1 of 3

CONFINED ZONE DISPERSION
FLUE GAS DESULFURIZATION DEMONSTRATION

Quarterly Report No. 8
For the Period
August 17, 1992 to November 16, 1992

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Section 1

SUMMARY

This is the eighth quarterly report for this project. It covers work performed on Phase 3b from August 17, 1992 through November 16, 1992.

Parametric testing was completed and the six-month continuous demonstration run was initiated in mid-August. Most of the automation of the CZD system has been completed, and the system integrated with the boiler operation of Unit 15.

The continuous demonstration run started on August 17. After about 10 hours of operation, the boiler of Unit 15 blew a tube and was shut down. During the shutdown, new permanent thermocouples were installed on the turning vanes in the duct. These thermocouples monitor temperature and automatically control lime injection. Operations (24 hours/day) resumed on August 20. In the following 10 days, consistent SO₂ removal was obtained in the range of 45-54%, and the operation of the automatic lime preparation and feed system was completely satisfactory. Type S - lime (pressure-hydrated dolomitic lime) was used during this period.

After 10 days of continuous (24 hours/day) lime injection operations, the steam pressure at which the duct sootblowers were operating was set too low to prevent deposits from forming on the bottom of the duct. The steam supply pressure to the sootblowers was increased to the maximum; however, it was not possible to remove some of the deposits that had already formed. In a few areas, these deposits were significant, and testing confirmed that further lime injection operations would cause accelerated growth of these deposits. Consequently, lime injection was halted, and it was decided to remove the deposits manually during the next boiler outage. At Penelec's request, the CZD system was kept online but put in the standby mode, and water injected into the duct to assist in opacity control.

To prepare the CZD system for winter operations, final heat tracing and insulation requirements for piping and equipment were completed in October. Penelec operated unit 15 for the entire month of September without a forced outage or maintenance shutdown. As a result, it was not possible to enter the duct to inspect or remove deposits.

Boiler #15 was taken offline on October 5 due to boiler leaks. Subsequent inspection of the duct during the outage revealed substantial fly ash/lime deposits. Evidence confirmed that a large contributing factor to deposit formation was the previous faulty operation of the sootblowers. The duct was thoroughly cleaned before Boiler #15 was restarted. As a preventive measure to limit duct deposits, an agreement was made with Penelec to operate the sootblowers more frequently.

On October 9, the boiler was brought to full load, and lime injection was resumed. The CZD system was returned to full automatic control (load following); however, frequent opacity excursions were observed. Analysis of the Buell ESP field currents for the CZD duct revealed that the first field current was stable, or was slightly increased with the lime injection, but the other three fields showed a dramatic drop in currents. This drop in field currents with lime slurry was the direct opposite of the reaction of the ESP observed so far in the test program. During the past year's testing, it has been observed that the addition of lime increased the field currents and led to a lowering of duct and stack opacity. Further investigation and consultation with Buell Engineers led to the causes of the problem, which were faulty ground connections in the second and third fields. Since repairs required a boiler shutdown, lime slurry density was reduced to about 4% to permit continued injection. This, coupled with low inlet flue gas temperatures, limited SO₂ removal to the range of 20-30%.

On October 26, Boiler #15 was shut down due to a steam leak in the superheater. An inspection of the duct showed that the increased frequency of the sootblower operations was effective in controlling deposits. Although some buildup was noted on duct walls, floor, and turning vanes, the amount was small and not considered a problem. During the outage, the ESP ground problem was fixed, and the fan room coils were brushed and washed down to permit higher inlet flue gas temperatures. Boiler startup was initiated on October 28.

CZD lime injection was resumed on November 2 following the startup of Boiler #15 and continued until November 16. Inlet flue gas temperatures to the CZD duct ranged from lows of about 260°F to highs of 280°F, with average temperatures of 275°F. During this period, the CZD system operated in the load - following mode with lime injection rates determined automatically by the temperature at the turning vanes. Due to the low inlet temperatures, lime injection rates varied from 26 gpm to 40 gpm, and SO₂ removal rates ranged from 18% to 41%. Lime slurry concentrations varied, in steps, from 5% to 10%. For reference, the Seward Station CZD installation was designed to achieve 50% SO₂ based on inlet flue gas temperatures of about 300°F with accompanying lime injection rates of about 50 gpm.

On November 16, lime injection was halted due to a leaking throttle valve in the secondary recirculation line of the lime feed system. The badly worn valve was permanently replaced with a heavy duty spool piece to receive the high pressure drop across the main control valve.

Since the commencement of the continuous demonstration period on August 17, 100% mechanical and process availability of the CZD system has been experienced. Operability has been excellent, and no major equipment or instrumentation failures have occurred. Whenever Boiler #15 has been in operation, the CZD system has been on-line, injecting lime for SO₂ removal or water for stack opacity control.

Figure 1-1 shows the major milestone status from the pre-award activities through November 16, 1992, including the units planned and the units completed.

Figure 1-1 Major Milestone Status from Pre-Award Activities through November 16, 1992

Section 2

INTRODUCTION

The CZD process involves injecting a finely atomized slurry of reactive lime into the flue gas duct work of a coal-fired utility boiler. The principle of the confined zone is to form a wet zone of slurry droplets in the middle of the duct confined in an envelope of hot gas between the wet zone and the duct walls. The lime slurry reacts with part of the SO₂ in the gas, and the reaction products dry to form solid particles. A solids collector, typically an electrostatic precipitator (ESP) downstream from the point of injection, captures the reaction products along with the fly ash entrained in the flue gas.

The features that distinguish the CZD process from other similar injection processes are:

- Injection of an alkaline slurry directly into the duct, instead of injection of dry solids into the duct ahead of a fabric filter.
- Use of an ultrafine calcium/magnesium hydroxide, type S pressure-hydrated dolomitic lime. This commercial product is made from plentiful, naturally occurring dolomite.
- Low residence time, made possible by the high effective surface area of the Type S lime.
- Localized dispersion of the reagent. Slurry droplets contact only part of the gas while the droplets are drying, to remove up to 50 percent of the SO₂. The process uses dual fluid rather than rotary atomizers.
- Improved electrostatic precipitator performance via gas conditioning from the increased water vapor content, and lower temperatures.

The waste product is composed of magnesium and calcium sulfite and sulfate, with some excess lime. This product mixed with fly ash is self-stabilizing because of the excess lime values, and thus tends to retain heavy metals in insoluble forms within the fly ash.

The demonstration is being conducted at Penelec's Seward Station, Unit No. 15. This boiler is a 147 MWe coal-fired unit, which utilizes Pennsylvania bituminous coal (approximately 1.2 to 2.5% sulfur). One of the two flue gas ducts leading from the boiler has been retrofitted with the CZD technology. The first existing ESP installed in the station is immediately behind the air preheater. The second ESP, installed about 15 years ago, is about 80 feet away from the first ESP. The station has two more boilers (#12 and #14) that burn the same coal and are connected to the common flue gas stack. The arrangement of Seward Station is shown in Figure 2-1.

The goal of this demonstration is to prove the technical and economic feasibility of the CZD technology on a commercial scale. The process is expected to achieve 50% SO₂ removal at lower capital and O&M costs than other systems.

The U.S. Department of Energy and Bechtel Corporation are engaged in a cooperative project to demonstrate the CZD Technology. DOE is providing half, or \$5.2 million, of the project's total \$10.4 million cost. Others contributing to the project are Pennsylvania Electric Company (\$3 million), Bechtel (\$1,340,000), the Pennsylvania Energy Development Authority (\$750,000), New York Gas and Electric Company (\$100,000), and Rockwell Lime Company (\$23,000).

To achieve its objectives, the project is divided into the following three phases:

- Phase 1: Design and Permitting
- Phase 2: Construction and Start-up
- Phase 3: Operation and Disposition

Phase 1 activities were completed on January 31, 1991. Phase 2 activities were essentially concluded on July 31, 1991, and Phase 3a, Parametric Testing, was initiated on July 1, 1991. This Quarterly Technical Progress Report covers Phase 3b activities from August 17, 1992 through November 16, 1992.

For further information on the structure of this demonstration project, Appendix A provides a project description by phase, a work breakdown structure (WBS) Diagram, and a detailed description of the WBS.

Figure 2-1 Seward Station Arrangement

Section 3

PROJECT STATUS

This section of the report provides details of the work performed from August 17, 1992 through November 16, 1992. It also describes the activities carried out as part of the CZD demonstration with continuous operation. Figure 3-1 shows a Seward Station overall process flow diagram.

Figures 3-2 through 3-5 show the Seward CZD system overview, the lime storage and slurry preparation, the lime slurry feed system and the lime slurry injection, respectively, all for the continuous operation.

3.1 COMPLETION OF DESIGN PROCUREMENT AND INSTALLATION (WBS 1.3.3)

During the boiler shutdown on August 18, new permanent thermocouples were installed on the turning vanes in the duct. These thermocouples are now monitoring the temperature and automatically controlling the lime injection.

Final heat tracing and insulation requirements for piping and equipment were developed so that installation could be completed on October.

3.2 COMPLETION OF FACILITY CONSTRUCTION (W.B.S. 1.3.4)

Facility construction activities have been completed.

3.3 CZD DEMONSTRATION WITH CONTINUOUS OPERATION (W.B.S. 1.3.6)

3.3.1 August 17, 1992 to September 16, 1992

The starting day for the continuous operation was August 17, 1992. At that time, most of the equipment, instruments, and controls were installed, tested, and debugged.

The retractable soot blowers, the thermocouple lances inside the turning vanes, and the temperature control system for the lime slurry injection rate (based on the lowest temperature at C-cross section) were only in the process of being installed. As a result, during the last two weeks of August 1992, we had difficulties in manually controlling the lime slurry flow rate to the atomizers, based on average flue gas temperature at C-cross section. The variations in the boiler load could not be exactly matched manually with the lime slurry injection rate. When the new thermocouple lances on the turning vanes were installed and the temperature controller could regulate the lime slurry injection rate, all the difficulties with following the variation of the boiler and load completely disappeared.

Figure 3-1 Seward Station Overall Process Flow Diagram

Figure 3-2 Seward CZD System Overview

Figure 3-3 Lime Storage and Slurry Preparation – Continuous Operation

Figure 3-4 Lime Slurry Feed System – Continuous Operation

Figure 3-5 Lime Slurry Injection - Continuous Operation

3.3.1.1 August 17, 1992

Continuous operation with the injection of pressure-hydrated dolomitic lime slurry started at 1 p.m. on August 17. Table 3-1 summarizes the results of the operation with different lime slurry injection rates and lime concentrations.

Table 3-1
Results of Different Lime Slurry Injection Rates and Lime Slurry Concentrations

Lime Slurry Injection Time	Lime Slurry Injection Rate (gpm)	Lime Concentration (%)	SO₂ Removal (%)	Stack Opacity (%)
2-1/2 hours	45 – 55	10.3	25 – 42	9.6 – 20
2-3/4 hours	54 – 55	10.7	43 – 46.8	15 – 20
2-1/2 hours	41 – 50	13.9	38 – 41.8	11 – 19.7
3/4 hour	50	11.5	40	13 – 14

During the lime slurry injection, the following operations data were recorded every 15 minutes. Table 3-2 shows the data recorded August 17 at 5:10 pm.

Table 3-2
Operations Data Recorded During the Lime Slurry Injections
on August 17 at 5:10 pm

Operation	Recorded Data
Boiler Load	146.8 MW
Stack Opacity	18.6%
SO ₂ In	176 scfm
SO ₂ Out	92.4 scfm
Flue gas temperature in	308.1°F
Flue gas temperature out	195.2°F
Wt% Lime Slurry	14.4%
Lime slurry injection rate	53.4 gpm
Lime slurry level in feed tank	7.5 feet
Compressed air flow rate	1,154 scfm
SO ₂ In	922.8 ppm
SO ₂ Out	392.8 ppm
SO ₂ Removal (Based on dilution of scfm flue gas in and out)	47.5%
SO ₂ Reduction (Based on dilution of % CO ₂ in and out)	44.5%
NO _x In	351.9 ppm
NO _x Out	293.0 ppm
NO _x Removal	-2.37%
CO ₂ In	11.6%
CO ₂ Out	8.9%
CO ₂ Dilution	23.1%
Flue gas in	190,570 scfm
Flue gas out	234,560 scfm
Flue gas dilution	18.75%

The operation had to be stopped after only 8-1/2 hours of the lime slurry injection because of an emergency shutdown of the boiler.

During this period, the percentage of SO₂ removal was usually over 40% and the percentage of stack opacity under 20%. Increasing the lime slurry concentration

from 10.3% to 13.9% – a 35% increase -- did not improve the percentage of SO₂ removal. (See Appendix C.)

The percent of SO₂ removal increased when the lime slurry injection rate increased.

3.3.1.2 *August 20, 1992*

The dolomitic lime slurry injection into the duct started at 1745 hours and continued until 2345 hours – a total of 6 hours. The cumulative lime slurry injection time was 14.5 hours. The summary of CZD operations for August 20 is as follows:

- Lime injection: 40-50 gpm with a 7.5% lime concentration
- SO₂ removal: 30-41%
- Stack opacity: 11-17%

3.3.1.3 *August 21, 1992*

Dolomitic lime slurry injection in the duct started at 1445 hours and continued until 2330 hours, a total of 8.75 hours. The cumulative lime injection time was 23.25 hours. The summary of CZD operations on August 21 is as follows:

- Lime injection: 50-55 gpm with a 9% lime concentration
- SO₂ removal: 40-55%
- Stack opacity: 7-9.7%

3.3.1.4 *August 24, 1992*

The dolomitic lime slurry injection in the duct started at 1400 hours and continued until 2400 hours – a total of 10 hours. The cumulative lime slurry injection time was 33.25 hours. The summary of the CZD operations for August 24 is as follows:

- Lime injection: 40-59 gpm with a 12% lime concentration
- SO₂ removal: 30-50%
- Stack opacity: 11-19.4%

3.3.1.5 *August 25, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2000 hours – a total of 20 hours. The cumulative lime slurry injection time was 53.25 hours. The summary of CZD operations for August 25 is as follows:

- Lime injection: 48-56 gpm with a 12% lime concentration
- SO₂ removal: 30-44%
- Stack opacity: 10-18%

3.3.1.6 *August 26, 1992*

The dolomitic lime slurry injection in the duct started at 0245 hours and continued until 2400 hours – a total of 18.75 hours. The cumulative lime slurry injection time was 72 hours. The summary of CZD operations for August 26 is as follows:

- Lime injection: 50-58.8 gpm with a 12% lime concentration
- SO₂ removal: 40-53.5%
- Stack opacity: 6-16%

3.3.1.7 *August 27, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued for 18 hours until 2400 hours. The cumulative lime slurry injection was 90 hours. The summary of CZD operations for August 27 is as follows:

- Lime injection: 49-59 gpm with predominantly 12% lime concentration
- SO₂ removal: 41-48.8%
- Stack opacity: 6-18%

3.3.1.8 *August 28, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2245 hours – a total of 17 hours. The cumulative lime injection time was 107 hours. The summary of CZD operations on August 28 is:

- Lime injection: 40-55.8 gpm with a 12% lime concentration
- SO₂ removal: 34-46.8%
- Stack opacity: Mostly 7-18.8%

3.3.1.9 September 2, 1992

The dolomitic lime slurry injection in the duct started at 1530 hours and continued until 2200 hours – a total of 6 hours. The cumulative lime injection time was 113 hours. The summary of CZD operation for September 2 is as follows:

- Lime injection: 33.4-39.6 gpm with a 12% lime concentration
- SO₂ removal: 11-25.4%
- Stack opacity: 8.5-18.7%

3.3.1.10 September 3, 1992

The dolomitic lime slurry injection in the duct started at 0915 hours and continued until 1045 hours – a total of 1.5 hours. The cumulative lime injection time was 114.5 hours.

Figure 3-6 shows the variation in the percentage of SO₂ removal versus the gpm of lime slurry flow and percentage of lime slurry concentration, during the period August 17 to September 16, 1992, with the operating data recorded every 15 minutes.

Figure 3-6A shows the daily average lime flow versus SO₂ removal for the same period. This cross plot shows that the percentage of SO₂ removal is dependent on the lime slurry injection rate, i.e., the higher the lime slurry injection rate, the higher the percentage of SO₂ removal. Figure 3-6A also shows that the daily average data varied from less than 20% SO₂ removal when lime flow was about 35 gpm, to 47% SO₂ removal with 54 gpm lime flow.

Figure 3-6B shows the daily average lime slurry concentration versus SO₂ removal for the same period. This cross plot shows that an increase in daily average lime slurry concentration above 9% does not increase the percentage of SO₂ removal and it decreases the percentage of lime utilization.

For example, on August 17, 1992, the lime slurry concentration varied from 10.3% to 10.7% to 13.9% and then to 11.5%, without any effect on the percentage of SO₂ removed, which was mostly dependent on the lime slurry injection rate. (For more details see Appendix C.)

Figure 3-7 shows SO₂ removal versus the lime slurry injection rate, expressed in gpm and based on daily averages during the period August 17 to September 16. This graph shows that at a low lime slurry injection rate – for example 36 gpm – the percent of SO₂ removal was only about 20%. By increasing the injection rate to 50 gpm, SO₂ removal increased to 38%. At a 54 gpm injection rate, the SO₂ removal rate increased to 45%. By extrapolation, with a 60 gpm injection rate,

Figure 3-6A Daily Average Lime Flow vs SO₂ Removal – August 17, 1992 to September 16, 1992

Figure 3-6B Daily Average Lime Slurry Concentration vs SO₂ Removal – August 17 to September 16, 1992

the percentage of SO₂ removed will reach 55%. As mentioned above, the percentage of SO₂ removed represents daily averages and not peak values.

In Figure 3-6, where the values that represent the percentage of SO₂ removed were recorded every 15 minutes, a peak value of 55% SO₂ removed at a 55 gpm lime slurry injection rate was recorded on August 21. A peak value of 52% SO₂ removed at a 54 gpm injection rate was recorded on August 26.

The operating data for the period August 17 to September 16, are included in Appendix C. These operating data also show the rate of stack opacity every 15 minutes. Almost regularly, the stack opacity percentage was lower than 20%, the limit of the permissible stack opacity percentage.

After 10 days of continuous (24-hour/day) lime injection operations, the steam pressure at which the duct sootblowers were operating was set too low to prevent deposits from forming on the bottom of the duct. The steam supply pressure to the sootblowers was increased to the maximum. However, it was not possible to remove some of the deposits that had already formed. In a few areas, these deposits were significant and testing confirmed that further lime injection operations would cause accelerated growth of these deposits. Consequently, lime injection was halted, and it was decided to remove the deposits manually at the next boiler outage.

For the period September 4 to September 16, 1992, only water was injected in the duct to maintain the percentage opacity at low values.

3.3.2 September 17 to October 16, 1992

During the startup phase of lime injection automation, there were some maloperations. At the end of August 1992 after 10 days of continuous (24-hour/day) operations, it was determined that the steam pressure at which the duct sootblowers were operating was set too low to prevent deposits from forming on the bottom of the duct. A few times when moving from standby mode to ready condition, the flow control valve FCV-10 – being not fully tuned – remained fully open and the lime injection rate reached over 80 gpm for 1-2 minutes. At that point the flow control valve closed to limit the lime slurry flow rate to the level to maintain a temperature of about 160°F at C-section (at the turning vanes). During these excursions, wet deposits were formed because there was not enough heat in the duct to evaporate the very large amount of lime slurry. Some small quantities of atomized lime slurry reached the ESP, coating the collecting plates and the discharge wires of Fields #3 and #4. This lime coating caused some opacity problems.

The steam supply pressure to the sootblowers was increased to the maximum. However, it was not possible to remove some of the deposits that had already formed. In a few areas, the deposits in the duct were significant, and testing

Figure 3-7 Removal vs Injection Rate, Based on August 17 to September 16, 1992 Daily Rates

confirmed that further lime injection operations would cause accelerated growth of these deposits. (See Section 3.3.6 for the chemical analyses of the coating materials.) Consequently, lime injection was halted, and it was decided to remove the deposits manually during the next boiler outage.

3.3.2.1 *September 29, 1992*

To test the effects on the ESP, operations were switched from water to lime. Dolomitic lime slurry injection in the duct was run at 20-30 gpm, starting at 1015 hours and continuing only until 1145 hours – a total of 1.5 hours. At 1145 hours, the D4 field of the ESP tripped off causing a stack opacity excursion. Operations switched back to water and the D4 field was reset. An increase in the duct deposit heights was also noted.

The summary of the CZD operation on September 29 is as follows:

- Lime slurry injection: 20-30 gpm with a 6.8-7.9% lime slurry concentration
- SO₂ removal: 11.3-20.8%
- Stack opacity: 6.6-7.6%

3.3.2.2 *September 30, 1992*

The dolomitic lime slurry injection in the duct started at 1700 hours and continued until 1815 hours – a total of 1.25 hours. The cumulative lime slurry injection time was 117.25 hours.

The summary of CZD operations on September 30 is as follows:

- Lime slurry injection: 11.1 gpm with a 8% lime slurry concentration
- SO₂ removal: 1.7-3.0%
- Stack opacity: 12.1-13.7%

3.3.2.3 *October 1, 1992*

The dolomitic lime slurry injection in the duct took only 0.25 hours. The cumulative lime slurry injection time was 117.5 hours.

3.3.2.4 *October 9, 1992*

The dolomitic lime slurry injection in the duct started at 1515 hours and continued until 1630 hours – a total of 1.25 hours. Cumulative lime slurry injection was 118.75 hours.

The summary of the CZD operation on October 9 is as follows:

- Lime slurry injection: 32-38.2 gpm with a 8.6% lime slurry concentration

- SO₂ removal: 17.5-19%
- Stack opacity: 8.7-16.7%

3.3.2.5 *October 12, 1992*

The dolomitic lime slurry injection in the duct started at 1500 hours and operated only 0.75 hours. The cumulative lime slurry injection was 119.5 hours.

The summary of the CZD operation on October 12 is as follows:

- Lime slurry injection: 8.9-14.8 gpm with a 7.8-8.5% lime slurry concentration
- SO₂ removal: 7.8-8.5%
- Stack opacity: 17.2-18.7%

3.3.2.6 *October 14, 1992*

The dolomitic lime slurry injection in the duct started at 0845 hours and continued until 2100 hours – a total of 12.25 hours. The cumulative lime slurry injection was 131.75 hours.

The summary of the CZD operation on October 14 is as follows:

- Lime slurry injection: 24-36% with a 1.8-9.1% lime slurry concentration
- SO₂ removal: 7.3-20%
- Stack opacity: 9.4-19.5%

3.3.2.7 *October 15, 1992*

The dolomitic lime slurry injection in the duct started at 1545 hours and continued until 2400 hours – a total of 8.25 hours. The cumulative lime slurry injection was 140 hours.

The summary of the CZD operation on October 15 is as follows:

- Lime slurry injection: 30 gpm with a 0.2-3% lime slurry concentration
- SO₂ removal: 4.6-22.7%
- Stack opacity: 10.9-21.8%

3.3.2.8 *October 16, 1992*

The dolomitic lime slurry injection in the duct started at midnight and continued until 2130 hours – a total of 14.5 hours. The cumulative lime slurry injection was 154.25 hours.

The summary of the CZD operations on October 16 is as follows:

- Lime slurry injection: 25-35 gpm with a 0.3-3% lime slurry concentration

- SO₂ removal: 6-15.9%
- Stack opacity: 7.5-37.3%

CZD operations during the period September 17 to October 16 were characterized by lime slurry injections with a very low percentage of solids. This was done to avoid a high percentage of stack opacity until the Buell ESP could be fixed during an emergency boiler shutdown.

Operating data for the period September 17 to October 16 are included in Appendix D. These operating data also show the percentage of stack opacity every 15 minutes during the lime slurry injection.

Bechtel attended the U.S. DOE First Annual Clean Coal Technology Conference held in Cleveland, Ohio, on September 22-24, 1992. Jack Abrams presented a paper titled "Update and Results of Bechtel's Confined Zone Dispersion (CZD) Demonstration at Pennsylvania Electric Company's Seward Station."

Bechtel also attended the DOE Duct Injection Technology Working Group Meeting in Johnstown, PA, on September 30 and October 1, 1992, and conducted a tour of the CZD facilities for the participants.

Figure 3-8 shows, for the period September 17 to October 16, the percentage of SO₂ removal versus the lime slurry injection rate in gpm and the percentage of lime slurry concentration recorded every 15 minutes. For this period, we added two cross plots: Figure 3-8A, daily average lime flow versus SO₂ removal, and Figure 3-8B, daily average lime slurry concentration versus SO₂ removal.

Figure 3-8A shows that a low daily average lime slurry flow of 11-12 gpm did not remove any SO₂ (on September 30 and October 12, 1992). Figure 3-8B shows that with an 8% daily average lime slurry concentration, the percentage SO₂ removal was zero. The reason for this is that, at that time the daily average of lime slurry flow rate was only 11-12 gpm, evaporation was too fast and the 120°F adiabatic saturation temperature could not be reached.

On the basis of recorded operations data (boiler load, inlet flue gas temperature, lime slurry injection rate, percentage lime slurry concentration, number of atomizers in operation, etc.), we expected a corresponding percentage of SO₂ removal and lime utilization. However, the automatically recorded results were disappointing.

We examined in more detail all the recorded data – calling it "x-ray data" – to find the cause of the unexpected results. For example, Figure 3-9 shows graphically, every 15 minutes for a period of one month, the boiler load variations and the corresponding flue gas flow rate, in and out, expressed in thousands of scfm. Normally, the inlet flue gas flow rate changes accordingly.

Figure 3-8 Lime Flow vs SO₂ Removal - September 17 to October 16, 1992

Figure 3-8A Daily Average Lime Flow vs SO₂ Removal - September 17 to October 16, 1992

Figure 3-88 Daily Average Lime Slurry Concentration vs SO₂ Removal - September 17 to October 16, 1992

Figure 3-9 Boiler Load and Fine Gas Flow - September 17 to October 16, 1992

This should also be true of the outlet flue gas. Figure 3-9 shows the boiler load during the night decreased from 147 MW to 105 MW and the flue gas flow rate, in and out, changed accordingly - except for the outlet flue gas flow rates marked with circles that show a different pattern. Figures 3-10 through 3-13 show in more detail the variations in the recorded data for the outlet flue gas flowrate. The anomalies are marked with circles. When calculating the percentage of SO₂ removed, the flue gas flow rate changes from the inlet to the outlet are thought of as dilution. The resulting SO₂ removal rates could be wrong if the inlet or outlet flue gas indicate incorrect values. After correcting the calibration of the outlet flue gas flow meter, we had no more problems.

3.3.3 October 17, 1992 to November 16, 1992

CZD operations from October 17 to November 16 are characterized by two distinct periods of continuous lime slurry injection:

- **ESP Operation Problems.** In the first week, there were ESP operation problems (see also Section 3.3.6):
 - Suddenly, when we turned lime slurry on with 8% lime concentration, the percentage opacity increased above 20%. Therefore, we had to switch off the lime slurry to lower the percentage opacity.
 - Analysis of the Buell ESP field currents for B-duct revealed that D1 current was stable or slightly increased with lime but that the other three fields exhibited a dramatic drop in field currents. This drop in field currents with lime slurry is the opposite of the reaction of the ESP observed during the CZD program to date. During this past year's testing, we observed that the addition of lime increased field currents and led to a lowering of duct and stack opacity.
 - We contacted GE Environmental for consulting services on the Buell ESP.
 - We formulated a plan to obtain additional ESP data with lime by using dilute lime slurry concentrations (4% or less) until stable operation of the ESP was obtained. Therefore, the percentage of SO₂ removal was moderately low (20% or lower).

After the boiler's emergency shutdown, problems with ESP operations were partly resolved on October 26. Faulty grounds to the collecting plates were corrected so the opacity percentages were no longer affected by the percentage of lime slurry concentration. The percentage of lime slurry concentration could then be slowly increased from 4 to 10% to verify its effects on the percentage of SO₂ removed.

Figure 3-10 Boiler Load and Flue Gas Flow - October 12 to October 16, 1992

Figure 3-11 Boiler Load and Flue Gas Flow - October 12, 1992

Figure 3-12 Boiler Load and Flue Gas Flow - October 13, 1992

Figure 3-13 Boiler Load and Flue Gas Flow - October 15, 1992

- **Low-Temperature Flue Gas.** In August, the flue gas temperature in the CZD duct was 300-310°F, but now the temperature was only 270-275°F, about 30°F lower. The low-temperature flue gas was caused by a large amount of air leakage in the air heater and through cracks in the furnace walls in the superheater area. Low-temperature flue gas in the CZD duct necessitates a substantial reduction in the lime slurry injection rate, resulting in a low percentage of SO₂ removal. Until the air heater is improved, we will continue to inject lime slurry at lower rates and therefore have a lower percentage of SO₂ removal.

3.3.3.1 *October 17, 1992*

The dolomitic lime slurry injection in the duct started at 0100 hours and continued until 1115 hours – a total of 10.25 hours. The cumulative lime slurry injection time was 164.5 hours.

The summary of the CZD operations on October 17 is as follows:

- Lime slurry injection: 25-35 gpm with a 4% lime slurry concentration
- SO₂ removal: 15-22%
- B-duct temperature: 285-288°F
- Stack opacity: 7-18%

3.3.3.2 *October 18, 1992*

The dolomitic lime slurry injection in the duct started at 1545 hours and continued until 2400 hours – a total of 7.25 hours. The cumulative lime slurry injection time was 172.25 hours.

The summary of the CZD operations on October 18 is as follows:

- Lime slurry injection: 28-35 gpm with a 4% lime slurry concentration
- SO₂ removal: 14-22%
- B-duct temperature: 273-280°F
- Stack opacity: 10-18.8%

3.3.3.3 *October 19, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 15.25 hours. The cumulative lime slurry injection time was 187.25 hours.

The summary of the CZD operations on October 19 is as follows:

- Lime slurry injection: 30-35 gpm with a 4% lime slurry concentration
- SO₂ removal: 7-11%

- B-duct temperature: 280°F
- Stack opacity: 9-18.5%

3.3.3.4 *October 20, 1992*

The dolomitic lime slurry injection in the duct started at 0600 hours and continued until 2400 hours – a total of 16.25 hours. The cumulative lime slurry injection time was 204 hours.

The summary of the CZD operations on October 20 is as follows:

- Lime slurry injection: 30-36 gpm with a 4% lime slurry concentration
- SO₂ removal: 10-18%
- B-duct temperature: 270-280°F
- Stack opacity: 14-20%

3.3.3.5 *October 21, 1992*

The dolomitic lime slurry injection in the duct started at 0630 hours and continued until 2400 hours – a total of 14.5 hours. The cumulative lime slurry injection time was 218.5 hours.

The summary of the CZD operations on October 21 is as follows:

- Lime slurry injection: 30-38 gpm with a 4% lime slurry concentration
- SO₂ removal: 10-16%
- B-duct temperature: 280-287°F
- Stack opacity: 12-20.8%

3.3.3.6 *October 22, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 22.25 hours. The cumulative lime slurry injection time was 240.75 hours.

The summary of the CZD operations on October 22 is as follows:

- Lime slurry injection: 30-35 gpm with a 4% lime slurry concentration
- SO₂ removal: 10-16%
- B-duct temperature: 276-288°F
- Stack opacity: 12-21.7%

3.3.3.7 *October 23, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 19 hours. The cumulative lime slurry injection time was 259.75 hours.

The summary of the CZD operations on October 23 is as follows:

- Lime slurry injection: 30-40 gpm with a 4% lime slurry concentration
- SO₂ removal: 10-18%
- B-duct temperature: 280-290°F
- Stack opacity: 13-20%

3.3.3.8 *November 2, 1992*

The dolomitic lime slurry injection in the duct started at 1615 hours and continued until 2400 hours – a total of 7.75 hours. The cumulative lime slurry injection time was 267.5 hours.

The summary of the CZD operations on November 2 is as follows:

- Lime slurry injection: 30-33 gpm with a 5% lime slurry concentration
- SO₂ removal: 12-20%
- B-duct inlet temperature: 280°F
- Stack opacity: 12-16%

3.3.3.9 *November 3, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 24 hours. The cumulative lime slurry injection time was 291.5 hours.

The summary of the CZD operations on November 3 is as follows:

- Lime slurry injection: 28-35 gpm with a 5% lime slurry concentration
- SO₂ removal: 10-20%
- B-duct inlet temperature: 275-280°F
- Stack opacity: 10-14%

3.3.3.10 *November 4, 1992*

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 24 hours. The cumulative lime slurry injection time was 315.5 hours.

The summary of the CZD operations on November 4 is as follows:

- Lime slurry injection: 27-30 gpm with a 6% lime slurry concentration
- SO₂ removal: 18-23%
- B-duct inlet temperature: 273-282°F
- Stack opacity: 12-15%

3.3.3.11 November 5, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 24 hours. The cumulative lime slurry injection time was 339.5 hours.

The summary of the CZD operations on November 5 is as follows:

- Lime slurry injection: 30-36 gpm with a 7% lime slurry concentration
- SO₂ removal: 18-25%
- B-duct inlet temperature: 272-280°F
- Stack opacity: 12-15%

3.3.3.12 November 6, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 23.75 hours. The cumulative lime slurry injection time was 363.25 hours.

The summary of the CZD operations on November 6 is as follows:

- Lime slurry injection: 30-36 gpm with a 8-9% lime slurry concentration
- SO₂ removal: 20-26%
- B-duct inlet temperature: 275-279°F
- Stack opacity: 10-17%

3.3.3.13 November 7, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 24 hours. The cumulative lime slurry injection time was 387.25 hours.

The summary of the CZD operations on November 7 is as follows:

- Lime slurry injection: 31-34 gpm with a 9% lime slurry concentration
- SO₂ removal: 22-26%
- B-duct inlet temperature: 272-274°F

- Stack opacity: 10-15%

3.3.3.14 November 8, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 24 hours. The cumulative lime slurry injection time was 411.25 hours.

The summary of the CZD operations on November 8 is as follows:

- Lime slurry injection: 33-35 gpm with a 9% lime slurry concentration
- SO₂ removal: 25-29%
- B-duct inlet temperature: 268-276°F
- Stack opacity: 7-15%

3.3.3.15 November 9, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 0915 hours – a total of 9.25 hours. The cumulative lime slurry injection time was 420.5 hours.

The summary of the CZD operations on November 9 is as follows:

- Lime slurry injection: 27-30 gpm with a 9% lime slurry concentration
- SO₂ removal: 30-37%
- B-duct inlet temperature: 267-275°F
- Stack opacity: 7-14%

It should be noted that from November 3 through November 9, the CZD continuously operated 24 hours/day, and proved to be a reliable system.

3.3.3.16 November 12, 1992

The dolomitic lime slurry injection in the duct started at 1130 hours and continued until 2245 hours – a total of 11.25 hours. The cumulative lime slurry injection time was 431.75 hours.

The summary of the CZD operations on November 12 is as follows:

- Lime slurry injection: 37-39 gpm with a 10-16% lime slurry concentration
- SO₂ removal: 25-35%
- B-duct inlet temperature: 290°F
- Stack opacity: 12-17%

3.3.3.17 November 13, 1992

The dolomitic lime slurry injection in the duct started at 0845 hours and continued until 2400 hours – a total of 9.25 hours. The cumulative lime slurry injection time was 441 hours.

The summary of the CZD operations on November 13 is as follows:

- Lime slurry injection: 32-40 gpm with a 10% lime slurry concentration
- SO₂ removal: 16-22%
- B-duct inlet temperature: 277°F
- Stack opacity: 10-14%

3.3.3.18 November 14, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 2400 hours – a total of 21 hours. The cumulative lime slurry injection time was 462 hours.

The summary of the CZD operations on November 14 is as follows:

- Lime slurry injection: 30-41 gpm with a 10% lime slurry concentration
- SO₂ removal: 20-24%
- B-duct inlet temperature: 273°F
- Stack opacity: 14-20%

3.3.3.19 November 15, 1992

The dolomitic lime slurry injection in the duct started at 2400 hours and continued until 1900 hours – a total of 16.5 hours. The cumulative lime slurry injection time was 478.5 hours.

The summary of the CZD operations on November 15 is as follows:

- Lime slurry injection: 32-38 gpm with a 10% lime slurry concentration
- SO₂ removal: 20-24%
- B-duct inlet temperature: 273-275°F
- Stack opacity: 8-15%

The summary data for the period October 17 through November 16, 1992 are included in Appendix E. These summary data show also the stack opacity percentage every 15 minutes during the lime slurry injections.

Figure 3-14 shows the lime slurry flow rate and percentage of lime concentration versus the percentage of SO₂ removal recorded every 15 minutes during the period October 17 to November 16, 1992. The graph shows that the lime slurry

Figure 3-14 Lime Flow vs SO₂ Removal – October 17 to November 16, 1992

Figure 3-14A Daily Average Lime Flow vs SO₂ Removal – October 17 to November 16, 1992

**Figure 3-148 Daily Average Lime Slurry Concentration vs SO₂ Removal -
October 17 to November 16, 1992**

injection rates were maintained at around 35 gpm because of the low flue gas inlet temperature. Figure 3-14A, the cross plot of daily average lime flow versus SO₂ removal for the same period, shows that a low lime slurry flow (28-38 gpm) limits the percentage of SO₂ removal to 20-30% because the cooling to adiabatic saturation temperature can not be maintained by the low lime slurry flow rate. Figure 3-14B, the cross plot of daily average lime slurry concentration versus SO₂ removal for this period, shows that the increase of lime slurry concentration from 6.5-10% does not improve the percentage of SO₂ removal.

Figure 3-15 shows the CZD performance summary for the period October 17 to November 16, 1992 with online availability for 744 hours (100%). It is remarkable that the automated and integrated CZD systems were online 100% of the time during this one-month period.

3.3.4 Percentage of Lime Utilization and the Factors that Could Affect It

The percentage of lime utilization in the CZD system significantly affects the total cost per ton of SO₂ removed. For this reason, we have attempted to determine methods that can improve the percentage of lime utilization. Based on the results of continuous operational data compiled to date, the percentage of lime utilization is directly dependent on two factors:

- The percentage of SO₂ removal
- The percentage of lime slurry concentration

For operating conditions at Seward Station, data show that 40-50% SO₂ removal rate and a 6-8% lime slurry concentration will assure a 40-50% lime utilization rate. That is, 2 to 2-1/2 moles of CaO are required for every mole of SO₂ removed; or assuming 92% lime purity, 1.9-2.4 tons of lime are required for every ton of SO₂ removed.

The following graphs of operational data recorded between August 17 and November 16, 1992 show the effect of the percentage of lime slurry concentration on the percentage of SO₂ removed. Figure 3-16 shows the relationship between the percentage of SO₂ removed at a constant 34 gpm injection rate with concentrations of lime slurry varying from 3 to 12%.

The average percentage of SO₂ removal varied with the percentage of lime slurry concentration, as shown in Table 3-3.

ON-LINE AVAILABILITY 744 HOURS (100%)

Figure 3-15 CZD Performance Summary - October 17 to November 16, 1992

Figure 3-16 Percent of SO₂ Removal at Constant 34 gpm Injection Rate and Variable Lime Concentration

Table 3-3
Variation of the Average Percentage of SO₂ Removal
with Percentage of Lime Slurry Concentration and 34 gpm Lime Slurry
Injection Rate, August 17 and November 16, 1992

Date	Time	Lime Slurry Concentration (%)	SO₂ Removal (%)
10-21-92	9:45	3.0	11.2
10-14-92	15:45	4.0	17.7
11-2-92	18:45	5.0	20.5
11-4-92	13:30	6.0	22.1
11-4-92	15:15	7.0	23.6
11-5-92	17:00	8.0	24.0
11-6-92	19:00	9.0	24.4
11-14-92	20:45	10.0	24.3
9-2-92	21:45	12.0	23.8

The data in Table 3-3 show that a lime slurry concentration above 7-8% does not increase the percentage of SO₂ removal. An increase in the lime slurry concentration above 7-8% results in a decrease in the percentage of lime utilization.

Figure 3-17 shows the relationship between the percentage of SO₂ removal at different injection rates and the percentage of the lime slurries. This relationship indicates that the percentage of SO₂ removed is directly dependent on the lime injection rate. Between the 27 and 37 gpm injection rate, the percentage of SO₂ removal is limited to 20-25% with very slight changes resulting from the percentage of lime concentration. Between the 45 gpm and 57 gpm lime slurry injection rate, the percentage of SO₂ removal increases from 25% to 50%. Therefore, to obtain a high percentage of SO₂ removal, the lime slurry injection rate has to be increased to 52-57 gpm.

It is clear that a high lime slurry injection rate is required to achieve a high percentage of SO₂ removal. Following are the conditions that limit the injection rate:

- The flue gas flow rate and temperature
- The residence time (in seconds) in the straight duct

Data recorded during period from 8/17/92 to 11/16/92

Figure 3-17 SO₂ Removal at Different Injection Rates and Percentages of Lime Slurries

The design of the CZD system at Seward Station is based on the following assumptions:

- An inlet flue gas temperature in the B-duct of 300°F
- A boiler load of 147 MW, equivalent to a flue gas velocity in the duct of 55-60 fps
- A 120-foot long straight duct, equivalent to 2 seconds' residence time

During the second half of August, the flue gas temperature was 300-310°F, the boiler load was 145-147 MW, the residence time in the duct was 2 seconds, and the injection of lime slurry was 52-57 gpm with SO₂ removal above 50%.

Figure 3-18 shows the CZD duct temperature versus the lime slurry injection rate and percentage of SO₂ removal during the August 17 to November 16, 1992 period. To include the duct inlet temperature in this graph, it has been divided by 5 – i.e., 300°F is represented by 60°F. The graph shows that during the months of October and November, the inlet flue gas temperature continued to descend from above 300°F to 260-280°F due to heavy-air leakage in the boiler air heater. This low temperature limited the lime slurry injection rate to 30-40 gpm, and resulted in a 15-30% variation in the percentage of SO₂ removal. Figure 3-18A, the cross plot of the daily lime slurry flow versus SO₂ removal for this period, shows that:

- With a low lime slurry injection rate of 11-12 gpm, SO₂ removal is zero.
- By increasing lime slurry injection to 37 gpm, SO₂ removal is 30%.
- By increasing lime slurry injection to 54 gpm, SO₂ removal is 47%.

Figure 3-18B, the cross plot of the daily average duct inlet temperature versus percentage SO₂ removal for the same period, shows that under the 300°F average duct inlet temperature, the percentage SO₂ removal is less than 35% and at 307°F, the average SO₂ removal is over 45%.

Figure 3-19 shows operating data for the same period, but with the lime slurry injection rate (gpm) and the percentage of lime slurry solids versus the percentage of SO₂ removal. This graph shows that the percentage of SO₂ removal is dependent on the lime slurry injection rate and that the percentage of lime slurry concentration above a specific level does not affect the percentage of SO₂ removal.

Figure 3-19A, the cross plot of the daily average lime slurry concentration versus SO₂ removal for this period, shows that with 9% lime slurry concentration by weight, the same percentage SO₂ removal can be obtained as with 12% lime slurry concentration.

Figure 3-18 Temperature vs Lime Flow and SO₂ Removal – August 17 to November 16, 1992

Figure 3-18A Daily Average Lime Flow vs SO₂ Removal – August 17 to November 16, 1992

Figure 3-188 Daily Average Duct Inlet Temperature vs SO₂ Removal -- August 17 to November 16, 1992

Figure 3-19 Lime Flow vs SO₂ Removal – August 17 to November 16, 1992

**Figure 3-19A Daily Average Lime Slurry Concentration vs SO₂ Removal -
August 17 to November 16, 1992**

3.3.5 Importance of Heat Balance in the CZD Process

For a better understanding of the CZD operation we offer the following explanation.

In the CZD process, the reaction between the SO_2 in the hot flue gas and the lime hydroxide slurry injected into the duct takes place in the presence of water. The reaction requires enough water to cool the flue gas at the adiabatic saturation temperature where water and gas mix. At Seward Station, it takes more than 30 gpm of atomized water in the B-duct to cool only a small portion of the flue gas to about 120°F , the adiabatic saturation temperature. Because the flue gas temperature in the B-duct is not uniform (hotter on the right side of the duct and top, than on the left side and bottom), to remove about 50% of the inlet SO_2 takes about 52-55 gpm of lime slurry to cool about 65% of the incoming flue gas to 120°F in the first 60 feet of the duct. In the next 60 feet of duct, the hot flue gas along the duct walls will warm the cold gas to about 165°F . If the inlet flue gas is input at a temperature lower than 300°F , there will not be enough heat to warm up the cold gas ahead of the turning vanes; in addition, wet deposits of fly ash and reacted products could stick to the turning vanes.

Because of boiler air leakage during the months of October and November 1992, the flue gas temperature was too low, and the lime slurry injection rate was limited.

Figures 3-20 through 3-24 show the average temperatures and the low temperatures measured in the flue gas duct during different water injection rates and at different distances from the atomizer lances. Figure 3-25 shows the plan view of the B-duct with the thermocouple locations (B, C, D, and E), and Figure 3-26 shows the typical thermocouple section, computed as an average of the 24 thermocouples in a section.

The B-cross section is about 60 feet from the injection point. With 60 fps gas velocity, it will take the flue gas about one second to reach the B-cross section. If the flue gas in the wet zone is cooled at the adiabatic saturation temperature during this one second, the reaction between the SO_2 and lime will be complete and the SO_2 removal will be above 50%. If only part of the wet zone is cooled at 120°F , then the percentage of SO_2 removal will be lower.

Figure 3-21 shows that at a 45 gpm water injection rate, only part of the flue gas in the wet zone will reach adiabatic saturation. Experience shows that at a 50-52 gpm lime slurry injection rate, the average temperature at the B-cross section will reach the adiabatic saturation temperature and the percentage of SO_2 removal will be 50%. Because of the non-uniform temperature of the in-coming flue gas, the graph shows an average temperature and a lowest temperature at B-section at different water injection rates.

Figure 3-20 B, C, D, and E Cross-Section Temperatures vs Water Flow Rate in gpm

Figure 3-21 B-Section Temperatures

Figure 3-22 C-Section Temperatures

Figure 3-23 D-Section Temperatures

Figure 3-24 E-Section Temperatures

Figure 3-25 Plan View of Duct with Thermocouple Locations

Figure 3-26 Typical Thermocouple Section (24 per Section)

Figure 3-22 shows that at the C-section, in front of the turning vanes (120 feet from the atomizer lances), the flue gas is warmer and deposition on the turning vanes will not take place.

Figure 3-24 shows that at the E-section, ahead of entrance of the ESP, the flue gas temperature is about 180°F, about 60°F approach to saturation.

3.3.6 CZD System Influence on ESP Particulate Removal Efficiency

3.3.6.1 Overview

In general, during CZD parametric testing for short or long durations (48 hours) as well as during continuous operation, the CZD system had a beneficial effect on ESP performance, as measured by lower percentages of stack and B-duct opacities.

During CZD operation in August and November 1992, the Buell ESP worked well and the duct and plant stack opacities were comfortably low. However, in September and October 1992, faced with difficulties with ESP operation, we had to limit the percentage lime slurry concentration to under 4% to avoid violations on high percentage opacity emissions. In late October 1992, during a boiler emergency shutdown, we corrected faulty grounds to Field #2 collecting plates and opacity was no longer affected by the percentage of lime slurry concentration. The following discussion describes these events in detail.

3.3.6.2 ESP Particulate Removal Efficiency – October 14 to November 16, 1992

Appendix I includes the Seward Plant Buell ESP fields operating log from October 14 through November 16, 1992. On October 27, 1992, at 1700 hours (see page I-20), with no water or lime slurry injection, the data indicate high percentage stack and duct opacities (28.5 and 33%, respectively) and a power consumption (kW) that increases instead of decreases from field to field through the precipitator – because of less particulate in the gas stream. The variation of power input in this unexpected way is symptomatic of problems with the precipitator. After faulty grounds to collecting plates of Field #2 were corrected, the stack and duct opacities (12.4 and 8.7%, respectively) were no longer detrimentally affected by lime slurry injection into the duct and ESP collecting efficiency was improved. (See data collected on November 3 at 1200 hours [page I-30].)

Appendices C, D, and E contain tables for the CZD operation for the period August 17 to November 16, 1992. The data in these tables include 1-minute average values of the opacity percentage in the plant stack recorded every 15 minutes during lime injection.

In Appendix I, instant values of the duct opacities recorded from October 12 through November 16, 1992, are presented. We took samples of coating materials containing ash and CZD solids waste from Unit #15 discharge wires

and collecting plates of each of the four Buell ESP fields. The ESP connected with B-duct where CZD is operating is named "D" and the one connected with A-duct – without CZD – is named "C." For comparison, eight samples were taken from D-ESP and eight samples from C-ESP. Elements were analyzed semi-quantitatively by Energy Dispersive X-ray Spectrometry (EDS). Table 3-4 shows the results of the analyzed samples. The most interesting data are the results for sulfur (S), calcium (Ca), and loss of ignition (LOI as wt%) which characterize the CZD solids waste. The sulfur concentration of the samples taken from the collecting plates of all fields of "D" and "C" ESPs are about the same. However, the sulfur concentration of the samples from the wires from Fields #2 and #3 are substantially larger on D-ESP versus C-ESP. The same is true of the increase of calcium concentration on the discharge wires on the Fields #2 and #3, and the wt% of the LOI on the wires in these fields. This means that more CZD reaction products ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) were collected on the discharge wires of Fields #2 and #3.

3.3.6.3 Summary

The beneficial influence on CZD on ESP performance is explained as follows:

- Through evaporation of water in the lime slurry injected into the duct, the flue gas is cooled from 300°F to about 180°F. This cooling decreases the gas volume and gas velocity in the ESP, and the longer residence time improves particulate removal efficiency.
- By decreasing the temperature, the particulates' resistivity is lowered, thereby improving performance.
- The increased humidity becomes a conditioning agent for reducing the cake resistivity, improving ESP performance.
- The size of fly ash particles, from the pulverized coal boiler varies from submicron to about 100 microns, with a mean diameter of 10-20 microns. The larger particles are easily removed by the ESP, but the submicron to about 2-micron particles are more difficult to remove due to reintrainment during rapping. The ESP removal efficiency depends on the percentage of very fine particles in the flue gas. If a method to agglomerate the fines into larger particles were available, then ESP performance would come close to 100 percent.

The injected fine atomized lime slurry – made of fine particles of hydrated lime or PHDL with a mean diameter of 5 microns – will intercept and impact the fly ash particles, agglomerating them in larger particles more easily removed by the ESP.

Table 3-4
Elemental LOI Analysis of Ash Samples Removed from
Boiler #15 Electrostatic Precipitators

Item	Al	Si	S	K	Ca	Ti	Fe	O	LOI (Wt%)
C-1 Wire	14.2	18.4	3.5	2.7	2.0	1.7	12.7	44.9	3.94
C-2 Wire	15.3	20.3	1.6	2.6	1.7	1.6	12.0	44.9	5.17
C-3 Wire	15.5	20.6	1.6	2.7	1.8	1.4	11.3	45.1	10.70
C-4 Wire	14.6	18.7	2.3	2.7	2.0	1.6	13.8	44.2	9.42
C-1 Plate	15.2	20.8	1.7	2.6	1.8	1.5	11.2	45.2	6.43
C-2 Plate	15.5	21.6	2.0	2.4	1.6	1.2	9.8	46.0	4.47
C-3 Plate	14.5	18.4	3.0	2.6	1.9	1.8	13.3	44.6	10.67
C-4 Plate	15.3	19.3	2.1	2.6	1.8	1.4	12.9	44.6	6.50
D-1 Wire	14.0	18.7	3.6	2.6	2.4	1.6	11.9	45.2	10.16
D-2 Wire	13.0	16.7	6.0	2.4	2.3	1.7	12.1	45.7	21.94
D-3 Wire	14.3	18.2	3.7	2.7	2.4	1.6	11.4	45.3	16.96
D-4 Wire	14.6	20.1	2.2	2.5	2.0	1.6	11.8	45.1	8.45
D-1 Plate	15.2	20.3	1.3	2.6	2.1	1.5	12.5	44.5	3.54
D-2 Plate	14.9	19.2	2.3	2.8	2.7	1.6	11.9	44.7	4.64
D-3 Plate	14.2	18.1	3.0	2.8	3.0	1.6	12.9	44.3	6.26
D-4 Plate	15.5	21.3	1.3	2.7	2.1	1.4	10.3	45.3	4.59

Note:

Elements were analyzed semi-quantitatively by Energy Dispersive X-Ray Spectrometry (EDS). The SEM or scanning electron microscope is used to view small specimens or deposits. Electrons rather than light are used to illuminate the sample, allowing the instrument to reach very high levels of magnification. When these electrons impact the sample they generate X-rays of varying element-specific wavelengths that can be measured by an energy dispersive spectrometer (EDS) attached to the SEM.

EDS instrument used at GPUN is only sensitive to elements equal to or greater than sodium in atomic number and the sensitivity of the technique generally increases with increasing atomic number. Consequently, common elements such as carbon, oxygen, and nitrogen are not detected by this technique. For example, a sample containing 50% graphite (crystalline carbon) and 50% iron oxide would be reported as 100% iron oxide. Also, EDS is an element-specific method and can not differentiate between various compounds. EDS cannot differentiate between iron filings (elemental iron) and rust (iron oxide). This distinction must be made using other techniques.

Since it is attached to the SEM, the EDS analysis beam can be focused on a very small area, allowing elemental analysis of very small areas or discrete particles. The beam can also be defocused and used to analyze a relatively large area, about a centimeter in diameter. Effective bulk analysis using a defocused beam requires special sample preparation since the electron beam penetrates only a few hundred angstroms into the sample. Consequently, bulk analysis of a sample using a defocused beam requires that the sample be reduced to a fine powder and

thoroughly mixed before analysis. Generally, unless otherwise specified, the laboratory performs and reports bulk sample analyses.

When semi-quantitative results are desired, a calculation is made based on the relative peak intensities of the various elements requested. The elements requested are assigned an arbitrary value of 100% based on the assumption that the elements are present as their common oxides. Relative peak intensities are then used to calculate the approximate percentage of each individual element. Although this technique is fairly reliable, it is subject to errors due to undetected elements, matrix interference, and sample preparation. Also, since standards are not used in the analysis, analytical accuracy is not extremely good. A general rule of thumb is to allow a 10-15% relative error for the elements reported.

If additional accuracy, specific compound identification, or analysis for undetected components is required, the laboratory should be contacted for more information about available techniques for the sample of interest.

3.3.7 Summary of CZD Operating Data on August 21, 1992

The following summarizes CZD operating data on August 21, 1992:

- Inlet SO₂ 1738.8 lb/hr = 237.7 lb moles/day
- SO₂ removed 796.3 lb/hr = 108.85 lb moles/day
- Percent SO₂ removed 45.8% average per day
- Hours of lime slurry injection 8.75 hours
- Lime slurry injection rate 53.8 gpm average per day
- Lime slurry concentration 9% average per day
- Lime consumed 2,553 lb/hr = 318.3 lb moles/day
- Lime utilization 34.3% lb average per day
- Ca-to-sulfur ratio 1.34 lb moles Ca per lb mole inlet SO₂
- Ca-to-sulfur ratio 2.92 lb moles Ca per lb mole SO₂ removed
- CZD solids waste 32,563 lb/day of which:
 - 17,886 lb/day reaction products +
 - 14,677 lb/day spent PHDL
- Calculated fly ash from B-duct 19,032 lb/day
- Total solids waste 25.8 tons/day of which:
 - 36.9% fly ash + 63.1% CZD solids waste

The CZD operation on August 21, 1992 is characterized by:

- High temperature of inlet flue gas (307.5°F)
- High flow lime slurry injection of 53.8 gpm average per day
- High percent SO₂ removed of 45.8% average per day
- Lime utilization of only 34.3% average per day, because of higher lime slurry concentration (9%) than required

- Calcium-to-sulfur ratio of 2.92 lb moles per lb mole of SO₂ removed, instead of expected 2-2.5 lb, due to the higher lime slurry concentration that would be required
- The total solids waste during the lime injection period contains about 37% fly ash and 63% CZD solids waste. Without the first ESP that removes 60% of the fly ash ahead of the B-duct, the total solids waste would contain 60% fly ash and 40% CZD solids waste

3.3.8 Summary of CZD Operating Data – August 17 to November 16, 1992

The following summarizes CZD operating data from August 17 to November 16, 1992:

■ Inlet SO ₂	1,493 lb/hr = 11,156 lb moles SO ₂ for the period
■ SO ₂ removed	322 lb/hr = 2,406 lb moles SO ₂ for the period
■ Percent SO ₂ removed	21.57% average for the period
■ Hours of lime slurry injection	478.25 hours
■ Lime slurry injection rate	35.8 gpm average for the period
■ Lime slurry concentration	7.8% average for the period
■ Lime consumed	697,670 lb lime = 9,938 lb moles for the period
■ Lime utilization	25.9% lb average
■ Ca-to-sulfur ratio	0.89 lb mole Ca per lb mole inlet SO ₂
■ Ca-to-sulfur ratio	4.13 lb mole Ca per lb mole SO ₂ removed
■ CZD solids waste	468.8 tons for the period, of which: 210.3 tons reaction products + 258.5 tons spent PHDL
■ Calculated fly ash from B-duct	491 tons fly ash
■ Total solids waste	959.8 tons, of which: 48.84% CZD solids waste + 51.16 % fly ash

The CZD operation during this period is characterized by:

- Adjustments to the automation for the continuous operation
- Mechanical problems with the Buell ESP (grounding wires broken, etc.) that limited for a while the lime slurry concentration to under 4%
- Low temperature of the inlet flue gas due to air in-leakage in the boiler system ahead of the B-duct. This low temperature flue gas limited the lime slurry injection rate to an average of 35.8 gpm. The low injection rate

caused a reduced percentage of SO₂ removal to 21.57% average, and therefore a low percent lime utilization of 25.9%, and a low calcium-to-sulfur ratio of 4.13 lb moles Ca per lb mole SO₂ removed

- Mechanical problems with the steam soot blowing system that allowed deposits to accumulate in the duct

3.3.9 Operating Data – August 17 to November 16, 1992

Operating data for lime slurry injections from August 17 to November 16, 1992 are included in Appendix H.

3.3.10 Conclusions

This eighth quarterly report is the first describing the CZD continuous operation and integration with Boiler #15 operating from the control room with Seward Station operators. Although we were at the beginning of the continuous demonstration period, operability was excellent. Figure 3-15 shows the CZD performance summary for the period October 17 to November 16, 1992. As shown in the figure, when Boiler #15 was in operation, the CZD system was on-line injecting lime for SO₂ removal or water for stack opacity control.

During the period when the automation of lime injection was in the startup phase, we had some maloperations. A few times moving from standby mode to ready condition, the flow control valve remained fully open and the lime injection rate reached over 80 gpm for 1-2 minutes. The flow control valve had to be closed to limit the lime slurry flow rate to the level that would maintain a temperature of about 160°F at the turning vanes. During these excursions, wet deposits were formed because there was not enough heat in the duct to evaporate the very large amount of lime slurry. In addition to the deposits in the duct, some small amount of atomized lime slurry reached the ESP, coating the collecting plates and the discharge wires of ESP Fields #3 and #4. This lime coating caused some opacity problems. By fully tuning the flow control valve (FCV-10), the problems disappeared.

Due to large air in-leakage in the boiler and air heater, the duct flue gas inlet temperature started to decrease due to the cold weather. In August, the flue gas temperature at the inlet of the B-duct was about 310°F, but in November, the temperature was only 275°F. This lower flue gas temperature limited the lime slurry injection rate and the percent SO₂ removal.

Because of the significant effect of low temperature flue gas at the duct inlet on the operating data, we prepared two summaries. Table 3-5 presents a summary of CZD operating data of one day in August (August 21, 1992) (see Section 3.3.7), and a summary of operating data for the period August 17 to November 16, 1992 (see Section 3.3.8).

**Table 3-5
Summary of CZD Operating Data**

Item	August 21, 1992	Aug. 17 to Nov. 18, 1992
Percent SO ₂ removed	45.8% average	21.57% average
Hours of lime injection	8.75 hours	478 hours
Lime slurry injection rate	53.8 gpm average	35.8 gpm average
Lime slurry concentration	9.0%	7.8% average
Lime utilization	34.3%	25.9% average
Ca-to-sulfur ratio	2.92 lb moles Ca / lb mole SO ₂ removed	4.13 lb moles Ca / lb mole SO ₂ removed
Total solids waste	36.9% fly ash + 63.1% CZD solids waste	51.16% fly ash + 48.84% CZD solids waste

The CZD system has a positive influence on ESP particulate removal efficiency, by lowering the percent stack and duct opacity, although the amount of particulate in the flue gas is substantially increased, assuming that the following conditions are observed:

- The ESP normal operating conditions are maintained.
- CZD operation avoids at all times operation that would result in wet lime entering the precipitator (whether planned or upset).
- The existing rapping system is able to remove the fly ash and dried lime and reaction products.

3.4 BASELINE TESTING – FUEL

Penelec analyzed samples of the incoming coal for moisture, ash, sulfur, Btu/lb, and volatile matter. The coal samples analyzed are as-received coal, taken ahead of the mills. Table 3-6 shows the results of the coal analyses for September 1992. The full results of these analyses during September, October, and November, 1992 are presented in Appendix F.

Table 3-6
Results of Coal Analyses During September 1992

SEWARD STATION HEAT RATE QUALITY SEPTEMBER - 1992

DATE	0 12 TONS	0 14 TONS	0 15 TONS	% MOIST	% ASH	% SULFUR	BTU	0 SUL/ 1000 BTU	% VOL
1	243	230	1246	6.13	13.53	1.61	12192	1.32	26.37
2	284	283	1218	5.75	15.09	1.51	11995	1.27	24.33
3	248	315	1256	5.87	16.02	1.72	11806	1.46	24.60
4	338	394	1245	5.93	13.75	1.46	12203	1.20	24.26
5	331	282	1323	4.83	14.55	1.50	12234	1.23	24.71
6	202	245	1122	5.77	13.13	1.62	12291	1.32	26.35
7	160	211	1082	5.22	13.84	1.55	12297	1.26	25.15
8	212	228	1170	6.27	14.10	1.58	12083	1.32	24.47
9	186	247	1256	7.01	12.85	1.62	12178	1.34	24.00
10	330	335	1290	7.42	13.86	1.51	11973	1.27	20.51
11	299	318	1219	6.14	13.54	1.56	12291	1.28	21.39
12	261	325	1221	5.81	14.43	1.54	12182	1.26	21.02
13	179	246	1210	6.43	12.17	1.43	12424	1.15	22.73
14	287	374	1230	6.02	13.17	1.54	12410	1.24	22.12
15	292	330	1175	5.93	13.45	1.42	12357	1.16	21.52
16	261	316	1214	5.87	13.91	1.43	12359	1.16	21.89
17	278	315	1221	5.66	14.08	1.45	12391	1.17	21.04
18	249	305	1185	6.40	13.42	1.55	12259	1.27	21.28
19	345	243	1256	6.92	12.88	1.59	12281	1.29	21.53
20	227	185	1124	6.10	12.52	1.44	12466	1.16	21.37
21	237	229	1114	6.79	12.94	1.51	12259	1.24	21.85
22	80	90	978	5.81	13.33	1.56	12430	1.26	22.86
23	474	424	1344	6.24	13.52	1.57	12364	1.28	21.22
24	285	265	1213	5.54	13.94	1.64	12371	1.33	21.87
25	320	350	1237	6.97	14.37	1.46	11986	1.22	22.46
26	245	286	1373	6.79	12.62	1.41	12372	1.14	22.31
27	288	249	1185	6.95	14.65	1.51	11997	1.26	22.18
28	202	140	1416	7.24	12.59	1.67	12157	1.38	21.34
29	381	329	1266	5.79	13.35	1.54	12140	1.25	21.22
30	245	320	1284	6.35	13.49	1.59	12304	1.30	21.38
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TOTAL-12	7989			6.20	13.69	1.53	12227	1.26	22.49
TOTAL-14		8409		6.19	13.70	1.53	12229	1.26	22.54
TOTAL-15			36453	6.21	13.63	1.54	12233	1.26	22.61

NOTE: WEEKENDS AND HOLIDAYS BASED ON GRAB SAMPLES

NOTE: VOLATILE MATTER NOT RUN FOR GRAB SAMPLES, AVERAGE OF PREVIOUS DAYS USED

NOTE: STOCKPILE AS OF 9/30/92 138581.10 TONS

Section 4

PLANNED ACTIVITIES

During the next Quarter (November 17, 1992 through February 16, 1993), the following work is planned.

4.1 PHASE 3 - OPERATION AND DISPOSITION

We will continue CZD demonstrations with continuous operation for another 3 months, as follows:

- Operate the CZD system under optimized conditions completely integrated with the power plant operation.
- Measure emission control system performance:
 - SO₂ and NO_x performance tests
 - ESP performance tests
 - ESP performance improvements, if required
 - Chemical analysis of solid wastes
 - Continuous data recording and acquisition
- Determine power plant impacts
- Determine effects on CZD continuous operation when higher sulfur coal is burned in boiler #15

4.2 PHASE 3 - PROJECT MANAGEMENT

Bechtel will provide overall management of the work required to complete Phase 3, including:

- Coordinating with Penelec and the project financial assistance groups
- Planning and conducting meetings with the DOE and project team to review the work
- Submitting reports in accordance with the federal assistance reporting checklist

Appendix A

Description of Project Work Breakdown Structure

Appendix A

DESCRIPTION OF PROJECT AND WORK BREAKDOWN STRUCTURE

A.1 PROJECT DESCRIPTION

To accomplish the objectives of this project, the test program contains two distinct periods:

- The first period, of six months duration, includes daily factorial runs to test different reagents, atomizers, additives, and slurry concentrations.
- The second period, of one year duration, will demonstrate the performance of the CZD system on a continuous basis under actual power plant operating conditions.

A detailed description of the Work Breakdown Structure for this project, is shown in Figure A-1 on page 4-8. The work is scheduled to be accomplished in three phases as follows:

- Phase 1 work was completed on January 31, 1991. During this phase, Bechtel developed a process design, P&IDs, and performed detailed engineering for a new extended duct to be used in the CZD demonstration in Unit 15 at Penelec's Seward Station. Bechtel wrote all the specifications for equipment and instruments, and started procurement activities. Interface with the appropriate environmental agencies was accomplished through Penelec, with Bechtel providing assistance as needed.
- Phase 2 work was substantially completed by July 31, 1991. This phase included equipment acquisition and installation, facility construction, and start-up operations. Bechtel completed procurement of the equipment, instruments, materials, and fabrication of the new long duct. Penelec performed construction and installation of these items in accordance with specifications prepared by Bechtel. At completion of construction, using Penelec operating and maintenance personnel, Bechtel trained the operators, started all major elements of the CZD system, and verified that the installation and control system functioned according to requirements. During this phase, the installation of equipment and instrumentation was limited to that necessary for parametric testing to be accomplished in Phase 3.

- Phase 3 work will be conducted in two parts. Parametric testing, Phase 3a, was scheduled for the period from June 3, 1991 through November 29, 1991, but the start was delayed until early August. During this period, Bechtel planned to carry out a parametric test program to optimize the performance of the CZD process. The test program is designed to develop operating conditions that will achieve high reliability and low cost operation. Phase 3b was scheduled from December 2, 1991 to July 1, 1993, to complete this demonstration project. The initial program included a period of time from December 2, 1991 to July 1992 when no CZD testing was scheduled. With DOE's concurrence, this "no CZD testing" was modified by extending the CZD parametric testing until July 1992 for debugging and training the Penelec operating and maintenance personnel. In this way, the demonstration in July 1992 will be assured.

Based on the results of the parametric tests, Bechtel had completed additional design, procurement, installation and facility construction as necessary to permit a 6-month continuous demonstration. At this time the CZD system is being fully instrumented and integrated with the operation of Penelec's Unit #15. The goal is to demonstrate the performance of the CZD process for SO₂ removal without significantly affecting either the boiler operation or plant particulate emissions.

Bechtel will supervise the 6-month continuous demonstration, and will carry out various performance tests, data acquisition, and chemical analyses. After the demonstration is completed, the system may remain in operation or the test apparatus may be dismantled and the site restored to its former condition, depending on Penelec's wishes. In either case, the new long straight duct will remain in operation.

To promote the dissemination of technical information to industry during the CZD demonstration, technical papers will be presented at various conferences. These papers will provide non-proprietary technical and economic data, results, and conclusions. The technical papers will also be made available for publication in appropriate journals. Representatives of the utilities will be invited to visit the demonstration site to learn first hand how the CZD process handles SO₂ and NO_x removal from utility flue gas operations.

A.2 WORK BREAKDOWN STRUCTURE DESCRIPTION

The following tasks will be performed during the three phases of the project to demonstrate the cost effective control of SO₂ and NO_x emissions from the pre-NSPS coal-fired utility boiler No. 15 at Penelec's Seward Station:

Phase 1: Design and Permitting

WBS No. 1.1.2 Design and Procurement

- Prepare process flow diagrams for each of the two periods, including material balances and stream properties. Prepare technical specifications for process equipment.
- Prepare detailed designs for the fabrication of the duct extension and its associated construction and installation.
- Prepare site-specific detailed designs for installation of the compressed air system, lime feed system, and atomizers with their related headers and distribution piping, including instruments and controls.
- Prepare technical specifications for procurement of required support equipment, and its associated construction and installation.
- Issue bids for equipment with long delivery times.

WBS No.1.1.3 Management and Travel

- Project Management. Provide overall management of the work required to complete this phase, including coordination with Penelec and the groups providing project financial assistance. Bechtel's project management plan includes provisions for meetings with the DOE and formal reviews of project work, as well as provisions for submitting reports in accordance with the Federal Assistance Reporting Checklist, Attachment C.
- Travel. Bechtel travel includes project management travel to the Penelec site and to DOE's offices for meetings, and travel by the project engineer and other members of the project team as required to complete the task activities. All travel and subsistence to be in accordance with Government regulations.

Phase 2: Construction and Start-up

WBS No. 1.2.1 Equipment Acquisition and Installation

- Procure air compressors and electric power supply.
- Procure atomizers.
- Procure instruments and controls.
- Procure lime feed system.
- Procure lime transfer system.
- Provide assistance to Penelec for installation of all process and support equipment, including drawings, specifications, design packages for bidding, and other related design information.

WBS No. 1.2.2 Facility Construction

- Approve shop drawings for fabrication of duct extension.
- Provide site engineering support and related assistance to Penelec as required for quality and schedule control.

WBS No. 1.2.3 Start-up (Checkout) and Operator Training for Parametric Testing

- Provide start-up engineer to supervise commissioning of all CZD components and systems.
- Train Penelec's operators to run the CZD system and perform the tasks required to conduct parametric testing.
- Establish procedures for coordination of test operations with Penelec's plant management and operations personnel.
- Finalize all elements of Test Plan.

WBS No. 1.2.4 Construction Management

- Provide construction management support to Penelec as requested. Penelec will have prime control and responsibility for all construction activities at Seward Station.

WBS No. 1.2.5 Management and Travel

- Project Management. Provide overall management of the work required to complete this phase, including coordination with Penelec and the groups providing project financial assistance. Plan and conduct meetings with the DOE and the project team for review of project work. Submit reports in accordance with the Federal Assistance Reporting Checklist, Attachment C.
- Travel. Bechtel travel includes project management travel to the Penelec site and to DOE's offices for meetings, and travel by the project engineer and other members of the project team as required to complete the task activities. All travel and subsistence to be in accordance with Government regulations.

Phase 3: Operation and Disposition

WBS No. 1.3.1 Lime Procurement

- Procure all types of lime and other reagents required to conduct parametric and continuous (one-year) test programs.

WBS No. 1.3.2 CZD Parametric Testing

- Perform wind tunnel tests on atomizers at the University of California at Davis to determine performance characteristics. Select atomizers to be used in the parametric test program.

- Evaluate performance of electrostatic precipitators (ESPs) during parametric tests. Consult with ESP experts, if necessary, to improve performance.
- Evaluate effects of process variables on emission control performance.
- Determine operating conditions for optimum overall performance.
- Evaluate effects of using alternative coals and reagents:
 - High and medium sulfur coals
 - Alternate reagents including pressure-hydrated dolomitic lime, hydrated calcitic lime, and fresh slaked calcitic lime.

WBS No. 1.3.3 Completion of Design, Procurement and Installation

- Based on the results of the parametric tests, complete the design packages and procure all process equipment needed to completely automate and integrate the operation of the CZD system with boiler No. 15 at Seward Station.
- Procure all instruments and controls needed for continuous operation, monitoring, and data collection.

WBS No. 1.3.4 Completion of Facility Construction

- Install facilities for lime unloading and storage to support the increased capacity required for continuous operation of the CZD system.
- Insulate piping and provide weather protection and enclosures as required to permit continuous, all-year operation of the CZD system.
- Provide construction management support to Penelec as requested. Penelec will have prime control and responsibility for all construction activities at Seward Station.

WBS No. 1.3.5 Start-up (Checkout) and Operator Training for Continuous Operation

- Provide start-up engineer to supervise commissioning of all new CZD components and systems.
- Train Penelec's operators to run the CZD system and perform the tasks required to conduct the one-year continuous demonstration.
- Establish procedures for coordination of data collection and reduction with Penelec's plant management and operations personnel.

WBS No. 1.3.6 CZD Demonstration with Continuous Operation

- Operate the CZD system under optimized conditions for one year completely integrated with the power plant operation.
- Measure emission control system performance:

- SO₂ and NO_x performance tests
- ESP performance tests
- ESP performance improvements, if required
- Chemical analysis of solid wastes
- Continuous data recording and acquisition
- Determine power plant impacts.

WBS No. 1.3.7 Duct and Hopper Cleaning

- Perform periodic inspection and cleaning, if necessary, during intervals when the boiler is not operating to determine the long-term extent of duct fouling resulting from CZD system operation.

WBS No. 1.3.8 Data Evaluation and Reporting

- Correlate and evaluate all data collected during the entire CZD test program, including parametric tests as well as continuous operation.
- Summarize key data and test results:
 - Inlet and outlet concentration of SO₂, NO_x, and oxygen
 - Amount of lime used and lime utilization
 - Variation in flue gas temperature during lime slurry injection
 - Variation in ESP recorded data
 - Variation in percent opacity at the stack
 - Lime deposition on duct surfaces
- Use technological, economic, environmental, and operating evaluations from the demonstration project to prepare Demonstration Test Reports and a Technology Performance and Economic Evaluation Report.

WBS No. 1.3.9 Disposition

- Disposition of the CZD system equipment installation:
 - The new long straight duct will remain in operation.
 - The disposition of all other equipment (continued operation or removal and storage) will be decided by Penelec

WBS No. 1.3.10 Management and Travel

- Project Management. Provide overall management of the work required to complete this phase, including coordination with Penelec and the groups providing project financial assistance. Plan and conduct meetings with the DOE and the project team for review of project work. Submit

reports in accordance with the Federal Assistance Reporting Checklist, Attachment C.

