrs	6	6
6:15	6:15	6:15
6:30 Sys on	6:30	6:30
6:45	6:45	6:45
7	7	7
	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	10:25p Sys off
8:15	8:15	~~8:45~~ 10:55p Sys on 0.5
8:30 Sys Down 0.5 hrs	8:30	8:30
~~8:45~~ 900 Sys on	8:45	8:45

0.07 / 22.18 22.25 2.2

2000			FEBRUARY			2000
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29				

to JANUARY 9

THURSDAY JAN. 6 '00	FRIDAY JAN. 7 '00	SATURDAY JAN. 8 '00
0355 sys down	7	12:30 off
0445 sys on	7:15	1:15 ON (0.75)
7:30	7:30	7:30
7:45 (0.83)	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC (0.07)	10	10
10:15 14385.02	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:40 off
11	11	11 (1)
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:40 ON
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2 sys off	2	2
2:05 sys on (0.08)	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	2110 off
4:15	4:15	2155 on (0.75)
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 21.5
5:45	5:45	SUNDAY JAN. 9 '00
6	6	0840 off
6:15	6:15	0935 ON 0.92
6:30	6:30	
6:45	6:45	1300 off
	7	1305 ON 0.08
	7:15	
7:30	7:30	2022 off
7:45	7:45	2025 ON 0.05
8	8	
8:15	8:15	
8:30	8:30	22.95
8:45	8:45	

AT-A-GLANCE®

2000 JANUARY 2000

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23		25	26	27	28	29

1277.38
14466.49

from JANUARY 10

Monday	Tuesday	Wednesday
7	7 Sys off Relocate Lower Level Float Switch	7 Zone1 on
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9 (6.0)	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10 GC (0.08)	10	10
10:15 14476.49	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
	12:45	12:45
	1 Restart System	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2 Summa & GC Zone2 Zone1
2:15	2:15	2:15
2:30	2:30	2:30 21@ 1284.46
2:45 Sys off - Tour	2:45	2:45
3:05 " ON 0.42	3 Sys off 15:15	3
3:15	3:15 to wire Switch (L.L.)	3:15
3:30	3:30	3:30
3:45	3:45 (.5)	3:45
4	4 Sys on 15:45	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
~~6:45~~ 2033 Off - Prime	6:45	6:45
2036 ON 0.05	7	7
	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45 17.5	8:45 7 [redacted]/17

[illegible]/22.45

to JANUARY 16

2000		FEBRUARY				2000
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29				

THURSDAY JAN. 13	FRIDAY JAN. 14	SATURDAY JAN. 15
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
:45	12:45	12:45
	1	1
1:15	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30 24
5:45	5:45	
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
	7	
.5	7:15	
7:30	7:30	
7:45	7:45	
8	8	
8:15	8:15	
8:30	8:30	
8:45 24	8:45 24	24

24 5 / 23 4 / 9 8 / 27 4 / 26 4 / 46 / 54 4

AT-A-GLANCE

2000			JANUARY			2000
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

1284.46
14620.44

from JANUARY 17

MONDAY, JAN. 17, 2000	TUESDAY, JAN. 18, 2000	WEDNESDAY, JAN. 19, 2000
7 Martin Luther King, Jr. Day (US)	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
1	1	1
1:15	1:15	1:15
1:30 Zone 2 GC	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	5:45
6	6	6
6:15	6:15	6:15
6:30	6:30	6:30
6:45	6:45	6:45
7	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45

to JANUARY 23

2000		FEBRUARY				2000
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29				

THURSDAY, JAN. 20, 2000	FRIDAY, JAN. 21, 2000	SATURDAY, JAN. 22, 2000
	7	7
7:15	7:15	7:15
7:30	7:30	7:30
7:45	7:45	7:45
8	8	8
8:15	8:15	8:15
8:30	8:30	8:30
8:45	8:45	8:45
9	9	9
9:15	9:15	9:15
9:30	9:30	9:30
9:45	9:45	9:45
10	10	10
10:15	10:15	10:15
10:30	10:30	10:30
10:45	10:45	10:45
11	11	11
11:15	11:15	11:15
11:30	11:30	11:30
11:45	11:45	11:45
12	12	12
12:15	12:15	12:15
12:30	12:30	12:30
12:45	12:45	12:45
	1	1
.5	1:15	1:15
1:30	1:30	1:30
1:45	1:45	1:45
2	2	2
2:15	2:15	2:15
2:30	2:30	2:30
2:45	2:45	2:45
3	3	3
3:15	3:15	3:15
3:30	3:30	3:30
3:45	3:45	3:45
4	4	4
4:15	4:15	4:15
4:30	4:30	4:30
4:45	4:45	4:45
5	5	5
5:15	5:15	5:15
5:30	5:30	5:30
5:45	5:45	SUNDAY, JAN. 23, 2000
6	6	
6:15	6:15	
6:30	6:30	
6:45	6:45	
7	7	
5	7:15	
0	7:30	
7:45	7:45	
8	8	
8:15	8:15	3156 Est.
8:30	8:30	
8:45	8:45	AT-A-GLANCE®

Attachment H

AS/SVE System Data Tracking Spreadsheets

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
01/04/99	9:35	2	30.24	54	3	176	0.82	0	-11.2	172	-17.7	-15.9	1.8	-14.4	1.5	-12.9	1.5	65776
01/04/99	13:40	2	30.25	52	5	182	0.82	0	-10.9	174	-17.6	-15.2	2.4	-13.9	1.3	-12.1	1.8	65776
01/05/99	7:40	2	30.39	64	-7	188	0.8	0	-11.5	174	-18.1	-15.9	2.2	-14.8	1.1	-12.9	1.9	65824
01/05/99	14:10	2	30.36	68	6	186	0.8	0	-11.4	174	-17.9	-15.5	2.4	-14.6	0.9	-13.1	1.5	65848
01/06/99	7:05	2	30.01	58	21	182	0.84	0	-10.9	174	-17.4	-14.9	2.5	-13.8	1.1	-11.9	1.9	65873
01/06/99	13:45	2	29.94	58	30	180	0.84	0	-10.8	172	-17.3	-14.8	2.5	-13.8	1	-12.1	1.7	65897
01/07/99	7:10	2	30.35	47	6	180	0.82	0	-11.4	166	-17.6	-15.2	2.4	-14.1	1.1	-11.9	2.2	65946
01/07/99	13:25	2	30.42	62	12	176	0.88	0	-10.6	174	-17.3	-14.7	2.6	-13.8	0.9	-12.1	1.7	65979
01/11/99	6:55	2	30.25	64	0	184	0.73	0	-12.1	172	-18.5	-15.8	2.7	-14.9	0.9	-13.6	1.3	66933
01/11/99	14:15	2	30.02	52	15	182	0.76	0	-11.6	172	-17.8	-15.3	2.5	-14.1	1.2	-12.6	1.5	67068
01/12/99	7:05	2	29.87	63	37	184	0.83	0	-10.8	176	-17.2	-14.5	2.7	-13.4	1.1	-11.9	1.5	67183
01/12/99	13:40	2	29.89	67	42	189	0.82	0	-10.9	180	-17.2	-14.7	2.5	-13.5	1.2	-11.9	1.6	67345
01/14/99	14:15	2	30.11	66	14	196	0.73	0	-12.1	172	-18.3	-15.9	2.4	-14.8	1.1	-12.9	1.9	70692
01/18/99	7:40	2	29.72	63	36	192	0.72	0	-11.9	174	-18.2	-15.3	2.9	-14.2	1.1	-11.4	2.8	78674
01/18/99	13:55	2	29.71	68	39	200	0.74	0	-11.8	178	-18.1	-15.1	3	-13.9	1.2	-11.1	2.8	79085
01/19/99	7:10	2	30.06	56	28	192	0.74	0	-11.9	170	-18.1	-14.9	3.2	-13.9	1	-12.2	1.7	79683
01/19/99	15:30	2	30.08	66	37	200	0.75	0	-11.8	180	-18.1	-14.9	3.2	-13.8	1.1	-11.9	1.9	79866
01/20/99	6:35	2	30	60	33	199	0.72	0	-12.2	172	-18.4	-15.2	3.2	-14.1	1.1	-12.5	1.6	80192
01/20/99	13:40	2	29.98	72	50	206	0.74	0	-11.9	184	-18.1	-15	3.1	-13.9	1.1	-12.3	1.6	80355
01/21/99	7:15	2	29.87	65	39	205	0.72	0	-12.1	178	-18.3	-15.1	3.2	-14.1	1	-12.5	1.6	80750
01/21/99	14:10	2	29.85	69	45	212	0.68	0	-12.5	184	-18.6	-15.6	3	-14.5	1.1	-12.9	1.6	81534
01/25/99	7:10	2	30.13	64	34	200	0.72	0	-12.4	178	-18.4	-15.3	3.1	-14.3	1	-12.5	1.8	90663
01/25/99	14:00	2	30.31	62	35	198	0.75	0	-12.1	176	-18.4	-15.2	3.2	-14.1	1.1	-12.5	1.6	90834
01/26/99	7:15	2	30.44	66	26	200	0.75	0	-12.1	178	-18.5	-15.3	3.2	-14.1	1.2	-12.5	1.6	91215
01/26/99	9:45	2	30.45	66	28	205	0.72	0	-12.6	176	-18.8	-15.7	3.1	-14.6	1.1	-12.9	1.7	91276
01/26/99	13:45	2	30.38	68	41	208	0.72	0	-12.6	182	-18.8	-15.6	3.2	-14.5	1.1	-12.9	1.6	91370
01/27/99	6:55	2	30.01	62	44	205	0.7	0	-12.5	174	-18.5	-15.4	3.1	-14.4	1	-12.8	1.6	91739
01/27/99	13:50	2	29.91	84	62	222	0.72	0	-12.2	198	-18.4	-15.3	3.1	-14.2	1.1	-12.7	1.5	91871
01/28/99	7:10	2	30.06	69	42	210	0.7	0	-12.4	184	-18.5	-15.4	3.1	-14.3	1.1	-12.8	1.5	92193
01/28/99	13:25	2	30.11	68	39	212	0.7	0	-12.5	184	-18.6	-15.6	3	-14.5	1.1	-12.9	1.6	92315
02/01/99	7:15	2	30.2	63	37	202	0.72	0	-12.4	180	-18.6	-15.2	3.4	-14.1	1.1	-12.5	1.6	93618
02/01/99	13:45	2	30.08	67	43	228	0.6	0	-13.7	182	-19.6	-16.4	3.2	-15.4	1	-13.7	1.7	94876
02/02/99	8:05	2	29.79	66	44	210	0.7	0	-12.4	182	-18.5	-15	3.5	-14	1	-12.4	1.6	95802
02/02/99	13:25	2	29.73	69	44	210	0.7	0	-12.4	184	-18.4	-15	3.4	-13.9	1.1	-12.2	1.7	95894
02/03/99	7:40	2	29.96	71	30	206	0.7	0	-12.4	176	-18.5	-15.2	3.3	-14.1	1.1	-12.4	1.7	96230
02/03/99	13:35	2	29.89	68	45	208	0.7	0	-12.3	180	-18.5	-15.1	3.4	-14	1.1	-12.5	1.5	96339
02/04/99	7:10	2	29.8	60	39	204	0.68	0	-12.3	174	-18.4	-15	3.4	-14	1	-12.4	1.6	96571
02/04/99	13:40	2	30.06	66	40	206	0.72	0	-12.3	180	-18.5	-15.1	3.4	-13.9	1.2	-12.5	1.4	96662
02/08/99	7:10	2	30.05	60	32	206	0.68	0	-12.6	172	-18.6	-15.2	3.4	-14.1	1.1	-12.5	1.6	101912
02/08/99	13:40	2	30.04	68	42	210	0.7	0	-12.5	182	-18.6	-15.1	3.5	-14	1.1	-12.5	1.5	102031
02/09/99	7:05	2	29.97	64	43	208	0.68	0	-12.5	176	-18.5	-15.1	3.4	-14	1.1	-12.5	1.5	102309
02/09/99	13:55	2	30.05	80	54	220	0.7	0	-12.5	194	-18.5	-15.1	3.4	-14	1.1	-12.5	1.5	102399

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
02/10/99	7:05	2	30.25	54	33	200	0.68	0	-12.8	166	-18.7	-15.3	3.4	-14.3	1	-12.6	1.7	102676
02/10/99	14:10	2	30.18	78	54	219	0.7	0	-12.5	192	-18.6	-15.3	3.3	-14.2	1.1	-12.5	1.7	102782
02/11/99	7:05	2	30.02	70	51	210	0.68	0	-12.5	182	-18.5	-15.2	3.3	-14.1	1.1	-12.5	1.6	103053
02/11/99	13:40	2	29.91	86	68	222	0.72	0	-12.2	200	-18.5	-15	3.5	-13.9	1.1	-12.2	1.7	103123
02/15/99	7:05	2	30.23	54	31	200	0.68	0	-12.8	168	-18.8	-15.3	3.5	-14.2	1.1	-12.5	1.7	105696
02/15/99	14:00	2	30.12	74	49	220	0.68	0	-12.8	186	-18.9	-15.4	3.5	-14.3	1.1	-12.7	1.6	105786
02/16/99	7:05	2	29.99	62	40	208	0.67	0	-12.8	178	-18.7	-15.4	3.3	-14.3	1.1	-12.6	1.7	106001
02/16/99	13:50	2	29.89	78	55	218	0.7	0	-12.5	190	-18.5	-15.1	3.4	-14	1.1	-12.5	1.5	106101
02/17/99	7:10	2	29.97	62	32	208	0.68	0	-12.7	176	-18.6	-15.2	3.4	-14.1	1.1	-12.5	1.6	106281
02/18/99	8:40	2	30.01	56	28	200	0.7	0	-12.5	168	-18.5	-15	3.5	-13.9	1.1	-12.1	1.8	106446
02/18/99	13:55	2	30.01	60	30	200	0.7	0	-12.5	172	-18.5	-15	3.5	-13.9	1.1	-12.1	1.8	106491
02/22/99	7:10	2	30.41	52	11	199	0.72	0	-12.5	168	-18.6	-15	3.6	-13.9	1.1	-12.4	1.5	107141
02/22/99	13:45	2	30.38	56	27	196	0.72	0	-12.5	170	-18.6	-15.1	3.5	-14	1.1	-12.3	1.7	107170
02/23/99	7:10	2	30.24	56	24	212	0.7	0	-11.6	206	-18	-14.6	3.4	-13.5	1.1	-12	1.5	107276
03/17/99	7:00	2	29.91	72	42	196	0.78	0	-9.9	192	-17.5	-15.5	2	-14.5	1	-12.9	1.6	108840
03/17/99	13:40	2	29.83	94	66	212	0.82	0	-9.4	214	-17.4	-15.3	2.1	-14.4	0.9	-12.8	1.6	108900
03/18/99	7:30	2	30.07	77	37	206	0.78	0	-9.9	200	-17.6	-15.5	2.1	-14.6	0.9	-12.9	1.7	109045
03/18/99	13:50	2	30.15	80	41	206	0.8	0	-9.8	202	-17.6	-15.5	2.1	-14.5	1	-12.9	1.6	109089
03/22/99	7:35	2	30.01	66	31	206	0.76	0	-10.2	196	-17.9	-15.4	2.5	-14.4	1	-12.6	1.8	109661
03/22/99	14:15	2	30.08	82	39	214	0.78	0	-9.8	214	-17.6	-15.2	2.4	-14.3	0.9	-12.9	1.4	109705
03/23/99	7:30	2	30.15	68	31	210	0.75	0	-10.1	204	-17.7	-15.3	2.4	-14.3	1	-12.6	1.7	109794
03/23/99	15:30	2	30.06	83	45	220	0.76	0	-9.8	222	-17.6	-15.2	2.4	-14.2	1	-12.5	1.7	109838
03/24/99	7:20	2	30	69	33	214	0.75	0	-9.9	210	-17.6	-15.1	2.5	-14.1	1	-12.5	1.6	109925
03/25/99	6:40	2	30.19	68	24	198	0.77	0	-10.4	182	-18.1	-15.4	2.7	-14.4	1	-12.5	1.9	110013
03/25/99	13:35	2	30.2	68	43	196	0.76	0	-10.4	182	-18.1	-15.3	2.8	-14.4	0.9	-12.6	1.8	110042
03/29/99	7:40	2	30.27	72	46	202	0.8	0	-10.4	192	-18	-15.2	2.8	-14.2	1	-12.4	1.8	110387
03/29/99	13:05	2	30.28	89	59	212	0.86	0	-9.6	212	-17.6	-14.6	3	-13.6	1	-12.1	1.5	110416
03/30/99	7:15	2	30.35	76	39	202	0.85	0	-9.8	200	-17.6	-14.6	3	-13.6	1	-12	1.6	110521
03/30/99	14:00	2	30.32	96	65	218	0.86	0	-9.4	220	-17.5	-14.3	3.2	-13.3	1	-11.9	1.4	110551
03/31/99	7:00	2	30.18	69	44	202	0.83	0	-9.8	196	-17.5	-14.4	3.1	-13.4	1	-11.9	1.5	110623
03/31/99	13:10	2	30.11	94	68	220	0.85	0	-9.4	224	-17.5	-14.3	3.2	-13.3	1	-11.5	1.8	110639
04/01/99	7:10	2	29.94	85	53	216	0.83	0	-9.5	218	-17.5	-14.3	3.2	-13.2	1.1	-11.5	1.7	110711
04/01/99	13:00	2	29.94	92	60	222	0.84	0	-9.4	228	-17.3	-14.1	3.2	-13.1	1	-11.6	1.5	110740
04/05/99	7:50	2	30.14	84	41	226	0.83	0	-9.3	238	-17.1	-14	3.1	-13	1	-11.6	1.4	111044
04/05/99	15:00	2	30.12	99	62	236	0.83	0	-9.3	254	-17.1	-14.1	3	-13.1	1	-11.5	1.6	111058
04/06/99	6:40	2	29.86	94	56	232	0.82	0	-9.2	248	-17	-14	3	-13	1	-11.5	1.5	111117
04/06/99	15:10	2	29.92	92	69	214	0.83	0	-9.6	208	-17.6	-13.8	3.8	-12.9	0.9	-11.5	1.4	111148
04/07/99	7:10	2	30.23	74	45	202	0.82	0	-10.1	194	-17.9	-14.1	3.8	-13.1	1	-11.7	1.4	111205
04/07/99	14:10	2	30.16	95	63	218	0.84	0	-9.9	218	-17.8	-14	3.8	-13	1	-11.5	1.5	111228
04/08/99	6:50	2	29.95	80	53	210	0.82	0	-9.9	202	-17.6	-14	3.6	-12.9	1.1	-11.6	1.3	111294
04/08/99	13:35	2	29.9	100	73	226	0.83	0	-9.7	226	-17.6	-13.9	3.7	-12.9	1	-11.3	1.6	111319
04/12/99	7:20	2	30.12	76	37	215	0.78	0	-10.1	212	-17.6	-13.9	3.7	-12.9	1	-11.3	1.6	111644

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
04/12/99	13:50	2	30.22	86	50	222	0.8	0	-9.9	224	-17.6	-13.9	3.7	-12.9	1	-11.3	1.6	111675
04/13/99	7:55	2	30.22	72	37	214	0.78	0	-10.1	214	-17.6	-13.8	3.8	-12.7	1.1	-11.4	1.3	111759
04/13/99	13:15	2	30.19	84	54	206	0.8	0	-9.9	201	-17.9	-14.2	3.7	-13.2	1	-11.6	1.6	111759
04/14/99	6:40	2	30.07	82	41	202	0.78	0	-10	198	-17.8	-14.1	3.7	-13	1.1	-11.6	1.4	111826
04/14/99	13:50	2	30.04	91	62	214	0.78	0	-9.9	210	-17.8	-14	3.8	-13	1	-11.4	1.6	111849
04/15/99	6:55	2	29.68	81	50	210	0.76	0	-10.1	204	-17.7	-13.7	4	-12.7	1	-11.1	1.6	111901
04/15/99	14:45	2	29.45	80	49	210	0.75	0	-10	202	-17.6	-13.6	4	-12.6	1	-11.1	1.5	111939
04/19/99	7:20	2	30.05	76	38	222	0.67	0	-11.3	206	-18.7	-12.3	6.4	-11.3	1	-10	1.3	113281
04/19/99	16:16	2	29.93	91	58	226	0.68	0	-11.1	208	-18.7	-12.7	6	-11.5	1.2	-10.2	1.3	113328
04/20/99	6:45	2	29.98	76	41	206	0.8	0	-9.5	212	-17.1	-15.4	1.7	-14.4	1	-12.5	1.9	113432
04/20/99	14:00	2	30.06	89	53	216	0.83	0	-9.3	230	-17	-15.4	1.6	-14.4	1	-12.5	1.9	113475
04/21/99	7:15	2	29.9	80	46	240	0.62	0	-11.3	230	-18.7	-16.5	2.2	-15.5	1	-14.3	1.2	113898
04/21/99	14:00	2	29.82	94	65	236	0.75	0	-9.8	248	-17.5	-15.9	1.6	-14.9	1	-13	1.9	116093
04/22/99	6:45	2	29.83	88	62	226	0.8	0	-9	246	-16.7	-15.1	1.6	-14.1	1	-12.4	1.7	116461
04/22/99	13:15	2	29.85	108	75	240	0.84	0	-8.5	266	-16.6	-14.9	1.7	-13.9	1	-12.5	1.4	116520
04/26/99	7:15	2	30.01	76	42	210	0.82	0	-9.6	219	-17.2	-15.4	1.8	-14.4	1	-12.5	1.9	117234
04/26/99	14:05	2	29.94	96	67	224	0.82	0	-9.3	236	-17.1	-15.2	1.9	-14.3	0.9	-12.5	1.8	117293
04/27/99	7:50	2	29.95	89	54	220	0.82	0	-9.2	234	-17	-15.1	1.9	-14.1	1	-12.4	1.7	117442
04/27/99	14:40	2	29.93	90	64	226	0.82	0	-9.3	240	-17	-15.1	1.9	-14.1	1	-12.4	1.7	117500
04/28/99	6:55	2	29.97	82	48	222	0.8	0	-9.2	236	-17	-15	2	-14	1	-12.5	1.5	117619
04/28/99	14:40	2	30.01	90	60	229	0.8	0	-9.1	250	-17	-15	2	-14	1	-12	2	117663
04/29/99	6:50	2	30.14	80	42	226	0.8	0	-9.2	248	-17	-15	2	-14	1	-12.4	1.6	117796
04/29/99	16:00	2	30.18	86	63	198	0.85	0	-10.2	190	-17.9	-15.5	2.4	-14.6	0.9	-12.6	2	117796
05/03/99	6:50	2	30.06	76	50	204	0.8	0	-10.6	186	-18	-15.5	2.5	-14.5	1	-12.5	2	118249
05/03/99	13:45	2	30.02	100	75	218	0.85	0	-10	212	-17.9	-15.3	2.6	-14.2	1.1	-12.6	1.6	118295
05/04/99	6:45	2	29.95	80	52	206	0.82	0	-10.5	190	-17.9	-15.3	2.6	-14.3	1	-12.6	1.7	118382
05/04/99	14:00	2	29.92	105	78	224	0.82	0	-10.2	218	-17.9	-14.5	3.4	-13.4	1.1	-12.1	1.3	118411
05/05/99	6:45	2	29.79	91	66	216	0.78	0	-10.5	202	-17.9	-14.5	3.4	-13.5	1	-12	1.5	118501
05/06/99	7:00	2	29.62	88	62	214	0.78	0	-10.5	200	-17.8	-14.4	3.4	-13.4	1	-11.9	1.5	118561
05/06/99	13:05	2	29.59	98	74	220	0.8	0	-10.3	210	-17.7	-14.4	3.3	-13.4	1	-11.7	1.7	118576
05/10/99	7:55	2	30.16	76	53	204	0.78	0	-10.6	188	-18	-14.6	3.4	-13.6	1	-12.1	1.5	118938
05/10/99	16:00	2	30.09	102	77	222	0.82	0	-10.1	214	-17.9	-14.4	3.5	-13.4	1	-11.8	1.6	118971
05/12/99	7:10	2	30.01	80	60	206	0.8	0	-10.3	194	-17.6	-14.4	3.2	-13.4	1	-11.5	1.9	119001
05/12/99	14:45	2	29.9	104	84	220	0.83	0	-9.7	212	-17.5	-14.2	3.3	-13.2	1	-11.5	1.7	119016
05/13/99	7:10	2	29.83	82	52	208	0.8	0	-10.2	192	-17.6	-14.4	3.2	-13.3	1.1	-11.5	1.8	119069
05/13/99	13:50	2	29.83	74	60	192	0.85	0	-9.6	176	-17.5	-16.1	1.4	-15.2	0.9	-13	2.2	119089
05/14/99	6:55	2	29.96	60	51	180	0.85	0	-9.5	170	-18.25	-16.5	1.75	-15.6	0.9	-13.25	2.35	119143
05/14/99	15:20	2	30.05	90	62	198	0.88	0	-9.1	190	-18.1	-16.5	1.6	-15.4	1.1	-13.3	2.1	119184
05/17/99	7:15	2	30.07	96	67	210	0.9	0	-8.9	214	-17.9	-16.4	1.5	-15.4	1	-13.4	2	119354
05/17/99	13:45	2	30.04	110	83	218	0.92	0	-8.5	220	-18.1	-16.5	1.6	-15.5	1	-13.3	2.2	119366
05/18/99	8:15	2	30.01	86	62	200	0.88	0	-9.1	192	-18	-16.5	1.5	-15.5	1	-13.3	2.2	119409
05/18/99	14:30	2	30.03	86	62	202	0.87	0	-9.1	206	-18	-16.5	1.5	-15.5	1	-13.6	1.9	119435