- Travel. Bechtel travel includes project management travel to the Penelec site and to DOE's offices for meetings, and travel by the project engineer and other members of the project team as required to complete the task activities. All travel and subsistence to be in accordance with Government regulations.

Figure A-1 Work Breakdown Structure (WBS) Diagram

Appendix B

Report Distribution List

Appendix B
REPORT DISTRIBUTION LIST

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Appendix C

Tables With Summary of Lime Slurry Injection Data August 17 to September 16, 1992

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/17/92	1300	0.25	0.25	304.3	35.0	10.3	9.8	15.1
8/17/92	1315	0.25	0.50	304.3	38.3	10.3	8.8	18.3
8/17/92	1330	0.25	0.75	305.3	44.8	10.3	6.3	14.5
8/17/92	1345	0.25	1.00	304.8	43.8	10.3	37.0	15.0
8/17/92	1400	0.25	1.25	306.4	50.0	10.3	34.4	16.2
8/17/92	1415	0.25	1.50	307.5	17.7	10.3	32.0	20.0
8/17/92	1430	0.25	1.75	303.2	44.5	10.3	24.9	9.6
8/17/92	1445	0.25	2.00	303.2	51.1	10.3	26.0	11.6
8/17/92	1500	0.25	2.25	306.6	54.0	10.3	41.3	18.7
8/17/92	1515	0.25	2.50	307.0	55.1	10.3	42.0	11.2
8/17/92	1530	0.25	2.75	307.4	55.1	10.7	42.5	11.5
8/17/92	1545	0.25	3.00	307.0	55.7	10.7	42.8	17.2
8/17/92	1600	0.25	3.25	307.4	54.5	10.7	43.4	15.9
8/17/92	1615	0.25	3.50	307.4	54.9	10.7	43.2	16.1
8/17/92	1630	0.25	3.75	308.3	55.1	10.7	43.5	15.0
8/17/92	1645	0.25	4.00	308.1	54.9	10.7	45.0	16.0
8/17/92	1700	0.25	4.25	308.3	55.2	10.7	45.7	15.3
8/17/92	1715	0.25	4.50	308.8	55.3	10.7	46.3	10.7
8/17/92	1730	0.25	4.75	307.5	54.8	10.7	46.4	15.1
8/17/92	1745	0.25	5.00	308.1	55.5	10.7	46.8	20.6
8/17/92	1800	0.25	5.25	308.3	49.9	10.7	43.2	18.5
8/17/92	1815	0.25	5.50	307.0	48.2	13.9	42.5	19.4
8/17/92	1830	0.25	5.75	306.2	48.0	13.9	42.1	19.7
8/17/92	1845	0.25	6.00	306.6	48.1	13.9	41.2	11.7
8/17/92	1900	0.25	6.25	306.4	45.6	13.9	38.3	11.0
8/17/92	1915	0.25	6.50	306.8	46.7	13.9	37.2	11.3
8/17/92	1930	0.25	6.75	305.3	47.5	13.9	40.5	10.9
8/17/92	1945	0.25	7.00	305.7	48.7	13.9	40.9	11.9
8/17/92	2000	0.25	7.25	305.9	49.0	13.9	41.8	12.4
8/17/92	2015	0.25	7.50	306.2	49.7	13.9	40.1	12.1
8/17/92	2030	0.25	7.75	305.9	49.8	13.9	39.8	11.1
8/17/92	2045	0.25	8.00	305.9	50.6	11.5	39.5	13.6
8/17/92	2100	0.25	8.25	306.2	49.8	11.5	40.1	13.9
8/17/92	2115	0.25	8.50	304.0	34.2	11.5	21.6	13.5
Total Hours		8.50						
8/20/92	1745	0.25	8.75	305.1	40.1	7.5	17.2	16.8
8/20/92	1800	0.25	9.00	306.0	44.8	7.5	21.5	15.8
8/20/92	1815	0.25	9.25	306.9	49.9	7.5	27.7	17.7
8/20/92	1830	0.25	9.50	305.1	48.2	7.5	28.4	16.1
8/20/92	1845	0.25	9.75	304.7	49.4	7.5	28.4	15.3
8/20/92	1900	0.25	10.00	304.2	49.7	7.5	32.5	14.9
8/20/92	1915	0.25	10.25	302.4	49.9	7.5	34.0	16.7
8/20/92	1930	0.25	10.50	301.6	50.0	7.5	35.4	14.5
8/20/92	1945	0.25	10.75	301.3	50.3	7.5	36.0	15.4
8/20/92	2000	0.25	11.00	300.3	50.1	7.5	37.1	16.1
8/20/92	2015	0.25	11.25	299.4	47.9	7.5	33.4	14.4

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/20/92	2030	0.25	11.50	299.4	48.2	7.5	33.6	16.5
8/20/92	2045	0.25	11.75	299.6	48.2	7.5	34.9	16.7
8/20/92	2100	0.25	12.00	299.9	47.9	7.5	35.6	15.0
8/20/92	2115	0.25	12.25	299.6	48.4	7.5	41.6	14.1
8/20/92	2130	0.25	12.50	299.2	48.1	7.5	37.5	14.1
8/20/92	2145	0.25	12.75	298.8	47.9	7.5	36.8	13.5
8/20/92	2200	0.25	13.00	297.4	48.1	7.5	38.8	13.4
8/20/92	2215	0.25	13.25	296.7	49.8	7.5	40.8	13.8
8/20/92	2230	0.25	13.50	297.4	49.8	7.5	39.3	11.6
8/20/92	2245	0.25	13.75	296.6	49.9	7.5	40.8	14.2
8/20/92	2300	0.25	14.00	296.7	50.3	7.5	41.0	12.2
8/20/92	2315	0.25	14.25	296.7	50.1	7.5	41.6	13.0
8/20/92	2330	0.25	14.50	296.1	50.4	7.5	36.6	12.4
Total Hours		6.00						
8/21/92	1445	0.25	14.75	310.5	46.9	9.0	32.3	9.4
8/21/92	1500	0.25	15.00	310.3	50.1	9.0	36.2	8.6
8/21/92	1515	0.25	15.25	311.2	52.1	9.0	38.7	9.2
8/21/92	1530	0.25	15.50	311.2	54.1	9.0	40.0	8.1
8/21/92	1545	0.25	15.75	310.7	54.0	9.0	41.8	8.7
8/21/92	1600	0.25	16.00	310.7	54.2	9.0	42.0	9.2
8/21/92	1615	0.25	16.25	310.6	54.0	9.0	43.2	8.1
8/21/92	1630	0.25	16.50	310.3	53.9	9.0	42.7	9.0
8/21/92	1645	0.25	16.75	309.8	54.0	9.0	42.7	7.8
8/21/92	1700	0.25	17.00	310.3	54.0	9.0	43.3	7.8
8/21/92	1715	0.25	17.25	310.4	54.0	9.0	42.9	7.8
8/21/92	1730	0.25	17.50	310.3	54.2	9.0	44.0	8.4
8/21/92	1745	0.25	17.75	309.5	54.2	9.0	43.3	7.6
8/21/92	1800	0.25	18.00	309.6	54.2	9.0	43.8	8.4
8/21/92	1815	0.25	18.25	308.3	54.0	9.0	45.1	9.0
8/21/92	1830	0.25	18.50	308.1	54.0	9.0	45.7	9.0
8/21/92	1845	0.25	18.75	307.9	54.0	9.0	44.0	8.4
8/21/92	1900	0.25	19.00	307.7	54.2	9.0	45.9	7.5
8/21/92	1915	0.25	19.25	307.2	54.3	9.0	44.7	9.1
8/21/92	1930	0.25	19.50	305.3	54.8	9.0	46.4	7.7
8/21/92	1945	0.25	19.75	305.1	55.1	9.0	50.0	7.7
8/21/92	2000	0.25	20.00	305.8	55.1	9.0	49.6	6.9
8/21/92	2015	0.25	20.25	306.0	55.0	9.0	47.5	8.1
8/21/92	2030	0.25	20.50	305.9	55.1	9.0	46.6	7.6
8/21/92	2045	0.25	20.75	306.2	55.4	9.0	46.5	8.8
8/21/92	2100	0.25	21.00	306.1	55.9	9.0	48.2	9.7
8/21/92	2115	0.25	21.25	305.2	55.8	9.0	55.3	7.8
8/21/92	2130	0.25	21.50	305.3	55.5	9.0	53.4	8.6
8/21/92	2145	0.25	21.75	304.4	55.2	9.0	51.7	7.6
8/21/92	2200	0.25	22.00	304.2	55.1	9.0	51.5	7.2
8/21/92	2215	0.25	22.25	304.4	54.9	9.0	53.1	7.8
8/21/92	2230	0.25	22.50	304.4	55.1	9.0	50.4	7.4

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SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/21/92	2245	0.25	22.75	304.1	55.1	9.0	50.4	8.0
8/21/92	2300	0.25	23.00	303.3	55.1	9.0	49.7	6.5
8/21/92	2315	0.25	23.25	302.6	40.6	9.0	50.5	8.0
Total Hours		8.75						
8/24/92	1400	0.25	23.50	308.6	39.8	12.0	24.5	15.9
8/24/92	1415	0.25	23.75	308.5	44.7	12.0	28.0	16.7
8/24/92	1430	0.25	24.00	309.1	44.9	12.0	29.4	18.0
8/24/92	1445	0.25	24.25	308.7	44.9	12.0	30.3	19.8
8/24/92	1500	0.25	24.50	307.6	44.9	12.0	31.3	17.0
8/24/92	1515	0.25	24.75	307.6	45.0	12.0	33.5	17.6
8/24/92	1530	0.25	25.00	307.9	45.1	12.0	34.0	18.9
8/24/92	1545	0.25	25.25	308.5	51.3	12.0	37.6	19.4
8/24/92	1600	0.25	25.50	309.9	53.9	12.0	43.4	17.1
8/24/92	1615	0.25	25.75	309.8	55.0	12.0	42.4	18.6
8/24/92	1630	0.25	26.00	310.5	55.2	12.0	46.3	12.7
8/24/92	1645	0.25	26.25	310.9	56.5	12.0	45.8	13.4
8/24/92	1700	0.25	26.50	311.2	56.9	12.0	47.7	13.5
8/24/92	1715	0.25	26.75	310.3	58.9	12.0	50.1	13.4
8/24/92	1730	0.25	27.00	310.8	59.0	12.0	49.4	12.3
8/24/92	1745	0.25	27.25	310.4	59.0	12.0	48.8	11.8
8/24/92	1800	0.25	27.50	310.3	58.9	12.0	49.2	11.0
8/24/92	1815	0.25	27.75	309.8	58.9	12.0	50.0	11.5
8/24/92	1830	0.25	28.00	310.0	59.2	12.0	49.5	11.3
8/24/92	1845	0.25	28.25	309.1	50.2	12.0	39.4	11.5
8/24/92	1900	0.25	28.50	307.4	49.9	12.0	37.8	11.8
8/24/92	1915	0.25	28.75	306.3	52.2	12.0	39.9	13.0
8/24/92	1930	0.25	29.00	306.1	55.2	12.0	39.3	11.2
8/24/92	1945	0.25	29.25	306.3	53.5	12.0	38.6	11.0
8/24/92	2000	0.25	29.50	306.4	54.0	12.0	39.4	11.2
8/24/92	2015	0.25	29.75	306.1	55.5	12.0	39.1	12.7
8/24/92	2030	0.25	30.00	306.3	56.0	12.0	41.3	13.0
8/24/92	2045	0.25	30.25	304.3	55.9	12.0	44.3	12.6
8/24/92	2100	0.25	30.50	305.5	56.3	12.0	44.7	13.2
8/24/92	2115	0.25	30.75	305.4	54.1	12.0	44.9	14.8
8/24/92	2130	0.25	31.00	306.1	54.2	12.0	43.2	12.0
8/24/92	2145	0.25	31.25	305.8	54.2	12.0	44.2	12.3
8/24/92	2200	0.25	31.50	304.3	54.0	12.0	46.0	12.4
8/24/92	2215	0.25	31.75	302.7	54.0	12.0	46.0	12.8
8/24/92	2230	0.25	32.00	303.1	53.9	12.0	44.7	14.7
8/24/92	2245	0.25	32.25	304.8	53.8	12.0	42.5	13.8
8/24/92	2300	0.25	32.50	303.7	53.9	12.0	42.3	14.7
8/24/92	2315	0.25	32.75	304.8	53.9	12.0	43.0	14.5
8/24/92	2330	0.25	33.00	305.1	54.0	12.0	31.3	15.6
8/24/92	2345	0.25	33.25	304.9	54.0	12.0	30.7	13.8
Total Hours		10.00						

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/25/92	0	0.25	33.50	303.6	54.1	12.0	34.4	14.8
8/25/92	15	0.25	33.75	303.0	54.7	12.0	38.0	14.0
8/25/92	30	0.25	34.00	303.4	54.8	12.0	39.3	15.3
8/25/92	45	0.25	34.25	302.7	54.8	12.0	40.1	12.9
8/25/92	100	0.25	34.50	301.8	55.0	12.0	41.4	11.8
8/25/92	115	0.25	34.75	302.6	51.5	12.0	41.0	12.7
8/25/92	130	0.25	35.00	304.6	50.8	12.0	36.4	12.4
8/25/92	145	0.25	35.25	302.6	51.2	12.0	36.0	16.1
8/25/92	200	0.25	35.50	302.2	52.8	12.0	42.0	13.4
8/25/92	215	0.25	35.75	301.8	50.1	12.0	39.1	9.7
8/25/92	230	0.25	36.00	301.9	48.2	12.0	38.1	10.4
8/25/92	245	0.25	36.25	304.1	48.3	12.0	34.9	13.7
8/25/92	300	0.25	36.50	303.7	49.6	12.0	35.7	9.9
8/25/92	315	0.25	36.75	303.9	50.3	12.0	37.5	11.4
8/25/92	330	0.25	37.00	304.1	50.4	12.0	36.7	13.1
8/25/92	345	0.25	37.25	304.2	49.8	12.0	36.3	11.0
8/25/92	400	0.25	37.50	304.5	50.3	12.0	37.4	14.8
8/25/92	415	0.25	37.75	303.4	49.8	12.0	37.4	14.0
8/25/92	430	0.25	38.00	304.4	49.8	12.0	37.0	10.1
8/25/92	445	0.25	38.25	304.2	52.1	12.0	35.9	10.7
8/25/92	500	0.25	38.50	304.5	53.7	12.0	39.3	10.6
8/25/92	515	0.25	38.75	304.2	54.1	12.0	38.4	11.0
8/25/92	530	0.25	39.00	304.2	53.9	12.0	42.0	10.4
8/25/92	545	0.25	39.25	305.0	54.0	12.0	42.7	11.4
8/25/92	600	0.25	39.50	302.8	54.3	12.0	41.2	11.5
8/25/92	615	0.25	39.75	303.2	53.3	12.0	44.2	15.0
8/25/92	630	0.25	40.00	303.9	52.3	12.0	39.6	10.1
8/25/92	645	0.25	40.25	303.6	52.3	12.0	40.6	10.8
8/25/92	700	0.25	40.50	304.1	51.8	12.0	42.5	9.5
8/25/92	715	0.25	40.75	304.1	51.9	12.0	38.5	10.4
8/25/92	730	0.25	41.00	304.4	51.2	12.0	38.5	10.7
8/25/92	745	0.25	41.25	304.5	50.0	12.0	37.0	10.6
8/25/92	800	0.25	41.50	304.9	49.7	12.0	36.9	10.9
8/25/92	815	0.25	41.75	305.4	50.3	12.0	37.8	11.3
8/25/92	830	0.25	42.00	304.2	50.3	12.0	37.3	11.0
8/25/92	845	0.25	42.25	304.4	49.8	12.0	37.8	10.4
8/25/92	900	0.25	42.50	303.7	49.9	12.0	39.3	10.6
8/25/92	915	0.25	42.75	304.8	50.2	12.0	37.9	10.3
8/25/92	930	0.25	43.00	305.6	50.0	12.0	36.8	11.0
8/25/92	945	0.25	43.25	306.2	49.8	12.0	37.2	12.4
8/25/92	1000	0.25	43.50	306.4	50.2	12.0	36.4	10.5
8/25/92	1015	0.25	43.75	307.7	50.0	12.0	38.5	12.5
8/25/92	1030	0.25	44.00	306.1	50.0	12.0	37.0	13.1
8/25/92	1045	0.25	44.25	307.9	49.9	12.0	37.8	15.2
8/25/92	1100	0.25	44.50	309.2	50.0	12.0	37.1	11.9
8/25/92	1115	0.25	44.75	309.7	49.9	12.0	36.1	9.7
8/25/92	1130	0.25	45.00	308.8	49.9	12.0	35.7	14.6

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/25/92	1145	0.25	45.25	309.8	50.0	12.0	35.4	10.7
8/25/92	1200	0.25	45.50	309.7	50.0	12.0	37.0	9.8
8/25/92	1215	0.25	45.75	310.0	50.1	12.0	40.0	9.3
8/25/92	1230	0.25	46.00	309.5	50.1	12.0	36.6	12.2
8/25/92	1245	0.25	46.25	309.2	51.0	12.0	37.1	11.0
8/25/92	1300	0.25	46.50	309.0	51.0	12.0	36.8	11.4
8/25/92	1315	0.25	46.75	310.2	51.1	12.0	38.0	9.8
8/25/92	1330	0.25	47.00	310.7	51.1	12.0	38.2	14.6
8/25/92	1345	0.25	47.25	310.6	51.1	12.0	38.0	18.2
8/25/92	1400	0.25	47.50	310.2	51.7	12.0	38.7	15.3
8/25/92	1415	0.25	47.75	309.9	51.1	12.0	39.3	21.8
8/25/92	1430	0.25	48.00	309.9	51.1	12.0	38.0	15.6
8/25/92	1445	0.25	48.25	310.6	52.2	12.0	38.3	14.5
8/25/92	1500	0.25	48.50	310.9	51.0	12.0	38.3	13.1
8/25/92	1515	0.25	48.75	311.1	51.0	12.0	36.9	13.9
8/25/92	1530	0.25	49.00	310.5	52.1	12.0	22.5	16.0
8/25/92	1545	0.25	49.25	311.2	53.8	12.0	24.4	15.5
8/25/92	1600	0.25	49.50	311.8	55.0	12.0	27.7	18.6
8/25/92	1615	0.25	49.75	311.2	55.1	12.0	28.1	15.1
8/25/92	1630	0.25	50.00	311.4	55.9	12.0	28.9	16.4
8/25/92	1645	0.25	50.25	311.1	56.1	12.0	30.7	15.0
8/25/92	1700	0.25	50.50	311.3	56.1	12.0	32.9	14.9
8/25/92	1715	0.25	50.75	311.0	56.0	12.0	33.6	14.7
8/25/92	1730	0.25	51.00	310.9	54.6	12.0	33.4	15.9
8/25/92	1745	0.25	51.25	310.0	53.1	12.0	31.0	16.6
8/25/92	1800	0.25	51.50	309.4	50.2	12.0	30.2	14.0
8/25/92	1815	0.25	51.75	309.2	48.2	12.0	28.9	15.9
8/25/92	1830	0.25	52.00	308.0	48.1	12.0	28.6	16.7
8/25/92	1845	0.25	52.25	307.4	48.1	12.0	29.2	15.0
8/25/92	1900	0.25	52.50	306.7	48.5	12.0	28.4	15.1
8/25/92	1915	0.25	52.75	305.5	50.0	12.0	32.0	13.0
8/25/92	1930	0.25	53.00	305.9	50.0	12.0	31.0	13.5
8/25/92	1945	0.25	53.25	304.7	50.0	12.0	32.7	14.1
Total Hours		20.00						
8/26/92	245	0.25	53.50	301.3	40.1	12.0	18.5	10.7
8/26/92	300	0.25	53.75	301.0	48.0	12.0	25.5	10.4
8/26/92	315	0.25	54.00	306.8	53.4	12.0	31.8	8.2
8/26/92	330	0.25	54.25	307.0	55.6	12.0	36.6	8.1
8/26/92	345	0.25	54.50	307.4	54.8	12.0	38.3	8.6
8/26/92	400	0.25	54.75	306.4	55.7	12.0	40.8	12.5
8/26/92	415	0.25	55.00	306.6	55.9	12.0	40.9	14.8
8/26/92	430	0.25	55.25	308.6	56.3	12.0	41.2	7.8
8/26/92	445	0.25	55.50	309.0	55.8	12.0	40.8	13.1
8/26/92	500	0.25	55.75	306.7	56.3	12.0	42.1	10.2
8/26/92	515	0.25	56.00	306.4	55.9	12.0	41.5	7.3
8/26/92	530	0.25	56.25	306.2	55.7	12.0	43.3	8.5

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/26/92	545	0.25	56.50	306.6	56.3	12.0	42.3	6.0
8/26/92	600	0.25	56.75	306.7	55.9	12.0	43.7	8.4
8/26/92	615	0.25	57.00	306.5	55.9	12.0	43.3	16.8
8/26/92	630	0.25	57.25	306.4	56.3	12.0	43.5	10.4
8/26/92	645	0.25	57.50	306.2	55.9	12.0	42.9	11.8
8/26/92	700	0.25	57.75	306.0	54.8	12.0	43.8	8.8
8/26/92	715	0.25	58.00	306.5	54.2	12.0	40.3	7.7
8/26/92	730	0.25	58.25	306.7	54.4	12.0	40.5	8.2
8/26/92	745	0.25	58.50	306.9	54.2	12.0	41.3	7.3
8/26/92	800	0.25	58.75	307.5	55.1	12.0	43.1	7.5
8/26/92	815	0.25	59.00	307.9	56.5	12.0	42.6	7.3
8/26/92	830	0.25	59.25	306.6	57.4	12.0	44.8	6.9
8/26/92	845	0.25	59.50	307.3	56.8	12.0	44.3	6.5
8/26/92	900	0.25	59.75	306.3	58.8	11.8	48.3	6.6
8/26/92	915	0.25	60.00	304.9	57.1	11.9	45.0	6.3
8/26/92	930	0.25	60.25	305.5	56.7	12.0	45.2	6.4
8/26/92	945	0.25	60.50	306.2	57.1	12.0	45.8	6.5
8/26/92	1000	0.25	60.75	306.7	57.2	12.0	47.1	6.5
8/26/92	1015	0.25	61.00	307.1	56.9	12.0	46.3	6.8
8/26/92	1030	0.25	61.25	306.4	56.9	12.0	48.1	6.5
8/26/92	1045	0.25	61.50	306.4	57.0	12.0	47.0	7.0
8/26/92	1100	0.25	61.75	307.2	56.8	12.0	47.0	6.7
8/26/92	1115	0.25	62.00	308.3	56.0	12.0	47.2	6.1
8/26/92	1130	0.25	62.25	309.6	55.2	12.0	51.0	6.0
8/26/92	1145	0.25	62.50	311.5	55.2	11.9	50.9	6.7
8/26/92	1200	0.25	62.75	311.2	54.7	11.9	53.5	6.0
8/26/92	1215	0.25	63.00	311.2	54.7	11.9	53.5	6.0
8/26/92	1230	0.25	63.25	310.9	53.0	12.0	50.8	6.8
8/26/92	1245	0.25	63.50	311.9	54.2	12.0	50.9	7.0
8/26/92	1300	0.25	63.75	312.0	53.9	12.0	51.1	7.2
8/26/92	1315	0.25	64.00	311.0	53.8	12.0	51.6	6.8
8/26/92	1330	0.25	64.25	310.7	54.0	12.0	51.0	7.0
8/26/92	1345	0.25	64.50	310.8	54.8	11.0	52.4	6.7
8/26/92	1400	0.25	64.75	310.8	55.2	9.4	51.5	6.7
8/26/92	1415	0.25	65.00	310.5	55.2	8.4	52.9	7.5
8/26/92	1430	0.25	65.25	309.5	52.0	7.4	51.1	6.6
8/26/92	1445	0.25	65.50	310.2	52.4	6.4	48.0	6.8
8/26/92	1500	0.25	65.75	308.7	52.1	4.3	46.5	7.8
8/26/92	1515	0.25	66.00	309.5	52.1	3.9	46.8	7.0
8/26/92	1530	0.25	66.25	309.9	50.0	4.3	24.2	7.8
8/26/92	1545	0.25	66.50	309.9	50.3	3.5	41.8	7.3
8/26/92	1830	0.25	66.75	306.4	50.0	11.9	38.6	9.6
8/26/92	1845	0.25	67.00	306.6	51.6	11.6	40.5	9.3
8/26/92	1900	0.25	67.25	305.6	52.0	11.7	43.6	12.2
8/26/92	1915	0.25	67.50	305.0	52.0	11.9	43.8	9.3
8/26/92	1930	0.25	67.75	303.1	54.2	12.0	46.1	11.1
8/26/92	1945	0.25	68.00	303.1	52.0	12.0	45.7	9.9

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/26/92	2000	0.25	68.25	303.0	52.2	12.0	46.7	11.0
8/26/92	2015	0.25	68.50	302.8	53.3	12.0	46.8	9.7
8/26/92	2030	0.25	68.75	303.9	55.2	12.0	44.8	10.4
8/26/92	2045	0.25	69.00	304.4	54.8	12.0	45.1	10.1
8/26/92	2100	0.25	69.25	304.3	54.9	12.0	45.7	11.3
8/26/92	2115	0.25	69.50	304.4	55.3	12.0	51.2	10.2
8/26/92	2130	0.25	69.75	304.1	54.9	12.0	48.6	10.5
8/26/92	2145	0.25	70.00	304.1	54.9	12.0	48.8	10.7
8/26/92	2200	0.25	70.25	303.5	54.8	12.0	48.0	12.6
8/26/92	2215	0.25	70.50	303.8	55.2	12.0	47.7	11.0
8/26/92	2230	0.25	70.75	302.9	52.4	12.0	48.7	11.4
8/26/92	2245	0.25	71.00	304.2	52.0	12.0	43.8	10.0
8/26/92	2300	0.25	71.25	306.1	53.2	12.0	44.1	12.7
8/26/92	2315	0.25	71.50	304.8	53.3	12.0	44.7	11.2
8/26/92	2330	0.25	71.75	304.1	53.8	12.0	42.6	11.2
8/26/92	2345	0.25	72.00	303.6	53.6	12.0	44.6	10.9
Total Hours		18.75						
8/27/92	0	0.25	72.25	304.7	54.7	11.9	44.0	11.0
8/27/92	15	0.25	72.50	308.4	54.8	11.9	41.8	11.0
8/27/92	30	0.25	72.75	309.6	54.9	12.0	42.8	9.9
8/27/92	45	0.25	73.00	309.1	55.4	11.6	42.1	14.0
8/27/92	100	0.25	73.25	308.7	55.7	11.9	44.3	7.7
8/27/92	115	0.25	73.50	308.4	56.7	12.1	44.2	8.2
8/27/92	130	0.25	73.75	307.8	56.1	11.9	43.9	11.6
8/27/92	145	0.25	74.00	307.7	56.6	12.2	44.1	9.3
8/27/92	200	0.25	74.25	307.3	54.0	12.2	43.9	9.6
8/27/92	215	0.25	74.50	305.5	53.2	12.0	48.2	9.4
8/27/92	230	0.25	74.75	305.4	53.1	12.2	44.0	8.9
8/27/92	245	0.25	75.00	306.8	53.0	12.2	45.1	9.3
8/27/92	300	0.25	75.25	309.0	54.3	12.1	43.5	8.6
8/27/92	315	0.25	75.50	308.2	54.5	11.9	45.3	13.4
8/27/92	330	0.25	75.75	306.5	55.1	12.0	46.3	9.9
8/27/92	345	0.25	76.00	306.8	55.4	12.2	46.1	10.0
8/27/92	400	0.25	76.25	307.4	55.4	12.0	46.4	18.2
8/27/92	415	0.25	76.50	306.7	56.1	11.9	47.7	10.0
8/27/92	430	0.25	76.75	305.8	56.2	12.1	47.1	7.1
8/27/92	445	0.25	77.00	305.6	55.9	11.8	48.8	7.8
8/27/92	500	0.25	77.25	305.8	55.0	10.5	46.2	6.1
8/27/92	515	0.25	77.50	306.0	55.2	8.3	46.5	5.4
8/27/92	530	0.25	77.75	306.0	54.1	7.2	46.1	6.0
8/27/92	545	0.25	78.00	305.4	54.0	6.5	45.3	5.9
8/27/92	600	0.25	78.25	305.7	54.2	8.2	44.7	5.5
8/27/92	615	0.25	78.50	305.9	53.0	10.8	44.5	6.0
8/27/92	630	0.25	78.75	305.8	53.0	11.7	43.7	6.1
8/27/92	645	0.25	79.00	305.4	52.3	11.8	42.5	5.5
8/27/92	700	0.25	79.25	304.4	51.0	11.8	44.5	6.0

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/27/92	715	0.25	79.50	304.4	49.0	12.2	42.1	6.0
8/27/92	730	0.25	79.75	305.3	49.4	12.1	40.8	6.8
8/27/92	745	0.25	80.00	305.7	52.1	11.2	43.0	6.3
8/27/92	800	0.25	80.25	306.1	52.8	8.9	43.8	6.0
8/27/92	830	0.25	80.50	305.5	47.7	6.3	42.3	5.5
8/27/92	1430	0.25	80.75	308.4	44.5	12.8	25.1	10.5
8/27/92	1445	0.25	81.00	307.7	52.4	13.2	31.0	9.6
8/27/92	1500	0.25	81.25	309.6	53.0	11.8	35.2	10.8
8/27/92	1515	0.25	81.50	309.9	54.2	12.3	38.6	9.9
8/27/92	1530	0.25	81.75	310.6	58.3	12.4	37.2	9.5
8/27/92	1545	0.25	82.00	310.9	53.9	12.2	38.8	10.3
8/27/92	1600	0.25	82.25	311.0	56.7	12.0	39.0	13.5
8/27/92	1615	0.25	82.50	310.9	57.7	11.8	40.4	9.7
8/27/92	1630	0.25	82.75	311.6	58.0	11.8	39.2	8.6
8/27/92	1645	0.25	83.00	312.3	56.1	12.0	39.5	7.8
8/27/92	1700	0.25	83.25	312.8	56.9	12.0	42.0	8.2
8/27/92	1715	0.25	83.50	313.3	57.0	12.0	41.5	8.7
8/27/92	1730	0.25	83.75	312.3	57.3	12.0	42.1	9.1
8/27/92	1745	0.25	84.00	312.3	57.3	12.0	41.9	8.6
8/27/92	1800	0.25	84.25	311.2	58.7	12.0	44.2	8.0
8/27/92	1815	0.25	84.50	309.6	59.3	12.0	45.5	9.0
8/27/92	1830	0.25	84.75	308.5	59.4	12.0	48.4	10.3
8/27/92	1845	0.25	85.00	307.7	58.8	12.0	47.6	8.7
8/27/92	1900	0.25	85.25	308.0	57.4	12.0	45.0	9.7
8/27/92	1915	0.25	85.50	307.3	55.4	12.0	46.3	10.4
8/27/92	1930	0.25	85.75	306.6	56.0	12.0	43.8	9.7
8/27/92	1945	0.25	86.00	305.9	57.1	12.0	45.6	9.9
8/27/92	2000	0.25	86.25	305.7	58.1	12.0	46.9	9.6
8/27/92	2015	0.25	86.50	306.2	55.6	12.0	48.1	9.2
8/27/92	2030	0.25	86.75	305.8	54.0	12.0	42.1	10.8
8/27/92	2045	0.25	87.00	305.4	55.0	12.0	42.3	12.5
8/27/92	2100	0.25	87.25	306.0	55.1	12.0	43.2	14.0
8/27/92	2115	0.25	87.50	306.1	55.0	12.0	47.6	12.5
8/27/92	2130	0.25	87.75	306.3	55.2	12.0	44.8	12.1
8/27/92	2145	0.25	88.00	307.6	54.8	12.0	43.5	12.4
8/27/92	2200	0.25	88.25	308.3	55.7	12.0	45.9	12.0
8/27/92	2215	0.25	88.50	307.6	55.9	12.0	48.5	11.5
8/27/92	2230	0.25	88.75	307.8	53.0	12.0	42.7	12.4
8/27/92	2245	0.25	89.00	306.9	54.8	12.0	44.2	12.5
8/27/92	2300	0.25	89.25	306.7	54.8	12.0	44.4	12.0
8/27/92	2315	0.25	89.50	307.8	53.2	12.0	44.5	13.6
8/27/92	2330	0.25	89.75	308.9	53.2	12.0	41.8	11.4
8/27/92	2345	0.25	90.00	307.2	53.9	12.0	38.9	10.9
Total Hours		18.00						
8/28/92	0	0.25	90.25	307.6	54.1	12.0	39.0	10.1
8/28/92	15	0.25	90.50	307.6	53.9	12.0	40.2	7.9

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/28/92	30	0.25	90.75	307.6	55.5	12.0	41.2	7.6
8/28/92	45	0.25	91.00	306.9	55.3	12.0	40.3	6.9
8/28/92	100	0.25	91.25	307.8	55.8	12.0	40.8	7.8
8/28/92	115	0.25	91.50	308.0	55.7	12.0	42.5	6.9
8/28/92	130	0.25	91.75	308.0	55.7	12.0	44.2	10.2
8/28/92	145	0.25	92.00	308.0	55.4	12.0	41.2	8.5
8/28/92	200	0.25	92.25	310.0	55.4	12.0	41.1	7.5
8/28/92	215	0.25	92.50	309.1	55.8	12.0	40.9	14.1
8/28/92	230	0.25	92.75	308.7	55.5	12.0	44.0	8.9
8/28/92	245	0.25	93.00	308.4	55.3	12.0	40.4	7.3
8/28/92	300	0.25	93.25	307.0	52.5	12.0	45.5	6.7
8/28/92	315	0.25	93.50	306.5	52.6	12.0	39.9	10.1
8/28/92	330	0.25	93.75	305.7	51.6	12.0	46.8	10.2
8/28/92	345	0.25	94.00	307.8	50.9	12.0	39.0	16.4
8/28/92	400	0.25	94.25	306.7	51.3	12.0	38.3	11.9
8/28/92	415	0.25	94.50	304.7	50.8	12.0	40.0	13.7
8/28/92	430	0.25	94.75	304.0	51.0	12.0	40.7	11.2
8/28/92	445	0.25	95.00	304.7	51.4	12.0	38.8	10.1
8/28/92	500	0.25	95.25	303.8	47.9	12.0	38.6	10.8
8/28/92	515	0.25	95.50	304.0	46.2	12.0	35.5	11.8
8/28/92	530	0.25	95.75	303.4	46.1	12.0	35.6	12.2
8/28/92	545	0.25	96.00	305.1	46.2	12.0	33.5	14.2
8/28/92	600	0.25	96.25	306.6	46.0	12.0	32.3	14.5
8/28/92	615	0.25	96.50	307.3	50.9	12.0	34.2	13.6
8/28/92	630	0.25	96.75	307.9	52.3	12.0	37.2	11.3
8/28/92	645	0.25	97.00	307.9	53.5	12.0	39.2	11.4
8/28/92	700	0.25	97.25	308.9	55.0	12.0	40.1	11.2
8/28/92	715	0.25	97.50	307.8	54.1	12.0	41.5	10.6
8/28/92	730	0.25	97.75	308.0	54.1	12.0	38.6	11.2
8/28/92	745	0.25	98.00	307.5	52.2	12.0	39.1	11.8
8/28/92	800	0.25	98.25	307.1	48.2	12.0	41.6	13.3
8/28/92	815	0.25	98.50	308.2	49.1	12.1	35.3	14.1
8/28/92	830	0.25	98.75	308.7	48.3	11.8	35.0	13.8
8/28/92	845	0.25	99.00	307.9	51.7	12.1	34.6	14.0
8/28/92	900	0.25	99.25	308.0	52.0	12.0	39.5	13.2
8/28/92	915	0.25	99.50	309.4	53.2	12.0	38.7	11.6
8/28/92	930	0.25	99.75	309.1	53.7	12.0	38.9	11.8
8/28/92	945	0.25	100.00	309.4	50.1	11.9	41.4	13.6
8/28/92	1000	0.25	100.25	310.4	47.2	11.9	34.1	18.0
8/28/92	1015	0.25	100.50	310.4	46.8	11.8	34.2	20.8
8/28/92	1615	0.25	100.75	301.6	40.4	11.1	24.3	14.8
8/28/92	1630	0.25	101.00	301.4	44.5	12.0	24.6	13.3
8/28/92	1645	0.25	101.25	302.2	49.9	12.0	31.3	11.5
8/28/92	1700	0.25	101.50	303.1	49.9	12.0	33.3	12.8
8/28/92	1715	0.25	101.75	304.0	52.1	12.0	34.0	16.4
8/28/92	1730	0.25	102.00	304.7	50.1	12.0	33.8	13.8
8/28/92	1745	0.25	102.25	304.9	49.9	12.0	33.2	13.7

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
8/28/92	1800	0.25	102.50	304.5	50.1	12.0	33.0	15.4
8/28/92	1815	0.25	102.75	303.9	52.1	12.0	37.5	15.6
8/28/92	1830	0.25	103.00	304.6	52.1	12.0	36.8	13.7
8/28/92	1845	0.25	103.25	304.9	52.2	12.0	37.3	13.9
8/28/92	1900	0.25	103.50	304.8	49.9	12.0	37.1	15.4
8/28/92	1915	0.25	103.75	303.9	47.3	12.0	39.2	15.2
8/28/92	1930	0.25	104.00	304.7	46.3	12.0	32.5	18.8
8/28/92	1945	0.25	104.25	304.5	47.1	12.0	31.8	15.8
8/28/92	2000	0.25	104.50	304.3	47.1	12.0	32.4	16.4
8/28/92	2015	0.25	104.75	304.0	48.1	12.0	33.1	14.9
8/28/92	2030	0.25	105.00	303.8	49.1	12.0	34.2	14.9
8/28/92	2045	0.25	105.25	303.3	48.5	12.0	35.5	14.5
8/28/92	2100	0.25	105.50	302.6	46.8	12.0	37.5	21.1
8/28/92	2115	0.25	105.75	302.8	47.0	12.0	36.4	13.2
8/28/92	2130	0.25	106.00	303.6	48.8	12.0	36.7	16.7
8/28/92	2145	0.25	106.25	304.2	50.9	12.0	39.4	11.0
8/28/92	2200	0.25	106.50	303.3	51.0	12.0	41.2	11.2
8/28/92	2215	0.25	106.75	302.3	48.1	12.0	36.5	12.4
8/28/92	2230	0.25	107.00	301.4	48.1	12.0	35.5	12.0
Total Hours		17.00						
9/2/92	1530	0.25	107.25	299.2	35.8	12.0	14.1	8.5
9/2/92	1545	0.25	107.50	299.2	38.0	12.0	13.6	8.6
9/2/92	1600	0.25	107.75	299.9	38.4	12.0	12.5	10.4
9/2/92	1615	0.25	108.00	299.5	37.8	12.0	12.7	12.7
9/2/92	1630	0.25	108.25	299.5	37.8	12.0	12.7	12.7
9/2/92	1715	0.25	108.50	298.7	37.0	12.0	11.0	10.0
9/2/92	1730	0.25	108.75	299.5	37.3	12.0	14.2	10.0
9/2/92	1745	0.25	109.00	299.3	36.8	12.0	13.3	9.4
9/2/92	1800	0.25	109.25	298.9	37.1	12.0	13.1	15.0
9/2/92	1815	0.25	109.50	298.5	36.8	12.0	14.9	12.8
9/2/92	1830	0.25	109.75	298.3	36.6	12.0	16.3	11.2
9/2/92	1845	0.25	110.00	298.5	36.2	12.0	14.0	11.9
9/2/92	1900	0.25	110.25	298.4	35.9	12.0	14.6	14.2
9/2/92	1915	0.25	110.50	298.2	36.4	12.0	15.9	13.8
9/2/92	1930	0.25	110.75	298.2	39.6	12.0	15.9	12.3
9/2/92	1945	0.25	111.00	298.3	36.6	12.0	19.4	13.2
9/2/92	2000	0.25	111.25	297.3	36.0	12.0	18.2	14.2
9/2/92	2015	0.25	111.50	297.3	36.2	12.0	20.4	15.8
9/2/92	2030	0.25	111.75	298.9	35.8	12.0	17.9	17.2
9/2/92	2045	0.25	112.00	297.6	35.6	12.0	17.8	18.7
9/2/92	2100	0.25	112.25	297.1	35.4	12.0	19.3	18.0
9/2/92	2115	0.25	112.50	298.8	35.5	12.0	25.4	17.5
9/2/92	2130	0.25	112.75	296.4	33.9	12.0	22.4	14.2
9/2/92	2145	0.25	113.00	292.7	33.8	12.0	23.8	17.5
Total Hours		6.00						

SUMMARY OF LIME SLURRY INJECTION FROM AUGUST 17, 1992 TO SEPTEMBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
9/3/92	915	0.25	113.25	294.5	35.6	12.0	14.6	14.7
9/3/92	930	0.25	113.50	294.5	35.9	12.0	14.6	16.4
9/3/92	945	0.25	113.75	294.9	36.3	12.0	18.7	15.0
9/3/92	1000	0.25	114.00	294.9	35.2	12.0	20.0	18.1
9/3/92	1015	0.25	114.25	295.4	36.9	12.0	22.1	16.1
9/3/92	1030	0.25	114.50	295.1	31.3	12.0	20.1	13.8
Total Hours		1.50						

Appendix D

Tables With Summary of Lime Slurry Injection Data September 17 to October 16, 1992

SUMMARY OF LIME SLURRY INJECTION FROM SEPTEMBER 17, 1992 TO OCTOBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
9/29/92	1015	0.25	114.75	281.1	20.8	6.8	11.3	7.4
9/29/92	1030	0.25	115.00	281.5	28.4	7.5	10.7	7.9
9/29/92	1045	0.25	115.25	282.1	30.1	7.5	18.0	6.8
9/29/92	1100	0.25	115.50	282.8	29.9	7.9	19.4	6.5
9/29/92	1115	0.25	115.75	282.4	30.0	7.9	20.8	6.6
9/29/92	1130	0.25	116.00	282.6	30.1	7.8	20.8	7.6
Total Hours		1.50						
9/30/92	1700	0.25	116.25	281.3	11.1	8.0	1.7	12.1
9/30/92	1715	0.25	116.50	281.2	11.2	8.0	1.7	13.2
9/30/92	1730	0.25	116.75	282.7	10.9	8.0	1.7	13.6
9/30/92	1745	0.25	117.00	282.9	11.1	8.0	1.0	12.9
9/30/92	1800	0.25	117.25	283.5	11.1	8.0	3.1	13.7
Total Hours		1.25						
10/1/92	1115	0.25	117.50	281.0	14.8	8.0	0.4	8.4
Total Hours		0.25						
10/9/92	1515	0.25	117.75	299.1	38.2	8.6	19.0	8.7
10/9/92	1530	0.25	118.00	298.6	35.7	8.6	18.3	10.4
10/9/92	1545	0.25	118.25	300.2	35.2	8.4	18.7	11.7
10/9/92	1600	0.25	118.50	299.1	32.0	8.8	17.5	16.7
10/9/92	1615	0.25	118.75	298.0	34.4	8.5	17.5	14.2
Total Hours		1.25						
10/12/92	1500	0.25	119.00	283.7	8.9	7.8	4.4	17.2
10/12/92	1515	0.25	119.25	282.9	12.6	8.4	2.7	18.1
10/12/92	1530	0.25	119.50	283.6	14.8	8.5	3.8	18.7
Total Hours		0.75						
10/14/92	845	0.25	119.75	283.0	24.9	9.1	8.6	12.9
10/14/92	900	0.25	120.00	283.0	25.0	9.1	7.3	12.8
10/14/92	915	0.25	120.25	284.5	25.0	9.1	9.2	12.0
10/14/92	930	0.25	120.50	284.4	25.3	9.1	8.3	14.9
10/14/92	945	0.25	120.75	285.0	25.4	9.1	8.3	14.7
10/14/92	1000	0.25	121.00	286.9	25.3	9.1	9.4	15.8
10/14/92	1015	0.25	121.25	286.7	25.4	9.1	7.7	17.1
10/14/92	1030	0.25	121.50	286.8	28.9	9.1	8.1	15.9
10/14/92	1045	0.25	121.75	287.7	34.6	9.1	13.9	12.2
10/14/92	1100	0.25	122.00	287.7	33.0	9.1	14.9	9.4
10/14/92	1115	0.25	122.25	287.4	32.0	9.1	12.8	10.1
10/14/92	1130	0.25	122.50	288.1	32.0	9.1	12.0	12.8
10/14/92	1145	0.25	122.75	290.0	31.8	8.5	11.9	12.9
10/14/92	1200	0.25	123.00	291.6	32.4	8.2	15.5	14.2
10/14/92	1215	0.25	123.25	292.4	32.3	5.8	18.0	15.0
10/14/92	1230	0.25	123.50	293.3	32.7	4.3	14.7	14.9
10/14/92	1245	0.25	123.75	294.0	32.8	4.4	16.9	13.4

SUMMARY OF LIME SLURRY INJECTION FROM SEPTEMBER 17, 1992 TO OCTOBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/14/92	1300	0.25	124.00	294.2	33.9	5.0	18.3	14.1
10/14/92	1315	0.25	124.25	294.2	35.3	5.2	18.3	12.9
10/14/92	1330	0.25	124.50	295.3	34.2	4.6	17.0	14.9
10/14/92	1345	0.25	124.75	294.9	34.0	4.8	18.1	13.0
10/14/92	1400	0.25	125.00	294.6	35.1	4.8	16.9	16.3
10/14/92	1415	0.25	125.25	294.4	34.4	1.8	17.5	16.6
10/14/92	1430	0.25	125.50	294.9	34.2	2.7	13.7	18.1
10/14/92	1445	0.25	125.75	294.6	35.2	4.3	18.6	16.0
10/14/92	1500	0.25	126.00	294.0	35.5	4.5	17.9	15.0
10/14/92	1515	0.25	126.25	294.6	35.0	4.2	20.0	16.3
10/14/92	1530	0.25	126.50	294.8	34.7	4.3	19.6	15.3
10/14/92	1545	0.25	126.75	296.7	35.0	4.0	17.7	16.6
10/14/92	1600	0.25	127.00	297.0	34.4	3.3	17.2	15.8
10/14/92	1615	0.25	127.25	295.5	34.1	3.5	15.5	14.7
10/14/92	1630	0.25	127.50	294.9	33.5	2.8	16.1	17.2
10/14/92	1645	0.25	127.75	294.7	36.1	2.0	17.7	14.4
10/14/92	1700	0.25	128.00	294.5	32.9	2.0	12.3	15.6
10/14/92	1715	0.25	128.25	294.6	32.8	1.9	15.1	17.1
10/14/92	1730	0.25	128.50	294.6	32.4	2.9	15.3	16.8
10/14/92	1745	0.25	128.75	294.1	31.9	3.2	13.0	16.1
10/14/92	1800	0.25	129.00	293.0	31.8	3.7	15.2	15.3
10/14/92	1815	0.25	129.25	293.2	32.7	3.8	15.3	14.5
10/14/92	1830	0.25	129.50	292.4	34.2	3.7	14.1	16.1
10/14/92	1845	0.25	129.75	292.0	33.3	3.3	12.3	17.0
10/14/92	1900	0.25	130.00	292.3	32.9	4.2	13.4	16.2
10/14/92	1915	0.25	130.25	292.3	32.5	3.9	15.2	16.4
10/14/92	1930	0.25	130.50	291.9	33.0	3.8	12.7	16.7
10/14/92	1945	0.25	130.75	291.7	36.4	3.7	15.7	15.0
10/14/92	2000	0.25	131.00	291.4	28.0	3.7	13.1	19.5
10/14/92	2015	0.25	131.25	290.6	29.8	4.0	11.1	17.5
10/14/92	2030	0.25	131.50	290.8	31.5	4.0	13.9	16.0
10/14/92	2045	0.25	131.75	289.7	29.7	4.3	15.4	17.9
Total Hours		12.25						
10/15/92	1545	0.25	132.00	294.9	30.1	3.0	4.6	10.9
10/15/92	1600	0.25	132.25	294.5	28.9	3.0	5.8	11.8
10/15/92	1615	0.25	132.50	292.7	27.5	3.0	9.0	12.6
10/15/92	1630	0.25	132.75	292.7	27.7	3.0	7.6	11.5
10/15/92	1645	0.25	133.00	292.6	27.7	3.0	8.9	14.3
10/15/92	1700	0.25	133.25	292.0	26.8	3.0	4.9	15.1
10/15/92	1715	0.25	133.50	292.0	26.6	3.0	3.7	13.5
10/15/92	1730	0.25	133.75	292.2	30.0	3.0	4.5	14.7
10/15/92	1745	0.25	134.00	291.7	29.7	3.0	5.5	12.7
10/15/92	1800	0.25	134.25	291.1	30.0	3.0	7.2	12.4
10/15/92	1815	0.25	134.50	291.3	29.7	3.0	8.5	12.6
10/15/92	1830	0.25	134.75	290.8	29.9	3.0	9.1	12.8
10/15/92	1845	0.25	135.00	290.4	30.2	3.0	7.6	13.3

SUMMARY OF LIME SLURRY INJECTION FROM SEPTEMBER 17, 1992 TO OCTOBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/15/92	1900	0.25	135.25	290.0	29.6	3.0	9.7	15.1
10/15/92	1915	0.25	135.50	289.7	29.5	2.7	7.8	16.4
10/15/92	1930	0.25	135.75	288.8	29.4	2.6	8.6	17.3
10/15/92	1945	0.25	136.00	287.3	28.7	1.8	8.5	14.5
10/15/92	2000	0.25	136.25	289.0	29.4	1.6	7.7	16.4
10/15/92	2015	0.25	136.50	289.3	28.7	1.1	7.9	17.7
10/15/92	2030	0.25	136.75	288.7	28.0	1.2	9.2	16.9
10/15/92	2045	0.25	137.00	287.8	27.7	0.6	7.7	15.2
10/15/92	2100	0.25	137.25	287.8	28.0	0.2	7.0	15.4
10/15/92	2115	0.25	137.50	287.5	27.2	0.3	22.7	14.4
10/15/92	2130	0.25	137.75	286.7	26.9	0.2	14.5	15.6
10/15/92	2145	0.25	138.00	286.5	26.6	1.5	11.6	17.0
10/15/92	2200	0.25	138.25	286.7	26.6	1.7	13.0	16.3
10/15/92	2215	0.25	138.50	286.9	27.4	1.4	10.1	17.0
10/15/92	2230	0.25	138.75	286.2	26.6	1.5	10.0	18.7
10/15/92	2245	0.25	139.00	285.6	25.6	3.3	8.4	*21.8
10/15/92	2300	0.25	139.25	286.0	28.6	3.1	8.4	18.0
10/15/92	2315	0.25	139.50	286.6	29.4	2.4	8.5	15.2
10/15/92	2330	0.25	139.75	287.1	29.4	2.2	10.0	13.9
10/15/92	2345	0.25	140.00	286.9	28.9	2.0	9.3	13.8
Total Hours		8.25						
10/16/92	0	0.25	140.25	286.2	28.5	1.4	8.9	14.9
10/16/92	15	0.25	140.50	286.2	29.8	1.6	9.1	14.5
10/16/92	30	0.25	140.75	285.8	32.8	1.0	10.2	10.7
10/16/92	45	0.25	141.00	285.9	27.6	0.6	9.3	12.6
10/16/92	100	0.25	141.25	287.5	26.8	0.5	8.9	16.9
10/16/92	115	0.25	141.50	286.3	28.4	0.6	8.0	17.2
10/16/92	130	0.25	141.75	284.9	28.4	0.6	7.4	13.8
10/16/92	145	0.25	142.00	280.5	26.4	2.5	8.2	10.7
10/16/92	200	0.25	142.25	281.5	26.5	2.3	10.2	11.0
10/16/92	215	0.25	142.50	283.3	26.5	2.0	9.6	9.3
10/16/92	230	0.25	142.75	282.5	25.0	1.5	10.1	9.4
10/16/92	245	0.25	143.00	283.5	26.6	1.2	11.1	7.6
10/16/92	300	0.25	143.25	281.2	25.7	1.1	11.2	7.5
10/16/92	315	0.25	143.50	281.9	25.6	0.6	11.5	9.0
10/16/92	330	0.25	143.75	282.4	25.2	0.3	9.0	10.4
10/16/92	345	0.25	144.00	281.1	25.0	0.3	8.6	11.0
10/16/92	400	0.25	144.25	281.5	25.1	0.3	9.1	13.4
10/16/92	415	0.25	144.50	281.5	25.0	0.2	9.8	8.6
10/16/92	430	0.25	144.75	281.6	25.6	1.7	9.8	12.0
10/16/92	445	0.25	145.00	280.0	25.6	2.0	8.7	10.1
10/16/92	500	0.25	145.25	279.6	29.2	1.6	11.2	8.9
10/16/92	515	0.25	145.50	278.7	25.0	2.4	9.7	9.0
10/16/92	530	0.25	145.75	279.0	25.2	2.1	9.1	10.9
10/16/92	545	0.25	146.00	278.3	25.1	2.2	7.5	11.4
10/16/92	600	0.25	146.25	281.2	25.2	2.7	8.0	37.3

SUMMARY OF LIME SLURRY INJECTION FROM SEPTEMBER 17, 1992 TO OCTOBER 16, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/16/92	615	0.25	146.50	282.0	25.3	2.0	7.8	17.8
10/16/92	630	0.25	146.75	282.3	25.6	2.1	10.0	16.9
10/16/92	645	0.25	147.00	283.4	25.5	1.4	8.5	18.0
10/16/92	700	0.25	147.25	282.9	29.6	1.8	8.1	12.7
10/16/92	715	0.25	147.50	288.4	27.9	1.3	7.1	19.2
10/16/92	730	0.25	147.75	289.5	28.0	1.0	8.3	14.8
10/16/92	1500	0.25	148.00	290.7	33.0	0.8	7.4	11.2
10/16/92	1515	0.25	148.25	290.9	35.0	0.8	5.7	10.8
10/16/92	1530	0.25	148.50	291.2	35.2	0.8	7.1	10.7
10/16/92	1545	0.25	148.75	292.3	35.4	0.8	8.3	10.2
10/16/92	1600	0.25	149.00	291.5	34.4	0.8	7.0	12.0
10/16/92	1615	0.25	149.25	291.2	34.3	1.3	5.7	12.0
10/16/92	1630	0.25	149.50	290.5	33.9	1.9	6.8	12.2
10/16/92	1645	0.25	149.75	290.8	34.1	2.2	6.0	12.3
10/16/92	1700	0.25	150.00	290.2	33.3	2.4	7.3	11.9
10/16/92	1715	0.25	150.25	290.4	33.2	2.1	7.3	12.1
10/16/92	1730	0.25	150.50	290.1	31.7	2.7	7.5	11.8
10/16/92	1745	0.25	150.75	289.9	31.2	2.3	6.8	13.9
10/16/92	1800	0.25	151.00	289.7	31.5	2.2	7.6	13.6
10/16/92	1815	0.25	151.25	290.0	33.0	2.4	9.2	12.6
10/16/92	1830	0.25	151.50	288.5	30.8	2.9	8.0	13.9
10/16/92	1845	0.25	151.75	287.5	31.1	2.6	8.0	14.0
10/16/92	1900	0.25	152.00	287.1	30.5	2.5	8.7	14.8
10/16/92	1915	0.25	152.25	286.1	30.1	2.8	6.7	16.6
10/16/92	1930	0.25	152.50	285.1	29.6	2.6	9.6	15.7
10/16/92	1945	0.25	152.75	284.3	28.8	2.8	9.8	16.3
10/16/92	2000	0.25	153.00	284.6	28.2	2.5	6.4	15.8
10/16/92	2015	0.25	153.25	284.6	27.9	2.7	9.1	18.0
10/16/92	2030	0.25	153.50	284.0	27.2	3.0	7.7	18.5
10/16/92	2045	0.25	153.75	283.1	26.8	2.5	9.3	18.6
10/16/92	2100	0.25	154.00	283.4	27.7	2.6	10.5	18.6
10/16/92	2115	0.25	154.25	283.6	27.5	2.6	15.9	17.9
Total Hours		14.25						

Appendix E

Tables With Summary of Lime Slurry Injection Data October 17 to November 16, 1992

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/17/92	100	0.25	154.50	287.1	31.4	4.4	3.7	10.7
10/17/92	115	0.25	154.75	287.9	34.8	4.7	11.0	11.4
10/17/92	130	0.25	155.00	286.9	34.6	4.6	11.7	12.1
10/17/92	145	0.25	155.25	287.3	33.9	4.2	13.4	16.6
10/17/92	200	0.25	155.50	289.3	35.1	4.4	13.5	12.9
10/17/92	215	0.25	155.75	288.9	36.5	4.0	11.6	6.4
10/17/92	230	0.25	156.00	288.6	34.9	4.1	16.5	9.5
10/17/92	245	0.25	156.25	288.4	35.4	3.7	15.7	7.0
10/17/92	300	0.25	156.50	287.3	34.9	4.2	16.4	9.4
10/17/92	315	0.25	156.75	289.3	34.1	4.0	15.3	9.7
10/17/92	330	0.25	157.00	288.4	34.0	4.2	17.2	11.0
10/17/92	345	0.25	157.25	288.0	33.5	4.2	16.7	9.2
10/17/92	400	0.25	157.50	289.2	33.6	4.1	17.0	9.1
10/17/92	415	0.25	157.75	287.4	36.8	4.0	19.4	9.4
10/17/92	430	0.25	158.00	287.1	33.5	3.9	21.4	8.7
10/17/92	445	0.25	158.25	286.4	32.7	4.0	19.7	8.5
10/17/92	500	0.25	158.50	285.8	32.8	4.1	19.8	8.9
10/17/92	515	0.25	158.75	287.8	32.4	4.4	21.1	6.4
10/17/92	530	0.25	159.00	288.3	32.9	3.7	22.7	6.9
10/17/92	545	0.25	159.25	287.9	32.4	4.0	20.5	7.2
10/17/92	600	0.25	159.50	287.1	32.7	4.0	20.1	6.7
10/17/92	615	0.25	159.75	285.7	33.5	4.4	24.0	7.2
10/17/92	630	0.25	160.00	283.7	32.1	4.3	22.1	7.0
10/17/92	645	0.25	160.25	281.7	31.7	4.3	19.8	8.0
10/17/92	700	0.25	160.50	284.1	32.3	4.1	19.1	7.9
10/17/92	715	0.25	160.75	285.5	31.5	4.2	16.8	8.7
10/17/92	730	0.25	161.00	285.0	30.7	4.0	18.3	12.0
10/17/92	745	0.25	161.25	283.5	34.0	4.1	16.7	8.9
10/17/92	800	0.25	161.50	284.4	32.8	4.0	18.9	10.3
10/17/92	815	0.25	161.75	284.6	32.9	3.8	17.8	10.5
10/17/92	830	0.25	162.00	285.0	34.4	4.3	20.3	10.8
10/17/92	845	0.25	162.25	285.9	32.1	4.1	17.9	11.0
10/17/92	900	0.25	162.50	285.6	31.5	3.8	17.3	13.1
10/17/92	915	0.25	162.75	286.1	30.2	3.8	16.7	12.6
10/17/92	930	0.25	163.00	286.1	31.1	4.2	19.0	12.5
10/17/92	945	0.25	163.25	286.6	32.4	4.2	17.6	12.6
10/17/92	1000	0.25	163.50	285.3	33.1	3.9	21.5	10.4
10/17/92	1015	0.25	163.75	285.5	30.2	4.2	17.9	*34.8
10/17/92	1030	0.25	164.00	285.2	32.0	3.8	19.0	13.7
10/17/92	1045	0.25	164.25	284.3	28.5	4.2	15.9	15.4
10/17/92	1100	0.25	164.50	284.2	25.2	4.3	17.5	17.8
Total Hours		10.25						
10/18/92	1545	0.25	164.75	279.2	31.9	3.6	7.7	8.9
10/18/92	1600	0.25	165.00	281.2	33.8	3.9	11.0	7.0
10/18/92	1615	0.25	165.25	282.1	34.1	4.2	11.2	18.8
10/18/92	1630	0.25	165.50	281.7	34.1	3.9	10.8	12.9

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/18/92	1645	0.25	165.75	281.2	35.1	3.8	12.2	10.3
10/18/92	1700	0.25	166.00	279.6	32.9	4.2	11.1	8.9
10/18/92	1715	0.25	166.25	277.7	31.6	4.1	11.1	9.6
10/18/92	1730	0.25	166.50	277.0	31.2	4.6	9.8	9.2
10/18/92	1745	0.25	166.75	277.7	31.7	4.3	12.2	8.8
10/18/92	1800	0.25	167.00	279.7	31.8	4.1	13.7	8.5
10/18/92	1815	0.25	167.25	281.6	32.9	4.1	10.9	8.8
10/18/92	1830	0.25	167.50	281.3	32.0	3.9	12.0	*28.1
10/18/92	1845	0.25	167.75	279.6	31.7	4.2	11.1	13.5
10/18/92	1900	0.25	168.00	281.0	31.9	4.4	11.5	11.8
10/18/92	1915	0.25	168.25	280.5	32.0	4.3	12.7	11.9
10/18/92	1930	0.25	168.50	279.9	30.7	4.7	12.6	14.4
10/18/92	1945	0.25	168.75	279.2	29.9	4.3	13.1	13.5
10/18/92	2000	0.25	169.00	279.0	30.3	4.4	13.3	13.4
10/18/92	2015	0.25	169.25	278.7	32.8	4.3	12.4	12.3
10/18/92	2030	0.25	169.50	276.9	28.4	4.6	21.9	13.0
10/18/92	2115	0.25	169.75	275.6	28.0	4.9	2.6	14.1
10/18/92	2130	0.25	170.00	274.6	29.4	4.6	16.3	13.0
10/18/92	2145	0.25	170.25	274.8	30.4	4.6	17.9	10.3
10/18/92	2200	0.25	170.50	273.9	28.7	4.1	16.5	11.5
10/18/92	2215	0.25	170.75	274.8	29.2	4.5	14.0	13.4
10/18/92	2230	0.25	171.00	275.9	29.9	4.2	15.8	13.3
10/18/92	2245	0.25	171.25	276.8	29.7	4.4	15.4	13.1
10/18/92	2300	0.25	171.50	276.2	29.4	3.9	15.9	12.7
10/18/92	2315	0.25	171.75	280.3	31.7	4.2	15.0	12.6
10/18/92	2330	0.25	172.00	279.0	30.7	4.0	14.4	13.5
10/18/92	2345	0.25	172.25	278.5	30.6	4.6	15.7	14.4
Total Hours		7.75						
10/19/92	0	0.25	172.50	276.0	32.9	4.4	15.0	13.4
10/19/92	15	0.25	172.75	276.7	31.4	4.2	9.6	12.0
10/19/92	30	0.25	173.00	279.0	34.8	4.7	12.8	13.6
10/19/92	45	0.25	173.25	283.6	29.7	4.6	14.2	10.5
10/19/92	100	0.25	173.50	285.6	30.5	4.3	11.2	9.1
10/19/92	115	0.25	173.75	285.5	29.7	4.5	11.7	9.1
10/19/92	130	0.25	174.00	286.6	30.2	4.3	11.5	10.5
10/19/92	145	0.25	174.25	285.6	29.8	4.4	13.0	14.4
10/19/92	200	0.25	174.50	285.2	30.3	4.2	13.7	10.3
10/19/92	215	0.25	174.75	284.8	30.7	4.4	14.6	13.2
10/19/92	230	0.25	175.00	283.6	28.1	4.5	13.1	11.4
10/19/92	245	0.25	175.25	284.9	30.0	4.1	13.1	13.1
10/19/92	300	0.25	175.50	285.8	27.9	4.3	16.8	11.8
10/19/92	315	0.25	175.75	288.9	27.6	4.4	11.8	14.6
10/19/92	1200	0.25	176.00	278.9	36.6	4.7	7.2	13.9
10/19/92	1215	0.25	176.25	279.4	36.0	4.5	7.0	14.0
10/19/92	1230	0.25	176.50	279.8	35.6	3.9	8.7	17.1
10/19/92	1245	0.25	176.75	279.4	35.0	3.3	7.5	13.9

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/19/92	1300	0.25	177.00	279.4	35.3	3.3	8.7	14.9
10/19/92	1315	0.25	177.25	280.1	35.4	4.9	8.7	18.2
10/19/92	1330	0.25	177.50	280.0	35.3	4.9	8.5	13.4
10/19/92	1345	0.25	177.75	281.0	38.6	4.2	10.9	18.5
10/19/92	1400	0.25	178.00	279.6	37.8	4.5	9.0	16.8
10/19/92	1415	0.25	178.25	279.4	34.8	4.2	11.4	13.8
10/19/92	1430	0.25	178.50	278.3	33.7	4.5	8.8	13.9
10/19/92	1445	0.25	178.75	279.9	34.0	4.0	8.8	17.5
10/19/92	1500	0.25	179.00	279.4	34.3	3.7	5.6	14.3
10/19/92	1515	0.25	179.25	278.8	33.5	3.8	8.6	*25
10/19/92	1530	0.25	179.50	279.1	33.5	4.3	8.4	14.2
10/19/92	1545	0.25	179.75	279.2	32.9	4.3	8.0	16.1
10/19/92	1600	0.25	180.00	277.5	32.4	4.1	8.2	16.5
10/19/92	1615	0.25	180.25	276.7	31.9	3.8	7.4	12.0
10/19/92	1630	0.25	180.50	279.1	32.3	4.1	8.7	10.8
10/19/92	1645	0.25	180.75	277.8	31.0	4.1	7.7	9.9
10/19/92	1700	0.25	181.00	278.0	31.7	3.9	7.6	8.7
10/19/92	1715	0.25	181.25	278.7	31.4	3.6	5.7	12.6
10/19/92	1730	0.25	181.50	278.7	31.2	3.8	5.5	12.2
10/19/92	1745	0.25	181.75	278.9	31.0	3.8	8.4	10.3
10/19/92	1800	0.25	182.00	278.0	33.4	3.5	8.8	11.2
10/19/92	1815	0.25	182.25	277.7	30.8	3.7	7.4	11.1
10/19/92	1830	0.25	182.50	276.9	31.3	3.6	6.8	15.1
10/19/92	1845	0.25	182.75	277.6	31.8	4.2	5.3	16.4
10/19/92	1900	0.25	183.00	278.1	31.9	4.3	7.9	15.1
10/19/92	1915	0.25	183.25	276.3	30.7	3.8	7.0	15.9
10/19/92	1930	0.25	183.50	276.2	30.1	3.9	9.8	14.6
10/19/92	1945	0.25	183.75	276.3	30.1	3.7	6.8	16.0
10/19/92	2000	0.25	184.00	276.2	30.6	4.0	7.4	15.1
10/19/92	2015	0.25	184.25	276.3	32.7	3.9	10.1	14.5
10/19/92	2030	0.25	184.50	274.8	29.9	4.1	10.1	15.3
10/19/92	2045	0.25	184.75	275.0	29.9	3.8	5.8	12.8
10/19/92	2100	0.25	185.00	275.2	29.8	3.8	4.3	12.4
10/19/92	2115	0.25	185.25	275.9	29.6	3.9	6.8	10.8
10/19/92	2130	0.25	185.50	276.5	29.8	3.9	11.6	10.5
10/19/92	2145	0.25	185.75	276.3	29.1	3.8	8.6	11.6
10/19/92	2200	0.25	186.00	276.5	33.6	3.9	6.7	9.6
10/19/92	2215	0.25	186.25	277.2	32.3	3.7	8.0	9.6
10/19/92	2230	0.25	186.50	278.5	32.4	3.7	9.7	10.5
10/19/92	2245	0.25	186.75	277.9	29.0	3.8	6.3	15.2
10/19/92	2300	0.25	187.00	277.4	28.7	4.0	7.4	12.3
10/19/92	2315	0.25	187.25	277.6	27.9	3.8	3.6	14.4
10/19/92	2330	0.25	187.50	278.7	29.3	3.8	9.8	11.6
10/19/92	2345	0.25	187.75	276.8	27.5	3.8	10.6	15.8
Total Hours		15.50						
10/20/92	600	0.25	188.00	272.0	33.6	3.4	8.0	9.7

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/20/92	615	0.25	188.25	272.3	34.1	3.4	4.3	13.5
10/20/92	630	0.25	188.50	273.2	33.3	3.7	8.2	12.0
10/20/92	645	0.25	188.75	271.8	33.1	3.8	4.6	14.5
10/20/92	700	0.25	189.00	272.0	32.8	3.7	8.4	14.3
10/20/92	715	0.25	189.25	272.0	32.7	3.8	4.1	13.7
10/20/92	730	0.25	189.50	270.5	32.1	3.7	11.3	15.2
10/20/92	745	0.25	189.75	269.6	32.7	3.6	7.7	15.7
10/20/92	800	0.25	190.00	271.2	32.5	4.1	10.5	15.9
10/20/92	815	0.25	190.25	269.6	32.5	4.0	9.7	15.3
10/20/92	830	0.25	190.50	270.5	31.8	3.8	12.4	15.3
10/20/92	845	0.25	190.75	270.3	33.1	3.6	8.3	14.8
10/20/92	900	0.25	191.00	271.6	33.2	4.1	8.0	15.7
10/20/92	915	0.25	191.25	271.6	35.5	4.2	7.9	17.3
10/20/92	930	0.25	191.50	272.0	33.9	3.8	12.6	17.1
10/20/92	945	0.25	191.75	272.5	31.1	3.8	10.2	16.4
10/20/92	1000	0.25	192.00	272.3	30.4	3.9	8.0	15.7
10/20/92	1015	0.25	192.25	273.4	30.7	3.7	6.7	17.6
10/20/92	1030	0.25	192.50	273.9	30.7	3.8	10.8	16.3
10/20/92	1045	0.25	192.75	274.5	30.0	3.9	8.3	15.4
10/20/92	1100	0.25	193.00	275.5	30.2	3.8	7.0	18.5
10/20/92	1115	0.25	193.25	276.9	32.4	4.5	11.9	16.2
10/20/92	1130	0.25	193.50	278.4	33.3	4.0	10.3	15.8
10/20/92	1145	0.25	193.75	278.3	31.3	3.9	10.6	15.7
10/20/92	1200	0.25	194.00	277.7	27.1	3.7	5.1	19.4
10/20/92	1215	0.25	194.25	283.6	28.7	4.1	6.6	17.8
10/20/92	1230	0.25	194.50	285.6	29.0	3.9	8.5	20.0
10/20/92	1245	0.25	194.75	282.3	27.7	3.9	8.0	19.9
10/20/92	1300	0.25	195.00	279.9	27.5	3.9	6.2	17.6
10/20/92	1315	0.25	195.25	280.6	25.9	4.0	9.3	19.6
10/20/92	1515	0.25	195.50	282.0	35.5	3.7	7.5	14.4
10/20/92	1530	0.25	195.75	282.4	35.5	3.3	5.7	16.3
10/20/92	1545	0.25	196.00	282.4	36.1	3.3	6.7	14.6
10/20/92	1600	0.25	196.25	283.9	36.6	2.7	9.4	16.5
10/20/92	1615	0.25	196.50	283.3	36.8	3.4	10.1	14.8
10/20/92	1630	0.25	196.75	282.5	36.3	5.2	8.6	14.2
10/20/92	1645	0.25	197.00	281.6	35.7	5.1	10.8	20.2
10/20/92	1700	0.25	197.25	281.4	35.5	4.3	14.3	16.3
10/20/92	1715	0.25	197.50	282.0	35.6	4.5	10.5	18.5
10/20/92	1730	0.25	197.75	281.1	36.7	4.2	13.6	16.8
10/20/92	1745	0.25	198.00	280.3	35.0	4.1	12.3	15.3
10/20/92	1800	0.25	198.25	279.8	35.8	4.5	10.3	15.8
10/20/92	1815	0.25	198.50	281.8	36.7	4.7	12.1	14.9
10/20/92	1830	0.25	198.75	284.0	37.6	3.9	11.0	14.2
10/20/92	1845	0.25	199.00	283.3	37.4	4.3	11.9	15.1
10/20/92	1900	0.25	199.25	282.2	36.8	4.3	14.1	14.4
10/20/92	1915	0.25	199.50	283.3	36.6	4.3	13.6	14.0
10/20/92	1930	0.25	199.75	283.6	36.5	4.0	14.2	14.5

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/20/92	1945	0.25	200.00	284.0	36.7	4.4	14.0	15.0
10/20/92	2000	0.25	200.25	283.7	36.3	4.3	14.9	15.9
10/20/92	2015	0.25	200.50	283.1	35.2	4.3	12.1	16.6
10/20/92	2030	0.25	200.75	283.3	35.3	4.3	14.0	13.3
10/20/92	2045	0.25	201.00	282.9	35.6	3.9	14.6	15.6
10/20/92	2100	0.25	201.25	282.3	34.9	4.2	15.4	13.5
10/20/92	2115	0.25	201.50	282.0	34.8	4.2	17.2	13.5
10/20/92	2130	0.25	201.75	281.4	34.0	3.9	18.9	14.0
10/20/92	2145	0.25	202.00	281.4	34.2	4.1	17.1	14.5
10/20/92	2200	0.25	202.25	281.3	33.3	4.3	14.4	12.9
10/20/92	2215	0.25	202.50	280.1	32.3	3.9	12.4	13.1
10/20/92	2230	0.25	202.75	278.8	31.7	4.2	14.7	11.7
10/20/92	2245	0.25	203.00	278.6	31.1	4.2	14.5	15.1
10/20/92	2300	0.25	203.25	276.9	31.6	4.3	13.3	14.7
10/20/92	2315	0.25	203.50	277.8	31.7	4.0	13.7	14.3
10/20/92	2330	0.25	203.75	275.9	27.6	4.1	16.8	15.4
10/20/92	2345	0.25	204.00	276.5	28.1	4.0	12.0	*25.6
Total Hours		16.25						
10/21/92	630	0.25	204.25	276.7	26.4	4.1	9.9	19.5
10/21/92	645	0.25	204.50	283.1	37.8	4.5	9.3	12.7
10/21/92	700	0.25	204.75	283.1	37.4	4.6	10.6	9.5
10/21/92	715	0.25	205.00	282.2	36.7	4.1	8.4	10.5
10/21/92	730	0.25	205.25	281.1	36.0	4.2	10.4	12.6
10/21/92	745	0.25	205.50	281.8	36.0	3.9	8.6	12.2
10/21/92	800	0.25	205.75	284.2	37.0	3.9	10.7	12.1
10/21/92	815	0.25	206.00	283.8	37.5	4.1	13.3	13.3
10/21/92	830	0.25	206.25	282.3	36.4	3.8	10.7	12.5
10/21/92	845	0.25	206.50	282.0	38.1	3.8	13.8	12.1
10/21/92	900	0.25	206.75	282.0	35.4	4.1	11.2	13.0
10/21/92	915	0.25	207.00	282.0	34.3	3.9	10.9	12.7
10/21/92	930	0.25	207.25	284.3	35.1	4.1	11.3	13.7
10/21/92	945	0.25	207.50	285.5	35.2	3.0	11.2	14.2
10/21/92	1000	0.25	207.75	287.3	35.4	2.9	9.0	13.9
10/21/92	1015	0.25	208.00	287.3	35.2	3.7	10.2	14.8
10/21/92	1030	0.25	208.25	286.7	34.6	4.5	10.4	16.8
10/21/92	1045	0.25	208.50	286.9	34.3	4.5	9.4	15.7
10/21/92	1100	0.25	208.75	286.4	39.0	4.9	13.3	14.1
10/21/92	1115	0.25	209.00	286.8	38.2	4.6	15.1	14.1
10/21/92	1130	0.25	209.25	287.1	37.9	4.3	13.9	14.3
10/21/92	1145	0.25	209.50	287.3	38.0	4.3	12.8	14.8
10/21/92	1200	0.25	209.75	287.4	38.1	4.6	15.7	12.7
10/21/92	1215	0.25	210.00	287.6	37.8	4.0	14.5	12.0
10/21/92	1230	0.25	210.25	289.0	37.1	4.1	15.0	12.8
10/21/92	1245	0.25	210.50	288.8	37.8	4.0	12.5	12.7
10/21/92	1300	0.25	210.75	288.1	37.9	3.9	13.2	13.9
10/21/92	1315	0.25	211.00	287.6	29.0	4.0	11.4	14.0

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/21/92	1330	0.25	211.25	286.9	31.1	4.2	9.5	14.7
10/21/92	1345	0.25	211.50	285.7	30.6	4.1	7.1	15.3
10/21/92	1615	0.25	211.75	286.2	36.2	3.8	3.1	12.8
10/21/92	1630	0.25	212.00	286.4	35.0	4.3	6.6	11.7
10/21/92	1645	0.25	212.25	285.5	30.6	4.2	9.9	16.5
10/21/92	1700	0.25	212.50	284.7	27.0	4.4	9.0	17.2
10/21/92	1800	0.25	212.75	284.3	27.8	5.2	12.9	19.0
10/21/92	1815	0.25	213.00	285.1	33.0	4.9	7.4	13.7
10/21/92	1830	0.25	213.25	286.9	34.1	4.4	10.6	14.5
10/21/92	1845	0.25	213.50	286.0	33.4	4.4	11.0	15.9
10/21/92	1900	0.25	213.75	285.8	33.1	4.8	12.1	14.7
10/21/92	1915	0.25	214.00	286.7	34.1	4.4	12.1	15.4
10/21/92	1930	0.25	214.25	285.9	34.0	4.4	13.0	16.2
10/21/92	1945	0.25	214.50	286.1	33.9	4.2	12.8	13.9
10/21/92	2000	0.25	214.75	285.3	34.1	4.3	10.5	13.5
10/21/92	2015	0.25	215.00	285.0	34.0	4.3	13.3	13.9
10/21/92	2030	0.25	215.25	285.3	34.0	4.3	12.3	13.9
10/21/92	2045	0.25	215.50	286.2	34.7	4.1	13.7	15.8
10/21/92	2100	0.25	215.75	286.1	35.2	4.6	13.1	13.8
10/21/92	2115	0.25	216.00	285.7	35.8	4.5	15.1	13.1
10/21/92	2130	0.25	216.25	286.1	36.1	4.6	13.5	15.2
10/21/92	2145	0.25	216.50	287.3	36.8	4.4	15.7	13.2
10/21/92	2200	0.25	216.75	283.0	34.3	4.3	16.3	15.6
10/21/92	2215	0.25	217.00	281.9	31.5	4.3	16.4	13.4
10/21/92	2230	0.25	217.25	282.4	31.9	4.1	14.6	14.6
10/21/92	2245	0.25	217.50	281.4	32.8	4.0	15.4	13.5
10/21/92	2300	0.25	217.75	279.8	32.7	4.5	15.6	20.8
10/21/92	2315	0.25	218.00	280.3	33.5	3.9	13.0	12.7
10/21/92	2330	0.25	218.25	279.4	33.6	4.2	14.7	12.3
10/21/92	2345	0.25	218.50	279.3	34.4	4.2	14.6	17.2
Total Hours		14.50						
10/22/92	0	0.25	218.75	279.3	34.6	4.2	14.6	12.8
10/22/92	15	0.25	219.00	280.0	35.4	4.2	14.1	14.1
10/22/92	30	0.25	219.25	280.3	35.8	4.2	12.3	14.1
10/22/92	45	0.25	219.50	281.0	37.4	4.2	9.9	14.7
10/22/92	100	0.25	219.75	280.8	38.1	4.2	11.2	15.5
10/22/92	115	0.25	220.00	279.5	35.2	4.2	10.4	12.2
10/22/92	130	0.25	220.25	278.9	29.1	4.2	12.9	10.9
10/22/92	145	0.25	220.50	276.6	27.6	4.2	11.3	12.2
10/22/92	200	0.25	220.75	276.8	28.1	4.2	11.5	12.1
10/22/92	215	0.25	221.00	276.7	27.9	4.2	10.9	12.0
10/22/92	230	0.25	221.25	277.8	19.0	4.2	8.6	**31.7
10/22/92	245	0.25	221.50	276.5	28.0	4.2	11.3	9.6
10/22/92	300	0.25	221.75	277.4	28.1	4.2	11.2	10.1
10/22/92	315	0.25	222.00	277.4	34.0	4.2	13.7	30.8
10/22/92	330	0.25	222.25	276.2	27.7	4.2	11.5	12.0

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/22/92	345	0.25	222.50	280.0	31.0	4.2	9.7	14.4
10/22/92	400	0.25	222.75	281.7	31.2	4.2	10.3	17.6
10/22/92	415	0.25	223.00	281.5	34.3	4.2	11.5	14.4
10/22/92	430	0.25	223.25	281.7	34.6	4.2	11.1	13.1
10/22/92	445	0.25	223.50	281.3	35.3	4.2	13.8	*31.2
10/22/92	500	0.25	223.75	282.6	35.5	4.2	12.1	13.1
10/22/92	515	0.25	224.00	283.5	36.4	4.2	15.0	13.0
10/22/92	530	0.25	224.25	283.1	36.0	4.2	16.9	11.9
10/22/92	545	0.25	224.50	282.8	35.2	4.2	14.0	13.0
10/22/92	600	0.25	224.75	282.8	36.9	4.2	13.5	13.3
10/22/92	615	0.25	225.00	282.8	37.1	4.2	15.8	14.3
10/22/92	630	0.25	225.25	282.8	35.9	4.2	17.0	15.7
10/22/92	645	0.25	225.50	280.6	29.1	4.2	10.6	16.5
10/22/92	700	0.25	225.75	278.2	30.9	4.2	16.2	11.0
10/22/92	715	0.25	226.00	277.8	30.2	4.2	12.6	15.9
10/22/92	730	0.25	226.25	277.3	28.2	4.2	12.1	15.1
10/22/92	745	0.25	226.50	276.9	28.9	4.2	12.0	15.0
10/22/92	800	0.25	226.75	278.4	28.5	4.0	11.1	16.4
10/22/92	815	0.25	227.00	277.6	29.1	3.8	10.2	16.6
10/22/92	830	0.25	227.25	278.3	32.1	4.0	12.5	13.5
10/22/92	845	0.25	227.50	276.9	30.3	4.1	13.7	13.7
10/22/92	900	0.25	227.75	277.7	29.0	4.4	12.5	12.7
10/22/92	915	0.25	228.00	277.7	29.0	4.4	12.5	12.7
10/22/92	930	0.25	228.25	277.7	29.0	4.4	12.5	12.7
10/22/92	945	0.25	228.50	277.9	30.3	3.9	11.9	13.7
10/22/92	1000	0.25	228.75	278.5	31.7	4.1	11.3	15.9
10/22/92	1015	0.25	229.00	279.4	31.7	3.8	10.6	10.9
10/22/92	1045	0.25	229.25	279.1	31.7	4.2	11.0	10.5
10/22/92	1100	0.25	229.50	279.8	32.2	3.8	11.1	9.9
10/22/92	1115	0.25	229.75	280.2	32.7	4.1	11.5	7.1
10/22/92	1130	0.25	230.00	281.3	27.0	4.0	11.9	7.9
10/22/92	1145	0.25	230.25	281.3	27.1	4.5	10.2	11.1
10/22/92	1200	0.25	230.50	282.6	26.6	4.1	7.6	11.0
10/22/92	1215	0.25	230.75	283.1	26.7	4.2	8.2	11.1
10/22/92	1230	0.25	231.00	284.6	31.1	4.0	9.1	19.3
10/22/92	1415	0.25	231.25	286.6	34.8	3.8	12.2	14.8
10/22/92	1430	0.25	231.50	287.0	35.4	3.7	11.2	15.2
10/22/92	1445	0.25	231.75	287.4	35.0	2.8	11.8	12.0
10/22/92	1500	0.25	232.00	288.0	34.2	2.9	10.4	13.7
10/22/92	1515	0.25	232.25	288.0	34.4	2.4	10.3	13.4
10/22/92	1530	0.25	232.50	289.1	31.5	4.1	12.1	14.0
10/22/92	1545	0.25	232.75	288.9	36.2	4.1	12.4	13.6
10/22/92	1600	0.25	233.00	288.8	35.9	4.0	14.3	12.4
10/22/92	1615	0.25	233.25	289.7	36.3	4.2	14.5	15.3
10/22/92	1630	0.25	233.50	292.0	37.0	3.6	13.6	14.2
10/22/92	1645	0.25	233.75	291.3	37.7	4.1	17.7	11.2
10/22/92	1700	0.25	234.00	289.4	35.5	4.1	16.6	11.1

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/22/92	1715	0.25	234.25	289.1	36.9	3.8	14.4	12.6
10/22/92	1730	0.25	234.50	288.3	36.7	4.2	14.8	15.2
10/22/92	1745	0.25	234.75	287.7	37.2	4.4	15.9	14.3
10/22/92	1800	0.25	235.00	286.4	34.4	4.0	15.4	14.9
10/22/92	1815	0.25	235.25	286.2	35.4	4.2	12.3	11.2
10/22/92	1830	0.25	235.50	285.6	35.8	3.9	15.8	11.8
10/22/92	1845	0.25	235.75	284.9	35.9	4.5	14.8	12.3
10/22/92	1900	0.25	236.00	284.4	34.7	4.1	14.6	15.8
10/22/92	1915	0.25	236.25	285.0	36.6	4.2	16.6	11.9
10/22/92	1930	0.25	236.50	284.1	35.9	3.8	17.1	14.1
10/22/92	1945	0.25	236.75	283.1	35.2	3.9	13.2	12.7
10/22/92	2000	0.25	237.00	282.1	35.1	4.4	14.2	14.4
10/22/92	2015	0.25	237.25	281.8	35.1	4.0	15.3	19.3
10/22/92	2030	0.25	237.50	281.6	35.2	4.2	15.8	13.8
10/22/92	2045	0.25	237.75	281.8	38.2	4.0	16.7	14.7
10/22/92	2100	0.25	238.00	279.8	35.6	4.2	16.1	13.4
10/22/92	2115	0.25	238.25	279.8	35.2	4.1	16.3	12.3
10/22/92	2130	0.25	238.50	280.0	33.9	4.2	16.9	17.5
10/22/92	2145	0.25	238.75	279.4	32.8	4.0	13.1	11.6
10/22/92	2200	0.25	239.00	279.1	33.6	3.7	15.2	21.7
10/22/92	2215	0.25	239.25	280.0	33.2	4.2	14.0	13.2
10/22/92	2230	0.25	239.50	279.9	33.9	4.3	14.6	11.9
10/22/92	2245	0.25	239.75	279.3	32.7	4.1	13.7	10.6
10/22/92	2300	0.25	240.00	279.3	32.7	4.3	13.7	13.2
10/22/92	2315	0.25	240.25	279.3	36.7	4.2	12.5	13.8
10/22/92	2330	0.25	240.50	277.9	31.3	4.3	15.4	11.0
10/22/92	2345	0.25	240.75	277.6	32.7	3.8	11.7	14.4
Total Hours		22.25						
10/23/92	0	0.25	241.00	277.7	31.6	4.1	13.3	12.5
10/23/92	15	0.25	241.25	278.6	29.6	4.2	4.9	11.8
10/23/92	30	0.25	241.50	278.7	30.3	3.9	9.1	20.0
10/23/92	45	0.25	241.75	276.9	30.2	4.2	9.2	12.3
10/23/92	100	0.25	242.00	278.9	30.4	4.1	10.1	15.7
10/23/92	115	0.25	242.25	278.7	29.6	4.1	8.8	11.7
10/23/92	130	0.25	242.50	277.3	29.1	4.4	9.0	15.6
10/23/92	600	0.25	242.75	276.8	28.4	5.5	9.4	14.6
10/23/92	615	0.25	243.00	276.6	27.9	5.1	9.0	15.6
10/23/92	630	0.25	243.25	276.6	30.3	4.8	8.9	13.8
10/23/92	645	0.25	243.50	277.4	30.5	4.8	7.9	13.5
10/23/92	700	0.25	243.75	277.6	30.5	4.7	11.0	14.2
10/23/92	715	0.25	244.00	277.6	30.6	4.6	10.1	14.6
10/23/92	730	0.25	244.25	277.6	31.1	4.3	12.8	16.5
10/23/92	745	0.25	244.50	278.0	31.6	4.7	11.8	12.8
10/23/92	800	0.25	244.75	278.2	31.4	4.5	12.2	14.9
10/23/92	815	0.25	245.00	278.2	31.4	4.5	12.2	14.9
10/23/92	830	0.25	245.25	277.9	35.2	4.2	13.7	12.4

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/23/92	845	0.25	245.50	277.4	34.7	4.2	15.4	13.1
10/23/92	900	0.25	245.75	276.9	34.5	4.2	15.1	17.3
10/23/92	915	0.25	246.00	277.3	34.1	4.1	13.8	12.1
10/23/92	930	0.25	246.25	276.7	34.1	3.8	14.3	16.4
10/23/92	945	0.25	246.50	277.8	34.4	4.0	12.6	14.3
10/23/92	1000	0.25	246.75	278.0	34.5	4.1	15.1	13.3
10/23/92	1015	0.25	247.00	278.3	34.6	3.9	12.2	14.2
10/23/92	1030	0.25	247.25	279.0	33.8	3.7	15.1	12.3
10/23/92	1045	0.25	247.50	278.9	33.6	3.0	11.7	13.5
10/23/92	1100	0.25	247.75	280.0	35.8	2.6	16.2	14.1
10/23/92	1115	0.25	248.00	281.5	35.9	4.8	14.3	16.1
10/23/92	1130	0.25	248.25	282.8	36.2	4.2	12.9	14.2
10/23/92	1145	0.25	248.50	283.7	36.3	4.6	16.5	17.8
10/23/92	1200	0.25	248.75	284.1	36.2	4.0	14.4	13.1
10/23/92	1215	0.25	249.00	284.5	34.9	4.4	12.9	14.5
10/23/92	1230	0.25	249.25	285.2	33.6	4.1	12.5	14.1
10/23/92	1245	0.25	249.50	286.4	35.6	4.3	14.9	12.5
10/23/92	1300	0.25	249.75	288.2	36.4	3.8	14.9	14.0
10/23/92	1315	0.25	250.00	289.4	38.1	4.3	13.8	14.6
10/23/92	1330	0.25	250.25	289.9	38.6	3.9	16.0	16.8
10/23/92	1345	0.25	250.50	290.7	38.5	4.4	16.3	13.0
10/23/92	1400	0.25	250.75	290.7	38.5	4.4	16.3	13.0
10/23/92	1415	0.25	251.00	290.7	38.5	4.4	16.3	13.0
10/23/92	1430	0.25	251.25	290.7	38.5	4.4	16.3	13.0
10/23/92	1445	0.25	251.50	291.2	40.8	4.1	18.3	13.8
10/23/92	1500	0.25	251.75	290.7	38.5	4.4	16.3	13.0
10/23/92	1515	0.25	252.00	290.7	38.5	4.4	16.3	13.0
10/23/92	1530	0.25	252.25	290.7	38.5	4.4	16.3	13.0
10/23/92	1545	0.25	252.50	292.0	37.8	3.9	14.3	15.5
10/23/92	1600	0.25	252.75	291.7	33.6	4.3	13.5	16.5
10/23/92	1615	0.25	253.00	291.4	34.1	4.4	12.7	13.0
10/23/92	1630	0.25	253.25	291.0	36.2	4.4	11.9	11.8
10/23/92	1645	0.25	253.50	291.1	36.8	4.4	12.8	12.1
10/23/92	1700	0.25	253.75	291.8	36.9	4.4	12.1	13.0
10/23/92	1715	0.25	254.00	291.0	36.9	4.1	14.7	13.3
10/23/92	1730	0.25	254.25	290.0	31.6	4.3	8.1	15.1
10/23/92	1745	0.25	254.50	288.9	33.0	4.3	15.3	13.6
10/23/92	1800	0.25	254.75	290.0	34.8	4.2	12.7	12.6
10/23/92	1815	0.25	255.00	287.7	30.5	4.0	11.0	14.9
10/23/92	1830	0.25	255.25	287.1	30.8	3.8	9.0	17.2
10/23/92	1845	0.25	255.50	285.5	30.3	3.9	7.4	13.5
10/23/92	1900	0.25	255.75	286.0	31.7	4.0	9.6	15.1
10/23/92	1915	0.25	256.00	285.0	30.9	4.0	11.6	15.2
10/23/92	1930	0.25	256.25	285.0	30.4	4.1	5.7	16.6
10/23/92	1945	0.25	256.50	282.5	27.7	3.9	5.8	13.0
10/23/92	2000	0.25	256.75	281.4	27.9	4.2	5.2	15.2
10/23/92	2015	0.25	257.00	279.8	29.0	4.4	2.8	16.8

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
10/23/92	2030	0.25	257.25	280.7	28.1	4.1	12.1	14.7
10/23/92	2045	0.25	257.50	281.6	30.5	4.4	8.9	15.4
10/23/92	2100	0.25	257.75	281.0	32.5	4.1	6.7	14.4
10/23/92	2115	0.25	258.00	280.9	34.5	3.9	9.5	12.8
10/23/92	2130	0.25	258.25	279.9	32.8	3.9	14.5	14.2
10/23/92	2145	0.25	258.50	280.0	33.8	4.2	14.8	14.8
10/23/92	2200	0.25	258.75	279.9	32.4	4.5	14.6	14.6
10/23/92	2215	0.25	259.00	279.9	35.2	4.2	11.0	14.7
10/23/92	2230	0.25	259.25	279.6	32.6	3.7	9.8	13.9
10/23/92	2245	0.25	259.50	279.4	32.5	4.1	10.6	15.1
10/23/92	2300	0.25	259.75	279.0	32.4	4.2	10.9	15.8
Total Hours		19.00						
11/2/92	1615	0.25	260.00	280.1	26.9	6.2	10.4	12.3
11/2/92	1630	0.25	260.25	281.5	31.3	6.1	9.7	11.8
11/2/92	1645	0.25	260.50	281.7	31.7	5.9	10.5	11.7
11/2/92	1700	0.25	260.75	283.4	30.8	5.1	12.6	12.9
11/2/92	1715	0.25	261.00	280.6	29.7	5.7	10.2	12.6
11/2/92	1730	0.25	261.25	278.8	30.7	5.8	11.9	11.7
11/2/92	1745	0.25	261.50	282.0	33.3	5.4	14.8	11.7
11/2/92	1800	0.25	261.75	282.9	34.6	5.4	12.4	12.0
11/2/92	1815	0.25	262.00	280.2	34.2	4.8	18.1	14.6
11/2/92	1830	0.25	262.25	282.1	33.0	5.7	14.8	13.2
11/2/92	1845	0.25	262.50	283.7	35.2	5.3	20.5	13.1
11/2/92	1900	0.25	262.75	282.7	33.2	5.1	16.8	13.3
11/2/92	1915	0.25	263.00	282.1	33.9	5.4	18.6	12.4
11/2/92	1930	0.25	263.25	283.5	33.3	4.7	13.7	17.6
11/2/92	1945	0.25	263.50	281.3	33.3	4.9	14.9	14.8
11/2/92	2000	0.25	263.75	282.2	34.4	5.2	17.8	12.9
11/2/92	2015	0.25	264.00	283.5	34.1	5.4	13.5	14.0
11/2/92	2030	0.25	264.25	281.4	33.2	4.8	14.5	13.8
11/2/92	2045	0.25	264.50	278.1	34.1	5.2	18.3	14.5
11/2/92	2100	0.25	264.75	278.5	32.0	5.1	19.0	13.2
11/2/92	2115	0.25	265.00	279.9	32.8	4.9	12.5	14.8
11/2/92	2130	0.25	265.25	279.2	32.6	5.2	20.2	15.8
11/2/92	2145	0.25	265.50	278.5	32.6	5.3	18.6	14.0
11/2/92	2200	0.25	265.75	279.0	31.9	5.1	16.1	14.1
11/2/92	2215	0.25	266.00	278.5	31.7	4.9	20.9	14.2
11/2/92	2230	0.25	266.25	280.1	32.1	5.1	15.0	13.0
11/2/92	2245	0.25	266.50	280.3	31.8	4.9	19.0	16.4
11/2/92	2300	0.25	266.75	277.9	30.4	5.0	18.9	15.7
11/2/92	2315	0.25	267.00	277.7	30.6	4.8	17.3	13.4
11/2/92	2330	0.25	267.25	278.8	30.4	4.9	20.3	13.0
11/2/92	2345	0.25	267.50	279.9	29.4	4.9	11.8	14.8
Total Hours		7.75						
11/3/92	0	0.25	267.75	278.1	29.6	5.3	19.9	12.6

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/3/92	15	0.25	268.00	280.0	30.0	5.1	16.7	10.5
11/3/92	30	0.25	268.25	281.0	29.7	5.0	12.0	10.0
11/3/92	45	0.25	268.50	278.7	29.5	5.4	8.5	10.1
11/3/92	100	0.25	268.75	279.1	29.4	5.1	13.1	9.4
11/3/92	115	0.25	269.00	280.2	29.5	5.4	10.1	10.1
11/3/92	130	0.25	269.25	281.0	28.7	4.8	11.6	10.9
11/3/92	145	0.25	269.50	279.1	29.4	4.9	7.5	11.7
11/3/92	200	0.25	269.75	276.4	28.8	4.8	16.5	10.1
11/3/92	215	0.25	270.00	275.3	29.3	5.3	16.7	10.4
11/3/92	230	0.25	270.25	275.4	29.0	5.1	17.1	11.0
11/3/92	245	0.25	270.50	275.6	28.7	5.2	13.6	10.2
11/3/92	300	0.25	270.75	274.6	29.3	5.2	15.5	11.6
11/3/92	315	0.25	271.00	274.5	29.4	5.8	15.0	14.0
11/3/92	330	0.25	271.25	274.2	29.0	5.4	13.1	13.2
11/3/92	345	0.25	271.50	274.8	29.1	5.4	12.0	11.8
11/3/92	400	0.25	271.75	273.5	29.4	5.5	12.2	12.1
11/3/92	415	0.25	272.00	272.9	29.9	5.6	10.9	*24.1
11/3/92	430	0.25	272.25	274.0	29.9	5.6	16.0	11.4
11/3/92	445	0.25	272.50	272.8	31.3	5.4	17.0	9.4
11/3/92	500	0.25	272.75	273.6	30.0	5.4	12.7	9.0
11/3/92	515	0.25	273.00	273.6	29.9	5.0	14.6	9.4
11/3/92	530	0.25	273.25	272.1	29.0	5.1	13.9	9.2
11/3/92	545	0.25	273.50	271.5	29.3	4.9	13.8	9.9
11/3/92	600	0.25	273.75	272.2	28.5	5.2	14.4	9.9
11/3/92	615	0.25	274.00	272.2	29.2	5.1	15.9	9.8
11/3/92	630	0.25	274.25	271.9	29.8	5.0	16.1	10.7
11/3/92	645	0.25	274.50	271.7	29.0	5.0	13.8	12.0
11/3/92	700	0.25	274.75	272.2	29.4	5.0	9.0	12.6
11/3/92	715	0.25	275.00	270.7	29.7	5.0	17.6	14.0
11/3/92	730	0.25	275.25	269.8	30.0	5.3	11.7	13.7
11/3/92	745	0.25	275.50	272.5	29.8	5.2	18.0	11.3
11/3/92	800	0.25	275.75	272.5	29.8	5.1	10.3	11.0
11/3/92	815	0.25	276.00	272.9	29.2	4.9	19.2	*59.0
11/3/92	830	0.25	276.25	271.3	30.4	5.0	11.5	12.2
11/3/92	845	0.25	276.50	271.8	30.5	5.4	17.5	12.0
11/3/92	900	0.25	276.75	272.5	29.9	5.0	14.2	12.0
11/3/92	915	0.25	277.00	274.9	28.7	5.0	16.0	11.6
11/3/92	930	0.25	277.25	274.7	29.3	5.0	15.0	10.3
11/3/92	945	0.25	277.50	275.4	28.6	5.2	18.5	11.0
11/3/92	1000	0.25	277.75	276.9	30.4	5.2	17.2	10.4
11/3/92	1015	0.25	278.00	276.6	28.7	4.9	17.0	11.8
11/3/92	1030	0.25	278.25	279.4	29.8	5.2	19.4	11.7
11/3/92	1045	0.25	278.50	279.1	30.4	5.5	15.2	11.4
11/3/92	1100	0.25	278.75	280.2	30.4	5.5	18.3	10.4
11/3/92	1115	0.25	279.00	281.3	35.5	5.4	18.7	12.4
11/3/92	1130	0.25	279.25	282.8	36.4	4.9	15.4	10.5
11/3/92	1145	0.25	279.50	283.3	34.7	5.4	14.1	11.5

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/3/92	1200	0.25	279.75	285.2	34.9	5.1	15.2	12.4
11/3/92	1215	0.25	280.00	285.0	34.7	5.3	15.5	11.1
11/3/92	1230	0.25	280.25	284.7	34.9	5.0	17.9	10.6
11/3/92	1245	0.25	280.50	285.0	34.4	4.8	12.1	10.8
11/3/92	1300	0.25	280.75	283.2	35.0	5.1	18.3	12.1
11/3/92	1315	0.25	281.00	282.0	34.6	5.1	18.1	11.0
11/3/92	1330	0.25	281.25	283.4	33.9	5.2	14.7	13.0
11/3/92	1345	0.25	281.50	286.1	35.1	5.1	18.8	11.9
11/3/92	1400	0.25	281.75	285.8	34.5	4.2	14.7	12.3
11/3/92	1415	0.25	282.00	284.8	33.8	5.9	18.6	11.3
11/3/92	1430	0.25	282.25	285.8	34.4	6.5	18.2	12.0
11/3/92	1445	0.25	282.50	285.0	34.1	6.1	17.2	13.2
11/3/92	1500	0.25	282.75	285.2	34.1	6.3	16.5	11.3
11/3/92	1515	0.25	283.00	285.4	33.6	6.0	17.2	12.5
11/3/92	1530	0.25	283.25	284.1	32.4	6.3	13.4	12.8
11/3/92	1545	0.25	283.50	283.6	31.4	6.1	12.8	12.6
11/3/92	1600	0.25	283.75	285.2	31.2	6.0	14.9	12.4
11/3/92	1615	0.25	284.00	282.8	31.6	6.1	18.1	13.8
11/3/92	1630	0.25	284.25	282.5	31.6	6.1	10.9	12.5
11/3/92	1645	0.25	284.50	284.5	32.1	6.6	20.8	12.5
11/3/92	1700	0.25	284.75	280.9	30.6	6.2	13.8	11.9
11/3/92	1715	0.25	285.00	280.7	30.8	6.1	12.4	12.1
11/3/92	1730	0.25	285.25	280.4	30.1	6.6	12.3	12.5
11/3/92	1745	0.25	285.50	278.9	29.9	5.9	18.1	11.7
11/3/92	1800	0.25	285.75	278.1	29.2	6.3	11.0	11.9
11/3/92	1815	0.25	286.00	278.0	29.6	5.8	12.8	12.3
11/3/92	1830	0.25	286.25	278.2	29.7	5.8	11.8	12.1
11/3/92	1845	0.25	286.50	277.4	28.1	6.3	13.9	13.5
11/3/92	1900	0.25	286.75	277.8	28.4	6.4	10.4	12.7
11/3/92	1915	0.25	287.00	276.8	28.2	6.3	11.2	12.2
11/3/92	1930	0.25	287.25	277.2	28.3	6.2	11.2	12.8
11/3/92	1945	0.25	287.50	277.1	28.2	6.4	10.3	12.0
11/3/92	2000	0.25	287.75	276.2	28.0	6.4	12.1	12.6
11/3/92	2015	0.25	288.00	276.9	28.6	6.4	12.6	13.1
11/3/92	2030	0.25	288.25	277.1	26.9	6.0	10.8	14.1
11/3/92	2045	0.25	288.50	276.8	28.2	6.1	9.5	15.0
11/3/92	2100	0.25	288.75	277.8	28.6	6.2	9.8	14.0
11/3/92	2115	0.25	289.00	278.5	29.0	5.8	10.9	12.0
11/3/92	2130	0.25	289.25	278.0	28.9	6.1	9.9	12.3
11/3/92	2145	0.25	289.50	278.0	28.6	5.9	13.4	14.3
11/3/92	2200	0.25	289.75	278.6	28.8	5.8	12.6	12.7
11/3/92	2215	0.25	290.00	278.1	28.9	5.9	18.1	13.1
11/3/92	2230	0.25	290.25	279.0	28.0	6.3	17.5	14.3
11/3/92	2245	0.25	290.50	278.1	28.6	5.9	13.0	13.2
11/3/92	2300	0.25	290.75	278.5	28.6	5.8	14.2	12.6
11/3/92	2315	0.25	291.00	278.0	28.2	5.9	13.3	15.5
11/3/92	2330	0.25	291.25	279.5	28.2	6.1	12.2	12.2

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/3/92	2345	0.25	291.50	281.7	30.2	5.8	15.9	12.3
Total Hours		24.00						
11/4/92	0	0.25	291.75	282.8	30.8	6.0	20.8	13.8
11/4/92	15	0.25	292.00	280.6	30.1	6.1	13.6	15.0
11/4/92	30	0.25	292.25	282.5	30.6	5.6	10.0	11.5
11/4/92	45	0.25	292.50	280.3	31.4	5.9	15.5	11.6
11/4/92	100	0.25	292.75	280.7	33.1	5.9	15.3	10.7
11/4/92	115	0.25	293.00	281.6	32.9	6.1	18.9	10.9
11/4/92	130	0.25	293.25	283.3	33.4	5.6	18.4	10.8
11/4/92	145	0.25	293.50	279.7	33.9	6.3	16.5	10.6
11/4/92	200	0.25	293.75	276.8	33.1	6.1	18.6	10.8
11/4/92	215	0.25	294.00	277.2	34.6	6.0	18.0	12.8
11/4/92	230	0.25	294.25	276.1	33.4	6.0	20.8	11.4
11/4/92	245	0.25	294.50	277.1	34.0	6.3	20.3	11.0
11/4/92	300	0.25	294.75	277.1	33.5	6.2	18.5	10.0
11/4/92	315	0.25	295.00	276.1	32.6	6.0	19.8	10.7
11/4/92	330	0.25	295.25	276.6	32.8	6.4	17.8	13.6
11/4/92	345	0.25	295.50	277.7	32.5	5.8	21.0	12.3
11/4/92	400	0.25	295.75	275.7	32.1	6.2	17.3	12.2
11/4/92	415	0.25	296.00	274.6	31.4	5.9	18.3	14.1
11/4/92	430	0.25	296.25	275.8	31.9	6.0	17.2	11.5
11/4/92	445	0.25	296.50	276.1	31.6	5.8	20.0	10.9
11/4/92	500	0.25	296.75	276.1	31.5	6.3	16.5	9.7
11/4/92	515	0.25	297.00	273.7	31.3	6.2	12.7	10.0
11/4/92	530	0.25	297.25	274.9	31.3	6.1	17.9	9.6
11/4/92	545	0.25	297.50	274.3	27.5	5.9	19.9	9.3
11/4/92	600	0.25	297.75	273.2	26.5	6.1	11.9	9.3
11/4/92	615	0.25	298.00	273.9	26.1	6.5	13.3	12.2
11/4/92	630	0.25	298.25	273.6	25.9	5.7	12.3	13.0
11/4/92	645	0.25	298.50	273.2	25.9	6.0	11.2	12.9
11/4/92	700	0.25	298.75	272.9	27.4	6.2	13.3	13.2
11/4/92	715	0.25	299.00	271.9	26.4	6.2	14.6	15.4
11/4/92	730	0.25	299.25	273.5	25.7	5.9	12.4	14.4
11/4/92	745	0.25	299.50	273.3	25.7	5.7	13.6	14.6
11/4/92	800	0.25	299.75	274.5	26.8	5.9	10.7	14.7
11/4/92	815	0.25	300.00	275.3	26.6	6.1	14.5	14.0
11/4/92	830	0.25	300.25	276.6	27.0	6.3	11.9	14.9
11/4/92	845	0.25	300.50	276.9	27.6	6.2	12.7	14.0
11/4/92	900	0.25	300.75	277.1	27.7	5.7	12.3	13.9
11/4/92	915	0.25	301.00	277.8	30.1	6.0	6.4	12.5
11/4/92	930	0.25	301.25	278.9	30.2	6.2	7.6	12.5
11/4/92	945	0.25	301.50	278.4	28.6	6.2	8.3	14.6
11/4/92	1000	0.25	301.75	278.9	27.3	6.2	9.0	14.1
11/4/92	1015	0.25	302.00	279.5	29.6	5.9	7.6	14.6
11/4/92	1030	0.25	302.25	280.8	28.2	6.2	15.7	14.2
11/4/92	1045	0.25	302.50	279.2	26.9	6.1	15.4	13.8

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/4/92	1100	0.25	302.75	279.3	29.6	6.4	14.0	14.4
11/4/92	1115	0.25	303.00	281.6	33.3	6.4	15.8	13.9
11/4/92	1130	0.25	303.25	282.0	34.1	5.9	16.1	12.6
11/4/92	1145	0.25	303.50	285.0	35.3	6.1	21.4	15.7
11/4/92	1200	0.25	303.75	284.7	35.1	6.3	19.2	14.8
11/4/92	1215	0.25	304.00	285.4	35.0	6.1	19.1	13.5
11/4/92	1230	0.25	304.25	285.9	34.5	6.0	18.6	14.0
11/4/92	1245	0.25	304.50	285.5	36.0	6.2	25.2	14.9
11/4/92	1300	0.25	304.75	284.0	34.9	5.8	21.3	16.6
11/4/92	1315	0.25	305.00	284.1	34.6	6.4	21.3	39.3
11/4/92	1330	0.25	305.25	284.9	35.2	5.9	22.1	8.7
11/4/92	1345	0.25	305.50	284.6	35.5	6.1	21.6	*64.5
11/4/92	1400	0.25	305.75	284.4	34.9	6.1	21.4	12.1
11/4/92	1415	0.25	306.00	285.0	35.9	6.2	22.3	15.5
11/4/92	1430	0.25	306.25	282.8	35.0	6.2	23.8	13.9
11/4/92	1445	0.25	306.50	283.2	34.9	7.5	22.6	13.6
11/4/92	1500	0.25	306.75	284.1	34.6	7.1	22.5	12.4
11/4/92	1515	0.25	307.00	284.2	34.4	7.2	23.6	14.8
11/4/92	1530	0.25	307.25	284.1	35.0	7.2	25.8	12.7
11/4/92	1545	0.25	307.50	283.3	34.5	7.0	21.3	14.4
11/4/92	1600	0.25	307.75	281.2	34.6	6.9	24.5	13.7
11/4/92	1615	0.25	308.00	279.9	33.9	7.3	22.8	12.9
11/4/92	1630	0.25	308.25	279.9	30.9	7.0	21.8	13.8
11/4/92	1645	0.25	308.50	278.8	30.1	7.0	17.5	13.9
11/4/92	1700	0.25	308.75	279.6	31.1	7.0	19.4	12.8
11/4/92	1715	0.25	309.00	278.9	31.4	7.1	22.3	17.2
11/4/92	1730	0.25	309.25	278.9	32.0	7.4	21.7	18.4
11/4/92	1745	0.25	309.50	277.7	32.0	7.1	22.2	16.4
11/4/92	1800	0.25	309.75	275.5	31.6	6.9	20.0	15.7
11/4/92	1815	0.25	310.00	276.4	31.8	6.7	21.2	14.6
11/4/92	1830	0.25	310.25	277.2	31.8	6.9	20.7	14.0
11/4/92	1845	0.25	310.50	277.4	31.3	7.3	23.7	15.3
11/4/92	1900	0.25	310.75	276.5	31.8	6.8	20.2	14.1
11/4/92	1915	0.25	311.00	275.7	31.5	6.9	21.4	13.8
11/4/92	1930	0.25	311.25	275.2	31.5	7.0	19.6	14.3
11/4/92	1945	0.25	311.50	275.7	31.7	7.5	18.2	15.7
11/4/92	2000	0.25	311.75	276.1	31.8	7.0	19.8	14.0
11/4/92	2015	0.25	312.00	275.9	28.5	7.6	20.6	16.1
11/4/92	2030	0.25	312.25	275.9	30.6	7.3	18.0	15.4
11/4/92	2045	0.25	312.50	275.2	29.8	7.3	19.3	13.8
11/4/92	2100	0.25	312.75	275.1	30.1	6.9	19.0	15.5
11/4/92	2115	0.25	313.00	275.1	29.9	7.2	19.6	15.6
11/4/92	2130	0.25	313.25	275.5	30.9	7.6	23.0	14.9
11/4/92	2145	0.25	313.50	274.9	29.4	7.3	19.6	15.3
11/4/92	2200	0.25	313.75	274.5	30.2	6.9	20.7	16.9
11/4/92	2215	0.25	314.00	275.4	30.3	7.1	17.7	15.0
11/4/92	2230	0.25	314.25	274.3	30.3	7.1	18.5	10.6

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/4/92	2245	0.25	314.50	274.0	29.5	7.2	19.1	10.9
11/4/92	2300	0.25	314.75	274.0	29.9	6.4	18.6	11.4
11/4/92	2315	0.25	315.00	274.7	29.9	7.3	19.0	11.4
11/4/92	2330	0.25	315.25	273.5	29.9	6.9	16.9	11.8
11/4/92	2345	0.25	315.50	273.8	29.9	6.6	19.9	12.8
Total Hours		24.00						
11/5/92	0	0.25	315.75	273.7	29.9	7.0	20.8	10.7
11/5/92	15	0.25	316.00	274.3	30.1	7.0	19.2	*54.1
11/5/92	30	0.25	316.25	272.6	29.3	6.7	16.2	10.9
11/5/92	45	0.25	316.50	274.1	29.5	6.8	20.8	10.4
11/5/92	100	0.25	316.75	273.6	29.9	7.1	16.1	10.2
11/5/92	115	0.25	317.00	274.2	29.5	7.2	17.1	11.2
11/5/92	130	0.25	317.25	275.6	29.5	7.1	15.1	10.3
11/5/92	145	0.25	317.50	275.1	30.6	7.0	19.0	9.7
11/5/92	200	0.25	317.75	272.5	26.0	7.3	13.0	11.3
11/5/92	215	0.25	318.00	271.6	25.6	7.2	14.1	12.2
11/5/92	230	0.25	318.25	272.1	27.9	7.1	13.9	10.1
11/5/92	245	0.25	318.50	270.3	27.1	6.7	16.6	9.4
11/5/92	300	0.25	318.75	272.6	25.6	7.1	14.3	15.0
11/5/92	315	0.25	319.00	272.6	27.8	7.0	16.4	15.1
11/5/92	330	0.25	319.25	272.6	28.4	7.0	16.2	13.7
11/5/92	345	0.25	319.50	273.0	28.4	7.1	21.3	12.4
11/5/92	400	0.25	319.75	273.2	28.1	7.2	15.7	12.8
11/5/92	415	0.25	320.00	272.1	28.7	6.9	16.3	12.3
11/5/92	430	0.25	320.25	271.8	29.1	6.8	15.6	13.1
11/5/92	445	0.25	320.50	271.3	29.2	7.2	16.8	12.4
11/5/92	500	0.25	320.75	272.3	30.7	7.3	17.0	12.1
11/5/92	515	0.25	321.00	272.8	31.1	7.3	21.8	12.5
11/5/92	530	0.25	321.25	272.1	32.3	7.3	23.9	15.8
11/5/92	545	0.25	321.50	273.0	32.2	7.2	21.3	12.5
11/5/92	600	0.25	321.75	273.5	30.9	7.1	21.1	12.0
11/5/92	615	0.25	322.00	271.2	31.1	7.3	23.4	10.8
11/5/92	630	0.25	322.25	271.8	32.0	7.2	21.8	9.8
11/5/92	645	0.25	322.50	273.5	31.2	7.3	24.1	12.2
11/5/92	700	0.25	322.75	272.2	30.5	6.9	22.2	11.2
11/5/92	715	0.25	323.00	271.6	30.1	7.2	20.7	11.3
11/5/92	730	0.25	323.25	272.7	29.7	6.9	21.2	11.0
11/5/92	745	0.25	323.50	273.4	30.4	7.3	20.6	11.5
11/5/92	800	0.25	323.75	273.8	30.3	6.9	21.9	12.4
11/5/92	815	0.25	324.00	273.0	30.0	6.9	24.1	12.0
11/5/92	830	0.25	324.25	274.7	29.9	7.2	20.5	8.2
11/5/92	845	0.25	324.50	275.0	29.9	7.4	20.8	8.4
11/5/92	900	0.25	324.75	274.2	29.6	6.9	20.2	8.8
11/5/92	915	0.25	325.00	273.7	29.4	7.2	19.9	9.5
11/5/92	930	0.25	325.25	273.3	29.2	7.0	20.4	11.3
11/5/92	945	0.25	325.50	273.2	29.3	7.1	20.7	12.0

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/5/92	1000	0.25	325.75	274.2	30.7	7.2	21.2	9.8
11/5/92	1015	0.25	326.00	273.0	29.5	7.1	20.9	9.8
11/5/92	1030	0.25	326.25	273.3	30.0	7.3	21.5	9.3
11/5/92	1045	0.25	326.50	273.4	29.8	7.1	23.9	9.9
11/5/92	1100	0.25	326.75	272.9	30.4	7.3	15.9	11.4
11/5/92	1115	0.25	327.00	273.3	28.7	7.1	18.5	13.3
11/5/92	1130	0.25	327.25	271.9	33.7	7.6	20.5	10.6
11/5/92	1145	0.25	327.50	271.9	27.4	7.9	18.2	12.0
11/5/92	1200	0.25	327.75	272.0	27.8	8.6	18.5	11.3
11/5/92	1215	0.25	328.00	271.5	28.5	8.1	20.6	11.6
11/5/92	1230	0.25	328.25	273.6	27.9	8.2	19.6	11.8
11/5/92	1245	0.25	328.50	272.2	27.9	8.2	21.8	12.5
11/5/92	1300	0.25	328.75	271.4	28.4	8.0	20.1	12.1
11/5/92	1315	0.25	329.00	273.6	28.3	8.0	19.9	14.8
11/5/92	1330	0.25	329.25	271.6	27.9	8.1	20.8	14.2
11/5/92	1345	0.25	329.50	271.4	28.3	8.2	20.2	12.6
11/5/92	1400	0.25	329.75	271.5	29.6	8.0	19.9	12.9
11/5/92	1415	0.25	330.00	269.4	27.3	8.0	25.7	14.8
11/5/92	1430	0.25	330.25	271.3	28.6	8.1	20.7	13.9
11/5/92	1445	0.25	330.50	271.1	26.6	8.0	17.8	15.2
11/5/92	1500	0.25	330.75	269.3	27.1	8.2	18.2	15.1
11/5/92	1515	0.25	331.00	270.2	29.0	7.7	23.4	12.3
11/5/92	1530	0.25	331.25	270.9	31.5	8.2	18.6	14.4
11/5/92	1545	0.25	331.50	271.1	32.6	7.7	20.8	12.1
11/5/92	1600	0.25	331.75	273.2	31.6	8.1	19.9	11.4
11/5/92	1615	0.25	332.00	271.8	32.0	7.7	23.9	11.6
11/5/92	1630	0.25	332.25	271.8	34.8	7.9	21.4	11.6
11/5/92	1645	0.25	332.50	270.7	31.1	8.0	20.0	10.8
11/5/92	1700	0.25	332.75	271.8	33.3	8.1	24.0	9.7
11/5/92	1715	0.25	333.00	269.8	31.3	8.0	24.0	14.2
11/5/92	1730	0.25	333.25	272.3	31.8	7.9	22.3	15.5
11/5/92	1745	0.25	333.50	269.2	31.0	8.1	22.0	12.5
11/5/92	1800	0.25	333.75	269.8	31.3	7.9	21.1	14.6
11/5/92	1815	0.25	334.00	270.3	31.8	8.2	21.9	15.7
11/5/92	1830	0.25	334.25	271.2	31.5	7.9	23.5	15.4
11/5/92	1845	0.25	334.50	271.1	34.5	8.1	22.9	13.7
11/5/92	1900	0.25	334.75	271.1	31.1	8.2	22.0	14.9
11/5/92	1915	0.25	335.00	271.3	31.9	8.2	22.0	13.4
11/5/92	1930	0.25	335.25	272.8	33.2	8.2	21.6	*34.0
11/5/92	1945	0.25	335.50	271.4	32.5	7.9	19.4	13.4
11/5/92	2000	0.25	335.75	270.7	34.1	8.1	18.7	16.0
11/5/92	2015	0.25	336.00	272.2	32.0	7.9	19.9	15.0
11/5/92	2030	0.25	336.25	272.4	32.7	7.8	19.9	13.1
11/5/92	2045	0.25	336.50	272.6	33.2	8.2	19.9	14.6
11/5/92	2100	0.25	336.75	271.7	32.3	8.1	19.8	13.0
11/5/92	2115	0.25	337.00	274.2	33.4	7.8	18.7	14.3
11/5/92	2130	0.25	337.25	280.0	35.2	7.9	25.4	13.7

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/5/92	2145	0.25	337.50	280.4	34.6	8.4	21.4	15.6
11/5/92	2200	0.25	337.75	277.9	34.4	8.4	18.0	14.1
11/5/92	2215	0.25	338.00	278.3	36.7	8.0	20.8	13.2
11/5/92	2230	0.25	338.25	279.1	35.6	8.1	18.9	13.4
11/5/92	2245	0.25	338.50	279.0	36.1	8.4	20.9	14.3
11/5/92	2300	0.25	338.75	279.1	34.7	7.8	21.1	14.6
11/5/92	2315	0.25	339.00	278.0	33.7	8.0	15.0	15.2
11/5/92	2330	0.25	339.25	279.2	35.7	7.8	18.2	14.6
11/5/92	2345	0.25	339.50	279.7	36.0	7.9	20.5	13.7
Total Hours		24.00						
11/6/92	0	0.25	339.75	279.0	36.0	8.1	21.3	12.9
11/6/92	15	0.25	340.00	277.9	36.3	8.2	16.6	14.7
11/6/92	30	0.25	340.25	279.8	36.9	8.1	19.0	13.5
11/6/92	45	0.25	340.50	279.2	36.3	8.0	16.6	14.3
11/6/92	100	0.25	340.75	280.6	35.9	8.0	18.7	11.6
11/6/92	115	0.25	341.00	279.2	35.2	8.3	19.4	9.4
11/6/92	130	0.25	341.25	277.0	32.4	8.1	15.1	10.9
11/6/92	145	0.25	341.50	277.9	36.2	8.1	23.0	9.2
11/6/92	215	0.25	341.75	278.1	28.7	8.6	16.5	14.8
11/6/92	230	0.25	342.00	275.7	29.9	8.4	14.0	14.5
11/6/92	245	0.25	342.25	276.6	30.2	8.2	15.0	13.4
11/6/92	300	0.25	342.50	278.0	31.6	8.7	17.1	9.8
11/6/92	315	0.25	342.75	277.7	32.5	8.4	18.8	9.7
11/6/92	330	0.25	343.00	277.5	33.1	8.0	18.6	9.3
11/6/92	345	0.25	343.25	277.0	32.2	8.0	19.9	11.2
11/6/92	400	0.25	343.50	278.1	33.7	8.1	16.9	11.9
11/6/92	415	0.25	343.75	278.2	33.8	8.0	18.6	10.0
11/6/92	430	0.25	344.00	277.0	32.8	8.1	19.8	10.4
11/6/92	445	0.25	344.25	275.9	32.9	8.1	21.7	8.7
11/6/92	500	0.25	344.50	276.0	34.0	8.4	20.4	8.9
11/6/92	515	0.25	344.75	276.7	32.5	8.2	20.9	8.1
11/6/92	530	0.25	345.00	276.4	31.6	7.9	21.2	8.4
11/6/92	545	0.25	345.25	276.9	32.8	8.2	19.8	9.3
11/6/92	600	0.25	345.50	277.9	29.8	8.0	17.8	11.8
11/6/92	615	0.25	345.75	275.5	29.4	8.0	19.3	16.7
11/6/92	630	0.25	346.00	274.9	29.3	8.0	19.1	13.1
11/6/92	645	0.25	346.25	274.4	30.4	8.2	20.5	12.3
11/6/92	700	0.25	346.50	274.7	32.7	7.7	21.2	13.3
11/6/92	715	0.25	346.75	276.7	30.8	8.3	20.4	12.8
11/6/92	730	0.25	347.00	276.0	30.5	8.3	18.2	13.6
11/6/92	745	0.25	347.25	276.1	31.4	7.9	21.1	12.9
11/6/92	800	0.25	347.50	277.0	35.6	8.0	21.3	11.5
11/6/92	815	0.25	347.75	277.3	33.9	7.9	22.3	10.0
11/6/92	830	0.25	348.00	277.4	33.9	8.3	22.8	10.5
11/6/92	845	0.25	348.25	277.1	34.4	8.0	23.7	10.5
11/6/92	900	0.25	348.50	277.5	33.8	7.9	22.8	11.7

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/6/92	915	0.25	348.75	278.4	34.0	7.9	22.4	11.1
11/6/92	930	0.25	349.00	277.2	34.6	8.3	23.6	12.1
11/6/92	945	0.25	349.25	277.6	35.6	8.1	24.2	10.8
11/6/92	1000	0.25	349.50	277.2	30.9	8.0	23.3	10.8
11/6/92	1015	0.25	349.75	274.3	31.5	8.3	19.7	10.5
11/6/92	1030	0.25	350.00	269.7	30.9	8.1	23.0	10.6
11/6/92	1045	0.25	350.25	267.3	30.4	8.0	23.0	10.2
11/6/92	1100	0.25	350.50	267.2	29.8	8.2	22.3	10.7
11/6/92	1115	0.25	350.75	267.5	29.9	8.0	23.5	10.2
11/6/92	1130	0.25	351.00	267.2	29.7	8.1	22.3	11.6
11/6/92	1145	0.25	351.25	266.2	31.4	7.9	25.5	10.7
11/6/92	1200	0.25	351.50	268.4	29.4	8.1	21.5	11.3
11/6/92	1215	0.25	351.75	273.0	32.3	7.9	20.9	10.4
11/6/92	1230	0.25	352.00	273.8	34.2	7.9	21.1	10.6
11/6/92	1245	0.25	352.25	275.9	34.2	8.0	18.3	11.1
11/6/92	1300	0.25	352.50	278.9	35.7	8.1	22.3	11.7
11/6/92	1315	0.25	352.75	279.2	35.3	8.1	22.0	11.6
11/6/92	1330	0.25	353.00	279.7	35.4	7.9	21.7	11.2
11/6/92	1345	0.25	353.25	278.3	35.0	8.0	19.3	11.5
11/6/92	1400	0.25	353.50	277.2	34.8	8.0	20.6	11.7
11/6/92	1415	0.25	353.75	276.8	34.6	8.0	17.9	12.0
11/6/92	1430	0.25	354.00	277.0	31.7	8.1	17.7	12.5
11/6/92	1445	0.25	354.25	277.6	32.3	8.0	16.2	13.1
11/6/92	1500	0.25	354.50	277.8	32.4	8.2	17.3	13.7
11/6/92	1515	0.25	354.75	277.0	33.0	7.9	17.7	13.3
11/6/92	1530	0.25	355.00	277.1	36.5	9.2	21.2	10.9
11/6/92	1545	0.25	355.25	276.4	31.7	9.0	17.6	13.3
11/6/92	1600	0.25	355.50	276.9	32.7	9.1	18.8	13.3
11/6/92	1615	0.25	355.75	276.2	32.8	8.9	20.6	13.1
11/6/92	1630	0.25	356.00	277.3	32.9	8.8	21.3	13.7
11/6/92	1645	0.25	356.25	277.1	33.5	8.9	21.1	13.4
11/6/92	1700	0.25	356.50	276.9	33.8	9.0	21.5	14.0
11/6/92	1715	0.25	356.75	277.3	33.0	9.0	21.3	13.5
11/6/92	1730	0.25	357.00	277.5	33.3	9.0	21.0	14.4
11/6/92	1745	0.25	357.25	276.8	33.3	9.0	21.2	12.3
11/6/92	1800	0.25	357.50	277.1	33.4	9.1	21.7	13.8
11/6/92	1815	0.25	357.75	277.2	33.4	9.0	22.2	13.9
11/6/92	1830	0.25	358.00	276.9	34.0	8.8	24.8	12.8
11/6/92	1845	0.25	358.25	276.9	33.6	9.3	22.7	13.1
11/6/92	1900	0.25	358.50	277.7	33.9	8.9	24.4	14.9
11/6/92	1915	0.25	358.75	277.0	33.3	9.0	24.3	16.3
11/6/92	1930	0.25	359.00	276.6	33.3	8.9	25.4	16.2
11/6/92	1945	0.25	359.25	277.2	33.3	9.2	24.4	14.5
11/6/92	2000	0.25	359.50	276.1	32.7	9.2	23.8	14.1
11/6/92	2015	0.25	359.75	276.0	35.2	9.1	23.0	14.2
11/6/92	2030	0.25	360.00	276.4	35.2	9.1	26.4	15.6
11/6/92	2045	0.25	360.25	276.9	31.7	9.3	25.2	17.0

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/6/92	2100	0.25	360.50	276.5	31.2	9.1	24.6	15.1
11/6/92	2115	0.25	360.75	276.6	31.1	8.9	25.3	17.1
11/6/92	2130	0.25	361.00	276.1	31.1	8.9	25.3	17.2
11/6/92	2145	0.25	361.25	276.4	36.1	9.1	23.0	16.6
11/6/92	2200	0.25	361.50	276.6	36.4	9.2	22.7	13.8
11/6/92	2215	0.25	361.75	276.4	35.1	9.0	23.2	12.9
11/6/92	2230	0.25	362.00	274.9	34.7	9.4	23.5	12.9
11/6/92	2245	0.25	362.25	275.5	34.5	9.1	22.8	12.5
11/6/92	2300	0.25	362.50	275.8	34.0	8.7	23.0	13.9
11/6/92	2315	0.25	362.75	274.9	34.4	8.9	22.0	12.4
11/6/92	2330	0.25	363.00	275.1	34.6	8.9	25.1	11.8
11/6/92	2345	0.25	363.25	275.5	34.1	9.3	24.8	10.7
Total Hours		23.75						
11/7/92	0	0.25	363.50	274.7	33.9	9.0	23.4	10.5
11/7/92	15	0.25	363.75	274.9	34.3	8.8	14.6	10.7
11/7/92	30	0.25	364.00	275.6	34.4	9.0	20.3	14.7
11/7/92	45	0.25	364.25	277.4	34.5	9.2	19.9	10.8
11/7/92	100	0.25	364.50	277.0	34.6	8.8	21.5	10.2
11/7/92	115	0.25	364.75	276.7	35.6	9.3	21.4	10.3
11/7/92	130	0.25	365.00	277.2	35.1	8.9	21.7	11.3
11/7/92	145	0.25	365.25	275.1	34.5	9.2	23.2	8.3
11/7/92	200	0.25	365.50	273.5	34.5	9.0	25.5	8.2
11/7/92	215	0.25	365.75	274.4	34.2	9.1	24.3	10.5
11/7/92	230	0.25	366.00	275.3	34.5	8.9	24.7	10.2
11/7/92	245	0.25	366.25	275.1	35.9	9.2	25.9	9.6
11/7/92	300	0.25	366.50	274.1	34.2	8.8	25.5	9.7
11/7/92	315	0.25	366.75	275.4	33.0	9.2	24.0	8.8
11/7/92	330	0.25	367.00	275.3	32.0	8.6	23.1	10.6
11/7/92	345	0.25	367.25	274.0	33.0	9.2	23.9	9.8
11/7/92	400	0.25	367.50	273.1	31.7	9.2	23.4	10.2
11/7/92	415	0.25	367.75	272.0	31.7	9.1	27.1	10.0
11/7/92	430	0.25	368.00	272.4	31.7	9.0	26.2	9.1
11/7/92	445	0.25	368.25	274.2	31.8	8.9	25.0	9.6
11/7/92	500	0.25	368.50	273.9	32.1	9.0	24.7	9.9
11/7/92	515	0.25	368.75	271.9	31.3	9.4	26.3	9.2
11/7/92	530	0.25	369.00	271.6	32.1	9.3	23.6	9.1
11/7/92	545	0.25	369.25	272.0	31.1	9.3	23.6	10.5
11/7/92	600	0.25	369.50	273.1	30.9	8.9	25.3	9.4
11/7/92	615	0.25	369.75	273.1	30.3	9.0	23.8	11.4
11/7/92	630	0.25	370.00	273.3	30.7	9.0	22.6	10.8
11/7/92	645	0.25	370.25	274.2	31.2	9.0	23.3	12.1
11/7/92	700	0.25	370.50	274.5	31.2	8.8	23.5	12.8
11/7/92	715	0.25	370.75	274.6	32.1	8.9	22.1	10.7
11/7/92	730	0.25	371.00	275.4	33.1	9.2	23.6	9.8
11/7/92	745	0.25	371.25	275.3	33.1	9.1	25.5	10.8
11/7/92	800	0.25	371.50	274.9	33.1	9.0	25.4	9.1

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/7/92	815	0.25	371.75	276.6	33.7	9.0	22.9	9.8
11/7/92	830	0.25	372.00	276.1	34.3	9.2	25.1	11.8
11/7/92	845	0.25	372.25	276.8	34.1	9.2	25.6	12.3
11/7/92	900	0.25	372.50	276.8	35.1	9.1	25.7	12.7
11/7/92	915	0.25	372.75	275.8	36.5	9.0	28.4	17.2
11/7/92	930	0.25	373.00	275.3	34.6	9.2	27.9	12.9
11/7/92	945	0.25	373.25	275.5	34.2	9.4	27.2	13.3
11/7/92	1000	0.25	373.50	274.0	34.4	9.1	23.9	11.2
11/7/92	1015	0.25	373.75	274.4	34.1	9.3	26.1	12.1
11/7/92	1030	0.25	374.00	274.4	33.4	8.8	26.5	12.1
11/7/92	1045	0.25	374.25	273.9	33.8	9.0	26.7	12.6
11/7/92	1100	0.25	374.50	273.3	33.2	8.9	26.7	13.4
11/7/92	1115	0.25	374.75	272.2	33.5	9.0	26.7	11.6
11/7/92	1130	0.25	375.00	274.0	32.4	8.8	25.7	11.1
11/7/92	1145	0.25	375.25	273.7	34.0	9.0	25.2	11.7
11/7/92	1200	0.25	375.50	273.8	32.6	8.9	28.0	14.5
11/7/92	1215	0.25	375.75	274.1	34.9	9.2	23.2	12.3
11/7/92	1230	0.25	376.00	274.2	32.8	9.2	27.5	12.2
11/7/92	1245	0.25	376.25	274.9	32.5	9.0	27.3	12.7
11/7/92	1300	0.25	376.50	273.8	31.9	9.1	24.3	13.3
11/7/92	1315	0.25	376.75	275.6	33.5	9.0	26.1	13.4
11/7/92	1330	0.25	377.00	276.4	34.4	8.8	23.4	14.1
11/7/92	1345	0.25	377.25	276.5	31.8	9.2	23.8	13.8
11/7/92	1400	0.25	377.50	275.3	34.7	8.9	24.9	12.6
11/7/92	1415	0.25	377.75	274.8	32.7	9.1	26.9	14.5
11/7/92	1430	0.25	378.00	274.7	31.3	9.0	24.7	13.6
11/7/92	1445	0.25	378.25	274.5	31.2	9.2	24.1	15.1
11/7/92	1500	0.25	378.50	273.6	30.8	9.3	23.2	13.7
11/7/92	1515	0.25	378.75	273.3	30.7	8.9	25.0	14.2
11/7/92	1530	0.25	379.00	273.4	32.1	9.0	22.8	13.9
11/7/92	1545	0.25	379.25	273.4	32.1	9.0	25.5	13.5
11/7/92	1600	0.25	379.50	274.6	32.6	9.2	24.2	13.9
11/7/92	1615	0.25	379.75	274.6	31.7	9.2	25.6	14.2
11/7/92	1630	0.25	380.00	274.1	33.1	8.9	26.3	14.0
11/7/92	1645	0.25	380.25	273.6	35.6	8.8	28.9	12.0
11/7/92	1700	0.25	380.50	273.4	34.6	8.8	24.7	12.4
11/7/92	1715	0.25	380.75	274.0	32.0	9.1	24.6	13.9
11/7/92	1730	0.25	381.00	275.9	33.1	8.9	23.7	15.3
11/7/92	1745	0.25	381.25	274.7	32.9	8.8	24.0	14.3
11/7/92	1800	0.25	381.50	273.8	33.7	9.0	26.3	14.4
11/7/92	1815	0.25	381.75	273.8	33.5	8.9	25.1	14.0
11/7/92	1830	0.25	382.00	274.7	34.2	9.1	25.5	13.2
11/7/92	1845	0.25	382.25	273.8	32.3	9.2	23.7	12.7
11/7/92	1900	0.25	382.50	274.2	34.9	8.8	25.5	13.2
11/7/92	1915	0.25	382.75	273.5	32.3	8.7	25.9	14.1
11/7/92	1930	0.25	383.00	273.6	31.6	8.9	23.7	13.7
11/7/92	1945	0.25	383.25	272.8	31.6	8.9	23.6	14.7

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/7/92	2000	0.25	383.50	272.6	32.0	8.8	24.0	14.9
11/7/92	2015	0.25	383.75	274.2	32.3	9.1	21.1	14.1
11/7/92	2030	0.25	384.00	273.3	32.2	9.2	25.8	12.9
11/7/92	2045	0.25	384.25	273.5	32.9	9.1	22.8	14.0
11/7/92	2100	0.25	384.50	274.2	32.8	8.8	22.6	14.2
11/7/92	2115	0.25	384.75	274.6	33.4	9.0	24.4	14.5
11/7/92	2130	0.25	385.00	274.2	32.8	9.0	25.6	13.3
11/7/92	2145	0.25	385.25	273.8	32.6	9.0	24.8	15.0
11/7/92	2200	0.25	385.50	272.7	32.3	9.4	25.8	12.7
11/7/92	2215	0.25	385.75	273.3	32.6	9.0	23.1	13.2
11/7/92	2230	0.25	386.00	274.2	34.8	8.8	23.1	13.9
11/7/92	2245	0.25	386.25	274.7	33.1	9.1	22.1	13.2
11/7/92	2300	0.25	386.50	274.2	34.2	9.1	22.1	13.3
11/7/92	2315	0.25	386.75	275.0	33.9	9.0	22.8	14.4
11/7/92	2330	0.25	387.00	274.1	31.9	9.0	22.7	14.7
11/7/92	2345	0.25	387.25	274.3	32.0	9.2	22.6	13.1
Total Hours		24.00						
11/8/92	0	0.25	387.50	274.0	31.4	8.8	24.5	13.3
11/8/92	15	0.25	387.75	273.7	33.1	8.8	22.5	13.0
11/8/92	30	0.25	388.00	274.2	33.0	9.1	24.6	14.8
11/8/92	45	0.25	388.25	275.2	33.5	9.0	21.8	13.6
11/8/92	100	0.25	388.50	275.0	32.8	9.2	23.8	14.3
11/8/92	115	0.25	388.75	275.5	32.6	9.1	23.3	15.0
11/8/92	130	0.25	389.00	274.3	31.9	8.8	19.1	10.7
11/8/92	145	0.25	389.25	273.4	31.1	9.2	19.3	10.7
11/8/92	200	0.25	389.50	270.9	31.3	8.9	24.0	10.6
11/8/92	215	0.25	389.75	270.6	33.9	9.2	17.6	9.1
11/8/92	230	0.25	390.00	273.4	30.2	8.9	18.3	10.0
11/8/92	245	0.25	390.25	273.2	29.5	8.9	20.2	11.8
11/8/92	300	0.25	390.50	272.7	30.1	9.2	20.2	11.7
11/8/92	315	0.25	390.75	273.1	31.2	9.2	21.1	9.5
11/8/92	330	0.25	391.00	273.9	30.7	8.8	21.8	9.7
11/8/92	345	0.25	391.25	272.4	30.9	9.3	20.9	12.3
11/8/92	400	0.25	391.50	272.0	31.0	9.3	21.0	9.8
11/8/92	415	0.25	391.75	272.7	31.8	9.1	24.9	9.3
11/8/92	430	0.25	392.00	273.8	31.4	8.9	22.3	10.3
11/8/92	445	0.25	392.25	273.2	34.2	8.8	24.6	8.6
11/8/92	500	0.25	392.50	273.5	31.7	9.3	23.6	10.0
11/8/92	515	0.25	392.75	273.7	33.3	8.9	24.4	8.8
11/8/92	530	0.25	393.00	273.8	33.1	9.1	25.4	9.5
11/8/92	545	0.25	393.25	273.5	32.3	8.8	25.6	8.4
11/8/92	600	0.25	393.50	272.5	32.2	9.1	25.9	8.2
11/8/92	615	0.25	393.75	273.5	32.2	9.3	24.8	9.1
11/8/92	630	0.25	394.00	271.8	33.2	9.2	27.7	7.3
11/8/92	645	0.25	394.25	271.0	35.7	9.0	26.9	6.5
11/8/92	700	0.25	394.50	273.0	32.1	8.8	28.5	7.1

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/8/92	715	0.25	394.75	272.3	31.6	9.0	25.5	8.3
11/8/92	730	0.25	395.00	272.9	32.4	9.0	24.8	8.3
11/8/92	745	0.25	395.25	274.2	32.8	8.9	26.0	8.8
11/8/92	800	0.25	395.50	274.7	32.9	9.0	25.5	8.7
11/8/92	815	0.25	395.75	273.4	35.5	9.2	24.2	9.3
11/8/92	830	0.25	396.00	273.8	33.3	8.8	25.4	8.4
11/8/92	845	0.25	396.25	275.2	34.6	9.1	24.6	10.0
11/8/92	900	0.25	396.50	275.9	34.7	9.1	27.8	9.3
11/8/92	915	0.25	396.75	276.0	34.6	9.0	26.7	9.0
11/8/92	930	0.25	397.00	275.1	34.0	8.9	27.3	9.0
11/8/92	945	0.25	397.25	274.5	34.5	8.8	25.7	8.9
11/8/92	1000	0.25	397.50	273.6	33.1	8.9	28.3	9.0
11/8/92	1015	0.25	397.75	272.6	33.4	9.3	25.5	8.3
11/8/92	1030	0.25	398.00	272.3	33.5	8.9	25.2	9.2
11/8/92	1045	0.25	398.25	271.0	33.2	9.0	31.0	7.8
11/8/92	1100	0.25	398.50	271.3	34.5	8.9	27.5	9.0
11/8/92	1115	0.25	398.75	271.8	33.3	9.0	28.5	8.9
11/8/92	1130	0.25	399.00	271.5	31.8	9.1	28.3	9.8
11/8/92	1145	0.25	399.25	273.3	33.5	9.2	28.3	9.5
11/8/92	1200	0.25	399.50	273.3	32.8	9.2	26.9	8.3
11/8/92	1215	0.25	399.75	274.0	32.4	8.9	25.9	8.6
11/8/92	1230	0.25	400.00	273.6	33.0	8.7	24.8	8.0
11/8/92	1245	0.25	400.25	272.6	32.1	8.1	26.9	7.8
11/8/92	1300	0.25	400.50	271.8	32.1	7.3	25.3	7.5
11/8/92	1315	0.25	400.75	272.1	31.2	6.7	27.6	8.0
11/8/92	1330	0.25	401.00	273.0	32.4	6.0	24.9	9.9
11/8/92	1345	0.25	401.25	274.5	31.7	7.5	25.2	8.3
11/8/92	1400	0.25	401.50	275.9	32.4	8.4	26.6	8.4
11/8/92	1415	0.25	401.75	275.9	35.5	8.8	27.7	10.3
11/8/92	1430	0.25	402.00	276.8	34.8	9.6	26.7	9.0
11/8/92	1445	0.25	402.25	276.1	34.2	9.2	26.8	8.8
11/8/92	1500	0.25	402.50	275.0	33.2	9.2	26.6	7.1
11/8/92	1515	0.25	402.75	274.4	33.5	9.1	27.3	8.5
11/8/92	1530	0.25	403.00	276.0	33.7	8.7	26.6	6.8
11/8/92	1545	0.25	403.25	277.2	34.4	9.3	26.0	6.3
11/8/92	1600	0.25	403.50	278.7	34.2	8.8	26.0	6.5
11/8/92	1615	0.25	403.75	278.8	34.4	8.7	25.0	8.0
11/8/92	1630	0.25	404.00	278.4	33.7	9.2	28.0	9.1
11/8/92	1645	0.25	404.25	276.4	33.1	9.0	25.9	7.6
11/8/92	1700	0.25	404.50	276.5	33.2	9.1	27.3	7.9
11/8/92	1715	0.25	404.75	275.2	33.0	9.1	26.3	7.3
11/8/92	1730	0.25	405.00	275.1	33.6	9.4	26.1	7.6
11/8/92	1745	0.25	405.25	274.6	34.1	8.8	26.7	7.3
11/8/92	1800	0.25	405.50	274.4	33.6	9.0	27.7	8.8
11/8/92	1815	0.25	405.75	274.8	34.5	8.8	26.9	8.2
11/8/92	1830	0.25	406.00	274.8	32.9	9.0	26.3	7.3
11/8/92	1845	0.25	406.25	274.7	35.8	9.0	27.5	6.8

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/8/92	1900	0.25	406.50	274.5	33.9	8.7	25.4	7.1
11/8/92	1915	0.25	406.75	274.5	33.5	9.1	26.0	7.4
11/8/92	1930	0.25	407.00	274.3	34.2	8.9	26.7	7.9
11/8/92	1945	0.25	407.25	273.8	33.8	8.6	26.2	8.0
11/8/92	2000	0.25	407.50	273.0	34.0	8.9	25.3	7.7
11/8/92	2015	0.25	407.75	273.0	37.6	8.9	27.5	7.7
11/8/92	2030	0.25	408.00	273.2	34.2	8.9	28.9	7.8
11/8/92	2045	0.25	408.25	272.5	32.9	9.4	26.8	7.7
11/8/92	2100	0.25	408.50	271.2	33.3	9.0	27.1	6.8
11/8/92	2115	0.25	408.75	271.0	32.1	9.3	24.3	7.4
11/8/92	2130	0.25	409.00	271.4	35.4	9.1	28.1	6.8
11/8/92	2145	0.25	409.25	271.0	34.1	8.8	28.0	7.4
11/8/92	2200	0.25	409.50	271.1	32.9	9.0	28.6	7.8
11/8/92	2215	0.25	409.75	270.8	32.8	9.1	26.0	8.1
11/8/92	2230	0.25	410.00	269.4	33.3	9.1	27.9	8.5
11/8/92	2245	0.25	410.25	270.1	29.1	9.3	27.1	8.5
11/8/92	2300	0.25	410.50	269.6	29.8	9.2	26.3	9.5
11/8/92	2315	0.25	410.75	268.8	30.1	9.0	27.1	8.7
11/8/92	2330	0.25	411.00	271.9	30.1	9.3	27.8	7.7
11/8/92	2345	0.25	411.25	274.8	28.9	8.8	22.3	7.1
Total Hours		24.00						
11/9/92	0	0.25	411.50	275.2	28.6	8.8	24.6	8.0
11/9/92	15	0.25	411.75	273.2	28.1	8.9	28.3	7.1
11/9/92	30	0.25	412.00	275.4	29.5	8.9	27.8	7.8
11/9/92	45	0.25	412.25	277.8	29.4	9.0	36.7	8.4
11/9/92	100	0.25	412.50	269.9	28.3	8.9	24.4	6.9
11/9/92	115	0.25	412.75	266.1	26.9	9.2	29.1	7.5
11/9/92	130	0.25	413.00	264.4	26.9	9.0	28.7	7.3
11/9/92	145	0.25	413.25	265.3	27.1	9.4	26.7	7.7
11/9/92	200	0.25	413.50	265.8	26.6	9.0	27.3	7.9
11/9/92	215	0.25	413.75	265.7	27.1	8.8	27.5	6.0
11/9/92	230	0.25	414.00	265.5	25.7	9.0	31.9	7.2
11/9/92	245	0.25	414.25	266.7	27.5	8.9	32.8	6.3
11/9/92	300	0.25	414.50	268.8	26.2	9.3	30.4	8.3
11/9/92	315	0.25	414.75	268.8	26.2	9.0	27.6	7.2
11/9/92	330	0.25	415.00	267.4	26.6	9.2	27.7	7.1
11/9/92	345	0.25	415.25	268.1	26.9	9.3	28.3	8.5
11/9/92	400	0.25	415.50	268.5	27.2	9.1	28.5	7.7
11/9/92	415	0.25	415.75	267.8	26.6	9.2	30.0	7.1
11/9/92	430	0.25	416.00	268.3	26.6	8.9	28.2	7.6
11/9/92	445	0.25	416.25	268.7	26.8	9.1	29.1	7.1
11/9/92	500	0.25	416.50	268.8	27.0	8.9	29.4	7.0
11/9/92	515	0.25	416.75	269.6	26.8	9.0	28.3	7.4
11/9/92	530	0.25	417.00	268.4	26.7	8.9	28.1	10.9
11/9/92	545	0.25	417.25	268.8	28.0	9.2	29.5	11.6
11/9/92	600	0.25	417.50	268.5	28.0	9.4	30.0	10.7