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
05/19/99	7:05	2	30.15	72	54	190	0.87	0	-9.3	182	-18.2	-16.6	1.6	-15.6	1	-13.6	2	119484
05/19/99	14:20	2	30.19	96	69	210	0.89	0	-8.7	216	-18.1	-16.5	1.6	-15.5	1	-13.2	2.3	119496
05/20/99	8:40	2	30.26	78	59	196	0.88	0	-9	196	-17.5	-16.1	1.4	-15.1	1	-12.9	2.2	119535
05/20/99	10:35	2	30.27	84	66	161	1.65	0	-1.7	198	-12.9	-10.6	2.3	-9.5	1.1	-7.1	2.4	119546
05/20/99	13:40	2	30.24	94	71	214	0.92	0	-8.4	218	-17.7	-16.3	1.4	-15.3	1	-13.1	2.2	119546
05/24/99	7:10	2	29.69	68	51	197	0.86	0	-8.6	200	-17.6	-16.1	1.5	-15.1	1	-13.3	1.8	119785
05/24/99	13:45	2	29.73	74	53	208	0.85	0	-8.6	220	-17.8	-16.3	1.5	-15.3	1	-13.1	2.2	119809
05/25/99	16:20	2	29.83	88	66	214	0.8	0	-9.5	224	-17.1	-13.3	3.8	-12.3	1	-10.6	1.7	119809
05/26/99	7:10	2	29.92	76	49	218	0.77	0	-10.1	206	-17	-13.3	3.7	-12.2	1.1	-10.5	1.7	119814
06/09/99	13:10	2	30.06	117	90	233	0.92	0	-8	275	-16	-13.1	2.9	-12.2	0.9	-10.8	1.4	119829
06/09/99	15:10	2	30.04	120	92	235	0.9	0	-8.1	276	-16.1	-13.1	3	-12.3	0.8	-10.6	1.7	119829
06/10/99	6:30	2	30.09	98	71	224	0.85	0	-8.6	258	-16.4	-13.4	3	-12.3	1.1	-10.6	1.7	119829
06/14/99	7:20	2	29.92	94	66	240	0.7	0	-10.6	250	-17.8	-14.5	3.3	-13.5	1	-11.8	1.7	119972
06/14/99	13:50	2	29.99	98	73	230	0.8	0	-9.1	240	-16.8	-13.2	3.6	-12.2	1	-10.5	1.7	120364
06/15/99	6:50	2	30.16	83	54	220	0.74	0	-9.4	242	-16.9	-13.4	3.5	-12.3	1.1	-10.6	1.7	120395
06/15/99	14:45	2	30.17	102	65	232	0.83	0	-9.1	264	-16.8	-13.3	3.5	-12.2	1.1	-10.5	1.7	120419
06/16/99	6:50	2	30.15	86	49	224	0.82	0	-9.4	250	-16.9	-13.5	3.4	-12.4	1.1	-10.8	1.6	120456
06/16/99	14.35	2	30.09	102	69	234	0.83	0	-9.1	265	-16.7	-13.3	3.4	-12.3	1	-10.9	1.4	120485
06/17/99	6:55	2	30.15	88	54	226	0.82	0	-9.3	255	-16.9	-13.4	3.5	-12.4	1	-11	1.4	120485
06/17/99	15:00	2	30.19	102	70	235	0.84	0	-9.1	265	-16.9	-13.4	3.5	-12.3	1.1	-11	1.3	120579
06/21/99	6:35	2	30.24	94	66	232	0.82	0	-9.4	260	-16.9	-13.6	3.3	-12.6	1	-11	1.6	120923
06/21/99	14:15	2	30.22	112	81	242	0.85	0	-8.9	278	-16.9	-13.4	3.5	-12.4	1	-10.9	1.5	120955
06/22/99	6:40	2	30.19	92	61	230	0.82	0	-9.3	258	-16.9	-13.6	3.3	-12.6	1	-11	1.6	121016
06/22/99	14:10	2	30.16	114	80	243	0.85	0	-8.8	282	-16.6	-13.3	3.3	-12.3	1	-11	1.3	121046
06/23/99	6:55	2	30.06	90	63	230	0.8	0	-9.3	258	-16.9	-13.6	3.3	-12.6	1	-10.9	1.7	121093
06/23/99	14:00	2	30.01	115	84	244	0.84	0	-8.7	284	-16.6	-13.4	3.2	-12.4	1	-10.9	1.5	121123
06/24/99	7:00	2	29.92	101	71	236	0.82	0	-9.1	268	-16.7	-13.5	3.2	-12.5	1	-10.9	1.6	121179
06/24/99	14:40	2	29.89	102	75	237	0.83	0	-8.9	267	-16.6	-13.4	3.2	-12.4	1	-11	1.4	121201
06/28/99	7:50	2	29.8	102	73	238	0.8	0	-8.9	270	-16.6	-13.5	3.1	-12.5	1	-11	1.5	121432
06/28/99	14:40	2	29.74	114	82	246	0.82	0	-8.6	282	-16.6	-13.4	3.2	-12.4	1	-10.7	1.7	121448
06/29/99	7:10	2	29.72	101	69	238	0.8	0	-9.1	272	-16.5	-13.6	2.9	-12.6	1	-11	1.6	121495
06/29/99	13:50	2	29.86	102	71	240	0.82	0	-9	272	-16.6	-13.6	3	-12.6	1	-10.9	1.7	121519
06/30/99	7:40	2	29.93	94	61	232	0.8	0	-9.2	262	-16.7	-13.7	3	-12.7	1	-11	1.7	121579
06/30/99	13:40	2	29.95	106	76	242	0.82	0	-9.1	280	-16.7	-13.6	3.1	-12.6	1	-10.9	1.7	121585
07/01/99	8:15	2	29.86	101	71	238	0.8	0	-9.1	270	-16.6	-13.6	3	-12.6	1	-11	1.6	121647
07/01/99	14:50	2	29.83	109	75	245	0.82	0	-8.8	278	-16.5	-13.4	3.1	-12.4	1	-11	1.4	121677
07/06/99	10:35	2	30.06	104	86	224	0.83	0	-8.8	262	-16.4	-13.3	3.1	-12.3	1	-10.5	1.8	121893
07/06/99	15:45	2	30	110	90	240	0.85	0	-8.6	278	-16.4	-13.4	3	-12.4	1	-10.6	1.8	121893
07/07/99	7:15	2	30.11	90	61	226	0.82	0	-9.1	252	-16.7	-13.6	3.1	-12.5	1.1	-10.8	1.7	121919
07/07/99	14:35	2	30.1	112	83	241	0.85	0	-8.6	276	-16.5	-13.4	3.1	-12.4	1	-10.6	1.8	121924
07/08/99	7:00	2	30.09	90	62	226	0.83	0	-9	252	-16.6	-13.4	3.2	-12.4	1	-11	1.4	121955
07/08/99	14:40	2	30.07	114	85	244	0.85	0	-8.6	280	-16.6	-13.4	3.2	-12.3	1.1	-10.5	1.8	121955

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
07/12/99	7:15	2	30.17	92	57	230	0.82	0	-9.2	258	-16.9	-13.4	3.5	-12.3	1.1	-10.9	1.4	122076
07/12/99	14:50	2	30.13	110	77	243	0.83	0	-9	278	-16.9	-13.3	3.6	-12.2	1.1	-10.6	1.6	122076
07/13/99	7:40	2	30.15	94	64	231	0.82	0	-9.1	258	-16.9	-13.3	3.6	-12.3	1	-10.9	1.4	122107
07/13/99	14:20	2	30.14	110	79	243	0.83	0	-8.9	274	-16.8	-13.2	3.6	-12.2	1	-10.6	1.6	122107
07/14/99	6:20	2	30.12	92	62	231	0.83	0	-9.3	258	-16.8	-13.3	3.5	-12.3	1	-10.7	1.6	122139
07/14/99	14:45	2	30.14	112	84	246	0.83	0	-8.9	280	-16.8	-13.2	3.6	-12.1	1.1	-10.5	1.6	122139
07/15/99	6:50	2	30.19	94	68	232	0.82	0	-9.4	258	-16.9	-13.3	3.6	-12.3	1	-10.9	1.4	122179
07/15/99	14:40	2	30.17	110	87	246	0.75	0	-9.1	278	-16.8	-13.2	3.6	-12.1	1.1	-10.5	1.6	122179
07/19/99	8:15	2	30.15	90	71	233	0.73	0	-9.4	258	-16.9	-13.2	3.7	-12.1	1.1	-10.7	1.4	122269
07/19/99	13:45	2	30.11	108	89	245	0.77	0	-8.9	280	-16.8	-13.2	3.6	-12.2	1	-10.6	1.6	122269
07/20/99	7:20	2	30.09	92	73	234	0.75	0	-9.3	272	-16.9	-13.1	3.8	-12.2	0.9	-10.6	1.6	122295
07/20/99	14:20	2	30.1	102	84	242	0.75	0	-9.1	274	-16.9	-13.1	3.8	-12.1	1	-10.5	1.6	122295
07/21/99	7:15	2	30.09	93	74	235	0.75	0	-9.4	264	-16.9	-13.2	3.7	-12.2	1	-10.5	1.7	122310
07/21/99	14:45	2	30.06	108	93	248	0.75	0	-9.1	278	-16.9	-13.1	3.8	-12.1	1	-10.4	1.7	122310
07/22/99	7:45	2	30.09	95	78	238	0.73	0	-9.4	268	-16.9	-13.2	3.7	-12.2	1	-10.5	1.7	122326
07/22/99	14:05	2	30.08	110	92	246	0.75	0	-9.1	276	-16.9	-13.1	3.8	-12.1	1	-10.4	1.7	122326
07/26/99	7:50	2	29.96	92	74	236	0.76	0	-9.4	261	-17	-13.3	3.7	-12.3	1	-10.7	1.6	122406
07/26/99	13:55	2	29.97	104	90	246	0.8	0	-8.9	270	-16.8	-13.1	3.7	-12.1	1	-10.7	1.4	122422
07/27/99	6:40	2	30.03	90	71	233	0.78	0	-9.4	260	-16.9	-13.4	3.5	-12.3	1.1	-10.75	1.55	122454
07/27/99	14:10	2	30.04	104	82	241	0.79	0	-9	272	-16.8	-13.1	3.7	-12.1	1	-10.7	1.4	122470
07/28/99	7:05	2	29.98	92	73	235	0.76	0	-9.4	262	-17	-13.4	3.6	-12.3	1.1	-10.7	1.6	122485
07/28/99	8:45	2	29.98	94	75	247	0.68	0	-10.5	268	-17.9	-14.5	3.4	-13.5	1	-12.2	1.3	122501
07/28/99	14:55	2	29.9	100	83	255	0.69	0	-10.4	279	-17.8	-14.4	3.4	-13.6	0.8	-12	1.6	122501
07/29/99	7:05	2	29.86	92	73	247	0.68	0	-10.5	267	-17.8	-14.6	3.2	-13.7	0.9	-12	1.7	122517
07/29/99	14:25	2	29.86	108	87	260	0.69	0	-10.2	284	-17.8	-14.5	3.3	-13.5	1	-11.9	1.6	122517
08/02/99	7:20	2	30.13	80	66	243	0.64	0	-10.9	254	-18.1	-14.4	3.7	-13.4	1	-12	1.4	122549
08/02/99	10:10	2	30.17	104	75	257	0.7	0	-10.4	279	-18.1	-14.4	3.7	-13.4	1	-12	1.4	122565
08/02/99	14:25	2	30.16	110	79	260	0.72	0	-10.3	282	-17.9	-14.3	3.6	-13.4	0.9	-12	1.4	122565
08/03/99	7:15	2	30.21	82	60	243	0.68	0	-10.9	260	-18.1	-14.5	3.6	-13.5	1	-11.9	1.6	122565
08/03/99	15:05	2	30.19	102	80	255	0.7	0	-10.5	278	-18	-14.3	3.7	-13.3	1	-11.6	1.7	122565
08/04/99	7:15	2	30.06	85	64	244	0.67	0	-10.9	258	-18.1	-14.3	3.8	-13.3	1	-11.6	1.7	122565
08/04/99	13:10	2	29.97	108	85	260	0.7	0	-10.4	278	-17.9	-14	3.9	-13.1	0.9	-11.5	1.6	122565
08/05/99	6:40	2	29.97	85	60	246	0.66	0	-10.8	260	-18	-14.2	3.8	-13.2	1	-11.5	1.7	122565
08/05/99	13:45	2	29.99	91	78	256	0.68	0	-10.6	272	-17.9	-14.1	3.8	-13.1	1	-11.5	1.6	122565
08/09/99	6:45	2	30.01	82	55	244	0.67	0	-10.8	260	-18	-14.4	3.6	-13.4	1	-11.9	1.5	122565
08/09/99	13:20	2	30.01	93	72	250	0.69	0	-10.6	262	-17.9	-14.4	3.5	-13.4	1	-11.8	1.6	122565
08/10/99	6:40	2	29.86	81	62	240	0.67	0	-10.8	254	-17.9	-14.5	3.4	-13.5	1	-11.9	1.6	122565
08/10/99	13:40	2	29.78	102	86	256	0.69	0	-10.2	274	-17.6	-14.4	3.2	-13.4	1	-11.7	1.7	122565
08/11/99	7:10	2	29.88	86	66	245	0.69	0	-10.6	264	-17.8	-14.6	3.2	-13.7	0.9	-11.9	1.8	122565
08/11/99	13:50	2	29.97	99	82	252	0.7	0	-10.3	260	-17.8	-14.6	3.2	-13.6	1	-12	1.6	122565
08/12/99	6:40	2	30	86	67	243	0.72	0	-10.4	262	-17.8	-14.7	3.1	-13.9	0.8	-12.2	1.7	122565
08/12/99	13:40	2	30.05	103	83	254	0.74	0	-9.9	278	-17.6	-14.6	3	-13.8	0.8	-12.2	1.6	122565

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
08/16/99	6:55	2	30.22	80	56	236	0.72	0	-10.4	252	-17.7	-14.9	2.8	-14.1	0.8	-12.5	1.6	122565
08/16/99	13:05	2	30.23	100	80	251	0.75	0	-10	264	-17.6	-14.7	2.9	-14	0.7	-12.5	1.5	122565
08/17/99	6:55	2	30.1	82	65	240	0.72	0	-10.4	258	-17.6	-14.8	2.8	-14.1	0.7	-12.5	1.6	122565
08/17/99	14:10	2	30.05	108	87	259	0.75	0	-9.7	286	-17.5	-14.2	3.3	-13.9	0.3	-12.2	1.7	122565
08/18/99	7:10	2	30.07	83	61	242	0.72	0	-10.4	260	-17.6	-14.8	2.8	-14.1	0.7	-12.5	1.6	122565
08/18/99	13:20	2	30.05	92	79	249	0.73	0	-10	262	-17.6	-14.7	2.9	-13.9	0.8	-12.6	1.3	122565
08/19/99	6:55	2	29.98	88	64	245	0.72	0	-10.2	266	-17.6	-14.7	2.9	-13.9	0.8	-12.5	1.4	122565
08/19/99	13:50	2	29.95	86	72	245	0.7	0	-10.2	258	-17.5	-14.7	2.8	-13.9	0.8	-12.3	1.6	122565
08/23/99	7:20	2	30.02	85	63	244	0.71	0	-10.3	262	-17.6	-14.7	2.9	-13.9	0.8	-12.4	1.5	122565
08/23/99	13:50	2	29.99	106	84	256	0.73	0	-9.8	282	-17.5	-14.5	3	-13.7	0.8	-12.2	1.5	122565
08/24/99	7:10	2	29.86	93	71	250	0.72	0	-9.9	270	-17.5	-14.6	2.9	-13.7	0.9	-12.1	1.6	122565
08/24/99	14:20	2	29.87	91	67	248	0.72	0	-10.1	262	-17.5	-14.6	2.9	-13.8	0.8	-12	1.8	122565
08/25/99	7:10	2	29.87	88	64	246	0.72	0	-10.2	268	-17.5	-14.6	2.9	-13.8	0.8	-12	1.8	122565
08/25/99	14:10	2	29.88	94	73	252	0.72	0	-10	272	-17.5	-14.5	3	-13.7	0.8	-12	1.7	122565
08/26/99	7:00	2	29.88	88	62	246	0.7	0	-10.2	264	-17.5	-14.6	2.9	-13.8	0.8	-12	1.8	122565
08/26/99	14:20	2	29.92	101	73	253	0.73	0	-9.9	274	-17.5	-14.5	3	-13.7	0.8	-12	1.7	122565
08/30/99	6:50	2	30.22	76	50	240	0.7	0	-10.6	258	-17.8	-14.9	2.9	-13.9	1	-12	1.9	122565
08/30/99	14:20	2	30.24	86	71	244	0.7	0	-10.5	232	-17.8	-14.8	3	-13.8	1	-12	1.8	122565
08/31/99	6:40	2	30.23	76	49	240	0.7	0	-10.6	254	-17.8	-14.8	3	-13.8	1	-12	1.8	122565
09/01/99	6:55	2	30.21	76	55	194	1.25	0	-4.3	252	-12.9	-8.6	4.3	-7.8	0.8	-5.9	1.9	122565
09/01/99	14:55	2	30.17	103	84	252	0.76	0	-9.6	264	-17.4	-14.4	3	-13.5	0.9	-12	1.5	122565
09/02/99	6:50	2	30.16	73	57	235	0.74	0	-10	253	-17.5	-14.4	3.1	-13.6	0.8	-12	1.6	122565
09/02/99	13:15	2	30.15	101	85	252	0.76	0	-9.5	265	-17.4	-14.3	3.1	-13.4	0.9	-12	1.4	122565
09/07/99	6:45	2	29.92	86	61	240	0.74	0	-9.7	260	-17.2	-14.2	3	-13.4	0.8	-11.8	1.6	122565
09/07/99	13:15	2	29.95	100	75	248	0.75	0	-9.4	274	-17.2	-14.1	3.1	-13.3	0.8	-11.7	1.6	122565
09/08/99	7:25	2	29.9	82	55	238	0.75	0	-9.8	258	-17.2	-14.1	3.1	-13.3	0.8	-11.7	1.6	122565
09/08/99	13:55	2	29.86	108	84	254	0.77	0	-9.2	280	-17	-13.9	3.1	-13.2	0.7	-11.5	1.7	122565
09/09/99	6:40	2	29.87	86	66	242	0.75	0	-9.5	256	-17.1	-14	3.1	-13.3	0.7	-11.6	1.7	122565
09/09/99	14:40	2	29.87	99	78	252	0.77	0	-9.3	272	-17	-13.9	3.1	-13.1	0.8	-11.5	1.6	122565
09/13/99	6:40	2	30.04	90	66	243	0.77	0	-9.4	268	-17.1	-14	3.1	-13.2	0.8	-11.5	1.7	122565
09/13/99	14:00	2	30.06	96	73	247	0.77	0	-9.3	272	-17	-13.9	3.1	-13.1	0.8	-11.5	1.6	122565
09/14/99	7:10	2	30.14	72	54	231	0.75	0	-9.8	250	-17.2	-14.1	3.1	-13.3	0.8	-11.5	1.8	122565
09/15/99	10:15	2	30.15	86	62	239	0.77	0	-9.4	260	-17.2	-14	3.2	-13.3	0.7	-11.5	1.8	122565
09/15/99	13:15	2	30.12	96	75	247	0.78	0	-9.2	274	-17.1	-13.9	3.2	-13.2	0.7	-11.5	1.7	122565
09/16/99	8:15	2	30.04	68	51	229	0.75	0	-9.7	234	-17.2	-14	3.2	-13.3	0.7	-11.5	1.8	122565
09/16/99	13:45	2	30.06	76	67	231	0.75	0	-9.6	228	-17.2	-14	3.2	-13.3	0.7	-11.5	1.8	122565
09/20/99	7:10	2	29.94	92	63	247	0.76	0	-9.3	270	-17.1	-14	3.1	-13.2	0.8	-11.5	1.7	122565
09/20/99	14:15	2	29.97	97	60	250	0.78	0	-9.3	276	-17	-14	3	-13.2	0.8	-11.5	1.7	122565
09/21/99	6:50	2	30.02	84	49	241	0.77	0	-9.5	262	-17.2	-14	3.2	-13.3	0.7	-11.5	1.8	122565
09/21/99	14:15	2	30.06	94	62	248	0.78	0	-9.3	272	-17	-14	3	-13.2	0.8	-11.5	1.7	122565
09/22/99	6:45	2	30.1	75	39	234	0.75	0	-9.6	250	-17.2	-14.1	3.1	-13.3	0.8	-11.5	1.8	122565
09/22/99	14:20	2	30.06	96	63	249	0.78	0	-9.3	247	-17.1	-14	3.1	-13.2	0.8	-11.5	1.7	122565

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
09/23/99	7:05	2	29.99	76	48	235	0.75	0	-9.6	250	-17.2	-14.1	3.1	-13.3	0.8	-11.5	1.8	122565
09/23/99	13:50	2	29.94	103	74	254	0.78	0	-9.1	280	-17	-13.9	3.1	-13.1	0.8	-11.5	1.6	122565
09/27/99	7:00	2	30.09	79	60	240	0.75	0	-9.7	256	-17.3	-14.2	3.1	-13.1	1.1	-11.5	1.6	122565
09/27/99	14:50	2	30.11	104	80	256	0.77	0	-9.2	282	-17.2	-14	3.2	-13	1	-11.3	1.7	122565
09/28/99	7:15	2	30.12	92	66	249	0.76	0	-9.4	270	-17.2	-14	3.2	-13.1	0.9	-11.3	1.8	122565
09/28/99	13:35	2	30.1	110	84	260	0.78	0	-8.9	292	-17	-13.9	3.1	-13	0.9	-11.2	1.8	122565
09/29/99	6:45	2	29.93	87	68	246	0.75	0	-9.4	270	-17.1	-14	3.1	-13.1	0.9	-11.3	1.8	122565
09/29/99	14:20	2	29.87	88	55	247	0.74	0	-9.3	272	-17.1	-14	3.1	-13.1	0.9	-11.2	1.9	122565
09/30/99	6:45	2	30.08	78	45	240	0.74	0	-9.8	256	-17.3	-14.2	3.1	-13.1	1.1	-11.2	1.9	122565
10/04/99	7:10	2	30.1	82	51	245	0.75	0	-9.6	262	-17.4	-14.1	3.3	-13.1	1	-11.3	1.8	122565
10/04/99	13:25	2	30.17	80	48	243	0.75	0	-9.7	260	-17.4	-14.2	3.2	-13.1	1.1	-11.2	1.9	122565
10/05/99	6:35	2	30.24	77	37	240	0.75	0	-9.7	255	-17.4	-14.1	3.3	-13	1.1	-11.2	1.8	122565
10/05/99	13:50	2	30.2	88	57	247	0.76	0	-9.5	266	-17.4	-14	3.4	-13	1	-11.2	1.8	122565
10/06/99	6:45	2	30.13	73	44	236	0.74	0	-9.8	250	-17.4	-14.2	3.2	-13.1	1.1	-11.2	1.9	122565
10/06/99	13:45	2	30.21	94	64	251	0.76	0	-9.4	268	-17.3	-14	3.3	-13.1	0.9	-11.1	2	122565
10/07/99	7:00	2	30.35	78	42	240	0.75	0	-9.8	254	-17.5	-14.2	3.3	-13.1	1.1	-11.4	1.7	122565
10/07/99	13:40	2	30.31	92	62	250	0.77	0	-9.5	268	-17.4	-14	3.4	-13	1	-11.4	1.6	122565
10/11/99	7:05	2	30.22	86	55	248	0.75	0	-9.6	265	-17.4	-14.1	3.3	-13	1.1	-11.2	1.8	122565
10/11/99	14:15	2	30.31	96	66	252	0.77	0	-9.4	274	-17.4	-14	3.4	-13	1	-11.2	1.8	122565
10/12/99	7:10	2	30.31	80	45	244	0.75	0	-9.7	258	-17.5	-14.1	3.4	-13.1	1	-11.3	1.8	122565
10/12/99	13:15	2	30.21	100	67	256	0.77	0	-9.4	278	-17.3	-13.9	3.4	-12.9	1	-11.2	1.7	122565
10/13/99	6:50	2	29.97	88	61	249	0.75	0	-9.6	266	-17.3	-14	3.3	-13	1	-11.1	1.9	122565
10/13/99	13:35	2	29.8	100	74	256	0.75	0	-9.3	278	-17.2	-13.9	3.3	-12.8	1.1	-11.2	1.6	122565
10/14/99	6:15	2	30.18	78	44	244	0.75	0	-9.8	258	-17.5	-14.1	3.4	-13	1.1	-11.2	1.8	122565
10/14/99	11:25	2	30.25	81	47	245	0.75	0	-9.7	260	-17.5	-14.1	3.4	-13.1	1	-11.3	1.8	122565
10/18/99	7:15	2	30.12	70	35	240	0.74	0	-9.9	250	-17.5	-14.1	3.4	-13	1.1	-11.2	1.8	122565
10/18/99	14:40	2	30.15	84	51	248	0.75	0	-9.7	262	-17.5	-13.9	3.6	-12.9	1	-11.1	1.8	122565
10/19/99	7:05	2	30.22	67	34	237	0.74	0	-10	244	-17.6	-14	3.6	-12.9	1.1	-11.2	1.7	122565
10/19/99	13:15	2	30.22	81	51	246	0.75	0	-9.8	260	-17.5	-13.9	3.6	-12.9	1	-11.1	1.8	122565
10/20/99	6:50	2	30.24	67	37	237	0.73	0	-10.1	245	-17.6	-14	3.6	-12.9	1.1	-11.1	1.8	122565
10/20/99	13:50	2	30.23	85	55	249	0.75	0	-9.8	264	-17.5	-13.9	3.6	-12.8	1.1	-11	1.8	122565
10/21/99	6:55	2	30.18	66	36	237	0.73	0	-10.2	244	-17.6	-13.9	3.7	-12.9	1	-11.1	1.8	122565
10/21/99	13:45	2	30.08	86	57	250	0.75	0	-9.8	264	-17.5	-13.8	3.7	-12.7	1.1	-11	1.7	122565
10/25/99	7:15	2	30.26	66	34	240	0.72	0	-10.2	244	-17.8	-13.9	3.9	-12.8	1.1	-11	1.8	122565
10/25/99	13:40	2	30.21	84	55	250	0.74	0	-9.9	262	-17.6	-13.7	3.9	-12.6	1.1	-11	1.6	122565
10/26/99	7:00	2	30.08	70	45	241	0.72	0	-10.1	248	-17.7	-13.7	4	-12.6	1.1	-11	1.6	122565
10/26/99	13:45	2	30.07	90	64	254	0.74	0	-9.9	265	-17.5	-13.5	4	-12.5	1	-10.9	1.6	122565
10/27/99	6:45	2	30.26	65	36	238	0.72	0	-10.3	244	-17.9	-13.8	4.1	-12.7	1.1	-11	1.7	122565
10/27/99	14:40	2	30.27	87	75	252	0.74	0	-9.9	260	-17.8	-13.6	4.2	-12.6	1	-11	1.6	122565
10/28/99	6:40	2	30.28	68	42	240	0.72	0	-10.3	246	-17.8	-13.8	4	-12.7	1.1	-11	1.7	122565
10/28/99	13:20	2	30.26	74	68	256	0.75	0	-9.8	270	-17.7	-13.6	4.1	-12.5	1.1	-10.9	1.6	122565
11/01/99	6:55	2	30.16	75	50	246	0.72	0	-9.9	254	-17.6	-13.9	3.7	-12.9	1	-11.1	1.8	122565