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/9/92	615	0.25	417.75	269.0	28.4	8.8	29.1	10.8
11/9/92	630	0.25	418.00	268.7	28.1	8.9	31.0	9.5
11/9/92	645	0.25	418.25	268.0	28.8	9.3	33.3	10.2
11/9/92	700	0.25	418.50	268.9	28.8	8.9	30.6	11.1
11/9/92	715	0.25	418.75	271.0	29.9	8.9	32.5	10.7
11/9/92	730	0.25	419.00	266.0	26.7	9.3	32.2	14.2
11/9/92	745	0.25	419.25	267.1	30.3	8.9	36.9	9.8
11/9/92	800	0.25	419.50	267.1	30.3	8.9	36.9	9.8
11/9/92	815	0.25	419.75	267.1	30.3	8.9	36.9	9.8
11/9/92	830	0.25	420.00	267.1	30.3	8.9	36.9	9.8
11/9/92	845	0.25	420.25	267.1	30.3	8.9	36.9	9.8
11/9/92	900	0.25	420.50	267.1	30.3	8.9	36.9	9.8
Total Hours		9.25		268.4	28.3	9.0	31.5	9.1
11/12/92	1130	0.25	420.75	286.7	37.1	6.6	20.0	16.8
11/12/92	1145	0.25	421.00	286.2	37.3	8.2	34.2	15.1
11/12/92	1200	0.25	421.25	284.8	37.5	9.4	31.7	16.7
11/12/92	1215	0.25	421.50	286.5	36.9	10.3	31.5	16.8
11/12/92	1230	0.25	421.75	286.5	36.9	12.8	31.8	17.2
11/12/92	1245	0.25	422.00	287.1	37.2	16.4	32.7	16.3
11/12/92	1300	0.25	422.25	286.7	37.0	18.3	32.3	18.0
11/12/92	1315	0.25	422.50	287.5	37.0	18.0	33.2	15.5
11/12/92	1330	0.25	422.75	287.7	36.9	17.7	32.8	18.2
11/12/92	1345	0.25	423.00	288.2	36.8	16.5	35.4	16.1
11/12/92	1400	0.25	423.25	285.9	36.8	14.6	35.1	*24.1
11/12/92	1415	0.25	423.50	287.0	36.7	12.9	31.8	17.1
11/12/92	1430	0.25	423.75	286.4	36.5	12.1	32.7	18.6
11/12/92	1445	0.25	424.00	287.0	36.8	11.2	33.5	14.1
11/12/92	1500	0.25	424.25	285.7	38.5	10.1	35.6	14.3
11/12/92	1515	0.25	424.50	285.1	37.5	9.7	35.7	15.4
11/12/92	1530	0.25	424.75	284.7	37.7	10.0	39.3	14.2
11/12/92	1545	0.25	425.00	289.2	38.2	10.1	36.2	17.9
11/12/92	1600	0.25	425.25	291.9	39.9	10.2	29.8	15.8
11/12/92	1615	0.25	425.50	291.8	39.8	9.9	31.7	17.3
11/12/92	1630	0.25	425.75	291.9	39.5	9.7	35.4	14.2
11/12/92	1645	0.25	426.00	291.9	39.5	10.3	30.8	12.2
11/12/92	1700	0.25	426.25	291.9	39.8	9.7	31.0	12.4
11/12/92	1715	0.25	426.50	291.1	39.1	10.1	29.6	12.8
11/12/92	1730	0.25	426.75	290.5	39.5	10.2	29.5	12.9
11/12/92	1745	0.25	427.00	290.5	38.1	10.0	27.2	13.5
11/12/92	1800	0.25	427.25	290.2	38.1	9.8	28.1	13.7
11/12/92	1815	0.25	427.50	290.1	37.7	10.2	28.3	14.0
11/12/92	1830	0.25	427.75	290.3	37.5	9.9	26.9	14.5
11/12/92	1845	0.25	428.00	290.7	37.7	10.1	27.4	14.7
11/12/92	1900	0.25	428.25	290.2	37.1	10.1	27.9	15.6
11/12/92	1915	0.25	428.50	290.0	36.9	10.0	25.7	14.8
11/12/92	1930	0.25	428.75	290.2	36.9	10.1	26.4	15.3

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/12/92	1945	0.25	429.00	290.3	36.8	10.1	25.0	14.8
11/12/92	2000	0.25	429.25	291.3	37.5	10.1	25.9	16.0
11/12/92	2015	0.25	429.50	291.3	37.0	10.1	24.3	15.8
11/12/92	2030	0.25	429.75	291.4	36.8	10.2	23.2	17.0
11/12/92	2045	0.25	430.00	290.7	37.2	9.6	27.6	18.1
11/12/92	2100	0.25	430.25	290.6	35.9	10.3	26.5	14.0
11/12/92	2115	0.25	430.50	291.2	36.3	10.1	21.3	16.7
11/12/92	2130	0.25	430.75	291.2	36.0	10.3	22.6	15.0
11/12/92	2145	0.25	431.00	290.1	36.0	10.1	29.2	15.1
11/12/92	2200	0.25	431.25	288.1	35.9	9.7	29.5	15.5
11/12/92	2215	0.25	431.50	287.7	36.0	9.8	29.4	16.4
11/12/92	2230	0.25	431.75	288.6	37.3	10.1	28.8	19.6
Total Hours		11.25						
11/13/92	845	0.25	432.00	277.0	32.1	10.2	13.3	12.4
11/13/92	900	0.25	432.25	277.3	32.4	10.4	14.2	8.0
11/13/92	915	0.25	432.50	277.3	32.1	10.7	14.2	8.8
11/13/92	930	0.25	432.75	277.2	32.0	10.8	14.1	9.1
11/13/92	1500	0.25	433.00	277.4	35.2	11.4	14.4	9.7
11/13/92	1515	0.25	433.25	281.8	38.3	11.0	15.9	10.3
11/13/92	1530	0.25	433.50	283.2	38.7	11.2	16.6	9.2
11/13/92	1545	0.25	433.75	284.1	38.9	10.0	16.6	9.0
11/13/92	1600	0.25	434.00	284.1	39.3	9.1	18.2	10.6
11/13/92	1615	0.25	434.25	283.5	39.6	8.0	17.7	10.1
11/13/92	1630	0.25	434.50	283.2	39.8	7.0	19.0	10.3
11/13/92	1645	0.25	434.75	282.6	40.0	6.1	19.0	10.4
11/13/92	1700	0.25	435.00	281.7	39.7	5.8	17.0	10.8
11/13/92	1715	0.25	435.25	281.6	39.1	5.4	17.7	11.5
11/13/92	1730	0.25	435.50	282.0	39.1	6.6	18.0	12.9
11/13/92	1745	0.25	435.75	282.0	38.8	8.5	16.4	13.4
11/13/92	1800	0.25	436.00	281.5	39.2	8.9	16.7	12.9
11/13/92	1815	0.25	436.25	281.8	39.0	9.5	16.4	12.1
11/13/92	1830	0.25	436.50	280.6	38.0	9.7	14.6	12.7
11/13/92	1845	0.25	436.75	279.7	37.5	9.7	18.0	12.8
11/13/92	1900	0.25	437.00	279.4	37.7	9.1	20.3	14.5
11/13/92	1915	0.25	437.25	279.9	36.9	8.2	17.9	13.4
11/13/92	1930	0.25	437.50	279.7	36.9	9.4	17.7	13.1
11/13/92	1945	0.25	437.75	278.6	36.7	9.8	18.5	13.3
11/13/92	2000	0.25	438.00	278.2	35.6	10.2	18.5	14.4
11/13/92	2015	0.25	438.25	278.1	35.3	9.1	16.7	12.8
11/13/92	2030	0.25	438.50	278.1	34.5	8.4	18.7	14.0
11/13/92	2130	0.25	438.75	278.6	33.5	7.6	16.8	14.6
11/13/92	2145	0.25	439.00	277.3	38.0	7.0	23.6	12.3
11/13/92	2200	0.25	439.25	277.3	37.6	7.6	23.7	11.6
11/13/92	2215	0.25	439.50	277.6	36.5	9.4	22.3	13.6
11/13/92	2230	0.25	439.75	277.5	36.2	10.2	19.6	13.0
11/13/92	2245	0.25	440.00	277.4	35.5	10.6	20.6	12.9

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/13/92	2300	0.25	440.25	277.3	35.2	10.6	20.4	12.6
11/13/92	2315	0.25	440.50	275.9	34.6	10.5	20.4	12.5
11/13/92	2330	0.25	440.75	275.4	34.9	10.2	22.5	11.3
11/13/92	2345	0.25	441.00	275.0	34.4	10.2	22.6	12.3
Total Hours		9.25						
11/14/92	0	0.25	441.25	275.0	34.6	10.4	16.3	11.4
11/14/92	15	0.25	441.50	276.3	35.5	10.2	16.7	12.0
11/14/92	30	0.25	441.75	277.0	36.7	9.9	15.7	11.2
11/14/92	45	0.25	442.00	276.6	29.2	9.2	12.9	11.6
11/14/92	100	0.25	442.25	274.7	36.3	8.4	14.8	10.0
11/14/92	115	0.25	442.50	274.7	35.5	9.0	16.0	9.9
11/14/92	130	0.25	442.75	275.4	35.4	10.4	16.9	9.7
11/14/92	145	0.25	443.00	275.3	37.3	10.3	18.4	16.4
11/14/92	200	0.25	443.25	277.4	36.7	9.9	17.4	11.5
11/14/92	215	0.25	443.50	276.4	36.0	10.3	21.3	9.7
11/14/92	230	0.25	443.75	274.4	35.4	10.5	22.6	11.6
11/14/92	245	0.25	444.00	273.9	34.2	10.7	18.5	9.7
11/14/92	300	0.25	444.25	274.3	36.1	10.2	22.3	9.8
11/14/92	315	0.25	444.50	276.9	36.2	10.2	21.5	8.5
11/14/92	330	0.25	444.75	274.5	36.6	10.1	22.0	9.0
11/14/92	345	0.25	445.00	273.3	33.6	10.1	21.4	9.4
11/14/92	400	0.25	445.25	273.2	36.9	10.2	19.8	8.7
11/14/92	415	0.25	445.50	274.3	35.7	10.3	20.6	9.0
11/14/92	430	0.25	445.75	275.2	35.3	10.1	23.0	8.5
11/14/92	445	0.25	446.00	275.0	35.1	9.6	20.0	8.7
11/14/92	500	0.25	446.25	272.6	35.7	10.1	21.5	10.4
11/14/92	515	0.25	446.50	272.6	37.4	9.9	20.3	8.2
11/14/92	530	0.25	446.75	272.7	33.0	10.2	21.5	8.8
11/14/92	545	0.25	447.00	274.3	33.8	9.9	23.7	8.1
11/14/92	600	0.25	447.25	275.5	33.4	10.0	21.4	8.6
11/14/92	615	0.25	447.50	273.9	33.8	9.8	21.9	10.2
11/14/92	630	0.25	447.75	273.5	34.9	10.4	19.6	11.0
11/14/92	645	0.25	448.00	272.2	33.9	10.3	20.6	11.3
11/14/92	700	0.25	448.25	271.9	32.1	9.9	22.6	9.7
11/14/92	715	0.25	448.50	271.3	33.2	10.1	21.0	9.9
11/14/92	730	0.25	448.75	272.1	34.6	10.2	21.6	10.3
11/14/92	745	0.25	449.00	271.6	33.1	10.0	20.5	9.9
11/14/92	800	0.25	449.25	272.6	31.8	9.9	19.7	10.4
11/14/92	815	0.25	449.50	273.9	29.7	9.9	21.2	15.2
11/14/92	830	0.25	449.75	273.4	30.8	10.3	18.2	17.4
11/14/92	845	0.25	450.00	274.4	31.6	10.0	19.4	17.8
11/14/92	900	0.25	450.25	274.1	30.8	10.1	19.0	16.6
11/14/92	915	0.25	450.50	272.6	33.3	9.9	20.6	13.9
11/14/92	930	0.25	450.75	272.9	30.7	10.1	19.4	14.8
11/14/92	945	0.25	451.00	273.3	29.1	10.0	17.4	17.3
11/14/92	1000	0.25	451.25	273.1	29.9	10.0	15.7	20.0

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/14/92	1300	0.25	451.50	274.5	36.3	9.6	16.9	14.9
11/14/92	1315	0.25	451.75	274.1	37.9	10.5	18.6	15.4
11/14/92	1330	0.25	452.00	274.0	40.0	10.0	17.5	9.3
11/14/92	1345	0.25	452.25	276.5	38.3	9.9	19.5	8.0
11/14/92	1400	0.25	452.50	276.8	37.9	9.9	19.0	7.2
11/14/92	1415	0.25	452.75	276.5	39.4	9.9	23.0	7.3
11/14/92	1430	0.25	453.00	275.8	38.4	10.2	19.9	8.5
11/14/92	1445	0.25	453.25	275.4	37.9	10.0	20.7	8.2
11/14/92	1500	0.25	453.50	276.2	37.7	10.3	19.5	7.3
11/14/92	1515	0.25	453.75	276.7	38.7	10.1	21.7	7.8
11/14/92	1530	0.25	454.00	275.5	41.7	10.1	22.2	7.4
11/14/92	1545	0.25	454.25	275.5	41.7	10.1	22.2	7.4
11/14/92	1600	0.25	454.50	278.6	36.8	9.8	20.6	9.1
11/14/92	1615	0.25	454.75	278.6	36.8	9.8	20.6	9.1
11/14/92	1645	0.25	455.00	275.6	36.2	9.9	20.1	8.0
11/14/92	1700	0.25	455.25	276.3	35.5	9.9	19.4	10.3
11/14/92	1715	0.25	455.50	276.5	35.3	9.9	21.5	13.5
11/14/92	1730	0.25	455.75	273.5	35.4	10.3	24.2	15.3
11/14/92	1745	0.25	456.00	273.4	36.0	10.0	22.7	12.9
11/14/92	1800	0.25	456.25	274.8	35.8	10.0	19.7	15.3
11/14/92	1815	0.25	456.50	274.8	35.1	9.9	21.4	13.7
11/14/92	1830	0.25	456.75	273.5	34.6	10.0	20.1	15.2
11/14/92	1845	0.25	457.00	272.8	34.6	9.7	23.1	14.7
11/14/92	1900	0.25	457.25	272.5	34.7	9.7	23.4	14.8
11/14/92	1915	0.25	457.50	271.8	33.9	10.2	22.4	14.5
11/14/92	1930	0.25	457.75	272.7	34.3	10.2	21.9	14.5
11/14/92	1945	0.25	458.00	272.7	34.7	10.0	23.2	14.2
11/14/92	2000	0.25	458.25	273.5	34.3	9.8	22.4	14.2
11/14/92	2015	0.25	458.50	272.1	33.2	10.2	22.1	14.9
11/14/92	2030	0.25	458.75	272.9	34.5	10.2	22.8	13.4
11/14/92	2045	0.25	459.00	273.3	35.5	10.0	24.3	14.5
11/14/92	2100	0.25	459.25	273.5	33.5	9.9	24.2	15.9
11/14/92	2115	0.25	459.50	272.9	35.2	10.0	21.7	14.8
11/14/92	2130	0.25	459.75	273.5	34.0	9.6	20.2	14.6
11/14/92	2145	0.25	460.00	273.8	33.6	9.6	18.6	14.6
11/14/92	2200	0.25	460.25	273.4	33.5	10.0	20.0	16.0
11/14/92	2215	0.25	460.50	272.6	32.9	9.8	21.5	14.3
11/14/92	2230	0.25	460.75	272.7	32.3	10.1	20.1	14.5
11/14/92	2245	0.25	461.00	274.3	34.0	9.7	22.8	13.9
11/14/92	2300	0.25	461.25	273.8	34.2	9.9	22.7	16.6
11/14/92	2315	0.25	461.50	274.6	34.2	10.1	18.1	13.4
11/14/92	2330	0.25	461.75	275.2	35.9	10.0	17.9	12.3
11/14/92	2345	0.25	462.00	274.4	35.7	10.2	16.4	9.6
Total Hours		21.00						
11/15/92	0	0.25	462.25	274.3	35.3	9.8	15.0	9.3
11/15/92	15	0.25	462.50	275.0	36.0	9.8	16.4	9.2

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/15/92	30	0.25	462.75	276.5	36.0	10.1	15.3	7.6
11/15/92	45	0.25	463.00	274.9	35.2	10.1	16.7	7.6
11/15/92	100	0.25	463.25	273.8	34.3	9.8	17.2	7.2
11/15/92	115	0.25	463.50	273.9	36.6	10.1	17.9	8.4
11/15/92	130	0.25	463.75	273.2	36.7	10.2	19.7	9.6
11/15/92	145	0.25	464.00	275.5	36.3	9.9	20.5	8.5
11/15/92	200	0.25	464.25	277.0	36.9	9.9	20.5	7.3
11/15/92	215	0.25	464.50	274.3	38.1	9.7	23.6	8.2
11/15/92	230	0.25	464.75	274.3	36.6	10.2	21.5	7.5
11/15/92	245	0.25	465.00	274.6	36.8	10.1	21.2	8.5
11/15/92	300	0.25	465.25	276.5	37.3	9.7	24.1	7.1
11/15/92	315	0.25	465.50	277.3	36.6	9.6	21.3	8.2
11/15/92	330	0.25	465.75	274.1	36.5	10.0	22.9	9.0
11/15/92	345	0.25	466.00	273.8	35.5	9.8	23.2	8.8
11/15/92	400	0.25	466.25	273.6	35.6	10.3	24.0	10.3
11/15/92	415	0.25	466.50	275.5	35.7	10.3	21.0	9.9
11/15/92	430	0.25	466.75	275.2	35.7	10.2	23.4	9.9
11/15/92	445	0.25	467.00	276.5	35.8	10.0	23.1	8.2
11/15/92	500	0.25	467.25	277.2	35.8	10.3	24.1	8.2
11/15/92	515	0.25	467.50	274.2	34.5	10.2	23.4	8.7
11/15/92	530	0.25	467.75	273.7	35.8	10.3	24.6	8.9
11/15/92	545	0.25	468.00	273.8	33.5	10.4	22.4	8.6
11/15/92	600	0.25	468.25	273.5	34.5	10.3	23.5	8.3
11/15/92	615	0.25	468.50	273.3	34.4	10.2	25.0	8.0
11/15/92	630	0.25	468.75	273.6	36.1	10.6	22.1	9.0
11/15/92	645	0.25	469.00	272.8	33.8	10.1	23.1	8.9
11/15/92	730	0.25	469.25	274.1	32.4	10.4	21.5	11.2
11/15/92	745	0.25	469.50	273.7	33.2	9.8	20.8	11.7
11/15/92	800	0.25	469.75	274.8	34.3	10.0	19.1	9.0
11/15/92	815	0.25	470.00	274.2	33.1	10.5	18.9	8.6
11/15/92	830	0.25	470.25	274.8	34.4	9.9	19.2	10.8
11/15/92	845	0.25	470.50	275.3	34.4	10.2	18.3	11.5
11/15/92	1100	0.25	470.75	274.9	35.1	9.6	17.6	8.1
11/15/92	1115	0.25	471.00	275.0	35.0	10.0	17.5	7.2
11/15/92	1130	0.25	471.25	272.9	34.4	10.7	18.9	7.2
11/15/92	1145	0.25	471.50	273.1	34.0	10.6	16.2	8.3
11/15/92	1200	0.25	471.75	273.2	34.0	10.3	18.2	8.2
11/15/92	1215	0.25	472.00	273.3	34.3	10.1	14.8	7.2
11/15/92	1230	0.25	472.25	272.2	34.9	10.1	21.2	7.6
11/15/92	1245	0.25	472.50	274.2	35.0	9.9	19.7	7.5
11/15/92	1300	0.25	472.75	275.3	35.4	10.0	17.0	7.8
11/15/92	1315	0.25	473.00	274.6	34.9	10.2	18.8	8.4
11/15/92	1330	0.25	473.25	273.1	34.4	10.1	19.2	8.4
11/15/92	1345	0.25	473.50	273.3	34.4	10.1	17.7	8.7
11/15/92	1400	0.25	473.75	273.3	34.0	10.1	20.1	7.4
11/15/92	1415	0.25	474.00	274.7	34.3	10.0	16.8	8.7
11/15/92	1430	0.25	474.25	274.7	34.5	10.1	23.1	7.8

SUMMARY OF LIME SLURRY INJECTION FROM OCTOBER 17, 1992 TO NOVEMBER 17, 1992

Date	Time	Hours of Injection	Cumulative Hours	B Duct Temp °F	Lime Flow GPM	Slurry Solids Percent	SO2 Removal Percent	Stack Opacity Percent
11/15/92	1445	0.25	474.50	274.2	33.7	9.9	20.0	8.9
11/15/92	1500	0.25	474.75	274.7	33.5	10.3	19.8	11.6
11/15/92	1515	0.25	475.00	273.6	33.4	10.0	20.3	8.4
11/15/92	1530	0.25	475.25	274.2	33.1	10.0	19.9	7.9
11/15/92	1545	0.25	475.50	274.4	32.9	10.1	20.8	8.2
11/15/92	1600	0.25	475.75	275.2	32.9	10.3	22.3	9.9
11/15/92	1615	0.25	476.00	274.3	33.4	10.0	19.8	11.3
11/15/92	1630	0.25	476.25	273.6	34.1	9.9	19.9	8.4
11/15/92	1645	0.25	476.50	273.8	34.9	10.0	20.5	9.3
11/15/92	1700	0.25	476.75	274.0	36.2	10.3	24.6	12.6
11/15/92	1715	0.25	477.00	275.1	34.7	10.1	21.7	12.2
11/15/92	1730	0.25	477.25	274.8	34.9	9.9	22.4	15.5
11/15/92	1745	0.25	477.50	274.4	34.2	10.2	22.6	13.0
11/15/92	1800	0.25	477.75	274.6	34.9	10.1	22.8	16.0
11/15/92	1815	0.25	478.00	275.5	35.2	10.4	24.0	12.0
11/15/92	1830	0.25	478.25	277.1	35.5	10.0	23.8	12.0
11/15/92	1845	0.25	478.50	275.5	34.7	9.9	23.8	13.7
Total Hours		16.50						

Appendix F

Baseline Testing – Fuel

Appendix F

Baseline Testing -- Fuel

Penelec conducted sampling of the incoming coal. The coal is analyzed for moisture, ash, sulfur, Btu/lb, and volatile matter. The results of these analyses during September, October, and November 1992 are attached.

SEWARD STATION HEAT RATE QUALITY SEPTEMBER - 1992

DATE	# 12 TONS	# 14 TONS	# 15 TONS	% MOIST	% ASH	% SULFER	BTU	# SUL/ 10E6 BTU	% VOL
1	263	230	1246	6.13	13.53	1.61	12192	1.32	26.37
2	284	283	1218	5.75	15.09	1.51	11995	1.27	24.33
3	248	315	1236	5.87	16.02	1.72	11806	1.46	24.60
4	338	394	1245	5.93	13.75	1.46	12203	1.20	24.26
5	331	282	1323	4.83	14.55	1.50	12234	1.23	24.71
6	202	245	1122	5.77	13.13	1.62	12291	1.32	26.35
7	160	211	1082	5.22	13.84	1.55	12297	1.26	25.15
8	212	228	1170	6.27	14.10	1.58	12083	1.32	24.47
9	186	247	1256	7.01	12.85	1.62	12178	1.34	24.00
10	330	335	1290	7.42	13.86	1.51	11973	1.27	20.51
11	299	318	1219	6.14	13.54	1.56	12291	1.28	21.39
12	261	325	1221	5.81	14.43	1.54	12182	1.26	21.02
13	179	246	1210	6.43	12.17	1.43	12424	1.15	22.73
14	287	374	1230	6.02	13.17	1.54	12410	1.24	22.12
15	292	330	1175	5.93	13.45	1.42	12357	1.16	21.52
16	261	316	1214	5.87	13.91	1.43	12359	1.16	21.89
17	278	315	1221	5.66	14.08	1.45	12391	1.17	21.04
18	249	305	1185	6.40	13.42	1.55	12259	1.27	21.28
19	345	243	1256	6.92	12.88	1.59	12281	1.29	21.23
20	227	185	1124	6.10	12.52	1.44	12466	1.16	21.37
21	237	229	1114	6.79	12.94	1.51	12259	1.24	21.85
22	80	90	978	5.81	13.33	1.56	12430	1.26	22.86
23	474	424	1344	6.24	13.52	1.57	12364	1.28	21.22
24	285	265	1213	5.54	13.94	1.64	12371	1.33	21.83
25	320	350	1237	6.97	14.37	1.46	11986	1.22	22.46
26	245	286	1373	6.79	12.62	1.41	12372	1.14	22.31
27	288	249	1185	6.95	14.65	1.51	11997	1.26	22.16
28	202	140	1416	7.24	12.59	1.67	12157	1.38	21.34
29	381	329	1266	5.79	13.35	1.54	12140	1.25	21.22
30	245	320	1284	6.35	13.49	1.59	12304	1.30	21.38
<hr/>									
TOTAL-12	7989			6.20	13.69	1.53	12227	1.26	22.49
TOTAL-14		8409		6.19	13.70	1.53	12229	1.26	22.54
TOTAL-15			36653	6.21	13.63	1.54	12233	1.26	22.61

NOTE: WEEKENDS AND HOLIDAYS BASED ON GRAB SAMPLES

NOTE: VOLATILE MATTER NOT RUN FOR GRAB SAMPLES, AVERAGE OF PREVIOUS DAYS USED

NOTE: STOCKPILE AS OF 9/30/92 138581.10 TONS

SEWARD STATION HEAT RATE QUALITY OCTOBER - 1992

DATE	# 12 TONS	# 14 TONS	# 15 TONS	% MOIST	% ASH	% SULFER	BTU	# SUL/ 10E6 BTU	% VOL
1	427	426	1145	6.45	13.34	1.63	12309	1.33	21.90
2	265	329	1257	6.23	13.83	1.40	12274	1.15	22.05
3	364	315	1430	6.32	12.81	1.61	12440	1.29	22.01
4	258	313	1118	5.85	11.77	1.38	12612	1.09	21.59
5	316	260	784	6.34	13.09	1.60	12321	1.31	21.93
6	205	315	0	5.54	14.58	1.60	12219	1.31	21.59
7	278	308	0	5.41	14.16	1.57	12354	1.28	21.50
8	314	288	385	5.33	12.45	1.54	12614	1.22	22.57
9	127	189	1109	6.33	13.58	1.61	12322	1.31	20.49
10	287	283	1195	5.58	13.24	1.53	12470	1.23	20.49
11	243	190	1165	6.09	12.75	1.61	12519	1.29	22.42
12	239	291	1217	6.38	13.38	1.69	12324	1.38	21.51
13	293	360	1195	6.76	13.32	1.66	12270	1.36	21.42
14	259	287	1216	7.08	13.37	1.57	12196	1.29	20.49
15	215	333	1237	6.30	13.66	1.49	12296	1.22	21.76
16	265	276	1221	5.91	14.12	1.59	12260	1.30	21.73
17	247	296	1215	5.79	15.00	1.64	12134	1.35	21.75
18	303	194	1216	6.24	13.70	1.47	12264	1.20	20.96
19	220	321	1260	5.81	15.13	1.53	12151	1.26	21.24
20	308	304	1313	5.03	13.96	1.53	12411	1.24	22.87
21	40	303	1296	5.30	14.31	1.61	12389	1.30	22.48
22	0	261	1370	5.86	13.71	1.62	12292	1.32	22.01
23	0	357	1338	5.41	15.22	1.63	12132	1.35	21.70
24	138	239	1264	5.55	13.44	1.44	12481	1.15	21.76
25	300	277	1316	5.54	14.64	1.62	12256	1.32	22.17
26	258	187	605	5.65	14.59	1.48	12209	1.21	22.63
27	285	149	0	5.24	14.24	1.56	12293	1.27	22.37
28	298	26	383	5.28	14.04	1.54	12339	1.25	22.37
29	186	159	1068	5.40	15.53	1.58	12124	1.31	20.94
30	204	184	1200	5.77	13.05	1.53	12444	1.23	20.66
31	328	344	1284	5.35	12.06	1.63	12619	1.29	20.66
TOTAL-12	7470			5.88	13.62	1.56	12347	1.27	21.69
TOTAL-14		8364		5.88	13.71	1.57	12335	1.27	21.67
TOTAL-15			31802	5.91	13.70	1.57	12334	1.27	21.61

NOTE: WEEKENDS AND HOLIDAYS BASED ON GRAB SAMPLES

NOTE: VOLATILE MATTER NOT RUN FOR GRAB SAMPLES, AVERAGE OF PREVIOUS DAYS USED

NOTE: STOCKPILE AS OF 10/31/92 161319.88 TONS

TO: BECHTEL OFF

MAR-01-'93 MON 10:48 ID: BECHTEL DEMO SEWD PL FAX NO: 814-446-6956

NO31 P02

SEWARD STATION HEAT RATE QUALITY NOVEMBER - 1992

DATE	# 12 TONS	# 14 TONS	# 15 TONS	% MOIST	% ASH	% SULFUR	BTU	# SUL/ 1000 BTU	% VBI
1	307	217	1301	6.56	12.66	1.34	12304	1.07	20.81
2	214	286	1046	5.33	15.57	1.56	12051	1.30	23.25
3	297	327	1098	5.97	15.43	1.53	12044	1.27	23.15
4	192	284	1060	5.66	14.38	1.85	12266	1.51	25.09
5	224	340	1082	6.42	13.20	1.68	12299	1.37	25.10
6	278	374	1290	5.82	14.36	1.64	12282	1.34	21.34
7	600	340	1268	6.09	11.84	1.44	12591	1.14	25.24
8	359	350	1296	7.32	11.67	1.52	12461	1.27	22.55
9	312	351	1130	6.77	11.83	1.50	12437	1.21	24.81
10	280	329	1141	6.16	12.44	1.39	12470	1.12	21.41
11	237	279	1300	6.53	13.88	1.51	12201	1.24	23.64
12	416	243	1223	6.67	13.43	1.52	12206	1.25	22.92
13	137	266	1305	6.96	14.09	1.31	12299	1.07	22.16
14	366	344	1278	6.57	12.80	1.43	12291	1.16	22.25
15	221	171	1272	6.52	12.00	1.41	12463	1.15	22.58
16	330	412	1309	6.11	12.55	1.47	12385	1.20	25.17
17	338	307	1273	5.87	13.96	1.46	12223	1.20	27.51
18	608	377	1239	4.98	14.67	1.48	12274	1.21	23.54
19	0	296	1236	5.99	13.73	1.47	12225	1.21	27.43
20	137	336	1273	5.53	13.99	1.47	12333	1.20	22.51
21	379	226	1220	6.61	13.47	1.48	12159	1.22	23.47
22	210	227	1170	5.92	13.52	1.44	12250	1.18	23.27
23	281	239	1276	6.87	14.42	1.47	11946	1.24	23.66
24	325	257	1194	6.69	14.73	1.50	12018	1.26	22.53
25	274	426	1220	6.35	12.78	1.50	12294	1.23	26.34
26	185	311	1000	6.35	13.28	1.51	12292	1.23	22.75
27	304	226	1164	6.72	11.90	1.49	12418	1.20	22.60
28	279	219	994	6.85	14.01	1.54	12074	1.28	22.44
29	244	294	0	6.17	12.76	1.49	12375	1.20	21.54
30	289	256	305	6.39	14.16	1.57	12044	1.34	21.32

TOTAL-12 6144 6.20 13.38 1.50 12276 1.23 23.10
TOTAL-14 8947 6.22 13.43 1.50 12282 1.23 23.23
TOTAL-15 33986 6.24 13.43 1.49 12262 1.22 23.14

NOTE: WEEKENDS AND HOLIDAYS BASED ON SHAB SAMPLES

NOTE: VOLATILE MATTER NOT RUN FOR SHAB SAMPLES, AVERAGE OF PREVIOUS DAYS USED

NOTE: STOCKPILE AS OF 11/30/92 149387.08 TONS

Appendix G

Procedures for Calculating SO₂ and NO_x Removal and the Percentage of Lime Utilization

ESTIMATES OF SO₂ AND NO_x REMOVAL

Bases: Measured Quantities are:

- SO₂, NO_x and O₂ concentrations in inlet and outlet flue gas
- Flue gas flow at the discharge from the test duct
- Inlet and outlet gas temperatures
- Barometric pressure
- Flue gas pressure
- Lime usage
- Lime concentration
- Atomizing air usage
- Dilution water usage

Estimated Quantities are:

- Flue gas flows in and out
- SO₂ and NO_x removal
- Lime utilization
- Solid waste requiring disposal

Flue Gas Flow Measurements

The flue gas flow meter is located at the end of the test duct, just upstream of the second stage Buell ESP. When nothing is being injected into the flue gas, it indicates the instantaneous gas flow in SCFM on a mass flow basis. During the injection of water or of a lime slurry, this meter will be used to indicate the flow of treated flue gas without correction for the effects of changed gas properties on the accuracy of these readings.

Figure 1 contains the planar arrangement of the test duct with the locations of the flue gas flow meter, the lime atomizers and the upstream and downstream SO₂, NO_x and O₂ analyzers indicated on it.

Figure 2 contains the flue gas flow diagram showing the location of ESPs, atomizers and instrumentation required for the determination of SO₂ removal and lime utilization.

Figures 3 and 4 contain the laboratory correlation of lime slurry concentrations with their specific gravities at 40°F, 60°F and 72°F.

Figure 1. Test Duct Arrangement

FIGURE - 1
TEST DUCT ARRANGEMENT
 SHOWING RELATIVE LOCATIONS
 OF FLUE GAS FLOW METER,
 LIME SLURRY ATOMIZERS AND
 UPSTREAM AND DOWNSTREAM
 SO₂, NO_x, O₂ ANALYZERS

Figure 2. Seward CSD System, Test Duct, Flue Gas Flow Diagram

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DOLOMITIC LIME SPECIFIC GRAVITIES - at 72° 60' & 40° F

CZD TESTING AT SEWARD - ESTIMATING PROCEDURE

In order to understand the operation and performance of CZD system we must know:

- The inlet and outlet flue gas flows and their compositions
- The atomizing air usage
- Lime slurry and dilution water injection rates
- Lime slurry concentration

The inlet and outlet flue gas flows are estimated from the flue gas flow meter reading located downstream of the atomizing nozzles at the inlet to the second stage ESP, from the atomizing air and water usage and from inlet and outlet flue gas analysis (SO_2 , NO_x and O_2).

Atomizing air usage is indicated by a flow indicator. Water usage is estimated from measured lime slurry usage and its water content and from the dilution water usage.

Plant air leakage is based on the oxygen mass balance.

In all, there is a set of 5 linear equation to be solved to estimate the actual SO_2 and NO_x removal.

Lime usage and utilization are based on the measured volumes and specific gravities of the lime slurries injected into the flue gas stream and the above estimates of the associated SO_2 and NO_x removals.

MATHEMATICAL PROCEDURE NOMENCLATURE

<u>Description</u>	<u>Symbol</u>	<u>Units</u>
Inlet flue gas flow	F.G. IN	SCFM
Outlet flue gas flow	F.G. OUT	SCFM
Flue gas flow meter reading	F.G.	SCFM
Atomizing air flow meter reading	A.A.	SCFM
Water content of atomized lime slurry (This is estimated from the flow of lime slurry and dilution water and expressed as the flow of water vapor in SCFM)	W.C.	SCFM
SO ₂ absorbed from flue gas	XSO ₂	SCFM
NO _x absorbed from flue gas	YNO _x	SCFM
Air leakage	Z _{al}	SCFM
Oxygen concentration in inlet flue gas	OX _{IN}	Vol %
Oxygen concentration in outlet flue gas	OX _{OUT}	Vol %
SO ₂ concentration in inlet flue gas	SO ₂ IN	$\frac{\text{ppm}}{10^6}(\text{Vol})$
SO ₂ concentration in outlet flue gas	SO ₂ OUT	$\frac{\text{ppm}}{10^6}(\text{Vol})$
NO _x concentration in inlet flue gas	NO _x IN	$\frac{\text{ppm}}{10^6}(\text{Vol})$
NO _x concentration in outlet flue gas	NO _x OUT	$\frac{\text{ppm}}{10^6}(\text{Vol})$

MASS BALANCE EQUATIONS

1. Inlet Flue Gas (FG_{IN}) = Flue gas flow meter reading (FG) less atomizing air meter reading (AA) less water content of lime slurry used (WC) plus SO_2 absorbed (X_{SO_2}) plus NO_x absorbed (Y_{NO_x}).

$$(FG_{IN}) = (FG) - (AA) - (WC) + (X_{SO_2}) + (Y_{NO_x})$$

2. Outlet Flue Gas (FG_{OUT}) = Flue gas flowmeter reading (FG) plus air leakage (Z_{AL})
(FG Discharged from ID fan)

$$(FG_{OUT}) = (FG) + (Z_{AL})$$

3. Oxygen Balance

$$\text{Inlet Flue Gas } (FG_{IN}) \times \frac{\text{Measured } O_2 \text{ Conc. } (OX_{IN})}{100} + \text{Atom. Air} \times 0.21 + Z_{AL} \times 0.21$$

$$= \text{Outlet Flue gas } (FG_{OUT}) \times \frac{\text{Measured } O_2 \text{ Conc. } (OX_{OUT})}{100}$$

$$(FG_{IN}) \times \frac{(OX_{IN})}{100} + (AA) \times 0.21 + (Z_{AL}) \times 0.21 = (FG_{OUT}) \times \frac{(OX_{OUT})}{100}$$

4. SO_2 Balance

$$SO_2 \text{ absorbed } (X_{SO_2}) = \text{Inlet Flue Gas } (FG_{IN}) \times \text{measured } SO_2 \text{ concentrate } (SO_2 \text{ ppm}) - \text{Outlet Flue Gas } (FG_{OUT}) \times \text{measured } SO_2 \text{ concentrate } (SO_2 \text{ ppm})$$

$$(X_{SO_2}) = (FG_{IN}) \times \frac{(SO_2 \text{ IN})}{10^6} - (FG_{OUT}) \times \frac{(SO_2 \text{ OUT})}{10^6}$$

5. NO_x Balance

$$NO_x \text{ absorbed } (Y_{NO_x}) = \text{inlet flue gas } (FG_{IN}) \times \text{measured } NO_x \text{ concentrate } \frac{NO_x}{10^6} - \text{outlet flue gas } (FG_{OUT}) \times \text{measured } NO_x \text{ concentrate } \frac{NO_x}{10^6}$$

$$Y_{NO_x} = (FG_{IN}) \times \left(\frac{NO_x \text{ IN}}{10^6} \right) - (FG_{OUT}) \times \left(\frac{NO_x \text{ OUT}}{10^6} \right)$$

There are 5 mass balance equations from which the 5 unknowns (FG_{IN} , FG_{OUT} , X_{SO_2} , NO_x , and Z_{AL}) can be estimated. These equations are:

$$(1) \quad (FG_{IN}) = (FG) - (AA) - (WC) + (X_{SO_2}) + (Y_{NO_x})$$

$$(2) \quad (FG_{OUT}) = (FG) + (Z_{AL})$$

$$(3) \quad (FG_{IN}) \times \frac{(OX_{IN})}{100} + AA \times 0.21 + Z_{AL} \times 0.21 = (FG_{OUT}) \times \frac{(OX_{OUT})}{100}$$

$$(4) \quad (X_{SO_2}) = (FG_{IN}) \times \frac{(SO_2 IN)}{10^6} - (FG_{OUT}) \times \frac{(SO_2 OUT)}{10^6}$$

$$(5) \quad (Y_{NO_x}) = (FG_{IN}) \times \frac{(NO_x IN)}{10^6} - (FG_{OUT}) \times \frac{(NO_x OUT)}{10^6}$$

To eliminate Z_{AL} (air leakage) multiply equation (2) by 0.21 and add it to equation (3)

$$0.21 (FG_{OUT}) = 0.21 (FG) + 0.21 (Z_{AL})$$

$$+ \frac{(FG_{IN}) \times \frac{(OX_{IN})}{100} + 0.21 (AA) = FG_{OUT} \frac{OX_{OUT}}{100} - Z_{AL} \times 0.21}{0.21 (FG_{OUT}) - 0.21 (FG) + (FG_{IN}) \frac{(OX_{IN})}{100} + 0.21 (AA) = (FG_{OUT}) \frac{(OX_{OUT})}{100}}$$

$$(FG_{OUT}) \left[0.21 - \frac{(OX_{OUT})}{100} \right] = -0.21 AA + 0.21 (FG) - (FG_{IN}) \frac{(OX_{IN})}{100}$$

Substituting X_{SO_2} and Y_{NO_x} in Equation (1) by their values from equations (4) and (5) we will get:

$$FG_{IN} = (FG) - (AA) - (WC) + (FG_{IN}) \times \frac{SO_2 IN}{10^6} - FG_{OUT} \times \frac{SO_2 OUT}{10^6}$$

$$+ (FG_{IN}) \frac{NO_x IN}{10^6} - (FG_{OUT}) \frac{NO_x OUT}{10^6}$$

$$FG_{IN} \left(1 - \frac{SO_2 IN}{10^6} \right) - \frac{NO_x IN}{10^6} = FG - AA - WC - \frac{SO_2 OUT}{10^6} + \frac{NO_x OUT}{10^6}$$

$$FG_{IN} \times \frac{OX_{IN}}{10^6} = 0.21 AA + 0.21 FG - FG_{OUT} \left[0.21 - \frac{OX_{IN}}{10^6} \right]$$

$$\frac{1 + \frac{SO_2 IN}{10^6} - \frac{NO_x IN}{10^6}}{\frac{OX_{IN}}{100}} = \frac{FG - AA - WC - (FG_{OUT}) \left[\frac{SO_2 OUT}{10^6} + \frac{NO_x OUT}{10^6} \right]}{-0.21 AA + 0.21 FG - (FG_{OUT}) \left[0.21 - \frac{OX_{OUT}}{100} \right]}$$

$$= \frac{FG - AA - WC - (FG_{OUT}) \left[\frac{SO_2 OUT}{10^6} + \frac{NO_x OUT}{10^6} \right]}{-0.21 (AA + FG) - FG_{OUT} \left[0.21 - \frac{OX_{OUT}}{100} \right]}$$

$$\frac{1 \cdot \frac{SO_2 IN}{10^6} + \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} [0.21(AA + FG)] = \frac{1 \cdot \frac{SO_2 IN}{10^6} \cdot \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} FG_{OUT} \left(0.21 \cdot \frac{OX OUT}{100}\right)$$

$$+ FG - AA - WC - FG_{OUT} \left[\frac{SO_2 OUT}{10^6} + \frac{NO_x OUT}{10^6} \right]$$

$$FG_{OUT} \left[\frac{1 + \frac{SO_2 IN}{10^6} + \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} \left(0.21 \cdot \frac{OX OUT}{100}\right) \cdot \frac{SO_2 OUT}{10^6} \cdot \frac{NO_x OUT}{10^6} \right]$$

$$= \left[\frac{1 \cdot \frac{SO_2 IN}{10^6} \cdot \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} \times [0.21(AA + FG)] \right] \cdot FG + AA + WC$$

$$= FG \left[0.21 \frac{1 \cdot \frac{SO_2 IN}{10^6} \cdot \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} \cdot 1 \right] - 0.21 \frac{1 \cdot \frac{SO_2 IN}{10^6} \cdot \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} AA + AA + WC$$

$$FG_{OUT} = \frac{FG \left[0.21 \frac{1 \cdot \frac{SO_2 IN}{10^6} + \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} \cdot 1 \right] - 0.21 \frac{1 + \frac{SO_2 IN}{10^6} \cdot \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} + AA + AA + WC}{\frac{1 \cdot \frac{SO_2 IN}{10^6} + \frac{NO_x IN}{10^6}}{\frac{OX IN}{100}} \left(0.21 \cdot \frac{OX OUT}{100}\right) + \frac{SO_2 OUT}{10^6} + \frac{NO_x OUT}{10^6}}$$

$$FG_{IN} = \frac{FG \cdot AA \cdot WC \cdot FG_{OUT} \left[\frac{SO_2_{OUT}}{10^6} + \frac{NO_x_{OUT}}{10^6} \right]}{1 \cdot \frac{SO_2_{IN}}{10^6} \cdot \frac{NO_x_{IN}}{10^6}}$$

$$Z_{AL} = FG_{OUT} \cdot FG$$

$$X_{SO_2} = FG_{IN} \times \frac{SO_2_{IN}}{10^6} \cdot FG_{OUT} \times \frac{SO_2_{OUT}}{10^6}$$

$$X_{NO_x} = FG_{IN} \times \frac{NO_x_{IN}}{10^6} \cdot FG_{OUT} \times \frac{NO_x_{OUT}}{10^6}$$

$$\% SO_2 \text{ REMOVAL} = \frac{X_{SO_2}}{FG_{IN} \times SO_{2N}} \times 100$$

$$\% NO_x \text{ REMOVAL} = \frac{Y_{NO_x}}{FG_{IN} \times NO_{xN}} \times 100$$

$$\text{Flue Gas Humidity} = \frac{\text{Lb } H_2O \text{ Vap}}{\text{Lb of Dry Air Equivalent of Flue Gas}} = W$$

$$\text{Relative Humidity} = \frac{P}{P_s} \times 100$$

where:

W = Flue gas humidity

P = Water vapor partial pressure
in flue gas

P_s = Saturated steam pressure at flue
gas temperature

$$P = \frac{\text{Relative Humidity} \times P_s}{100}$$

$$W = \frac{18.016 p}{18.967 (P - p)}$$

DETERMINING LIME USAGE

Basis:

There is no data available for correlating the specific gravity of dolomitic hydrate slurries with their hydrate content. Local laboratory will measure specific gravities of dolomitic lime slurries and their hydrate contents at 40°F, 60°F and 80°F and prepare a chart showing the dependence of specific gravity on hydrate concentration at the above temperatures.

During the test runs the actual dolomitic lime usage will be determined by:

- measuring the specific gravity and temperature of the lime slurry in the feed tank
- using the laboratory correlation of the specific gravity with the hydrate concentration to determine the hydrate content of this slurry
- dipping the lime feed tank to determine the volume of the lime slurry and, hence, the amount of lime hydrate used

DETERMINATION OF SPECIFIC GRAVITY OF THE DOLOMITIC LIME SLURRY IN THE LIME FEED TANK

This tank handles up to 20 WT% of lime slurries which are too viscous for determining their specific gravity with a simple hydrometer. However, a hydrometer could be used to determine specific gravity of 20% lime slurry after threefold dilution with water.

Method

Take 100 ml sample of concentrated slurry, weigh it and dilute it with 200 ml of water to a total volume of 300 ml. Measure its specific gravity and then calculate the specific gravity of original sample as follows:

Calculations:

Suppose that 100 ml of original sample weight equals 112.5 gm and that after mixing it with 200 ml of water it has specific gravity equals 1.04 at 80°F.

This specific gravity (from the graph of concentrated vs specific gravity) corresponds to the lime concentrate of 7.3%.

$$\therefore \frac{\text{Lime content of original sample}}{\text{WT of 100 ml of original sample} + 200} \times 100 = 7.3$$

$$\text{Lime content of original sample} = 0.073 (\text{weight of original sample} + 200)$$

Concentration of lime in original sample: =

$$\begin{aligned} &= \frac{0.073 (\text{Wt. of original sample} + 200)}{\text{WT of original sample}} \times 100 \\ &= \frac{0.073 (112.5 + 200)}{112.5} \times 100 = 20.28 \text{ Wt. \%} \end{aligned}$$

Lime concentrated below 10 Wt. % can be measured using hydrometer to determine their specific gravity and then a chart of specific gravity vs. concentrate. To determine slurry concentrate, the lime feed pumps will recirculate 100 GPM of 20 Wt% lime slurry of which about 20 GPM will be fed to the atomizers and about 80 GPM returned to the feed tank. The two lime slurry feed pumps will use up to 1-1/2 GPM of seal water, 80% of which will enter the lime feed tank resulting in progressive dilution of its content. In order to account for it the concentrate of lime slurry in the feed tank should be checked at least twice for each test. The first check should be when lime injection starts and the second check when it stops.

N LIME (HIGH CALCIUM) SPECIFIC GRAVITIES AT 72° 60° & 40°F

FIGURE 1
SPECIFIC ACTIVITIES OF
BOLOMATIC HYDRATE SLURRIES
BEFORE DEGRITTING

BASES - 10 GR. OF BOLOMATIC HYDRATE + 2.376
 - 10 GR. OF WATER - FROM TABLE
 - GRILL CONTENT = 1% OF TOTAL SOLIDS

Lime Usage = (Content of lime feed tank at the start of test run in gallon) x 8.328 x (its specific gravity) x (corresponding slurry concentrate) - content of lime feed tank at the end of test run in gallon) x 8.326 x (FLS specific gravity) x (corresponding slurry concentrate)

Example: Estimate of lime content of the lime slurry in the lime feed tank at the start of test:

Tank diameter = 12'-0"
Slurry Depth = 10'-0" (by tank dipping)

$$\therefore \text{Volume of slurry} = \frac{12^2 \pi}{4} \times 10 = 1,130^4 \text{ cu. ft.}$$

$$= 8,455.4 \text{ GAL.}$$

Specific gravity of slurry = 1.125 (at 60°F, measured)

Corresponding lime concentrate = 19.5 wt % (from the chart relating specific gravity to concentrate)

$$\therefore \text{Lime content of the feed tank at the start of test} = 8,455.4 \times 8.328 \times 1.125 \times 0.195 = 15,447.6 \text{ lbs.}$$

Estimate of lime content of the lime slurry in the lime feed tank at the end of test:

Slurry Depth = 5'9 $\frac{3}{8}$ " (by tank dipping)

$$\therefore \text{Volume of Slurry} = \frac{12^2 \pi}{4} \times 5.7792 \times 7.48 = 4,961.4 \text{ Gal.}$$

Specific gravity of slurry = 1.12

Corresponding lime concentrate = 18.9 WT %

$\therefore$ Lime content of the feed tank at the end of test

$$= 4,961.4 \times 8.328 \times 1.12 \times 0.189 = 8,614.3 \text{ lbs.}$$

Hence lime used = 15, 447.6 - 8,614.3 = 6,833 lbs.

Average concentration of lime slurry used

$$= \frac{6,833}{8,455.4 - 4,886.5 + 307.5}$$

Estimated volume of seal water used by P-102A and P-102B during the test.

= 1,7627 lbs of lime hydrate/gallon of slurry corresponding to slurry concentrate of 18.9 WT% from the chart.

$$\text{Lime utilization} = \frac{\text{Mols SO}_2 \text{ ABS} = \frac{1}{2} \text{ Mols NO}_x \text{ ABS}}{\text{Mols of lime used}}$$

$$\text{Mols SO}_2 \text{ ABS} = \frac{X_{\text{SO}_2}}{379.3}$$

$$\text{Mols NO}_x \text{ ABS} = \frac{Y_{\text{NO}_x}}{379.3}$$

Mols of lime used

$$= \frac{\text{WT of lime hydrate} \times 0.385}{58} + \frac{\text{WT of lime hydrate} \times 0.57}{74}$$

$$= \text{WT of lime hydrate used} (0.0066 + 0.0077)$$

$$= \text{WT of lime hydrate used} \times 0.0143$$

TEST DATA
10/10/91

Flue gas flow meter reading = 260,000 SCFM = FG = C
 Atomizing air flow meter reading = 1,350 SCFM = AA = D
 Water content of lime slurry = 5,180 SCFM = WC = F

Concentrate = 3.4 WT%
 Specific Gravity = 1.018 at 60°F
 Flow = 30 gpm

$$WC = 30 \times 8.328 \times 1.018 \times 0.966 = 245.7 \text{ lb/mid} = 5,180 \text{ SCFM}$$

Inlet SO₂ concentrate in ppmv = 905.81 ppmv = SO₂ IN = F
 Outlet SO₂ concentrate in ppmv = 703.87 = SO₂ OUT = G
 Inlet NO_x concentrate in ppmv = 383.25 = NO_x IN = H
 Outlet NO_x concentrate in ppmv = 313.87 = NO_x OUT = I
 Inlet O₂ concentrate in Vol. % = 6.16 = O₂ IN = J
 Outlet O₂ concentrate in Vol. % = 7.41 = O₂ OUT = K

$$FG_{OUT} = \frac{FG \left[.21 \frac{1 + SO_2 IN + NO_x IN}{\frac{O_x IN}{100}} - 1 \right] + AA \left[1 - 0.21 \frac{1 + SO_2 IN + NO_x IN}{\frac{O_x IN}{100}} \right] + WS}{\frac{1 + SO_2 IN + NO_x IN}{\frac{O_x IN}{100}} \left(0.21 - \frac{O_x OUT}{100} \right) + SO_2 OUT + NO_x OUT}$$

$$= \frac{260,000 \left[.21 \frac{1.0012891}{0.0616} - 1 \right] + 1,350 \left[1 - 0.21 \frac{1.0012891}{0.0616} \right] + 5,180}{\frac{1.0012891}{0.0616} (0.21 - 0.0741) + 0.00070387 + 0.000313851}$$

$$= \frac{627,506.2 + 3,258.2 + 5,180}{2.2090 + 0.00101774} = \frac{629,428}{2.2100} = 284,809 \text{ SCFM}$$

$$\begin{aligned} \text{Inlet FG} = FG_{IN} &= \frac{FG - AA - WC - FG_{OUT} (SO_2 OUT + NO_x OUT)}{1 + SO_2 IN - NO_x IN} \\ &= \frac{260,000 - 1,350 - 5,180 - 284,809 (0.00070367 + 0.00031387)}{1 - 0.00090581 - 0.00038325} \\ &= \frac{253,470 - 289.9}{0.9987109} \\ &= 253,506 \text{ SCFM} \end{aligned}$$

$$\begin{aligned}
 \text{Air Leakage} &= Z_{AL} = FG_{OUT} - FG \\
 &= 284,809 - 260,000 \\
 &= 24,809 \text{ SCFM}
 \end{aligned}$$

$$\begin{aligned}
 \text{SO}_2 \text{ Removed} &= FG_{IN} \times SO_2 \text{ IN} - FG_{OUT} \times SO_2 \text{ OUT} \\
 &= 253,506 \times 0.00090581 - 284,809 \times 0.00070387 \\
 &= 229.63 - 200.47 \\
 X_{SO_2} &= 2916 \text{ SCFM}
 \end{aligned}$$

$$\begin{aligned}
 \text{NO}_3 \text{ Removed} &= FG_{IN} \times NO_{xIN} - FG_{OUT} \times NO_{xOUT} \\
 &= 253,506 \times 0.00038325 - 284,809 \times 0.00031387 \\
 Y_{NO_x} &= 97.16 - 89.39 + 7.76 \text{ SCFM}
 \end{aligned}$$

$$\% \text{ SO}_2 \text{ Removal} = \frac{X_{SO_2}}{FG_{IN} \times SO_2 \text{ IN}} \times 100 = \frac{2916}{229.56} \times 100 = 12.7\%$$

$$\% \text{ NO}_x \text{ Removal} = \frac{Y_{NO_x}}{FG_{IN} \times NO_{xIN}} \times 100 = \frac{7.76}{97.13} \times 100 = 8.00\%$$

Estimate of lime usage:

30 gpm of 3.4 WT% lime slurry

$$\text{SP GT at } 60^\circ\text{F} = 1.018$$

$$\begin{aligned}
 \text{Ca(OH)}_2 \text{ Used} &= 30 \times 8.328 \times 1.018 \times 0.034 \\
 &= 8.6475 \text{ lb/minute}
 \end{aligned}$$

Assume 95.5% purity

$$= \frac{8.6475 \times 0.955}{74}$$

$$= 0.1116 \text{ lb Mol/minute}$$

$$\text{SO}_2 \text{ Removed} = \frac{29.16}{379} = 0.079 \text{ Lb Mol/minute}$$

$$\text{NO}_x \text{ Removed} = \frac{7.76}{379} = 0.0204 \text{ Lb Mol/minute}$$

$$\text{Lime Utilization} = \frac{0.0769 \times \frac{0.0204}{2}}{0.1116} \times 100 = 78.07\%$$

TEST DATA
10/11/91

Flue gas Flow Meter Reading = 268,000 SCFM

Atomizing Air Meter Reading = 1,350 SCFM

Water Content of Lime Slurry = 5,127 SCFM

Concentrate = 5.5 WT %

Sp Gr = 1.03 at 60° F

Flow = 30 gpm

W.C. = $30 \times 8.328 \times 1.03 \times 0.945 = 243.18 \text{ Lb/Min}$
= 5,127 SCFM

Inlet SO₂ Concentrate = 868.56 ppm

Outlet SO₂ Concentrate = 660.49 ppm

Inlet NO_x Concentrate = 400.23 ppm

Outlet NO_x Concentrate = 328.05 ppm

Inlet O₂ Concentrate = 6.32%

Outlet O₂ Concentrate = 7.38%

$$\begin{aligned}
 FG_{OUT} &= \frac{268,000 \times \left[\frac{1.0012688}{0.0623} - 1 \right] + 1,350 \left[1 - .21 \times \frac{1.0012688}{0.0623} \right] + 5,127}{\frac{1.0012688}{0.0623} (.21 - 0.0738) + 0.00066049 + 0.000328.05} \\
 &= \frac{636,517.0 - 3,206.3 + 5,127}{2,1890 + 0.0009885} = \frac{638,437.7}{2.1900} \\
 &= 291,524 \text{ SCFM}
 \end{aligned}$$

$$\begin{aligned}
 FG_{IN} &= \frac{FG - AA - WC + FG_{OUT} (SO_{2 \text{ OUT}} + NO_{x \text{ OUT}})}{1 + SO_{2 \text{ IN}} + NO_{x \text{ IN}}} \\
 &= \frac{268,000 - 1,350 - 5,127 + 295,690.7 (0.00066049 + 0.00032805)}{1 + 0.00086856 + 0.00040023} \\
 &= \frac{261,523 + 292.3}{0.9987312} \\
 &= 261,562 \text{ SCFM}
 \end{aligned}$$

$$\text{Air Leakage} = Z_{AL} = FG_{OUT} - FG$$

$$= 241,524 - 268,000$$

$$= 23,524 \text{ SCFM}$$

$$\text{SO}_2 \text{ Removed} = FG_{IN} \times SO_2 \text{ IN} - FG_{OUT} \times SO_2 \text{ OUT}$$

$$= 261,562 \times 0.00086856 - 291,524 \times 0.0006604$$

$$= 227.18 - 192.55$$

$$= 34.63 \text{ SCFM}$$

$$\text{NO}_x \text{ Removed} = 261,562 \times 0.00040023 - 291,524 \times 0.00032805$$

$$= 104.68 - 95.63$$

$$= 9.05 \text{ SCFM}$$

$$\% \text{ SO}_2 \text{ REMOVAL} = \frac{34.63}{227.18} 100 = 15.24\%$$

$$\% \text{ NO}_x \text{ REMOVAL} = \frac{9.05}{104.68} 100 = 8.65\%$$

Estimate of Lime Usage

30 gpm of 5.5 WT% lime slurry

Sp Gr = 1.03

$$30 \times 8.328 \times 1.03 \times 0.55 = 14.15 \text{ Lb/Hr}$$

$$= 13.5 \text{ Lb of pure Ca (OH)}_2$$

$$= 0.1827 \text{ Lb Mol/Minute}$$

$$\text{SO}_2 \text{ Removed} = \frac{34.63}{379.5} = 0.0913 \text{ Lb Mol/Minute}$$

$$\text{NO}_x \text{ Removed} = \frac{9.05}{379.5} = 0.0238 \text{ Lb Mol/Minute}$$

$$\text{Lime Utilization} = \frac{0.0913 + \frac{0.0238}{2}}{0.1827} 100$$

$$= 56.50\%$$

TEST DATA
10/14/91

$$\text{FG} = 252,000 \text{ SCFM}$$

$$\text{AA} = 1,350 \text{ SCFM}$$

$$\text{Water Content of Lime Slurry} = 5,054 \text{ SCFM}$$

$$\begin{aligned}\text{Concentrate} &= 8 \% \\ \text{Sp Gr} &= 1.043F \\ \text{Flow} &= 30 \text{ gpm}\end{aligned}$$

$$\begin{aligned}\text{W.C.} &= 30 \times 8.328 \times 1.03 \times 0.92 = 239.74 \text{ Lb/Min} \\ &= 5,054 \text{ SCFM}\end{aligned}$$

$$\text{Inlet SO}_2 \text{ Concentrate} = 891.1 \text{ ppm}$$

$$\text{Outlet SO}_2 \text{ Concentrate} = 665.9 \text{ ppm}$$

$$\text{Inlet NO}_x \text{ Concentrate} = 423.9 \text{ ppm}$$

$$\text{Outlet NO}_x \text{ Concentrate} = 326.6 \text{ ppm}$$

$$\text{Inlet O}_2 \text{ Concentrate} = 6.2\%$$

$$\text{Outlet O}_2 \text{ Concentrate} = 7.52\%$$

$$\text{FG}_{\text{OUT}} = \frac{252,000 \left[.21 \times \frac{1.001315}{0.062} - 1 \right] + 1,350 \left[1 - .21 \times \frac{1.001315}{0.062} \right] + 5,000}{\frac{1.001315}{0.062} (0.21 - 0.0738) + 0.000659 + 0.0003266}$$

$$= \frac{602,670.8 - 3,228.6 + 5,054}{2,1771 + 0.0009925} = \frac{604,496.2}{2.1781}$$

$$= 277,534.7 \text{ SCFM}$$

$$\text{FG}_{\text{IN}} = \frac{252,000 - 1,350 - 5,054 + 277,534.7 (0.0006659 + 0.0003266)}{1 + 0.000891.1 - 0.000423.9}$$

$$= \frac{245,320}{0.9987} = 245,643 \text{ SCFM}$$

$$\text{Air Leakage} = Z_{\text{AL}} = \text{FG}_{\text{OUT}} - \text{FG}$$

$$= 277,534 - 252,000$$

$$= 25,534 \text{ SCFM}$$

$$\text{SO}_2 \text{ Removed} = \text{FG}_{\text{IN}} \times \text{SO}_2 \text{ IN} - \text{FG}_{\text{OUT}} \times \text{SO}_2 \text{ OUT}$$

$$= 245,643 \times 891.1 - 277,535 \times 665.9$$

$$= 218.89 - 184.81$$

$$= 34.08 \text{ SCFM}$$

$$\text{NO}_x \text{ Removed} = 245,643 \times 423.9 - 277,535 \times 326.6$$

$$= 104.13 - 10.64$$

$$= 13.49 \text{ SCFM}$$

$$\% \text{ SO}_2 \text{ REMOVAL} = \frac{34.08}{218.89} 100 = 15.57\%$$

$$\% \text{ NO}_x \text{ REMOVAL} = \frac{13.49}{104.13} 100 = 12.95\%$$

Estimate of Lime Usage

30 gpm of 8 WT% lime slurry

$$\text{Sp Gr} = 1.043$$

$$\text{Purity} = 95.5\%$$

$$30 \times 8.328 \times 1.043 \times 0.08 \times 0.955 = 19.9 \text{ Lb/Min} = 0.269 \text{ Lb Mol/Minute}$$

$$\text{SO}_2 \text{ Removed} = \frac{34.08}{379.5} = 0.0898$$

$$\text{NO}_x \text{ Removed} = \frac{13.49}{379.5} = 0.0355$$

$$\text{Lime Utilization} = \frac{0.0898 + \frac{0.0355}{2}}{0.259} = 40\%$$

Appendix H

Tables With Lime Slurry Injection Operating Data August 17 to November 16, 1992

CZD LIME INJECTION DATA AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Aug-17	1300	145.2	304.3	N/A	221.4	189.7	228.2	906	680	346	299	35.0	10.3	9.8	-3.8	1741.9	169.9	9.8
Aug-17	1315	144.6	304.3	N/A	220.4	190.2	227.1	907	693	323	299	38.1	10.3	8.8	-10.5	1748.5	154.3	8.1
Aug-17	1330	145.4	305.3	N/A	209.3	190.2	230.3	893	691	352	297	44.8	10.3	6.3	-2.0	1719.9	108.0	4.8
Aug-17	1345	146.3	304.8	N/A	211.6	189.3	229.4	883	459	318	302	43.8	10.3	37.0	-14.9	1694.6	627.4	28.8
Aug-17	1400	140.5	306.4	N/A	203.5	189.8	232.2	908	487	351	296	50.0	10.3	34.4	-3.0	1745.7	600.9	24.1
Aug-17	1415	134.4	307.5	N/A	204.8	76.6	92.1	860	487	340	296	17.7	10.3	32.0	-4.5	667.5	213.4	24.2
Aug-17	1430	140.0	303.2	N/A	208.1	183.9	228.6	874	528	359	296	44.5	10.3	24.9	-2.2	1627.9	406.1	18.3
Aug-17	1445	140.0	303.2	N/A	199.4	189.5	232.2	874	528	359	296	51.1	10.3	26.0	-0.7	1677.6	436.6	17.2
Aug-17	1500	146.1	306.6	N/A	196.8	191.0	232.7	901	434	370	313	54.0	10.3	41.3	-2.9	1744.4	720.8	26.8
Aug-17	1515	146.9	307.0	N/A	194.9	190.7	232.8	909	432	364	308	55.1	10.3	42.0	-3.3	1755.0	736.6	26.9
Aug-17	1530	146.8	307.4	N/A	194.4	190.4	231.0	902	427	357	303	55.1	10.7	42.5	-2.7	1739.7	739.6	25.9
Aug-17	1545	147.2	307.0	N/A	194.1	191.2	234.9	910	424	354	309	55.7	10.7	42.8	-7.3	1763.5	754.6	26.1
Aug-17	1600	146.8	307.4	N/A	195.0	190.0	235.6	909	415	352	322	54.5	10.7	43.4	-13.4	1750.5	759.1	26.9
Aug-17	1615	146.9	307.4	N/A	194.7	189.3	234.7	900	413	320	293	54.9	10.7	43.2	-13.2	1726.8	745.1	26.2
Aug-17	1630	146.6	308.3	N/A	194.7	190.1	235.6	906	413	349	293	55.1	10.7	43.5	-3.8	1745.6	759.0	26.6
Aug-17	1645	145.8	308.1	N/A	195.2	192.5	234.9	903	407	355	335	54.9	10.7	45.0	-15.3	1760.8	792.6	27.9
Aug-17	1700	146.8	308.3	N/A	194.9	190.7	233.3	908	403	350	297	55.2	10.7	45.7	-3.6	1755.0	802.8	28.1
Aug-17	1715	147.1	308.8	N/A	195.2	190.1	232.5	896	394	321	293	55.3	10.7	46.3	-11.4	1726.3	798.7	27.9
Aug-17	1730	147.3	307.5	N/A	194.8	189.3	232.5	896	391	352	295	54.8	10.7	46.4	-2.8	1718.1	797.5	28.1
Aug-17	1745	146.9	308.1	N/A	195.3	190.4	233.8	906	392	355	336	55.5	10.7	46.8	-16.1	1748.4	819.1	28.5
Aug-17	1800	146.3	308.3	N/A	199.4	190.6	233.0	903	420	356	298	49.9	10.7	43.2	-2.3	1744.4	763.4	29.1
Aug-17	1815	146.5	307.0	N/A	202.3	190.7	231.7	897	424	326	298	48.2	13.9	42.5	-11.1	1732.8	736.7	22.3
Aug-17	1830	146.9	306.2	N/A	203.3	191.3	229.4	906	438	356	298	48.0	13.9	42.1	-0.1	1755.7	738.3	22.4
Aug-17	1845	146.5	306.6	N/A	204.0	192.8	232.2	910	444	354	335	48.1	13.9	41.2	-13.8	1777.2	732.2	22.2
Aug-17	1900	146.8	306.4	N/A	205.8	191.8	230.2	899	462	352	296	45.6	13.9	38.3	-0.7	1747.6	669.6	21.4
Aug-17	1915	146.2	306.8	N/A	205.9	191.8	230.7	895	467	323	296	46.7	13.9	37.2	-9.9	1738.9	646.8	20.2
Aug-17	1930	146.4	305.3	N/A	205.1	191.7	231.9	916	450	352	296	47.5	13.9	40.5	-1.7	1778.7	721.0	22.1
Aug-17	1945	146.7	305.7	N/A	204.4	192.9	230.8	908	448	349	332	48.7	13.9	40.9	-13.8	1774.2	726.2	21.7
Aug-17	2000	146.8	305.9	N/A	202.9	191.3	228.0	908	444	354	300	49.0	13.9	41.8	-0.9	1760.5	735.5	21.9
Aug-17	2015	147.0	306.2	N/A	201.4	192.8	232.5	894	444	325	296	49.7	13.9	40.1	-9.7	1747.0	700.6	20.5
Aug-17	2030	146.8	305.9	N/A	200.8	192.7	232.4	915	457	359	298	49.8	13.9	39.8	0.0	1787.1	711.7	20.8
Aug-17	2045	147.1	305.9	N/A	200.6	193.4	232.0	917	463	356	334	50.6	11.5	39.5	-12.6	1796.5	708.9	25.0
Aug-17	2100	147.1	306.2	N/A	200.8	193.2	232.0	917	458	665	298	49.8	11.5	40.1	46.3	1794.6	719.0	25.8
Aug-17	2115	146.8	304.0	N/A	214.4	191.8	230.0	933	610	734	263	34.2	11.5	21.6	57.0	1813.7	391.2	20.4
AVERAGES		145.6	306.4	N/A	202.1	187.5	227.7	902.1	468.4	368.1	303.2	48.6	11.6	37.0	-3.3	1714.9	636.3	22.8
Aug-20	1745	142.0	305.1	N/A	212.0	190.8	228.1	868	601	360	337	40.1	7.5	17.2	-11.6	1678.8	288.9	20.2
Aug-20	1800	141.5	306.0	N/A	209.9	191.0	226.2	856	568	358	300	44.8	7.5	21.5	0.6	1656.3	355.7	22.3
Aug-20	1815	144.3	306.9	N/A	202.1	192.1	228.1	876	534	330	301	49.9	7.5	27.7	-8.3	1705.8	472.8	26.6
Aug-20	1830	143.2	305.1	N/A	201.6	192.6	229.9	881	529	359	298	48.2	7.5	28.4	0.9	1719.0	487.7	28.4
Aug-20	1845	145.2	304.7	N/A	200.3	192.8	230.9	877	524	360	338	49.4	7.5	28.4	12.3	1713.0	486.9	27.6
Aug-20	1900	144.9	304.2	N/A	199.4	193.3	232.4	874	491	362	303	49.7	7.5	32.5	-0.6	1712.5	556.1	31.4
Aug-20	1915	144.6	302.4	N/A	198.4	191.3	228.6	860	475	333	303	49.9	7.5	34.0	-8.4	1666.7	567.2	31.9
Aug-20	1930	144.3	301.6	N/A	198.0	192.9	229.7	864	469	363	304	50.0	7.5	35.4	0.2	1689.4	597.5	33.5
Aug-20	1945	144.8	301.3	N/A	196.5	192.2	228.1	857	463	361	338	50.3	7.5	36.0	-10.9	1669.7	600.3	33.5
Aug-20	2000	143.9	300.3	N/A	194.6	192.3	230.0	857	451	364	303	50.1	7.5	37.1	0.6	1670.5	620.2	34.7
Aug-20	2015	143.9	299.4	N/A	197.1	193.4	230.3	847	474	333	303	47.9	7.5	33.4	-8.0	1660.5	554.0	32.4
Aug-20	2030	144.3	299.4	N/A	197.8	192.6	231.0	858	475	369	302	48.2	7.5	33.6	1.8	1674.1	563.1	32.8
Aug-20	2045	143.5	299.6	N/A	198.3	194.3	231.9	864	471	365	341	48.2	7.5	34.9	-11.5	1700.7	593.6	34.5
Aug-20	2100	144.0	299.9	N/A	198.2	193.7	230.5	864	468	365	304	47.9	7.5	35.6	0.9	1695.5	603.2	35.3
Aug-20	2115	144.0	299.6	N/A	199.0	194.1	231.8	864	422	365	254	48.4	7.5	41.6	17.0	1699.0	707.1	41.0
Aug-20	2130	143.7	299.2	N/A	198.6	194.3	234.0	864	448	365	271	48.1	7.5	37.5	10.7	1700.7	636.1	37.2
Aug-20	2145	144.3	298.8	N/A	198.2	193.6	234.8	864	450	365	279	47.9	7.5	36.8	7.4	1694.6	623.6	36.5
Aug-20	2200	143.6	297.4	N/A	196.7	193.4	231.2	864	442	365	279	48.1	7.5	38.8	8.7	1692.8	657.0	38.3
Aug-20	2215	143.9	296.7	N/A	193.8	191.3	233.5	904	439	365	280	49.8	7.5	40.8	6.5	1751.8	713.9	40.2
Aug-20	2230	143.8	297.4	N/A	192.7	189.4	231.6	888	441	365	288	49.8	7.5	39.3	3.5	1704.8	669.5	37.7
Aug-20	2245	144.4	296.6	N/A	192.2	192.3	233.9	898	437	365	282	49.9	7.5	40.8	6.0	1749.2	713.1	40.1
Aug-20	2300	143.7	296.7	N/A	192.4	192.1	232.9	898	437	365	282	50.3	7.5	41.0	6.3	1747.4	715.8	39.9
Aug-20	2315	143.8	296.7	N/A	192.4	191.4	229.6	898	437	365	282	50.1	7.5	41.6	7.3	1741.1	724.0	40.5
Aug-20	2330	140.8	296.1	N/A	191.4	189.4	231.9	898	465	305	282	50.4	7.5	36.6	-13.2	1722.9	629.8	35.1
AVERAGES		143.8	300.5	N/A	198.0	192.4	230.9	872.7	475.5	357.2	297.9	48.6	7.5	34.6	-0.3	1700.7	589.1	33.8
Aug-21	1445	145.2	310.5	N/A	205.6	186.9	229.7	941	518	456	290	46.9	9.0	32.3	21.7	1781.6	575.8	28.4
Aug-21	1500	145.3	310.3	N/A	205.6	185.5	230.1	940	484	449	290	50.1	9.0	36.2	20.1	1767.3	639.8	29.6
Aug-21	1515	144.5	311.2	N/A	201.0	187.7	232.6	921	455	440	291	52.1	9.0	38.7	18.1	1751.1	678.4	30.2
Aug-21	1530	145.6	311.2	N/A	199.7	189.8	233.0	921	450	436	289	54.1	9.0	40.0	18.8	1770.7	709.1	30.4
Aug-21	1545	145.5	310.7	N/A	198.9	190.2	233.4	909	431	430	292	54.0	9.0	41.8	16.7	1751.3	731.6	31.4
Aug-21	1600	145.4	310.7	N/A	198.6	189.2	235.3	911	425	423	290	54.2	9.0	42.0	14.7	1746.9	734.2	31.4
Aug-21	1615	145.5	310.6	N/A	198.6	191.7	233.0	913	427	419	294	54.0	9.0	43.2	14.7	1772.9	765.4	32.8
Aug-21	1630	145.0	310.3	N/A	197.8	188.7	233.3	914	424	413	292	53.9	9.0	42.7	12.5	1747.1	745.3	32.0
Aug-21	1645	145.3	309.8	N/A	198.4	188.4	234.9	921	423	409	289	54						

CZD LIME INJECTION DATA AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Aug-21	1815	135.4	308.3	N/A	197.2	191.6	234.5	866	388	383	286	54.0	9.0	45.1	8.6	1681.9	759.3	32.6
Aug-21	1830	135.3	308.1	N/A	195.4	187.1	232.6	872	381	384	272	54.0	9.0	45.7	11.9	1653.8	756.4	32.5
Aug-21	1845	145.1	307.9	N/A	196.0	190.7	231.6	891	411	387	273	54.0	9.0	44.0	14.3	1722.3	757.2	32.5
Aug-21	1900	140.0	307.7	N/A	196.3	191.2	234.8	911	401	400	286	54.2	9.0	45.9	12.2	1764.4	809.7	34.6
Aug-21	1915	139.1	307.2	N/A	196.1	190.8	235.0	860	386	377	271	54.3	9.0	44.7	11.4	1662.3	742.6	31.7
Aug-21	1930	138.1	305.3	N/A	193.5	187.3	234.5	878	376	383	275	54.8	9.0	46.4	9.9	1666.0	773.1	32.7
Aug-21	1945	135.9	305.1	N/A	191.7	186.0	227.6	883	361	385	270	55.1	9.0	50.0	14.2	1664.8	832.6	35.0
Aug-21	2000	136.4	305.8	N/A	191.1	187.7	231.5	890	363	383	271	55.1	9.0	49.6	12.9	1692.4	840.0	35.3
Aug-21	2015	145.2	306.0	N/A	193.2	193.2	235.3	911	392	392	270	55.0	9.0	47.5	16.3	1782.9	847.6	35.7
Aug-21	2030	145.5	305.9	N/A	193.4	193.1	235.2	910	399	392	280	55.1	9.0	46.6	13.1	1780.0	829.6	34.9
Aug-21	2045	145.2	306.2	N/A	193.8	193.4	236.0	910	399	395	285	55.4	9.0	46.5	11.9	1783.7	830.2	34.7
Aug-21	2100	140.4	306.1	N/A	193.2	194.3	234.3	910	391	395	286	55.9	9.0	48.2	12.8	1792.0	863.1	35.8
Aug-21	2115	139.5	305.2	N/A	192.1	193.4	235.8	910	333	395	257	55.8	9.0	55.3	20.6	1783.7	987.2	41.0
Aug-21	2130	135.7	305.3	N/A	189.1	184.9	228.8	910	343	395	268	55.5	9.0	53.4	16.0	1705.3	910.4	38.0
Aug-21	2145	135.7	304.4	N/A	188.9	185.2	231.4	910	352	395	277	55.2	9.0	51.7	12.5	1708.1	883.1	37.1
Aug-21	2200	137.3	304.2	N/A	189.3	188.2	234.6	910	354	395	277	55.1	9.0	51.5	12.7	1735.8	894.3	37.6
Aug-21	2215	144.5	304.4	N/A	190.9	194.0	235.9	910	351	395	270	54.9	9.0	53.1	16.8	1789.3	950.6	40.1
Aug-21	2230	138.1	304.4	N/A	190.7	191.0	235.9	917	368	395	286	55.1	9.0	50.4	10.7	1774.2	894.9	37.6
Aug-21	2245	140.7	304.1	N/A	190.7	192.0	236.0	910	367	395	279	55.1	9.0	50.4	13.2	1770.8	892.3	37.5
Aug-21	2300	135.6	303.3	N/A	188.2	184.4	230.0	910	367	395	279	55.1	9.0	49.7	11.9	1700.7	844.6	35.5
Aug-21	2315	139.4	302.6	N/A	198.1	189.0	231.6	910	367	395	279	40.6	9.0	50.5	13.5	1743.2	881.0	50.3
AVERAGES		141.3	307.5	N/A	195.5	189.6	233.3	905.1	398.7	401.9	280.0	53.8	9.0	45.8	14.2	1738.8	796.3	34.3
Aug-24	1400	144.4	308.6	N/A	217.5	184.7	223.1	893	559	343	290	39.8	12.0	24.5	-2.1	1671.7	409.2	17.6
Aug-24	1415	145.1	308.5	N/A	213.4	183.3	227.7	893	518	317	290	44.7	12.0	28.0	-13.8	1659.0	463.7	17.7
Aug-24	1430	145.1	309.1	N/A	212.9	182.1	228.2	898	506	343	289	44.9	12.0	29.4	-5.3	1656.5	487.5	18.5
Aug-24	1445	144.3	308.7	N/A	215.3	183.1	227.6	895	502	345	325	44.9	12.0	30.3	-17.2	1660.9	503.1	19.1
Aug-24	1500	144.5	307.6	N/A	215.8	183.5	228.0	886	490	346	289	44.9	12.0	31.3	-3.7	1648.0	515.8	19.6
Aug-24	1515	144.8	307.6	N/A	214.6	184.0	227.7	895	481	315	289	45.0	12.0	33.5	-13.5	1668.2	559.4	21.2
Aug-24	1530	145.0	307.9	N/A	215.4	184.4	227.7	895	479	351	292	45.1	12.0	34.0	-2.8	1672.7	568.6	21.5
Aug-24	1545	144.5	308.5	N/A	208.7	183.9	226.6	884	448	351	329	51.3	12.0	37.6	-15.5	1647.9	620.0	20.6
Aug-24	1600	143.6	309.9	N/A	203.7	185.1	230.0	880	401	348	289	53.9	12.0	43.4	-3.2	1651.1	716.0	22.7
Aug-24	1615	143.6	309.8	N/A	200.5	184.6	230.4	873	403	332	295	55.0	12.0	42.4	-10.8	1633.6	693.3	21.5
Aug-24	1630	143.5	310.5	N/A	199.9	187.0	233.4	881	379	349	295	55.2	12.0	46.3	-5.5	1669.0	772.0	23.9
Aug-24	1645	144.0	310.9	N/A	198.0	185.7	231.8	867	377	344	330	56.5	12.0	45.8	-19.7	1632.0	747.1	22.6
Aug-24	1700	143.7	311.2	N/A	196.8	186.5	231.8	879	370	351	296	56.9	12.0	47.7	-4.6	1661.7	792.0	23.8
Aug-24	1715	143.2	310.3	N/A	194.0	184.6	231.0	873	348	315	290	58.9	12.0	50.1	-15.2	1633.6	818.1	23.7
Aug-24	1730	143.4	310.8	N/A	193.2	184.7	234.8	877	349	344	288	59.0	12.0	49.4	-6.3	1641.9	810.7	23.5
Aug-24	1745	143.7	310.4	N/A	192.4	184.8	233.3	851	345	343	323	59.0	12.0	48.8	-19.0	1593.2	776.8	22.5
Aug-24	1800	142.7	310.3	N/A	191.9	185.9	232.8	852	346	342	290	58.9	12.0	49.2	-6.3	1604.6	788.7	22.9
Aug-24	1815	143.5	309.8	N/A	191.1	185.5	234.5	869	343	321	295	58.9	12.0	50.0	-16.0	1633.1	817.2	23.7
Aug-24	1830	143.1	310.0	N/A	190.4	184.6	233.4	875	349	345	292	59.2	12.0	49.5	-6.9	1637.3	811.0	23.4
Aug-24	1845	137.6	309.1	N/A	196.6	184.1	230.9	854	413	346	325	60.2	12.0	39.4	-17.5	1593.7	628.0	21.4
Aug-24	1900	142.8	307.4	N/A	199.1	185.2	229.7	849	426	343	283	49.9	12.0	37.8	-2.4	1593.8	602.9	20.6
Aug-24	1915	137.3	306.3	N/A	197.5	185.5	233.0	864	413	317	299	52.2	12.0	39.9	-18.5	1624.6	648.9	21.2
Aug-24	1930	141.6	306.1	N/A	194.2	186.6	234.2	854	413	339	293	55.2	12.0	39.3	-8.3	1614.4	633.7	19.6
Aug-24	1945	141.5	306.3	N/A	193.8	186.0	232.8	872	428	336	323	53.5	12.0	38.6	-20.0	1644.1	634.1	20.2
Aug-24	2000	141.0	306.4	N/A	193.8	187.5	233.7	847	412	351	285	54.0	12.0	39.4	-1.1	1609.8	634.8	20.1
Aug-24	2015	143.4	306.1	N/A	192.8	187.4	236.4	876	423	327	296	55.5	12.0	39.1	-13.9	1664.0	651.4	20.0
Aug-24	2030	143.4	306.3	N/A	191.2	186.6	234.6	893	417	357	302	56.0	12.0	41.3	-6.2	1688.9	698.2	21.3
Aug-24	2045	143.6	304.3	N/A	188.9	185.0	238.5	891	385	352	328	55.9	12.0	44.3	-19.9	1669.9	740.1	22.6
Aug-24	2100	139.6	305.5	N/A	190.0	188.0	233.3	891	397	352	290	56.3	12.0	44.7	-2.1	1697.0	759.0	23.0
Aug-24	2115	141.5	305.4	N/A	191.7	187.7	234.8	891	392	352	258	54.1	12.0	44.9	8.4	1694.3	761.0	24.0
Aug-24	2130	136.9	306.1	N/A	192.6	189.2	231.2	891	414	352	260	54.2	12.0	43.2	9.8	1707.8	738.5	23.3
Aug-24	2145	136.8	305.8	N/A	192.8	189.0	235.1	891	399	352	258	54.2	12.0	44.2	8.8	1706.0	754.9	23.8
Aug-24	2200	136.9	304.3	N/A	191.3	184.5	228.3	912	398	352	258	54.0	12.0	46.0	9.3	1705.4	784.1	24.8
Aug-24	2215	137.2	302.7	N/A	189.5	182.8	228.6	908	392	352	254	54.0	12.0	46.0	9.7	1682.3	773.6	24.5
Aug-24	2230	135.7	303.1	N/A	189.8	184.9	231.2	905	400	352	260	53.9	12.0	44.7	7.7	1696.0	758.3	24.0
Aug-24	2245	137.5	304.8	N/A	191.3	186.4	231.8	882	408	352	260	53.8	12.0	42.5	8.4	1666.5	707.6	22.5
Aug-24	2300	136.4	303.7	N/A	190.9	186.4	232.6	882	408	352	260	53.9	12.0	42.3	8.1	1666.5	704.3	22.3
Aug-24	2315	136.4	304.8	N/A	192.4	189.5	233.4	882	408	352	260	53.9	12.0	43.0	9.3	1694.2	728.7	23.1
Aug-24	2330	139.6	305.1	N/A	192.8	190.9	235.3	733	408	352	298	54.0	12.0	31.3	-4.1	1417.2	443.8	14.0
Aug-24	2345	139.8	304.9	N/A	193.0	189.5	232.0	760	430	307	299	54.0	12.0	30.7	-19.1	1458.4	447.2	14.1
AVERAGES		141.6	307.4	N/A	197.8	185.8	231.6	873.8	414.5	342.5	290.5	53.1	12.0	40.8	-6.0	1644.3	672.6	21.5
Aug-25	0	135.5	303.6	N/A	191.7	188.4	234.9	790	415	317	289	54.1	12.0	34.4	-14.0	1507.2	518.8	16.4
Aug-25	15	138.5	303.0	N/A	190.9	189.1	233.9	811	406	299	282	54.7	12.0	38.0	-16.8	1552.9	590.0	18.4
Aug-25	30	135.0	303.4	N/A	190.1	185.8	232.4	832	404	324	281	54.8	12.0	39.3	-8.5	1566.2	615.4	19.2
Aug-25	45	135.5	302.7	N/A	188.4	184.6	231.1	852	407	323	311	54.8	12.0	40.1	-20.7	1593.4	639.7	19.9
Aug-25	100	135.6	301.8	N/A	187.5	183.4	228.1	852	402	329	279	55.0	12.0	41.4	-5.5	1583.9	655.3	20.3
Aug-25	115	138.1	302.6	N/A	190.3	186.0	233.0	851	401									

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO ₂ Inlet ppm	SO ₂ Outlet ppm	NO _x Inlet ppm	NO _x Outlet ppm	Lime Flow gpm	Lime Conc %	SO ₂ Removal %	NO _x Removal %	SO ₂ Inlet Lb/Hr	SO ₂ Removed Lb/Hr	Lime Utilization %
Aug-25	245	140.6	304.1	N/A	199.6	190.3	232.8	871	484	312	309	48.3	12.0	34.9	-21.3	1679.2	585.5	20.7
Aug-25	300	141.0	303.7	N/A	198.8	188.5	234.4	878	454	304	283	49.6	12.0	35.7	-15.6	1678.7	599.2	20.6
Aug-25	315	140.9	303.9	N/A	197.5	188.5	232.1	870	442	296	289	50.3	12.0	37.5	-20.0	1661.4	622.7	21.1
Aug-25	330	140.3	304.1	N/A	198.0	189.7	231.7	864	448	314	290	50.4	12.0	36.7	-12.6	1660.4	609.4	20.6
Aug-25	345	143.7	304.2	N/A	198.1	188.8	231.8	872	453	318	313	49.8	12.0	36.3	-20.8	1667.9	604.7	20.7
Aug-25	400	139.6	304.5	N/A	198.6	189.9	232.6	891	458	313	287	50.3	12.0	37.4	-12.5	1715.1	641.2	21.8
Aug-25	415	138.3	303.4	N/A	196.9	185.6	229.0	870	442	304	296	49.8	12.0	37.4	-20.4	1635.8	611.0	20.9
Aug-25	430	142.3	304.4	N/A	198.2	188.7	233.7	894	455	317	298	49.8	12.0	37.0	-15.8	1708.9	632.2	21.7
Aug-25	445	143.6	304.2	N/A	197.0	189.4	233.9	870	452	316	314	52.1	12.0	35.9	-22.8	1669.3	598.9	19.6
Aug-25	500	143.3	304.5	N/A	195.5	189.7	233.2	890	440	317	287	53.7	12.0	39.3	-11.1	1710.4	671.5	21.3
Aug-25	515	138.5	304.2	N/A	193.7	188.8	234.4	863	429	307	295	54.1	12.0	38.4	-19.3	1651.6	633.7	20.0
Aug-25	530	137.0	304.2	N/A	192.1	186.3	229.2	872	411	320	296	53.9	12.0	42.0	-13.9	1646.7	691.8	21.9
Aug-25	545	136.5	305.0	N/A	192.4	187.5	231.2	891	414	313	314	54.0	12.0	42.7	-23.5	1693.4	722.9	22.9
Aug-25	600	140.1	302.8	N/A	191.5	187.0	234.7	876	410	317	289	54.3	12.0	41.2	-14.7	1660.5	684.8	21.5
Aug-25	615	144.0	303.2	N/A	191.9	188.2	234.2	897	402	304	296	53.3	12.0	44.2	-21.0	1711.0	756.4	24.2
Aug-25	630	144.1	303.9	N/A	194.5	188.7	234.7	908	441	324	295	52.3	12.0	39.6	-13.1	1735.8	687.6	22.4
Aug-25	645	140.4	303.6	N/A	194.6	188.9	236.5	886	420	323	322	52.3	12.0	40.6	-24.7	1695.5	688.4	22.5
Aug-25	700	145.7	304.1	N/A	194.3	188.1	233.2	933	433	326	294	51.8	12.0	42.5	-11.7	1778.7	756.3	24.9
Aug-25	715	144.2	304.1	N/A	195.0	187.6	234.7	895	440	304	297	51.9	12.0	38.5	-22.2	1700.8	655.2	21.5
Aug-25	730	144.1	304.4	N/A	195.4	188.5	233.0	895	445	322	296	51.2	12.0	38.5	-13.4	1709.9	658.9	22.0
Aug-25	745	142.7	304.5	N/A	197.9	188.3	232.9	908	463	323	268	50.0	12.0	37.0	-2.5	1732.9	641.0	21.9
Aug-25	800	143.2	304.9	N/A	198.8	190.1	233.9	898	461	336	280	49.7	12.0	36.9	-2.6	1729.2	637.4	21.9
Aug-25	815	141.6	305.4	N/A	199.8	190.8	235.6	897	452	309	282	50.3	12.0	37.8	-12.7	1733.7	654.5	22.2
Aug-25	830	144.7	304.2	N/A	197.8	187.3	234.6	905	453	332	283	50.3	12.0	37.3	-6.5	1717.0	639.8	21.7
Aug-25	845	145.5	304.4	N/A	198.2	187.2	231.8	911	457	331	312	49.8	12.0	37.8	-16.4	1727.5	653.7	22.4
Aug-25	900	144.8	303.7	N/A	198.0	187.6	234.0	905	440	331	276	49.9	12.0	39.3	-4.0	1719.8	676.1	23.1
Aug-25	915	145.0	304.8	N/A	198.4	188.4	232.1	915	461	302	278	50.2	12.0	37.9	-13.2	1746.2	661.7	22.5
Aug-25	930	145.7	305.6	N/A	198.6	187.7	233.2	915	465	335	280	50.0	12.0	36.8	-3.5	1739.7	640.6	21.9
Aug-25	945	145.1	306.2	N/A	198.8	187.1	231.6	926	470	334	313	49.8	12.0	37.2	-15.9	1756.0	652.6	22.4
Aug-25	1000	145.5	306.4	N/A	199.1	186.0	229.6	918	473	333	278	50.2	12.0	36.4	-2.9	1729.4	629.1	21.4
Aug-25	1015	145.5	307.7	N/A	200.1	186.4	232.9	914	450	303	276	50.0	12.0	38.5	-13.8	1726.7	665.6	22.7
Aug-25	1030	145.1	306.1	N/A	200.4	187.9	233.1	921	468	339	279	50.0	12.0	37.0	-2.1	1753.0	646.4	22.1
Aug-25	1045	145.3	307.9	N/A	200.1	185.4	228.5	920	464	331	309	49.9	12.0	37.8	-14.9	1728.7	654.1	22.4
Aug-25	1100	145.5	309.2	N/A	200.6	185.9	230.6	928	470	328	277	50.0	12.0	37.1	-4.7	1747.5	648.9	22.2
Aug-25	1115	144.8	309.7	N/A	201.2	186.1	230.3	923	477	302	257	49.9	12.0	36.1	-5.4	1740.9	627.7	21.5
Aug-25	1130	145.3	308.8	N/A	200.6	184.9	232.0	916	470	328	270	49.9	12.0	35.7	-3.0	1716.6	612.5	21.0
Aug-25	1145	144.7	309.8	N/A	201.3	185.8	232.2	914	472	333	308	50.0	12.0	35.4	-15.4	1720.2	609.3	20.8
Aug-25	1200	145.8	309.7	N/A	201.7	185.6	229.2	918	468	330	276	50.0	12.0	37.0	-3.1	1725.9	638.6	21.8
Aug-25	1215	145.4	310.0	N/A	201.8	185.0	228.6	933	453	305	275	50.1	12.0	40.0	-11.6	1749.4	699.7	23.8
Aug-25	1230	145.1	309.5	N/A	201.9	183.4	228.6	915	465	337	276	50.1	12.0	36.6	-1.8	1700.8	623.3	21.2
Aug-25	1245	145.1	309.2	N/A	200.2	183.5	230.4	926	464	339	276	51.0	12.0	37.1	-2.1	1722.2	639.7	21.4
Aug-25	1300	145.2	309.0	N/A	199.6	184.1	229.7	917	464	337	278	51.0	12.0	36.8	-2.7	1710.1	629.8	21.1
Aug-25	1315	145.0	310.2	N/A	200.1	185.3	227.8	917	463	337	267	51.1	12.0	38.0	-2.7	1721.2	653.3	21.8
Aug-25	1330	145.2	310.7	N/A	201.0	186.1	230.0	917	459	337	268	51.1	12.0	38.2	-1.8	1728.7	659.7	22.0
Aug-25	1345	145.9	310.6	N/A	201.0	185.4	227.9	917	463	337	271	51.1	12.0	38.0	-1.4	1722.2	653.8	21.8
Aug-25	1400	145.5	310.2	N/A	200.0	184.6	229.8	917	452	337	271	51.7	12.0	38.7	-0.0	1714.7	663.0	21.9
Aug-25	1415	146.0	309.9	N/A	200.5	184.9	227.8	917	452	337	271	51.1	12.0	39.3	-1.0	1717.5	675.0	22.5
Aug-25	1430	145.7	309.9	N/A	200.8	183.3	230.5	917	452	337	271	51.1	12.0	38.0	-1.0	1702.7	647.8	21.6
Aug-25	1445	145.3	310.6	N/A	199.0	184.7	231.3	917	452	337	254	52.2	12.0	38.3	-5.9	1715.7	657.1	21.5
Aug-25	1500	145.5	310.9	N/A	200.1	184.1	228.2	917	456	337	256	51.0	12.0	38.3	-6.1	1710.1	655.3	21.9
Aug-25	1515	145.2	311.1	N/A	200.2	184.4	229.9	917	464	273	262	51.0	12.0	36.9	-19.7	1712.9	632.8	21.2
Aug-25	1530	145.2	310.5	N/A	199.6	184.7	228.5	737	462	284	269	52.1	12.0	22.5	-17.2	1378.6	309.7	10.1
Aug-25	1545	144.9	311.2	N/A	198.6	185.4	227.2	733	452	290	281	53.8	12.0	24.4	-18.8	1376.3	335.4	10.6
Aug-25	1600	144.3	311.8	N/A	197.7	184.6	230.5	748	433	295	273	55.0	12.0	27.7	-15.8	1398.3	388.0	12.0
Aug-25	1615	144.7	311.2	N/A	196.3	184.9	228.1	741	432	294	273	55.1	12.0	28.1	-14.7	1387.6	389.9	12.1
Aug-25	1630	145.3	311.4	N/A	195.4	182.7	231.7	769	431	312	285	55.9	12.0	28.9	-15.9	1422.8	410.5	12.5
Aug-25	1645	143.5	311.1	N/A	195.2	183.9	230.3	768	425	307	295	56.1	12.0	30.7	-20.4	1431.2	440.0	13.4
Aug-25	1700	144.4	311.3	N/A	195.0	183.9	228.1	780	422	306	280	56.1	12.0	32.9	-13.6	1452.6	477.8	14.5
Aug-25	1715	144.3	311.0	N/A	194.6	185.0	228.2	774	417	292	277	56.0	12.0	33.6	-17.0	1451.0	487.3	14.9
Aug-25	1730	144.1	310.9	N/A	194.8	184.2	229.3	785	420	309	277	54.6	12.0	33.4	-11.6	1465.2	488.8	15.3
Aug-25	1745	144.3	310.0	N/A	196.9	183.6	226.2	779	436	310	295	53.1	12.0	31.0	-17.2	1448.4	448.7	14.4
Aug-25	1800	143.7	309.4	N/A	199.0	184.1	229.1	788	442	307	276	50.2	12.0	30.2	-11.7	1470.0	443.6	15.1
Aug-25	1815	144.1	309.2	N/A	202.4	183.9	226.8	792	456	294	276	48.2	12.0	28.9	-15.9	1475.0	426.6	15.1
Aug-25	1830	144.5	308.0	N/A	203.0	183.2	226.0	784	454	312	278	48.1	12.0	28.6	-9.9	1455.4	416.5	14.8
Aug-25	1845	143.7	307.4	N/A	203.5	184.7	227.4	789	453	309	295	48.1	12.0	29.2	-17.5	1475.8	431.6	15.3
Aug-25	1900	144.5	306.7	N/A	203.5	185.1	229.3	781	451	308	278	48.5	12.0	28.4	-11.8	1464.0	415.7	14.6
Aug-25	1915	143.0	305.5	N/A	201.3	184.1	226.5	775	429	285	271	50.0	12.0	32.0	-16.8	1445.8	462.0	15.8
Aug-25	1930	143.3	305.9	N/A	201.0	183.5	227.4	773	430	307	268	50.0	12.0	31.0	-8.2	1437.4	446.2	15.2
Aug-25	1945	144.0	304.7	N/A	200.4	185.3	228.0	7										

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Aug-26	345	144.6	307.4	N/A	197.3	191.6	219.2	774	418	297	291	54.8	12.0	38.3	-12.1	1502.7	574.8	17.9
Aug-26	400	144.0	306.4	N/A	195.6	189.4	216.8	771	399	295	274	55.7	12.0	40.8	-6.5	1478.8	602.8	18.5
Aug-26	415	144.7	306.6	N/A	195.2	191.7	218.0	765	397	285	278	55.9	12.0	40.9	-11.2	1486.0	608.5	18.6
Aug-26	430	144.6	306.6	N/A	196.1	191.1	218.1	772	398	298	273	56.3	12.0	41.2	-4.5	1494.0	614.9	18.6
Aug-26	445	144.4	309.0	N/A	198.5	191.0	218.0	772	400	297	292	55.8	12.0	40.8	-12.2	1494.2	610.0	18.7
Aug-26	500	144.7	306.7	N/A	195.5	191.1	216.6	768	392	297	289	56.3	12.0	42.1	-10.1	1486.2	625.3	19.0
Aug-26	515	144.3	306.4	N/A	194.9	190.5	217.3	754	387	297	290	55.9	12.0	41.5	-11.7	1455.5	603.9	18.4
Aug-26	530	144.3	306.2	N/A	194.8	190.2	219.9	771	378	313	289	55.7	12.0	43.3	-6.7	1485.0	643.3	19.7
Aug-26	545	144.7	306.6	N/A	194.6	190.5	219.1	772	387	311	306	56.3	12.0	42.3	-13.4	1489.3	630.6	19.1
Aug-26	600	144.3	306.7	N/A	194.4	190.9	218.2	776	382	307	282	55.9	12.0	43.7	-5.3	1500.2	655.0	20.0
Aug-26	615	144.3	306.5	N/A	193.8	190.4	217.8	765	379	293	286	55.9	12.0	43.3	-11.8	1475.0	638.0	19.5
Aug-26	630	144.7	306.4	N/A	194.0	190.3	219.2	771	378	308	291	56.3	12.0	43.5	-8.3	1486.8	646.6	19.6
Aug-26	645	144.5	306.2	N/A	193.5	190.6	215.8	771	389	306	297	55.9	12.0	42.9	-10.0	1489.1	639.0	19.5
Aug-26	700	144.6	306.0	N/A	194.1	189.6	216.5	769	379	303	277	54.8	12.0	43.8	-4.5	1477.5	646.5	20.1
Aug-26	715	144.0	306.5	N/A	195.4	190.2	217.4	764	399	283	275	54.2	12.0	40.3	-11.1	1472.5	594.1	18.7
Aug-26	730	144.2	306.7	N/A	196.1	189.8	216.8	776	404	297	274	54.4	12.0	40.5	-5.0	1491.5	604.5	19.0
Aug-26	745	144.3	306.9	N/A	196.8	190.3	216.1	777	401	296	292	54.2	12.0	41.3	-12.1	1496.0	618.4	19.5
Aug-26	800	144.4	307.5	N/A	196.3	191.2	216.8	778	390	295	270	55.1	12.0	43.1	-3.7	1507.4	650.0	20.1
Aug-26	815	144.3	307.9	N/A	195.9	191.5	217.7	770	388	280	273	56.5	12.0	42.6	-10.6	1493.2	636.7	19.2
Aug-26	830	144.1	306.6	N/A	193.8	189.7	218.1	777	373	300	272	57.4	12.0	44.8	-4.1	1493.6	668.7	19.9
Aug-26	845	144.6	307.3	N/A	193.0	190.7	219.1	779	377	299	293	56.8	12.0	44.3	-12.5	1504.4	666.8	20.0
Aug-26	900	143.9	306.3	N/A	191.9	185.2	214.7	779	347	297	269	58.8	11.8	48.3	-4.8	1461.0	706.4	20.9
Aug-26	915	143.8	304.9	N/A	190.7	187.8	216.4	766	365	296	276	57.1	11.9	45.0	-7.4	1457.7	656.6	19.8
Aug-26	930	144.1	305.5	N/A	190.3	186.4	214.1	766	365	296	276	56.7	12.0	45.2	-7.1	1446.8	654.2	19.7
Aug-26	945	144.1	306.2	N/A	190.5	187.9	216.1	776	365	295	290	57.1	12.0	45.8	-13.0	1476.6	676.5	20.2
Aug-26	1000	143.4	306.7	N/A	191.0	189.4	218.2	771	354	303	270	57.2	12.0	47.1	-2.8	1479.9	696.4	20.8
Aug-26	1015	144.7	307.1	N/A	190.8	187.2	218.4	770	354	288	272	56.9	12.0	46.3	-10.2	1459.9	675.7	20.3
Aug-26	1030	144.6	306.4	N/A	190.0	186.6	217.4	778	346	303	269	56.9	12.0	48.1	-3.6	1470.1	707.1	21.2
Aug-26	1045	144.3	306.4	N/A	189.4	185.8	215.6	773	353	294	287	57.0	12.0	47.0	-13.5	1455.4	684.5	20.5
Aug-26	1100	144.4	307.2	N/A	189.9	186.1	214.7	774	355	296	274	56.8	12.0	47.0	-6.7	1459.8	686.7	20.6
Aug-26	1115	144.6	308.3	N/A	191.1	188.0	218.0	757	345	296	259	56.0	12.0	47.2	-1.5	1442.1	680.3	20.7
Aug-26	1130	144.0	309.6	N/A	193.1	186.5	216.3	865	365	333	255	55.2	12.0	51.0	11.3	1634.3	833.5	25.8
Aug-26	1145	143.8	311.5	N/A	194.5	184.7	214.9	873	368	333	255	55.2	11.9	50.9	11.0	1633.5	831.4	25.9
Aug-26	1200	143.7	311.2	N/A	194.5	184.1	216.5	893	353	333	255	54.7	11.9	53.5	10.1	1665.5	890.3	28.0
Aug-26	1215	143.7	311.2	N/A	194.5	184.1	216.5	893	353	333	255	54.7	11.9	53.5	10.1	1665.5	890.3	28.0
Aug-26	1230	144.1	310.9	N/A	197.1	182.5	213.5	900	378	697	514	53.0	12.0	50.8	13.7	1664.7	846.4	27.3
Aug-26	1245	143.7	311.9	N/A	196.6	182.8	213.4	900	378	607	856	54.2	12.0	50.9	-64.6	1667.5	849.5	26.8
Aug-26	1300	144.2	312.0	N/A	196.9	183.7	213.9	900	378	872	793	53.9	12.0	51.1	-5.9	1675.7	855.8	27.1
Aug-26	1315	144.4	311.0	N/A	196.1	182.1	209.8	900	378	872	793	53.8	12.0	51.6	-4.8	1661.1	856.9	27.2
Aug-26	1330	144.8	310.7	N/A	196.3	183.1	213.5	900	378	925	793	54.0	12.0	51.0	0.0	1670.2	851.9	26.9
Aug-26	1345	144.6	310.8	N/A	195.6	182.9	214.6	918	373	801	537	54.8	11.0	52.4	21.3	1701.7	890.9	30.5
Aug-26	1400	143.8	310.8	N/A	195.5	182.4	214.6	909	374	772	546	55.2	9.4	51.5	16.8	1679.5	865.5	34.7
Aug-26	1415	143.9	310.5	N/A	194.0	180.3	209.6	908	368	746	549	55.2	8.4	52.9	14.5	1659.3	878.0	39.6
Aug-26	1430	144.0	309.5	N/A	196.6	180.4	213.0	904	374	746	540	52.0	7.4	51.1	14.4	1652.9	845.1	46.2
Aug-26	1445	144.4	310.2	N/A	197.8	179.3	210.4	905	401	747	553	52.4	6.4	48.0	13.1	1643.7	788.2	49.8
Aug-26	1500	144.4	308.7	N/A	197.3	178.7	212.6	893	402	747	551	52.1	4.3	46.5	12.2	1617.4	751.9	71.9
Aug-26	1515	144.7	309.5	N/A	197.0	179.9	210.9	898	407	745	550	52.1	3.9	46.8	13.4	1636.8	766.5	81.1
Aug-26	1530	144.3	309.9	N/A	201.3	180.0	211.0	897	580	737	558	50.0	4.3	24.2	11.2	1635.5	395.4	39.4
Aug-26	1545	143.9	309.9	N/A	197.9	178.6	211.7	894	439	743	556	50.3	3.5	41.8	11.3	1617.4	676.4	82.7
Aug-26	1630	141.9	306.4	N/A	198.8	178.7	210.5	902	470	772	586	50.0	11.9	38.6	10.6	1633.7	630.9	21.7
Aug-26	1645	142.2	306.6	N/A	197.3	179.2	210.5	879	445	772	579	51.6	11.6	40.5	11.8	1596.7	647.2	22.2
Aug-26	1900	142.9	305.6	N/A	195.4	179.4	209.0	875	424	754	577	52.0	11.7	43.6	10.9	1590.3	692.9	23.4
Aug-26	1915	142.3	305.0	N/A	194.6	181.1	213.3	881	420	749	572	52.0	11.9	43.8	10.0	1617.3	708.9	23.5
Aug-26	1930	142.3	303.1	N/A	191.9	178.4	211.8	878	399	724	553	54.2	12.0	46.1	9.2	1587.7	731.9	23.1
Aug-26	1945	142.8	303.1	N/A	192.8	181.4	211.5	873	406	738	551	52.0	12.0	45.7	12.9	1604.1	733.5	24.1
Aug-26	2000	142.2	303.0	N/A	193.0	181.7	213.1	870	399	739	556	52.2	12.0	46.7	11.8	1618.9	756.8	24.7
Aug-26	2015	142.9	302.8	N/A	192.4	181.8	214.8	881	396	746	565	53.3	12.0	46.8	10.6	1622.6	760.1	24.3
Aug-26	2030	141.8	303.9	N/A	191.3	183.8	229.7	890	393	770	543	55.2	12.0	44.8	11.9	1657.2	743.0	23.0
Aug-26	2045	142.7	304.4	N/A	190.9	182.9	230.3	897	391	775	585	54.8	12.0	45.1	4.9	1661.9	750.0	23.4
Aug-26	2100	141.8	304.3	N/A	190.7	183.1	229.5	897	388	743	584	54.9	12.0	45.7	1.5	1663.7	760.8	23.7
Aug-26	2115	142.8	304.4	N/A	190.7	183.5	229.4	944	368	743	551	55.3	12.0	51.2	7.3	1755.7	899.4	27.8
Aug-26	2130	142.2	304.1	N/A	190.5	183.5	231.8	923	376	798	554	54.9	12.0	48.6	12.3	1716.6	834.0	25.9
Aug-26	2145	140.4	304.1	N/A	190.2	184.1	227.7	930	385	784	547	54.9	12.0	48.8	13.7	1735.3	847.5	26.4
Aug-26	2200	142.1	303.5	N/A	190.3	184.8	232.6	926	383	779	547	54.8	12.0	48.0	11.6	1734.4	832.2	25.9
Aug-26	2215	142.5	303.8	N/A	190.1	184.7	230.1	920	386	761	563	55.2	12.0	47.7	7.7	1721.3	820.7	25.4
Aug-26	2230	142.0	302.9	N/A	190.2	183.9	231.0	913	373	757	549	52.4	12.0	48.7	8.9	1701.7	828.0	27.0
Aug-26	2245	142.2	304.2	N/A	192.3	184.4	229.6	918	415	757	558	52.0	12.0	43.8	8.2	1715.7	750.7	24.6
Aug-26	2300	142.2	306.1	N/A	193.3	184.7	228.5	918	415	757	558	53.2	12.0	44.1	8.8	1718.5	758.2	24.3
Aug-26	2315	142.1	304.8	N/A	193.6	186.9	228.7	918	415	757	558	53.3	12.0	44.				

CZD LIME INJECTION DATA AUGUST 12 TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KBCFM	Flue Gas Flow Out KBCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Aug 27	30	142.5	309.6	N/A	195.5	191.3	231.7	877	414	710	573	54.9	12.0	42.8	2.2	1700.6	728.0	22.6
Aug 27	45	142.8	309.1	N/A	195.6	190.2	231.7	877	417	723	572	55.4	11.6	42.1	3.5	1690.8	711.2	22.7
Aug 27	100	142.2	308.7	N/A	194.9	190.7	233.0	877	400	721	578	55.7	11.9	44.3	2.0	1695.3	750.3	23.2
Aug 27	115	143.2	308.4	N/A	194.1	189.1	232.2	877	399	739	583	56.7	12.1	44.2	3.2	1681.1	742.8	22.2
Aug 27	130	143.1	307.8	N/A	193.6	189.5	231.4	877	403	740	575	56.1	11.9	43.9	5.2	1683.5	739.1	22.7
Aug 27	145	142.5	307.7	N/A	193.6	189.6	232.0	880	402	729	585	56.6	12.2	44.1	5.2	1690.3	744.7	22.1
Aug 27	200	142.7	307.3	N/A	194.2	189.1	235.2	891	402	721	568	54.0	12.2	43.9	2.0	1706.9	749.4	23.3
Aug 27	215	142.9	305.5	N/A	194.3	188.1	230.6	882	373	728	566	53.2	12.0	48.2	4.7	1680.7	809.7	26.0
Aug 27	230	143.6	305.4	N/A	195.3	187.7	229.8	883	404	741	560	53.1	12.2	44.0	7.5	1680.0	738.7	23.3
Aug 27	245	142.4	306.8	N/A	195.3	188.9	230.8	906	407	798	605	53.0	12.2	45.1	7.2	1734.6	782.4	24.8
Aug 27	300	142.3	309.0	N/A	196.6	190.3	234.3	898	412	789	611	54.3	12.1	43.5	4.8	1731.1	752.3	23.4
Aug 27	315	143.1	308.2	N/A	195.7	188.5	229.2	909	409	790	601	54.5	11.9	45.3	7.5	1736.5	786.0	24.8
Aug 27	330	143.2	306.5	N/A	194.8	190.1	231.8	902	397	782	608	55.1	12.0	46.3	5.1	1737.9	804.8	24.9
Aug 27	345	143.0	306.8	N/A	194.4	188.6	230.1	901	398	785	598	55.4	12.2	46.1	7.0	1722.3	793.7	24.0
Aug 27	400	143.3	307.4	N/A	194.3	189.8	231.9	901	395	773	587	55.4	12.0	46.4	7.1	1730.4	802.8	24.7
Aug 27	415	142.5	306.7	N/A	194.1	188.3	228.7	893	385	760	580	56.1	11.9	47.7	7.3	1703.5	811.9	24.9
Aug 27	430	143.3	305.8	N/A	193.7	187.4	230.2	889	383	762	580	56.2	12.1	47.1	6.5	1688.7	795.9	24.0
Aug 27	445	143.4	305.6	N/A	193.8	187.4	229.4	910	380	750	579	55.9	11.8	48.8	5.4	1727.5	843.5	26.2
Aug 27	500	142.9	305.8	N/A	194.3	187.6	231.2	896	391	752	567	55.0	10.5	46.2	7.1	1702.7	787.2	26.2
Aug 27	515	142.9	306.0	N/A	194.6	186.8	227.8	898	393	748	563	55.2	8.3	46.5	8.2	1696.4	788.6	36.0
Aug 27	530	143.1	306.0	N/A	194.1	186.5	229.4	903	395	748	573	54.1	7.2	46.1	5.9	1705.9	787.2	42.6
Aug 27	545	142.6	305.4	N/A	194.1	186.4	230.7	901	399	753	570	54.0	6.5	45.3	6.3	1702.2	770.3	46.4
Aug 27	600	142.7	305.7	N/A	194.2	185.9	229.1	909	408	757	569	54.2	8.2	44.7	7.3	1712.7	764.9	36.1
Aug 27	615	142.7	305.9	N/A	195.2	186.7	229.0	909	411	775	570	53.0	10.8	44.5	9.8	1719.1	764.8	27.6
Aug 27	630	142.9	305.8	N/A	195.8	187.1	229.7	911	418	772	582	53.0	11.7	43.7	7.4	1727.5	755.2	25.0
Aug 27	645	143.0	305.4	N/A	196.5	185.9	228.5	908	425	763	578	52.3	11.8	42.5	6.8	1709.9	726.4	24.1
Aug 27	700	142.4	304.4	N/A	196.1	185.3	230.9	920	410	755	569	51.0	11.8	44.5	8.0	1726.9	768.2	26.2
Aug 27	715	143.1	304.4	N/A	199.4	185.9	227.5	921	436	764	570	49.0	12.2	42.1	8.8	1735.3	731.0	25.0
Aug 27	730	142.8	305.3	N/A	200.3	186.8	228.3	926	448	754	572	49.4	12.1	40.8	7.2	1752.2	715.5	24.5
Aug 27	745	143.0	305.7	N/A	200.3	185.9	226.9	930	435	757	570	52.1	11.2	43.0	8.0	1752.2	752.9	26.6
Aug 27	800	142.6	306.1	N/A	198.1	186.9	228.6	938	431	755	570	52.8	8.9	43.8	7.7	1776.8	778.1	34.6
Aug 27	830	142.4	305.5	N/A	197.2	186.8	229.6	931	437	757	573	47.7	6.3	42.3	7.0	1761.7	744.6	52.5
Aug 27	1430	136.3	308.4	N/A	206.3	184.7	240.8	934	537	402	301	44.5	12.8	25.1	2.4	1748.4	438.3	15.7
Aug 27	1445	136.4	307.7	N/A	203.4	185.1	240.4	916	487	394	300	52.4	13.2	31.0	1.0	1717.5	532.3	15.6
Aug 27	1500	135.9	309.6	N/A	197.3	186.5	241.2	926	464	385	285	53.0	11.8	35.2	4.3	1749.6	616.1	20.2
Aug 27	1515	139.3	309.9	N/A	196.9	186.7	241.7	933	442	389	298	54.2	12.3	38.6	3.2	1764.5	681.6	20.9
Aug 27	1530	139.7	310.6	N/A	195.6	185.4	240.2	946	459	397	299	58.3	12.4	37.2	2.5	1776.8	660.3	18.7
Aug 27	1545	141.3	310.9	N/A	195.9	186.5	240.4	955	454	395	297	53.9	12.2	38.8	3.1	1804.9	699.9	21.8
Aug 27	1600	141.5	311.0	N/A	195.2	185.1	242.2	944	440	390	298	56.7	12.0	39.0	0.1	1771.1	690.7	20.8
Aug 27	1615	142.1	310.9	N/A	194.9	184.6	238.8	943	434	387	295	57.7	11.8	40.4	1.5	1764.5	713.7	21.5
Aug 27	1630	142.1	311.6	N/A	195.2	184.7	241.8	959	445	382	292	58.0	11.8	39.2	0.1	1795.4	704.4	21.1
Aug 27	1645	143.3	312.3	N/A	195.5	184.2	242.3	960	442	386	292	56.1	12.0	39.5	0.3	1792.0	707.7	21.5
Aug 27	1700	142.7	312.8	N/A	195.0	184.4	241.6	952	422	383	293	56.9	12.0	42.0	0.4	1779.2	746.7	22.4
Aug 27	1715	141.9	313.3	N/A	195.2	185.4	241.5	952	427	389	293	57.0	12.0	41.5	1.9	1787.9	742.4	22.2
Aug 27	1730	142.2	312.3	N/A	194.4	183.2	238.7	951	423	383	291	57.3	12.0	42.1	1.0	1764.8	742.3	22.1
Aug 27	1745	142.8	312.3	N/A	194.7	185.8	240.6	945	424	388	290	57.3	12.0	41.9	3.2	1778.6	745.5	22.2
Aug 27	1800	141.8	311.2	N/A	193.0	185.3	240.6	938	403	385	290	58.7	12.0	44.2	2.0	1760.7	777.5	22.6
Aug 27	1815	141.6	309.6	N/A	190.3	183.4	242.1	948	392	378	284	59.3	12.0	45.5	0.8	1762.1	801.1	23.1
Aug 27	1830	142.0	308.5	N/A	191.7	183.9	241.2	953	375	375	283	59.4	12.0	48.4	1.0	1775.3	850.4	24.7
Aug 27	1845	141.3	307.7	N/A	189.7	183.6	240.0	950	381	374	280	58.8	12.0	47.6	2.3	1766.8	840.9	24.4
Aug 27	1900	141.8	308.0	N/A	190.3	184.8	242.0	941	395	372	281	57.4	12.0	45.0	1.2	1762.5	793.2	23.6
Aug 27	1915	138.8	307.3	N/A	192.6	183.3	242.7	953	386	372	279	55.4	12.0	46.3	0.8	1769.5	819.6	25.3
Aug 27	1930	141.4	306.6	N/A	193.2	182.5	239.9	938	401	371	282	56.0	12.0	43.8	0.1	1735.0	759.6	23.2
Aug 27	1945	141.3	305.9	N/A	192.5	182.1	239.8	941	389	368	278	57.1	12.0	45.6	1.2	1736.7	792.1	23.7
Aug 27	2000	142.6	305.7	N/A	190.0	182.8	241.2	945	380	368	275	58.1	12.0	46.9	1.4	1750.8	821.4	24.1
Aug 27	2015	142.6	306.2	N/A	191.1	183.7	239.7	946	376	367	277	55.6	12.0	48.1	1.5	1760.4	846.5	26.0
Aug 27	2030	141.7	305.8	N/A	192.5	182.8	240.0	937	413	371	276	54.0	12.0	42.1	2.3	1736.0	731.0	23.1
Aug 27	2045	142.5	305.4	N/A	192.4	182.8	240.0	955	420	379	285	55.0	12.0	42.3	1.4	1769.3	748.5	23.2
Aug 27	2100	142.3	306.0	N/A	192.7	183.6	241.4	955	413	357	285	55.1	12.0	43.2	5.1	1777.1	767.4	23.8
Aug 27	2115	143.1	306.1	N/A	192.6	183.9	241.2	961	384	427	269	55.0	12.0	47.6	17.4	1790.0	852.1	26.4
Aug 27	2130	141.9	306.3	N/A	192.7	183.4	242.8	956	399	403	274	55.2	12.0	44.8	10.1	1777.0	795.9	24.6
Aug 27	2145	143.3	307.6	N/A	193.1	182.1	240.0	975	418	390	279	54.8	12.0	43.5	5.6	1799.3	783.3	24.4
Aug 27	2200	141.9	308.3	N/A	192.8	182.6	238.5	957	397	389	279	55.7	12.0	45.9	6.2	1771.1	812.2	24.9
Aug 27	2215	142.2	307.6	N/A	192.2	182.8	240.7	944	369	386	280	55.9	12.0	48.5	4.4	1749.0	848.1	25.9
Aug 27	2230	142.6	307.8	N/A	194.6	180.8	237.3	953	416	389	284	53.0	12.0	42.7	4.2	1745.4	744.5	24.0
Aug 27	2245	142.6	306.9	N/A	193.4	183.8	239.9	940	402	392	290	54.8	12.0	44.2	3.5	1751.1	774.4	24.1
Aug 27	2300	142.1	306.7	N/A	193.4	182.6	237.4	940	402	392	290	54.8	12.0	44.4	3.8	1739.6	773.2	24.1
Aug 27	2315	143.3	307.8	N/A	194.3	184.3	239.4	940	402	392	318	53.2	12.0	44.5	5.3	1755.8	781.2	25.1
Aug 27	2330	142.0	308.9	N/A	195.9	184.7	240.1	940	421	344	294	53.2	12.0	41.8	10.9	1759.6	734.8	23.6

CZD LIME INJECTION DATA AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Aug-28	45	143.2	306.9	N/A	192.7	183.5	239.0	892	409	365	291	55.3	12.0	40.3	4.0	1659.2	669.2	20.7
Aug-28	100	143.7	307.8	N/A	193.1	183.2	239.1	905	410	371	288	55.8	12.0	40.8	1.4	1680.4	686.4	21.0
Aug-28	115	143.0	308.0	N/A	193.1	184.4	239.7	912	404	369	289	55.7	12.0	42.5	1.7	1704.7	724.0	22.2
Aug-28	130	143.4	308.0	N/A	192.8	183.7	237.5	907	391	363	288	55.7	12.0	44.2	2.5	1687.8	746.2	22.9
Aug-28	145	142.6	308.0	N/A	193.8	186.5	244.9	916	410	369	287	55.4	12.0	41.2	1.9	1731.4	713.4	22.0
Aug-28	200	142.5	310.0	N/A	194.8	185.9	243.4	929	418	370	291	55.4	12.0	41.1	2.9	1750.4	718.8	22.1
Aug-28	215	142.7	309.1	N/A	195.0	185.6	242.1	916	415	368	287	55.8	12.0	40.9	1.5	1723.1	704.4	21.5
Aug-28	230	143.4	308.7	N/A	194.8	185.4	239.1	940	408	370	290	55.5	12.0	44.0	1.1	1765.4	777.5	23.9
Aug-28	245	143.2	308.4	N/A	194.1	185.0	239.9	926	425	375	286	55.3	12.0	40.4	1.0	1735.3	701.6	21.7
Aug-28	300	142.5	307.0	N/A	193.4	183.1	239.3	935	390	365	277	52.5	12.0	45.5	0.9	1735.1	789.1	25.7
Aug-28	315	143.1	306.5	N/A	197.8	184.0	241.5	925	424	365	278	52.6	12.0	39.9	0.1	1724.1	687.1	22.3
Aug-28	330	142.1	305.7	N/A	196.5	184.7	238.2	924	381	368	292	51.6	12.0	46.8	2.3	1728.8	808.5	26.7
Aug-28	345	142.3	307.8	N/A	198.0	184.3	238.7	922	433	363	280	50.9	12.0	39.0	0.3	1722.2	671.4	22.5
Aug-28	400	142.6	308.7	N/A	198.4	182.6	239.3	922	434	365	277	51.3	12.0	38.3	0.4	1705.4	653.9	21.8
Aug-28	415	143.2	304.7	N/A	198.0	183.3	238.4	926	427	356	272	50.8	12.0	40.0	0.6	1719.4	667.3	23.1
Aug-28	430	143.9	304.0	N/A	197.1	181.5	238.3	948	428	360	277	51.0	12.0	40.7	1.0	1743.9	710.0	23.8
Aug-28	445	143.8	304.7	N/A	197.1	182.8	238.9	929	435	358	274	51.4	12.0	38.8	0.1	1721.2	667.8	22.2
Aug-28	500	143.4	303.8	N/A	199.2	181.9	235.8	932	442	357	270	47.9	12.0	38.6	2.1	1718.2	662.7	23.6
Aug-28	515	143.5	304.0	N/A	201.6	182.1	238.5	921	454	352	269	46.2	12.0	35.5	0.0	1699.8	603.5	22.3
Aug-28	530	142.5	303.4	N/A	202.9	181.5	234.0	929	464	359	272	46.1	12.0	35.6	2.5	1708.0	608.6	22.5
Aug-28	545	142.0	305.1	N/A	204.8	183.5	238.6	945	483	356	276	46.2	12.0	33.5	0.7	1756.6	586.7	21.8
Aug-28	600	143.1	306.8	N/A	206.0	182.8	242.8	947	483	363	275	46.0	12.0	32.3	0.8	1753.6	566.4	21.0
Aug-28	615	142.9	307.3	N/A	203.7	183.1	241.2	968	484	361	275	50.9	12.0	34.2	0.4	1795.2	613.4	20.6
Aug-28	630	142.8	307.9	N/A	201.8	184.5	243.6	936	445	357	271	52.3	12.0	37.2	0.1	1749.3	650.5	21.2
Aug-28	645	143.5	307.9	N/A	199.7	184.7	243.0	965	446	361	275	53.5	12.0	39.2	0.3	1806.2	708.9	22.6
Aug-28	700	143.9	308.9	N/A	198.4	184.2	242.9	964	438	361	276	55.0	12.0	40.1	0.6	1798.6	721.4	22.4
Aug-28	715	141.9	307.8	N/A	197.8	183.6	241.5	934	416	350	266	54.1	12.0	41.5	0.1	1738.0	720.6	22.7
Aug-28	730	141.8	308.0	N/A	197.8	183.4	242.9	930	431	355	268	54.1	12.0	38.6	0.1	1727.7	666.5	21.0
Aug-28	745	142.7	307.5	N/A	198.8	183.4	240.1	959	446	357	272	52.2	12.0	39.1	0.2	1781.6	697.4	22.8
Aug-28	800	143.3	307.1	N/A	202.5	182.7	238.5	963	426	355	250	48.2	12.0	41.6	8.2	1764.7	734.5	26.0
Aug-28	815	143.6	308.2	N/A	204.3	183.1	240.6	971	478	359	274	49.1	12.1	35.3	0.3	1800.8	635.3	21.9
Aug-28	830	142.6	308.7	N/A	204.9	182.5	237.5	956	478	358	271	48.3	11.8	39.0	1.6	1767.3	618.1	22.2
Aug-28	845	142.9	307.9	N/A	204.2	183.8	241.9	955	475	364	276	51.7	12.1	34.6	0.2	1777.9	614.4	20.1
Aug-28	900	143.2	308.0	N/A	202.0	183.5	237.6	959	446	361	275	52.0	12.0	39.5	1.3	1783.4	704.4	23.1
Aug-28	915	143.3	309.4	N/A	200.8	184.2	239.8	949	447	355	276	53.2	12.0	38.7	1.1	1771.9	685.1	22.0
Aug-28	930	142.2	309.1	N/A	200.1	183.0	241.0	941	437	357	270	53.7	12.0	38.9	0.3	1744.6	678.0	21.6
Aug-28	945	142.9	309.4	N/A	200.3	184.7	237.9	966	440	363	273	50.1	11.9	41.4	2.9	1808.3	748.2	25.7
Aug-28	1000	143.0	310.4	N/A	206.9	181.8	236.5	964	488	368	280	47.2	11.9	34.1	0.8	1776.2	606.4	22.1
Aug-28	1015	132.0	310.4	N/A	208.8	181.4	237.2	948	477	365	279	46.8	11.8	34.2	0.2	1742.0	595.1	22.1
Aug-28	1615	142.7	301.6	N/A	207.2	184.4	237.8	914	537	363	277	40.4	11.1	24.3	1.5	1707.3	414.6	19.0
Aug-28	1630	142.4	301.4	N/A	206.2	185.0	239.6	919	536	359	278	44.5	12.0	24.6	0.2	1723.1	423.2	16.2
Aug-28	1645	143.0	302.2	N/A	201.1	185.6	240.2	930	494	358	279	49.9	12.0	31.3	0.6	1749.4	548.1	18.8
Aug-28	1700	142.6	303.1	N/A	199.4	185.6	240.0	925	477	360	280	49.9	12.0	33.3	0.5	1739.1	579.9	19.8
Aug-28	1715	142.9	304.0	N/A	197.8	184.8	240.0	918	467	360	280	52.1	12.0	34.0	1.0	1719.4	584.3	19.1
Aug-28	1730	141.9	304.7	N/A	198.7	185.4	242.0	922	467	367	280	50.1	12.0	33.8	0.5	1731.6	586.0	20.0
Aug-28	1745	143.7	304.9	N/A	199.1	184.0	242.8	928	470	367	282	49.9	12.0	33.2	1.5	1730.6	575.1	19.7
Aug-28	1800	142.7	304.5	N/A	199.1	183.4	240.1	911	466	367	285	50.1	12.0	33.0	1.8	1692.4	558.3	19.0
Aug-28	1815	142.2	303.9	N/A	197.8	183.6	241.8	906	430	370	282	52.1	12.0	37.5	0.4	1685.9	632.0	20.7
Aug-28	1830	142.7	304.6	N/A	197.3	185.3	242.4	911	440	373	282	52.1	12.0	36.8	1.1	1710.9	629.8	20.6
Aug-28	1845	143.3	304.9	N/A	197.4	184.3	242.7	912	434	377	286	52.2	12.0	37.3	0.1	1702.6	634.9	20.8
Aug-28	1900	143.3	304.8	N/A	198.8	184.2	244.1	917	436	377	281	49.9	12.0	37.1	1.1	1712.0	634.4	21.7
Aug-28	1915	143.4	303.9	N/A	199.6	184.4	238.7	910	427	378	286	47.3	12.0	39.2	2.1	1700.7	667.3	24.1
Aug-28	1930	144.5	304.7	N/A	202.8	183.8	239.7	935	484	377	290	46.3	12.0	32.5	0.5	1740.8	565.1	20.8
Aug-28	1945	143.6	304.5	N/A	203.1	184.5	241.6	919	479	379	291	47.1	12.0	31.8	0.7	1718.5	545.7	19.8
Aug-28	2000	143.9	304.3	N/A	203.4	184.0	241.4	923	475	382	288	47.1	12.0	32.4	1.2	1720.5	558.3	20.2
Aug-28	2015	144.0	304.0	N/A	203.1	184.2	240.0	909	467	386	293	48.1	12.0	33.1	1.2	1697.0	561.0	19.9
Aug-28	2030	144.1	303.8	N/A	201.3	185.5	240.4	892	453	367	288	49.1	12.0	34.2	1.5	1677.2	573.4	19.9
Aug-28	2045	143.9	303.3	N/A	200.1	183.8	243.4	892	435	375	282	48.5	12.0	35.5	0.2	1661.9	589.9	20.8
Aug-28	2100	143.9	302.6	N/A	203.0	183.8	241.9	892	424	375	282	46.8	12.0	37.5	1.0	1661.9	623.2	22.7
Aug-28	2115	143.6	302.8	N/A	202.5	183.3	240.0	892	433	375	272	47.0	12.0	36.4	4.8	1657.3	604.0	21.9
Aug-28	2130	141.6	303.6	N/A	202.4	185.0	241.2	922	448	375	278	48.8	12.0	36.7	3.4	1729.0	634.9	22.2
Aug-28	2145	140.5	304.2	N/A	200.4	185.3	243.1	896	414	375	278	50.9	12.0	39.4	2.8	1681.3	662.0	22.2
Aug-28	2200	141.6	303.3	N/A	198.5	185.8	241.9	888	401	385	278	51.0	12.0	41.2	6.1	1671.7	689.3	23.1
Aug-28	2215	146.1	302.3	N/A	200.1	185.0	242.7	888	430	372	273	48.1	12.0	36.5	3.7	1665.2	608.6	21.6
Aug-28	2230	145.3	301.4	N/A	200.3	184.4	243.3	891	436	374	282	48.1	12.0	35.5	0.5	1665.4	591.4	21.0
AVERAGES		142.9	306.0	N/A	199.6	184.0	240.3	925.2	443.5	365.4	279.8	50.7	12.0	37.4	0.1	1724.3	644.5	21.7
Sep-2	1530	144.7	299.2	N/A	223.0	170.2	233.0	882	554	339	265	35.8	12.0	14.1	6.8	1520.8	214.1	10.2
Sep-2	1545	145.8	299.2	N/A	219.9	170.7	231.8	897	571	338	258	38.0	12.0	13.6	3.6	1551.9	210.9	9.5
Sep-2	1600	145.1	299.9	N/A	217.6	170.4	233.7	889	567	342	259	38.4	12.0	12.5	3.5	1534.7	192.1	

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Sep-2	1800	146.2	298.9	N/A	218.4	170.8	234.2	907	575	336	256	37.1	12.0	13.1	4.5	1569.2	206.0	9.5
Sep-2	1815	145.6	298.5	N/A	217.2	173.2	235.5	911	570	344	261	36.8	12.0	14.9	3.1	1590.3	238.3	11.1
Sep-2	1830	146.8	298.3	N/A	218.0	172.8	233.0	927	575	340	261	36.6	12.0	16.3	3.3	1622.6	265.2	12.4
Sep-2	1845	146.2	298.5	N/A	218.2	173.0	234.4	912	579	347	264	36.2	12.0	14.0	3.0	1599.1	224.0	10.6
Sep-2	1900	145.9	298.4	N/A	218.6	173.1	232.6	907	577	344	259	35.9	12.0	14.6	-1.3	1591.3	232.6	11.1
Sep-2	1915	146.1	298.2	N/A	218.7	173.2	232.4	910	571	344	264	36.4	12.0	15.9	3.1	1596.6	263.2	11.9
Sep-2	1930	145.1	298.2	N/A	216.8	172.6	233.3	917	565	344	266	39.6	12.0	15.9	-4.3	1586.7	252.3	10.9
Sep-2	1945	144.8	298.3	N/A	217.4	173.6	233.6	918	550	346	266	36.6	12.0	19.4	-3.5	1614.3	313.8	14.6
Sep-2	2000	145.0	297.3	N/A	218.0	173.7	232.4	907	555	350	270	36.0	12.0	18.2	-3.1	1595.9	290.2	13.8
Sep-2	2015	145.0	297.3	N/A	218.4	174.0	231.4	915	548	349	270	36.2	12.0	20.4	-2.7	1613.6	328.8	15.5
Sep-2	2030	146.6	298.9	N/A	219.0	173.9	232.7	915	561	353	268	35.8	12.0	17.9	-1.6	1611.8	289.2	13.8
Sep-2	2045	145.5	297.6	N/A	219.0	173.9	231.7	902	557	354	268	35.6	12.0	17.8	-0.9	1588.9	282.5	13.5
Sep-2	2100	145.6	297.1	N/A	218.4	174.4	231.5	902	548	359	270	35.4	12.0	19.3	0.2	1593.5	306.1	14.9
Sep-2	2115	143.8	298.8	N/A	219.3	174.3	232.9	946	529	359	255	35.5	12.0	25.4	5.0	1671.2	423.8	20.4
Sep-2	2130	134.1	296.4	N/A	217.4	166.4	224.9	893	513	379	264	33.9	12.0	22.4	5.8	1505.4	337.3	17.0
Sep-2	2145	135.8	292.7	N/A	217.6	172.4	229.8	911	521	357	262	33.8	12.0	23.8	2.2	1590.9	378.8	19.1
Sep-2	AVERAGES	144.6	298.3	N/A	218.5	172.3	232.5	906.1	561.0	346.2	261.8	36.5	12.0	16.4	-2.1	1581.7	259.8	12.2
Sep-3	915	145.9	294.5	N/A	219.4	175.1	231.2	897	580	374	283	35.6	12.0	14.6	0.2	1591.0	232.6	11.2
Sep-3	930	144.7	294.5	N/A	218.2	175.2	229.4	872	569	359	275	35.9	12.0	14.6	0.3	1547.7	225.2	10.7
Sep-3	945	144.5	294.9	N/A	217.3	174.9	232.0	884	542	367	282	36.3	12.0	18.7	-2.0	1566.5	292.5	13.8
Sep-3	1000	145.0	294.9	N/A	218.9	174.9	232.0	900	543	362	269	35.2	12.0	20.0	1.5	1594.9	318.5	15.4
Sep-3	1015	145.1	295.4	N/A	217.0	175.0	230.8	900	532	357	271	36.9	12.0	22.1	-0.2	1595.8	352.9	16.3
Sep-3	1030	145.1	295.1	N/A	218.1	175.2	231.1	890	539	356	273	31.3	12.0	20.1	-0.9	1579.0	318.1	17.3
Sep-3	AVERAGES	145.1	294.9	N/A	218.2	175.1	231.1	890.4	550.7	362.6	275.5	35.2	12.0	18.3	-0.3	1579.1	290.0	14.1
Sep-29	1015	144.4	281.1	N/A	235.3	178.2	242.3	873	572	392	281	20.8	6.8	11.0	2.6	1576.0	173.0	25.8
Sep-29	1030	145.0	281.5	N/A	229.2	177.1	242.8	890	579	392	278	28.4	7.5	10.9	2.6	1597.7	174.6	17.2
Sep-29	1045	144.6	282.1	N/A	222.5	177.3	244.8	871	518	385	275	30.1	7.5	18.0	1.4	1565.4	281.8	26.2
Sep-29	1100	144.4	282.8	N/A	220.4	176.8	246.3	872	510	384	272	29.9	7.9	18.6	1.3	1561.9	290.2	25.8
Sep-29	1115	144.3	282.4	N/A	218.9	175.5	244.4	873	502	375	268	30.0	7.9	20.0	0.7	1553.0	311.0	27.5
Sep-29	1130	143.8	282.6	N/A	218.5	175.5	245.4	867	504	378	269	30.1	7.8	18.7	0.6	1542.4	289.0	25.9
Sep-29	AVERAGES	144.4	282.1	N/A	224.1	176.7	244.3	874.6	530.5	384.2	273.7	28.2	7.6	16.2	1.5	1566.1	253.2	24.8
Sep-30	1715	138.1	281.2	N/A	251.5	174.3	233.8	813	603	370	276	11.2	8.0	0.4	-0.3	1435.8	6.4	1.5
Sep-30	1730	137.9	282.7	N/A	252.5	173.1	235.4	826	603	374	268	10.9	8.0	0.7	2.5	1448.7	9.5	2.3
Sep-30	1745	137.4	282.9	N/A	252.5	172.3	232.6	817	606	375	271	11.1	8.0	-0.2	2.4	1426.3	-2.8	-0.7
Sep-30	1800	138.2	283.5	N/A	252.8	172.5	234.9	823	603	371	271	11.1	8.0	0.1	0.6	1437.5	1.4	0.3
Sep-30	AVERAGES	137.9	282.6	N/A	252.3	173.1	234.2	819.6	604.2	372.2	271.5	11.1	8.0	0.3	1.3	1437.1	3.6	0.9
Oct-9	1515	145.2	299.1	N/A	214.6	187.7	228.4	497	379	313	300	38.2	8.6	7.2	-16.5	945.4	67.6	4.3
Oct-9	1530	145.2	298.6	N/A	216.6	187.2	225.5	508	370	332	303	35.7	8.6	10.0	-10.1	962.6	96.0	6.5
Oct-9	1545	144.9	300.2	N/A	218.6	190.5	227.2	515	379	337	322	35.2	8.4	12.2	-13.9	994.2	121.1	8.6
Oct-9	1600	145.3	299.1	N/A	221.3	185.2	222.2	508	379	332	303	32.0	8.8	10.3	-9.7	952.3	98.4	7.3
Oct-9	1615	144.9	298.0	N/A	220.6	183.3	221.8	508	379	332	303	34.4	8.5	9.6	-10.6	942.5	90.1	6.4
Oct-9	AVERAGES	145.1	299.0	N/A	218.3	186.8	225.0	506.9	379.3	329.0	306.2	35.1	8.6	9.8	-12.2	959.4	94.6	6.6
Oct-12	1500	146.8	283.7	N/A	251.9	180.5	225.0	835	699	381	325	8.9	7.8	-4.4	-6.4	1526.7	-67.3	-20.4
Oct-12	1515	146.6	282.9	N/A	254.3	179.8	225.8	842	711	386	327	12.6	8.4	-6.0	-6.5	1533.9	-92.0	-18.2
Oct-12	1530	148.1	283.6	N/A	248.1	180.1	229.2	837	707	394	327	14.8	8.5	-7.6	-5.9	1526.4	115.9	-19.3
Oct-12	AVERAGES	147.2	283.4	N/A	251.4	180.1	226.7	837.8	705.7	386.5	326.4	12.1	8.2	-6.0	-6.3	1529.0	-91.7	-19.3
Oct-14	845	147.5	283.0	N/A	223.9	186.4	217.0	876	701	380	317	24.9	9.1	6.8	2.9	1654.0	112.4	10.3
Oct-14	900	147.7	283.0	N/A	224.5	186.3	216.0	874	688	376	317	25.0	9.1	8.7	2.4	1650.5	144.2	13.2
Oct-14	915	147.4	284.5	N/A	225.5	186.9	216.4	869	684	374	315	25.0	9.1	8.9	2.5	1645.4	146.1	13.4
Oct-14	930	147.1	284.4	N/A	225.8	186.1	216.4	869	683	375	314	25.3	9.1	8.6	2.6	1639.3	141.1	12.8
Oct-14	945	147.2	285.0	N/A	225.8	185.8	214.9	869	692	373	315	25.4	9.1	8.0	2.3	1636.7	130.4	11.8
Oct-14	1000	145.8	286.9	N/A	226.6	185.5	214.7	872	693	376	318	25.3	9.1	8.0	2.0	1638.7	131.6	11.9
Oct-14	1015	147.2	286.7	N/A	226.6	186.4	215.7	866	687	377	317	25.4	9.1	8.3	2.7	1636.3	135.3	12.2
Oct-14	1030	147.2	286.8	N/A	223.6	187.1	219.6	887	701	376	316	28.9	9.1	7.3	1.3	1681.3	122.2	9.7
Oct-14	1045	146.9	287.7	N/A	216.5	187.6	220.6	889	658	378	321	34.6	9.1	13.0	0.0	1689.6	219.3	14.5
Oct-14	1100	147.5	287.7	N/A	214.4	187.6	220.1	892	659	379	316	33.0	9.1	13.4	2.2	1696.2	227.1	15.8
Oct-14	1115	148.7	287.4	N/A	215.4	187.3	215.4	906	680	378	318	32.0	9.1	13.7	3.3	1719.9	236.3	16.9
Oct-14	1130	147.2	288.1	N/A	215.7	186.3	217.7	909	688	380	315	32.0	9.1	11.5	3.0	1716.4	198.2	14.2
Oct-14	1145	147.0	290.0	N/A	217.2	185.4	216.7	899	688	380	307	31.8	8.5	10.5	5.5	1689.3	178.1	13.8
Oct-14	1200	147.4	291.6	N/A	217.9	185.2	215.2	897	660	377	315	32.4	8.2	14.5	2.8	1682.8	244.2	19.3
Oct-14	1215	146.8	292.4	N/A	218.0	183.3	218.0	914	652	373	314	32.3	5.8	15.2	0.0	1697.1	257.4	29.2
Oct-14	1230	146.9	293.3	N/A	218.6	182.6	214.3	888	659	377	311	32.7	4.3	12.9	3.3	1643.6	212.1	32.3
Oct-14	1245	147.4	294.0	N/A	219.3	184.5	217.1	915	656	372	314	32.8	4.4	15.7	0.6	1711.0	268.7	39.9
Oct-14	1300	146.8	294.2	N/A	217.7	182.5	218.3	898	633	379	312	33.9	5.0	15.7	1.4	1661.0	261.4	32.9
Oct-14	1315	147.7	294.2	N/A	216.1	182.6	215.9	905	625	371	312	35.3	5.2	18.3	0.6	1674.0	307.0	35.7
Oct-14	1330	147.5	295.3	N/A	217.1	182.1	217.1	906	643	377	320	34.2	4.6	15.4	-1.4	1672.1	258.2	35.1
Oct-14	1345	146.6	294.9	N/A	217.6	182.2	218.0	905	639	362	300	34.0	4.8	15.5	0.9	1670.3	258.2	33.8
Oct-14	1400	146.5	294.6	N/A	217.2	182.2	215.9	903	640	365	303	35.1	4.8	16.0	1.6	1666.6	266.0	33.7
Oct-14	1415	147.4	294.4	N/A	216.8	181.0	218.1	892	628	365	309	34.4	1.8	15.2	-1.8	1635.6	248.1	87.1
Oct-14	1430	138.7	294.9	N/A	217.8	183.2												