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
11/01/99	13:45	2	30.01	102	76	262	0.75	0	-9.5	280	-17.5	-13.6	3.9	-12.6	1	-11	1.6	122565
11/02/99	7:05	2	29.79	74	42	245	0.72	0	-9.9	253	-17.5	-13.9	3.6	-12.8	1.1	-11.1	1.7	122565
11/02/99	13:45	2	29.74	70	37	243	0.72	0	-9.9	250	-17.5	-13.9	3.6	-12.8	1.1	-11	1.8	122565
11/03/99	6:55	2	29.91	66	31	240	0.72	0	-10.1	244	-17.6	-13.9	3.7	-12.8	1.1	-11.2	1.6	122565
11/03/99	13:50	2	30.01	74	40	245	0.73	0	-10.1	250	-17.6	-13.9	3.7	-12.8	1.1	-11.1	1.7	122565
11/04/99	6:55	2	30.22	65	32	241	0.72	0	-10.3	244	-17.5	-13.9	3.6	-12.8	1.1	-11	1.8	122565
11/04/99	13:45	2	30.23	86	58	254	0.73	0	-9.9	265	-17.7	-13.8	3.9	-12.6	1.2	-11	1.6	122565
11/08/99	6:55	2	30.26	67	35	246	0.7	0	-10.5	250	-18	-13.6	4.4	-12.5	1.1	-10.9	1.6	122565
11/08/99	13:30	2	30.19	90	62	260	0.72	0	-10	265	-17.9	-13.4	4.5	-12.3	1.1	-10.7	1.6	122565
11/09/99	6:55	2	30.15	73	54	248	0.7	0	-10.4	252	-18	-13.4	4.6	-12.3	1.1	-10.7	1.6	122565
11/09/99	13:30	2	30.1	99	73	265	0.73	0	-9.9	278	-17.6	-13.2	4.4	-12.1	1.1	-10.5	1.6	122565
11/10/99	6:55	2	30	84	56	254	0.71	0	10.1	262	-17.7	-13.3	4.4	-12.2	1.1	-10.6	1.6	122565
11/10/99	13:40	2	29.89	93	68	260	0.71	0	-9.9	273	-17.7	-13.2	4.5	-12.1	1.1	-10.6	1.5	122565
11/11/99	7:10	2	30.15	76	45	252	0.71	0	-10.3	258	-18	-13.5	4.5	-12.4	1.1	-10.8	1.6	122565
11/11/99	13:05	2	30.27	78	49	252	0.72	0	-10.3	260	-17.9	-13.5	4.4	-12.4	1.1	-10.7	1.7	122565
11/15/99	6:50	2	30.13	71	30	247	0.7	0	-10.5	246	-18	-13.5	4.5	-12.3	1.2	-10.7	1.6	122565
11/15/99	14:15	2	30.04	78	44	252	0.71	0	-10.3	258	-18	-13.4	4.6	-12.2	1.2	-10.5	1.7	122565
11/16/99	6:55	2	30.02	65	30	246	0.69	0	-10.5	244	-18	-13.3	4.7	-12.2	1.1	-10.5	1.7	122565
11/16/99	13:10	2	30.07	72	41	249	0.69	0	-10.4	252	-18	-13.3	4.7	-12.1	1.2	-10.5	1.6	122565
11/17/99	6:50	2	30.21	67	26	246	0.69	0	-10.5	245	-18	-13.3	4.7	-12.2	1.1	-10.5	1.7	122565
11/17/99	14:25	2	30.19	75	41	251	0.7	0	-10.4	253	-18	-13.2	4.8	-12.1	1.1	-10.5	1.6	122565
11/18/99	6:15	2	30.17	64	33	243	0.69	0	-10.6	240	-18.2	-13.3	4.9	-12.1	1.2	-10.5	1.6	122565
11/18/99	13:25	2	30.12	84	56	256	0.7	0	-10.3	262	-18	-13.1	4.9	-12	1.1	-10.5	1.5	122565
11/22/99	7:15	2	30.11	76	53	252	0.69	0	-10.4	254	-18	-13.3	4.7	-12.2	1.1	-10.5	1.7	122565
11/22/99	13:00	2	30.12	94	63	265	0.72	0	-10	274	-18	-13.2	4.8	-12.1	1.1	-10.5	1.6	122565
11/23/99	6:55	2	30.16	72	49	249	0.7	0	-10.4	250	-18	-13.4	4.6	-12.3	1.1	-10.6	1.7	122565
11/23/99	13:45	2	30.1	94	69	262	0.72	0	-9.9	272	-17.8	-13.2	4.6	-12.1	1.1	-10.5	1.6	122565
11/24/99	7:00	2	30.19	75	42	252	0.7	0	-10.2	255	-18	-13.5	4.5	-12.4	1.1	-10.7	1.7	122565
11/24/99	12:30	2	30.24	75	46	252	0.72	0	-10.4	252	-18	-13.5	4.5	-12.4	1.1	-10.8	1.6	122565
11/29/99	6:35	2	30.48	62	29	247	0.7	0	-10.6	243	-18.2	-13.6	4.6	-12.5	1.1	-10.9	1.6	122565
11/29/99	14:03	2	30.52	75	40	251	0.7	0	-10.4	254	-18.1	-13.5	4.6	-12.4	1.1	-10.8	1.6	122565
11/30/99	6:55	2	30.68	68	24	248	0.7	0	-10.6	244	-18.2	-13.6	4.6	-12.5	1.1	-10.9	1.6	122565
11/30/99	13:25	2	30.67	68	34	247	0.7	0	-10.6	248	-18.3	-13.5	4.8	-12.4	1.1	-10.8	1.6	122565
12/01/99	6:55	2	30.58	60	22	247	0.68	0	-10.6	242	-18.3	-13.5	4.8	-12.4	1.1	-10.7	1.7	122565
12/01/99	14:10	2	30.47	70	37	249	0.68	0	-10.6	248	-18.3	-13.4	4.9	-12.3	1.1	-10.6	1.7	122565
12/02/99	7:10	2	30.27	62	33	246	0.67	0	-10.6	240	-18.2	-13.3	4.9	-12.2	1.1	-10.5	1.7	122565
12/02/99	13:00	2	30.18	80	48	255	0.68	0	-10.6	258	-18.1	-13.1	5	-12	1.1	-10.4	1.6	122565
12/06/99	7:20	2	30.06	66	32	249	0.69	0	-10.6	248	-18.1	-13.4	4.7	-12.3	1.1	-10.7	1.6	122565
12/06/99	13:40	2	30.12	67	35	248	0.68	0	-10.6	248	-18	-13.4	4.6	-12.3	1.1	-10.7	1.6	122565
12/07/99	7:15	2	30.29	62	26	243	0.68	0	-10.6	240	-18.2	-13.5	4.7	-12.4	1.1	-10.8	1.6	122565
12/07/99	13:40	2	30.23	75	41	251	0.69	0	-10.5	250	-18.1	-13.4	4.7	-12.3	1.1	-10.7	1.6	122565
12/08/99	7:10	2	30.3	54	26	238	0.67	0	-10.8	230	-18.3	-13.5	4.8	-12.4	1.1	-10.8	1.6	122565

Building 301 SVE System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Delta Carbon	Pre Flt. ("Hg)	Filter Delta	Hdr. Vac. ("Hg)	Coalescing Delta	H2O Mtr. (gal.)
12/08/99	14:00	2	30.29	78	51	253	0.69	0	-10.5	254	-18.2	-13.3	4.9	-12.2	1.1	-10.6	1.6	122565
12/09/99	6:50	2	30.28	59	36	244	0.67	0	-10.7	238	-18.3	-13.3	5	-12.2	1.1	-10.6	1.6	122565
12/09/99	13:40	2	30.2	75	50	250	0.7	0	-10.5	250	-18.1	-13.4	4.7	-12.3	1.1	-10.6	1.7	122565
12/14/99	13:10	2	29.73	69	42	190	0.74	0	-10.9	196	-18.5	-15.4	3.1	-14.3	1.1	-12.6	1.7	123980
12/15/99	6:55	2	29.8	64	37	189	0.72	0	-11.2	190	-18.8	-14.6	4.2	-13.6	1	-11.9	1.7	124078
12/15/99	13:40	2	29.71	72	44	191	0.73	0	-10.9	200	-18.5	-15.5	3	-14.5	1	-12.5	2	124093
12/16/99	5:50	2	29.97	64	32	190	0.72	0	-11.3	194	-18.9	-15.6	3.3	-14.6	1	-12.5	2.1	124137
12/16/99	11:20	2	30.01	71	33	191	0.74	0	-11.3	196	-18.9	-15.6	3.3	-14.6	1	-12.5	2.1	124168
12/20/99	7:00	2	29.94	72	48	196	0.71	0	-11.4	198	-19	-15.4	3.6	-14.3	1.1	-12.4	1.9	124382
12/20/99	13:40	2	30.05	71	33	196	0.73	0	-11.5	195	-19	-15.5	3.5	-14.4	1.1	-12.4	2	124409
12/21/99	6:50	2	30.28	50	19	180	0.69	0	-11.9	172	-18.7	-15.6	3.1	-14.6	1	-12.5	2.1	124446
12/22/99	1:05	2	30.37	53	17	156	0.93	0	-8.9	184	-17.4	-14.2	3.2	-13.2	1	-11.7	1.5	124462
12/22/99	14:05	2	30.32	60	28	158	0.95	0	-8.9	188	-17.3	-14.1	3.2	-13.2	0.9	-11.6	1.6	124462
01/03/00	8:05	2	29.93	78	53	179	0.89	0	-9.3	206	-17.4	-13.5	3.9	-12.5	1	-11.2	1.3	124769
01/03/00	13:15	2	29.84	77	52	180	0.85	0	-9.6	206	-17.8	-14.2	3.6	-13.2	1	-11.7	1.5	124922
01/04/00	12:25	2	29.89	68	33	189	0.74	0	-11.1	196	-18.5	-10.5	8	-9.7	0.8	-9		129590
01/04/00	16:00	2	29.96	62	30	172	0.8	0	-10.3	184	-18.1	-14.6	3.5	-13.6	1	-11.4	2.2	129850
01/05/00	6:36	2	30.31	70	25	173	0.84	0	-9.8	190	-18	-14.4	3.6	-13.4	1	-11.2	2.2	130135
01/05/00	15:05	2	30.37	60	28	168	0.84	0	-10	178	-18	-14.5	3.5	-13.4	1.1	-11.2	2.2	130242
01/06/00	7:20	2	30.29	65	26	172	0.84	0	-9.9	186	-18	-14.4	3.6	-13.3	1.1	-11.1	2.2	130361
01/06/00	14:20	2	30.26	71	43	174	0.85	0	-9.8	190	-18	-14.3	3.7	-13.1	1.2	-11.2	1.9	130431
01/10/00	7:15	2	29.41	72	48	177	0.83	0	-9.6	196	-17.4	-13.9	3.5	-12.9	1	-10.9	2	130979
01/10/00	13:00	2	29.52	74	50	177	0.84	0	-9.6	194	-17.4	-13.9	3.5	-12.9	1	-11	1.9	131026
01/11/00	6:35	2	29.68	66	39	172	0.83	0	-9.6	186	-17.4	-14	3.4	-12.8	1.2	-11.1	1.7	131160
01/11/00	14:55	2	29.98	68	38	175	0.8	0	-10.2	188	-18	-14.6	3.4	-13.6	1	-11.8	1.8	131174
01/12/00	6:52	2	30.2	54	21	169	0.77	0	-10.5	174	-18.3	-14.75	3.55	-13.7	1.05	-12	1.7	131236
01/12/00	15:10	2	30.03	73	46	178	0.83	0	-9.9	196	-17.8	-14.4	3.4	-13.4	1	-11.7	1.7	131236
01/13/00	6:40	2	29.98	64	35	176	0.78	0	-10.3	186	-17.1	-14.6	2.5	-13.6	1	-11.5	2.1	131285
01/13/00	14:45	2	30.39	61	28	174	0.81	0	-10.4	180	-18.2	-14.7	3.5	-13.5	1.2	-11.8	1.7	131318

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Building 301 AS System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
01/04/99	9:35	2	927	3950	539	01/04/99							
01/04/99	13:40	2	0	3975	542	01/04/99							
01/05/99	7:40	2	48	3950	539	01/05/99							
01/05/99	14:10	2	24	3950	539	01/05/99							
01/06/99	7:05	2	25	4050	552	01/06/99							
01/06/99	13:45	2	24	4050	552	01/06/99							
01/07/99	7:10	2	49	3975	542	01/07/99							
01/07/99	13:25	2	33	4100	559	01/07/99							
01/11/99	6:55	2	954	3750	511	01/11/99							
01/11/99	14:15	2	135	3850	525	01/11/99							
01/12/99	7:05	2	115	4050	552	01/12/99							
01/12/99	13:40	2	162	4025	549	01/12/99							
01/14/99	14:15	2	3347	3800	518	01/14/99							
01/18/99	7:40	2	7982	3800	518	01/18/99							
01/18/99	13:55	2	411	3875	528	01/18/99							
01/19/99	7:10	2	598	3825	522	01/19/99							
01/19/99	15:30	2	183	3875	528	01/19/99							
01/20/99	6:35	2	326	3800	518	01/20/99							
01/20/99	13:40	2	163	3900	532	01/20/99							
01/21/99	7:15	2	395	3800	518	01/21/99							
01/21/99	14:10	2	784	3725	508	01/21/99							
01/25/99	7:10	2	9129	3800	518	01/25/99							
01/25/99	14:00	2	171	3850	525	01/25/99							
01/26/99	7:15	2	381	3850	525	01/26/99							
01/26/99	9:45	2	61	3800	518	01/26/99							
01/26/99	13:45	2	94	3800	518	01/26/99							
01/27/99	6:55	2	369	3750	511	01/27/99							
01/27/99	13:50	2	132	3850	525	01/27/99							
01/28/99	7:10	2	322	3775	515	01/28/99							
01/28/99	13:25	2	122	3775	515	01/28/99							
02/01/99	7:15	2	1303	3775	515	02/01/99							
02/01/99	13:45	2	1258	3550	484	02/01/99							
02/02/99	8:05	2	926	3800	518	02/02/99							
02/02/99	13:25	2	92	3800	518	02/02/99							
02/03/99	7:40	2	336	3775	515	02/03/99							
02/03/99	13:35	2	109	3775	515	02/03/99							
02/04/99	7:10	2	232	3700	505	02/04/99							
02/04/99	13:40	2	91	3825	522	02/04/99							
02/08/99	7:10	2	5250	3700	505	02/08/99							
02/08/99	13:40	2	119	3775	515	02/08/99							
02/09/99	7:05	2	278	3725	508	02/09/99							
02/09/99	13:55	2	90	3800	518	02/09/99							

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Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
02/10/99	7:05	2	277	3675	501	02/10/99							
02/10/99	14:10	2	106	3800	518	02/10/99							
02/11/99	7:05	2	271	3725	508	02/11/99							
02/11/99	13:40	2	70	3850	525	02/11/99							
02/15/99	7:05	2	2573	3675	501	02/15/99							
02/15/99	14:00	2	90	3750	511	02/15/99							
02/16/99	7:05	2	215	3700	505	02/16/99							
02/16/99	13:50	2	100	3800	518	02/16/99							
02/17/99	7:10	2	180	3725	508	02/17/99							
02/18/99	8:40	2	165	3750	511	02/18/99							
02/18/99	13:55	2	45	3750	511	02/18/99							
02/22/99	7:10	2	650	3760	513	02/22/99							
02/22/99	13:45	2	29	3775	515	02/22/99							
02/23/99	7:10	2	106	3775	515	02/23/99							
03/17/99	7:00	2	1564	3950	539	03/17/99							
03/17/99	13:40	2	60	4100	559	03/17/99							
03/18/99	7:30	2	145	3975	542	03/18/99							
03/18/99	13:50	2	44	4000	545	03/18/99							
03/22/99	7:35	2	572	3925	535	03/22/99							
03/22/99	14:15	2	44	4000	545	03/22/99							
03/23/99	7:30	2	89	3900	532	03/23/99							
03/23/99	15:30	2	44	3950	539	03/23/99							
03/24/99	7:20	2	87	3900	532	03/24/99							
03/25/99	6:40	2	88	3925	535	03/25/99							
03/25/99	13:35	2	29	3900	532	03/25/99							
03/29/99	7:40	2	345	3983	543	03/29/99							
03/29/99	13:05	2	29	4160	567	03/29/99							
03/30/99	7:15	2	105	4101	559	03/30/99							
03/30/99	14:00	2	30	4176	569	03/30/99							
03/31/99	7:00	2	72	4063	554	03/31/99							
03/31/99	13:10	2	16	4172	569	03/31/99							
04/01/99	7:10	2	72	4123	562	04/01/99							
04/01/99	13:00	2	29	4166	568	04/01/99							
04/05/99	7:50	2	304	4139	564	04/05/99							
04/05/99	15:00	2	14	4171	569	04/05/99							
04/06/99	6:40	2	59	4151	566	04/06/99							
04/06/99	15:10	2	31	4118	561	04/06/99							
04/07/99	7:10	2	57	4036	550	04/07/99							
04/07/99	14:10	2	23	4138	564	04/07/99							
04/08/99	6:50	2	66	4079	556	04/08/99							
04/08/99	13:35	2	25	4156	567	04/08/99							
04/12/99	7:20	2	325	3982	543	04/12/99							

Building 30 Building 301 AS System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
04/12/99	13:50	2	31	4046	552	04/12/99							
04/13/99	7:55	2	84	3972	542	04/13/99							
04/13/99	13:15	2	0	4001	546	04/13/99							
04/14/99	6:40	2	67	3946	538	04/14/99							
04/14/99	13:50	2	23	3984	543	04/14/99							
04/15/99	6:55	2	52	3945	538	04/15/99							
04/15/99	14:45	2	38	3934	536	04/15/99							
04/19/99	7:20	2	1342	3714	506	04/19/99							
04/19/99	16:16	2	47	3760	513	04/19/99							
04/20/99	6:45	2	104	4015	547	04/20/99							
04/20/99	14:00	2	43	4114	561	04/20/99							
04/21/99	7:15	2	423	3628	495	04/21/99							
04/21/99	14:00	2	2195	3984	543	04/21/99							
04/22/99	6:45	2	368	4085	557	04/22/99							
04/22/99	13:15	2	59	4227	576	04/22/99							
04/26/99	7:15	2	714	4075	556	04/26/99							
04/26/99	14:05	2	59	4122	562	04/26/99							
04/27/99	7:50	2	149	4109	560	04/27/99							
04/27/99	14:40	2	58	4129	563	04/27/99							
04/28/99	6:55	2	119	4063	554	04/28/99							
04/28/99	14:40	2	44	4081	557	04/28/99							
04/29/99	6:50	2	133	4064	554	04/29/99							
04/29/99	16:00	2	0	4100	559	04/29/99							
05/03/99	6:50	2	453	4003	546	05/03/99							
05/03/99	13:45	2	46	4173	569	05/03/99							
05/04/99	6:45	2	87	4067	554	05/04/99							
05/04/99	14:00	2	29	4123	562	05/04/99							
05/05/99	6:45	2	90	4007	546	05/05/99							
05/06/99	7:00	2	60	4012	547	05/06/99							
05/06/99	13:05	2	15	4083	557	05/06/99							
05/10/99	7:55	2	362	3946	538	05/10/99							
05/10/99	16:00	2	33	4106	560	05/10/99							
05/12/99	7:10	2	30	4013	547	05/12/99							
05/12/99	14:45	2	15	4138	564	05/12/99							
05/13/99	7:10	2	53	4031	550	05/13/99							
05/13/99	13:50	2	20	4105	560	05/13/99							
05/14/99	6:55	2	54	4058	553	05/14/99		254	2	14.5	12.5	6575	323
05/14/99	15:20	2	41	4180	570	05/14/99							
05/17/99	7:15	2	170	4265	581	05/17/99							
05/17/99	13:45	2	12	4340	592	05/17/99		282	2	14.4	12.9	6693	329
05/18/99	8:15	2	43	4189	571	05/18/99		260	2	14.5	12.5	6597	324
05/18/99	14:30	2	26	4171	569	05/18/99		258	2.2	14.6	12.6	6907	339

Building 30 Building 301 AS System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
05/19/99	7:05	2	49	4124	562	05/19/99		234	2.4	14.5	12.5	7078	347
05/19/99	14:20	2	12	4232	577	05/19/99		258	2	14.1	12	6568	322
05/20/99	8:40	2	39	4159	567	05/20/99		252	2	14.6	12.5	6533	321
05/20/99	10:35	2	11	5541	755	05/20/99							
05/20/99	13:40	2	0	4312	588	05/20/99		272	1.85	15.2	13.1	6373	313
05/24/99	7:10	2	239	4154	566	05/24/99							
05/24/99	13:45	2	24	4162	567	05/24/99							
05/25/99	16:20	2	0	4049	552	05/25/99							
05/26/99	7:10	2	5	3978	542	05/26/99							
06/09/99	13:10	2	15	4386	598	06/09/99							
06/09/99	15:10	2	0	4346	593	06/09/99							
06/10/99	6:30	2	0	4186	571	06/10/99							
06/14/99	7:20	2	143	3854	525	06/14/99							
06/14/99	13:50	2	392	4086	557	06/14/99							
06/15/99	6:50	2	31	3890	530	06/15/99							
06/15/99	14:45	2	24	4155	567	06/15/99							
06/16/99	6:50	2	37	4107	560	06/16/99							
06/16/99	14.35	2	29	4167	568	06/16/99							
06/17/99	6:55	2	0	4113	561	06/17/99							
06/17/99	15:00	2	94	4188	571	06/17/99							
06/21/99	6:35	2	344	4125	562	06/21/99							
06/21/99	14:15	2	32	4232	577	06/21/99							
06/22/99	6:40	2	61	4123	562	06/22/99							
06/22/99	14:10	2	30	4239	578	06/22/99							
06/23/99	6:55	2	47	4081	556	06/23/99							
06/23/99	14:00	2	30	4227	576	06/23/99							
06/24/99	7:00	2	56	4159	567	06/24/99							
06/24/99	14:40	2	22	4190	571	06/24/99							
06/28/99	7:50	2	231	4122	562	06/28/99							
06/28/99	14:40	2	16	4202	573	06/28/99							
06/29/99	7:10	2	47	4128	563	06/29/99							
06/29/99	13:50	2	24	4175	569	06/29/99							
06/30/99	7:40	2	60	4096	558	06/30/99							
06/30/99	13:40	2	6	4175	569	06/30/99							
07/01/99	8:15	2	62	4118	562	07/01/99							
07/01/99	14:50	2	30	4192	572	07/01/99							
07/06/99	10:35	2	216	4139	564	07/06/99							
07/06/99	15:45	2	0	4241	578	07/06/99							
07/07/99	7:15	2	26	4116	561	07/07/99							
07/07/99	14:35	2	5	4237	578	07/07/99							
07/08/99	7:00	2	31	4143	565	07/08/99							
07/08/99	14:40	2	0	4248	579	07/08/99							