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler	Duct	Avg °C	Duct	Flue Gas	Flue Gas	SO2	SO2	NOx	NOx	Lime	Lime	SO2	NOx	SO2	SO2	Lime
		Load	Inlet	Section	Outlet	Flow In	Flow Out	Inlet	Outlet	Inlet	Outlet	Flow	Conc	Removal	Removal	Inlet	Removed	Utilization
		MW	Temp °F	Temp °F	Temp °F	KSCFM	KSCFM	ppm	ppm	ppm	ppm	gpm	%	%	%	Lb/Hr	Lb/Hr	%
Oct-14	1545	141.4	296.7	N/A	217.2	181.4	217.9	879	621	371	309	35.0	4.0	15.1	-0.1	1616.3	244.4	37.5
Oct-14	1600	141.0	297.0	N/A	218.0	180.9	214.4	882	621	373	310	34.4	3.3	16.6	1.6	1616.4	267.6	50.8
Oct-14	1615	145.8	295.5	N/A	218.2	179.0	213.7	886	639	382	307	34.1	3.5	14.0	3.8	1607.6	224.5	40.5
Oct-14	1630	145.8	294.9	N/A	217.5	179.2	213.3	888	642	380	313	33.5	2.8	13.9	1.8	1612.7	224.6	51.8
Oct-14	1645	146.4	294.7	N/A	215.6	178.7	213.8	897	636	376	306	36.1	2.0	15.1	2.6	1623.7	245.4	73.8
Oct-14	1700	145.9	294.5	N/A	218.4	180.0	212.1	890	667	375	315	32.9	2.0	11.7	1.0	1623.0	180.0	62.7
Oct-14	1715	142.6	294.6	N/A	219.0	181.6	211.8	875	646	373	310	32.8	1.9	14.0	2.9	1610.7	224.8	78.4
Oct-14	1730	143.0	294.6	N/A	219.2	179.9	207.3	867	645	370	310	32.4	2.9	14.3	3.7	1581.0	226.7	52.1
Oct-14	1745	144.8	294.1	N/A	219.3	178.9	204.4	859	657	375	305	31.9	3.2	12.6	7.1	1556.8	196.8	41.6
Oct-14	1800	144.3	293.0	N/A	218.1	179.2	206.8	887	630	369	306	31.8	3.7	18.1	4.5	1610.3	290.7	53.1
Oct-14	1815	140.7	293.2	N/A	219.3	180.7	203.9	852	633	372	312	32.7	3.8	16.2	5.4	1560.6	252.3	43.6
Oct-14	1830	142.4	292.4	N/A	219.0	181.1	202.4	855	637	378	309	34.2	3.7	16.7	8.8	1568.6	261.7	44.5
Oct-14	1845	146.0	292.0	N/A	217.6	180.3	198.3	883	674	378	306	33.3	3.3	16.0	11.0	1613.8	259.0	50.8
Oct-14	1900	147.3	292.3	N/A	217.4	180.7	195.8	910	680	366	307	32.9	4.2	19.0	8.9	1665.7	316.1	49.1
Oct-14	1915	147.2	292.3	N/A	217.4	181.5	190.1	913	661	367	306	32.5	3.9	24.1	12.7	1678.6	404.9	68.6
Oct-14	1930	147.5	291.9	N/A	216.7	179.6	188.4	893	671	362	308	33.0	3.8	21.1	10.7	1624.8	343.4	58.9
Oct-14	1945	147.1	291.7	N/A	214.2	180.7	185.9	883	660	363	306	36.4	3.7	23.1	13.1	1616.4	373.7	59.7
Oct-14	2000	147.9	291.4	N/A	220.0	180.2	183.5	889	696	365	310	28.0	3.7	21.4	13.6	1623.8	347.9	72.2
Oct-14	2015	146.7	290.6	N/A	221.2	180.7	181.6	899	702	363	309	29.8	4.0	21.5	14.5	1646.5	354.5	63.9
Oct-14	2030	147.4	290.8	N/A	218.8	180.2	180.4	882	667	366	307	31.5	4.0	24.3	16.1	1611.1	391.4	66.7
Oct-14	2045	137.7	289.7	N/A	218.8	183.5	182.9	865	632	376	317	29.7	4.3	27.1	15.9	1608.0	436.3	73.2
AVERAGES		145.3	291.7	N/A	218.8	182.8	209.9	883.5	654.5	373.4	311.7	32.0	5.3	15.0	4.2	1636.3	245.3	39.6
Oct-15	1545	137.1	294.9	N/A	219.0	177.6	206.7	774	663	358	336	30.1	3.0	0.7	-9.3	1392.0	4.0	0.9
Oct-15	1600	134.9	294.5	N/A	221.8	177.8	213.1	779	652	353	325	28.9	3.0	-0.3	-10.2	1403.5	-3.8	-0.9
Oct-15	1615	137.5	292.7	N/A	223.4	175.3	208.1	809	660	353	323	27.5	3.0	3.0	-8.7	1436.0	43.8	11.5
Oct-15	1630	136.6	292.7	N/A	224.6	176.1	211.3	821	668	376	329	27.7	3.0	2.3	-5.1	1464.0	34.3	8.9
Oct-15	1645	139.8	292.6	N/A	224.5	175.6	206.9	822	660	376	321	27.7	3.0	5.4	-0.6	1461.6	78.4	20.4
Oct-15	1700	137.7	292.0	N/A	225.3	175.2	207.3	837	689	385	328	26.8	3.0	2.6	-0.7	1485.8	39.1	10.5
Oct-15	1715	144.1	292.0	N/A	225.4	173.8	206.2	837	684	387	319	26.6	3.0	2.9	2.1	1473.0	43.4	11.7
Oct-15	1730	140.5	292.4	N/A	223.5	175.8	209.3	828	705	382	337	30.0	3.0	-1.4	-5.1	1473.9	-20.5	-4.9
Oct-15	1745	145.6	291.7	N/A	221.5	175.6	207.9	833	683	385	324	29.7	3.0	2.9	0.2	1481.2	42.9	10.4
Oct-15	1800	144.9	291.1	N/A	220.3	176.9	209.2	839	690	379	324	30.0	3.0	2.8	-1.1	1503.8	41.7	10.0
Oct-15	1815	143.6	291.3	N/A	220.4	176.9	208.1	850	675	388	331	29.7	3.0	6.6	-0.5	1524.2	100.4	24.3
Oct-15	1830	145.1	290.8	N/A	220.2	177.7	212.7	851	675	389	324	29.9	3.0	2.8	0.3	1496.2	41.9	10.1
Oct-15	1845	145.3	290.4	N/A	219.6	177.1	209.8	857	687	383	322	30.2	3.0	5.0	0.5	1537.6	76.6	18.3
Oct-15	1900	145.3	290.0	N/A	219.8	176.8	212.3	859	675	383	325	29.6	3.0	5.7	-1.8	1539.5	88.0	21.4
Oct-15	1915	145.4	289.7	N/A	219.6	178.0	211.5	862	683	385	320	29.5	2.7	5.8	1.1	1554.4	90.2	24.5
Oct-15	1930	145.4	288.8	N/A	219.6	178.3	212.1	849	667	383	324	29.4	2.6	6.5	-0.7	1533.6	99.5	28.2
Oct-15	1945	144.8	287.3	N/A	219.3	176.4	211.8	866	681	380	324	28.7	1.8	5.6	-2.3	1548.5	86.5	36.4
Oct-15	2000	145.3	289.0	N/A	220.0	179.3	215.2	853	670	391	331	29.4	1.6	5.8	-1.4	1550.3	89.9	41.6
Oct-15	2015	144.7	289.3	N/A	220.9	179.4	212.5	854	677	380	319	28.7	1.1	6.1	0.6	1553.0	94.8	65.5
Oct-15	2030	140.8	288.7	N/A	221.7	180.0	210.5	836	686	389	321	28.0	1.2	4.0	3.6	1524.7	60.9	39.6
Oct-15	2045	139.7	287.8	N/A	222.1	180.0	213.4	804	646	367	307	27.7	0.6	4.7	0.8	1466.3	68.9	90.8
Oct-15	2100	139.8	287.8	N/A	222.6	180.3	213.7	804	644	367	307	28.0	0.2	5.0	1.0	1468.7	73.7	288.8
Oct-15	2115	140.3	287.5	N/A	222.3	180.0	209.4	873	624	367	303	27.2	0.3	16.9	4.0	1592.9	269.2	723.5
Oct-15	2130	140.0	286.7	N/A	223.1	180.7	213.2	839	636	381	304	26.9	0.2	10.5	5.7	1536.1	161.6	659.1
Oct-15	2145	139.9	286.5	N/A	223.2	180.7	212.5	824	640	375	305	26.6	1.5	8.7	4.2	1508.2	130.9	71.5
Oct-15	2200	139.6	286.7	N/A	224.0	181.5	214.0	823	643	374	305	26.6	1.7	7.9	3.7	1512.5	118.8	57.2
Oct-15	2215	140.0	286.9	N/A	223.3	181.7	214.8	818	648	371	310	27.4	1.4	6.4	1.3	1506.7	96.8	55.0
Oct-15	2230	140.3	286.2	N/A	224.0	181.0	212.6	814	638	372	311	26.6	1.5	7.9	1.9	1491.9	118.0	64.4
Oct-15	2245	140.2	285.6	N/A	224.5	181.8	212.8	813	649	373	310	25.6	3.3	6.6	2.9	1497.5	98.7	25.2
Oct-15	2300	139.7	286.0	N/A	221.4	182.5	213.4	813	649	373	310	28.6	3.1	6.7	3.0	1503.1	100.5	24.5
Oct-15	2315	139.6	286.6	N/A	219.7	182.7	212.6	813	648	373	310	29.4	2.4	7.3	3.4	1504.9	109.6	33.6
Oct-15	2330	140.1	287.1	N/A	219.4	182.9	214.3	813	638	373	312	29.4	2.2	8.1	2.2	1506.6	121.8	40.8
Oct-15	2345	139.9	286.9	N/A	219.3	182.3	211.3	813	642	319	317	28.9	2.0	8.4	-15.2	1501.7	126.6	47.6
AVERAGES		141.3	289.4	N/A	221.8	178.7	211.2	829.0	662.9	374.8	318.7	28.4	2.2	5.4	-0.6	1501.0	82.6	77.9
Oct-16	0	139.9	286.2	N/A	220.3	182.6	213.7	748	645	333	316	28.5	1.4	-0.9	-11.1	1384.1	-12.1	-6.6
Oct-16	15	139.7	286.2	N/A	219.0	182.8	213.3	766	645	331	316	29.8	1.6	1.7	-11.4	1418.9	24.3	11.1
Oct-16	30	139.7	285.8	N/A	214.6	182.8	215.3	774	644	345	316	32.8	1.0	2.0	-8.0	1433.7	28.2	18.8
Oct-16	45	140.2	285.9	N/A	218.4	181.8	212.5	774	630	348	335	27.6	0.6	4.9	-12.3	1425.9	69.9	92.4
Oct-16	100	139.7	287.5	N/A	222.5	183.1	210.5	774	639	352	321	26.8	0.5	5.1	-4.8	1436.1	72.6	118.7
Oct-16	115	139.6	286.3	N/A	221.5	184.0	212.4	783	653	339	321	28.4	0.6	3.6	-9.6	1459.0	53.1	68.2
Oct-16	130	128.0	284.9	N/A	218.9	177.8	205.2	760	629	356	321	28.4	0.6	4.4	-4.1	1369.3	60.9	78.3
Oct-16	145	113.8	280.5	N/A	213.9	167.0	194.0	764	605	363	310	26.4	2.5	8.0	0.9	1292.9	102.9	33.8
Oct-16	200	105.6	281.5	N/A	212.8	162.1	188.7	738	583	350	299	26.5	2.3	8.1	0.4	1212.4	98.0	34.9
Oct-16	215	104.6	283.3	N/A	213.0	162.4	189.0	734	577	361	306	26.5	2.0	8.6	1.4	1208.1	104.1	42.7
Oct-16	230	105.0	282.5	N/A	212.6	158.0	182.7	746	583	364	311	25.0	1.5	9.6	1.1	1193.6	114.6	66.6
Oct-16	245	104.7	283.5	N/A	212.3	159.4	187.2	746	577	362	300	26.6	1.2	9.2	2.4	1205.0	110.6	75.6
Oct-16	300	104.8	281.2	N/A	211.1													

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
		MW																
Oct-16	430	105.2	281.6	N/A	211.3	161.1	188.7	737	571	365	300	25.6	1.7	9.3	4.0	1202.5	111.7	55.9
Oct-16	445	104.9	280.0	N/A	211.3	162.2	185.8	742	576	373	304	25.6	2.0	11.1	6.6	1218.9	135.5	57.5
Oct-16	500	105.1	279.6	N/A	208.3	161.9	187.5	746	556	373	303	29.2	1.6	13.7	5.9	1223.1	167.7	78.2
Oct-16	515	105.0	278.7	N/A	210.4	160.8	183.6	742	570	373	303	25.0	2.4	12.4	7.2	1209.2	149.8	54.1
Oct-16	530	111.6	279.0	N/A	212.2	167.2	180.6	751	575	371	306	25.2	2.1	12.7	5.9	1271.6	162.1	66.5
Oct-16	545	121.7	278.3	N/A	214.0	172.2	195.5	769	609	373	310	25.1	2.2	10.0	5.7	1341.0	133.9	52.6
Oct-16	600	129.1	281.2	N/A	217.8	178.1	204.4	777	620	372	309	25.2	2.7	8.4	4.7	1402.3	117.4	37.3
Oct-16	615	124.7	282.0	N/A	216.8	171.9	196.8	795	623	369	310	25.3	2.0	10.3	3.9	1384.6	142.6	61.2
Oct-16	630	125.3	282.3	N/A	216.1	174.1	198.0	788	608	372	309	25.6	2.1	12.2	5.8	1389.5	170.0	68.6
Oct-16	645	124.9	283.4	N/A	217.8	173.1	199.5	785	622	377	312	25.5	1.4	8.6	4.5	1376.1	118.0	72.0
Oct-16	700	127.3	282.9	N/A	213.2	172.7	198.1	773	616	375	311	29.6	1.8	8.5	4.9	1352.8	115.6	47.2
Oct-16	715	130.1	288.4	N/A	218.9	182.8	209.9	792	634	377	313	27.9	1.3	8.1	4.5	1467.1	119.2	71.7
Oct-16	730	130.0	289.5	N/A	220.3	180.5	212.2	800	631	377	313	28.0	1.0	7.2	2.2	1462.1	105.9	82.6
Oct-16	1500	145.5	290.7	N/A	213.7	174.3	209.2	878	707	379	317	33.0	0.8	3.4	-0.3	1551.2	53.3	44.2
Oct-16	1515	145.6	290.9	N/A	210.4	176.5	212.1	857	696	379	314	35.0	0.8	2.4	0.3	1532.4	37.3	29.2
Oct-16	1530	146.0	291.2	N/A	209.8	176.7	211.0	860	680	379	315	35.2	0.8	5.5	0.6	1539.5	85.1	66.1
Oct-16	1545	144.1	292.3	N/A	209.9	178.6	210.7	850	668	376	307	35.4	0.8	7.3	3.8	1538.9	112.2	86.6
Oct-16	1600	145.1	291.5	N/A	210.4	178.1	209.9	844	667	371	319	34.4	0.8	6.8	-1.3	1522.1	103.0	81.8
Oct-16	1615	146.5	291.2	N/A	209.9	175.5	206.8	850	683	395	319	34.3	1.3	5.3	4.9	1512.1	80.4	39.3
Oct-16	1630	145.9	290.5	N/A	210.4	175.9	208.8	867	695	392	331	33.9	1.9	4.9	-0.2	1545.0	75.5	25.5
Oct-16	1645	145.6	290.8	N/A	210.8	176.1	211.9	860	688	388	320	34.1	2.2	3.7	0.9	1534.3	56.5	16.3
Oct-16	1700	145.7	290.2	N/A	211.1	175.3	208.4	865	690	386	315	33.3	2.4	5.2	3.1	1537.1	80.6	21.8
Oct-16	1715	145.5	290.4	N/A	211.6	175.2	207.5	870	700	385	316	33.2	2.1	4.7	2.8	1545.1	73.0	22.7
Oct-16	1730	145.7	290.1	N/A	212.9	175.2	205.3	868	689	382	320	31.7	2.7	7.0	2.0	1541.5	107.7	27.2
Oct-16	1745	145.5	289.9	N/A	214.2	174.6	208.2	865	685	379	313	31.2	2.3	5.5	1.5	1530.0	84.4	25.5
Oct-16	1800	145.7	289.7	N/A	214.4	173.5	207.2	855	678	377	311	31.5	2.2	5.3	1.4	1502.8	79.9	25.0
Oct-16	1815	145.7	290.0	N/A	213.7	173.5	210.4	873	674	373	311	33.0	2.4	6.3	-0.9	1534.5	97.0	26.5
Oct-16	1830	145.5	288.5	N/A	214.2	174.6	208.8	865	677	375	308	30.8	2.9	6.4	2.0	1530.0	98.2	23.8
Oct-16	1845	145.3	287.5	N/A	214.6	175.7	210.3	855	676	381	310	31.1	2.6	5.4	2.5	1522.8	82.8	22.2
Oct-16	1900	145.4	287.1	N/A	215.2	177.0	212.9	856	671	375	310	30.5	2.5	5.7	0.7	1534.9	88.0	25.0
Oct-16	1915	145.3	286.1	N/A	215.7	177.3	211.1	855	677	379	314	30.1	2.8	5.7	1.5	1536.6	88.0	22.6
Oct-16	1930	145.7	285.1	N/A	215.9	177.7	209.5	866	666	380	313	29.6	2.6	9.3	2.9	1559.0	145.8	41.0
Oct-16	1945	145.7	284.3	N/A	216.3	176.7	213.1	861	666	381	316	28.8	2.8	6.7	0.0	1541.3	102.7	27.5
Oct-16	2000	145.5	284.6	N/A	217.6	179.2	210.3	858	675	384	318	28.2	2.5	7.6	2.7	1557.6	118.7	36.5
Oct-16	2015	145.0	284.6	N/A	218.6	178.8	209.4	861	679	385	320	27.9	2.7	7.7	2.8	1560.5	120.3	34.6
Oct-16	2030	145.9	284.0	N/A	219.2	177.6	209.4	844	666	377	314	27.2	3.0	6.9	1.8	1517.8	104.2	27.6
Oct-16	2045	145.5	283.1	N/A	219.4	178.0	210.7	867	674	384	319	26.8	2.5	8.0	1.7	1564.3	124.8	40.4
Oct-16	2100	145.9	283.4	N/A	218.6	176.6	208.5	867	673	375	319	27.7	2.6	8.4	-0.4	1552.0	130.7	39.3
Oct-16	2115	144.7	283.6	N/A	219.0	178.8	212.0	867	655	375	317	27.5	2.6	10.5	-0.2	1571.4	164.9	49.9
AVERAGES		130.9	285.3	N/A	214.5	172.8	202.4	805.9	637.6	370.6	312.4	28.8	1.7	7.3	1.2	1413.4	101.6	72.3
Oct-17	100	105.2	287.1	N/A	208.7	157.4	182.7	769	638	364	315	31.4	4.4	3.7	-0.4	1226.5	45.0	7.0
Oct-17	115	105.0	287.9	N/A	201.1	158.5	185.1	775	590	371	310	34.8	4.7	11.0	2.2	1244.7	137.5	18.0
Oct-17	130	105.0	286.9	N/A	198.2	156.2	183.1	777	585	373	311	34.6	4.6	11.7	2.3	1229.1	144.0	19.4
Oct-17	145	105.1	287.3	N/A	198.4	157.0	183.6	778	577	378	311	33.9	4.2	13.4	3.6	1237.7	165.3	24.9
Oct-17	200	104.9	289.3	N/A	197.7	156.9	186.6	770	560	375	304	35.1	4.4	13.5	3.5	1224.2	165.5	23.0
Oct-17	215	105.2	288.9	N/A	196.8	156.0	187.2	782	576	377	308	36.5	4.0	11.6	1.8	1235.4	142.9	21.0
Oct-17	230	105.0	288.6	N/A	196.6	158.2	184.8	779	557	376	310	34.9	4.1	16.5	3.7	1248.8	205.9	30.9
Oct-17	245	105.0	288.4	N/A	197.9	158.0	186.5	780	557	375	310	35.4	3.7	15.7	2.6	1248.0	195.5	32.1
Oct-17	300	105.0	287.3	N/A	197.7	156.6	187.7	783	547	379	307	34.9	4.2	16.4	2.7	1242.5	203.2	29.7
Oct-17	315	105.0	289.3	N/A	198.9	159.2	186.1	769	558	373	306	34.1	4.0	15.3	4.1	1240.6	189.4	29.8
Oct-17	330	104.9	288.4	N/A	199.1	159.2	183.1	771	555	376	312	34.0	4.2	17.2	4.4	1243.0	214.3	32.2
Oct-17	345	105.0	288.0	N/A	199.0	157.3	183.8	778	555	377	310	33.5	4.2	16.7	3.9	1239.3	206.7	31.5
Oct-17	400	104.8	289.2	N/A	200.3	159.9	184.3	768	553	375	310	33.6	4.1	17.0	4.9	1243.6	211.9	33.0
Oct-17	415	105.2	287.4	N/A	198.9	159.2	184.1	778	542	377	308	36.8	4.0	19.4	5.6	1254.3	243.3	35.5
Oct-17	430	104.8	287.1	N/A	197.9	159.6	182.7	781	536	376	308	33.5	3.9	21.4	6.2	1263.1	270.9	44.6
Oct-17	445	104.6	286.4	N/A	199.7	158.7	183.2	785	546	375	306	32.7	4.0	19.7	5.7	1261.7	248.3	40.8
Oct-17	500	104.8	285.8	N/A	199.4	159.4	182.1	790	555	376	307	32.8	4.1	19.8	6.8	1276.0	253.0	40.4
Oct-17	515	104.9	287.8	N/A	200.8	158.9	181.5	791	547	377	306	32.4	4.4	21.1	7.3	1273.8	268.8	40.4
Oct-17	530	104.6	288.3	N/A	201.0	158.4	181.0	807	546	379	303	32.9	3.7	22.7	8.9	1295.2	293.9	51.9
Oct-17	545	104.8	287.9	N/A	201.8	158.2	181.8	806	558	376	307	32.4	4.0	20.5	6.1	1291.9	265.0	43.9
Oct-17	600	104.9	287.1	N/A	202.3	157.0	182.5	799	549	374	305	32.7	4.0	20.1	5.2	1270.2	255.0	41.9
Oct-17	615	105.4	285.7	N/A	199.6	159.5	181.3	792	530	372	302	33.5	4.4	24.0	7.7	1279.4	306.6	44.6
Oct-17	630	114.1	283.7	N/A	201.1	162.9	185.1	800	549	376	305	32.1	4.3	22.1	7.6	1320.4	291.7	45.3
Oct-17	645	124.0	281.7	N/A	204.1	173.4	191.2	801	583	376	311	31.7	4.3	15.8	8.7	1407.1	278.0	43.7
Oct-17	700	133.7	284.1	N/A	206.8	179.3	199.6	831	603	381	312	32.3	4.1	19.1	8.8	1508.7	288.5	46.7
Oct-17	715	135.9	285.5	N/A	209.4	181.7	203.0	819	610	376	314	31.5	4.2	16.8	6.7	1506.8	252.4	40.9
Oct-17	730	134.0	285.0	N/A	210.9	179.4	200.3	812	616	381	315	30.7	4.0	18.3	7.8	1529.7	279.8	48.9
Oct-17	745	138.1	283.5	N/A	208.7	180.4	204.0	834	615	380	317	34.0	4.1	16.7	5.7	1524.4	254.3	39.1
Oct-17	800	141.2	284.4	N/A	210.7	182.5	202.1	862	631	385	321	32.8	4.					

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Oct-17	930	139.2	286.1	N/A	214.2	179.7	200.1	860	625	392	323	31.1	4.2	19.0	8.2	1565.6	297.7	48.9
Oct-17	945	140.8	286.6	N/A	213.6	183.2	204.1	839	620	388	325	32.4	4.2	17.6	6.7	1557.3	274.4	43.2
Oct-17	1000	139.6	285.3	N/A	212.2	182.5	199.8	858	615	391	323	33.1	3.9	21.5	9.5	1586.3	341.5	56.8
Oct-17	1015	139.7	285.5	N/A	213.8	180.7	201.2	845	623	389	324	30.2	4.2	17.9	7.2	1547.8	277.0	46.8
Oct-17	1030	139.3	285.2	N/A	213.8	181.1	200.7	864	632	398	328	32.0	3.8	19.0	8.6	1586.1	301.3	53.3
Oct-17	1045	135.0	284.3	N/A	214.9	176.4	195.7	837	635	398	332	28.5	4.2	15.9	7.6	1495.9	237.3	42.5
Oct-17	1100	133.2	284.2	N/A	218.0	174.4	191.6	847	636	398	319	25.2	4.3	17.5	12.0	1496.3	262.0	51.8
AVERAGES		119.7	286.4	N/A	205.0	168.1	191.2	810.3	587.1	380.0	313.3	32.8	4.1	17.5	6.1	1384.1	243.9	39.4
Oct-18	1545	141.5	279.2	N/A	206.8	176.3	212.2	836	641	382	310	31.9	3.6	7.7	2.2	1492.4	114.7	21.5
Oct-18	1600	141.5	281.2	N/A	205.8	181.8	219.0	832	614	389	321	33.8	3.9	11.0	0.6	1532.5	169.2	27.6
Oct-18	1615	145.1	282.1	N/A	205.7	183.6	217.6	838	628	398	324	34.1	4.2	11.2	3.6	1558.9	174.5	26.1
Oct-18	1630	146.3	281.7	N/A	205.8	182.9	220.3	834	617	394	331	34.1	3.9	10.8	-1.1	1545.5	167.4	27.1
Oct-18	1645	140.4	281.2	N/A	205.3	181.7	220.9	828	597	400	332	35.1	3.8	12.2	-0.8	1523.4	186.3	30.0
Oct-18	1700	139.6	279.6	N/A	203.9	177.5	215.1	816	599	388	318	32.9	4.2	11.1	0.6	1467.5	162.3	25.2
Oct-18	1715	134.7	277.7	N/A	203.3	173.6	210.5	805	590	383	315	31.6	4.1	11.1	0.2	1415.9	156.7	26.0
Oct-18	1730	136.8	277.0	N/A	203.9	174.5	213.1	813	600	384	311	31.2	4.6	9.8	1.0	1437.4	141.1	21.0
Oct-18	1745	138.7	277.7	N/A	204.2	177.8	217.7	804	577	382	310	31.7	4.3	12.2	0.5	1447.5	175.9	27.7
Oct-18	1800	140.8	279.7	N/A	206.4	182.5	221.1	818	582	380	323	31.8	4.1	13.7	-2.8	1512.5	207.9	34.2
Oct-18	1815	139.6	281.6	N/A	207.3	184.7	221.0	805	599	387	318	32.9	4.1	10.9	1.6	1505.5	163.4	26.0
Oct-18	1830	140.0	281.3	N/A	207.8	181.0	219.5	798	579	380	316	32.0	3.9	12.0	-0.9	1462.5	176.0	30.3
Oct-18	1845	145.1	279.6	N/A	207.7	180.8	219.9	805	588	388	324	31.7	4.2	11.1	-1.6	1474.6	163.7	26.4
Oct-18	1900	145.5	281.0	N/A	208.5	182.0	219.6	815	598	405	332	31.9	4.4	11.5	1.3	1502.9	172.6	26.3
Oct-18	1915	145.5	280.5	N/A	208.8	183.0	220.3	816	592	389	320	32.0	4.3	12.7	0.8	1513.0	191.8	29.9
Oct-18	1930	145.8	279.9	N/A	209.4	182.5	219.3	805	585	388	322	30.7	4.7	12.6	0.4	1487.6	188.0	27.9
Oct-18	1945	145.4	279.2	N/A	210.5	182.1	218.8	819	592	385	315	29.9	4.3	13.1	1.6	1511.1	197.8	33.0
Oct-18	2000	145.4	279.0	N/A	210.4	181.4	216.6	816	592	383	316	30.3	4.4	13.3	1.5	1498.8	199.9	32.1
Oct-18	2015	140.6	278.7	N/A	209.0	181.3	220.9	831	597	382	313	32.8	4.3	12.4	0.1	1525.6	189.6	28.8
Oct-18	2030	137.8	276.9	N/A	208.3	172.3	203.6	817	540	379	303	28.4	4.6	21.9	4.1	1425.4	312.5	51.2
Oct-18	2115	140.1	275.6	N/A	207.6	174.8	213.7	824	657	419	300	28.0	4.9	2.6	12.4	1459.4	37.7	5.9
Oct-18	2130	134.9	274.6	N/A	205.6	172.8	210.0	853	588	395	308	29.4	4.6	16.3	5.3	1494.1	243.3	38.5
Oct-18	2145	134.4	274.8	N/A	204.9	173.1	210.5	845	571	391	309	30.4	4.6	17.9	3.9	1481.8	265.1	40.6
Oct-18	2200	134.6	273.9	N/A	203.9	172.8	209.5	846	582	386	309	28.7	4.1	16.5	3.0	1480.8	244.6	44.6
Oct-18	2215	135.0	274.8	N/A	205.2	175.4	208.9	838	604	390	312	29.2	4.5	14.0	4.7	1488.4	209.1	34.1
Oct-18	2230	134.9	275.9	N/A	205.4	175.7	210.9	831	583	387	314	29.9	4.2	15.8	2.4	1478.4	232.9	39.8
Oct-18	2245	140.0	276.8	N/A	206.7	179.3	216.0	846	594	386	315	29.7	4.4	15.4	1.9	1537.6	236.8	38.8
Oct-18	2300	134.2	276.2	N/A	206.2	174.4	208.9	846	594	386	315	29.4	3.9	15.9	2.5	1495.6	237.5	44.5
Oct-18	2315	144.1	280.3	N/A	208.1	183.8	222.5	846	594	386	315	31.7	4.2	15.0	1.4	1576.2	236.2	38.1
Oct-18	2330	136.0	279.0	N/A	206.4	174.9	213.2	846	594	386	320	30.7	4.0	14.4	-0.9	1499.9	215.9	37.8
Oct-18	2345	135.0	278.5	N/A	206.3	175.7	210.8	846	594	329	323	30.6	4.6	15.7	-17.9	1506.7	237.2	36.1
AVERAGES		140.0	278.6	N/A	206.6	178.6	215.5	826.3	595.6	386.7	316.7	31.2	4.3	13.0	1.0	1494.8	193.8	31.5
Oct-19	0	134.8	276.0	N/A	202.0	173.7	210.3	846	594	340	318	32.9	4.4	15.0	-13.3	1489.6	223.1	33.0
Oct-19	15	134.1	276.7	N/A	203.2	174.5	208.0	784	594	339	320	31.4	4.2	9.6	-12.6	1385.4	132.8	21.6
Oct-19	30	122.6	279.0	N/A	202.7	165.8	202.7	803	573	357	319	34.8	4.7	12.8	-9.5	1348.9	173.2	22.6
Oct-19	45	108.3	283.6	N/A	203.6	160.8	197.0	798	559	370	312	29.7	4.6	14.2	-3.3	1300.1	184.4	28.9
Oct-19	100	105.2	285.6	N/A	203.9	159.4	197.8	752	538	362	310	30.5	4.3	11.2	-6.5	1214.7	136.5	22.3
Oct-19	115	105.1	285.5	N/A	204.7	159.6	196.9	752	538	364	311	29.7	4.5	11.7	-5.3	1215.4	142.1	22.8
Oct-19	130	105.1	286.6	N/A	205.0	159.7	196.4	756	544	369	310	30.2	4.3	11.5	-3.4	1223.4	140.9	23.3
Oct-19	145	105.2	285.6	N/A	205.2	159.6	197.0	758	535	377	309	29.8	4.4	13.0	-1.4	1225.9	158.8	26.0
Oct-19	200	104.9	285.2	N/A	204.8	157.9	196.9	776	537	380	316	30.3	4.2	13.7	-3.7	1240.8	169.5	28.6
Oct-19	215	104.8	284.8	N/A	204.2	156.3	197.2	770	522	372	311	30.7	4.4	14.6	-5.6	1219.7	177.5	28.2
Oct-19	230	105.2	283.6	N/A	205.7	156.8	194.3	776	544	381	308	28.1	4.5	13.1	-0.1	1233.0	161.8	27.4
Oct-19	245	105.0	284.9	N/A	206.9	158.3	197.0	774	541	377	308	30.0	4.1	13.1	-1.8	1241.7	162.9	28.4
Oct-19	300	105.0	285.8	N/A	206.7	156.6	196.2	778	516	376	306	27.9	4.3	16.8	-1.9	1233.8	207.8	37.1
Oct-19	315	105.0	288.9	N/A	211.1	158.1	193.5	781	563	381	314	27.6	4.4	11.8	-1.0	1251.2	147.4	26.0
Oct-19	1200	145.3	278.9	N/A	201.8	181.9	228.6	841	620	397	334	36.6	4.7	7.2	-5.7	1549.0	112.1	13.9
Oct-19	1215	145.2	279.4	N/A	201.1	183.7	229.1	835	622	400	330	36.0	4.5	7.0	-3.1	1553.2	108.5	14.3
Oct-19	1230	145.7	279.8	N/A	201.3	180.5	224.1	834	613	398	331	35.6	3.9	8.7	-3.3	1524.3	132.7	20.5
Oct-19	1245	145.9	279.4	N/A	201.8	181.8	229.6	839	614	397	334	35.0	3.3	7.5	-6.1	1544.5	116.4	21.7
Oct-19	1300	145.7	279.4	N/A	201.7	180.3	226.6	845	614	401	332	35.3	3.3	8.7	-4.2	1543.5	134.0	24.8
Oct-19	1315	145.5	280.1	N/A	201.6	179.9	225.1	841	613	398	330	35.4	4.9	8.7	-3.7	1532.9	133.9	16.5
Oct-19	1330	145.2	280.0	N/A	202.0	181.8	228.9	839	609	401	334	35.3	4.9	8.5	-5.0	1544.5	131.2	16.2
Oct-19	1345	145.4	281.0	N/A	201.6	182.8	232.9	848	593	403	331	38.6	4.2	10.9	-4.6	1570.4	171.3	22.7
Oct-19	1400	145.5	279.6	N/A	200.4	183.4	233.0	833	597	399	331	37.8	4.5	9.0	-5.6	1547.9	138.8	17.5
Oct-19	1415	145.3	279.4	N/A	201.9	183.6	232.2	843	590	403	333	34.8	4.2	11.4	-4.6	1567.2	179.4	26.3
Oct-19	1430	145.4	278.3	N/A	202.8	182.3	232.0	836	599	401	336	33.7	4.5	8.8	-6.7	1544.1	135.2	19.1
Oct-19	1445	145.5	279.9	N/A	204.4	183.7	231.0	839	608	403	333	34.0	4.0	8.8	-3.7	1561.6	137.9	21.8
Oct-19	1500	146.1	279.4	N/A	203.8	180.6	228.5	833	621	399	329	34.3	3.7	5.6	-4.5	1523.3	85.9	14.6
Oct-19	1515	145.3	278.8	N/A	203.5	180.0	229.8	859	615	390	325	33.5	3.8	8.6	-6.4	1567.3	134.7	22.8
Oct-19	1530	145.3	279.1	N/A	203.8	180.2	227.1	856	622	387	324	33.5	4.3	8.				

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO ₂ Inlet ppm	SO ₂ Outlet ppm	NO _x Inlet ppm	NO _x Outlet ppm	Lime Flow gpm	Lime Conc %	SO ₂ Removal %	NO _x Removal %	SO ₂ Inlet Lb/Hr	SO ₂ Removed Lb/Hr	Lime Utilization %
Oct-19	1700	145.6	278.0	N/A	206.4	179.6	230.3	845	609	389	323	31.7	3.9	7.6	-6.5	1538.4	116.4	20.2
Oct-19	1715	145.6	278.7	N/A	207.3	181.4	233.4	829	607	386	321	31.4	3.6	5.7	-6.8	1522.7	86.4	16.4
Oct-19	1730	145.8	278.7	N/A	207.1	178.9	227.9	836	620	384	318	31.2	3.8	5.5	-5.5	1515.3	83.9	15.2
Oct-19	1745	145.5	278.9	N/A	207.9	180.5	229.5	852	613	380	321	31.0	3.8	8.4	-7.4	1558.0	131.6	24.0
Oct-19	1800	145.0	278.0	N/A	206.0	180.1	231.8	852	604	380	317	33.4	3.5	8.8	-7.2	1555.4	137.1	25.3
Oct-19	1815	145.7	277.7	N/A	207.7	182.9	233.6	832	603	379	317	30.8	3.7	7.4	-6.7	1541.8	113.7	21.5
Oct-19	1830	145.2	276.9	N/A	207.2	182.3	230.5	836	616	380	314	31.3	3.6	6.8	-4.6	1544.1	105.8	20.2
Oct-19	1845	145.5	277.6	N/A	207.8	183.1	232.6	826	615	379	318	31.8	4.2	5.3	-6.6	1531.4	81.1	13.0
Oct-19	1900	145.7	278.1	N/A	207.8	185.2	234.7	826	600	380	319	31.9	4.3	7.9	-6.5	1549.0	122.5	19.1
Oct-19	1915	145.5	276.3	N/A	207.6	183.1	231.5	843	619	381	319	30.7	3.8	7.0	-5.6	1563.0	110.1	20.3
Oct-19	1930	145.5	276.2	N/A	208.5	183.8	230.4	846	608	381	319	30.1	3.9	9.8	-5.1	1575.3	155.0	28.4
Oct-19	1945	145.4	276.3	N/A	208.8	183.4	232.6	826	607	381	319	30.1	3.7	6.8	-6.2	1534.9	104.8	20.2
Oct-19	2000	145.8	276.2	N/A	208.3	182.6	232.3	830	604	378	318	30.6	4.0	7.4	-7.1	1535.2	112.9	19.8
Oct-19	2015	145.3	276.3	N/A	206.7	185.1	235.6	829	585	376	319	32.7	3.9	10.1	-8.0	1554.7	157.3	26.5
Oct-19	2030	145.2	274.8	N/A	206.9	183.3	231.3	835	595	378	318	29.9	4.1	10.1	-6.1	1550.7	156.6	27.4
Oct-19	2045	145.9	275.0	N/A	207.5	182.0	234.0	832	609	380	317	29.9	3.8	5.8	-7.2	1534.2	89.4	16.9
Oct-19	2100	145.5	275.2	N/A	208.5	182.3	233.5	832	622	381	316	29.8	3.8	4.3	-6.4	1536.7	65.5	12.4
Oct-19	2115	145.4	275.9	N/A	208.6	181.2	234.0	832	600	422	302	29.6	3.9	6.8	7.4	1527.5	104.0	19.4
Oct-19	2130	145.7	276.5	N/A	209.9	183.2	233.6	868	602	393	311	29.8	3.9	11.6	-0.7	1611.0	186.4	34.5
Oct-19	2145	144.9	276.3	N/A	209.0	179.6	229.5	864	618	388	315	29.1	3.8	8.6	-3.8	1572.0	135.2	26.3
Oct-19	2200	145.5	276.5	N/A	207.6	181.7	234.6	851	615	386	315	33.6	3.9	6.7	-5.5	1566.5	104.9	17.2
Oct-19	2215	145.5	277.2	N/A	207.1	182.8	237.1	855	606	386	312	32.3	3.7	8.0	-5.0	1583.4	126.6	22.8
Oct-19	2230	145.2	278.5	N/A	208.0	184.2	236.3	852	600	389	316	32.4	3.7	9.7	-4.2	1589.9	153.6	27.6
Oct-19	2245	147.3	277.9	N/A	211.3	183.7	235.8	869	634	388	320	29.0	3.8	6.3	-5.8	1617.2	101.8	19.9
Oct-19	2300	147.5	277.4	N/A	212.9	185.3	235.0	869	634	388	320	28.7	4.0	7.4	-4.6	1631.3	121.0	22.6
Oct-19	2315	146.0	277.6	N/A	213.6	183.5	234.2	869	656	388	340	27.9	3.8	3.6	-12.0	1615.5	58.1	11.8
Oct-19	2330	146.1	278.7	N/A	214.3	188.9	238.9	869	620	388	315	29.3	3.8	9.8	-2.7	1663.0	162.5	31.4
Oct-19	2345	146.7	276.8	N/A	215.0	187.9	239.9	735	637	322	324	27.5	3.8	-10.6	-28.4	1399.7	-148.2	-30.5
AVERAGES		137.7	279.2	N/A	206.1	177.6	224.2	826.9	598.0	383.0	320.2	31.8	4.1	8.8	-5.6	1490.4	128.3	21.3
Oct-20	600	146.0	272.0	N/A	200.6	180.9	232.4	865	668	371	313	33.6	3.4	0.8	-8.5	1586.2	12.5	2.4
Oct-20	615	147.1	272.3	N/A	198.8	184.0	234.8	840	630	376	311	34.1	3.4	4.3	-5.6	1565.1	66.8	12.4
Oct-20	630	144.2	273.2	N/A	198.7	178.8	226.2	857	622	373	308	33.3	3.7	8.2	-4.3	1553.3	128.0	22.3
Oct-20	645	147.1	271.8	N/A	199.0	182.3	232.3	842	630	376	316	33.1	3.8	4.6	-6.9	1554.3	72.0	12.3
Oct-20	700	144.7	272.0	N/A	198.8	180.7	229.6	853	615	377	310	32.8	3.7	8.4	-4.6	1561.5	131.1	23.2
Oct-20	715	142.4	272.0	N/A	198.5	178.7	230.5	836	621	378	310	32.7	3.8	4.1	-5.8	1513.3	62.1	10.7
Oct-20	730	136.7	270.5	N/A	195.9	171.4	214.6	862	610	368	311	32.1	3.7	11.3	-5.9	1496.8	169.6	30.7
Oct-20	745	138.1	269.6	N/A	196.9	178.6	225.3	829	606	384	327	32.7	3.6	7.7	-7.4	1499.2	115.0	21.0
Oct-20	800	137.3	271.2	N/A	196.8	177.5	225.1	845	597	398	319	32.5	4.1	10.5	-1.5	1520.4	159.0	25.6
Oct-20	815	142.2	269.6	N/A	197.1	181.5	231.5	842	596	387	317	32.5	4.0	9.7	-4.4	1548.4	149.5	24.7
Oct-20	830	142.8	270.5	N/A	198.1	181.1	227.4	856	597	389	322	31.8	3.8	12.4	-4.0	1570.5	184.1	34.5
Oct-20	845	147.2	270.3	N/A	198.7	182.4	230.4	847	615	390	319	33.1	3.6	8.3	-3.2	1566.0	129.5	23.4
Oct-20	900	147.9	271.6	N/A	200.7	183.2	230.8	849	620	390	320	33.2	4.1	8.0	-3.5	1575.7	126.1	19.9
Oct-20	915	146.9	271.6	N/A	199.6	183.0	233.0	852	616	386	321	35.5	4.2	7.9	-5.9	1579.5	125.6	18.1
Oct-20	930	146.4	272.0	N/A	199.8	183.7	227.6	866	611	387	318	33.9	3.8	12.6	-1.9	1611.6	202.9	33.9
Oct-20	945	146.6	272.5	N/A	202.4	183.2	229.8	852	610	381	312	31.1	3.8	10.2	-2.7	1582.2	161.0	29.3
Oct-20	1000	147.0	272.3	N/A	202.2	180.9	226.8	859	631	377	316	30.4	3.9	8.0	-5.1	1575.2	125.6	22.8
Oct-20	1015	146.3	273.4	N/A	203.9	182.4	228.9	830	617	378	309	30.7	3.7	6.7	-2.6	1533.9	102.0	19.3
Oct-20	1030	146.8	273.9	N/A	205.2	184.0	228.1	841	605	378	307	30.7	3.8	10.8	-0.8	1567.9	169.9	31.3
Oct-20	1045	146.3	274.5	N/A	206.0	184.1	226.1	839	626	375	312	30.0	3.9	8.3	-2.1	1565.0	130.0	23.9
Oct-20	1100	146.8	275.5	N/A	206.9	182.1	223.3	849	644	379	316	30.2	3.8	7.0	-2.3	1566.2	109.7	20.5
Oct-20	1115	146.6	276.9	N/A	204.6	183.4	228.0	863	611	381	313	32.4	4.5	11.9	-2.0	1603.4	191.1	28.1
Oct-20	1130	147.2	278.4	N/A	204.8	182.6	226.5	850	615	387	317	33.3	4.0	10.3	-1.7	1572.4	161.3	26.0
Oct-20	1145	143.4	278.3	N/A	204.9	179.4	223.0	850	612	385	316	31.3	3.9	10.6	-1.9	1545.7	163.2	28.7
Oct-20	1200	143.1	277.7	N/A	211.6	180.3	222.4	855	658	384	320	27.1	3.7	5.1	-2.8	1562.6	80.4	17.2
Oct-20	1215	139.7	283.6	N/A	214.7	184.0	222.2	843	652	380	325	28.7	4.1	6.6	-3.1	1570.7	103.2	18.8
Oct-20	1230	146.9	285.6	N/A	217.4	188.3	228.8	852	641	385	322	29.0	3.9	8.5	-1.6	1625.3	138.6	26.3
Oct-20	1245	146.4	282.3	N/A	216.6	182.8	222.3	854	646	383	317	27.7	3.9	8.0	-0.8	1581.5	127.0	25.3
Oct-20	1300	146.6	279.9	N/A	216.9	182.0	223.6	844	644	379	314	27.5	3.9	6.2	-1.8	1555.4	95.8	19.2
Oct-20	1315	147.3	280.6	N/A	217.6	181.0	221.8	855	633	383	318	25.9	4.0	9.3	-1.7	1567.8	145.7	30.2
Oct-20	1530	147.6	282.4	N/A	206.2	182.0	223.6	845	649	392	327	35.5	3.3	5.7	-2.3	1558.0	88.1	16.2
Oct-20	1545	148.7	282.4	N/A	205.2	185.7	230.1	838	631	392	329	36.1	3.3	6.7	-4.0	1576.7	106.1	19.2
Oct-20	1600	145.6	283.9	N/A	204.4	184.0	225.5	819	605	380	312	36.6	2.7	9.4	-0.5	1525.9	143.9	31.5
Oct-20	1615	146.8	283.3	N/A	203.6	183.5	227.2	845	613	388	321	36.8	3.4	10.1	-2.6	1570.8	158.8	27.4
Oct-20	1630	147.5	282.5	N/A	202.7	182.5	225.8	824	609	390	327	36.3	5.2	8.6	-3.9	1523.6	130.8	14.8
Oct-20	1645	147.1	281.6	N/A	202.4	179.9	222.6	855	616	390	322	35.7	5.1	10.8	-2.1	1559.2	169.0	19.8
Oct-20	1700	145.9	281.4	N/A	202.2	180.9	220.6	860	604	389	338	35.5	4.3	14.3	-5.9	1577.0	226.1	31.8
Oct-20	1715	139.0	282.0	N/A	201.8	178.6	222.2	849	611	404	331	35.6	4.5	10.5	-1.9	1537.0	161.7	21.6
Oct-20	1730	138.0	281.1	N/A	198.8	175.4	218.1	833	579	386	316	36.7	4.2	13.6	-1.8	1480.4	200.9	28.0
Oct-20	1745	138.7	280.3	N/A	200.0	177.6	218.3	831	592	391	330	35.0	4.1	12.3	-3.9	1494.4		

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg "C" Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Oct-20	1915	147.1	283.3	N/A	201.4	180.6	223.9	845	589	384	317	36.6	4.3	13.6	-2.5	1546.9	211.0	28.7
Oct-20	1930	147.0	283.6	N/A	201.8	179.5	220.3	851	595	384	318	36.5	4.0	14.2	-1.8	1548.4	219.7	32.3
Oct-20	1945	147.0	284.0	N/A	202.2	182.1	225.5	839	583	382	315	36.7	4.4	14.0	-2.2	1548.0	216.4	28.7
Oct-20	2000	146.3	283.7	N/A	202.0	180.9	222.0	840	582	384	320	36.3	4.3	14.9	-2.3	1539.6	229.6	31.5
Oct-20	2015	147.0	283.1	N/A	203.7	181.8	227.5	839	589	387	318	35.2	4.3	12.1	-3.0	1545.4	186.8	26.5
Oct-20	2030	146.7	283.3	N/A	204.0	180.5	223.5	853	592	389	322	35.3	4.3	14.0	-2.4	1559.8	218.3	30.8
Oct-20	2045	146.8	282.9	N/A	204.6	183.3	224.6	824	574	383	315	35.6	3.9	14.6	-0.8	1530.3	223.4	34.6
Oct-20	2100	146.5	282.3	N/A	205.4	185.3	225.5	824	573	383	315	34.9	4.2	15.4	0.1	1547.0	237.9	34.8
Oct-20	2115	146.1	282.0	N/A	205.2	184.2	224.3	824	560	383	307	34.8	4.2	17.2	2.4	1537.8	265.2	38.9
Oct-20	2130	147.2	281.4	N/A	205.8	184.4	225.7	858	569	396	313	34.0	3.9	18.9	3.5	1603.8	303.7	49.2
Oct-20	2145	146.4	281.4	N/A	205.8	183.9	224.7	847	575	390	314	34.2	4.1	17.1	1.7	1578.0	270.1	41.3
Oct-20	2200	145.9	281.3	N/A	207.1	185.7	228.5	837	582	385	314	33.3	4.3	14.4	-0.2	1574.8	226.5	33.9
Oct-20	2215	143.5	280.1	N/A	207.2	183.7	224.2	821	589	380	313	32.3	3.9	12.4	-0.4	1528.1	189.2	32.3
Oct-20	2230	138.4	278.8	N/A	205.7	177.2	218.1	837	580	379	312	31.7	4.2	14.7	-1.2	1501.8	220.4	35.5
Oct-20	2245	137.4	278.6	N/A	205.2	174.7	213.6	830	580	386	311	31.1	4.2	14.5	1.5	1468.3	212.2	34.8
Oct-20	2300	137.5	276.9	N/A	204.3	177.8	220.2	830	580	386	311	31.6	4.3	13.3	0.2	1494.3	199.4	31.5
Oct-20	2315	138.5	277.8	N/A	205.1	179.7	216.9	830	593	386	327	31.7	4.0	13.7	-2.4	1510.3	206.2	34.9
Oct-20	2330	137.4	275.9	N/A	207.6	176.5	213.5	830	571	386	313	27.6	4.1	16.8	1.7	1483.4	249.3	47.3
Oct-20	2345	136.9	276.5	N/A	209.0	175.6	217.2	830	590	386	320	28.1	4.0	12.0	-2.7	1475.8	176.6	33.7
AVERAGES		144.5	278.2	N/A	203.7	181.3	224.9	843.1	606.9	384.4	317.9	33.2	4.0	10.7	-2.6	1549.0	165.7	26.6
Oct-21	0	137.9	276.7	N/A	212.0	174.4	212.8	830	612	386	317	26.4	4.1	9.9	-0.5	1465.7	145.4	28.8
Oct-21	645	146.5	283.1	N/A	203.8	185.4	226.3	827	614	368	317	37.8	4.5	9.3	-5.2	1552.5	145.0	18.2
Oct-21	700	146.9	283.1	N/A	203.4	184.9	225.4	831	609	375	307	37.4	4.6	10.6	0.1	1556.8	165.1	20.5
Oct-21	715	147.3	282.2	N/A	203.6	184.8	225.3	831	624	381	315	36.7	4.1	8.4	-0.9	1555.9	130.6	18.6
Oct-21	730	146.2	281.1	N/A	203.4	182.5	225.3	834	605	372	312	36.0	4.2	10.4	-3.7	1542.1	160.2	22.7
Oct-21	745	147.1	281.8	N/A	204.1	182.9	225.2	823	611	367	308	36.0	3.9	8.6	-3.4	1525.1	131.5	3.1
Oct-21	800	146.6	284.2	N/A	205.3	186.3	228.3	824	600	371	310	37.0	3.9	10.7	-2.4	1554.4	167.0	24.9
Oct-21	815	146.5	283.8	N/A	204.8	187.7	227.3	818	585	370	313	37.5	4.1	13.3	-2.6	1554.7	206.5	28.8
Oct-21	830	146.7	282.3	N/A	205.2	184.7	228.4	819	591	372	313	36.4	3.8	10.7	-4.2	1531.7	164.3	25.5
Oct-21	845	146.1	282.0	N/A	203.5	185.6	227.3	816	574	374	314	38.1	3.8	13.8	-2.6	1534.5	211.9	31.5
Oct-21	900	146.5	282.0	N/A	205.2	185.9	231.1	820	585	373	311	35.4	4.1	11.2	-3.6	1543.5	172.8	25.6
Oct-21	915	147.2	282.0	N/A	206.2	184.9	225.6	815	595	370	310	34.3	3.9	10.9	-2.2	1526.8	167.0	26.8
Oct-21	930	147.1	284.3	N/A	207.1	184.7	226.2	836	605	372	313	35.1	4.1	11.3	-3.2	1563.5	177.2	26.4
Oct-21	945	147.2	285.5	N/A	207.7	184.4	224.3	833	608	371	311	35.2	3.0	11.2	-1.9	1555.4	173.9	35.6
Oct-21	1000	147.1	287.3	N/A	208.7	183.2	228.0	841	614	371	312	35.4	2.9	9.0	-4.7	1560.1	140.8	29.6
Oct-21	1015	146.9	287.3	N/A	208.5	183.1	227.1	844	611	371	311	35.2	3.7	10.2	-4.0	1564.8	159.2	26.3
Oct-21	1030	146.9	286.7	N/A	209.1	182.9	225.1	854	622	372	309	34.6	4.5	10.4	-2.4	1583.3	164.9	22.7
Oct-21	1045	146.9	286.9	N/A	209.7	183.4	225.1	844	622	370	308	34.3	4.5	9.4	-2.2	1567.4	147.9	20.5
Oct-21	1100	147.3	286.4	N/A	204.5	183.4	228.0	848	591	371	308	39.0	4.9	13.3	-3.3	1576.5	210.3	23.5
Oct-21	1115	147.0	286.8	N/A	204.5	183.7	227.6	857	587	374	309	38.2	4.6	15.1	-2.3	1594.9	240.3	29.3
Oct-21	1130	147.2	287.1	N/A	205.1	184.4	226.8	851	595	370	308	37.9	4.3	13.9	-2.5	1589.8	221.6	29.1
Oct-21	1145	147.1	287.3	N/A	205.2	184.0	227.0	848	599	373	311	38.0	4.3	12.8	-2.8	1581.7	203.1	26.6
Oct-21	1200	146.6	287.4	N/A	205.4	184.2	229.2	859	582	373	310	38.1	4.6	15.7	-3.4	1603.0	251.7	30.7
Oct-21	1215	145.9	287.6	N/A	205.2	182.9	227.4	864	594	373	308	37.8	4.0	14.5	-2.7	1600.9	231.4	32.9
Oct-21	1230	146.4	289.0	N/A	206.7	183.8	228.2	869	595	375	312	37.1	4.1	15.0	-3.3	1618.1	242.6	34.2
Oct-21	1245	147.2	288.8	N/A	206.4	184.3	227.2	845	600	373	313	37.8	4.0	12.5	-3.3	1577.5	196.6	27.9
Oct-21	1300	145.7	288.1	N/A	205.4	183.3	227.4	848	594	378	316	37.9	3.9	13.2	-3.8	1575.6	207.3	30.1
Oct-21	1315	142.5	287.6	N/A	212.1	183.8	230.0	848	600	389	320	29.0	4.0	11.4	-2.8	1579.0	179.9	33.3
Oct-21	1330	140.4	286.9	N/A	214.8	182.4	221.9	850	632	391	322	31.1	4.2	9.5	-0.2	1570.7	149.3	24.5
Oct-21	1345	142.2	285.7	N/A	217.6	183.4	222.3	847	649	383	321	30.6	4.1	7.1	-1.6	1574.6	112.2	19.2
Oct-21	1615	144.6	286.2	N/A	211.6	183.4	225.8	849	668	374	318	36.2	3.8	3.1	-4.6	1577.4	48.5	7.6
Oct-21	1630	143.0	286.4	N/A	210.9	182.8	224.4	849	646	385	319	35.0	4.3	6.6	-1.8	1573.2	103.8	14.8
Oct-21	1645	141.8	285.5	N/A	211.6	177.4	216.8	862	636	381	318	30.6	4.2	9.9	-2.1	1550.1	153.5	25.6
Oct-21	1700	141.7	284.7	N/A	215.7	175.5	214.9	864	642	387	322	27.0	4.4	9.0	-2.0	1536.1	137.6	24.8
Oct-21	1800	138.8	284.3	N/A	217.8	176.4	212.2	863	738	388	325	27.8	5.2	-2.9	-0.8	1542.2	-44.5	-6.6
Oct-21	1815	140.3	285.1	N/A	213.4	180.0	221.0	866	653	391	324	33.0	4.9	7.4	-1.8	1580.1	117.5	15.5
Oct-21	1830	146.7	286.9	N/A	212.8	184.0	225.4	900	657	395	331	34.1	4.4	10.6	-2.6	1678.4	178.7	25.5
Oct-21	1945	146.4	286.0	N/A	212.9	185.2	227.2	865	628	375	316	33.4	4.4	11.0	-3.4	1623.9	178.5	26.0
Oct-21	1900	146.8	285.8	N/A	213.4	185.2	224.3	868	630	379	317	33.1	8	12.1	-1.4	1628.6	197.3	26.5
Oct-21	1915	146.4	286.7	N/A	212.4	184.9	224.3	853	618	383	317	34.1		12.1	-0.7	1598.8	193.4	27.6
Oct-21	1930	146.6	235.9	N/A	212.1	185.6	226.4	872	622	386	320	34.0	4.4	13.0	-1.2	1640.5	214.0	30.6
Oct-21	1945	146.2	286.1	N/A	211.6	185.4	223.0	864	626	380	317	33.9	4.2	12.8	-0.3	1622.6	207.5	31.3
Oct-21	2000	147.5	285.3	N/A	210.9	183.8	224.0	858	630	385	317	34.1	4.3	10.5	-0.5	1597.6	168.3	24.6
Oct-21	2015	146.5	285.0	N/A	210.3	182.5	220.6	883	634	380	316	34.0	4.3	13.3	-0.5	1633.5	216.9	31.8
Oct-21	2030	147.3	285.3	N/A	210.2	182.0	222.9	886	634	381	318	34.0	4.3	12.3	-2.1	1633.6	201.1	29.5
Oct-21	2045	146.8	286.2	N/A	210.1	182.2	223.2	894	630	382	319	34.7	4.1	13.7	-2.1	1650.9	226.7	34.2
Oct-21	2100	146.9	286.1	N/A	209.5	184.5	223.5	894	642	384	318	35.2	4.6	13.1	-0.2	1671.8	218.4	28.9
Oct-21	2115	146.7	285.7	N/A	208.1	183.7	223.8	894	623	384	312	35.8	4.5	15.1	1.0	1664.5	252.1	33.5
Oct-21	2130	146.6	286.1	N/A	208.3	185.6	227.2	894	632	384	315	36.1	4.6	13.5	-0.4	1681.7		

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg "C" Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Oct-21	2300	137.5	279.8	N/A	206.2	178.2	215.9	889	620	380	309	32.7	4.5	15.6	1.5	1605.8	249.8	36.3
Oct-21	2315	138.1	280.3	N/A	206.0	179.9	218.9	889	636	380	309	33.5	3.9	13.0	1.1	1621.1	211.0	34.7
Oct-21	2330	136.9	279.4	N/A	204.8	178.2	214.0	886	632	380	318	33.6	4.2	14.7	-0.3	1605.8	235.9	35.9
Oct-21	2345	141.0	279.3	N/A	204.8	181.9	222.3	889	621	380	326	34.4	4.2	14.6	-4.6	1639.2	239.6	35.6
AVERAGES		144.6	284.7	N/A	208.4	182.9	223.9	858.5	619.4	378.4	315.0	34.6	4.2	11.7	-1.9	1590.6	186.2	27.5
Oct-22	0	138.1	279.3	N/A	203.4	180.4	221.6	889	618	380	323	34.6	4.2	14.6	-4.3	1625.6	237.2	35.0
Oct-22	15	146.3	280.0	N/A	203.9	186.9	228.5	889	625	380	324	35.4	4.2	14.1	-4.1	1684.2	237.5	34.3
Oct-22	30	145.1	280.3	N/A	204.1	186.6	226.9	864	623	360	328	35.8	4.2	12.3	-10.7	1634.2	201.1	28.7
Oct-22	45	144.1	281.0	N/A	202.2	184.1	224.4	862	637	362	318	37.4	4.2	9.9	-7.1	1607.7	158.7	21.7
Oct-22	100	144.7	280.8	N/A	200.7	182.1	223.0	862	625	368	322	38.1	4.2	11.2	-7.1	1590.2	178.3	23.9
Oct-22	115	144.3	279.5	N/A	200.7	179.3	219.1	862	632	374	315	35.2	4.2	10.4	-2.8	1565.8	162.1	23.5
Oct-22	130	142.2	278.9	N/A	204.8	180.9	219.7	878	629	361	327	29.1	4.2	12.9	-9.8	1609.1	208.3	36.5
Oct-22	145	139.5	276.6	N/A	206.5	181.1	219.2	877	756	376	320	27.6	4.2	-4.3	-3.2	1609.9	-69.3	-12.8
Oct-22	200	140.5	276.8	N/A	207.3	178.1	216.5	886	765	376	321	28.1	4.2	-5.0	-3.6	1598.6	-79.7	-14.5
Oct-22	215	146.1	276.7	N/A	209.4	184.5	220.9	891	759	377	317	27.9	4.2	-1.9	-0.6	1665.4	-32.5	-5.9
Oct-22	230	141.2	277.8	N/A	220.9	178.3	210.1	908	783	371	317	19.0	4.2	-1.6	-0.7	1640.0	-26.0	-7.0
Oct-22	245	140.8	276.5	N/A	206.7	178.3	216.6	904	767	379	318	28.0	4.2	-3.1	-1.8	1632.7	-50.7	-9.3
Oct-22	330	141.9	276.2	N/A	208.6	178.4	215.8	906	760	384	324	27.7	4.2	-1.5	-2.3	1638.2	-23.8	-4.4
Oct-22	345	145.0	280.0	N/A	210.4	188.3	224.1	903	685	381	325	31.0	4.2	9.7	-1.3	1723.4	167.3	27.6
Oct-22	400	141.9	281.7	N/A	209.9	182.5	217.2	907	683	392	325	31.2	4.2	10.3	1.3	1676.7	173.0	28.3
Oct-22	415	138.3	281.5	N/A	206.2	178.4	213.6	903	668	392	322	34.3	4.2	11.5	1.5	1632.7	187.5	27.9
Oct-22	430	140.4	281.7	N/A	204.6	180.6	220.8	907	660	392	327	34.6	4.2	11.1	-1.9	1660.2	184.1	27.2
Oct-22	445	139.3	281.3	N/A	204.1	183.6	221.0	898	643	391	332	35.3	4.2	13.8	-2.2	1670.1	229.7	33.2
Oct-22	500	140.6	282.6	N/A	203.4	181.4	221.5	908	654	401	325	35.5	4.2	12.1	0.9	1668.5	201.2	28.9
Oct-22	515	143.0	283.5	N/A	204.1	185.8	223.8	908	641	389	322	36.4	4.2	15.0	0.3	1708.9	255.9	35.9
Oct-22	530	138.8	283.1	N/A	202.0	181.4	218.2	908	627	396	322	36.0	4.2	16.9	2.0	1668.5	282.5	40.1
Oct-22	545	143.3	282.8	N/A	202.7	182.8	221.1	908	645	396	327	35.2	4.2	14.0	0.2	1681.4	235.8	34.2
Oct-22	600	141.9	282.8	N/A	202.7	181.7	220.9	908	646	400	329	36.9	4.2	13.5	0.0	1671.2	225.8	31.3
Oct-22	615	144.2	282.8	N/A	203.2	186.8	225.1	908	634	387	327	37.1	4.2	15.8	-2.1	1718.1	271.5	37.4
Oct-22	630	143.7	282.8	N/A	202.7	184.5	220.9	908	629	381	320	35.9	4.2	17.0	-0.6	1697.0	288.5	41.0
Oct-22	645	144.3	280.6	N/A	209.8	185.3	221.0	889	667	379	317	29.1	4.2	10.6	0.0	1669.8	176.7	31.0
Oct-22	700	143.8	278.2	N/A	207.6	183.2	220.4	898	625	377	316	30.9	4.2	16.2	-0.9	1667.4	270.8	44.8
Oct-22	715	147.0	277.8	N/A	208.7	183.7	222.0	885	640	378	313	30.2	4.2	12.6	-0.2	1647.0	207.9	35.2
Oct-22	730	147.2	277.3	N/A	207.8	182.0	222.1	893	643	379	310	28.2	4.2	12.1	0.1	1646.5	200.0	36.2
Oct-22	745	147.1	276.1	N/A	211.6	183.1	220.8	891	650	379	310	28.9	4.2	12.0	1.6	1653.7	198.9	35.1
Oct-22	800	146.9	278.4	N/A	212.1	180.5	216.8	878	650	375	309	28.5	4.0	11.1	1.0	1606.4	177.8	33.5
Oct-22	815	146.5	277.6	N/A	211.4	182.9	221.6	875	648	381	319	29.1	3.8	10.2	-1.5	1621.3	165.7	32.2
Oct-22	830	146.5	278.3	N/A	210.1	180.9	219.7	889	640	383	317	32.1	4.0	12.5	-0.5	1629.2	203.9	34.1
Oct-22	845	146.8	276.9	N/A	210.9	183.8	217.8	888	646	383	318	30.3	4.1	13.7	1.7	1653.5	227.3	39.3
Oct-22	900	146.0	277.7	N/A	211.6	184.1	219.5	891	654	388	319	29.0	4.4	12.5	1.9	1661.8	207.8	34.9
Oct-22	915	146.0	277.7	N/A	211.6	184.1	219.5	891	654	388	319	29.0	4.4	12.5	1.9	1661.8	207.8	34.9
Oct-22	930	146.0	277.7	N/A	211.6	184.1	219.5	891	654	388	319	29.0	4.4	12.5	1.9	1661.8	207.8	34.9
Oct-22	945	146.5	277.9	N/A	210.2	184.7	221.3	891	655	397	327	30.3	3.9	11.9	1.2	1667.2	199.0	36.2
Oct-22	1000	146.4	278.5	N/A	208.7	183.8	222.8	891	652	396	330	31.7	4.1	11.3	-1.0	1659.1	187.7	31.0
Oct-22	1015	146.8	279.4	N/A	209.1	186.7	224.6	891	662	409	335	31.7	3.8	10.6	1.3	1685.3	178.1	31.8
Oct-22	1045	146.4	279.1	N/A	208.6	185.1	220.3	891	666	411	341	31.7	4.2	11.0	1.4	1670.8	183.6	29.6
Oct-22	1100	146.5	279.8	N/A	207.4	183.3	219.7	891	661	408	338	32.2	3.8	11.1	0.6	1654.6	183.6	32.3
Oct-22	1115	146.0	280.2	N/A	206.7	182.5	221.5	891	650	393	323	32.7	4.1	11.5	0.4	1647.3	189.0	30.3
Oct-22	1130	146.5	281.3	N/A	214.2	183.9	217.1	904	675	389	320	27.0	4.0	11.9	2.9	1684.0	199.7	39.7
Oct-22	1145	146.6	281.3	N/A	217.5	183.6	221.2	904	674	392	319	27.1	4.5	10.2	2.0	1681.3	171.2	30.1
Oct-22	1200	146.8	282.6	N/A	219.1	181.6	218.1	904	696	388	323	26.6	4.1	7.6	0.0	1663.0	125.6	24.7
Oct-22	1215	146.2	283.1	N/A	220.3	182.7	218.7	904	693	387	319	26.7	4.2	8.2	1.4	1673.0	136.8	26.2
Oct-22	1230	147.2	284.6	N/A	216.7	183.3	217.3	904	693	387	356	31.1	4.0	9.1	-8.9	1678.5	152.1	26.3
Oct-22	1415	146.6	286.6	N/A	212.9	181.6	219.8	854	619	372	312	34.8	3.8	12.2	-1.6	1571.1	191.7	31.2
Oct-22	1430	146.6	287.0	N/A	210.9	181.5	220.5	840	611	372	313	35.4	3.7	11.2	-2.2	1543.8	172.3	28.3
Oct-22	1445	146.7	287.4	N/A	210.1	182.1	218.9	848	622	373	309	35.0	2.8	11.8	0.6	1564.4	185.1	40.8
Oct-22	1500	146.8	288.0	N/A	211.1	181.0	219.5	835	617	372	306	34.2	2.9	10.4	0.0	1531.3	159.3	34.7
Oct-22	1515	146.7	288.0	N/A	211.8	180.7	219.5	833	615	369	308	34.4	2.4	10.3	-1.4	1525.1	157.6	41.4
Oct-22	1530	146.5	289.1	N/A	211.4	181.2	221.9	843	605	368	306	31.5	4.1	12.1	-2.0	1547.7	187.7	31.2
Oct-22	1545	146.4	288.9	N/A	210.7	181.4	220.6	833	600	369	306	36.2	4.1	12.4	-0.9	1531.0	190.2	27.5
Oct-22	1600	146.5	288.8	N/A	210.2	180.7	220.8	848	595	367	306	35.9	4.0	14.3	-1.9	1553.3	222.4	33.3
Oct-22	1615	146.8	289.7	N/A	210.9	180.9	220.5	832	583	374	307	36.3	4.2	14.5	-0.2	1524.9	221.6	31.2
Oct-22	1630	146.9	292.0	N/A	210.0	182.4	222.7	822	581	368	308	37.0	3.6	13.6	-2.3	1518.2	206.3	33.3
Oct-22	1645	146.3	291.3	N/A	209.3	181.0	217.6	842	577	371	308	37.7	4.1	17.7	0.1	1544.1	273.1	37.9
Oct-22	1700	146.5	289.4	N/A	208.8	180.2	217.0	835	578	374	307	35.5	4.1	16.6	1.2	1524.5	253.7	37.4
Oct-22	1715	142.9	289.1	N/A	208.8	181.0	222.7	821	572	373	306	36.9	3.8	14.4	-0.9	1505.6	216.1	33.1
Oct-22	1730	147.0	288.3	N/A	208.1	181.7	221.1	831	582	376	305	36.7	4.2	14.8	1.1	1529.8	226.3	31.5
Oct-22	1745	146.4	287.7	N/A	207.9	181.0	221.4	844	580	374	310	37.2	4.4	15.9	-1.3	1548.5	246.6	32.3
Oct-22	1800	146.9	286.4	N/A	208.3	181.6	220.7	834	580	376	308	34.4	4.0	15.4	0.5	1534.5	236.7	36.9

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Oct-22	1930	146.4	284.1	N/A	206.6	184.1	222.3	849	583	383	308	35.9	3.8	17.1	2.8	1584.4	270.4	42.6
Oct-22	1945	147.1	283.1	N/A	206.6	183.3	222.5	842	602	380	314	35.2	3.9	13.2	-0.2	1563.7	205.7	32.2
Oct-22	2000	146.6	282.1	N/A	206.9	183.7	222.5	847	600	381	315	35.1	4.4	14.2	-0.3	1577.2	223.7	31.0
Oct-22	2015	146.5	281.8	N/A	206.6	183.8	222.0	843	591	380	317	35.1	4.0	15.3	-0.7	1569.9	239.6	36.7
Oct-22	2030	146.9	281.6	N/A	205.9	183.6	222.5	833	579	385	315	35.2	4.2	15.8	1.0	1549.6	244.3	35.4
Oct-22	2045	144.9	281.8	N/A	204.7	186.0	225.8	848	582	377	310	38.2	4.0	16.7	0.1	1597.9	266.6	37.5
Oct-22	2100	146.7	279.8	N/A	205.2	184.6	225.8	848	582	371	307	35.6	4.2	16.1	-1.4	1585.9	254.6	36.5
Oct-22	2115	146.6	279.8	N/A	204.8	184.0	224.2	848	582	410	309	35.2	4.1	16.3	8.1	1580.7	257.8	38.3
Oct-22	2130	146.1	280.0	N/A	206.2	183.8	223.1	869	595	387	304	33.9	4.2	16.9	4.7	1619.0	273.2	41.2
Oct-22	2145	146.7	279.4	N/A	205.3	179.2	219.1	873	621	384	309	32.8	4.0	13.1	1.4	1585.8	207.4	34.0
Oct-22	2200	146.7	279.1	N/A	204.6	179.0	219.0	880	610	383	309	33.6	3.7	15.2	1.3	1596.7	243.4	42.1
Oct-22	2215	146.4	280.0	N/A	205.3	180.5	220.2	875	617	382	309	33.2	4.2	14.0	1.1	1600.9	223.5	34.4
Oct-22	2230	146.8	279.9	N/A	205.7	181.7	222.7	874	609	381	313	33.9	4.3	14.6	-0.7	1608.8	234.9	34.5
Oct-22	2245	146.4	279.3	N/A	206.2	180.7	220.1	869	615	379	311	32.7	4.1	13.7	0.1	1590.8	218.5	35.0
Oct-22	2300	146.4	279.3	N/A	206.9	182.9	222.8	869	615	379	311	32.7	4.3	13.7	0.1	1610.2	221.0	33.7
Oct-22	2315	147.8	279.3	N/A	205.6	182.8	221.5	869	627	379	311	36.7	4.2	12.5	0.6	1609.3	201.3	28.0
Oct-22	2330	146.4	277.9	N/A	207.5	181.5	220.1	869	606	379	310	31.3	4.3	15.4	0.8	1597.9	245.6	39.1
Oct-22	2345	146.4	277.6	N/A	209.6	181.6	222.0	869	628	323	322	32.7	3.8	11.7	-21.7	1598.7	186.4	32.3
AVERAGES		145.2	281.8	N/A	208.1	182.5	220.8	872.6	634.9	380.6	316.8	33.0	4.1	12.1	-0.8	1613.3	193.9	30.6
Oct-23	0	146.6	277.7	N/A	208.2	180.1	218.6	869	620	337	318	31.6	4.1	13.3	-14.6	1585.5	211.4	35.0
Oct-23	15	146.2	278.6	N/A	210.3	180.3	218.8	815	640	334	319	29.6	4.2	4.9	-15.6	1492.0	73.7	12.7
Oct-23	30	146.6	278.7	N/A	210.9	181.9	220.0	828	622	357	320	30.3	3.9	9.1	-8.4	1525.1	138.9	25.2
Oct-23	45	147.0	276.9	N/A	210.5	182.1	218.9	819	619	360	346	30.2	4.2	9.2	-15.5	1511.1	138.4	23.4
Oct-23	100	146.6	278.9	N/A	211.1	183.4	222.0	839	623	361	325	30.4	4.1	10.1	-9.2	1558.1	157.0	27.0
Oct-23	115	146.8	278.7	N/A	212.1	183.2	220.8	814	615	369	316	29.6	4.1	8.8	-3.2	1510.0	133.3	23.6
Oct-23	130	146.8	277.3	N/A	211.7	182.3	222.2	828	618	377	317	29.1	4.4	9.0	-2.5	1529.4	138.3	23.1
Oct-23	600	146.1	276.8	N/A	213.8	185.1	221.3	861	652	372	311	28.4	5.5	9.4	-0.1	1614.5	152.0	20.7
Oct-23	615	146.6	276.6	N/A	213.9	183.8	217.6	853	655	372	314	27.9	5.1	9.0	-0.2	1588.3	143.6	21.5
Oct-23	630	147.0	276.6	N/A	211.1	184.0	219.8	841	641	375	312	30.3	4.8	8.9	0.6	1566.9	139.9	20.6
Oct-23	645	146.8	277.4	N/A	210.5	184.4	222.4	836	638	376	314	30.5	4.8	7.9	-0.8	1561.9	123.6	18.0
Oct-23	700	146.4	277.6	N/A	210.4	184.7	221.1	849	631	378	316	30.5	4.7	11.0	0.2	1589.5	175.3	26.2
Oct-23	715	146.1	277.6	N/A	210.3	185.7	221.9	843	634	384	322	30.6	4.6	10.1	-0.3	1586.1	160.0	24.3
Oct-23	730	146.4	277.6	N/A	210.0	186.2	221.0	860	632	392	322	31.1	4.3	12.8	2.4	1623.2	208.5	33.4
Oct-23	745	144.9	278.0	N/A	209.3	185.9	220.6	831	617	370	318	31.6	4.7	11.8	-1.9	1564.3	184.9	26.6
Oct-23	800	146.2	278.2	N/A	209.7	187.2	223.0	827	609	383	322	31.4	4.5	12.2	-0.1	1568.6	191.7	29.0
Oct-23	815	146.2	278.2	N/A	209.7	187.2	223.0	827	609	383	322	31.4	4.5	12.2	-0.1	1568.6	191.7	29.0
Oct-23	830	146.5	277.9	N/A	204.3	184.3	222.9	833	594	379	316	35.2	4.2	13.7	-0.7	1554.5	213.3	30.9
Oct-23	845	146.9	277.4	N/A	204.5	185.1	221.2	841	595	378	314	34.7	4.2	15.4	0.9	1577.2	242.8	35.7
Oct-23	900	146.4	276.9	N/A	202.7	183.2	222.2	840	587	376	306	34.5	4.2	15.1	1.3	1558.3	235.8	34.9
Oct-23	915	145.9	277.3	N/A	203.3	185.1	221.3	832	600	376	315	34.1	4.1	13.8	-0.2	1560.3	215.3	33.0
Oct-23	930	146.5	276.7	N/A	202.6	182.6	221.7	850	600	373	310	34.1	3.8	14.3	-1.0	1572.4	224.9	37.3
Oct-23	945	146.7	277.8	N/A	202.6	182.9	224.0	841	600	376	311	34.4	4.0	12.6	-1.4	1558.5	195.8	30.6
Oct-23	1000	146.6	278.0	N/A	202.8	182.9	221.1	842	591	372	310	34.5	4.1	15.1	-0.9	1559.4	235.7	35.8
Oct-23	1015	146.7	278.3	N/A	203.2	182.0	223.9	836	596	374	309	34.6	3.9	12.2	-1.9	1541.6	188.6	30.0
Oct-23	1030	146.4	279.0	N/A	204.6	183.0	224.9	845	584	374	309	33.8	3.7	15.1	-1.4	1567.5	237.0	40.8
Oct-23	1045	146.8	278.9	N/A	205.1	182.3	221.4	841	611	374	311	33.6	3.0	11.7	-1.2	1552.4	182.1	39.0
Oct-23	1100	146.7	280.0	N/A	203.4	183.5	222.6	851	588	371	312	35.8	2.6	16.2	-2.0	1582.9	255.9	59.5
Oct-23	1115	146.8	281.5	N/A	203.6	183.6	222.3	844	597	375	313	35.9	4.8	14.3	-0.9	1570.8	225.2	27.9
Oct-23	1130	143.1	282.8	N/A	203.7	183.1	223.7	834	595	370	310	36.2	4.2	12.9	-2.5	1547.2	198.9	28.1
Oct-23	1145	145.1	283.7	N/A	203.4	180.3	217.1	837	580	362	307	36.3	4.6	16.5	-2.1	1528.1	252.5	32.4
Oct-23	1200	145.3	284.1	N/A	204.2	182.6	224.0	834	582	373	316	36.2	4.0	14.4	-4.1	1543.0	222.3	33.0
Oct-23	1215	145.3	284.5	N/A	205.2	181.5	222.4	834	592	368	308	34.9	4.4	12.9	-2.6	1532.8	197.9	27.6
Oct-23	1230	145.7	285.2	N/A	208.6	179.8	221.3	842	598	367	307	33.6	4.1	12.5	-2.9	1533.0	192.4	30.0
Oct-23	1245	145.7	286.4	N/A	207.1	181.3	217.6	842	596	367	306	35.6	4.3	14.9	-0.1	1545.8	230.9	32.3
Oct-23	1300	145.9	288.2	N/A	206.9	180.2	219.4	846	592	365	310	36.4	3.8	14.9	-3.3	1545.3	229.6	35.7
Oct-23	1315	145.4	289.4	N/A	206.4	178.8	221.5	843	587	365	307	38.1	4.3	13.8	-4.3	1527.2	210.0	27.5
Oct-23	1330	145.7	289.9	N/A	204.8	178.4	211.2	845	581	366	309	38.6	3.9	16.0	-3.5	1528.1	243.8	34.8
Oct-23	1345	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1400	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1415	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1430	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1445	145.5	291.2	N/A	205.5	176.7	218.7	850	561	359	303	40.8	4.1	18.3	-4.4	1521.6	278.5	35.7
Oct-23	1500	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1515	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1530	145.8	290.7	N/A	205.3	177.8	215.0	842	582	367	307	38.5	4.4	16.3	-1.1	1515.9	247.2	31.3
Oct-23	1545	145.3	292.0	N/A	208.3	174.9	216.2	824	571	360	303	37.8	3.9	14.3	-3.8	1470.2	208.7	30.4
Oct-23	1600	145.9	291.7	N/A	211.4	174.2	214.2	830	583	361	301	33.6	4.3	13.5	-2.4	1464.1	197.9	29.4
Oct-23	1615	146.0	291.4	N/A	211.6	174.7	214.7	812	577	332	304	34.1	4.4	12.7	-12.5	1437.3	183.2	26.2
Oct-23	1630	147.0	291.0	N/A	210.5	174.5	214.3	815	584	358	300	36.2	4.4	11.9	-2.8			