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Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)
07/12/99	7:15	2	121	4124	562
07/12/99	14:50	2	0	4191	571
07/13/99	7:40	2	31	4128	563
07/13/99	14:20	2	0	4190	571
07/14/99	6:20	2	32	4156	567
07/14/99	14:45	2	0	4199	573
07/15/99	6:50	2	40	4129	563
07/15/99	14:40	2	0	3990	544
07/19/99	8:15	2	90	3901	532
07/19/99	13:45	2	0	4044	551
07/20/99	7:20	2	26	3961	540
07/20/99	14:20	2	0	3983	543
07/21/99	7:15	2	15	3964	540
07/21/99	14:45	2	0	4003	546
07/22/99	7:45	2	16	3919	534
07/22/99	14:05	2	0	3996	545
07/26/99	7:50	2	80	4001	546
07/26/99	13:55	2	16	4134	564
07/27/99	6:40	2	32	4040	551
07/27/99	14:10	2	16	4089	558
07/28/99	7:05	2	15	3997	545
07/28/99	8:45	2	16	3814	520
07/28/99	14:55	2	0	3868	527
07/29/99	7:05	2	16	3821	521
07/29/99	14:25	2	0	3884	530
08/02/99	7:20	2	32	3680	502
08/02/99	10:10	2	16	3884	530
08/02/99	14:25	2	0	3948	538
08/03/99	7:15	2	0	3788	517
08/03/99	15:05	2	0	3878	529
08/04/99	7:15	2	0	3772	514
08/04/99	13:10	2	0	3905	533
08/05/99	6:40	2	0	3755	512
08/05/99	13:45	2	0	3837	523
08/09/99	6:45	2	0	3775	515
08/09/99	13:20	2	0	3848	525
08/10/99	6:40	2	0	3774	515
08/10/99	13:40	2	0	3879	529
08/11/99	7:10	2	0	3842	524
08/11/99	13:50	2	0	3884	530
08/12/99	6:40	2	0	3912	533
08/12/99	13:40	2	0	3993	544

Building 301 AS System Parameters

Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
07/12/99							
07/12/99							
07/13/99							
07/13/99							
07/14/99							
07/14/99							
07/15/99							
07/15/99							
07/19/99							
07/19/99							
07/20/99							
07/20/99							
07/21/99							
07/21/99							
07/22/99							
07/22/99							
07/26/99							
07/26/99							
07/27/99							
07/27/99							
07/28/99							
07/28/99							
07/28/99							
07/29/99							
07/29/99							
08/02/99							
08/02/99							
08/02/99							
08/03/99							
08/03/99							
08/04/99							
08/04/99							
08/05/99							
08/05/99	536						
08/09/99	17						
08/09/99							
08/10/99							
08/10/99							
08/11/99							
08/11/99							
08/12/99							
08/12/99							

Building 30 Building 301 AS System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
08/16/99	6:55	2	0	3878	529	08/16/99							
08/16/99	13:05	2	0	4000	545	08/16/99							
08/17/99	6:55	2	0	3897	531	08/17/99							
08/17/99	14:10	2	0	4034	550	08/17/99							
08/18/99	7:10	2	0	3904	532	08/18/99							
08/18/99	13:20	2	0	3952	539	08/18/99							
08/19/99	6:55	2	0	3919	534	08/19/99							
08/19/99	13:50	2	0	3866	527	08/19/99							
08/23/99	7:20	2	0	3886	530	08/23/99							
08/23/99	13:50	2	0	3976	542	08/23/99							
08/24/99	7:10	2	0	3940	537	08/24/99							
08/24/99	14:20	2	0	3934	536	08/24/99							
08/25/99	7:10	2	0	3929	536	08/25/99							
08/25/99	14:10	2	0	3945	538	08/25/99							
08/26/99	7:00	2	0	3873	528	08/26/99							
08/26/99	14:20	2	0	3972	542	08/26/99							
08/30/99	6:50	2	0	3835	523	08/30/99							
08/30/99	14:20	2	0	3844	524	08/30/99							
08/31/99	6:40	2	0	3834	523	08/31/99							
09/01/99	6:55	2	0	4954	675	09/01/99							
09/01/99	14:55	2	0	4033	550	09/01/99							
09/02/99	6:50	2	0	3933	536	09/02/99	535						
09/02/99	13:15	2	0	4034	550	09/02/99	25						
09/07/99	6:45	2	0	3962	540	09/07/99							
09/07/99	13:15	2	0	4010	547	09/07/99							
09/08/99	7:25	2	0	3985	543	09/08/99							
09/08/99	13:55	2	0	4086	557	09/08/99							
09/09/99	6:40	2	0	3998	545	09/09/99							
09/09/99	14:40	2	0	4080	556	09/09/99							
09/13/99	6:40	2	0	4043	551	09/13/99							
09/13/99	14:00	2	0	4053	553	09/13/99							
09/14/99	7:10	2	0	3949	538	09/14/99							
09/15/99	10:15	2	0	4024	549	09/15/99							
09/15/99	13:15	2	0	4075	556	09/15/99							
09/16/99	8:15	2	0	3950	539	09/16/99							
09/16/99	13:45	2	0	3954	539	09/16/99							
09/20/99	7:10	2	0	4034	550	09/20/99							
09/20/99	14:15	2	0	4094	558	09/20/99							
09/21/99	6:50	2	0	4038	551	09/21/99							
09/21/99	14:15	2	0	4082	557	09/21/99							
09/22/99	6:45	2	0	3960	540	09/22/99							
09/22/99	14:20	2	0	4085	557	09/22/99							

Building 30 | Building 301 AS System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
09/23/99	7:05	2	0	3970	541	09/23/99							
09/23/99	13:50	2	0	4107	560	09/23/99							
09/27/99	7:00	2	0	3978	542	09/27/99							
09/27/99	14:50	2	0	4075	556	09/27/99							
09/28/99	7:15	2	0	4028	549	09/28/99							
09/28/99	13:35	2	0	4114	561	09/28/99							
09/29/99	6:45	2	0	4006	546	09/29/99							
09/29/99	14:20	2	0	3986	543	09/29/99							
09/30/99	6:45	2	0	3952	539	09/30/99	549						
10/04/99	7:10	2	0	3991	544	10/04/99	7.1611495						
10/04/99	13:25	2	0	3981	543	10/04/99							
10/05/99	6:35	2	0	3968	541	10/05/99							
10/05/99	13:50	2	0	4017	548	10/05/99							
10/06/99	6:45	2	0	3937	537	10/06/99							
10/06/99	13:45	2	0	4028	549	10/06/99							
10/07/99	7:00	2	0	3961	540	10/07/99							
10/07/99	13:40	2	0	4044	551	10/07/99							
10/11/99	7:05	2	0	3992	544	10/11/99							
10/11/99	14:15	2	0	4050	552	10/11/99							
10/12/99	7:10	2	0	3975	542	10/12/99							
10/12/99	13:15	2	0	4068	555	10/12/99							
10/13/99	6:50	2	0	4011	547	10/13/99							
10/13/99	13:35	2	0	4043	551	10/13/99							
10/14/99	6:15	2	0	3983	543	10/14/99							
10/14/99	11:25	2	0	3981	543	10/14/99							
10/18/99	7:15	2	0	3949	539	10/18/99							
10/18/99	14:40	2	0	3997	545	10/18/99							
10/19/99	7:05	2	0	3934	536	10/19/99							
10/19/99	13:15	2	0	3986	544	10/19/99							
10/20/99	6:50	2	0	3906	533	10/20/99							
10/20/99	13:50	2	0	3994	545	10/20/99							
10/21/99	6:55	2	0	3910	533	10/21/99							
10/21/99	13:45	2	0	4007	546	10/21/99							
10/25/99	7:15	2	0	3887	530	10/25/99							
10/25/99	13:40	2	0	3971	542	10/25/99							
10/26/99	7:00	2	0	3901	532	10/26/99							
10/26/99	13:45	2	0	3992	544	10/26/99							
10/27/99	6:45	2	0	3881	529	10/27/99							
10/27/99	14:40	2	0	3973	542	10/27/99							
10/28/99	6:40	2	0	3885	530	10/28/99							
10/28/99	13:20	2	0	4012	547	10/28/99							
11/01/99	6:55	2	0	3910	533	11/01/99							

Building 30 | Building 301 AS System Parameters

Date (USA)	Time (24 hr)	Hdr. Zone	H2O Mtr. Delta	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)		AS: Main Temp. (°F)	Mag. ("H_2O)	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)
11/01/99	13:45	2	0	4045	552	11/01/99							
11/02/99	7:05	2	0	3931	536	11/02/99							
11/02/99	13:45	2	0	3929	536	11/02/99							
11/03/99	6:55	2	0	3909	533	11/03/99							
11/03/99	13:50	2	0	3944	538	11/03/99							
11/04/99	6:55	2	0	3892	531	11/04/99							
11/04/99	13:45	2	0	3954	539	11/04/99							
11/08/99	6:55	2	0	3849	525	11/08/99	541						
11/08/99	13:30	2	0	3946	538	11/08/99	7.3152715						
11/09/99	6:55	2	0	3861	526	11/09/99							
11/09/99	13:30	2	0	3993	544	11/09/99							
11/10/99	6:55	2	0	3915	534	11/10/99							
11/10/99	13:40	2	0	3938	537	11/10/99							
11/11/99	7:10	2	0	3899	532	11/11/99							
11/11/99	13:05	2	0	3919	534	11/11/99							
11/15/99	6:50	2	0	3860	526	11/15/99							
11/15/99	14:15	2	0	3907	533	11/15/99							
11/16/99	6:55	2	0	3836	523	11/16/99							
11/16/99	13:10	2	0	3841	524	11/16/99							
11/17/99	6:50	2	0	3824	521	11/17/99							
11/17/99	14:25	2	0	3867	527	11/17/99							
11/18/99	6:15	2	0	3819	521	11/18/99							
11/18/99	13:25	2	0	3885	530	11/18/99							
11/22/99	7:15	2	0	3847	525	11/22/99							
11/22/99	13:00	2	0	3965	541	11/22/99							
11/23/99	6:55	2	0	3863	527	11/23/99							
11/23/99	13:45	2	0	3958	540	11/23/99							
11/24/99	7:00	2	0	3869	528	11/24/99							
11/24/99	12:30	2	0	3921	535	11/24/99							
11/29/99	6:35	2	0	3837	523	11/29/99							
11/29/99	14:03	2	0	3846	524	11/29/99							
11/30/99	6:55	2	0	3828	522	11/30/99							
11/30/99	13:25	2	0	3825	522	11/30/99							
12/01/99	6:55	2	0	3776	515	12/01/99							
12/01/99	14:10	2	0	3788	517	12/01/99							
12/02/99	7:10	2	0	3765	513	12/02/99							
12/02/99	13:00	2	0	3822	521	12/02/99							
12/06/99	7:20	2	0	3842	524	12/06/99							
12/06/99	13:40	2	0	3807	519	12/06/99							
12/07/99	7:15	2	0	3783	516	12/07/99							
12/07/99	13:40	2	0	3836	523	12/07/99							
12/08/99	7:10	2	0	3741	510	12/08/99	526						

Building 30						Building 301 AS System Parameters							
								AS:					
Date	Time	Hdr.	H2O Mtr.	Calc. Flow	Flow	Date		Main Temp.	Mag.	Main Press.	Zone Press.	Calc. Flow	Flow
(USA)	(24 hr)	Zone	Delta	(Ft./Min.)	(CFM)	(USA)		(°F)	("H_2O)	(psig)	(psig)	(Ft./Min.)	(CFM)
12/08/99	14:00	2	0	3838	523	12/08/99	8.2199831						
12/09/99	6:50	2	0	3759	513	12/09/99							
12/09/99	13:40	2	0	3863	527	12/09/99							
12/14/99	13:10	2	1415	3831	522	12/14/99							
12/15/99	6:55	2	98	3771	514	12/15/99							
12/15/99	13:40	2	15	3809	519	12/15/99							
12/16/99	5:50	2	44	3763	513	12/16/99							
12/16/99	11:20	2	31	3816	520	12/16/99							
12/20/99	7:00	2	214	3756	512	12/20/99							
12/20/99	13:40	2	27	3802	518	12/20/99							
12/21/99	6:50	2	37	3637	496	12/21/99							
12/22/99	1:05	2	16	4136	564	12/22/99							
12/22/99	14:05	2	0	4191	571	12/22/99	524						
01/03/00	8:05	2	307	4151	566	01/03/00	20.816073						
01/03/00	13:15	2	153	4066	554	01/03/00							
01/04/00	12:25	2	4668	3817	521	01/04/00							
01/04/00	16:00	2	260	3912	533	01/04/00							
01/05/00	6:36	2	285	3989	544	01/05/00							
01/05/00	15:05	2	107	3969	541	01/05/00							
01/06/00	7:20	2	119	3987	544	01/06/00							
01/06/00	14:20	2	70	4019	548	01/06/00							
01/10/00	7:15	2	548	4038	551	01/10/00							
01/10/00	13:00	2	47	4054	553	01/10/00	541						
01/11/00	6:35	2	134	4004	546	01/11/00	11.098141						
01/11/00	14:55	2	14	3920	535	01/11/00							
01/12/00	6:52	2	62	3814	520	01/12/00							
01/12/00	15:10	2	0	3999	545	01/12/00							
01/13/00	6:40	2	49	3874	528	01/13/00							
01/13/00	14:45	2	33	3915	534	01/13/00							

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
01/04/99	9:35	2	
01/04/99	13:40	2	
01/05/99	7:40	2	
01/05/99	14:10	2	
01/06/99	7:05	2	
01/06/99	13:45	2	
01/07/99	7:10	2	
01/07/99	13:25	2	
01/11/99	6:55	2	
01/11/99	14:15	2	
01/12/99	7:05	2	
01/12/99	13:40	2	
01/14/99	14:15	2	
01/18/99	7:40	2	
01/18/99	13:55	2	
01/19/99	7:10	2	
01/19/99	15:30	2	Soil Moist And Frozen. And monthly readings taken at this time.
01/20/99	6:35	2	
01/20/99	13:40	2	
01/21/99	7:15	2	
01/21/99	14:10	2	
01/25/99	7:10	2	
01/25/99	14:00	2	
01/26/99	7:15	2	
01/26/99	9:45	2	
01/26/99	13:45	2	
01/27/99	6:55	2	
01/27/99	13:50	2	
01/28/99	7:10	2	
01/28/99	13:25	2	
02/01/99	7:15	2	
02/01/99	13:45	2	
02/02/99	8:05	2	
02/02/99	13:25	2	
02/03/99	7:40	2	
02/03/99	13:35	2	
02/04/99	7:10	2	
02/04/99	13:40	2	
02/08/99	7:10	2	
02/08/99	13:40	2	
02/09/99	7:05	2	
02/09/99	13:55	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
02/10/99	7:05	2	
02/10/99	14:10	2	
02/11/99	7:05	2	
02/11/99	13:40	2	
02/15/99	7:05	2	
02/15/99	14:00	2	
02/16/99	7:05	2	
02/16/99	13:50	2	
02/17/99	7:10	2	
02/18/99	8:40	2	
02/18/99	13:55	2	
02/22/99	7:10	2	System shut down for maint, @ 07:15 Blowers lubed. System back on @ 07:49 , Oil in blowers cheched also (ok)
02/22/99	13:45	2	
02/23/99	7:10	2	
03/17/99	7:00	2	
03/17/99	13:40	2	
03/18/99	7:30	2	
03/18/99	13:50	2	
03/22/99	7:35	2	
03/22/99	14:15	2	
03/23/99	7:30	2	
03/23/99	15:30	2	
03/24/99	7:20	2	
03/25/99	6:40	2	
03/25/99	13:35	2	
03/29/99	7:40	2	Cross checked manual with formula on flow...Good...Start copy of cells Q,R,&S
03/29/99	13:05	2	Set up to calculate flow, system rebalanced (ed-N1,2,4,5=0.24;ew-n7&8=4.8)
03/30/99	7:15	2	
03/30/99	14:00	2	
03/31/99	7:00	2	
03/31/99	13:10	2	
04/01/99	7:10	2	
04/01/99	13:00	2	
04/05/99	7:50	2	
04/05/99	15:00	2	
04/06/99	6:40	2	
04/06/99	15:10	2	System Auto shut down@ 13:10 Blower motor over load. System back on @14:00. Sve Blowers@Elect Blower,
04/07/99	7:10	2	Motor Greased at this time.
04/07/99	14:10	2	
04/08/99	6:50	2	
04/08/99	13:35	2	
04/12/99	7:20	2	System shut down for belt alignment and tensioning, approx. 12 - 15 gal. Water removed from carbon tank A

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
04/12/99	13:50	2	
04/13/99	7:55	2	
04/13/99	13:15	2	
04/14/99	6:40	2	
04/14/99	13:50	2	
04/15/99	6:55	2	
04/15/99	14:45	2	
04/19/99	7:20	2	
04/19/99	16:16	2	Changed to Tank B at COB
04/20/99	6:45	2	
04/20/99	14:00	2	
04/21/99	7:15	2	Rained soil moist.
04/21/99	14:00	2	
04/22/99	6:45	2	
04/22/99	13:15	2	
04/26/99	7:15	2	
04/26/99	14:05	2	
04/27/99	7:50	2	
04/27/99	14:40	2	
04/28/99	6:55	2	
04/28/99	14:40	2	
04/29/99	6:50	2	
04/29/99	16:00	2	
05/03/99	6:50	2	Post carbon in-line filter installed
05/03/99	13:45	2	
05/04/99	6:45	2	
05/04/99	14:00	2	
05/05/99	6:45	2	
05/06/99	7:00	2	
05/06/99	13:05	2	
05/10/99	7:55	2	
05/10/99	16:00	2	
05/12/99	7:10	2	
05/12/99	14:45	2	
05/13/99	7:10	2	
05/13/99	13:50	2	
05/14/99	6:55	2	
05/14/99	15:20	2	
05/17/99	7:15	2	
05/17/99	13:45	2	
05/18/99	8:15	2	
05/18/99	14:30	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
05/19/99	7:05	2	
05/19/99	14:20	2	
05/20/99	8:40	2	
05/20/99	10:35	2	system set to run on zone 1 & zone 2
05/20/99	13:40	2	
05/24/99	7:10	2	
05/24/99	13:45	2	
05/25/99	16:20	2	
05/26/99	7:10	2	system down - blower failure
06/09/99	13:10	2	System return to service Approx. 08:30
06/09/99	15:10	2	
06/10/99	6:30	2	
06/14/99	7:20	2	
06/14/99	13:50	2	
06/15/99	6:50	2	
06/15/99	14:45	2	
06/16/99	6:50	2	
06/16/99	14.35	2	
06/17/99	6:55	2	
06/17/99	15:00	2	
06/21/99	6:35	2	
06/21/99	14:15	2	
06/22/99	6:40	2	
06/22/99	14:10	2	
06/23/99	6:55	2	
06/23/99	14:00	2	
06/24/99	7:00	2	
06/24/99	14:40	2	
06/28/99	7:50	2	
06/28/99	14:40	2	
06/29/99	7:10	2	
06/29/99	13:50	2	
06/30/99	7:40	2	
06/30/99	13:40	2	
07/01/99	8:15	2	
07/01/99	14:50	2	
07/06/99	10:35	2	system down-due to high water level in sump @ bld. #300. Went down @ 1430 on 07/04/99 System turned back on @10:00 on 0
07/06/99	15:45	2	
07/07/99	7:15	2	
07/07/99	14:35	2	
07/08/99	7:00	2	
07/08/99	14:40	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
07/12/99	7:15	2	
07/12/99	14:50	2	
07/13/99	7:40	2	
07/13/99	14:20	2	
07/14/99	6:20	2	
07/14/99	14:45	2	
07/15/99	6:50	2	
07/15/99	14:40	2	
07/19/99	8:15	2	
07/19/99	13:45	2	
07/20/99	7:20	2	
07/20/99	14:20	2	
07/21/99	7:15	2	
07/21/99	14:45	2	
07/22/99	7:45	2	
07/22/99	14:05	2	
07/26/99	7:50	2	Found diff. press. tube loose at "t" (by Pitot tube)
07/26/99	13:55	2	
07/27/99	6:40	2	
07/27/99	14:10	2	
07/28/99	7:05	2	
07/28/99	8:45	2	
07/28/99	14:55	2	
07/29/99	7:05	2	
07/29/99	14:25	2	
08/02/99	7:20	2	Hose came loose to mag. Gage over week-en. Had to make adjustment to pitot tube.
08/02/99	10:10	2	
08/02/99	14:25	2	
08/03/99	7:15	2	
08/03/99	15:05	2	
08/04/99	7:15	2	
08/04/99	13:10	2	
08/05/99	6:40	2	
08/05/99	13:45	2	
08/09/99	6:45	2	
08/09/99	13:20	2	
08/10/99	6:40	2	
08/10/99	13:40	2	
08/11/99	7:10	2	
08/11/99	13:50	2	
08/12/99	6:40	2	
08/12/99	13:40	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
08/16/99	6:55	2	
08/16/99	13:05	2	
08/17/99	6:55	2	
08/17/99	14:10	2	
08/18/99	7:10	2	
08/18/99	13:20	2	
08/19/99	6:55	2	
08/19/99	13:50	2	
08/23/99	7:20	2	
08/23/99	13:50	2	
08/24/99	7:10	2	
08/24/99	14:20	2	
08/25/99	7:10	2	
08/25/99	14:10	2	
08/26/99	7:00	2	
08/26/99	14:20	2	
08/30/99	6:50	2	
08/30/99	14:20	2	
08/31/99	6:40	2	
09/01/99	6:55	2	System running on Zone 1 & 2 Zone 2 came on @ midnight auto timer.Zone 2 turned off @ 7:10
09/01/99	14:55	2	Zone 2 turned back on @ 14:30
09/02/99	6:50	2	
09/02/99	13:15	2	
09/07/99	6:45	2	
09/07/99	13:15	2	
09/08/99	7:25	2	
09/08/99	13:55	2	
09/09/99	6:40	2	
09/09/99	14:40	2	
09/13/99	6:40	2	
09/13/99	14:00	2	
09/14/99	7:10	2	Summa sample taken @ 8:43 #10811 Data chem Labs.
09/15/99	10:15	2	
09/15/99	13:15	2	
09/16/99	8:15	2	
09/16/99	13:45	2	
09/20/99	7:10	2	
09/20/99	14:15	2	
09/21/99	6:50	2	
09/21/99	14:15	2	
09/22/99	6:45	2	
09/22/99	14:20	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
09/23/99	7:05	2	
09/23/99	13:50	2	
09/27/99	7:00	2	
09/27/99	14:50	2	
09/28/99	7:15	2	
09/28/99	13:35	2	
09/29/99	6:45	2	
09/29/99	14:20	2	
09/30/99	6:45	2	
10/04/99	7:10	2	
10/04/99	13:25	2	
10/05/99	6:35	2	
10/05/99	13:50	2	
10/06/99	6:45	2	
10/06/99	13:45	2	
10/07/99	7:00	2	
10/07/99	13:40	2	
10/11/99	7:05	2	
10/11/99	14:15	2	
10/12/99	7:10	2	
10/12/99	13:15	2	
10/13/99	6:50	2	
10/13/99	13:35	2	
10/14/99	6:15	2	
10/14/99	11:25	2	
10/18/99	7:15	2	Sve Blowers, 5Hp, 5Lp, 6Lp, And 25Hp,50Hp Elect, Motors Lubed (Greased)
10/18/99	14:40	2	
10/19/99	7:05	2	
10/19/99	13:15	2	
10/20/99	6:50	2	
10/20/99	13:50	2	
10/21/99	6:55	2	
10/21/99	13:45	2	
10/25/99	7:15	2	
10/25/99	13:40	2	
10/26/99	7:00	2	
10/26/99	13:45	2	
10/27/99	6:45	2	
10/27/99	14:40	2	
10/28/99	6:40	2	
10/28/99	13:20	2	
11/01/99	6:55	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
11/01/99	13:45	2	
11/02/99	7:05	2	
11/02/99	13:45	2	
11/03/99	6:55	2	
11/03/99	13:50	2	
11/04/99	6:55	2	
11/04/99	13:45	2	
11/08/99	6:55	2	
11/08/99	13:30	2	
11/09/99	6:55	2	
11/09/99	13:30	2	
11/10/99	6:55	2	
11/10/99	13:40	2	
11/11/99	7:10	2	
11/11/99	13:05	2	
11/15/99	6:50	2	
11/15/99	14:15	2	
11/16/99	6:55	2	
11/16/99	13:10	2	
11/17/99	6:50	2	
11/17/99	14:25	2	
11/18/99	6:15	2	
11/18/99	13:25	2	
11/22/99	7:15	2	
11/22/99	13:00	2	
11/23/99	6:55	2	
11/23/99	13:45	2	
11/24/99	7:00	2	
11/24/99	12:30	2	
11/29/99	6:35	2	
11/29/99	14:03	2	
11/30/99	6:55	2	
11/30/99	13:25	2	
12/01/99	6:55	2	
12/01/99	14:10	2	
12/02/99	7:10	2	
12/02/99	13:00	2	
12/06/99	7:20	2	
12/06/99	13:40	2	
12/07/99	7:15	2	
12/07/99	13:40	2	
12/08/99	7:10	2	