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Oct-23	1800	146.3	290.0	N/A	213.8	177.3	217.3	810	577	362	316	34.8	4.2	12.7	-7.0	1454.2	184.9	27.1
Oct-23	1815	146.7	287.7	N/A	216.3	175.8	215.5	804	584	364	307	30.5	4.0	11.0	-3.4	1432.1	157.2	27.7
Oct-23	1830	146.4	287.1	N/A	216.0	176.4	214.6	786	588	363	309	30.8	3.8	9.0	-3.3	1405.0	126.7	23.3
Oct-23	1845	146.6	285.5	N/A	216.5	176.3	216.2	783	591	371	318	30.3	3.9	7.4	-5.2	1397.9	103.5	18.8
Oct-23	1900	146.9	286.0	N/A	215.7	177.9	213.9	789	593	372	316	31.7	4.0	9.6	-2.3	1422.3	136.3	23.1
Oct-23	1915	146.4	285.0	N/A	214.1	177.0	216.8	787	588	371	317	30.9	4.0	11.6	-4.8	1410.6	163.0	28.3
Oct-23	1930	146.3	285.0	N/A	215.9	179.0	218.8	786	606	363	323	30.4	4.1	5.7	-9.0	1424.8	81.6	14.0
Oct-23	1945	146.1	282.5	N/A	216.4	176.9	217.4	785	602	364	319	27.7	3.9	5.8	-7.8	1407.2	81.4	16.2
Oct-23	2000	146.8	281.4	N/A	218.2	177.6	217.6	788	609	372	319	27.9	4.2	5.2	-5.0	1417.2	73.7	13.5
Oct-23	2015	146.4	279.8	N/A	217.9	176.3	219.4	784	612	360	313	29.0	4.4	2.8	-8.5	1399.7	39.5	6.6
Oct-23	2030	147.1	280.7	N/A	213.9	178.5	217.3	786	567	359	307	28.1	4.1	12.1	-4.1	1420.8	172.5	32.1
Oct-23	2045	146.3	281.6	N/A	214.0	179.5	214.7	788	600	360	336	30.5	4.4	8.9	-11.7	1432.4	127.4	20.3
Oct-23	2100	146.2	281.0	N/A	211.8	178.7	218.3	788	601	368	316	32.5	4.1	6.7	-5.1	1426.0	95.8	15.4
Oct-23	2115	146.0	280.9	N/A	211.3	178.9	216.3	788	589	368	308	34.5	3.9	9.5	-1.2	1427.6	135.9	21.7
Oct-23	2130	146.1	279.9	N/A	211.3	179.7	219.6	837	585	380	303	32.8	3.9	14.5	2.5	1523.0	220.5	37.0
Oct-23	2145	146.1	280.0	N/A	209.6	179.9	219.6	831	580	376	307	33.8	4.2	14.8	0.2	1513.8	223.5	33.8
Oct-23	2200	147.3	279.9	N/A	209.0	179.5	215.8	832	590	375	307	32.4	4.5	14.6	1.6	1512.2	221.3	32.5
Oct-23	2215	146.4	279.9	N/A	210.9	180.2	220.4	837	608	377	312	35.2	4.2	11.0	-1.5	1527.3	168.7	24.5
Oct-23	2230	146.7	279.6	N/A	210.4	179.7	219.6	834	615	381	314	32.6	3.7	9.8	-0.6	1517.6	148.3	26.4
Oct-23	2245	146.4	279.4	N/A	208.6	179.1	218.2	834	611	384	319	32.5	4.1	10.6	-1.2	1512.5	160.8	25.9
Oct-23	2300	146.8	279.0	N/A	208.0	180.2	218.9	834	611	384	319	32.4	4.2	10.9	-0.9	1521.8	165.8	26.1
AVERAGES		146.3	283.1	N/A	209.2	180.2	218.9	826.4	597.7	368.3	312.8	33.5	4.2	12.1	-3.3	1509.1	183.5	27.9
Nov-2	1615	122.0	280.1	N/A	214.6	150.1	174.7	795	612	373	324	26.9	6.2	10.4	-1.1	1209.0	125.9	16.0
Nov-2	1630	121.2	281.5	N/A	207.6	152.6	179.3	780	599	365	327	31.3	6.1	9.7	-5.2	1205.4	116.5	12.9
Nov-2	1730	121.6	278.8	N/A	199.6	154.6	184.6	783	578	384	318	30.7	5.8	11.9	1.0	1225.9	145.7	17.4
Nov-2	1745	121.7	282.0	N/A	199.4	156.6	186.4	785	562	380	322	33.3	5.4	14.8	-0.9	1245.7	184.3	21.8
Nov-2	1800	121.2	282.9	N/A	197.7	154.4	185.4	776	567	381	316	34.6	5.4	12.4	0.2	1214.1	150.0	17.1
Nov-2	1815	123.1	280.2	N/A	198.0	158.1	189.3	761	521	379	317	34.2	4.8	18.1	-0.1	1219.2	220.7	28.7
Nov-2	1830	121.5	282.1	N/A	199.7	157.9	186.8	756	545	381	317	33.0	5.7	14.8	1.5	1209.6	179.1	20.2
Nov-2	1845	121.7	283.7	N/A	198.8	157.2	185.8	789	530	376	321	35.2	5.3	20.5	-1.0	1256.0	257.5	29.4
Nov-2	1900	122.5	282.7	N/A	199.0	154.9	183.5	784	551	377	315	33.2	5.1	16.8	1.2	1230.6	206.2	26.0
Nov-2	1915	122.1	282.1	N/A	199.0	158.1	187.4	772	530	381	323	33.9	5.4	18.6	-0.5	1236.8	230.3	26.8
Nov-2	1930	121.3	283.5	N/A	199.1	152.9	183.1	789	569	362	314	33.3	4.7	13.7	-3.9	1221.7	167.0	22.8
Nov-2	1945	123.3	281.3	N/A	199.1	155.5	182.0	732	533	367	313	33.3	4.9	14.9	0.3	1153.6	171.7	22.5
Nov-2	2000	122.2	282.2	N/A	199.5	160.9	190.7	753	522	363	333	34.4	5.2	17.8	-8.9	1227.7	218.9	26.1
Nov-2	2015	119.8	283.5	N/A	198.9	158.2	188.3	734	534	379	306	34.1	5.4	13.5	4.1	1176.0	158.2	18.3
Nov-2	2030	120.6	281.4	N/A	197.4	151.5	180.8	760	544	354	319	33.2	4.8	14.5	-7.8	1166.0	169.4	22.7
Nov-2	2045	121.3	278.1	N/A	196.0	152.8	183.1	760	518	356	325	34.1	5.2	18.3	-9.5	1176.0	215.8	25.9
Nov-2	2100	121.6	278.5	N/A	196.9	151.0	180.1	760	516	399	317	32.0	5.1	19.0	5.1	1162.1	221.3	28.9
Nov-2	2115	120.2	279.9	N/A	197.5	153.8	185.6	760	551	389	308	32.8	4.9	12.5	4.2	1183.7	148.5	19.7
Nov-2	2130	120.9	279.2	N/A	196.7	149.9	180.6	817	541	374	315	32.6	5.2	20.2	-1.4	1240.8	250.9	31.6
Nov-2	2145	120.9	278.5	N/A	196.2	150.5	180.4	788	535	376	306	32.6	5.3	18.6	2.5	1201.0	223.1	27.5
Nov-2	2200	119.9	279.0	N/A	196.9	151.0	180.9	777	544	370	306	31.9	5.1	16.1	0.9	1188.1	191.1	25.1
Nov-2	2215	120.1	278.5	N/A	196.8	147.8	177.3	808	533	364	315	31.7	4.9	20.9	-3.9	1210.0	253.4	34.9
Nov-2	2230	120.6	280.1	N/A	197.6	150.3	181.0	770	543	372	315	32.1	5.1	15.0	-2.1	1172.0	176.2	23.0
Nov-2	2245	119.7	280.3	N/A	198.1	154.7	186.0	778	524	367	314	31.8	4.9	19.0	-2.8	1219.6	231.9	31.8
Nov-2	2300	120.5	277.9	N/A	198.3	150.1	180.7	778	524	367	314	30.4	5.0	18.9	-2.9	1183.3	223.8	31.4
Nov-2	2315	120.7	277.7	N/A	199.0	151.8	182.7	778	535	367	326	30.6	4.8	17.3	-6.7	1196.7	207.3	30.2
Nov-2	2330	120.3	278.8	N/A	200.4	156.8	187.7	778	518	367	312	30.4	4.9	20.3	-1.7	1236.2	250.9	36.0
Nov-2	2345	119.0	279.9	N/A	199.4	145.9	174.7	778	573	306	300	29.4	4.9	11.8	-17.5	1150.2	136.0	20.2
AVERAGES		121.1	280.5	N/A	199.2	153.6	183.2	774.1	544.6	370.6	316.4	32.4	5.2	16.1	-2.0	1204.2	194.0	24.8
Nov-3	0	120.7	278.1	N/A	201.5	154.6	181.6	778	531	317	321	29.6	5.3	19.9	-18.9	1218.8	242.7	33.0
Nov-3	15	120.1	280.0	N/A	201.8	156.1	183.7	778	551	347	316	30.0	5.1	16.7	-7.0	1230.6	206.0	28.7
Nov-3	30	118.9	281.0	N/A	201.3	150.2	179.9	772	568	334	321	29.7	5.0	12.0	-15.3	1175.0	140.6	20.2
Nov-3	45	119.4	278.7	N/A	201.6	152.7	179.1	709	553	355	314	29.5	5.4	8.5	-3.7	1096.5	93.0	12.4
Nov-3	100	121.1	279.1	N/A	202.8	155.6	182.3	700	520	332	330	29.4	5.1	13.1	-16.6	1103.9	144.2	20.5
Nov-3	115	119.8	280.2	N/A	204.5	160.0	184.7	701	546	361	311	29.5	5.4	10.1	0.5	1136.7	115.0	15.4
Nov-3	130	119.1	281.0	N/A	205.0	156.1	185.8	736	546	342	312	28.7	4.8	11.6	-8.4	1164.1	135.4	21.0
Nov-3	145	119.1	279.1	N/A	204.0	153.4	180.0	717	565	343	308	29.4	4.9	7.5	-5.3	1113.9	83.7	12.4
Nov-3	200	120.7	276.4	N/A	202.3	150.9	176.4	745	533	315	326	28.8	4.8	16.5	-21.0	1139.2	187.5	29.0
Nov-3	215	120.7	275.3	N/A	201.6	156.3	179.7	720	522	349	320	29.3	5.3	16.7	-5.5	1139.7	190.2	26.1
Nov-3	230	118.4	275.4	N/A	203.0	162.4	188.0	741	531	326	334	29.0	5.1	17.1	-18.4	1219.6	209.1	30.2
Nov-3	245	120.2	275.6	N/A	202.5	158.0	183.1	742	554	331	310	28.7	5.2	13.6	-8.2	1188.1	161.3	23.1
Nov-3	300	120.3	274.6	N/A	201.9	160.2	182.4	713	530	315	315	29.3	5.2	15.5	-13.9	1157.6	178.9	25.0
Nov-3	315	120.0	274.5	N/A	200.3	158.8	182.5	721	534	333	309	29.4	5.8	15.0	-6.6	1160.4	173.9	21.7
Nov-3	330	115.0	274.2	N/A	199.4	154.4	179.5	729	545	329	332	29.0	5.4	13.1	-17.4	1140.0	149.7	20.4
Nov-3	345	115.3	274.8	N/A	199.6	154.6	179.9	722	546	335	318	29.1	5.4	12.0	-10.5	1131.3	136.0	18.4
Nov-3	400	114.6	273.5	N/A	199.0	157.3	180.9	696	531	324	318	29.4	5.5	12.2	-12.9	1108.8	135.5	17.8
Nov-3	415	114.9	272.9	N/A	198.5	159.6	182.4	701	547	342	312	29.9	5.6	10.9	-4.5	1133.9	123.9	15.7
Nov-3																		

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-3	545	117.2	271.5	N/A	197.6	159.2	181.7	709	536	329	317	29.3	4.9	13.8	-10.2	1143.9	158.1	23.5
Nov-3	600	116.8	272.2	N/A	198.2	159.0	182.2	711	532	318	316	28.5	5.2	14.4	-13.7	1145.7	164.6	23.7
Nov-3	615	117.2	272.2	N/A	197.3	157.0	181.0	741	541	339	318	29.2	5.1	15.9	-8.2	1179.0	187.8	26.9
Nov-3	630	117.1	271.9	N/A	196.7	159.7	181.2	730	540	340	340	29.8	5.0	16.1	-13.6	1180.7	190.2	27.3
Nov-3	645	116.6	271.7	N/A	196.8	155.5	179.8	729	544	339	319	29.0	5.0	13.8	-8.8	1148.9	158.8	23.4
Nov-3	700	116.9	272.2	N/A	197.3	157.2	183.0	714	558	320	316	29.4	5.0	9.0	-14.7	1137.5	102.9	14.9
Nov-3	715	117.6	270.7	N/A	195.2	153.9	177.4	751	537	339	319	29.7	5.0	17.6	-8.5	1170.4	206.1	29.6
Nov-3	730	117.2	269.8	N/A	194.3	155.4	179.1	713	546	335	338	30.0	5.3	11.7	-16.2	1122.1	131.4	17.6
Nov-3	745	116.1	272.5	N/A	195.2	158.8	182.6	741	529	339	318	29.8	5.2	18.0	-8.0	1192.6	214.6	29.5
Nov-3	800	116.5	272.5	N/A	195.9	157.3	180.7	717	560	324	317	29.8	5.1	10.3	-12.3	1143.0	117.8	16.5
Nov-3	815	116.5	272.9	N/A	196.5	155.4	178.0	752	531	350	317	29.2	4.9	19.2	-3.8	1183.4	226.8	33.8
Nov-3	830	118.3	271.3	N/A	195.2	156.9	180.7	702	539	349	319	30.4	5.0	11.5	-5.1	1115.5	128.7	18.1
Nov-3	845	116.2	271.8	N/A	195.6	160.2	182.7	719	520	346	317	30.5	5.4	17.5	-4.3	1166.5	204.7	26.5
Nov-3	900	117.3	272.5	N/A	197.6	158.0	180.9	731	548	327	317	29.9	5.0	14.2	-11.2	1170.5	166.1	23.7
Nov-3	915	117.2	274.9	N/A	198.7	154.3	177.7	749	547	353	322	28.7	5.0	16.0	-5.1	1171.1	187.2	27.8
Nov-3	930	117.3	274.7	N/A	199.4	161.7	185.2	708	526	350	320	29.3	5.0	15.0	-4.6	1160.3	174.0	25.4
Nov-3	945	117.2	275.4	N/A	199.8	159.9	181.9	740	530	349	328	28.6	5.2	18.5	-6.8	1199.2	222.2	31.9
Nov-3	1000	116.6	276.9	N/A	197.6	155.2	179.6	745	533	330	307	30.4	5.2	17.2	-7.6	1170.9	201.0	27.1
Nov-3	1015	117.1	276.6	N/A	199.4	157.3	179.4	732	533	351	320	28.7	4.9	17.0	-4.1	1166.9	198.1	30.1
Nov-3	1030	117.2	279.4	N/A	201.2	160.5	181.9	742	528	352	319	29.8	5.2	19.4	-2.6	1206.1	233.8	32.2
Nov-3	1045	116.5	279.1	N/A	199.6	158.9	184.7	732	534	346	313	30.4	5.5	15.2	-5.1	1178.0	179.6	22.9
Nov-3	1100	116.6	280.2	N/A	198.2	152.7	177.3	758	534	359	315	30.4	5.5	18.3	-1.9	1172.9	214.5	27.3
Nov-3	1115	116.8	281.3	N/A	193.6	153.8	180.9	761	526	350	319	35.5	5.4	18.7	-7.1	1186.0	221.7	24.6
Nov-3	1130	117.6	282.8	N/A	193.4	156.3	183.4	729	526	353	318	36.4	4.9	15.4	-5.7	1154.0	177.3	21.2
Nov-3	1145	116.8	283.3	N/A	193.4	154.2	179.2	742	549	357	324	34.7	5.4	14.1	-5.4	1159.6	163.7	18.6
Nov-3	1200	116.6	285.2	N/A	194.3	153.4	179.4	750	544	361	311	34.9	5.1	15.2	-0.8	1165.1	177.2	21.2
Nov-3	1215	116.5	285.0	N/A	195.1	154.9	182.3	753	541	351	321	34.7	5.3	15.5	-7.5	1181.9	183.6	21.3
Nov-3	1230	115.9	284.7	N/A	195.8	157.0	184.8	760	530	343	322	34.9	5.0	17.9	-10.3	1208.3	216.7	26.5
Nov-3	1245	116.0	285.0	N/A	195.9	153.2	182.8	744	549	347	302	34.4	4.8	12.1	-3.8	1155.2	139.3	18.0
Nov-3	1300	116.1	283.2	N/A	195.6	156.6	183.1	742	519	332	321	35.0	5.1	18.3	-13.1	1177.6	215.5	25.8
Nov-3	1315	116.5	282.0	N/A	194.5	155.4	183.2	733	510	352	310	34.6	5.1	18.1	-3.6	1154.4	208.5	25.2
Nov-3	1330	115.0	283.4	N/A	194.5	148.7	175.3	741	536	355	311	33.9	5.2	14.7	-3.3	1116.0	163.9	19.8
Nov-3	1345	112.2	286.1	N/A	195.3	152.0	180.5	745	509	350	321	35.1	5.1	18.8	-8.9	1146.7	215.7	25.7
Nov-3	1400	112.3	285.8	N/A	195.9	149.3	178.2	743	531	323	310	34.5	4.2	14.7	-14.4	1124.2	165.5	24.5
Nov-3	1415	112.8	284.8	N/A	195.8	146.8	176.9	751	507	342	315	33.8	5.9	18.6	-11.1	1116.4	207.5	22.1
Nov-3	1430	112.5	285.8	N/A	196.4	150.4	180.8	727	495	347	318	34.4	6.5	18.2	-10.3	1107.4	201.3	19.1
Nov-3	1445	111.7	285.0	N/A	195.6	147.7	178.5	725	497	349	319	34.1	6.1	17.2	-10.7	1085.3	187.1	19.1
Nov-3	1500	112.4	285.2	N/A	196.0	147.2	176.8	720	501	360	323	34.1	6.3	16.5	-7.7	1073.4	176.6	17.4
Nov-3	1515	112.7	285.4	N/A	197.6	145.2	178.0	744	502	351	322	33.6	6.0	17.2	-12.4	1094.1	188.6	19.9
Nov-3	1530	112.8	284.1	N/A	198.9	147.4	179.4	724	515	351	321	32.4	6.3	13.4	-11.2	1081.6	145.3	15.1
Nov-3	1545	112.6	283.6	N/A	200.2	147.9	179.9	718	515	363	328	31.4	6.1	12.8	-9.9	1076.2	138.3	15.3
Nov-3	1600	111.2	285.2	N/A	200.9	144.7	174.3	713	504	327	312	31.2	6.0	14.9	-15.0	1044.9	155.5	17.6
Nov-3	1615	116.6	282.8	N/A	200.8	144.6	174.8	742	503	352	325	31.6	6.1	18.1	-11.4	1087.4	197.2	21.7
Nov-3	1630	118.2	282.5	N/A	202.1	151.5	182.9	701	518	361	321	31.6	6.1	10.9	-7.5	1076.3	117.2	12.9
Nov-3	1645	117.2	284.5	N/A	202.8	153.4	184.7	760	500	353	331	32.1	6.6	20.8	-13.1	1180.6	245.7	24.5
Nov-3	1700	118.7	280.9	N/A	202.2	148.2	178.4	726	520	328	319	30.6	6.2	13.8	-17.3	1080.4	150.3	16.8
Nov-3	1715	117.8	280.7	N/A	203.5	152.8	183.6	710	518	354	315	30.8	6.1	12.4	-6.7	1098.7	135.9	15.3
Nov-3	1730	119.8	280.4	N/A	203.7	152.9	182.2	725	534	347	318	30.1	6.6	12.3	-9.2	1123.5	138.6	14.8
Nov-3	1745	117.8	278.9	N/A	203.7	151.5	180.6	746	513	354	330	29.9	5.9	18.1	-11.2	1145.3	207.3	25.0
Nov-3	1800	118.7	278.1	N/A	204.2	151.2	179.5	715	536	336	322	29.2	6.3	11.0	-13.9	1094.9	121.0	13.9
Nov-3	1815	119.6	278.0	N/A	203.9	151.3	181.8	735	533	351	323	29.6	5.8	12.8	-10.6	1126.3	144.5	17.9
Nov-3	1830	119.9	278.2	N/A	204.2	152.5	182.1	725	535	357	327	29.7	5.8	11.8	-9.4	1119.7	132.7	16.4
Nov-3	1845	117.8	277.4	N/A	204.7	151.5	179.7	730	530	354	328	28.1	6.3	13.9	-9.8	1120.8	155.7	18.6
Nov-3	1900	117.9	277.8	N/A	204.9	151.9	181.5	712	534	327	317	28.4	6.4	10.4	-15.8	1095.3	114.3	13.3
Nov-3	1915	118.8	276.8	N/A	205.1	151.0	179.7	730	545	345	313	28.2	6.3	11.2	-7.8	1117.1	124.9	14.9
Nov-3	1930	117.9	277.2	N/A	205.2	151.3	180.6	731	544	353	326	28.3	6.2	11.2	-10.2	1120.9	125.5	15.2
Nov-3	1945	117.3	277.1	N/A	205.6	150.8	180.4	736	552	354	334	28.2	6.4	10.3	-12.7	1124.1	116.0	13.6
Nov-3	2000	118.6	276.2	N/A	205.3	150.8	179.9	738	544	326	320	28.0	6.4	12.1	-16.8	1127.9	136.3	16.1
Nov-3	2015	118.0	276.9	N/A	205.3	150.3	178.3	752	554	357	328	28.6	6.4	12.6	-8.9	1145.3	144.5	16.7
Nov-3	2030	119.1	277.1	N/A	205.8	150.6	180.8	762	566	356	329	26.9	6.0	10.8	-11.1	1162.1	125.3	16.5
Nov-3	2045	119.4	276.8	N/A	205.0	151.1	181.6	755	568	356	327	28.2	6.1	9.5	-10.4	1155.9	110.0	13.6
Nov-3	2100	118.9	277.8	N/A	205.5	151.6	181.7	755	569	356	322	28.6	6.2	9.8	-8.4	1159.7	113.1	13.5
Nov-3	2115	120.1	278.5	N/A	204.4	151.2	180.0	755	565	386	311	29.0	5.8	10.9	4.0	1156.6	126.2	15.9
Nov-3	2130	121.0	278.0	N/A	204.2	151.1	179.2	755	574	382	308	28.9	6.1	9.9	4.2	1155.9	114.6	13.8
Nov-3	2145	119.7	278.0	N/A	204.1	150.8	178.3	755	553	377	316	28.6	5.9	13.4	1.1	1153.6	154.7	19.5
Nov-3	2200	120.2	278.6	N/A	204.3	151.2	179.8	782	575	373	316	28.8	5.8	12.6	-0.7	1197.4	150.8	19.2
Nov-3	2215	121.0	278.1	N/A	204.5	151.5	178.3	777	541	371	324	28.9	5.9	18.1	-2.7	1192.8	216.4	27.0
Nov-3	2230	118.5	279.0	N/A	205.2	151.8	181.2	792	548	384	322	28.0	6.3	17.5	-0.3	1218.3	213.1	25.6
Nov-3	2245	121.3	278.1	N/A	204.7	148.7	178.2	780	566	374	316	28.6	5.9	13.0	-1.1	1174.6	152.6	19.2
Nov-3	2300																	

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-4	0	114.5	282.8	N/A	204.1	152.9	180.8	780	522	332	321	30.8	6.0	20.8	-14.2	1207.7	251.3	28.9
Nov-4	15	116.4	280.6	N/A	202.5	149.7	177.6	736	536	337	308	30.1	6.1	13.6	-8.5	1115.9	152.3	17.6
Nov-4	30	118.7	282.5	N/A	203.5	151.8	178.9	709	542	349	324	30.6	5.6	10.0	-9.2	1090.0	108.5	13.5
Nov-4	45	116.5	280.3	N/A	201.5	153.5	182.1	724	516	355	335	31.4	5.9	15.5	-11.7	1125.5	174.2	20.0
Nov-4	100	116.6	280.7	N/A	200.1	154.0	182.0	726	521	338	323	33.1	5.9	15.3	-12.7	1133.1	173.1	18.8
Nov-4	115	117.9	281.6	N/A	198.6	152.9	179.5	734	507	340	317	32.9	6.1	18.9	-9.7	1136.6	215.3	22.8
Nov-4	130	117.2	283.3	N/A	198.5	154.8	182.3	743	515	347	325	33.4	5.6	18.4	-10.1	1164.9	214.4	24.4
Nov-4	145	117.4	279.7	N/A	196.6	154.4	182.6	722	510	358	334	33.9	6.3	16.5	-10.3	1129.8	186.1	18.5
Nov-4	200	116.3	276.8	N/A	195.2	155.1	182.6	728	504	339	325	33.1	6.1	18.6	-12.7	1144.3	212.6	22.3
Nov-4	215	116.5	277.2	N/A	193.2	155.6	180.5	728	514	352	321	34.6	6.0	18.0	-5.9	1147.2	207.0	21.2
Nov-4	230	116.5	276.1	N/A	192.0	153.8	181.0	742	500	353	332	33.4	6.0	20.8	-10.8	1156.6	240.4	25.5
Nov-4	245	115.7	277.1	N/A	193.0	156.7	186.0	744	499	358	330	34.0	6.3	20.3	-9.4	1180.8	240.2	23.8
Nov-4	300	115.9	277.1	N/A	192.7	156.0	184.5	733	505	332	321	33.5	6.2	18.5	-14.4	1168.1	213.9	21.8
Nov-4	315	116.0	276.1	N/A	193.1	155.2	181.7	744	510	357	320	32.6	6.0	19.8	-4.9	1170.2	231.2	25.1
Nov-4	330	112.9	276.6	N/A	192.8	154.2	180.5	736	517	352	327	32.8	6.4	17.8	-8.9	1149.4	204.7	20.6
Nov-4	345	111.3	277.7	N/A	193.2	155.0	183.3	765	511	352	328	32.5	5.8	21.0	-10.1	1201.6	252.3	28.4
Nov-4	400	113.0	275.7	N/A	193.4	152.9	179.7	723	509	332	321	32.1	6.2	17.3	-13.8	1120.4	193.4	20.6
Nov-4	415	112.9	274.6	N/A	193.1	151.6	179.5	749	517	354	319	31.4	5.9	18.3	-6.6	1149.8	210.3	24.1
Nov-4	430	113.5	275.8	N/A	193.7	152.2	180.5	747	521	361	330	31.9	6.0	17.2	-8.3	1151.3	198.3	22.0
Nov-4	445	112.8	276.1	N/A	193.9	150.3	179.8	772	516	349	334	31.6	5.8	20.0	-14.2	1175.8	235.6	27.3
Nov-4	500	113.2	276.1	N/A	194.3	151.3	179.6	734	516	336	329	31.5	6.3	16.5	-16.0	1124.4	185.3	19.8
Nov-4	515	114.9	273.7	N/A	194.5	153.8	182.3	729	537	364	314	31.3	6.2	12.7	-2.3	1135.5	144.6	15.8
Nov-4	530	115.6	274.9	N/A	194.7	150.7	178.5	767	532	360	332	31.3	6.1	17.9	-9.2	1171.3	210.0	23.3
Nov-4	545	114.8	274.3	N/A	195.8	152.0	183.6	751	498	361	317	27.5	5.9	19.9	-6.2	1156.0	230.3	30.1
Nov-4	600	115.7	273.2	N/A	200.8	152.2	180.3	740	551	331	315	26.5	6.1	11.9	-12.8	1141.4	135.8	17.8
Nov-4	615	117.3	273.9	N/A	202.6	150.4	176.4	776	574	353	317	26.1	6.5	13.3	-5.4	1181.9	156.9	19.6
Nov-4	630	115.2	273.6	N/A	203.4	150.7	177.7	770	573	364	332	25.9	5.7	12.3	-7.7	1175.9	145.1	20.9
Nov-4	645	116.2	273.2	N/A	203.6	149.2	176.2	757	569	352	328	25.9	6.0	11.2	-10.0	1143.7	127.9	17.5
Nov-4	700	115.2	272.9	N/A	202.0	150.5	178.3	751	549	333	320	27.4	6.2	13.3	-13.7	1144.6	152.8	19.1
Nov-4	715	116.1	271.9	N/A	203.1	152.2	180.0	755	546	361	320	26.4	6.2	14.6	-4.8	1164.3	169.4	21.9
Nov-4	730	116.2	273.5	N/A	203.5	150.6	177.7	757	562	360	314	25.7	5.9	12.4	-3.0	1154.5	143.5	20.1
Nov-4	745	117.1	273.3	N/A	204.3	150.8	175.9	756	560	369	331	25.7	5.7	13.6	-4.8	1154.5	157.3	22.8
Nov-4	800	116.5	274.5	N/A	204.2	152.0	178.0	739	564	338	318	26.8	5.9	10.7	-10.3	1138.4	122.1	16.4
Nov-4	815	116.5	275.3	N/A	204.6	150.5	176.5	755	551	359	315	26.6	6.1	14.5	-2.7	1151.4	167.0	21.8
Nov-4	830	116.1	276.6	N/A	205.0	152.2	179.6	738	551	354	325	27.0	6.3	11.9	-8.2	1138.4	135.7	16.9
Nov-4	845	115.7	276.9	N/A	204.8	151.9	178.0	746	556	346	323	27.6	6.2	12.7	-9.3	1147.5	145.7	18.0
Nov-4	900	114.1	277.1	N/A	204.4	152.7	177.9	714	538	331	313	27.7	5.7	12.3	-10.3	1104.2	135.4	18.2
Nov-4	915	117.6	277.8	N/A	203.2	152.7	183.0	714	558	366	307	30.1	6.0	6.4	-0.6	1104.2	70.5	8.3
Nov-4	931	118.8	278.9	N/A	203.5	154.6	182.8	714	558	366	307	30.2	6.2	7.6	0.8	1117.9	85.4	9.7
Nov-4	941	119.1	278.4	N/A	205.0	153.3	179.9	714	558	366	307	28.6	6.2	8.3	1.5	1108.5	92.4	11.0
Nov-4	1000	116.4	278.9	N/A	205.6	154.7	180.2	714	558	366	307	27.3	6.2	9.0	2.2	1118.7	100.8	12.6
Nov-4	1015	117.6	279.5	N/A	203.7	152.3	180.1	714	558	366	307	29.6	5.9	7.6	0.8	1101.3	84.0	10.2
Nov-4	1030	117.6	280.8	N/A	205.7	154.0	181.0	714	512	366	302	28.2	6.2	15.7	3.1	1113.6	174.5	21.2
Nov-4	1045	117.4	279.2	N/A	205.5	152.3	179.9	714	511	366	309	26.9	6.1	15.4	0.3	1101.3	169.7	21.9
Nov-4	1100	117.8	279.3	N/A	203.7	151.4	179.4	723	525	366	313	29.6	6.4	14.0	-1.2	1109.4	155.8	17.4
Nov-4	1115	117.0	281.6	N/A	197.8	152.3	179.8	718	512	366	306	33.3	6.4	15.8	1.3	1108.2	175.3	17.4
Nov-4	1130	117.5	282.0	N/A	198.3	152.1	182.9	739	515	365	315	34.1	5.9	16.1	-3.6	1138.4	183.8	19.4
Nov-4	1145	117.4	285.0	N/A	195.7	152.6	183.3	744	487	370	312	35.3	6.1	21.4	-1.3	1150.6	246.0	24.2
Nov-4	1200	118.7	284.7	N/A	195.6	150.6	178.2	750	512	370	308	35.1	6.3	19.2	1.5	1144.6	220.0	21.1
Nov-4	1215	118.1	285.4	N/A	195.8	151.7	181.1	750	508	372	314	35.0	6.1	19.1	-0.8	1152.1	219.8	21.8
Nov-4	1230	118.4	285.9	N/A	195.8	150.2	181.8	768	517	371	309	34.5	6.0	18.6	-0.9	1168.9	217.3	22.3
Nov-4	1245	116.6	285.5	N/A	195.4	150.2	182.1	762	470	371	311	36.0	6.2	25.2	-1.6	1159.0	292.4	27.8
Nov-4	1300	118.6	284.0	N/A	195.8	149.1	179.5	756	494	371	306	34.9	5.8	21.3	0.7	1141.5	242.9	25.5
Nov-4	1315	118.4	284.1	N/A	194.7	147.7	179.5	770	499	371	308	34.6	6.4	21.3	-0.9	1151.7	244.9	23.4
Nov-4	1330	117.4	284.9	N/A	195.2	148.6	178.7	769	498	373	312	35.2	5.9	22.1	-0.5	1157.2	256.3	26.2
Nov-4	1345	118.1	284.6	N/A	195.5	149.7	181.8	751	485	376	304	35.5	6.1	21.6	2.1	1138.5	245.8	24.1
Nov-4	1400	118.1	284.4	N/A	195.5	1.0	0.2	762	479	374	310	34.9	6.1	87.4	83.4	7.7	6.7	0.7
Nov-4	1415	118.2	285.0	N/A	196.1	218.0	154.9	760	473	372	310	35.9	6.2	55.8	40.8	1677.8	935.9	89.1
Nov-4	1430	117.8	282.8	N/A	195.7	151.1	182.3	733	463	370	311	35.0	6.2	23.8	-1.4	11.2.5	266.9	26.1
Nov-4	1445	117.8	283.2	N/A	196.3	149.0	182.1	743	471	382	312	34.9	7.5	22.6	0.1	1122.0	253.5	20.4
Nov-4	1500	118.7	284.1	N/A	197.1	148.5	182.6	757	477	383	315	34.6	7.1	22.5	-1.1	1138.4	255.7	22.0
Nov-4	1515	117.4	284.2	N/A	197.2	149.0	181.8	746	467	383	311	34.4	7.2	23.6	0.8	1126.4	265.8	22.6
Nov-4	1530	117.2	284.1	N/A	196.9	147.0	181.9	780	467	385	313	35.0	7.2	25.8	-0.7	1161.1	300.1	25.1
Nov-4	1545	119.2	283.3	N/A	196.6	149.0	183.0	749	480	381	310	34.5	7.0	21.3	0.0	1130.1	240.9	21.0
Nov-4	1600	117.8	281.2	N/A	196.1	148.7	181.5	758	469	386	314	34.6	6.9	24.5	0.5	1142.2	280.3	24.8
Nov-4	1615	117.2	279.9	N/A	196.6	147.8	182.4	773	483	386	311	33.9	7.3	22.8	0.4	1157.0	264.2	22.5
Nov-4	1630	117.9	279.9	N/A	199.4	146.2	180.4	805	510	385	313	30.9	7.0	21.8	-0.2	1191.7	260.2	25.4
Nov-4	1645	118.1	278.8	N/A	200.6	147.5	180.9	774	521	381	307	30.1	7.0	17.5	1.3	1156.1	201.9	20.2
Nov-4	1700	117.6	279.6	N/A	200.4	147.3	179.9	788	520	380	308	31.1	7.0	19.4	1.1	1175.9	228.1	22.1
Nov-4	1715	123.6	278.9	N/A	201.3	151.4	185.0	796	506	386	308	31.4	7.1	22.3	2.4			

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-4	1830	122.6	277.2	N/A	198.9	150.8	184.1	810	526	383	312	31.8	6.9	20.7	0.7	1237.6	256.3	24.7
Nov-4	1845	123.0	277.4	N/A	198.5	149.4	181.8	822	516	377	306	31.3	7.3	23.7	1.3	1244.3	294.5	27.2
Nov-4	1900	123.2	276.5	N/A	198.3	148.8	183.6	808	522	374	307	31.8	6.8	20.2	-1.2	1217.4	246.2	24.1
Nov-4	1915	122.6	275.7	N/A	198.3	150.3	183.1	798	515	375	313	31.5	6.9	21.4	-1.7	1215.8	280.2	25.3
Nov-4	1930	122.7	275.2	N/A	197.9	147.9	183.3	810	525	369	302	31.5	7.0	19.6	-1.3	1213.0	237.8	22.8
Nov-4	1945	124.1	275.7	N/A	197.6	146.7	181.1	823	546	371	299	31.7	7.5	18.2	0.4	1223.7	222.8	19.7
Nov-4	2000	122.3	276.1	N/A	198.0	149.3	184.2	825	537	371	315	31.8	7.0	19.8	-5.0	1248.4	247.2	23.4
Nov-4	2015	121.4	275.9	N/A	200.3	149.3	182.9	819	531	382	305	28.5	7.6	20.6	2.1	1238.9	254.9	24.7
Nov-4	2030	123.0	275.9	N/A	200.3	149.9	181.3	839	569	381	311	30.6	7.3	18.0	1.4	1273.5	229.2	21.6
Nov-4	2045	122.6	275.2	N/A	200.0	148.8	180.2	843	562	374	304	29.8	7.3	19.3	1.6	1270.2	245.0	23.7
Nov-4	2100	121.9	275.1	N/A	200.4	150.5	182.8	843	562	374	304	30.1	6.9	19.0	1.2	1284.7	244.7	24.9
Nov-4	2115	122.9	275.1	N/A	200.6	149.6	182.1	843	557	374	299	29.9	7.2	19.6	2.8	1277.0	250.3	24.5
Nov-4	2130	121.8	275.5	N/A	200.4	152.6	184.4	856	546	386	310	30.9	7.6	23.0	3.0	1323.3	304.2	27.2
Nov-4	2145	123.4	274.9	N/A	200.6	149.9	181.0	853	588	379	303	29.4	7.3	19.6	3.3	1295.4	253.7	24.9
Nov-4	2200	121.6	274.5	N/A	201.2	153.0	183.4	825	546	375	303	30.2	6.9	20.7	3.0	1278.1	264.5	26.8
Nov-4	2215	118.3	275.4	N/A	201.1	153.7	183.2	812	560	376	301	30.3	7.1	17.7	4.4	1263.7	224.3	22.0
Nov-4	2230	120.8	274.3	N/A	200.0	151.3	182.7	828	559	374	301	30.3	7.1	18.5	3.1	1269.3	235.5	23.1
Nov-4	2245	119.5	274.0	N/A	200.4	151.7	182.3	832	560	374	305	29.5	7.2	19.1	1.9	1278.8	244.4	24.3
Nov-4	2300	120.8	274.0	N/A	200.0	151.4	183.0	832	560	374	305	29.9	6.4	18.6	1.3	1276.3	237.9	26.3
Nov-4	2315	118.6	274.7	N/A	200.4	153.1	184.3	832	560	374	305	29.9	7.3	19.0	1.7	1290.6	244.9	23.6
Nov-4	2330	120.2	273.5	N/A	200.2	152.1	182.7	832	575	374	304	29.9	6.9	16.9	2.4	1282.2	217.2	22.2
Nov-4	2345	118.9	273.8	N/A	199.6	152.2	183.2	832	554	374	308	29.9	6.6	19.9	0.8	1283.0	255.6	27.4
AVERAGES		118.1	278.2	N/A	198.9	150.4	179.1	767.6	524.5	365.0	313.8	31.2	6.5	19.0	-1.9	1169.0	216.7	22.4
Nov-5	0	119.8	273.7	N/A	199.4	151.4	182.3	832	547	374	308	29.9	7.0	20.8	0.7	1276.3	265.9	26.8
Nov-5	15	119.8	274.3	N/A	200.0	153.2	184.3	832	559	355	318	30.1	7.0	19.2	-7.7	1291.4	248.5	24.9
Nov-5	30	120.2	272.6	N/A	199.2	151.4	182.9	823	571	350	319	29.3	6.7	16.2	-9.9	1262.2	204.9	22.1
Nov-5	45	112.4	274.1	N/A	199.1	150.0	180.8	831	546	366	311	29.5	6.8	20.8	-2.5	1262.2	262.2	27.6
Nov-5	100	115.9	273.6	N/A	198.5	148.2	180.7	831	572	360	299	29.9	7.1	16.1	-1.1	1247.8	200.5	19.9
Nov-5	115	116.0	274.2	N/A	199.2	150.1	182.3	806	550	372	318	29.5	7.2	17.1	-3.8	1225.8	209.9	20.8
Nov-5	130	115.2	275.6	N/A	200.2	149.8	182.3	813	567	377	313	29.5	7.1	15.1	-1.1	1233.9	186.7	18.8
Nov-5	145	115.0	275.1	N/A	198.9	150.7	182.8	818	546	369	315	30.6	7.0	19.0	-3.5	1248.2	227.2	23.4
Nov-5	200	116.4	272.5	N/A	202.9	147.6	178.7	823	591	373	312	26.0	7.3	13.0	-1.3	1230.5	159.9	17.7
Nov-5	215	115.6	271.6	N/A	204.3	149.6	179.0	818	587	378	314	25.6	7.2	14.1	0.4	1239.1	174.7	20.0
Nov-5	230	114.9	272.1	N/A	202.4	149.3	181.8	861	609	376	309	27.9	7.1	13.9	-0.1	1303.0	180.5	19.2
Nov-5	245	114.6	270.3	N/A	201.4	148.6	178.3	850	591	381	306	27.1	6.7	16.6	3.8	1280.4	212.0	24.7
Nov-5	300	115.7	272.6	N/A	203.1	150.4	179.7	853	612	370	306	25.6	7.1	14.3	1.0	1299.7	185.6	21.5
Nov-5	315	114.9	272.6	N/A	201.4	150.4	179.9	872	609	375	309	27.8	7.0	16.4	1.4	1329.4	218.6	23.7
Nov-5	330	115.6	272.6	N/A	200.2	150.6	181.6	864	600	381	311	28.4	7.0	16.2	1.4	1319.0	213.0	22.6
Nov-5	345	114.1	273.0	N/A	198.5	149.9	180.6	874	571	374	308	28.4	7.1	21.3	0.8	1327.3	283.3	29.6
Nov-5	400	116.4	273.2	N/A	199.3	148.1	179.8	836	580	361	309	28.1	7.2	15.7	-3.8	1253.7	196.4	20.5
Nov-5	415	114.5	272.1	N/A	198.7	149.1	179.3	846	589	377	309	28.7	6.9	16.3	1.6	1277.9	208.0	22.2
Nov-5	430	114.8	271.8	N/A	197.9	149.4	180.4	840	587	383	312	29.1	6.8	15.6	1.4	1271.5	198.8	21.2
Nov-5	445	116.1	271.3	N/A	196.9	148.0	178.2	854	590	376	306	29.2	7.2	16.8	2.0	1281.2	215.2	21.6
Nov-5	500	115.3	272.3	N/A	195.8	147.7	178.4	855	588	374	310	30.7	7.3	17.0	-0.4	1280.1	217.4	20.4
Nov-5	515	116.0	272.8	N/A	194.7	149.5	179.8	871	567	374	303	31.1	7.3	21.8	2.7	1319.9	287.9	26.7
Nov-5	530	114.3	272.1	N/A	192.6	151.6	180.4	873	559	378	309	32.3	7.3	23.9	2.9	1341.5	320.7	28.7
Nov-5	545	116.3	273.0	N/A	192.7	150.1	181.1	861	562	378	306	32.2	7.2	21.3	2.3	1309.3	279.0	25.4
Nov-5	600	114.3	273.5	N/A	193.0	151.2	179.1	851	567	372	309	30.9	7.1	21.1	1.5	1303.5	275.5	26.5
Nov-5	615	114.8	271.2	N/A	192.4	152.0	180.5	865	558	373	310	31.1	7.3	23.4	1.3	1332.0	311.5	28.9
Nov-5	630	115.4	271.8	N/A	192.7	150.1	180.8	866	562	376	306	32.0	7.2	21.8	1.9	1316.9	286.6	26.2
Nov-5	645	114.4	273.5	N/A	192.7	152.1	179.2	876	564	375	314	31.2	7.3	24.1	1.6	1349.8	325.8	30.1
Nov-5	700	115.5	272.2	N/A	193.0	148.9	177.8	856	558	363	311	30.5	6.9	22.2	-2.5	1291.2	286.0	28.7
Nov-5	715	115.0	271.6	N/A	193.7	150.4	180.4	856	567	380	309	30.1	7.2	20.7	2.4	1305.0	269.6	26.2
Nov-5	730	115.4	272.7	N/A	193.3	148.6	176.3	879	584	364	301	29.7	6.9	21.2	1.9	1323.3	280.3	28.9
Nov-5	745	116.4	273.4	N/A	193.7	149.9	178.1	864	578	380	308	30.4	7.3	20.6	3.7	1312.8	270.7	25.7
Nov-5	800	114.3	273.8	N/A	193.7	0.0	0.0	851	578	373	312	30.3	6.9	?	?	0.0	0.0	0.0
Nov-5	815	116.0	273.0	N/A	194.5	150.4	179.8	874	556	367	297	30.0	6.9	24.1	3.4	1332.4	320.5	32.7
Nov-5	830	115.8	274.7	N/A	195.9	150.9	181.0	879	583	380	311	29.9	7.2	20.5	1.8	1344.5	275.6	27.0
Nov-5	845	115.7	275.0	N/A	195.9	1.3	1.5	874	600	375	307	29.9	7.4	20.8	5.6	11.5	2.4	0.2
Nov-5	900	114.8	274.2	N/A	196.9	151.9	180.2	856	576	374	311	29.6	6.9	20.2	1.3	1317.3	266.5	27.6
Nov-5	915	114.9	273.7	N/A	196.9	150.6	180.6	877	586	373	297	29.4	7.2	19.9	4.6	1338.0	265.9	26.5
Nov-5	930	114.5	273.3	N/A	197.3	151.5	181.3	853	568	363	305	29.2	7.0	20.4	-0.7	1310.0	266.6	27.5
Nov-5	945	115.1	273.2	N/A	196.3	150.9	182.0	869	572	368	304	29.3	7.1	20.7	0.2	1328.5	274.6	27.8
Nov-5	1000	115.4	274.2	N/A	195.8	151.8	180.1	856	569	359	311	30.7	7.2	21.2	-2.6	1317.2	278.9	26.6
Nov-5	1015	114.5	273.0	N/A	196.2	151.6	180.1	855	570	373	299	29.5	7.1	20.9	5.0	1313.1	273.9	27.6
Nov-5	1030	114.8	273.3	N/A	195.6	151.8	179.8	858	569	372	296	30.0	7.3	21.5	5.9	1319.5	283.8	27.3
Nov-5	1045	114.8	273.4	N/A	196.9	152.2	181.5	860	549	369	297	29.8	7.1	23.9	4.1	1326.0	317.4	31.6
Nov-5	1100	115.9	272.9	N/A	200.9	150.7	179.9	859	605	360	297	30.4	7.3	15.9	1.5	1311.4	208.0	19.7
Nov-5	1115	114.8	273.3	N/A	200.4	153.6	180.6	852	590	367	297	28.7	7.1	18.5	5.1	1325.8	245.5	25.4
Nov-5	1130	115.2	271.9	N/A	197.9	153.6	181.9	866	581	356	296	33.7	7.6	20.5	1.5	13		

CZD LIME INJECTION DATA AUGUST 17, 10 NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-5	1245	115.5	272.2	N/A	199.7	150.0	177.5	914	804	352	291	27.9	8.2	21.8	2.1	1388.8	302.7	27.7
Nov-5	1300	116.7	271.4	N/A	199.0	149.8	178.2	891	598	357	292	28.4	8.0	20.1	2.6	1352.2	271.9	25.1
Nov-5	1315	114.9	273.6	N/A	199.6	151.0	177.7	869	592	360	290	28.3	8.0	19.9	5.3	1330.1	264.4	24.5
Nov-5	1330	116.8	271.6	N/A	199.1	150.5	178.5	896	598	356	293	27.9	8.1	20.8	2.6	1366.0	283.7	26.3
Nov-5	1345	116.2	271.4	N/A	198.8	151.6	181.5	860	573	362	302	28.3	8.2	20.2	0.2	1320.8	267.1	24.1
Nov-5	1400	114.2	271.5	N/A	197.0	149.9	178.3	847	571	361	295	29.6	8.0	19.9	2.8	1286.3	255.6	22.6
Nov-5	1415	116.5	269.4	N/A	197.3	149.6	177.8	870	545	370	297	27.3	8.0	25.7	4.6	1319.3	338.4	32.6
Nov-5	1430	116.3	271.3	N/A	199.0	151.2	181.5	867	573	370	299	28.6	8.1	20.7	2.9	1328.0	275.2	24.9
Nov-5	1445	114.7	271.1	N/A	197.2	146.7	184.8	870	568	371	295	26.6	8.0	17.8	0.4	1293.7	230.2	22.7
Nov-5	1500	114.8	269.3	N/A	199.0	149.6	180.4	864	586	371	300	27.1	8.2	18.2	2.7	1309.4	238.5	22.5
Nov-5	1515	115.0	270.2	N/A	193.7	148.4	183.5	879	545	362	290	29.0	7.7	23.4	1.1	1322.2	309.0	29.1
Nov-5	1530	114.4	270.9	N/A	192.2	150.8	181.4	855	579	360	290	31.5	8.2	18.6	2.9	1306.2	243.0	19.7
Nov-5	1545	115.9	271.1	N/A	191.0	149.8	180.7	876	575	357	287	32.6	7.7	20.8	3.0	1329.4	276.7	23.2
Nov-5	1600	113.9	273.2	N/A	191.7	151.7	182.9	845	562	358	293	31.6	8.1	19.9	1.4	1299.4	258.9	21.2
Nov-5	1615	116.5	271.8	N/A	190.5	149.3	180.0	894	564	371	299	32.0	7.7	23.9	3.0	1352.0	323.5	27.6
Nov-5	1630	114.5	271.8	N/A	190.0	149.8	183.7	877	563	366	296	34.8	7.9	21.4	1.0	1331.7	284.7	21.7
Nov-5	1645	116.6	270.7	N/A	190.1	149.5	180.7	891	589	372	300	31.1	8.0	20.0	2.5	1349.5	270.4	22.8
Nov-5	1700	113.0	271.8	N/A	189.7	152.0	182.9	858	542	365	291	33.3	8.1	24.0	3.9	1321.2	316.8	24.6
Nov-5	1715	115.7	269.8	N/A	189.8	149.6	180.9	874	549	369	296	31.3	8.0	24.0	2.9	1324.6	317.6	26.6
Nov-5	1730	114.1	272.3	N/A	191.1	151.4	182.3	861	556	367	299	31.8	7.9	22.3	1.8	1320.6	294.6	24.6
Nov-5	1745	115.7	269.2	N/A	190.2	149.8	180.0	875	568	375	300	31.0	8.1	22.0	3.7	1327.9	292.0	24.4
Nov-5	1800	115.3	269.8	N/A	191.3	151.0	181.6	868	570	374	304	31.3	7.9	21.1	2.2	1327.8	280.0	23.8
Nov-5	1815	114.9	270.3	N/A	191.0	150.3	183.2	884	567	379	304	31.8	8.2	21.9	2.3	1346.0	294.5	23.7
Nov-5	1830	115.0	271.2	N/A	191.0	151.1	182.3	869	552	371	297	31.5	7.9	23.5	3.5	1331.0	312.3	26.3
Nov-5	1845	114.6	271.1	N/A	190.5	151.7	183.2	872	556	367	302	34.5	8.1	22.9	0.6	1340.0	307.2	23.0
Nov-5	1900	113.7	271.1	N/A	191.1	151.1	182.5	866	560	365	301	31.1	8.2	22.0	0.4	1326.4	291.8	24.0
Nov-5	1915	115.1	271.3	N/A	190.1	148.4	176.7	886	581	361	299	31.9	8.2	22.0	1.4	1332.8	292.8	23.5
Nov-5	1930	115.5	272.8	N/A	189.4	148.1	179.4	896	580	369	299	33.2	8.2	21.6	1.9	1344.2	290.8	22.4
Nov-5	1945	114.9	271.4	N/A	188.6	147.1	179.8	871	574	372	298	32.5	7.9	19.4	2.1	1298.0	252.3	20.6
Nov-5	2000	115.8	270.7	N/A	187.7	147.6	181.7	872	576	370	298	34.1	8.1	18.7	0.8	1303.8	243.4	18.5
Nov-5	2015	113.9	272.2	N/A	189.8	148.3	181.6	879	575	374	296	32.0	7.9	19.9	3.1	1320.5	263.4	21.9
Nov-5	2030	114.9	272.4	N/A	187.4	146.1	181.0	879	568	363	293	32.7	7.8	19.9	0.2	1300.9	259.2	21.3
Nov-5	2045	115.1	272.6	N/A	188.0	146.3	180.2	879	572	366	291	33.2	8.2	19.9	2.1	1302.6	259.2	20.0
Nov-5	2100	115.4	271.7	N/A	188.2	145.8	179.7	879	572	366	290	32.3	8.1	19.8	2.2	1298.2	257.7	20.6
Nov-5	2115	115.3	274.2	N/A	190.4	151.0	186.0	879	580	366	281	33.4	7.8	18.7	5.5	1344.5	251.7	20.3
Nov-5	2130	116.1	280.0	N/A	191.3	150.7	185.8	879	532	376	283	35.2	7.9	25.4	7.4	1341.8	341.3	25.8
Nov-5	2145	124.6	280.4	N/A	193.4	152.8	188.0	896	573	376	294	34.6	8.4	21.4	3.9	1387.6	297.1	21.4
Nov-5	2200	137.8	277.9	N/A	195.9	160.4	197.9	900	598	356	294	34.4	8.4	18.0	1.8	1463.1	263.3	19.1
Nov-5	2215	143.6	278.3	N/A	196.9	169.1	208.7	915	587	360	291	36.7	8.0	20.8	0.0	1568.2	326.1	23.3
Nov-5	2230	145.1	279.1	N/A	198.8	169.9	203.7	914	619	360	293	35.6	8.1	18.9	2.3	1573.9	296.8	21.6
Nov-5	2245	144.4	279.0	N/A	198.8	170.9	207.8	909	591	360	292	36.1	8.4	20.0	1.3	1573.6	329.5	22.7
Nov-5	2300	138.7	279.1	N/A	199.0	165.7	201.1	909	591	360	292	34.7	7.8	21.1	1.5	1525.7	321.8	25.0
Nov-5	2315	142.8	278.0	N/A	199.8	166.4	205.1	909	626	360	305	33.7	8.0	15.0	4.6	1532.2	230.5	17.9
Nov-5	2330	145.4	279.2	N/A	200.7	171.3	209.6	909	608	360	289	35.7	7.8	18.2	1.7	1577.3	286.3	21.6
Nov-5	2345	144.0	279.7	N/A	199.8	168.8	200.5	909	608	360	297	36.0	7.9	20.5	2.0	1554.3	319.4	23.6
AVERAGES		117.7	273.0	N/A	195.7	148.5	178.9	866.7	576.1	368.0	301.0	30.7	7.6	20.0	1.5	1305.1	260.8	23.6
Nov-6	0	139.4	279.0	N/A	199.7	171.4	208.6	909	588	360	313	36.0	8.1	21.3	6.0	1578.2	335.7	24.1
Nov-6	15	146.7	277.9	N/A	200.9	177.6	213.7	844	585	340	311	36.3	8.2	16.6	10.0	1518.5	252.1	17.7
Nov-6	30	141.7	279.8	N/A	201.1	176.8	210.6	840	571	356	334	36.9	8.1	19.0	11.8	1504.4	286.4	20.1
Nov-6	45	145.4	279.2	N/A	201.2	177.5	210.9	856	601	342	315	36.3	8.0	16.6	9.2	1539.3	255.2	18.4
Nov-6	100	145.7	280.6	N/A	202.7	178.7	209.2	857	595	342	320	35.9	8.0	18.7	9.4	1552.4	290.4	21.2
Nov-6	115	139.7	279.2	N/A	201.2	172.1	206.8	882	591	353	326	35.2	8.3	19.4	11.0	1537.8	298.6	21.4
Nov-6	130	143.7	277.0	N/A	204.6	176.1	208.6	873	625	364	311	32.4	8.1	15.1	1.3	1557.5	235.7	18.8
Nov-6	145	143.3	277.9	N/A	203.0	178.3	210.7	888	579	365	314	36.2	8.1	23.0	1.7	1604.0	369.0	26.4
Nov-6	215	129.7	278.1	N/A	210.7	168.0	193.9	834	603	383	312	28.7	8.6	16.5	5.9	1418.8	234.3	19.8
Nov-6	230	137.7	275.7	N/A	206.9	169.6	198.7	876	643	362	306	29.9	8.4	14.0	0.9	1505.1	210.0	17.5
Nov-6	245	143.7	276.6	N/A	208.6	177.2	206.3	882	644	365	312	30.2	8.2	15.0	0.5	1583.3	237.7	20.1
Nov-6	300	143.3	278.0	N/A	208.3	178.6	208.1	874	622	359	310	31.6	8.7	17.1	0.9	1582.3	271.0	20.6
Nov-6	315	138.2	277.7	N/A	205.2	171.6	198.7	887	622	365	306	32.5	8.4	18.8	2.8	1542.0	280.0	22.2
Nov-6	330	138.1	277.5	N/A	204.4	173.8	204.1	884	613	367	304	33.1	8.0	18.6	2.7	1556.5	289.1	22.9
Nov-6	345	137.7	277.0	N/A	203.2	170.6	199.8	902	617	360	307	32.2	8.0	19.9	0.4	1559.6	310.8	25.3
Nov-6	400	142.2	278.1	N/A	203.3	174.6	204.3	858	609	353	303	33.7	8.1	16.9	0.3	1518.5	257.1	19.7
Nov-6	415	139.3	278.2	N/A	202.7	174.8	204.5	878	611	367	299	33.8	8.0	18.6	4.9	1554.8	289.0	22.4
Nov-6	430	139.0	277.0	N/A	202.5	174.4	203.7	898	617	374	302	32.8	8.1	19.8	5.7	1587.3	314.1	24.8
Nov-6	445	137.3	275.9	N/A	201.4	173.0	201.3	900	606	373	304	32.9	8.1	21.7	5.3	1578.1	342.3	26.9
Nov-6	500	142.8	276.0	N/A	201.4	175.4	207.6	906	609	364	305	34.0	8.4	20.4	0.8	1609.7	327.9	24.0
Nov-6	515	137.7	276.7	N/A	202.8	172.1	201.4	914	617	372	306	32.5	8.2	20.6	3.6	1593.4	333.3	26.2
Nov-6	530	140.9	276.4	N/A	203.7	172.2	201.9	910	612	371	300	31.6	7.9	21.2	5.2	1588.2	336.5	28.3
Nov-6	545	146.2	276.9	N/A	205.2	178.3	208.4	923	633	369	304	32.8	8.2	19.8	3.5	1668.0	330.8	25.8
Nov-6	600	142.7	277.9	N/A	207.6	177.6	203.5	907	651	373	310							

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Utilization %
Nov-6	715	145.8	276.7	N/A	206.7	179.8	205.2	907	833	373	310	30.8	8.3	20.4	5.3	1651.9	336.3	27.5
Nov-6	730	144.8	276.0	N/A	207.4	178.6	206.1	912	646	373	308	30.5	8.3	18.2	4.6	1650.0	300.4	24.8
Nov-6	745	146.3	276.1	N/A	207.6	180.4	207.5	912	625	374	310	31.4	7.9	21.1	4.7	1667.5	352.7	29.8
Nov-6	800	146.0	277.0	N/A	205.8	180.0	206.2	903	621	373	305	35.6	8.0	21.3	6.3	1647.4	350.2	25.8
Nov-6	815	144.1	277.3	N/A	205.0	179.9	210.6	902	599	377	309	33.9	7.9	22.3	4.2	1644.7	366.7	28.7
Nov-6	830	143.7	277.4	N/A	204.1	178.3	207.5	902	599	377	309	33.9	8.3	22.8	4.8	1630.0	370.9	27.6
Nov-6	845	145.3	277.1	N/A	203.1	180.5	207.4	902	599	377	309	34.4	8.0	23.7	6.0	1650.1	391.6	29.9
Nov-6	900	143.4	277.5	N/A	204.8	178.2	205.5	869	581	384	310	33.8	7.9	22.8	7.0	1568.8	358.3	28.2
Nov-6	915	144.8	278.4	N/A	205.1	182.0	208.4	847	574	378	305	34.0	7.9	22.4	7.8	1562.4	350.4	27.4
Nov-6	930	145.0	277.2	N/A	204.2	181.3	208.9	852	565	374	303	34.6	8.3	23.6	6.7	1565.8	369.9	27.0
Nov-6	945	143.1	277.6	N/A	203.2	179.6	207.6	838	550	369	301	35.6	8.1	24.2	5.6	1524.9	369.1	26.8
Nov-6	1000	116.0	277.2	N/A	201.9	161.6	184.3	815	548	373	291	30.9	8.0	23.3	10.9	1334.4	311.1	26.4
Nov-6	1015	112.9	274.3	N/A	196.4	152.1	175.7	839	583	327	250	31.5	8.3	19.7	11.5	1293.0	255.3	20.4
Nov-6	1030	112.2	269.7	N/A	197.7	153.4	177.7	812	540	317	260	30.9	8.1	23.0	5.0	1262.0	290.7	24.4
Nov-6	1045	112.5	267.3	N/A	192.8	156.1	179.4	813	545	311	247	30.4	8.0	23.0	8.7	1285.0	295.3	25.5
Nov-6	1100	111.9	267.2	N/A	193.2	158.0	178.7	813	559	311	252	29.8	8.2	22.3	8.4	1301.5	290.3	24.9
Nov-6	1115	111.8	267.5	N/A	193.0	157.9	179.1	811	547	311	257	29.9	8.0	23.5	6.4	1296.7	305.0	26.7
Nov-6	1130	112.9	267.2	N/A	192.4	157.2	177.5	802	552	310	253	29.7	8.1	22.3	8.0	1276.6	284.8	24.8
Nov-6	1145	111.9	266.2	N/A	190.8	156.1	176.3	813	536	311	249	31.4	7.9	25.5	9.7	1285.8	328.4	27.8
Nov-6	1200	119.2	268.4	N/A	194.5	167.0	188.1	810	564	309	249	29.4	8.1	21.5	9.0	1369.7	294.8	26.0
Nov-6	1215	126.5	273.0	N/A	195.1	169.8	189.9	812	574	359	292	32.3	7.9	20.9	9.0	1397.0	292.6	24.1
Nov-6	1230	138.5	273.8	N/A	196.8	175.6	201.5	839	577	372	294	34.2	7.9	21.1	9.5	1491.8	314.9	24.5
Nov-6	1245	144.5	275.9	N/A	200.3	183.4	209.4	837	599	376	306	34.2	8.0	18.3	7.2	1555.3	284.7	21.8
Nov-6	1300	145.7	278.9	N/A	201.6	183.5	206.7	843	581	375	311	35.7	8.1	22.3	6.6	1566.4	348.8	25.3
Nov-6	1315	145.3	279.2	N/A	202.4	184.3	207.7	842	582	367	305	35.3	8.1	22.0	6.3	1572.3	346.7	25.4
Nov-6	1330	145.3	279.7	N/A	202.9	183.8	207.0	843	586	365	306	35.4	7.9	21.7	5.6	1569.9	340.0	25.5
Nov-6	1345	146.0	278.3	N/A	202.7	182.9	210.7	845	592	369	308	35.0	8.0	19.3	4.0	1566.6	303.0	22.7
Nov-6	1400	145.2	277.2	N/A	203.2	182.6	207.8	846	590	367	301	34.8	8.0	20.6	6.7	1565.9	322.9	24.3
Nov-6	1415	145.0	276.8	N/A	201.8	182.4	210.5	848	603	360	298	34.6	8.0	17.9	4.5	1567.0	281.1	21.3
Nov-6	1430	144.5	277.0	N/A	205.1	181.9	205.6	857	624	367	300	31.7	8.1	17.7	7.7	1579.3	281.1	22.8
Nov-6	1445	144.6	277.6	N/A	207.1	182.7	210.2	853	621	363	298	32.3	8.0	16.2	5.6	1578.8	260.4	20.7
Nov-6	1500	145.7	277.8	N/A	207.0	182.4	206.5	852	622	366	304	32.4	8.2	17.3	6.1	1575.3	273.1	21.5
Nov-6	1515	140.5	277.0	N/A	205.9	177.7	206.0	869	617	369	300	33.0	7.9	17.7	5.8	1565.3	277.7	22.4
Nov-6	1530	139.9	277.1	N/A	202.2	176.6	203.8	857	585	374	304	36.5	9.2	21.2	6.4	1533.2	325.5	20.2
Nov-6	1545	142.4	276.4	N/A	205.6	178.1	205.8	856	611	368	300	31.7	9.0	17.6	5.7	1545.4	271.6	19.9
Nov-6	1600	142.8	276.9	N/A	205.2	179.4	205.3	855	607	366	313	32.7	9.1	18.8	2.2	1554.8	292.4	20.5
Nov-6	1615	144.2	276.2	N/A	205.6	183.2	209.0	865	602	375	306	32.8	8.9	20.6	7.1	1606.3	330.7	23.6
Nov-6	1630	144.8	277.3	N/A	205.8	183.7	208.6	865	600	372	298	32.9	8.8	21.3	8.9	1610.7	342.8	24.7
Nov-6	1645	145.7	277.1	N/A	205.7	182.6	206.7	870	606	375	297	33.5	8.9	21.1	10.4	1610.3	340.4	23.8
Nov-6	1700	145.1	276.9	N/A	205.2	183.5	206.3	858	599	373	303	33.8	9.0	21.5	8.6	1605.9	343.1	23.5
Nov-6	1715	145.5	277.3	N/A	205.6	182.5	206.4	866	603	374	311	33.0	9.0	21.3	5.8	1602.0	341.2	24.0
Nov-6	1730	144.9	277.5	N/A	205.9	183.3	209.3	864	597	374	310	33.3	9.0	21.0	5.5	1604.4	337.6	23.5
Nov-6	1745	145.6	276.8	N/A	206.4	183.3	208.7	861	596	373	305	33.3	9.0	21.2	6.9	1598.8	338.8	23.6
Nov-6	1800	145.0	277.1	N/A	205.6	184.0	208.7	868	599	374	308	33.4	9.1	21.7	6.6	1618.9	351.5	24.1
Nov-6	1815	145.1	277.2	N/A	205.5	183.9	207.3	853	589	368	306	33.4	9.0	22.2	6.2	1590.1	353.2	24.5
Nov-6	1830	144.5	276.9	N/A	204.6	183.2	206.3	862	576	367	305	34.0	8.8	24.8	6.5	1599.8	396.9	27.7
Nov-6	1845	144.9	276.9	N/A	205.2	185.2	209.5	849	580	374	306	33.6	9.3	22.7	7.5	1592.9	360.9	24.0
Nov-6	1900	145.8	277.7	N/A	206.0	186.8	209.2	849	574	371	303	33.9	8.9	24.4	8.6	1607.6	392.0	27.1
Nov-6	1915	144.3	277.0	N/A	205.8	185.3	208.0	846	571	371	303	33.3	9.0	24.3	8.4	1589.1	386.8	26.9
Nov-6	1930	145.2	276.6	N/A	206.2	186.0	209.1	853	566	367	301	33.3	8.9	25.4	7.6	1607.3	408.2	28.7
Nov-6	1945	145.7	277.2	N/A	206.6	186.5	209.5	850	572	371	305	33.3	9.2	24.4	7.5	1606.0	391.8	26.6
Nov-6	2000	145.5	276.1	N/A	205.8	183.6	206.5	851	577	368	306	32.7	9.2	23.8	6.6	1582.3	376.1	26.0
Nov-6	2015	145.5	276.0	N/A	205.0	184.4	207.4	847	580	372	303	35.2	9.1	23.0	8.2	1582.3	363.7	23.7
Nov-6	2030	142.8	276.4	N/A	205.2	183.7	206.0	855	562	369	303	35.2	9.1	26.4	7.8	1592.1	420.2	27.3
Nov-6	2045	145.7	276.9	N/A	206.9	184.6	207.0	855	571	369	303	31.7	9.3	25.2	8.1	1599.9	403.4	28.5
Nov-6	2100	143.9	276.5	N/A	207.1	181.3	203.9	855	573	369	303	31.2	9.1	24.6	7.8	1571.3	386.9	28.4
Nov-6	2115	144.7	276.6	N/A	208.1	184.0	205.6	855	572	369	302	31.1	8.9	25.3	8.7	1594.7	403.2	30.4
Nov-6	2130	144.0	276.1	N/A	208.7	184.3	205.3	869	582	383	305	31.1	8.9	25.3	11.4	1622.5	411.1	31.0
Nov-6	2145	144.5	276.4	N/A	208.1	182.1	205.4	867	594	381	307	36.1	9.1	23.0	9.5	1607.4	370.4	23.5
Nov-6	2200	144.3	276.6	N/A	204.4	186.2	207.8	860	596	381	307	36.4	9.2	22.7	10.1	1622.3	367.6	22.9
Nov-6	2215	142.7	276.4	N/A	202.1	182.7	204.5	864	593	379	309	35.1	9.0	23.2	8.7	1599.2	370.7	24.5
Nov-6	2230	138.3	274.9	N/A	200.4	179.6	201.0	864	591	379	310	34.7	9.4	23.5	8.4	1572.0	368.7	23.5
Nov-6	2245	137.5	275.5	N/A	199.4	176.1	199.3	878	599	378	305	34.5	9.1	22.8	8.6	1567.3	357.9	23.8
Nov-6	2300	139.2	275.8	N/A	200.1	180.6	204.0	878	599	378	305	34.0	8.7	23.0	8.8	1607.3	369.4	26.1
Nov-6	2315	143.2	274.9	N/A	199.7	180.4	203.2	878	608	378	305	34.4	8.9	22.0	9.0	1605.5	353.0	24.1
Nov-6	2330	138.8	275.1	N/A	198.7	177.4	198.7	878	587	378	311	34.6	8.9	25.1	7.8	1578.8	396.3	26.9
Nov-6	2345	138.2	275.5	N/A	199.4	176.4	195.6	878	595	378	314	34.1	9.3	24.8	7.7	1569.9	390.0	25.6
AVERAGES		139.9	276.2	N/A	203.3	177.2	201.2	865.3	595.2	364.5	301.2	33.1	8.4	21.1	5.2	1554.4	328.2	24.6
Nov-7	0	137.7	274.7	N/A	200.0	178.0	199.6	878	600	378	317	33.9	9.0	23.4	5.8	1584.2	371.0	25.4
Nov-7	15	144.7	274.9	N/A	201.7	184.9	208.3	828	628	378								