Building 30

Date (USA)	Time (24 hr)	Hdr. Zone	Notes
12/08/99	14:00	2	
12/09/99	6:50	2	
12/09/99	13:40	2	
12/14/99	13:10	2	switched to tank A tank B full of H20. Top (H L) sensor / switch malfunction. System shut down for clean out and
12/15/99	6:55	2	change over.
12/15/99	13:40	2	
12/16/99	5:50	2	
12/16/99	11:20	2	
12/20/99	7:00	2	
12/20/99	13:40	2	
12/21/99	6:50	2	GLCT change out anthro & carbon in Tank A
12/22/99	1:05	2	Vac. Relief valve actuated.
12/22/99	14:05	2	Vac. Relief valve actuated.
01/03/00	8:05	2	Vac. Relief valve actuated.
01/03/00	13:15	2	Vac. Relief valve actuated, 4.01" of rain in 24 hrs
01/04/00	12:25	2	Vac. Relief valve actuated, Checked anthro & carbon changed out by GLCT
01/04/00	16:00	2	EW-N7 & EW-N8 full open, Switch back to Tank A, Outside Temp. plummets to < freezing (28) from 56 degrees
01/05/00	6:36	2	EW-N7 & EW-N8 full open
01/05/00	15:05	2	
01/06/00	7:20	2	
01/06/00	14:20	2	
01/10/00	7:15	2	
01/10/00	13:00	2	
01/11/00	6:35	2	
01/11/00	14:55	2	
01/12/00	6:52	2	
01/12/00	15:10	2	
01/13/00	6:40	2	
01/13/00	14:45	2	

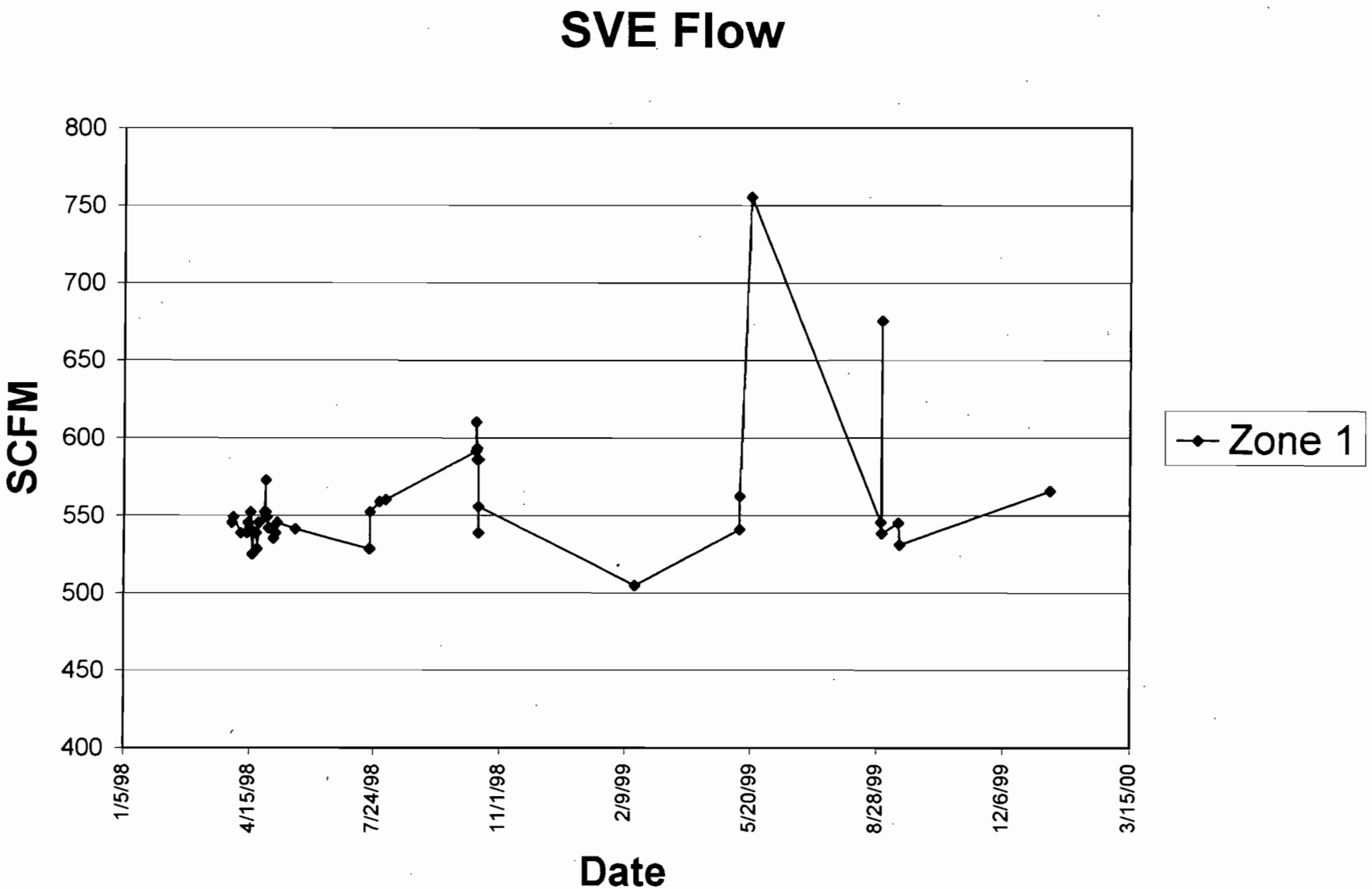
Building 301 SVE System Parameters

Building 301 A

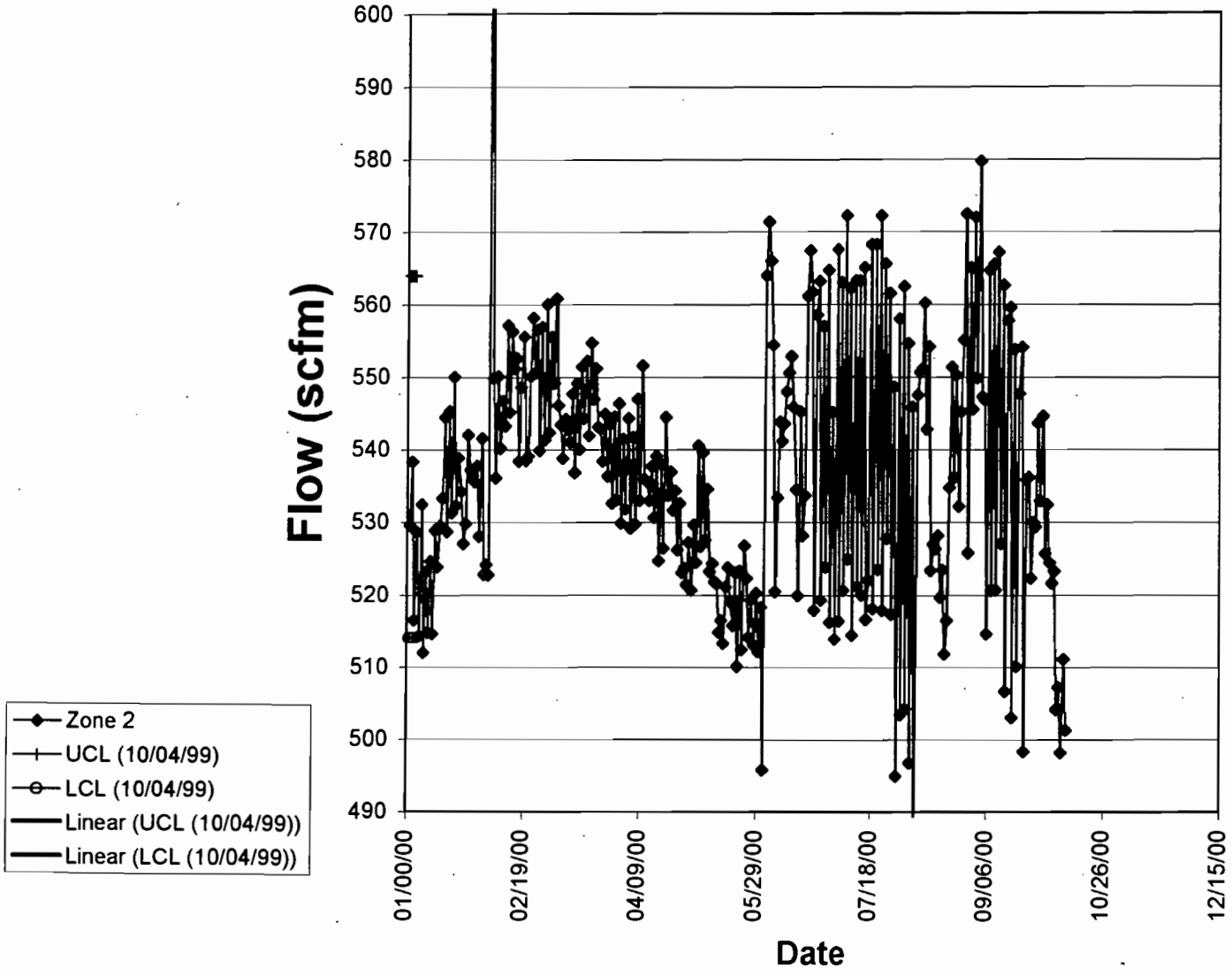
Date (USA)	Time (24 hr)	Hdr. Zone	Bar. Press. ("Hg)	In Temp. (°F)	Out Temp. (°F)	SVE: Ex. Temp. (°F)	Mag. ("H_2O)	Bk. Press. (psig)	Ht. Excg. ("Hg)	6LP Temp. (°F+50)	Sys. Vac. ("Hg)	Post Flt. ("Hg)	Pre Flt. ("Hg)	Hdr. Vac. ("Hg)	H2O Mtr. (gal.)	Calc. Flow (Ft./Min.)	Flow (CFM)	Date (USA)	AS: Main Temp. (°F)	Mag. ("H_2O)
10/15/98	12:35	1	30.25	81	54	210	0.82	0	-10.7	210	-18.5	-18.9	-18.1	-16.3	60434	4075	556	10/15/98		
02/17/99	13:55	1	29.97	62	33	210	0.67	0	-12.8	176	-18.8	-15.3	-14.2	-12.5	106311	3700	505	02/17/99		
05/11/99	8:00	1	30.13	84	58	210	0.78	0	-10.7	194	-18.1	-14.9	-14.1	-12.6	118971	3966	541	05/11/99		
5/11/99	16:00	1	30.07	108	84	228	0.82	0	-10.1	220	-18	-14.8	-13.9	-12.5	118971	4125	562	05/11/99		
5/20/99	10:35	1	30.27	84	66	161	1.65	0	-1.7	198	-12.9	-10.6	-9.5	-7.1	119546	5541	755	05/20/99		
8/31/99	13:45	1	30.22	89	78	251	0.75	0	-9.8	272	-17.5	-14.5	-13.4	-11.8	122565	4000	545	08/31/99		
9/1/99	6:55	1	30.21	76	55	194	1.25	0	-4.3	252	-12.9	-8.6	-7.8	-5.5	122565	4954	675	09/01/99		
9/1/99	7:40	1	30.22	74	56	233	0.75	0	-10.2	255	-17.5	-14.4	-13.6	-11.9	122565	3949	539	09/01/99		
9/14/99	13:55	1	30.14	92	71	248	0.75	0	-9.7	264	-17.5	-14.4	-13.7	-11.8	122565	3997	545	09/14/99		
9/15/99	7:15	1	30.15	69	48	231	0.73	0	-10.2	246	-17.5	-14.5	-13.7	-11.9	122565	3895	531	09/15/99		
1/12/00	11:05	1	30.17	67	37	162	0.92	0	-8.9	188	-17.3	-14.4	-13.4	-11.8	131236	4147	566	01/12/00		

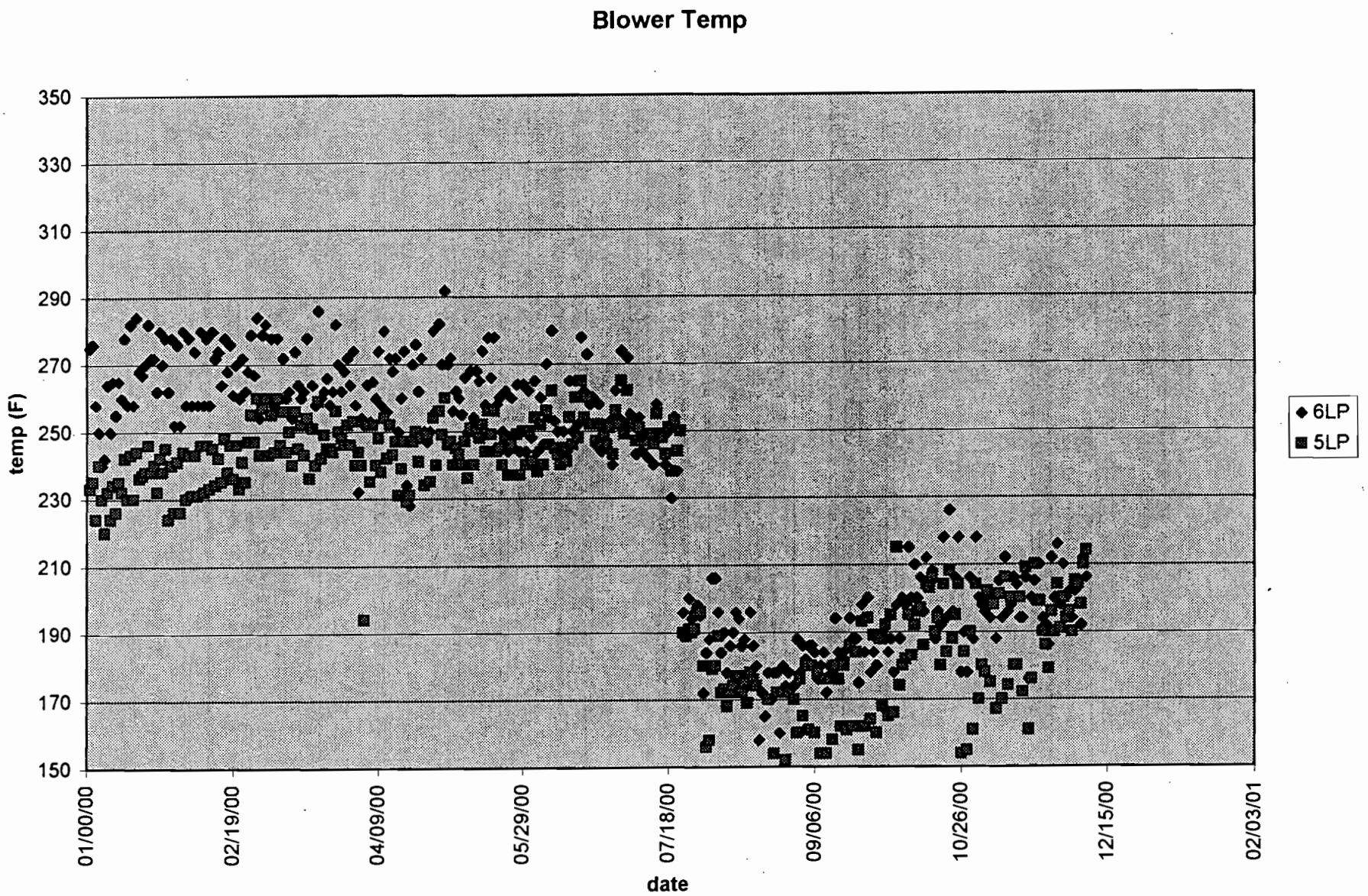
Building 301 SS System Parameters

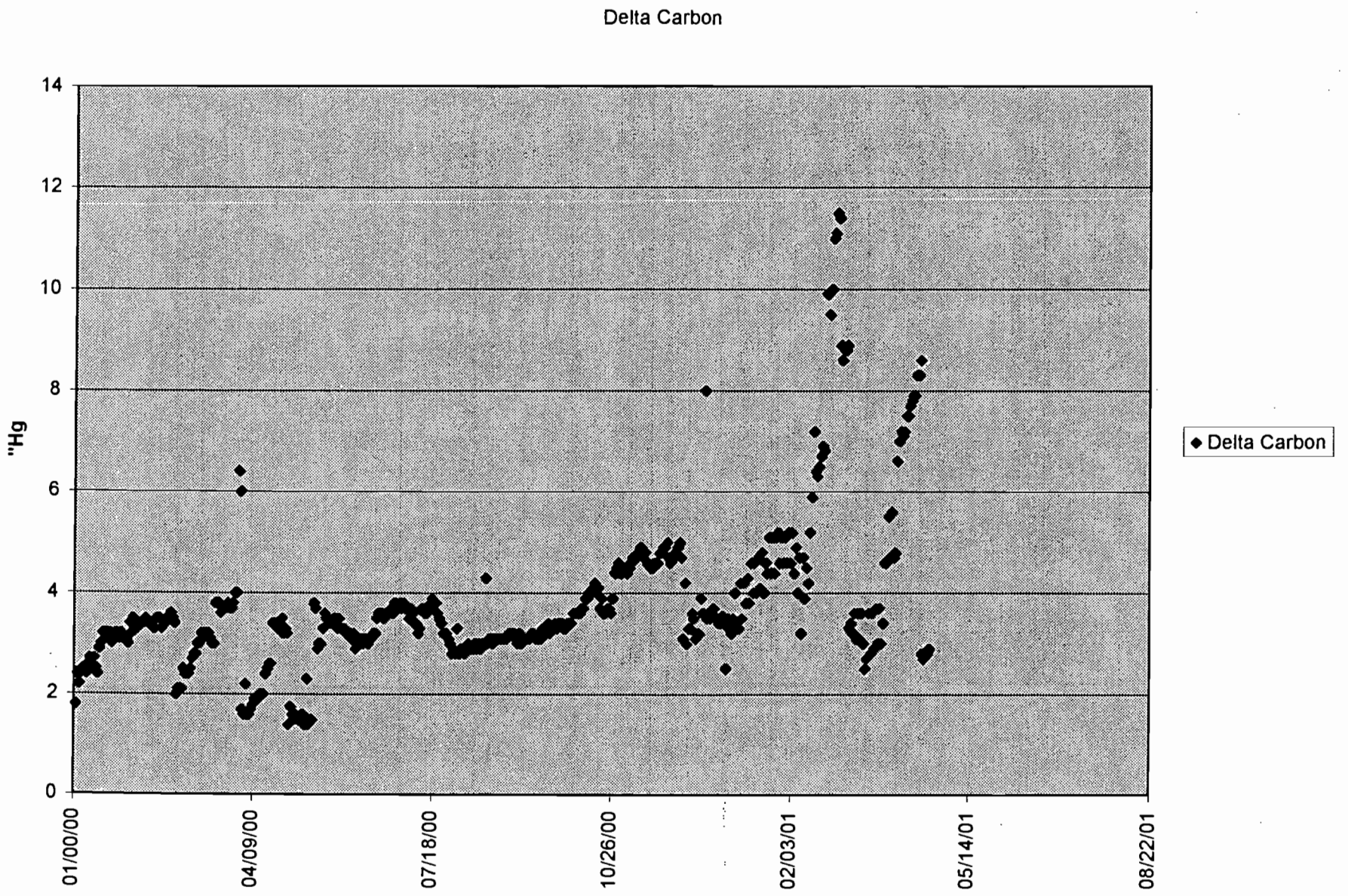
Date (USA)	Time (24 hr)	Hdr. Zone	Main Press. (psig)	Zone Press. (psig)	Calc. Flow (Ft./Min.)	Flow (CFM)	Notes
10/15/98	12:35	1					
02/17/99	13:55	1					Sampling wells via Tedlar. Ground condition are wet.
05/11/99	8:00	1					
5/11/99	16:00	1					
5/20/99	10:35	1			0	0	system set to run on zone 1 & zone 2
8/31/99	13:45	1					
9/1/99	6:55	1					Zone 2 came on @midnight auto timer.Zone 2 turned off @ 7:10
9/1/99	7:40	1					Changed back to Zone 2 @ 14:30
9/14/99	13:55	1					
9/15/99	7:15	1					Summa sample taken @8:11 #105695 Data Chem Labs.
1/12/00	11:05	1					Vac. Relief Valve Actuated

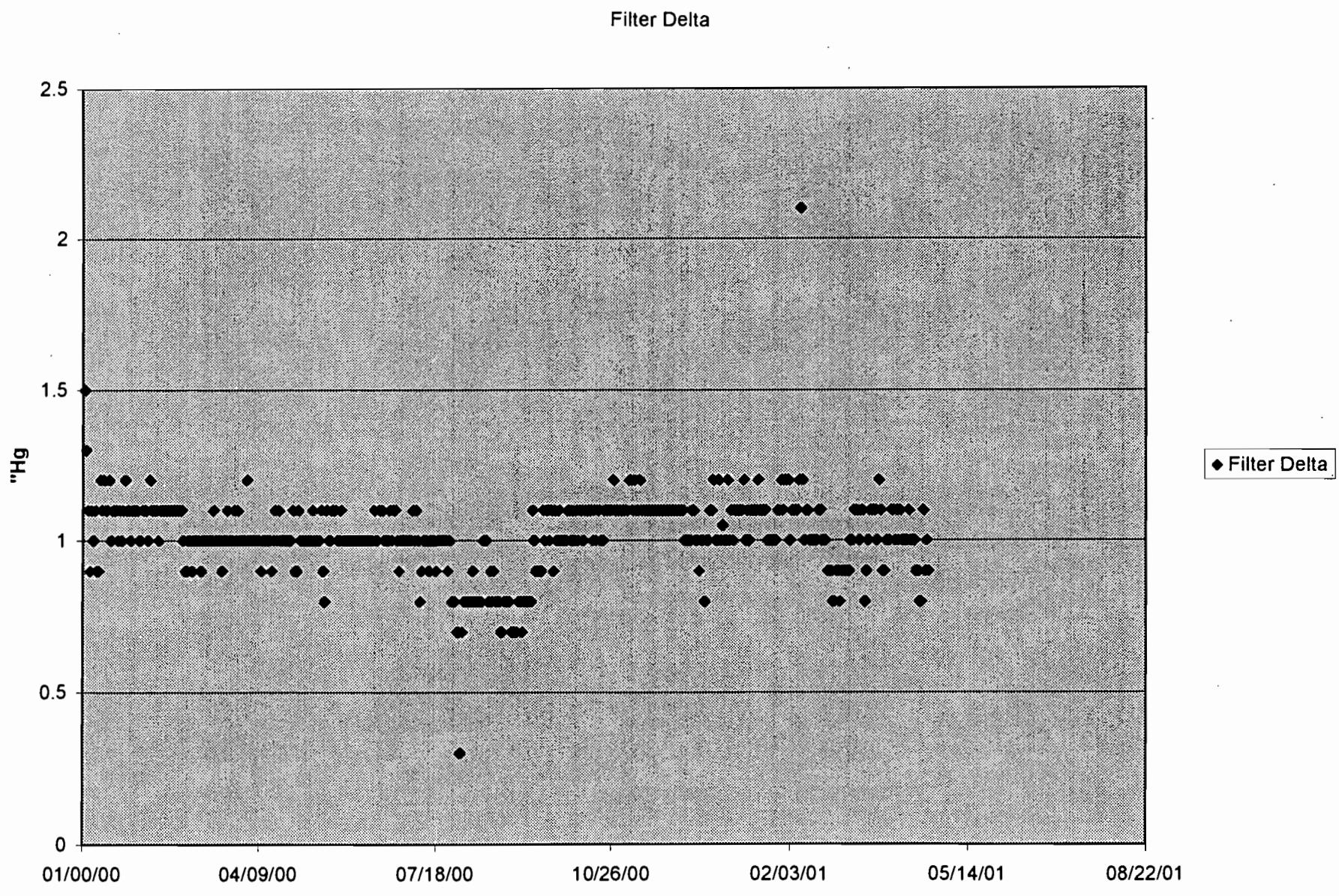

SVE Flow
SCFM
800
750
700
650
600
550
500
450
400
1/5/98
4/15/98
7/24/98
11/1/98
2/9/99
5/20/99
8/28/99
12/6/99
3/15/00
Date
Zone 1

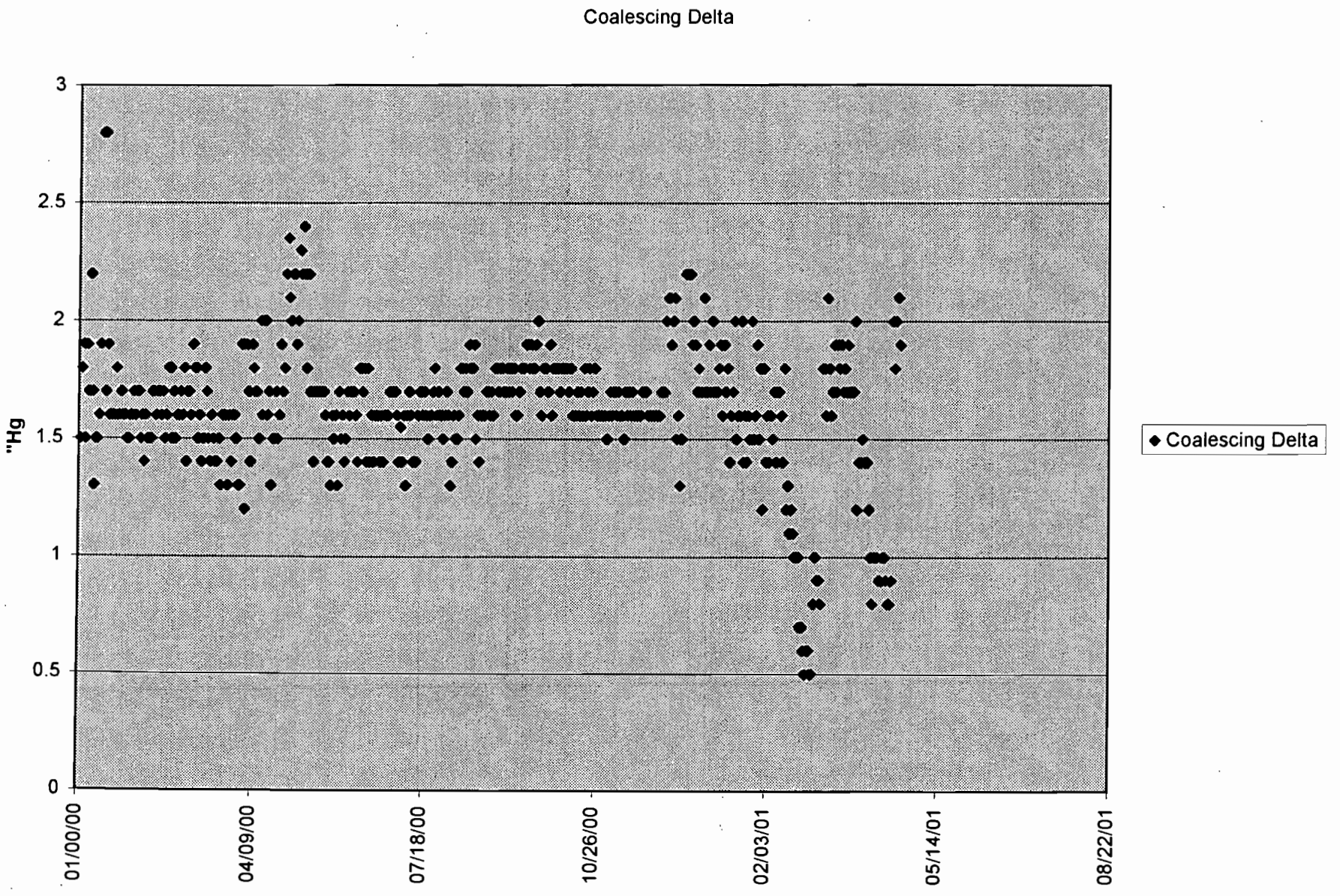
Zone 2 SVE Flow




Blower Temp
temp (F)
350
330
310
290
270
250
230
210
190
170
150
01/00/00
02/19/00
04/09/00
05/29/00
07/18/00
09/06/00
10/26/00
12/15/00
02/03/01
date
6LP
5LP


Delta Carbon
14
12
10
8
6
4
2
0
"Hg
01/00/00
04/09/00
07/18/00
10/26/00
02/03/01
05/14/01
08/22/01
Delta Carbon


Filter Delta
2.5
2
1.5
1
0.5
0
"Hg
01/00/00
04/09/00
07/18/00
10/26/00
02/03/01
05/14/01
08/22/01
Filter Delta


Coalescing Delta
"Hg
3
2.5
2
1.5
1
0.5
0
01/00/00
04/09/00
07/18/00
10/26/00
02/03/01
05/14/01
08/22/01
Coalescing Delta

Attachment I

AS/SVE Consolidated Lubrication Information

1wk = 168 hrs
1 ~~qtr = 3190 hrs~~ 2190
1 mo. = ~~6380 hrs~~

Building 300/301 System Log

				Blower	Blower	Blower
	4380	300 10HP	301 50HP	301 25HP	301 6LP	301 5LP	301 5HP
Date	930968	930969	930970	930971	930972	930973
7/99	T_0 (start)	T_0 (start)	T_0 (start)	T_0 (start)	T_0 (start)	T_0 (start)
6/14/99 8AM	168 hrs.	120 hrs	0hrs (OFF)	120 hrs	120 hrs	0hrs (off)
6/21/99 8AM	336	288	"	288	288	"
6/28/99 8AM	504	456	"	456	456	"
6/30/99	—	—	—	(G) @ 12:30	(G) @ 12:30	(G) @ 12:30
7/22/99	—	—	—	(G) @ 07:30	(G) @ 07:30	(G) @ 07:30
7/26/99 8AM	1176	1128	off	96	96	OFF
8/2/99 8AM	1344	1296	"	264	264	"
8/12/99	—	—	—	(G) @ 13:15	(G) @ 13:15	(G) @ 13:15
9/1/99				(G) @ 10:00	(G) @ 10:00	(G) @ 10:00
9/16/99	(G) @ 13:00	(G) @ 13:00	(G) @ 13:00	—	—	—
9/20/99	—	—	—	(G) @ 9:30	(G) @ 9:30	(G) @ 9:30
10/19/99	—	(G) @ 10:30	(G) @ 10:30	(G) @ 10:30	(G) @ 10:30	(G) @ 10:30
12/09/99	—	(G) @ 7:30	(G) @ 7:30	(G) @ 7:30	(G) @ 7:30	(G) @ 7:30
12/09/99	—	[redacted]	—	oil changed @ 12:00	oil changed @ 12:00	oil changed @ 10:00
01/05/00	(G) @ 10:00	—	—	(G) @ 10:00	(G) @ 10:00	(G) @ 10:00
02/02/00	—	(G) 0700	(G) 0700	(G) 07:00	(G) 07:00	(G) 07:00
03/02/00	—	(G) @ 14:40	(G) @ 14:40	(G) @ 14:40	(G) @ 14:40	(G) @ 14:40
03/28/00	(G) @ 10:00	(G) @ 10:00	(G) @ 10:00	(G) @ 10:00	(G) @ 10:00	(G) @ 10:00

Attachment J

AS/SVE Monthly Well Readings

01/19/99 System on Zone 2

Barometric Pressure = 30.08
Temprature = 55

ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG	Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	0		0	0		EW-N7	-8	2	5573	122	
AS-N11	0		0	0		EW-N8	-7.9	4.6	8451	184	
AS-N12	0		0	0		EW-N9	-9	0	280	6	*
AS-N13	0		0	0		EW-N10	-9	0	1100	24	*
AS-N14	0		0	0		ED-N1	0	0.12	1365	30	
AS-N15	0		0	0		ED-N2	-1.25	0.2	1762	38	
AS-N16	0		0	0		ED-N3	-9	0	0	0	*
AS-N17	0		0	0		ED-N4	-1	0.2	1762	38	
AS-N18	0		0	0		ED-N5	-2.75	0.18	1672	36	
AS-N19	0		0	0		ITRD-N7	-9	0.25	1970	43	
AS-N20	0		0	0		ITRD-N9	-9	0.055	924	20	
AS-N21	0		0	0							
AS-N22	0		0	0							
AS-N23	0		0	0							
			Sum:	0					Sum:	542	
			Building Flow:	0					Building Flow:	528	
			Delta:	0					Delta:	-14	

Soil Conditions moist and, frozen

	"H_2O WC
VPMP-1 S	0
VPMP-1 M	0.5
VPMP-1 D	0
VPMP-2 S	5.3
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.37
VPMP-4S	1.29
VPMP-4M	11

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

03/23/99 System on Zone 2

Barometric Pressure = 30.09
Temprature = 55

Well ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG	Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	0		0	0		EW-N7	-8.2	5.2	8984	196	
AS-N11	0		0	0		EW-N8	-5.8	2.8	6593	144	
AS-N12	0		0	0		EW-N9	-9.5		190	4	*
AS-N13	0		0	0		EW-N10	-9.5		1010	22	*
AS-N14	0		0	0		ED-N1	0	0.31	2194	48	
AS-N15	0		0	0		ED-N2	0	0.34	2297	50	
AS-N16	0		0	0		ED-N3	-9.5	0	0	0	*
AS-N17	0		0	0		ED-N4	0	0.32	2229	49	
AS-N18	0		0	0		ED-N5	-1.9	0.32	2229	49	
AS-N19	0		0	0		ITRD-N7	-9.9		12	0	
AS-N20	0		0	0		ITRD-N9	-9.5	0.075	1079	24	
AS-N21	0		0	0							
AS-N22	0		0	0							
AS-N23	0		0	0							
			Sum:	0					Sum:	585	
			Building Flow:	0					Building Flow:	539	
			Delta:	0					Delta:	-46	

Soil Conditions: moderate

	"H_2O WC
VPMP-1 S	0.91
P-1 M	0.49
VPMP-1 D	0
VPMP-2 S	5.1
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.33
VPMP-4S	0
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

03/29/99 System on Zone 2

Barometric Pressure = 30.38
Temprature = 55

ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG	Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	0		0	0		EW-N7	-7.8	4.8	8590	187	
AS-N11	0		0	0		EW-N8	-7.7	4.85	8635	188	
AS-N12	0		0	0		EW-N9	-8.7	0	90	2	*
AS-N13	0		0	0		EW-N10	-8.8	0	1010	22	*
AS-N14	0		0	0		ED-N1	0	0.25	1960	43	
AS-N15	0		0	0		ED-N2	0	0.285	2093	46	
AS-N16	0		0	0		ED-N3	-8.6	0	4	0	*
AS-N17	0		0	0		ED-N4	0	0.27	2037	44	
AS-N18	0		0	0		ED-N5	-2.2	0.27	2037	44	
AS-N19	0		0	0		ITRD-N7	-9	0	14	0	
AS-N20	0		0	0		ITRD-N9	-8.7	0.058	944	21	
AS-N21	0		0	0							
AS-N22	0		0	0							
AS-N23	0		0	0							
			Sum:	0					Sum:	598	
			Building Flow:	0					Building Flow:	554	
			Delta:	0					Delta:	-44	

Soil Conditions: moderate

	"H_2O WC
VPMP-1 S	0.88
VPMP-1 M	0.52
VPMP-1 D	0
VPMP-2 S	5.2
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.42
VPMP-4S	2.55
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

04/27/99 System on Zone 2

Barometric Pressure = 29.95
Temprature = 55

Well ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG	Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	0		0	0		EW-N7	-8.3	3.7	7596	166	
AS-N11	0		0	0		EW-N8	-8.2	5.1	8918	195	
AS-N12	0		0	0		EW-N9	-9.2	0	180	4	*
AS-N13	0		0	0		EW-N10	-9.1	0	1050	23	*
AS-N14	0		0	0		ED-N1	0	0.26	2014	44	
AS-N15	0		0	0		ED-N2	0	0.38	2434	53	
AS-N16	0		0	0		ED-N3	-9.1	0	5	0	*
AS-N17	0		0	0		ED-N4	0	0.26	2014	44	
AS-N18	0		0	0		ED-N5	-2.8	0.28	2090	46	
AS-N19	0		0	0		ITRD-N7	-9.3	0	15	0	
AS-N20	0		0	0		ITRD-N9	-9.2	0.055	926	20	
AS-N21	0		0	0							
AS-N22	0		0	0							
AS-N23	0		0	0							
			Sum:	0					Sum:	594	
			Building Flow:	0					Building Flow:	537	
			Delta:	0					Delta:	-57	

Soil Conditions moderate

	"H_2O WC
VPMP-1 S	0.86
P-1 M	0.48
VPMP-1 D	0
VPMP-2 S	5.1
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.39
VPMP-4S	2.2
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

05/14/99 AM System on Zone 2

Air Sparge:
Barometric Pressure = 29.96
Temprature = 150

Well ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	-5.7	1.4	5084	28	
AS-N11	-5.5	0.98	4254	23	
AS-N12	-1.1	1.4	5084	28	
AS-N13	-12.8	0.74	3697	20	
AS-N14	0		0	0	
AS-N15	0		0	0	
AS-N16	0		0	0	
AS-N17	-11.4	0.98	4254	23	
AS-N18	-9.9	0.96	4210	23	
AS-N19	-11	0.98	4254	23	
AS-N20	-9.4	1.5	5263	29	
AS-N21	-6.4	1.4	5084	28	
AS-N22	-8.8	1.3	4899	27	
AS-N23	-12.3	0.18	1823	10	
			Sum:	261	
			Building Flow:	323	
			Delta:	62	

Soil Vapor Extraction:
Barometric Pressure = 29.96
Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-8.6	6.9	10371	226	
EW-N8	-8.6	5.9	9590	209	
EW-N9	-9.7		200	4	*
EW-N10	-9.75		1125	25	*
ED-N1	0	0.24	1934	42	
ED-N2	0	0.24	1934	42	
ED-N3	-9.6		5	0	*
ED-N4	0	0.24	1934	42	
ED-N5	-2.7	0.25	1974	43	
ITRD-N7	-10		15	0	
ITRD-N9	-9.5	0.06	967	21	
			Sum:	656	
			Building Flow:	570	
			Delta:	-86	

Soil Conditions moderate

	"H_2O WC
VPMP-1 S	0.86
P-1 M	0.45
VPMP-1 D	0
VPMP-2 S	5.7
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.35
VPMP-4S	1.25
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

05/14/99 PM System on Zone 2

Air Sparge:

Barometric Pressure = 30.08

Temprature = 120

Well ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	0		0	0	
AS-N11	0		0	0	
AS-N12	0		0	0	
AS-N13	0		0	0	
AS-N14	0		0	0	
AS-N15	0		0	0	
AS-N16	0		0	0	
AS-N17	0		0	0	
AS-N18	0		0	0	
AS-N19	0		0	0	
AS-N20	0		0	0	
AS-N21	0		0	0	
AS-N22	0		0	0	
AS-N23	0		0	0	
			Sum:	0	
			Building Flow:	0	
			Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.05

Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-8.6	6.7	10205	223	
EW-N8	-8.5	5.7	9412	205	
EW-N9	-9.5		220	5	*
EW-N10	-9.6		1100	24	*
ED-N1	0	0.26	2010	44	
ED-N2	0	0.26	2010	44	
ED-N3	-9.4		4	0	*
ED-N4	0	0.25	1971	43	
ED-N5	-2.3	0.26	2010	44	
ITRD-N7	-9.9		120	3	
ITRD-N9	-9.8	0.075	1080	24	
			Sum:	658	
			Building Flow:	570	
			Delta:	-88	

Soil Conditions moderate

	"H_2O WC
VPMP-1 S	0.43
P-1 M	0.23
VPMP-1 D	0
VPMP-2 S	5.3
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0
VPMP-4S	1.5
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

Note: SVE Building Flow from Telog

05/18/99 System on Zone 2

Air Sparge:
Barometric Pressure = 30.03
Main Temprature = 258

Soil Vapor Extraction:
Barometric Pressure = 30.08
Temprature = 55

ID	Press. (psi)	Mag. Rdg.	Temp Corr	KURZ	Flow (fpm)	Flow (cfm)	Ass. SVE	Flow (cfm)
AS-N10	7.7	1.9	140	5800	5868	32	ITRD-N7	0.33
AS-N11	5.5	0.94	140	4200	4127	23	ED-N1	42
AS-N12	2.6	1.825	120	5400	5654	31	ED-N2	42
AS-N13	12.5	0.185	120	1850	1800	10	ED-N4	42
AS-N14	0				0	0	ED-N5	43
AS-N15	0				0	0		
AS-N16	0				0	0		
AS-N17	10.75	1.2	140	4800	4663	25	EW-N7	226
AS-N18	8.4	1.2	140	4400	4663	25	ED-N3	0.11
AS-N19	10	1.2	140	4700	4663	25	EW-N8	209
AS-N20	10.4	1.75	140	6000	5631	31		
AS-N21	7.5	2	120	6000	5919	32	EW-N9	4
AS-N22	11.5	1.6	120	5400	5294	29	ITRD-N9	21
AS-N23	12.1	0.06	120	1000	1025	6	EW-N10	25
			SUM:	49550	49307	270		
					Sum:	269		
	14.6	2.2	Building Flow:		6907	339		
					Delta:	70		

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)
EW-N7			0
EW-N8			0
EW-N9			
EW-N10			
ED-N1			0
ED-N2			0
ED-N3			
ED-N4			0
ED-N5			0
ITRD-N7			0
ITRD-N9			0
			Sum:
			Building Flow:
			Delta:

Soil Conditions:

	"H_2O WC
-1 S	
VPMP-1 M	
VPMP-1 D	
VPMP-2 S	
VPMP-2 M	
VPMP-2 D	
VPMP-3	
VPMP-4S	
VPMP-4M	

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

05/19/99 AM System on Zone 2

Air Sparge:

Barometric Pressure = 30.15

Effluent Temprature = 234

Well ID	Press. (psi)	Mag. Rdg.	Temp Corr	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	7.5	1.2	140	4654	25	
AS-N11	5.5	1	140	4248	23	
AS-N12	2.4	1.9	120	5757	31	
AS-N13	12.4	0.195	120	1844	10	
AS-N14	0			0	0	
AS-N15	0			0	0	
AS-N16	0			0	0	
AS-N17	10.6	1.4	140	5027	27	
AS-N18	7.8	1.4	140	5027	27	
AS-N19	9.8	1.4	140	5027	27	
AS-N20	10.4	1.6	140	5374	29	
AS-N21	7.2	2.4	120	6471	35	
AS-N22	11.5	1.6	120	5283	29	
AS-N23	12.1	0.055	120	980	5	
Building	14.5	2.4		7078	347	
				Individual Sum:	271	
				Delta:	76	

Soil Vapor Extraction:

Barometric Pressure = 30.15

Influent Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	
EW-N7	-8.6	6.6	10111	221	
EW-N8	-8.5	6	9641	210	
EW-N9	-9.6		190	4	*
EW-N10	-9.6		1175	26	*
ED-N1	0	0.25	1968	43	
ED-N2	0	0.18	1670	36	
ED-N3	-9.5		3	0	*
ED-N4	0	0.25	1968	43	
ED-N5	-2.3	0.27	2045	45	
ITRD-N7	-10.1		150	3	
ITRD-N9	-9.7	0.085	1147	25	
			Sum:	656	
			Building Flow:	562	
			Delta:	-94	

Soil Conditions:

	"H_2O WC
VPMP-1 S	
'-1 M	
VPMP-1 D	
VPMP-2 S	
VPMP-2 M	
VPMP-2 D	
VPMP-3	
VPMP-4S	
VPMP-4M	

Flag: * = Measurement performed with Kurz meter

Note: SVE Building Flow from Telog

05/19/99 PM System on Zone 2

Air Sparge:

Barometric Pressure = 30.19

Effluent Temprature = 258

ı ID	Press. (psi)	Mag. Rdg.	Temp Corr	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	7.6	2	140	6004	33	
AS-N11	5.4	1.3	140	4841	26	
AS-N12	2.4	1.75	120	5522	30	
AS-N13	12	0.165	120	1696	9	
AS-N14	0			0	0	
AS-N15	0			0	0	
AS-N16	0			0	0	
AS-N17	9.5	1.4	140	5023	27	
AS-N18	7.6	1.4	140	5023	27	
AS-N19	9.1	1.4	140	5023	27	
AS-N20	10.2	1.85	140	5774	31	
AS-N21	6.8	1.5	120	5112	28	
AS-N22	11.2	1.4	120	4939	27	
AS-N23	11.7	0.057	120	997	5	
Building	14.1	2		6568	322	
				Individual Sum:	272	
				Delta:	50	

Soil Vapor Extraction:

Barometric Pressure = 30.19

Influent Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-8.5	6.4	9950	217	
EW-N8	-8.4	5.8	9473	207	
EW-N9	-9.5		220	5	*
EW-N10	-9.4		1500	33	*
ED-N1	0	0.24	1927	42	
ED-N2	0	0.27	2044	45	
ED-N3	-9.3		5	0	*
ED-N4	0	0.23	1886	41	
ED-N5	-2.3	0.28	2081	45	
ITRD-N7	-10.2		150	3	
ITRD-N9	-10.6	0.075	1077	24	
			Sum:	661	
			Building Flow:	577	
			Delta:	-84	

Soil Condition moderate

	"H_2O WC	
VPMP-1 S	0.4	vac.
P-1 M	0.23	vac.
VPMP-1 D	0	vac.
VPMP-2 S	5.2	vac.
VPMP-2 M	0	vac.
VPMP-2 D	0	vac.
VPMP-3	0	vac.
VPMP-4S	3	vac.
VPMP-4M	>20	vac.

Flag: * = Measurement performed with Kurz meter

Note: SVE Building Flow from Telog

05/20/99 System on Zone 2

Air Sparge:
Barometric Pressure = 30.26
Effluent Temprature = 252

Well ID	Press. (psi)	Mag. Rdg.	Temp Corr	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	6.9	2.7	140	6968	38	
AS-N11	5.2	1.4	140	5017	27	
AS-N12	2.1	1.9	120	5747	31	
AS-N13	12.6	0.225	120	1978	11	
AS-N14	0			0	0	
AS-N15	0			0	0	
AS-N16	0			0	0	
AS-N17	10.9	0.61	140	3312	18	
AS-N18	7.9	1.4	140	5017	27	
AS-N19	10.1	0.85	140	3910	21	
AS-N20	10.6	2.1	140	6145	34	
AS-N21	7.4	2.4	120	6459	35	
AS-N22	11.8	0.085	120	1216	7	
AS-N23	12.3	0.025	120	659	4	
Building	14.6	2		6533	321	
				Individual Sum:	253	
				Delta:	67	

Soil Vapor Extraction:
Barometric Pressure = 30.26
Influent Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FL
EW-N7	-8.4	6.3	9861	215	
EW-N8	-8.4	5.7	9380	205	
EW-N9	-9.3		225	5	*
EW-N10	-9.3		1215	27	*
ED-N1	0	0.26	2003	44	
ED-N2	0	0.27		0	
ED-N3	-9.2		3	0	*
ED-N4	0	0.25	1964	43	
ED-N5	-2.2	0.27	2041	45	
ITRD-N7	-9.6		125	3	
ITRD-N9	-9.4	0.062	978	21	
			Sum:	606	
			Building Flow:	567	
			Delta:	-39	

Soil Conditions: moderate

	"H_2O WC	
VPMP-1 S		
IP-1 M	0.4	(blowing)
VPMP-1 D		
VPMP-2 S		
VPMP-2 M		
VPMP-2 D		
VPMP-3		
VPMP-4S		
VPMP-4M		

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

05/20/99 System on Zone 2

Air Sparge:
Barometric Pressure = 30.24
Effluent Temprature = 252

ID	Press. (psi)	Mag. Rdg.	Temp Corr	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	6.7	3	140	7347	40	
AS-N11	5.2	1.4	140	5019	27	
AS-N12	3.3	2.8	120	6979	38	
AS-N13	13.2	0.225	120	1978	11	
AS-N14	0	0		0	0	
AS-N15	0	0		0	0	
AS-N16	0	0		0	0	
AS-N17	11.7	0.45	140	2846	16	
AS-N18	8.3	1.4	140	5019	27	
AS-N19	10.4	0.875	140	3968	22	
AS-N20	10.3	3.1	140	7469	41	
AS-N21	7.6	2.5	120	6594	36	
AS-N22	12.4	0.01	120	417	2	
AS-N23	12.7	0.026	120	672	4	
Building	15.2	1.85		6285	309	
				Individual Sum:	263	
				Delta:	45	

Soil Vapor Extraction:
Barometric Pressure = 30.24
Influent Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-11.6	6.5	10020	219	
EW-N8	-11.6	5.9	9546	208	
EW-N9	-10.7		230	5	*
EW-N10	10.8		1225	27	*
ED-N1	0	0.25	1965	43	
ED-N2	0	0.26		0	
ED-N3	9.3		5	0	*
ED-N4	0	0.25	1965	43	
ED-N5	-2.3	0.27	2042	45	
ITRD-N7	-10.2		120	3	*
ITRD-N9	-10.6	0.072	1055	23	
Building	-17.7	0.92	3770	514	
			Sum:	615	
			Delta:	-101	

Note: Building flow is with both Zone 1 & 2 on, the individual well data was taken with only Zone 2 on

Soil Condition moderate

	"H_2O WC	
VPMP-1 S	0.4	
VPMP-1 M	0.63	(Blowing)
VPMP-1 D	0	
VPMP-2 S	5.2	
VPMP-2 M	0	
VPMP-2 D	0	
VPMP-3	0.26	(Blowing)
VPMP-4S	0.46	
VPMP-4M	>20	

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

05/20/99 System on Zone 2

Air Sparge:

Barometric Pressure = 30.24

Effluent Temprature = 272

Well ID	Press. (psi)	Mag. Rdg.	Temp Corr	Flow (fpm)	Flow (cfm)	FLAG
AS-N10	6.7	1.9	140	5847	32	
AS-N11	5.2	1.6	140	5366	29	
AS-N12	3.3	1.9	120	5749	31	
AS-N13	13.2	0.205	120	1888	10	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17	11.7	1.6	140	5366	29	
AS-N18	8.3	1.6	140	5366	29	
AS-N19	10.4	1.6	140	5366	29	
AS-N20	10.3	1.9	140	5847	32	
AS-N21	7.6	1.9	120	5749	31	
AS-N22	12.4	0.2	120	1865	10	
AS-N23	12.7	0.03	120	722	4	
Building	15.2	1.85		6373	313	
				Individual Sum:	268	
				Delta:	45	

Soil Vapor Extraction:

Barometric Pressure = 30.24

Influent Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	
EW-N7			0	0	
EW-N8			0	0	
EW-N9				0	*
EW-N10				0	*
ED-N1			0	0	
ED-N2			0	0	
ED-N3				0	*
ED-N4			0	0	
ED-N5			0	0	
ITRD-N7				0	*
ITRD-N9			0	0	
Building			0	0	
			Individual Sum:	0	
			Delta:	0	

Soil Condition moderate

	"H_2O WC	
VPMP-1 S	0.4	
VPMP-1 M	0.63	(Blowing)
VPMP-1 D	0	
VPMP-2 S	5.2	
VPMP-2 M	0	
VPMP-2 D	0	
VPMP-3	0.26	(Blowing)
VPMP-4S	0.46	
VPMP-4M	>20	

Flag: * = Measurement performed with Kurz meter

Note: SVE Building Flow from Telog

06/24/99 System on Zone 2

Air Sparge:
Barometric Pressure = 30.24
Effluent Temprature = 252

ID	Press. (psi)	Mag. Rdg.	Temp Corr	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:
Barometric Pressure = 29.92
Influent Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-7.6	4.4	8288	181	
EW-N8	-7.3	4.4	8288	181	
EW-N9	-8.2		145	3	*
EW-N10	-7.9		1010	22	*
ED-N1	0	0.22	1853	40	
ED-N2	0	0.23	1895	41	
ED-N3	-7.9		5	0	*
ED-N4	0	0.24	1936	42	
ED-N5	-1.9	0.24	1936	42	
ITRD-N7	-8.3		700	15	*
ITRD-N9	-8.2	0.053	910	20	
Building	-16.7	0.82	4190	571	
			Individual Sum:	588	
			Delta:	-17	

Soil Conditions moderate

	"H_2O WC
VPMP-1 S	0.62
VPMP-1 M	0.3
VPMP-1 D	0
VPMP-2 S	4.6
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.21
VPMP-4S	3.3
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter
Note: SVE Building Flow from Telog

07/28/99 07:45 System on Zone 2

Air Sparge:

Barometric Pressure = 29.98

Effluent Temprature =

Well ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 29.98

Influent Temprature = 55 Effluent Temprature = 235

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	
EW-N7	-7.5	4.5	8373	183	
EW-N8	-7.2	4.2	8089	176	
EW-N9	-7.9		120	3	*
EW-N10	-7.9		1100	24	*
ED-N1	0	0.23	1893	41	
ED-N2	0	0.22	1851	40	
ED-N3	-7.7		5	0	*
ED-N4	0	0.22	1851	40	
ED-N5	-1.5	0.2	1765	39	
ITRD-N7	-8		750	16	*
ITRD-N9	-8	0.035	738	16	
Building	-17	0.76	3997	545	
			Individual Sum:	579	
			Delta:	-34	

Soil Conditions moderate Moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.57
P-1 M	0.24
VPMP-1 D	
VPMP-2 S	4.8
VPMP-2 M	
VPMP-2 D	
VPMP-3	0.16
VPMP-4S	0.6
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

07/28/99 System on Zone 2

Air Sparge:

Barometric Pressure = 29.98

Effluent Temprature =

ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 29.98

Influent Temprature = 55 Effluent Temprature = 247

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-6.9	4	7894	172	
EW-N8	-4.5	1.9	5441	119	
EW-N9	-9.6		170	4	*
EW-N10	-9.7		1200	26	*
ED-N1	0	0.24	1934	42	
ED-N2	0	0.24	1934	42	
ED-N3	-9.3		5	0	*
ED-N4	0	0.25	1974	43	
ED-N5	-1.7	0.23	1893	41	
ITRD-N7	-9.9		800	17	*
ITRD-N9	-9.75	0.05	883	19	
Building	-17.9	0.68	3814	520	
			Individual Sum:	526	
			Delta:	-6	

Soil Conditions moderate Moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.5
-1 M	0.23
VPMP-1 D	
VPMP-2 S	4.5
VPMP-2 M	
VPMP-2 D	
VPMP-3	0.12
VPMP-4S	0.13
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

08/30/99 System on Zone 2

Air Sparge:

Barometric Pressure = 30.24

Effluent Temprature =

Well ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.24

Influent Temprature = 55 Effluent Temprature = 244

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-6.6	4	7860	171	
EW-N8	-4.4	1.6	4971	108	
EW-N9	-9.2		140	3	*
EW-N10	-9.2		1200	26	*
ED-N1	0	0.24	1925	42	
ED-N2	0	0.24	1925	42	
ED-N3	-9.2			0	*
ED-N4	0	0.24	1925	42	
ED-N5	-1.8	0.24	1925	42	
ITRD-N7	-9.4		925	20	*
ITRD-N9	-9.4	0.44	2607	57	
Building	-17.8	0.7	3844	524	
			Individual Sum:	554	
			Delta:	-30	

Soil Conditions moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.4
P-1 M	0.3
VPMP-1 D	0
VPMP-2 S	3.75
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.17
VPMP-4S	0.22
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

System on Zone 1

Air Sparge:

Barometric Pressure = 0.01

Temprature = 120

ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N1			0	0	
AS-N2			0	0	
AS-N3			0	0	
AS-N4			0	0	
AS-N5			0	0	
AS-N6			0	0	
AS-N7			0	0	
AS-N8			0	0	
AS-N9			0	0	
			Sum:	0	
			Building Flow:	0	
			Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.22

Temprature = 55

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N1	-11.4		0	0	*
EW-N2	0	4	7863	172	
EW-N3	-10.5	-	0	0	*
EW-N4	-1.5	4	7863	172	
EW-N5	-10.75	0.32	2224	49	
EW-N6	-3.6	3.9	7764	169	
			Sum:	561	
			Building Flow:	539	
			Delta:	-22	

Soil Conditions moderate

	"H_2O WC
VPMP-1 S	0.67
VPMP-1 M	1.53
VPMP-1 D	0
VPMP-2 S	0.14
VPMP-2 M	0
VPMP-2 D	0
P-3	2.3
VPMP-4S	0
VPMP-4M	0.29

Flag: * = Measurement performed with Kurz meter

09/29/99 System on Zone 2

Air Sparge:

Barometric Pressure = 30.24

Effluent Temprature =

Well ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.1

Influent Temprature = 55 Effluent Temprature = 260

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-6.5	4	7878	172	
EW-N8	-3.9	1.5	4824	105	
EW-N9	-8.3		85	2	*
EW-N10	-8.1		1175	26	*
ED-N1	0	0.21	1805	39	
ED-N2	0	0.22	1848	40	
ED-N3	-8.2		0	0	*
ED-N4	0	0.21	1805	39	
ED-N5	-1.3	0.21	1805	39	
ITRD-N7	-8.5		400	9	*
ITRD-N9	-8.4	1.2	4315	94	
Building	-17	0.78	4114	561	
			Individual Sum:	566	
			Delta:	-5	

Soil Conditions moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.28
P-1 M	0.32
VPMP-1 D	0
VPMP-2 S	2.8
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.17
VPMP-4S	0
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

10/27/99 System on Zone 2

Air Sparge:

Barometric Pressure = 30.24

Effluent Temprature =

Well ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.32

Influent Temprature = 55 Effluent Temprature = 238

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-6.5	3.4	7237	158	
EW-N8	-3.8	1.5	4807	105	
EW-N9	-8.2		50	1	*
EW-N10	-7.9		850	19	*
ED-N1	0	0.18	1665	36	
ED-N2	0	0.25	1962	43	
ED-N3	-8.1		0	0	*
ED-N4	0	0.19	1711	37	
ED-N5	-1.4	0.19	1711	37	
ITRD-N7	-8.5		700	15	*
ITRD-N9	-8.2	1.2	4299	94	
Building	-17.9	0.72	3877	529	
			Individual Sum:	545	
			Delta:	-17	

Soil Conditions moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.29
VPMP-1 M	0.31
VPMP-1 D	0
VPMP-2 S	2.8
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.155
VPMP-4S	0.44
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

11/99 System on Zone 2

Air Sparge:

Barometric Pressure = 30.24

Effluent Temprature =

Well ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.17

Influent Temprature = 55 Effluent Temprature = 260

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	
EW-N7	-6.5	3.4	7255	158	
EW-N8	-3.8	1.5	4819	105	
EW-N9	-7.9		90	2	*
EW-N10	-7.7		1000	22	*
ED-N1	0	0.18	1669	36	
ED-N2	0	0.21	1803	39	
ED-N3	-7.9		0	0	*
ED-N4	0	0.19	1715	37	
ED-N5	-1.4	0.19	1715	37	
ITRD-N7	-8.3		750	16	*
ITRD-N9	-7.9	1.1	4127	90	
Building	-18	0.7	3892	531	
			Individual Sum:	544	
			Delta:	-13	

Soil Conditions moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.29
P-1 M	0.27
VPMP-1 D	0
VPMP-2 S	2.7
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.162
VPMP-4S	0.28
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

01/12/2000 System on Zone 1

Air Sparge:

Barometric Pressure = 0.01

Temprature = 120

Well ID	Press. (psi)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
AS-N1			0	0	
AS-N2			0	0	
AS-N3			0	0	
AS-N4			0	0	
AS-N5			0	0	
AS-N6			0	0	
AS-N7			0	0	
AS-N8			0	0	
AS-N9			0	0	
			Sum:	0	
			Building Flow:	0	
			Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.19

Temprature = 55 Eff. Temp. 162

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N1	-12		20	0	*
EW-N2	0	4	7867	172	
EW-N3	-11.1		20	0	*
EW-N4	-1.6	3.9	7768	169	
EW-N5	-9.3	0.3	2154	47	
EW-N6	-3.5	3.9	7768	169	
Bldg.	-17.3	0.92	4146	565	
			Sum:	558	
			Delta:	7	

Soil Conditions moderate

	"H_2O WC	(high side open, low side to well)
VPMP-1 S	1.4	
VPMP-1 M	2.4	
VPMP-1 D	0	
VPMP-2 S	0.26	
VPMP-2 M	0.03	
VPMP-2 D	0	
MP-3	3.3	
VPMP-4S	1	
VPMP-4M	0.46	

Flag: * = Measurement performed with Kurz meter

01/12/2000 System on Zone 2

Air Sparge:

Barometric Pressure = 30.24

Effluent Temprature =

Well ID	Press. (psi)	Mag. Rdg.	Temp. Corr.	Flow (fpm)	Flow (cfm)	FLAG
AS-N10			140	0	0	
AS-N11			140	0	0	
AS-N12			120	0	0	
AS-N13			120	0	0	
AS-N14				0	0	
AS-N15				0	0	
AS-N16				0	0	
AS-N17			140	0	0	
AS-N18			140	0	0	
AS-N19			140	0	0	
AS-N20			140	0	0	
AS-N21			120	0	0	
AS-N22			120	0	0	
AS-N23			120	0	0	
Building				0	0	
				Individual Sum:	0	
				Delta:	0	

Soil Vapor Extraction:

Barometric Pressure = 30.1

Influent Temprature = 55 Effluent Temprature = 178

Well ID	Vac. ("Hg)	Mag. Rdg.	Flow (fpm)	Flow (cfm)	FLAG
EW-N7	-6.8	2.6	6352	139	
EW-N8	-5.5	2	5571	122	
EW-N9	-8		90	2	*
EW-N10	-8		1000	22	*
ED-N1	0	0.22	1848	40	
ED-N2	0	0.23	1889	41	
ED-N3	-7.9		0	0	*
ED-N4	0	0.28	2084	45	
ED-N5	-2	0.2	1762	38	
ITRD-N7	-8.5		750	16	*
ITRD-N9	-8	0.9	3737	82	
Building	-17.8	0.83	3994	545	
			Individual Sum:	547	
			Delta:	-3	

Soil Conditions moderate

	"H_2O WC (high side open, low side to well)
VPMP-1 S	0.6
P-1 M	0.41
VPMP-1 D	0
VPMP-2 S	3.5
VPMP-2 M	0
VPMP-2 D	0
VPMP-3	0.24
VPMP-4S	1.3
VPMP-4M	>20

Flag: * = Measurement performed with Kurz meter

Attachment K

Building 301

Telog Summary of Down Time

Date Time	Date Time	Hourly (Ave)		
01/03/99	1:40	106.25	Lost Prime	0.83
01/03/99	5:40	0.00		
01/03/99	6:40	0.00	" "	0.67
01/03/99	8:40	182.93		
01/03/99	9:40	73.11	Maint.	1.25
01/12/99	21:30	111.86		
01/12/99	23:30	82.85		1.75
01/13/99	0:30	0.00		
01/13/99	1:30	0.00		
01/13/99	2:30	183.57		
01/13/99	5:30	83.92		
01/13/99	6:30	0.00		
01/13/99	7:30	0.00		
01/13/99	8:30	0.00	Lower float	
01/13/99	9:30	0.00	Switch failure	(32.5 hrs)
01/13/99	10:30	0.00		
01/13/99	11:30	0.00		
01/13/99	12:30	0.00		
01/13/99	13:30	0.00		
01/13/99	14:30	0.00		
01/13/99	15:30	0.00		
01/13/99	16:30	0.00		
01/13/99	17:30	0.00		
01/13/99	18:30	0.00		
01/13/99	19:30	0.00		
01/13/99	20:30	0.00		
01/13/99	21:30	0.00		
01/13/99	22:30	0.00		
01/13/99	23:30	0.00		
01/14/99	0:30	0.00		
01/14/99	1:30	0.00		
01/14/99	2:30	0.00		
01/14/99	3:30	0.00		
01/14/99	4:30	0.00		
01/14/99	5:30	0.00		
01/14/99	6:30	0.00		
01/14/99	7:30	0.00		
01/14/99	8:30	0.00		
01/14/99	9:30	0.00		
01/14/99	10:30	155.68	2/22 Sch. Maint.	0.57
02/23/99	8:00	191.62		
02/23/99	9:00	0.00	Blower motor overload	
02/23/99	11:00	145.83	Bad Bearings	
02/23/99	12:00	167.87		
02/23/99	14:00	0.00	(1.25 + 1 + 47.25 =	Sub 49.5)
02/23/99	15:00	0.00		
02/23/99	16:00	0.00		
02/23/99	17:00	0.00		
02/23/99	18:00	0.00		

02/23/99	19:00	0.00
02/23/99	20:00	0.00
02/23/99	21:00	0.00
02/23/99	22:00	0.00
02/23/99	23:00	0.00
02/24/99	0:00	0.00
02/24/99	1:00	0.00
02/24/99	2:00	0.00
02/24/99	3:00	0.00
02/24/99	4:00	0.00
02/24/99	5:00	0.00
02/24/99	6:00	0.00
02/24/99	7:00	0.00
02/24/99	8:00	0.00
02/24/99	9:00	0.00
02/24/99	10:00	0.00
02/24/99	11:00	0.00
02/24/99	12:00	0.00
02/24/99	13:00	0.00
02/24/99	14:00	0.00
02/24/99	15:00	0.00
02/24/99	16:00	0.00
02/24/99	17:00	0.00
02/24/99	18:00	0.00
02/24/99	19:00	0.00
02/24/99	20:00	0.00
02/24/99	21:00	0.00
02/24/99	22:00	0.00
02/24/99	23:00	0.00
02/25/99	0:00	0.00
02/25/99	1:00	0.00
02/25/99	2:00	0.00
02/25/99	3:00	0.00
02/25/99	4:00	0.00
02/25/99	5:00	0.00
02/25/99	6:00	0.00
02/25/99	7:00	0.00
02/25/99	8:00	0.00
02/25/99	9:00	0.00
02/25/99	10:00	0.00
02/25/99	11:00	0.00
02/25/99	12:00	0.00
02/25/99	13:00	103.74
02/25/99	14:00	113.18
02/25/99	15:00	0.00
02/25/99	16:00	0.00
02/25/99	17:00	0.00
02/25/99	18:00	0.00
02/25/99	19:00	0.00
02/25/99	20:00	0.00
02/25/99	21:00	0.00

Total
(49.5 + 0.5 = 50 hrs
down due to Bearings)

SLP Blower failure

(0.5 + 454.5 = 456 hrs)

02/25/99	22:00	0.00
02/25/99	23:00	0.00
02/26/99	0:00	0.00
02/26/99	1:00	0.00
02/26/99	2:00	0.00
02/26/99	3:00	0.00
02/26/99	4:00	0.00
02/26/99	5:00	0.00
02/26/99	6:00	0.00
02/26/99	7:00	0.00
02/26/99	8:00	0.00
02/26/99	9:00	0.00
02/26/99	10:00	0.00
02/26/99	11:00	0.00
02/26/99	12:00	0.00
02/26/99	13:00	0.00
02/26/99	14:00	0.00
02/26/99	15:00	0.00
02/26/99	16:00	0.00
02/26/99	17:00	0.00
02/26/99	18:00	0.00
02/26/99	19:00	0.00
02/26/99	20:00	0.00
02/26/99	21:00	0.00
02/26/99	22:00	0.00
02/26/99	23:00	0.00
02/27/99	0:00	0.00
02/27/99	1:00	0.00
02/27/99	2:00	0.00
02/27/99	3:00	0.00
02/27/99	4:00	0.00
02/27/99	5:00	0.00
02/27/99	6:00	0.00
02/27/99	7:00	0.00
02/27/99	8:00	0.00
02/27/99	9:00	0.00
02/27/99	10:00	0.00
02/27/99	11:00	0.00
02/27/99	12:00	0.00
02/27/99	13:00	0.00
02/27/99	14:00	0.00
02/27/99	15:00	0.00
02/27/99	16:00	0.00
02/27/99	17:00	0.00
02/27/99	18:00	0.00
02/27/99	19:00	0.00
02/27/99	20:00	0.00
02/27/99	21:00	0.00
02/27/99	22:00	0.00
02/27/99	23:00	0.00
02/28/99	0:00	0.00

02/28/99	1:00	0.00
02/28/99	2:00	0.00
02/28/99	3:00	0.00
02/28/99	4:00	0.00
02/28/99	5:00	0.00
02/28/99	6:00	0.00
02/28/99	7:00	0.00
02/28/99	8:00	0.00
02/28/99	9:00	0.00
02/28/99	10:00	0.00
02/28/99	11:00	0.00
02/28/99	12:00	0.00
02/28/99	13:00	0.00
02/28/99	14:00	0.00
02/28/99	15:00	0.00
02/28/99	16:00	0.00
02/28/99	17:00	0.00
02/28/99	18:00	0.00
02/28/99	19:00	0.00
02/28/99	20:00	0.00
02/28/99	21:00	0.00
02/28/99	22:00	0.00
02/28/99	23:00	0.00
03/01/99	0:00	0.00
03/01/99	1:00	0.00
03/01/99	2:00	0.00
03/01/99	3:00	0.00
03/01/99	4:00	0.00
03/01/99	5:00	0.00
03/01/99	6:00	0.00
03/01/99	7:00	0.00
03/01/99	8:00	0.00
03/01/99	9:00	0.00
03/01/99	10:00	0.00
03/01/99	11:00	0.00
03/01/99	12:00	0.00
03/01/99	13:00	0.00
03/01/99	14:00	0.00
03/01/99	15:00	0.00
03/01/99	16:00	0.00
03/01/99	17:00	0.00
03/01/99	18:00	0.00
03/01/99	19:00	0.00
03/01/99	20:00	0.00
03/01/99	21:00	0.00
03/01/99	22:00	0.00
03/01/99	23:00	0.00
03/02/99	0:00	0.00
03/02/99	1:00	0.00
03/02/99	2:00	0.00
03/02/99	3:00	0.00

03/02/99	4:00	0.00
03/02/99	5:00	0.00
03/02/99	6:00	0.00
03/02/99	7:00	0.00
03/02/99	8:00	0.00
03/02/99	9:00	0.00
03/02/99	10:00	0.00
03/02/99	11:00	0.00
03/02/99	12:00	0.00
03/02/99	13:00	0.00
03/02/99	14:00	0.00
03/02/99	15:00	0.00
03/02/99	16:00	0.00
03/02/99	17:00	0.00
03/02/99	18:00	0.00
03/02/99	19:00	0.00
03/02/99	20:00	0.00
03/02/99	21:00	0.00
03/02/99	22:00	0.00
03/02/99	23:00	0.00
03/03/99	0:00	0.00
03/03/99	1:00	0.00
03/03/99	2:00	0.00
03/03/99	3:00	0.00
03/03/99	4:00	0.00
03/03/99	5:00	0.00
03/03/99	6:00	0.00
03/03/99	7:00	0.00
03/03/99	8:00	0.00
03/03/99	9:00	0.00
03/03/99	10:00	0.00
03/03/99	11:00	0.00
03/03/99	12:00	0.00
03/03/99	13:00	0.00
03/03/99	14:00	0.00
03/03/99	15:00	0.00
03/03/99	16:00	0.00
03/03/99	17:00	0.00
03/03/99	18:00	0.00
03/03/99	19:00	0.00
03/03/99	20:00	0.00
03/03/99	21:00	0.00
03/03/99	22:00	0.00
03/03/99	23:00	0.00
03/04/99	0:00	0.00
03/04/99	1:00	0.00
03/04/99	2:00	0.00
03/04/99	3:00	0.00
03/04/99	4:00	0.00
03/04/99	5:00	0.00
03/04/99	6:00	0.00

03/04/99	7:00	0.00
03/04/99	8:00	0.00
03/04/99	9:00	0.00
03/04/99	10:00	0.00
03/04/99	11:00	0.00
03/04/99	12:00	0.00
03/04/99	13:00	0.00
03/04/99	14:00	0.00
03/04/99	15:00	0.00
03/04/99	16:00	0.00
03/04/99	17:00	0.00
03/04/99	18:00	0.00
03/04/99	19:00	0.00
03/04/99	20:00	0.00
03/04/99	21:00	0.00
03/04/99	22:00	0.00
03/04/99	23:00	0.00
03/05/99	0:00	0.00
03/05/99	1:00	0.00
03/05/99	2:00	0.00
03/05/99	3:00	0.00
03/05/99	4:00	0.00
03/05/99	5:00	0.00
03/05/99	6:00	0.00
03/05/99	7:00	0.00
03/05/99	8:00	0.00
03/05/99	9:00	0.00
03/05/99	10:00	0.00
03/05/99	11:00	0.00
03/05/99	12:00	0.00
03/05/99	13:00	0.00
03/05/99	14:00	0.00
03/05/99	15:00	0.00
03/05/99	16:00	0.00
03/05/99	17:00	0.00
03/05/99	18:00	0.00
03/05/99	19:00	0.00
03/05/99	20:00	0.00
03/05/99	21:00	0.00
03/05/99	22:00	0.00
03/05/99	23:00	0.00
03/06/99	0:00	0.00
03/06/99	1:00	0.00
03/06/99	2:00	0.00
03/06/99	3:00	0.00
03/06/99	4:00	0.00
03/06/99	5:00	0.00
03/06/99	6:00	0.00
03/06/99	7:00	0.00
03/06/99	8:00	0.00
03/06/99	9:00	0.00

03/06/99	10:00	0.00	
03/06/99	11:00	0.00	
03/06/99	12:00	0.00	
03/06/99	13:00	0.00	
03/06/99	14:00	0.00	
03/06/99	15:00	0.00	
03/06/99	16:00	0.00	
03/06/99	17:00	0.00	
03/06/99	18:00	0.00	
03/06/99	19:00	0.00	
03/06/99	20:00	0.00	
03/06/99	21:00	0.00	
03/06/99	22:00	0.00	
03/06/99	23:00	0.00	
03/07/99	0:00	0.00	
03/07/99	1:00	0.00	
03/07/99	2:00	0.00	
03/07/99	3:00	0.00	
03/07/99	4:00	0.00	
03/07/99	5:00	0.00	
03/07/99	6:00	0.00	
03/07/99	7:00	0.00	
03/07/99	8:00	0.00	
03/07/99	9:00	0.00	
03/07/99	10:00	0.00	
03/07/99	11:00	0.00	
03/07/99	12:00	0.00	
03/07/99	13:00	0.00	
03/07/99	14:00	0.00	
03/07/99	15:00	0.00	
03/07/99	16:00	0.00	
03/07/99	17:00	0.00	
03/07/99	18:00	0.00	
03/07/99	19:00	0.00	
03/07/99	20:00	0.00	
03/07/99	21:00	0.00	
03/07/99	22:00	0.00	
03/07/99	23:00	0.00	
03/08/99	0:00	0.00	
03/08/99	1:00	0.00	
03/08/99	2:00	0.00	
03/08/99	3:00	0.00	
03/08/99	4:00	0.00	
03/08/99	5:00	0.00	
03/08/99	6:00	0.00	
03/08/99	7:00	0.00	GLCT Steam Clean
03/08/99	8:00	0.00	System Replace
03/08/99	9:00	0.00	Carbon
03/08/99	10:00	0.00	
03/08/99	11:00	0.00	
03/08/99	12:00	0.00	

03/08/99	13:00	0.00
03/08/99	14:00	0.00
03/08/99	15:00	0.00
03/08/99	16:00	0.00
03/08/99	17:00	0.00
03/08/99	18:00	0.00
03/08/99	19:00	0.00
03/08/99	20:00	0.00
03/08/99	21:00	0.00
03/08/99	22:00	0.00
03/08/99	23:00	0.00
03/09/99	0:00	0.00
03/09/99	1:00	0.00
03/09/99	2:00	0.00
03/09/99	3:00	0.00
03/09/99	4:00	0.00
03/09/99	5:00	0.00
03/09/99	6:00	0.00
03/09/99	7:00	0.00
03/09/99	8:00	0.00
03/09/99	9:00	0.00
03/09/99	10:00	0.00
03/09/99	11:00	0.00
03/09/99	12:00	0.00
03/09/99	13:00	0.00
03/09/99	14:00	0.00
03/09/99	15:00	25.49
03/09/99	16:00	0.00
03/09/99	17:00	0.00
03/09/99	18:00	0.00
03/09/99	19:00	0.00
03/09/99	20:00	0.00
03/09/99	21:00	0.00
03/09/99	22:00	0.00
03/09/99	23:00	0.00
03/10/99	0:00	0.00
03/10/99	1:00	0.00
03/10/99	2:00	0.00
03/10/99	3:00	0.00
03/10/99	4:00	0.00
03/10/99	5:00	0.00
03/10/99	6:00	0.00
03/10/99	7:00	0.00
03/10/99	8:00	0.00
03/10/99	9:00	0.00
03/10/99	10:00	0.00
03/10/99	11:00	0.00
03/10/99	12:00	0.00
03/10/99	13:00	0.00
03/10/99	14:00	11.34
03/10/99	15:00	47.65

03/10/99	16:00	16.06
03/10/99	17:00	0.00
03/10/99	18:00	0.00
03/10/99	19:00	0.00
03/10/99	20:00	0.00
03/10/99	21:00	0.00
03/10/99	22:00	0.00
03/10/99	23:00	0.00
03/11/99	0:00	0.00
03/11/99	1:00	0.00
03/11/99	2:00	0.00
03/11/99	3:00	0.00
03/11/99	4:00	0.00
03/11/99	5:00	0.00
03/11/99	6:00	0.00
03/11/99	7:00	23.16
03/11/99	8:00	23.16
03/11/99	9:00	0.00
03/11/99	10:00	0.00
03/11/99	11:00	0.00
03/11/99	12:00	0.00
03/11/99	13:00	0.00
03/11/99	14:00	0.00
03/11/99	15:00	0.00
03/11/99	16:00	0.00
03/11/99	17:00	0.00
03/11/99	18:00	0.00
03/11/99	19:00	0.00
03/11/99	20:00	0.00
03/11/99	21:00	0.00
03/11/99	22:00	0.00
03/11/99	23:00	0.00
03/12/99	0:00	0.00
03/12/99	1:00	0.00
03/12/99	2:00	0.00
03/12/99	3:00	0.00
03/12/99	4:00	0.00
03/12/99	5:00	0.00
03/12/99	6:00	0.00
03/12/99	7:00	0.00
03/12/99	8:00	0.00
03/12/99	9:00	0.00
03/12/99	10:00	0.00
03/12/99	11:00	0.00
03/12/99	12:00	0.00
03/12/99	13:00	0.00
03/12/99	14:00	0.00
03/12/99	15:00	0.00
03/12/99	16:00	0.00
03/12/99	17:00	0.00
03/12/99	18:00	0.00

03/12/99	19:00	0.00
03/12/99	20:00	0.00
03/12/99	21:00	0.00
03/12/99	22:00	0.00
03/12/99	23:00	0.00
03/13/99	0:00	0.00
03/13/99	1:00	0.00
03/13/99	2:00	0.00
03/13/99	3:00	0.00
03/13/99	4:00	0.00
03/13/99	5:00	0.00
03/13/99	6:00	0.00
03/13/99	7:00	0.00
03/13/99	8:00	0.00
03/13/99	9:00	0.00
03/13/99	10:00	0.00
03/13/99	11:00	0.00
03/13/99	12:00	0.00
03/13/99	14:00	0.00
03/13/99	15:00	0.00
03/13/99	16:00	0.00
03/13/99	17:00	0.00
03/13/99	18:00	0.00
03/13/99	19:00	0.00
03/13/99	20:00	0.00
03/13/99	21:00	0.00
03/13/99	22:00	0.00
03/13/99	23:00	0.00
03/14/99	0:00	0.00
03/14/99	1:00	0.00
03/14/99	2:00	0.00
03/14/99	3:00	0.00
03/14/99	4:00	0.00
03/14/99	5:00	0.00
03/14/99	6:00	0.00
03/14/99	7:00	0.00
03/14/99	8:00	0.00
03/14/99	9:00	0.00
03/14/99	10:00	0.00
03/14/99	11:00	0.00
03/14/99	12:00	0.00
03/14/99	13:00	0.00
03/14/99	14:00	0.00
03/14/99	15:00	0.00
03/14/99	16:00	0.00
03/14/99	17:00	0.00
03/14/99	18:00	0.00
03/14/99	19:00	0.00
03/14/99	20:00	0.00
03/14/99	21:00	0.00
03/14/99	22:00	0.00

03/14/99	23:00	0.00	
03/15/99	0:00	0.00	
03/15/99	1:00	0.00	
03/15/99	2:00	0.00	
03/15/99	3:00	0.00	
03/15/99	4:00	0.00	
03/15/99	5:00	0.00	
03/15/99	6:00	0.00	
03/15/99	7:00	0.00	
03/15/99	8:00	0.00	
03/15/99	9:00	0.00	
03/15/99	10:00	0.00	
03/15/99	11:00	0.00	
03/15/99	12:00	0.00	
03/15/99	13:00	0.00	
03/15/99	14:00	0.00	
03/15/99	15:00	0.00	
03/15/99	16:00	0.00	
03/15/99	17:00	0.00	
03/15/99	18:00	0.00	
03/15/99	19:00	0.00	
03/15/99	20:00	0.00	
03/15/99	21:00	0.00	
03/15/99	22:00	0.00	
03/15/99	23:00	0.00	
03/16/99	0:00	0.00	GLCT Clean GLP
03/16/99	1:00	0.00	Silencer & process
03/16/99	2:00	0.00	pipe
03/16/99	3:00	0.00	
03/16/99	4:00	0.00	
03/16/99	5:00	0.00	
03/16/99	6:00	0.00	
03/16/99	7:00	33.92	
03/16/99	10:00	190.07	
03/16/99	11:00	97.35	12:30
03/24/99	13:00	73.53	
03/24/99	14:00	0.00	(1.75 hrs - tube disconn.) sys. act. on!
04/13/99	9:00	46.76	4/6/99 System Down (0.83 hr) Blower motor overheat
04/23/99	15:00	152.28	
04/29/99	8:00	106.28	0745
04/29/99	9:00	116.45	System maint. 2.17 hrs 4/19 sys. main 1.4hr
04/29/99	10:00	191.72	
04/29/99	11:00	0.00	System Maint.
04/29/99	12:00	0.00	
04/29/99	13:00	0.00	
04/29/99	14:00	0.00	7.92 hr
04/29/99	15:00	0.00	15:50 full on
05/05/99	9:00	134.66	5/3/99 5/4 0.28hr P&T maint. 1.0 filter inst.
05/05/99	10:00	0.00	
05/05/99	11:00	0.00	
05/05/99	12:00	0.00	

Blower HT (1.5hr) — 04/23/99

0845 — 05/05/99

Maint. PIZ Rdgs per mark G.

Syst. Down 8.05 hrs

5/6 GLCT TANK A
Chg.

05/05/99	13:00	0.00	
05/05/99	14:00	0.00	
05/05/99	15:00	0.00	
05/05/99	16:00	0.00	16:48
05/12/99	9:00	0.00	Equip. Inst. 2.00
05/19/99	20:00	60.86	System down VE Motor 1.50
05/20/99	21:00	83.50	2020 → 2200 " " " 1.67
05/21/99	6:00	192.06	High H_2O " Alarm 1.50+.83
05/22/99	8:00	79.53	710 → 840 " VE Alarm 1.50
05/24/99	15:00	0.00	
05/24/99	16:00	0.00	GLP Blower failure
05/24/99	17:00	0.00	
05/24/99	18:00	0.00	
05/24/99	19:00	0.00	Clean & Ret. to
05/24/99	20:00	0.00	Service
05/24/99	21:00	0.00	
05/24/99	22:00	0.00	
05/24/99	23:00	0.00	(26.25 hr)
05/25/99	0:00	0.00	
05/25/99	1:00	0.00	
05/25/99	2:00	0.00	
05/25/99	3:00	0.00	
05/25/99	4:00	0.00	
05/25/99	5:00	0.00	
05/25/99	6:00	0.00	
05/25/99	7:00	0.00	
05/25/99	8:00	0.00	
05/25/99	9:00	60.77	
05/25/99	10:00	155.00	
05/25/99	11:00	94.90	Working on Blower
05/25/99	12:00	0.00	See Above
05/25/99	13:00	22.96	
05/25/99	14:00	98.25	
05/25/99	15:00	115.42	
05/26/99	8:00	58.22	Final Death of Blower (GLP)
05/26/99	9:00	0.00	
05/26/99	10:00	0.00	
05/26/99	11:00	0.00	
05/26/99	12:00	0.00	
05/26/99	13:00	0.00	
05/26/99	14:00	0.00	
05/26/99	15:00	0.00	
05/26/99	16:00	0.00	
05/26/99	17:00	0.00	
05/26/99	18:00	0.00	
05/26/99	19:00	0.00	
05/26/99	20:00	0.00	
05/26/99	21:00	0.00	
05/26/99	22:00	0.00	
05/26/99	23:00	0.00	
05/27/99	0:00	0.00	

05/27/99	1:00	0.00
05/27/99	2:00	0.00
05/27/99	3:00	0.00
05/27/99	4:00	0.00
05/27/99	5:00	0.00
05/27/99	6:00	0.00
05/27/99	7:00	0.00
05/27/99	8:00	0.00
05/27/99	9:00	0.00
05/27/99	10:00	0.00
05/27/99	11:00	0.00
05/27/99	12:00	0.00
05/27/99	13:00	0.00
05/27/99	14:00	0.00
05/27/99	15:00	0.00
05/27/99	16:00	0.00
05/27/99	17:00	0.00
05/27/99	18:00	0.00
05/27/99	19:00	0.00
05/27/99	20:00	0.00
05/27/99	21:00	0.00
05/27/99	22:00	0.00
05/27/99	23:00	0.00
05/28/99	0:00	0.00
05/28/99	1:00	0.00
05/28/99	2:00	0.00
05/28/99	3:00	0.00
05/28/99	4:00	0.00
05/28/99	5:00	0.00
05/28/99	6:00	0.00
05/28/99	7:00	0.00
05/28/99	8:00	0.00
05/28/99	9:00	0.00
05/28/99	10:00	0.00
05/28/99	11:00	0.00
05/28/99	12:00	0.00
05/28/99	13:00	0.00
05/28/99	14:00	0.00
05/28/99	15:00	0.00
05/28/99	16:00	0.00
05/28/99	17:00	0.00
05/28/99	18:00	0.00
05/28/99	19:00	0.00
05/28/99	20:00	0.00
05/28/99	21:00	0.00
05/28/99	22:00	0.00
05/28/99	23:00	0.00
05/29/99	0:00	0.00
05/29/99	1:00	0.00
05/29/99	2:00	0.00
05/29/99	3:00	0.00

05/29/99	4:00	0.00
05/29/99	5:00	0.00
05/29/99	6:00	0.00
05/29/99	7:00	0.00
05/29/99	8:00	0.00
05/29/99	9:00	0.00
05/29/99	10:00	0.00
05/29/99	11:00	0.00
05/29/99	12:00	0.00
05/29/99	13:00	0.00
05/29/99	14:00	0.00
05/29/99	15:00	0.00
05/29/99	16:00	0.00
05/29/99	17:00	0.00
05/29/99	18:00	0.00
05/29/99	19:00	0.00
05/29/99	20:00	0.00
05/29/99	21:00	0.00
05/29/99	22:00	0.00
05/29/99	23:00	0.00
05/30/99	0:00	0.00
05/30/99	1:00	0.00
05/30/99	2:00	0.00
05/30/99	3:00	0.00
05/30/99	4:00	0.00
05/30/99	5:00	0.00
05/30/99	6:00	0.00
05/30/99	7:00	0.00
05/30/99	8:00	0.00
05/30/99	9:00	0.00
05/30/99	10:00	0.00
05/30/99	11:00	0.00
05/30/99	12:00	0.00
05/30/99	13:00	0.00
05/30/99	14:00	0.00
05/30/99	15:00	0.00
05/30/99	16:00	0.00
05/30/99	17:00	0.00
05/30/99	18:00	0.00
05/30/99	19:00	0.00
05/30/99	20:00	0.00
05/30/99	21:00	0.00
05/30/99	22:00	0.00
05/30/99	23:00	0.00
05/31/99	0:00	0.00
05/31/99	1:00	0.00
05/31/99	2:00	0.00
05/31/99	3:00	0.00
05/31/99	4:00	0.00
05/31/99	5:00	0.00
05/31/99	6:00	0.00

05/31/99	7:00	0.00
05/31/99	8:00	0.00
05/31/99	9:00	0.00
05/31/99	10:00	0.00
05/31/99	11:00	0.00
05/31/99	12:00	0.00
05/31/99	13:00	0.00
05/31/99	14:00	0.00
05/31/99	15:00	0.00
05/31/99	16:00	0.00
05/31/99	17:00	0.00
05/31/99	18:00	0.00
05/31/99	19:00	0.00
05/31/99	20:00	0.00
05/31/99	21:00	0.00
05/31/99	22:00	0.00
05/31/99	23:00	0.00
06/01/99	0:00	0.00
06/01/99	1:00	0.00
06/01/99	2:00	0.00
06/01/99	3:00	0.00
06/01/99	4:00	0.00
06/01/99	5:00	0.00
06/01/99	6:00	0.00
06/01/99	7:00	0.00
06/01/99	8:00	0.00
06/01/99	9:00	0.00
06/01/99	10:00	0.00
06/01/99	11:00	0.00
06/01/99	12:00	0.00
06/01/99	13:00	0.00
06/01/99	14:00	0.00
06/01/99	15:00	0.00
06/01/99	16:00	0.00
06/01/99	17:00	0.00
06/01/99	18:00	0.00
06/01/99	19:00	0.00
06/01/99	20:00	0.00
06/01/99	21:00	0.00
06/01/99	22:00	0.00
06/01/99	23:00	0.00
06/02/99	0:00	0.00
06/02/99	1:00	0.00
06/02/99	2:00	0.00
06/02/99	3:00	0.00
06/02/99	4:00	0.00
06/02/99	5:00	0.00
06/02/99	6:00	0.00
06/02/99	7:00	0.00
06/02/99	8:00	0.00
06/02/99	9:00	0.00

06/02/99	10:00	0.00
06/02/99	11:00	0.00
06/02/99	12:00	0.00
06/02/99	13:00	0.00
06/02/99	14:00	0.00
06/02/99	15:00	0.00
06/02/99	16:00	0.00
06/02/99	17:00	0.00
06/02/99	18:00	0.00
06/02/99	19:00	0.00
06/02/99	20:00	0.00
06/02/99	21:00	0.00
06/02/99	22:00	0.00
06/02/99	23:00	0.00
06/03/99	0:00	0.00
06/03/99	1:00	0.00
06/03/99	2:00	0.00
06/03/99	3:00	0.00
06/03/99	4:00	0.00
06/03/99	5:00	0.00
06/03/99	6:00	0.00
06/03/99	7:00	0.00
06/03/99	8:00	0.00
06/03/99	9:00	0.00
06/03/99	10:00	0.00
06/03/99	11:00	0.00
06/03/99	12:00	0.00
06/03/99	13:00	0.00
06/03/99	14:00	0.00
06/03/99	15:00	0.00
06/03/99	16:00	0.00
06/03/99	17:00	0.00
06/03/99	18:00	0.00
06/03/99	19:00	0.00
06/03/99	20:00	0.00
06/03/99	21:00	0.00
06/03/99	22:00	0.00
06/03/99	23:00	0.00
06/04/99	0:00	0.00
06/04/99	1:00	0.00
06/04/99	2:00	0.00
06/04/99	3:00	0.00
06/04/99	4:00	0.00
06/04/99	5:00	0.00
06/04/99	6:00	0.00
06/04/99	7:00	0.00
06/04/99	8:00	0.00
06/04/99	9:00	0.00
06/04/99	10:00	0.00
06/04/99	11:00	0.00
06/04/99	12:00	0.00

06/04/99	13:00	0.00
06/04/99	14:00	0.00
06/04/99	15:00	0.00
06/04/99	16:00	0.00
06/04/99	17:00	0.00
06/04/99	18:00	0.00
06/04/99	19:00	0.00
06/04/99	20:00	0.00
06/04/99	21:00	0.00
06/04/99	22:00	0.00
06/04/99	23:00	0.00
06/05/99	0:00	0.00
06/05/99	1:00	0.00
06/05/99	2:00	0.00
06/05/99	3:00	0.00
06/05/99	4:00	0.00
06/05/99	5:00	0.00
06/05/99	6:00	0.00
06/05/99	7:00	0.00
06/05/99	8:00	0.00
06/05/99	9:00	0.00
06/05/99	10:00	0.00
06/05/99	11:00	0.00
06/05/99	12:00	0.00
06/05/99	13:00	0.00
06/05/99	14:00	0.00
06/05/99	15:00	0.00
06/05/99	16:00	0.00
06/05/99	17:00	0.00
06/05/99	18:00	0.00
06/05/99	19:00	0.00
06/05/99	20:00	0.00
06/05/99	21:00	0.00
06/05/99	22:00	0.00
06/05/99	23:00	0.00
06/06/99	0:00	0.00
06/06/99	1:00	0.00
06/06/99	2:00	0.00
06/06/99	3:00	0.00
06/06/99	4:00	0.00
06/06/99	5:00	0.00
06/06/99	6:00	0.00
06/06/99	7:00	0.00
06/06/99	8:00	0.00
06/06/99	9:00	0.00
06/06/99	10:00	0.00
06/06/99	11:00	0.00
06/06/99	12:00	0.00
06/06/99	13:00	0.00
06/06/99	14:00	0.00
06/06/99	15:00	0.00

06/06/99	16:00	0.00
06/06/99	17:00	0.00
06/06/99	18:00	0.00
06/06/99	19:00	0.00
06/06/99	20:00	0.00
06/06/99	21:00	0.00
06/06/99	22:00	0.00
06/06/99	23:00	0.00
06/07/99	0:00	0.00
06/07/99	1:00	0.00
06/07/99	2:00	0.00
06/07/99	3:00	0.00
06/07/99	4:00	0.00
06/07/99	5:00	0.00
06/07/99	6:00	0.00
06/07/99	7:00	0.00
06/07/99	8:00	0.00
06/07/99	9:00	0.00
06/07/99	10:00	0.00
06/07/99	11:00	0.00
06/07/99	12:00	0.00
06/07/99	13:00	0.00
06/07/99	14:00	0.00
06/07/99	15:00	9.20
06/07/99	16:00	0.00
06/07/99	17:00	0.00
06/07/99	18:00	0.00
06/07/99	19:00	0.00
06/07/99	20:00	0.00
06/07/99	21:00	0.00
06/07/99	22:00	0.00
06/07/99	23:00	0.00
06/08/99	0:00	0.00
06/08/99	1:00	0.00
06/08/99	2:00	0.00
06/08/99	3:00	0.00
06/08/99	4:00	0.00
06/08/99	5:00	0.00
06/08/99	6:00	0.00
06/08/99	7:00	0.00
06/08/99	8:00	0.00
06/08/99	9:00	0.00
06/08/99	10:00	0.00
06/08/99	11:00	0.00
06/08/99	12:00	0.00
06/08/99	13:00	0.00
06/08/99	14:00	0.00
06/08/99	15:00	0.00
06/08/99	16:00	0.00
06/08/99	17:00	0.00
06/08/99	18:00	45.11

06/08/99	20:00	0.00	
06/08/99	21:00	0.00	
06/08/99	22:00	0.00	
06/08/99	23:00	0.00	
06/09/99	0:00	0.00	
06/09/99	1:00	0.00	
06/09/99	2:00	0.00	
06/09/99	3:00	0.00	
06/09/99	4:00	0.00	
06/09/99	5:00	0.00	
06/09/99	6:00	0.00	
06/09/99	7:00	0.00	
06/09/99	8:00	189.41	Restart w/ new blower
07/04/99	15:00	83.30	system went down & auto-dialer
07/04/99	16:00	0.00	failed to call
07/04/99	17:00	0.00	
07/04/99	18:00	0.00	14:30 Sump full in 300
07/04/99	19:00	0.00	
07/04/99	20:00	0.00	
07/04/99	21:00	0.00	
07/04/99	22:00	0.00	
07/04/99	23:00	0.00	~~13~~ 19.5
07/05/99	0:00	0.00	+ 24.
07/05/99	1:00	0.00	+ 14
07/05/99	2:00	0.00	
07/05/99	3:00	0.00	47.5 hrs
07/05/99	4:00	0.00	
07/05/99	5:00	0.00	
07/05/99	6:00	0.00	
07/05/99	7:00	0.00	
07/05/99	8:00	0.00	
07/05/99	9:00	0.00	
07/05/99	10:00	0.00	
07/05/99	11:00	0.00	
07/05/99	12:00	0.00	
07/05/99	13:00	0.00	
07/05/99	14:00	0.00	
07/05/99	15:00	0.00	
07/05/99	16:00	0.00	
07/05/99	17:00	0.00	
07/05/99	18:00	0.00	
07/05/99	19:00	0.00	
07/05/99	20:00	0.00	
07/05/99	21:00	0.00	
07/05/99	22:00	0.00	
07/05/99	23:00	0.00	
07/06/99	0:00	0.00	
07/06/99	1:00	0.00	
07/06/99	2:00	0.00	
07/06/99	3:00	0.00	
07/06/99	4:00	0.00	

07/06/99	5:00	0.00	
07/06/99	6:00	0.00	
07/06/99	7:00	0.00	
07/06/99	8:00	0.00	
07/06/99	9:00	0.00	System Restart @ 10:00
~~07/30/99~~	~~20:00~~	~~89.00~~	
07/30/99	21:00	87.76	
07/30/99	22:00	90.51	
07/30/99	23:00	90.01	
07/31/99	0:00	94.03	
07/31/99	1:00	93.16	
07/31/99	2:00	95.06	NA 7/22/99 0.33 hr for Auto-dialer removal for Service
07/31/99	3:00	92.55	
07/31/99	4:00	94.83	7/29/99 Auto-dialer back in Service
07/31/99	5:00	97.90	
07/31/99	6:00	99.34	
07/31/99	7:00	98.03	
07/31/99	8:00	107.11	
~~07/31/99~~	~~9:00~~	~~105.96~~	
12/09/99	11:00	0.00	8/11/99 0.2 hrs DOE Tour
12/09/99	12:00	130.77	9/2/99 0.18 " Sys maint.
12/13/99	8:00	71.51	10:00 - 12:30 2.50 " " "
12/13/99	9:00	92.27	
12/13/99	10:00	82.03	HIGH Level sensor Defective
12/13/99	11:00	0.00	Carbon tank B ½ Full H_2O
12/13/99	12:00	62.30	
12/13/99	13:00	89.70	Clean out H_2O & switch
12/13/99	14:00	99.77	to tank A
12/13/99	17:00	173.49	
12/13/99	18:00	0.00	
12/13/99	19:00	0.00	
12/13/99	20:00	0.00	
12/13/99	21:00	0.00	
12/13/99	22:00	0.00	
12/13/99	23:00	0.00	
12/14/99	0:00	0.00	
12/14/99	1:00	0.00	
12/14/99	2:00	0.00	
12/14/99	3:00	0.00	
12/14/99	4:00	0.00	
12/14/99	5:00	71.67	- 05:30 Restart
12/21/99	12:00	0.00	- 11:15 Shut down to
12/21/99	13:00	0.00	Replace sensors/switches
12/21/99	14:00	0.00	
12/21/99	15:00	0.00	
12/21/99	16:00	0.00	
12/21/99	17:00	0.00	(21.25 hrs)
12/21/99	18:00	0.00	
12/21/99	19:00	0.00	
12/21/99	20:00	0.00	
12/21/99	21:00	0.00	

12/21/99	22:00	0.00	
12/21/99	23:00	0.00	
12/22/99	0:00	0.00	
12/22/99	1:00	0.00	
12/22/99	2:00	0.00	
12/22/99	3:00	0.00	
12/22/99	4:00	0.00	
12/22/99	5:00	0.00	
12/22/99	6:00	0.00	
12/22/99	7:00	0.00	
12/22/99	8:00	101.43	system Restart@ 08:30
12/25/99	4:00	0.00	3:20 – 5:50
12/25/99	5:00	0.00	High H_2O shutdown 2.5 hrs
01/03/00	18:00	0.00	1031 hrs total down 1999 hrs down ≈ 108 (107.8 due to maint.
01/03/00	21:00	178.79	
01/04/00	8:00	39.12	0.5 hr
01/06/00	4:00	161.42	1/5/00 0.93 hr pump lost prime
01/08/00	1:00	143.56	0.93 hr same as above
01/08/00	11:00	129.25	1.75 hrs pump lost prime lower level sw - too low
01/08/00	21:00	193.38	*0.75 hrs
01/09/00	9:00	173.63	1.05 hrs pump prime
01/11/00	8:00	0.00	1/10/00 0.47 hrs Tour + prime
01/11/00	9:00	0.00	
01/11/00	10:00	0.00	Relocate lower level switch
01/11/00	11:00	0.00	and rewire 6.5 hrs
01/11/00	12:00	0.00	

8808 hrs

1044.00 (936 equipment failure + 108 maint.

98.74 % uptime for CY99 (based on down time due to

87.93% Total up time