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-7	130	143.8	277.2	N/A	202.3	185.8	208.4	837	584	368	315	35.1	8.9	21.7	4.1	1574.7	341.8	22.8
Nov-7	145	139.4	275.1	N/A	199.4	177.8	197.6	840	580	363	310	34.5	9.2	23.2	5.1	1512.3	351.3	23.1
Nov-7	200	141.3	273.5	N/A	199.4	182.2	205.5	856	566	385	326	34.5	9.0	25.5	4.8	1580.9	403.5	27.1
Nov-7	215	145.0	274.4	N/A	201.7	187.9	208.1	856	585	391	330	34.2	9.1	24.3	6.5	1629.5	396.2	26.5
Nov-7	230	144.9	275.3	N/A	202.6	188.2	210.3	855	576	393	332	34.5	8.9	24.7	5.5	1630.1	402.8	27.4
Nov-7	245	143.1	275.1	N/A	201.0	185.1	208.6	846	556	382	328	35.9	9.2	25.9	5.7	1586.4	411.3	25.9
Nov-7	300	142.2	274.1	N/A	201.6	186.0	205.2	844	570	385	323	34.2	8.8	25.5	7.4	1590.4	406.3	28.2
Nov-7	315	142.2	275.4	N/A	202.6	185.4	204.8	839	578	386	323	33.0	9.2	24.0	7.5	1576.0	377.7	25.9
Nov-7	330	142.6	275.3	N/A	204.4	185.8	205.8	835	579	385	326	32.0	8.8	23.1	6.0	1571.0	363.7	27.6
Nov-7	345	141.9	274.0	N/A	203.3	182.6	204.2	844	574	380	327	33.0	9.2	23.9	3.6	1586.6	373.0	25.6
Nov-7	400	140.9	273.1	N/A	202.8	182.2	202.9	842	579	384	323	31.7	9.2	23.4	6.5	1554.4	384.1	26.0
Nov-7	415	138.1	272.0	N/A	201.6	177.4	196.6	856	564	382	324	31.7	9.1	27.1	5.8	1530.3	416.8	30.1
Nov-7	430	139.0	272.4	N/A	201.8	176.8	195.9	859	572	387	319	31.7	9.0	26.2	8.7	1538.6	403.2	29.5
Nov-7	445	137.8	274.2	N/A	202.6	179.8	200.4	858	578	382	321	31.8	8.9	25.0	6.4	1563.8	390.2	28.8
Nov-7	500	137.3	273.9	N/A	202.1	178.0	198.3	851	575	387	319	32.1	9.0	24.7	8.2	1534.6	379.3	27.4
Nov-7	515	137.4	271.9	N/A	201.6	173.7	191.0	858	575	389	322	31.3	9.4	26.3	9.0	1510.7	398.0	28.1
Nov-7	530	139.0	271.6	N/A	200.7	179.0	204.0	848	569	384	317	32.1	9.3	23.6	5.9	1538.7	362.6	25.3
Nov-7	545	139.6	272.0	N/A	202.9	180.9	201.1	859	591	385	317	31.1	9.3	23.6	8.4	1575.2	371.0	26.7
Nov-7	600	140.4	273.1	N/A	203.9	180.4	199.4	856	579	386	323	30.9	8.9	25.3	7.5	1564.4	395.7	30.0
Nov-7	615	143.5	273.1	N/A	205.9	184.9	205.8	859	588	382	323	30.3	9.0	23.8	6.0	1609.1	383.2	29.3
Nov-7	630	143.5	273.3	N/A	206.3	184.4	204.7	860	599	385	319	30.7	9.0	22.6	8.0	1606.8	363.4	27.4
Nov-7	645	144.1	274.2	N/A	206.9	185.9	206.4	860	594	383	320	31.2	9.0	23.3	7.1	1619.6	377.5	28.0
Nov-7	700	142.9	274.5	N/A	207.0	185.9	206.1	859	593	384	323	31.2	8.8	23.5	6.7	1617.8	379.7	28.9
Nov-7	715	145.6	274.6	N/A	206.4	185.6	208.5	863	598	385	317	32.1	8.9	22.1	7.4	1623.6	359.5	26.3
Nov-7	730	144.8	275.4	N/A	205.3	185.2	205.3	873	602	377	315	33.1	9.2	23.6	7.5	1637.9	385.9	26.4
Nov-7	745	144.8	275.3	N/A	204.9	185.9	204.7	857	580	384	321	33.1	9.1	25.5	7.9	1614.9	412.2	28.5
Nov-7	800	144.5	274.9	N/A	204.8	184.9	207.5	861	573	375	319	33.1	9.0	25.4	4.4	1613.7	410.1	28.7
Nov-7	815	145.5	276.6	N/A	205.3	185.6	204.6	845	591	377	314	33.7	9.0	22.9	8.4	1589.8	384.8	25.1
Nov-7	830	145.2	276.1	N/A	204.2	185.7	207.3	853	572	380	315	34.3	9.2	25.1	7.6	1604.7	403.3	26.6
Nov-7	845	145.9	276.8	N/A	204.0	187.3	204.9	844	574	376	309	34.1	9.2	25.6	10.0	1601.5	409.8	27.2
Nov-7	900	144.3	276.8	N/A	204.2	189.1	209.7	842	564	377	311	35.1	9.1	25.7	8.6	1612.3	415.0	27.1
Nov-7	915	145.1	275.8	N/A	201.5	188.2	207.9	834	541	376	306	36.5	9.0	28.4	10.1	1589.3	450.8	28.6
Nov-7	930	143.9	275.3	N/A	201.2	186.3	205.1	831	544	369	304	34.6	9.2	27.9	9.3	1568.6	438.1	28.7
Nov-7	945	142.1	275.5	N/A	201.6	185.7	202.6	842	562	365	307	34.2	9.4	27.2	8.0	1584.2	430.6	27.9
Nov-7	1000	143.3	274.0	N/A	200.7	183.0	202.3	837	577	357	297	34.4	9.1	23.9	7.9	1551.9	370.3	24.7
Nov-7	1015	143.0	274.4	N/A	200.8	185.1	205.5	841	560	366	308	34.1	9.3	26.1	6.6	1577.2	412.3	27.1
Nov-7	1030	138.2	274.4	N/A	200.2	179.8	199.6	849	562	382	303	33.4	8.8	26.5	11.9	1547.4	410.8	29.2
Nov-7	1045	137.8	273.9	N/A	199.2	181.2	200.9	850	563	380	315	33.8	9.0	26.7	8.1	1561.3	416.3	28.5
Nov-7	1100	137.4	273.3	N/A	198.8	176.5	194.9	846	562	376	307	33.2	8.9	26.7	9.8	1512.7	403.9	28.5
Nov-7	1115	138.0	272.2	N/A	198.4	176.8	195.0	846	562	365	308	33.5	9.0	26.7	6.9	1515.3	404.1	28.0
Nov-7	1130	142.3	274.0	N/A	201.3	184.8	204.5	851	572	377	308	32.4	8.8	25.7	9.8	1594.1	409.0	30.0
Nov-7	1145	141.7	273.7	N/A	200.7	181.2	201.4	847	571	371	303	34.0	9.0	25.2	9.4	1555.7	391.6	26.7
Nov-7	1200	139.1	273.8	N/A	200.5	178.3	198.5	862	558	362	307	32.8	8.9	28.0	5.5	1557.9	435.7	31.3
Nov-7	1215	137.8	274.1	N/A	200.8	177.9	201.0	854	580	369	301	34.9	9.2	23.2	7.8	1540.0	358.0	23.2
Nov-7	1230	137.4	274.2	N/A	200.0	173.8	192.0	856	562	364	300	32.8	9.2	27.5	9.0	1507.2	414.9	28.6
Nov-7	1245	138.0	274.9	N/A	200.6	175.1	194.4	870	570	378	305	32.5	9.0	27.3	10.3	1543.3	421.6	30.1
Nov-7	1300	139.1	273.8	N/A	203.2	177.6	198.8	856	579	364	296	31.9	9.1	24.3	8.9	1540.1	373.9	26.8
Nov-7	1315	146.4	275.6	N/A	203.9	186.9	206.3	848	568	367	296	33.5	9.0	26.1	11.1	1605.6	419.4	29.0
Nov-7	1330	144.0	276.4	N/A	203.5	187.0	207.3	838	579	362	299	34.4	8.8	23.4	8.4	1586.8	371.7	25.6
Nov-7	1345	140.1	276.5	N/A	204.6	179.4	200.4	843	575	362	300	31.8	9.2	23.8	7.4	1531.4	363.9	25.9
Nov-7	1400	139.8	275.3	N/A	203.4	177.5	198.6	846	568	386	315	34.7	8.9	24.9	8.6	1521.3	379.4	25.6
Nov-7	1415	140.5	274.8	N/A	203.1	180.4	199.2	852	564	380	312	32.7	9.1	26.9	9.4	1558.0	419.7	26.4
Nov-7	1430	138.3	274.7	N/A	203.8	178.3	198.1	851	577	387	317	31.3	9.0	24.7	9.1	1537.2	380.1	28.1
Nov-7	1445	139.4	274.5	N/A	204.3	178.6	198.4	856	585	381	320	31.2	9.2	24.1	6.6	1549.7	374.0	27.1
Nov-7	1500	137.9	273.6	N/A	203.7	176.3	196.6	844	581	385	310	30.8	9.3	23.2	10.0	1507.4	349.3	25.4
Nov-7	1515	137.9	273.3	N/A	204.3	176.8	196.1	855	578	380	309	30.7	8.9	25.0	9.8	1531.4	383.0	29.3
Nov-7	1530	137.7	273.4	N/A	203.1	176.3	197.6	838	577	371	311	32.1	9.0	22.8	5.9	1496.9	341.7	24.7
Nov-7	1545	137.3	273.4	N/A	202.0	175.8	197.8	862	570	373	306	32.1	9.0	25.5	7.5	1534.4	392.0	28.3
Nov-7	1600	137.3	274.6	N/A	202.2	173.7	195.2	857	579	369	307	32.6	9.2	24.2	6.5	1509.0	364.8	25.3
Nov-7	1615	140.5	274.6	N/A	201.9	177.5	199.9	867	573	371	311	31.7	9.2	25.6	5.6	1559.0	399.5	28.5
Nov-7	1630	142.4	274.1	N/A	201.1	180.1	199.6	866	576	370	311	33.1	8.9	26.3	6.8	1579.9	415.0	29.4
Nov-7	1645	138.2	273.6	N/A	199.2	177.6	200.1	866	547	373	309	35.6	8.8	28.9	6.5	1559.0	450.0	30.0
Nov-7	1700	139.4	273.4	N/A	200.8	180.9	202.6	870	585	369	302	34.6	8.8	24.7	8.2	1595.3	394.7	27.1
Nov-7	1715	146.1	274.0	N/A	203.6	185.0	206.6	864	583	367	299	32.0	9.1	24.6	8.9	1619.3	398.1	28.5
Nov-7	1730	145.2	275.9	N/A	205.2	187.3	206.6	855	591	387	313	33.1	8.9	23.7	10.7	1622.4	384.4	27.2
Nov-7	1745	141.6	274.7	N/A	203.5	179.6	200.3	850	579	365	299	32.9	8.8	24.0	8.8	1546.6	371.5	26.8
Nov-7	1800	138.1	273.8	N/A	200.4	175.5	195.1	855	567	367	302	33.7	9.0	26.3	8.4	1521.0	400.2	27.5
Nov-7	1815	140.3	273.8	N/A	200.4	179.3	203.1	865	572	363	300	33.5	8.9	25.1	6.5	1572.0	394.9	27.6
Nov-7	1830	142.2	274.7	N/A	200.3	180.5	204.1	862	568	367	302	34.2	9.1	25.5	7.2	1576.3	401.7	26.9
Nov-7	1845	142.4	273.8	N/A	202.2

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CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-7	2000	142.5	272.6	N/A	202.6	179.8	201.3	864	586	372	303	32.0	8.8	24.0	8.8	1573.8	377.8	28.0
Nov-7	2015	141.8	274.2	N/A	203.8	180.3	206.2	849	586	376	309	32.3	9.1	21.1	5.9	1551.5	327.4	23.2
Nov-7	2030	139.2	273.3	N/A	202.1	175.7	196.9	865	573	370	311	32.2	9.2	25.8	5.9	1539.7	397.6	28.0
Nov-7	2045	143.1	273.5	N/A	203.8	186.4	208.7	852	587	373	307	32.9	9.1	22.8	7.7	1609.8	367.8	25.6
Nov-7	2100	145.9	274.2	N/A	204.0	184.4	208.1	852	584	373	309	32.8	8.8	22.6	6.5	1592.6	360.4	26.1
Nov-7	2115	146.1	274.6	N/A	203.8	183.6	206.0	852	574	373	304	33.4	9.0	24.4	8.4	1585.7	387.6	26.9
Nov-7	2130	143.0	274.2	N/A	202.8	178.7	201.1	882	583	380	303	32.8	9.0	25.6	10.3	1597.7	409.0	28.9
Nov-7	2145	142.3	273.8	N/A	203.0	179.5	204.1	873	578	375	304	32.6	9.0	24.8	7.9	1588.4	393.2	27.9
Nov-7	2200	138.1	272.7	N/A	201.2	175.3	196.1	859	570	374	304	32.3	9.4	25.8	9.0	1525.5	394.0	27.0
Nov-7	2215	145.2	273.3	N/A	203.1	183.5	207.6	860	584	373	309	32.6	9.0	23.1	6.4	1598.7	369.5	26.3
Nov-7	2230	145.8	274.2	N/A	202.6	185.7	210.5	854	580	377	309	34.8	8.8	23.1	7.1	1607.6	370.8	25.3
Nov-7	2245	143.8	274.7	N/A	203.2	182.9	206.0	845	584	379	308	33.1	9.1	22.1	8.6	1565.7	346.0	23.9
Nov-7	2300	144.9	274.2	N/A	203.6	184.3	207.6	845	584	379	308	34.2	9.1	22.1	8.6	1577.7	348.5	23.3
Nov-7	2315	144.8	275.0	N/A	203.4	185.5	206.5	845	586	379	308	33.9	9.0	22.8	9.6	1588.0	362.1	24.8
Nov-7	2330	142.4	274.1	N/A	204.3	182.6	205.0	845	581	379	317	31.9	9.0	22.7	6.1	1563.1	355.5	25.8
Nov-7	2345	141.3	274.3	N/A	204.3	180.6	202.4	845	583	379	320	32.0	9.2	22.6	5.4	1546.0	349.6	24.7
AVERAGES		141.7	274.4	N/A	202.6	181.8	202.7	852.3	577.3	375.2	312.2	33.1	9.0	24.4	7.2	1569.4	383.5	26.8
Nov-8	0	140.0	274.0	N/A	204.6	180.2	201.5	845	571	379	311	31.4	8.8	24.5	8.2	1542.6	377.9	28.6
Nov-8	15	142.2	273.7	N/A	203.2	181.7	204.1	845	583	379	312	33.1	8.8	22.5	7.6	1555.4	350.0	25.1
Nov-8	30	144.8	274.2	N/A	203.9	184.9	207.1	845	569	344	314	33.0	9.1	24.6	-2.2	1582.8	388.9	27.0
Nov-8	45	144.5	275.2	N/A	204.8	186.8	207.6	845	594	358	316	33.5	9.0	21.8	1.8	1599.1	348.8	24.1
Nov-8	100	144.4	275.0	N/A	204.6	186.5	207.8	845	578	361	331	32.8	9.2	23.8	-2.1	1596.5	379.6	26.2
Nov-8	115	144.9	275.5	N/A	205.8	187.4	207.8	845	584	366	324	32.6	9.1	23.3	1.9	1604.2	373.8	26.3
Nov-8	130	143.4	274.3	N/A	205.6	185.4	207.2	815	590	370	325	31.9	8.8	19.1	1.8	1530.9	292.5	21.8
Nov-8	145	141.0	273.4	N/A	204.8	181.2	202.5	816	589	364	336	31.1	9.2	19.3	-3.1	1497.2	288.9	21.0
Nov-8	200	140.4	270.9	N/A	203.5	180.0	200.1	826	564	362	329	31.3	8.9	24.0	-1.0	1505.5	362.1	27.1
Nov-8	215	140.5	270.6	N/A	202.2	180.0	206.0	837	602	389	327	33.9	9.2	17.6	3.6	1525.6	268.2	17.9
Nov-8	230	140.4	273.4	N/A	205.2	180.9	206.6	837	599	379	333	30.2	8.9	18.3	-0.3	1534.1	280.5	21.8
Nov-8	245	140.7	273.2	N/A	205.9	178.2	200.0	849	604	377	320	29.5	8.9	20.2	4.7	1532.7	309.0	24.6
Nov-8	300	138.3	272.7	N/A	205.6	178.1	200.8	844	598	380	324	30.1	9.2	20.2	4.0	1523.7	307.3	23.1
Nov-8	315	138.1	273.1	N/A	204.7	178.7	200.8	843	592	384	324	31.2	9.2	21.1	5.2	1526.3	322.1	23.4
Nov-8	330	136.8	273.9	N/A	204.8	177.5	198.5	844	590	386	321	30.7	8.8	21.8	7.1	1518.6	331.2	25.6
Nov-8	345	140.8	272.4	N/A	204.9	181.2	202.1	849	602	389	329	30.9	9.3	20.9	5.6	1559.4	325.9	23.6
Nov-8	400	140.1	272.0	N/A	205.2	179.2	202.2	861	602	399	330	31.0	9.3	21.0	6.6	1563.1	329.0	23.8
Nov-8	415	140.1	272.7	N/A	204.1	182.3	204.2	868	582	395	325	31.8	9.1	24.9	7.7	1603.2	399.9	28.8
Nov-8	430	142.0	273.8	N/A	205.0	181.6	202.6	870	606	390	327	31.4	8.9	22.3	6.6	1600.6	356.8	26.6
Nov-8	445	141.1	273.2	N/A	202.7	180.4	203.2	873	584	395	321	34.2	8.8	24.6	8.4	1595.5	392.3	27.2
Nov-8	500	143.2	273.5	N/A	204.8	185.6	207.7	871	594	390	327	31.7	9.3	23.6	6.0	1637.7	386.9	27.3
Nov-8	515	143.3	273.7	N/A	203.4	184.8	205.0	880	599	390	324	33.3	8.9	24.4	7.7	1647.5	402.5	28.3
Nov-8	530	142.1	273.8	N/A	203.1	185.6	204.4	874	592	389	325	33.1	9.1	25.4	7.8	1643.4	417.6	28.9
Nov-8	545	141.4	273.5	N/A	202.8	183.8	201.5	882	599	382	320	32.3	8.8	25.6	8.2	1643.2	420.5	30.9
Nov-8	600	141.2	272.5	N/A	202.5	181.5	202.0	885	589	390	317	32.2	9.1	25.9	9.6	1628.2	421.9	30.0
Nov-8	615	141.8	273.5	N/A	203.3	181.7	202.1	889	601	385	314	32.2	9.3	24.8	9.3	1637.4	405.9	28.2
Nov-8	630	137.8	271.8	N/A	200.1	179.9	199.1	901	589	397	324	33.2	9.2	27.7	9.6	1642.8	454.9	31.0
Nov-8	645	136.8	271.0	N/A	199.1	179.3	200.9	890	580	397	326	35.7	9.0	26.9	7.9	1616.6	435.2	28.3
Nov-8	700	136.7	273.0	N/A	199.6	176.7	194.9	895	580	394	327	32.1	8.8	28.5	8.5	1602.0	455.8	33.7
Nov-8	715	140.8	272.3	N/A	201.8	181.6	202.4	890	595	389	313	31.6	9.0	25.5	10.4	1638.3	417.3	30.6
Nov-8	730	146.5	272.9	N/A	203.5	186.5	207.0	887	601	387	319	32.4	9.0	24.8	8.5	1676.8	416.6	29.8
Nov-8	745	145.7	274.2	N/A	204.4	188.8	206.9	881	595	391	319	32.8	8.9	26.0	10.6	1686.0	439.0	31.4
Nov-8	800	145.7	274.7	N/A	204.8	188.7	208.3	883	596	389	316	32.9	9.0	25.5	10.2	1689.0	430.3	30.3
Nov-8	815	142.8	273.4	N/A	204.4	184.6	205.7	872	593	389	319	35.5	9.2	24.2	8.6	1630.8	394.0	25.1
Nov-8	830	143.0	273.8	N/A	202.3	183.3	202.7	893	602	391	307	33.3	8.8	25.4	13.0	1659.0	421.8	30.1
Nov-8	845	144.8	275.2	N/A	201.6	183.8	205.8	888	598	379	315	34.6	9.1	24.6	6.9	1654.4	406.7	26.9
Nov-8	900	143.4	275.9	N/A	200.9	184.0	202.8	888	582	385	310	34.7	9.1	27.8	11.2	1655.3	459.6	30.3
Nov-8	915	139.4	276.0	N/A	200.8	179.8	199.2	873	578	371	310	34.6	9.0	26.7	7.4	1591.1	425.5	28.5
Nov-8	930	144.1	275.1	N/A	200.8	181.3	203.0	887	576	373	300	34.0	8.9	27.3	9.8	1629.2	445.5	30.7
Nov-8	945	145.8	274.5	N/A	201.2	183.5	204.0	875	585	378	305	34.5	8.8	25.7	10.2	1626.6	417.7	28.7
Nov-8	1000	139.7	273.6	N/A	199.6	176.5	195.1	883	573	369	300	33.1	8.9	28.3	10.0	1578.9	447.2	31.7
Nov-8	1015	139.2	272.6	N/A	199.4	178.2	195.3	868	590	362	300	33.4	9.3	25.5	9.2	1567.9	399.6	26.8
Nov-8	1030	139.9	272.3	N/A	199.1	178.5	200.5	888	591	369	300	33.5	8.9	25.2	8.7	1605.8	405.4	28.4
Nov-8	1045	137.9	271.0	N/A	196.2	175.7	191.6	893	565	367	296	33.2	9.0	31.0	12.1	1590.2	493.4	34.4
Nov-8	1100	138.4	271.3	N/A	198.5	175.4	192.6	892	589	364	300	34.5	8.9	27.5	9.6	1585.0	435.8	29.6
Nov-8	1115	137.7	271.8	N/A	197.3	174.0	190.8	890	580	366	298	33.3	9.0	28.5	10.7	1569.7	447.7	31.2
Nov-8	1130	140.4	271.5	N/A	199.4	173.7	192.3	895	580	365	300	31.8	9.1	28.3	9.0	1574.8	444.9	32.0
Nov-8	1145	146.8	273.3	N/A	201.2	185.5	203.0	898	588	380	309	33.5	9.2	28.3	11.1	1687.4	478.2	32.3
Nov-8	1200	146.2	273.3	N/A	201.4	182.5	202.2	892	589	377	298	32.8	9.2	26.9	12.4	1650.1	443.7	30.6
Nov-8	1215	146.3	274.0	N/A	202.7	183.7	203.7	897	599	368	305	32.4	8.9	25.9	8.0	1669.2	432.1	31.3
Nov-8	1230	145.1	273.6	N/A	202.0	181.8	203.6	893	599	376	307	33.0	8.7	24.8	8.4	1644.7	408.2	29.7
Nov-8	1245	143.4	272.6	N/A	201.1	180.1	197.9	893	594	370	303	32.1	8.1	26.9	10.0	1629.3	438.5	35.4
Nov-8	1300	143.5	271.8	N/A														

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO ₂ Inlet ppm	SO ₂ Outlet ppm	NO _x Inlet ppm	NO _x Outlet ppm	Lime Flow gpm	Lime Conc %	SO ₂ Removal %	NO _x Removal %	SO ₂ Inlet Lb/Hr	SO ₂ Removed Lb/Hr	Lime Utilization %
Nov-8	1415	146.6	275.9	N/A	201.8	184.6	205.9	874	567	395	316	35.5	8.8	27.7	10.7	1635.4	453.6	30.3
Nov-8	1430	144.4	276.8	N/A	202.3	184.1	203.8	862	571	377	316	34.8	9.6	26.7	7.2	1608.6	429.6	26.7
Nov-8	1445	144.6	276.1	N/A	202.4	180.5	198.1	866	578	366	306	34.2	9.2	26.8	8.1	1584.5	425.4	28.2
Nov-8	1500	143.1	275.0	N/A	201.4	176.7	195.9	876	580	370	295	33.2	9.2	26.6	11.8	1568.1	417.1	28.4
Nov-8	1515	143.2	274.4	N/A	200.9	177.5	197.5	882	576	363	302	33.5	9.1	27.3	7.4	1586.0	433.4	29.6
Nov-8	1530	143.3	276.0	N/A	200.9	177.1	195.8	875	581	365	301	33.7	8.7	26.6	8.8	1570.8	417.4	29.7
Nov-8	1545	142.9	277.2	N/A	201.1	178.0	197.4	889	593	370	296	34.4	9.3	26.0	11.3	1603.1	417.3	27.2
Nov-8	1600	141.6	278.7	N/A	201.4	176.2	196.9	887	587	369	297	34.2	8.8	26.0	10.1	1583.3	411.5	28.5
Nov-8	1615	137.5	278.8	N/A	202.0	174.3	192.2	872	593	365	299	34.4	8.7	25.0	9.9	1539.8	384.2	26.8
Nov-8	1630	138.8	278.4	N/A	202.2	174.8	194.2	872	565	377	296	33.7	9.2	28.0	12.8	1544.2	431.7	29.0
Nov-8	1645	141.9	276.4	N/A	203.3	177.0	198.1	877	581	362	300	33.1	9.0	25.9	7.3	1572.6	406.6	28.5
Nov-8	1700	142.3	276.5	N/A	203.6	179.1	198.7	872	572	370	296	33.2	9.1	27.3	11.4	1582.2	431.6	29.8
Nov-8	1715	142.8	275.2	N/A	203.1	177.9	199.2	868	572	367	298	33.0	9.1	26.3	9.0	1565.3	411.8	28.6
Nov-8	1730	141.6	275.1	N/A	201.9	176.4	197.9	876	578	363	296	33.6	9.4	26.1	8.5	1566.4	408.4	26.9
Nov-8	1745	142.8	274.6	N/A	201.0	177.8	198.1	870	572	371	299	34.1	8.8	26.7	10.1	1567.1	419.0	29.2
Nov-8	1800	146.4	274.4	N/A	202.0	183.0	202.4	874	572	371	302	33.6	9.0	27.7	10.0	1621.3	449.3	31.0
Nov-8	1815	147.1	274.8	N/A	201.6	181.2	200.7	854	564	367	301	34.5	8.8	26.9	9.3	1568.6	421.7	29.0
Nov-8	1830	146.2	274.8	N/A	203.4	181.1	203.7	856	561	369	298	32.9	9.0	26.3	9.3	1570.5	413.7	29.1
Nov-8	1845	146.3	274.7	N/A	200.5	182.8	204.5	848	550	368	301	35.8	9.0	27.5	8.4	1570.4	431.9	28.0
Nov-8	1900	145.5	274.5	N/A	200.9	180.7	201.0	843	566	369	300	33.9	8.7	25.4	9.6	1543.4	381.7	27.8
Nov-8	1915	146.1	274.5	N/A	202.2	181.8	201.2	844	565	365	302	33.5	9.1	26.0	8.5	1555.4	404.6	27.7
Nov-8	1930	143.8	274.3	N/A	201.4	181.1	201.5	840	554	366	300	34.2	8.9	26.7	8.9	1541.3	411.3	28.2
Nov-8	1945	145.2	273.8	N/A	201.6	182.2	201.4	849	552	369	299	33.8	8.6	28.2	10.4	1568.0	441.6	31.8
Nov-8	2000	146.4	273.0	N/A	201.6	183.7	202.7	844	571	394	311	34.0	8.9	25.3	12.8	1570.0	397.3	27.4
Nov-8	2015	145.8	273.0	N/A	199.0	185.4	203.6	853	564	378	311	37.6	8.9	27.5	9.6	1603.1	440.7	27.5
Nov-8	2030	146.1	273.2	N/A	200.6	185.1	204.5	860	554	375	305	34.2	8.9	28.9	10.1	1613.6	465.7	31.9
Nov-8	2045	142.2	272.5	N/A	201.1	180.8	199.4	849	564	374	305	32.9	9.4	26.8	10.2	1556.0	416.5	28.0
Nov-8	2100	143.0	271.2	N/A	199.4	179.1	196.9	849	563	374	304	33.3	9.0	27.1	10.6	1541.3	418.2	29.1
Nov-8	2115	143.9	271.0	N/A	200.5	179.1	198.3	849	580	374	302	32.1	9.3	24.3	10.6	1541.3	375.2	26.2
Nov-8	2130	142.9	271.4	N/A	199.0	184.4	204.5	889	577	381	300	35.4	9.1	28.1	12.7	1661.7	466.2	30.2
Nov-8	2145	143.7	271.0	N/A	199.1	182.5	200.3	885	581	375	302	34.1	8.8	28.0	11.7	1636.2	457.4	31.8
Nov-8	2200	146.1	271.1	N/A	200.0	183.8	199.4	875	576	377	302	32.9	9.0	28.6	13.2	1630.2	466.5	32.9
Nov-8	2215	146.1	270.8	N/A	201.3	185.1	203.5	868	584	371	305	32.8	9.1	26.0	9.8	1628.6	423.7	29.6
Nov-8	2230	146.4	269.4	N/A	200.4	184.7	199.6	873	583	372	304	33.3	9.1	27.9	11.8	1634.5	455.6	31.3
Nov-8	2245	145.5	270.1	N/A	203.6	183.1	199.1	881	591	372	302	29.1	9.3	27.1	11.6	1635.1	443.1	34.1
Nov-8	2300	145.4	269.6	N/A	205.3	181.5	199.6	881	591	372	302	29.8	9.2	26.3	10.6	1620.8	425.8	32.4
Nov-8	2315	134.3	268.8	N/A	203.0	173.3	188.5	881	591	372	302	30.1	9.0	27.1	11.6	1547.6	419.1	32.3
Nov-8	2330	116.7	271.9	N/A	200.4	158.6	169.1	881	597	372	308	30.1	9.3	27.8	11.8	1416.3	393.7	29.3
Nov-8	2345	105.9	274.8	N/A	198.6	153.2	162.5	727	533	321	316	28.9	8.8	22.3	-4.4	1128.8	251.2	20.6
AVERAGES		142.0	273.6	N/A	202.0	180.4	200.0	869.2	583.3	374.8	309.7	32.9	8.9	25.5	8.3	1588.6	406.2	29.0
Nov-9	0	106.9	275.2	N/A	198.7	152.6	162.7	744	526	328	313	28.6	8.8	24.6	-1.7	1150.6	283.4	23.5
Nov-9	15	107.3	273.2	N/A	198.1	154.3	162.9	771	524	346	317	28.1	8.9	28.3	3.0	1205.5	341.3	28.5
Nov-9	30	106.8	275.4	N/A	198.7	157.0	166.7	780	531	387	332	29.5	8.9	27.8	8.9	1240.9	344.9	27.4
Nov-9	45	110.2	277.8	N/A	197.7	152.9	161.4	880	528	282	280	29.4	9.0	36.7	-4.8	1363.1	500.3	39.4
Nov-9	100	114.6	269.9	N/A	197.1	156.6	168.3	798	561	308	272	28.3	8.9	24.4	5.2	1266.2	309.5	25.6
Nov-9	115	113.9	266.1	N/A	196.6	155.4	167.1	862	568	290	265	26.9	9.2	29.1	2.0	1357.1	395.4	33.3
Nov-9	130	111.8	264.4	N/A	195.4	154.1	165.6	863	573	313	267	26.9	9.0	28.7	8.4	1347.3	386.7	33.3
Nov-9	145	112.0	265.3	N/A	195.6	154.4	166.3	856	582	306	267	27.1	9.4	26.7	6.0	1338.9	357.6	29.2
Nov-9	200	106.9	265.8	N/A	195.1	150.0	160.9	871	590	305	267	26.6	9.0	27.3	5.8	1323.6	361.1	31.5
Nov-9	215	107.5	265.7	N/A	195.4	151.5	164.1	855	573	326	272	27.1	8.8	27.5	9.4	1313.0	361.2	31.6
Nov-9	230	108.8	265.5	N/A	195.4	152.4	161.9	870	558	325	271	25.7	9.0	31.9	11.5	1343.2	427.9	38.6
Nov-9	245	108.6	266.7	N/A	193.6	151.8	160.5	867	551	319	267	27.5	8.9	32.8	11.4	1333.3	437.3	37.3
Nov-9	300	107.9	268.8	N/A	196.9	152.8	160.9	865	572	324	272	26.2	9.3	30.4	11.5	1339.0	407.3	34.8
Nov-9	315	108.2	268.8	N/A	197.5	150.9	161.2	850	576	329	272	26.2	9.0	27.6	11.8	1300.2	359.4	31.8
Nov-9	330	108.9	267.4	N/A	197.3	150.1	160.5	866	586	315	273	26.6	9.2	27.7	7.3	1317.6	364.8	31.1
Nov-9	345	108.4	268.1	N/A	196.2	149.9	159.1	860	581	325	274	26.9	9.3	28.3	10.4	1306.0	369.6	30.8
Nov-9	400	109.0	268.5	N/A	196.2	149.6	160.7	872	580	328	273	27.2	9.1	28.5	10.6	1321.6	376.6	31.7
Nov-9	415	108.8	267.8	N/A	196.2	149.3	160.9	877	570	308	274	26.6	9.2	30.0	4.2	1327.2	398.0	33.9
Nov-9	430	109.3	268.3	N/A	196.2	148.8	160.7	884	588	327	273	26.6	8.9	28.2	9.8	1332.6	375.4	33.1
Nov-9	445	109.7	268.7	N/A	196.4	148.3	158.7	868	575	322	272	26.8	9.1	29.1	9.7	1304.8	380.3	32.5
Nov-9	500	109.3	268.8	N/A	196.4	148.2	161.2	872	566	333	273	27.0	8.9	29.4	10.6	1309.2	384.8	33.4
Nov-9	515	109.7	269.6	N/A	196.5	148.2	160.3	863	572	329	275	26.8	9.0	28.3	9.6	1296.4	367.4	31.8
Nov-9	530	109.8	268.4	N/A	196.9	146.3	158.6	874	580	326	273	26.7	8.9	28.1	9.2	1295.4	364.2	32.0
Nov-9	545	108.7	268.8	N/A	195.6	148.5	160.9	861	561	329	274	28.0	9.2	29.5	9.6	1295.3	381.6	30.9
Nov-9	600	110.4	268.5	N/A	195.0	147.8	160.3	869	562	331	277	28.0	9.4	30.0	9.3	1301.9	390.0	30.8
Nov-9	615	109.9	269.0	N/A	194.3	147.4	160.7	861	561	337	275	28.4	8.8	29.1	11.0	1286.5	373.8	31.2
Nov-9	630	110.6	268.7	N/A	193.8	147.0	160.7	873	552	331	276	28.1	8.9	31.0	8.8	1300.8	402.9	33.6
Nov-9	645	110.1	268.0	N/A	193.4	147.2	160.7	881	539	330	275	28.8	9.3	33.3	9.1	1314.5	437.8	34.0
Nov-9	700	110.9	268.9	N/A	192.6	146.6	160.6	870	552	332	272	28.8	8.9	30.6	10.2	1292.		

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load	Duct Inlet Temp °F	Avg "C" Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-9	830	109.4	267.1	N/A	190.9	152.4	161.9	837	497	336	272	30.3	8.9	36.9	13.8	1291.6	477.0	36.9
Nov-9	845	109.4	267.1	N/A	190.9	152.4	161.9	837	497	336	272	30.3	8.9	36.9	13.8	1291.6	477.0	36.9
Nov-9	900	109.4	267.1	N/A	190.9	152.4	161.9	837	497	336	272	30.3	8.9	36.9	13.8	1291.6	477.0	36.9
AVERAGES		109.6	268.5	N/A	195.0	150.9	161.8	852.0	551.1	326.2	276.5	27.9	9.0	30.6	9.0	1301.9	398.3	32.9
Nov-12	1130	116.8	286.7	N/A	200.2	159.7	181.9	755	531	330	274	37.1	0.0	20.0	5.5	1221.8	244.1	0.0
Nov-12	1145	118.4	286.2	N/A	199.0	160.1	182.8	739	426	323	267	37.3	0.0	34.2	5.7	1198.3	409.6	0.0
Nov-12	1200	122.3	284.8	N/A	198.7	165.0	187.3	728	438	321	268	37.5	0.0	31.7	5.3	1216.5	385.9	0.0
Nov-12	1215	121.1	286.5	N/A	198.8	161.3	183.5	762	459	326	271	36.9	0.0	31.5	5.5	1244.7	391.8	0.0
Nov-12	1230	122.1	286.5	N/A	199.1	161.7	182.8	742	447	325	269	36.9	0.0	31.8	6.4	1215.2	386.9	0.0
Nov-12	1245	121.2	287.1	N/A	199.5	162.0	183.4	758	451	324	271	37.2	0.0	32.7	5.3	1244.3	406.8	0.0
Nov-12	1300	121.7	286.7	N/A	199.4	161.1	181.1	742	447	329	273	37.0	18.3	32.3	6.7	1211.5	391.8	11.4
Nov-12	1315	122.4	287.5	N/A	199.4	158.7	181.6	762	445	332	274	37.0	18.0	33.2	5.5	1225.4	407.2	12.1
Nov-12	1330	120.1	287.7	N/A	199.8	158.4	181.9	754	441	328	271	36.9	17.7	32.8	5.2	1209.5	396.1	12.0
Nov-12	1345	120.3	288.2	N/A	200.8	160.7	183.0	753	427	333	277	36.8	16.5	35.4	5.3	1225.4	434.0	14.2
Nov-12	1400	121.6	285.9	N/A	199.9	160.0	181.8	743	424	330	269	36.8	14.6	35.1	7.5	1204.0	422.4	15.9
Nov-12	1415	120.6	287.0	N/A	199.5	156.2	178.3	786	470	325	265	36.7	12.9	31.8	7.2	1243.3	394.8	17.0
Nov-12	1430	119.0	286.4	N/A	199.2	158.2	179.0	719	427	300	263	36.5	12.1	32.7	1.1	1152.0	377.0	17.5
Nov-12	1445	121.8	287.0	N/A	200.8	163.6	184.5	716	422	314	288	36.8	11.2	33.5	-3.2	1187.2	397.7	18.9
Nov-12	1500	119.8	285.7	N/A	198.4	161.8	183.4	717	407	303	265	38.5	10.1	35.6	0.8	1175.7	418.9	22.3
Nov-12	1515	121.3	285.1	N/A	198.7	163.1	184.2	703	400	293	270	37.5	9.7	35.7	-4.1	1162.1	415.0	23.7
Nov-12	1530	120.4	284.7	N/A	197.3	164.1	185.8	703	377	306	267	37.7	10.0	39.3	1.4	1169.2	459.8	25.3
Nov-12	1545	122.8	289.2	N/A	200.3	168.2	191.9	805	450	314	286	38.2	10.1	36.2	-4.0	1371.0	496.7	26.7
Nov-12	1600	137.8	291.9	N/A	204.2	179.3	203.0	732	454	342	291	39.9	10.2	29.8	3.8	1330.2	397.0	20.2
Nov-12	1615	135.5	291.8	N/A	204.8	179.6	202.9	742	448	328	295	39.8	9.9	31.7	-1.4	1349.7	428.3	22.5
Nov-12	1630	146.6	291.9	N/A	205.0	178.4	202.1	785	447	326	299	39.5	9.7	35.4	-3.7	1418.2	502.5	27.2
Nov-12	1645	145.1	291.9	N/A	205.4	178.8	202.3	796	487	355	304	39.5	10.3	30.8	2.9	1441.1	443.7	22.6
Nov-12	1700	143.1	291.9	N/A	205.2	178.1	202.0	797	485	356	312	39.8	9.7	31.0	0.6	1437.3	445.5	24.0
Nov-12	1715	142.9	291.1	N/A	205.5	178.7	202.3	768	477	335	298	39.1	10.1	29.6	-0.9	1389.8	411.9	21.6
Nov-12	1730	141.7	290.5	N/A	205.0	178.9	201.5	768	481	331	293	39.5	10.2	29.5	0.2	1392.3	411.1	21.1
Nov-12	1745	141.8	290.5	N/A	205.5	178.1	204.0	758	482	336	309	38.1	10.0	27.2	-5.1	1368.0	372.6	20.3
Nov-12	1800	141.4	290.2	N/A	206.0	178.8	202.7	765	485	330	293	38.1	9.8	28.1	-0.7	1385.1	388.9	21.6
Nov-12	1815	141.7	290.1	N/A	206.4	178.6	200.6	766	489	320	289	37.7	10.2	28.3	-1.4	1385.4	392.3	21.1
Nov-12	1830	141.7	290.3	N/A	206.9	179.1	201.8	767	498	328	284	37.5	9.9	26.9	2.5	1391.1	373.7	20.9
Nov-12	1845	141.4	290.7	N/A	207.2	179.0	202.1	775	498	328	308	37.7	10.1	27.4	-5.9	1405.7	385.8	21.0
Nov-12	1900	140.4	290.2	N/A	207.4	177.7	199.7	774	497	331	294	37.1	10.1	27.9	0.3	1392.8	388.0	21.5
Nov-12	1915	140.4	290.0	N/A	207.8	178.0	199.5	766	508	320	291	36.9	10.0	25.7	-1.7	1381.6	354.6	19.9
Nov-12	1930	140.3	290.2	N/A	207.8	178.6	199.3	777	512	331	287	36.9	10.1	26.4	3.3	1405.3	371.2	20.6
Nov-12	1945	140.7	290.3	N/A	207.9	177.2	199.2	777	519	331	309	36.8	10.1	25.0	-4.9	1395.2	348.5	19.4
Nov-12	2000	140.4	291.3	N/A	208.1	178.5	200.8	789	520	331	292	37.5	10.1	25.9	1.0	1427.1	369.0	20.2
Nov-12	2015	140.8	291.3	N/A	208.6	178.6	201.0	781	526	322	292	37.0	10.1	24.3	-1.8	1413.4	343.1	19.0
Nov-12	2030	133.7	291.4	N/A	208.7	178.1	200.7	765	521	330	292	36.8	10.2	23.2	0.1	1379.7	320.1	17.7
Nov-12	2045	130.8	290.7	N/A	208.2	179.4	201.8	731	470	331	309	37.2	9.6	27.6	-4.8	1328.2	366.8	21.3
Nov-12	2100	134.4	290.6	N/A	206.6	170.0	191.6	731	476	331	296	35.9	10.3	26.5	-0.5	1258.6	334.1	18.7
Nov-12	2115	131.1	291.2	N/A	206.5	170.8	196.0	731	501	369	289	36.3	10.1	21.3	10.0	1264.5	269.4	15.2
Nov-12	2130	134.5	291.2	N/A	206.7	173.1	199.0	731	492	357	276	36.0	10.3	22.6	11.2	1281.5	289.3	16.1
Nov-12	2145	130.9	290.1	N/A	206.3	170.6	194.6	788	489	350	291	36.0	10.1	29.2	5.1	1361.4	397.0	22.6
Nov-12	2200	130.5	288.1	N/A	206.2	171.1	195.9	786	484	355	291	35.9	9.7	29.5	6.2	1362.8	401.9	24.0
Nov-12	2215	137.8	287.7	N/A	207.3	174.9	198.6	794	493	350	287	36.0	9.8	29.4	6.9	1406.3	414.1	24.4
Nov-12	2230	136.3	288.6	N/A	206.5	178.3	201.1	786	496	352	308	37.3	10.1	28.8	1.3	1419.2	408.4	22.5
AVERAGES		131.5	289.0	N/A	203.7	170.8	193.4	757.9	469.4	330.3	285.8	37.4	9.6	29.9	1.9	1312.2	390.3	17.4
Nov-13	845	145.4	277.0	N/A	202.6	178.4	204.0	773	698	366	304	32.1	0.0	-3.3	5.1	1396.5	-46.6	0.0
Nov-13	1500	137.3	277.4	N/A	197.5	168.1	194.8	806	665	354	305	35.2	11.4	4.4	0.3	1371.9	59.8	3.1
Nov-13	1515	135.5	281.8	N/A	195.3	164.6	192.6	819	588	352	295	38.3	11.0	15.9	1.9	1365.0	216.8	10.6
Nov-13	1530	135.8	283.2	N/A	195.4	163.9	194.5	817	574	354	295	38.7	11.2	16.6	1.1	1355.9	225.7	10.7
Nov-13	1545	136.0	284.1	N/A	195.3	163.7	193.9	815	574	352	298	38.9	10.0	16.6	-0.3	1351.8	224.1	11.9
Nov-13	1600	138.5	284.1	N/A	196.0	168.6	197.2	810	566	353	296	39.3	9.1	18.2	1.9	1382.8	251.9	14.7
Nov-13	1615	140.7	283.5	N/A	197.7	176.4	205.9	793	559	360	301	39.6	8.0	17.7	2.4	1417.5	251.3	16.6
Nov-13	1630	145.0	283.2	N/A	198.2	176.6	206.0	797	554	359	304	39.8	7.0	19.0	1.4	1426.1	270.8	20.5
Nov-13	1645	145.2	282.6	N/A	198.6	181.2	207.4	792	561	356	305	40.0	6.1	19.0	2.0	1454.2	276.4	24.0
Nov-13	1700	145.3	281.7	N/A	198.5	180.1	208.9	791	566	357	313	39.7	5.8	17.0	-1.7	1442.7	245.7	22.7
Nov-13	1715	144.6	281.6	N/A	199.0	180.9	210.2	789	559	336	309	39.1	5.4	17.7	-7.0	1445.4	255.9	25.8
Nov-13	1730	144.9	282.0	N/A	199.1	180.8	207.8	795	568	348	312	39.1	6.6	18.0	-3.0	1456.3	261.5	21.4
Nov-13	1745	145.0	282.0	N/A	199.3	179.4	208.9	796	571	357	306	38.8	8.5	16.4	0.0	1446.0	237.4	15.1
Nov-13	1800	145.2	281.5	N/A	199.1	179.5	210.1	798	568	358	305	39.2	8.9	16.7	0.4	1451.3	242.2	14.5
Nov-13	1815	144.7	281.8	N/A	199.6	180.7	210.6	796	571	341	307	39.0	9.5	16.4	-4.8	1456.4	239.1	13.4
Nov-13	1830	144.0	280.6	N/A	202.2	180.6	210.0	797	585	341	298	38.0	9.7	14.6	-1.6	1458.4	212.8	12.0
Nov-13	1845	144.8	279.7	N/A	201.4	180.0	207.1	790	564	352	322	37.5	9.7	18.0	-5.3	1441.1	258.7	14.8
Nov-13	1900	145.5	279.4	N/A	199.4	179.6	206.5	795	551	352	299	37.7	9.1	20.3	2.6	1445.7	292.9	17.8
Nov-1																		

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-13	2130	144.5	278.6	N/A	205.8	181.3	206.9	787	574	373	300	33.5	7.6	16.8	8.4	1445.8	243.6	20.1
Nov-13	2145	142.0	277.3	N/A	199.4	179.4	206.2	808	537	380	292	38.0	7.0	23.6	11.6	1467.8	345.9	27.4
Nov-13	2200	135.7	277.3	N/A	194.5	171.1	194.1	798	537	365	292	37.6	7.6	23.7	9.1	1383.4	327.3	24.1
Nov-13	2215	138.8	277.6	N/A	197.6	181.3	207.7	808	548	365	296	36.5	9.4	22.3	7.2	1483.3	330.1	20.0
Nov-13	2230	143.5	277.5	N/A	199.1	182.5	209.1	783	549	371	307	36.2	10.2	19.6	5.1	1447.3	284.2	15.9
Nov-13	2245	141.5	277.4	N/A	198.3	177.5	204.0	798	551	371	296	35.5	10.6	20.6	8.1	1434.2	295.4	16.2
Nov-13	2300	136.0	277.3	N/A	197.0	170.2	196.0	798	551	371	296	35.2	10.6	20.4	7.9	1375.3	281.0	15.6
Nov-13	2315	135.6	275.9	N/A	196.4	170.2	197.1	798	549	371	296	34.6	10.5	20.4	7.4	1375.3	279.9	15.9
Nov-13	2330	135.8	275.4	N/A	195.7	169.4	196.3	798	534	371	298	34.9	10.2	22.5	7.0	1368.8	307.7	17.9
Nov-13	2345	135.3	275.0	N/A	196.1	171.3	198.3	798	534	371	306	34.4	10.2	22.6	4.6	1384.1	312.3	18.4
AVERAGES		141.4	279.7	N/A	198.7	176.3	203.6	794.4	566.3	357.4	302.5	37.1	8.7	17.6	2.1	1418.4	250.4	16.4
Nov-14	0	135.5	275.0	N/A	195.8	170.5	195.9	727	530	319	305	34.6	10.4	16.3	-9.5	1256.2	205.1	11.8
Nov-14	15	144.8	276.3	N/A	198.2	180.1	206.5	727	528	318	302	35.5	10.2	16.7	-9.0	1327.0	222.1	12.7
Nov-14	30	142.9	277.0	N/A	197.2	181.5	206.3	733	544	332	306	36.7	9.9	15.7	-4.5	1347.4	211.4	12.1
Nov-14	45	144.3	276.6	N/A	200.8	181.0	209.3	735	554	336	316	29.2	9.2	12.9	-9.0	1348.3	174.5	13.5
Nov-14	100	144.7	274.7	N/A	198.1	180.9	206.1	739	553	337	306	36.3	8.4	14.8	-3.3	1353.9	200.2	13.7
Nov-14	115	145.2	274.7	N/A	197.8	178.9	207.0	759	551	335	306	35.5	9.0	16.0	-5.5	1375.9	220.3	14.4
Nov-14	130	143.6	275.4	N/A	198.2	178.7	204.7	758	550	343	307	35.4	10.4	16.9	-2.6	1371.7	232.0	13.0
Nov-14	145	142.4	275.3	N/A	196.2	179.3	205.9	757	538	342	320	37.3	10.3	18.4	-7.4	1375.4	253.0	13.6
Nov-14	200	138.2	277.4	N/A	195.7	177.4	202.5	750	543	343	310	36.7	9.9	17.4	-3.0	1348.2	234.2	13.4
Nov-14	215	139.4	276.4	N/A	195.2	175.0	198.3	767	533	358	305	36.0	10.3	21.3	3.5	1360.1	290.3	16.2
Nov-14	230	138.4	274.4	N/A	196.0	172.9	200.5	775	518	356	312	35.4	10.5	22.6	-1.8	1357.8	306.3	17.0
Nov-14	245	142.0	273.9	N/A	197.5	176.5	204.4	766	539	352	305	34.2	10.7	18.5	-0.3	1369.1	253.9	14.3
Nov-14	300	137.2	274.3	N/A	194.9	174.2	200.0	764	517	361	304	36.1	10.2	22.3	3.4	1347.7	299.9	16.9
Nov-14	315	136.4	276.9	N/A	195.4	176.2	201.9	765	524	361	298	36.2	10.2	21.5	5.5	1365.0	293.9	16.5
Nov-14	330	141.1	274.5	N/A	194.7	174.9	203.3	771	518	355	295	36.6	10.1	22.0	3.5	1366.4	300.3	16.8
Nov-14	345	137.8	273.3	N/A	196.2	171.9	196.6	772	531	357	299	33.6	10.1	21.4	4.0	1343.9	287.2	17.5
Nov-14	400	142.0	273.2	N/A	198.0	177.3	206.4	782	539	359	300	36.9	10.2	19.8	3.0	1405.0	277.6	15.3
Nov-14	415	144.6	274.3	N/A	196.6	180.0	208.9	773	529	339	304	35.7	10.3	20.6	-4.2	1409.0	290.2	16.3
Nov-14	430	141.3	275.2	N/A	196.1	175.4	201.9	780	522	351	310	35.3	10.1	23.0	-1.7	1385.5	318.5	18.5
Nov-14	445	145.0	275.0	N/A	197.8	179.3	207.2	781	541	353	300	35.1	9.6	20.0	1.8	1418.1	283.4	17.5
Nov-14	500	141.1	272.6	N/A	197.9	179.9	207.3	775	528	356	301	35.7	10.1	21.5	2.7	1411.9	303.7	17.5
Nov-14	515	140.9	272.6	N/A	196.1	179.1	206.2	774	536	358	296	37.4	9.9	20.3	4.8	1404.7	284.9	16.0
Nov-14	530	138.7	272.7	N/A	196.7	171.4	197.5	794	541	354	299	33.0	10.2	21.5	2.7	1378.3	296.8	18.3
Nov-14	545	135.9	274.3	N/A	196.4	171.6	195.9	795	532	360	293	33.8	9.9	23.7	7.2	1382.2	327.3	20.3
Nov-14	600	140.7	275.5	N/A	198.3	175.3	201.9	795	543	348	298	33.4	10.0	21.4	1.5	1411.1	301.4	18.7
Nov-14	615	140.9	273.9	N/A	198.2	175.9	201.0	796	544	344	305	33.8	9.8	21.9	-1.5	1418.1	311.3	19.5
Nov-14	630	145.1	273.5	N/A	199.7	181.3	209.8	789	548	354	304	34.9	10.4	19.6	0.5	1449.5	284.6	16.2
Nov-14	645	139.0	272.2	N/A	201.1	177.3	206.0	784	536	365	333	33.9	10.3	20.6	-5.9	1407.8	290.1	17.2
Nov-14	700	138.6	271.9	N/A	199.4	172.2	199.8	779	520	358	307	32.1	9.9	22.6	0.7	1359.3	307.5	20.1
Nov-14	715	138.2	271.3	N/A	199.1	172.6	197.1	782	541	366	309	33.2	10.1	21.0	3.6	1366.8	286.5	17.7
Nov-14	730	143.8	272.1	N/A	201.5	177.5	205.9	783	530	363	305	34.6	10.2	21.6	2.4	1408.3	303.5	17.8
Nov-14	745	142.4	271.6	N/A	200.6	174.7	202.2	772	530	361	304	33.1	10.0	20.5	2.5	1366.7	280.7	17.6
Nov-14	800	145.0	272.6	N/A	202.0	177.8	204.3	775	541	363	306	31.8	9.9	19.7	3.1	1395.4	275.6	18.2
Nov-14	815	145.4	273.9	N/A	203.1	178.6	202.0	759	529	361	308	29.7	9.9	21.2	3.3	1373.6	291.8	20.6
Nov-14	830	144.5	273.4	N/A	204.1	178.5	204.8	763	544	359	310	30.8	10.3	18.2	1.1	1379.2	251.4	16.4
Nov-14	845	144.7	274.4	N/A	204.3	181.0	207.8	775	544	366	334	31.6	10.0	19.4	-4.6	1421.4	276.1	18.1
Nov-14	900	144.9	274.1	N/A	204.4	178.1	204.2	782	552	364	310	30.8	10.1	19.0	2.2	1410.4	268.3	17.9
Nov-14	915	141.6	272.6	N/A	202.4	177.6	205.1	772	531	366	306	33.3	9.9	20.6	3.5	1389.3	285.9	18.0
Nov-14	930	141.1	272.9	N/A	202.8	174.7	201.6	777	543	368	310	30.7	10.1	19.4	2.8	1375.5	267.4	17.9
Nov-14	945	141.1	273.3	N/A	205.1	178.1	201.7	781	570	372	318	29.1	10.0	17.4	3.2	1409.5	244.6	17.4
Nov-14	1000	140.3	273.1	N/A	204.2	175.5	202.7	785	573	362	307	29.9	10.0	15.7	1.9	1396.0	219.2	15.2
Nov-14	1300	145.9	274.5	N/A	196.2	180.4	207.2	801	579	372	316	36.3	9.6	16.9	2.2	1463.2	247.6	14.8
Nov-14	1315	146.4	274.1	N/A	195.6	180.4	209.9	807	564	373	310	37.9	10.5	18.6	3.3	1474.1	274.7	14.3
Nov-14	1330	146.3	274.0	N/A	195.0	180.1	210.5	800	565	364	312	40.0	10.0	17.5	-0.2	1459.8	255.9	13.3
Nov-14	1345	145.8	276.5	N/A	194.1	180.9	209.5	814	566	369	308	38.3	9.9	19.5	3.3	1491.0	290.7	15.9
Nov-14	1400	146.3	276.8	N/A	194.5	179.4	210.6	819	565	367	309	37.9	9.9	19.0	1.2	1487.8	282.2	15.6
Nov-14	1415	146.1	276.5	N/A	194.3	180.9	210.3	803	532	369	308	39.4	9.9	23.0	3.1	1470.9	338.4	18.0
Nov-14	1430	146.2	275.8	N/A	195.0	180.8	212.8	800	545	372	317	38.4	10.2	19.9	-0.2	1465.5	291.5	15.4
Nov-14	1445	146.7	275.4	N/A	193.9	181.9	207.8	797	554	373	317	37.9	10.0	20.7	3.1	1468.9	303.5	16.6
Nov-14	1500	146.2	276.2	N/A	194.3	180.4	207.0	796	559	373	318	37.7	10.3	19.5	2.3	1454.9	283.6	15.1
Nov-14	1515	146.1	276.7	N/A	195.4	181.2	210.1	794	536	374	322	38.7	10.1	21.7	0.2	1457.0	316.0	16.7
Nov-14	1530	146.8	275.5	185.7	194.5	181.4	210.4	797	535	373	316	41.7	10.1	22.2	1.6	1463.9	324.5	16.0
Nov-14	1545	146.8	275.5	185.7	194.5	181.4	210.4	797	535	373	316	41.7	10.1	22.2	1.6	1463.9	324.5	16.0
Nov-14	1600	145.7	278.6	181.2	197.3	181.2	210.5	803	549	365	304	36.8	9.8	20.6	3.4	1474.2	303.3	17.5
Nov-14	1615	145.7	278.6	181.2	197.3	181.2	210.5	803	549	365	304	36.8	9.8	20.6	3.4	1474.2	303.3	17.5
Nov-14	1645	146.6	275.6	181.2	197.6	180.0	207.2	784	545	372	311	36.2	9.9	20.1	3.9	1430.0	286.9	16.6
Nov-14	1700	146.6	276.3	182.9	198.5	179.5	206.3	783	550	369	311	35.5	9.9	19.4	3.3	1424.2	275.6	16.3
Nov-14	1715	144.5	276.5	182.8	198.5	178.1	202.6	792										

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-14	1845	146.2	272.8	181.4	198.1	180.5	207.3	798	535	379	318	34.6	9.7	23.1	3.6	1459.4	336.8	20.8
Nov-14	1900	142.2	272.5	180.3	197.0	177.2	203.3	784	524	378	321	34.7	9.7	23.4	2.6	1407.8	329.2	20.3
Nov-14	1915	142.9	271.8	180.8	197.3	177.6	204.2	790	534	372	315	33.9	10.2	22.4	2.7	1421.7	318.0	19.0
Nov-14	1930	142.8	272.7	180.8	197.2	176.8	204.0	781	528	371	310	34.3	10.2	21.9	3.4	1398.3	306.8	18.2
Nov-14	1945	142.3	272.7	180.1	196.6	175.2	203.2	781	517	372	313	34.7	10.0	23.2	2.3	1385.7	321.0	19.2
Nov-14	2000	142.4	273.5	179.9	196.8	174.8	202.1	787	528	373	315	34.3	9.8	22.4	2.3	1393.1	311.7	19.3
Nov-14	2015	142.2	272.1	178.8	197.7	177.0	205.4	781	525	376	320	33.2	10.2	22.1	1.2	1400.8	309.0	18.9
Nov-14	2030	142.3	272.9	180.8	196.8	176.8	205.3	768	510	373	316	34.5	10.2	22.8	1.7	1375.0	314.0	18.5
Nov-14	2045	142.9	273.3	180.2	196.2	178.1	206.5	775	506	370	313	35.5	10.0	24.3	1.9	1397.8	339.9	19.9
Nov-14	2100	142.7	273.5	181.4	197.7	176.0	201.7	775	512	370	314	33.5	9.9	24.2	2.6	1381.3	334.7	20.9
Nov-14	2115	146.8	272.9	181.5	197.3	179.1	209.1	775	520	370	303	35.2	10.0	21.7	4.2	1405.6	304.8	18.0
Nov-14	2130	143.0	273.5	181.3	196.8	173.6	200.9	775	534	385	309	34.0	9.6	20.2	7.1	1362.4	275.5	17.5
Nov-14	2145	139.3	273.8	182.2	197.3	172.1	199.7	775	544	383	313	33.6	9.6	18.6	5.2	1350.7	251.0	16.2
Nov-14	2200	137.7	273.4	181.3	196.4	170.0	196.5	775	536	378	313	33.5	10.0	20.0	4.2	1334.2	267.1	16.5
Nov-14	2215	137.3	272.6	182.0	196.6	171.4	196.6	778	533	380	306	32.9	9.8	21.5	7.6	1351.3	290.6	18.7
Nov-14	2230	138.0	272.7	182.5	197.1	170.0	195.6	773	537	375	307	32.3	10.1	20.1	5.9	1330.7	267.5	17.0
Nov-14	2245	138.0	274.3	185.4	198.3	175.0	201.6	777	521	375	317	34.0	9.7	22.8	2.5	1378.0	313.6	19.8
Nov-14	2300	141.5	273.8	187.8	199.1	178.6	206.0	777	521	375	317	34.2	9.9	22.7	2.4	1406.2	318.6	19.5
Nov-14	2315	144.8	274.8	182.4	199.9	184.0	210.7	777	556	375	317	34.2	10.1	18.1	3.1	1448.7	261.8	15.7
Nov-14	2330	143.1	275.2	182.4	198.7	179.9	208.9	777	550	375	313	35.9	10.0	17.9	2.9	1416.4	253.4	14.6
Nov-14	2345	143.3	274.4	179.4	196.6	175.7	201.2	748	546	375	314	35.7	10.2	16.4	4.1	1331.8	218.7	12.4
AVERAGES		142.8	274.3	182.1	197.8	177.7	204.8	778.5	538.0	363.1	310.1	35.0	10.0	20.3	1.4	1401.6	284.8	16.9
Nov-15	0	138.9	274.3	179.3	195.8	173.8	202.7	748	545	375	313	35.3	9.8	15.0	2.5	1317.4	198.1	11.9
Nov-15	15	141.6	275.0	180.0	196.4	178.4	205.4	748	544	334	312	36.0	9.8	16.4	-7.4	1352.2	221.1	13.0
Nov-15	30	139.1	276.5	180.0	195.6	176.9	201.7	748	556	344	313	36.0	10.1	15.3	-4.0	1340.8	205.6	11.7
Nov-15	45	140.8	274.9	179.7	195.4	177.7	199.8	752	558	345	328	35.2	10.1	16.7	-6.7	1354.1	225.5	13.1
Nov-15	100	141.3	273.8	176.5	195.0	177.7	202.5	761	553	358	318	34.3	9.8	17.2	-1.1	1370.3	235.7	14.6
Nov-15	115	141.5	273.9	182.3	196.1	180.4	207.2	761	544	361	315	36.6	10.1	17.9	-0.3	1391.1	249.1	14.0
Nov-15	130	142.1	273.2	185.1	196.0	179.1	207.8	775	537	360	306	36.7	10.2	19.7	1.3	1406.5	277.0	15.3
Nov-15	145	142.7	275.5	177.7	195.2	180.1	204.1	770	540	353	329	36.3	9.9	20.5	-5.7	1404.3	287.7	16.6
Nov-15	200	143.7	277.0	178.9	196.2	182.8	207.2	765	537	350	316	36.9	9.9	20.5	-2.3	1417.1	290.8	16.5
Nov-15	215	146.2	274.3	182.5	195.8	185.7	212.5	772	516	365	310	38.1	9.7	23.6	2.8	1452.9	342.8	19.3
Nov-15	230	145.3	274.3	182.0	196.6	182.5	210.4	778	530	363	311	36.6	10.2	21.5	1.2	1437.8	308.9	17.1
Nov-15	245	143.3	274.6	182.8	197.1	182.3	210.0	782	535	367	309	36.8	10.1	21.2	3.1	1443.7	306.4	17.1
Nov-15	300	145.4	276.5	178.6	196.7	186.0	210.7	787	527	361	309	37.3	9.7	24.1	3.2	1482.4	357.1	20.5
Nov-15	315	146.1	277.3	180.8	198.3	187.5	211.1	775	542	358	310	36.6	9.6	21.3	2.3	1471.5	313.3	18.5
Nov-15	330	146.1	274.1	183.7	197.5	184.7	210.3	786	533	360	315	36.5	10.0	22.9	0.3	1471.1	336.5	19.1
Nov-15	345	146.2	273.8	183.3	197.9	182.9	206.6	795	541	366	304	35.5	9.8	23.2	6.0	1472.3	340.9	20.3
Nov-15	400	143.9	273.6	177.8	196.3	180.2	208.4	794	522	362	307	35.6	10.3	24.0	1.7	1449.8	347.4	19.6
Nov-15	415	144.1	275.5	180.3	197.8	182.3	210.0	797	546	361	306	35.7	10.3	21.0	2.6	1471.2	309.4	17.4
Nov-15	430	145.3	275.2	180.2	197.7	182.3	207.3	800	539	361	304	35.7	10.2	23.4	4.5	1477.6	345.6	19.6
Nov-15	445	146.4	276.5	181.0	198.4	182.9	209.5	800	537	350	307	35.8	10.0	23.1	-0.2	1481.6	342.8	19.9
Nov-15	500	143.8	277.2	181.1	198.5	182.0	205.8	796	534	360	304	35.8	10.3	24.1	4.7	1467.3	353.6	19.8
Nov-15	515	142.7	274.2	182.1	198.2	178.6	207.1	813	537	365	306	34.5	10.2	23.4	2.6	1471.2	344.2	20.3
Nov-15	530	142.7	273.7	184.1	197.5	180.0	207.0	821	538	366	301	35.8	10.3	24.6	5.5	1497.3	368.9	20.7
Nov-15	545	138.2	273.8	180.4	197.3	174.7	200.2	824	558	368	300	33.5	10.4	22.4	6.4	1457.6	326.8	19.4
Nov-15	600	140.6	273.5	184.2	197.5	175.5	203.4	827	546	361	302	34.5	10.3	23.5	3.3	1470.5	345.3	20.1
Nov-15	615	141.7	273.3	184.2	197.7	175.3	202.1	837	544	363	297	34.4	10.2	25.0	5.6	1485.9	372.0	22.0
Nov-15	630	144.7	273.6	187.4	198.5	178.8	209.0	826	550	365	298	36.1	10.6	22.1	4.5	1495.5	330.8	17.9
Nov-15	645	142.3	272.8	185.4	199.5	180.3	207.5	808	540	368	303	33.8	10.1	23.1	5.4	1476.0	340.6	20.7
Nov-15	730	144.4	274.1	193.0	202.6	181.6	206.1	815	682	370	307	32.4	10.4	5.0	6.0	1499.6	74.8	4.6
Nov-15	745	143.4	273.7	185.1	200.6	181.3	205.3	803	561	378	312	33.2	9.8	20.8	6.5	1474.1	307.2	19.6
Nov-15	800	143.8	274.8	184.3	199.6	181.2	204.1	798	574	379	314	34.3	10.0	19.1	6.6	1465.1	279.1	16.9
Nov-15	815	137.3	274.2	184.0	199.1	178.5	201.6	796	571	369	303	33.1	10.5	18.9	7.4	1439.1	272.5	16.2
Nov-15	830	146.5	274.8	185.3	200.0	184.2	208.8	813	580	366	303	34.4	9.9	19.2	5.9	1517.3	291.3	17.7
Nov-15	845	146.3	275.3	185.6	200.4	184.8	211.7	791	564	373	310	34.4	10.2	18.3	4.9	1480.3	270.6	16.0
Nov-15	1100	145.2	274.9	185.9	199.9	181.4	206.8	813	587	381	316	35.1	9.6	17.6	5.4	1494.2	263.5	16.2
Nov-15	1115	145.4	275.0	184.2	199.1	181.5	208.6	808	580	380	313	35.0	10.0	17.5	5.3	1484.9	260.2	15.4
Nov-15	1130	143.8	272.9	183.5	198.5	180.4	204.8	802	573	380	313	34.4	10.7	18.9	6.4	1465.9	276.9	15.5
Nov-15	1145	145.2	273.1	183.7	198.3	178.8	205.7	826	601	377	313	34.0	10.6	16.2	4.3	1495.5	242.1	13.9
Nov-15	1200	146.3	273.2	184.7	199.4	182.5	210.1	838	595	372	307	34.0	10.3	18.2	4.9	1548.6	282.2	16.7
Nov-15	1215	146.4	273.3	187.0	199.9	181.1	210.9	838	613	374	304	34.3	10.1	14.8	5.1	1537.6	226.9	13.6
Nov-15	1230	145.2	272.2	188.6	199.7	180.5	207.2	841	578	369	300	34.9	10.1	21.2	6.7	1538.0	325.7	19.1
Nov-15	1245	146.3	274.2	181.6	198.0	180.7	205.9	844	595	373	312	35.0	9.9	19.7	4.7	1546.0	304.9	18.3
Nov-15	1300	146.2	275.3	183.3	198.5	181.9	210.8	839	601	371	307	35.4	10.0	17.0	4.3	1545.4	261.9	15.3
Nov-15	1315	146.3	274.6	182.9	198.1	181.9	209.7	842	592	381	314	34.9	10.2	18.8	4.9	1550.9	292.2	17.7
Nov-15	1330	146.0	273.1	182.7	197.8	179.4	208.7	839	583	380	314	34.4	10.1	19.2	3.8	1525.0	292.5	17.4
Nov-15	1																	

CZD LIME INJECTION DATA - AUGUST 17, TO NOVEMBER 16, 1992

Date	Time	Boiler Load MW	Duct Inlet Temp °F	Avg °C Section Temp °F	Duct Outlet Temp °F	Flue Gas Flow In KSCFM	Flue Gas Flow Out KSCFM	SO2 Inlet ppm	SO2 Outlet ppm	NOx Inlet ppm	NOx Outlet ppm	Lime Flow gpm	Lime Conc %	SO2 Removal %	NOx Removal %	SO2 Inlet Lb/Hr	SO2 Removed Lb/Hr	Lime Utilization %
Nov-15	1530	138.0	274.2	182.5	197.1	169.0	194.9	826	574	378	312	33.1	10.0	19.9	4.8	1413.5	281.0	17.6
Nov-15	1545	138.7	274.4	183.4	198.1	171.3	198.8	825	563	379	313	32.9	10.1	20.8	4.2	1431.0	298.0	18.6
Nov-15	1600	138.4	275.2	183.6	197.7	169.4	195.2	838	565	375	305	32.9	10.3	22.3	6.2	1438.3	320.9	19.6
Nov-15	1615	143.5	274.3	185.2	199.6	177.0	207.2	823	564	370	306	33.4	10.0	19.8	3.1	1475.9	293.0	18.2
Nov-15	1630	142.2	273.6	182.8	198.9	174.3	204.5	819	559	377	308	34.1	9.9	19.9	4.1	1445.5	288.3	17.7
Nov-15	1645	145.3	273.8	185.8	199.6	179.5	209.8	814	554	375	304	34.9	10.0	20.5	5.3	1480.4	302.8	18.0
Nov-15	1700	145.5	274.0	183.1	198.2	179.2	207.1	815	532	374	309	36.2	10.3	24.6	4.3	1479.7	364.5	20.2
Nov-15	1715	145.4	275.1	181.7	198.8	178.8	206.2	809	550	366	308	34.7	10.1	21.7	2.9	1465.6	317.6	18.8
Nov-15	1730	146.0	274.8	181.9	198.3	177.1	204.4	824	554	369	306	34.9	9.9	22.4	4.3	1477.7	330.3	19.8
Nov-15	1745	145.9	274.4	182.3	198.3	176.6	204.8	831	555	374	307	34.2	10.2	22.6	4.9	1486.9	336.3	20.0
Nov-15	1800	145.8	274.6	181.8	198.1	175.4	204.7	825	546	370	303	34.9	10.1	22.8	4.2	1465.3	333.9	19.6
Nov-15	1815	145.3	275.5	182.0	198.5	180.8	206.8	800	532	370	304	35.2	10.4	24.0	5.8	1465.5	351.8	19.9
Nov-15	1830	146.2	277.1	184.1	200.0	183.0	211.3	803	530	372	309	35.5	10.0	23.8	4.3	1487.9	354.1	20.7
Nov-15	1845	142.5	275.5	182.1	198.3	176.5	203.3	796	527	360	304	34.7	9.9	23.8	2.9	1422.6	337.9	20.4
AVERAGES		143.6	274.5	182.9	198.1	179.2	206.0	807.8	559.5	368.3	309.0	34.9	10.1	20.4	3.5	1466.4	298.7	17.6

PROCEDURES FOR CALCULATING SO₂ AND NO_x REMOVAL AND PERCENTAGE OF LIME UTILIZATION FOR CZD CONTINUOUS OPERATION

Going into the second phase from parametric testing to continuous CZD demonstration, automated and integrated with Boiler #15 at Seward Station, all the operating data are automatically recorded. The calculations are computerized, and the results recorded.

The lime slurry concentration is set and controlled by the nuclear-type density gauge and transmitter.

The environmental monitoring system (EMS) for monitoring CZD operations includes:

- Duct and stack opacity
- SO₂ in and out – by dilution system*
- NO_x in and out – by dilution system*
- CO₂ in and out – by dilution system*

*Flue gas samples are filtered and diluted with air (one volume flue gas with 200 volumes of air) before they are analyzed.

The flow of flue gas in the duct is monitored at three locations using the differential temperature type. Two locations use multipoint probes. These flow measurements, combined with the environmental measurements, form the basis for determining the percentages of SO₂ and NO_x reduction by CZD.

During CZD operations, the following data are recorded every 15 minutes:

Field Name	Field Type	Formula
Date	Date	
Time	Time	
R/C Out Temp °F	Number	
I.D. Fan Out Temp °F	Number	
Flue gas flow in KSCFM	Number	
Flue gas flow out KSCFM	Number	
Lime slurry flow gpm	Number	
Lime slurry header pressure psig	Number	
Atomizing air flow SCFM	Number	

Field Name	Field Type	Formula
B-duct opacity %	Number	
Stack opacity %	Number	
Slurry solids %	Number	
Boiler load MW	Number	
SO ₂ inlet ppm	Number	
SO ₂ outlet ppm	Number	
NO _x inlet ppm	Number	
NO _x outlet ppm	Number	
CO ₂ inlet %	Number	
CO ₂ outlet %	Number	
Average C-cross section Temp °F	Number	
Lowest C-cross section Temp °F	Number	
SO ₂ in SCFM	Calculation Number	$(\text{Flue gas [FG] flow in KSCFM} \times \text{SO}_2 \text{ inlet ppm})/1000$
SO ₂ out SCFM	Calculation Number	$(\text{FG flow out KSCFM} \times \text{SO}_2 \text{ outlet ppm})/1000$
NO _x in SCFM	Calculation Number	$(\text{FG flow in KSCFM} \times \text{NO}_x \text{ inlet ppm})/1000$
NO _x out SCFM	Calculation Number	$(\text{FG flow out KSCFM} \times \text{NO}_x \text{ outlet ppm})/1000$
SO ₂ removal %	Calculation Number	$100 (\text{SO}_2 \text{ in SCFM} - \text{SO}_2 \text{ out SCFM})/\text{SO}_2 \text{ in SCFM}$
NO _x removal %	Calculation Number	$100 (\text{NO}_x \text{ in SCFM} - \text{NO}_x \text{ out SCFM})/\text{NO}_x \text{ in SCFM}$
SO ₂ in lb/MM Btu	Calculation Number	$0.03 \times \text{SO}_2 \text{ inlet ppm}/\text{CO}_2 \text{ inlet \%}$
SO ₂ out lb/MM Btu	Calculation Number	$0.03 \times \text{SO}_2 \text{ outlet ppm}/\text{CO}_2 \text{ outlet \%}$
NO _x in lb/MM Btu	Calculation Number	$0.0218 \times \text{NO}_x \text{ inlet ppm}/\text{CO}_2 \text{ inlet \%}$
NO _x out lb/MM Btu	Calculation Number	$0.0218 \times \text{NO}_x \text{ outlet ppm}/\text{CO}_2 \text{ outlet \%}$
SO ₂ reduction %	Calculation Number	$100 \times (\text{SO}_2 \text{ in lb/MM Btu} - \text{SO}_2 \text{ out lb/MM Btu}) / (\text{SO}_2 \text{ in lb/MM Btu} + 0.00001)$
NO _x reduction %	Calculation Number	$100 \times (\text{NO}_x \text{ in lb/MM Btu} - \text{NO}_x \text{ out lb/MM Btu}) / (\text{NO}_x \text{ in lb/MM Btu} + 0.00001)$
Dilution SO ₂ %	Calculation Number	$100 \times (\text{SO}_2 \text{ inlet ppm}/\text{SO}_2 \text{ outlet ppm} - 1.0)$
Dilution NO _x %	Calculation Number	$100 \times (\text{NO}_x \text{ inlet ppm}/\text{NO}_x \text{ outlet ppm} - 1.0)$
Dilution CO ₂ %	Calculation Number	$100 \times (\text{CO}_2 \text{ inlet \%}/\text{CO}_2 \text{ outlet \%} - 1.0)$
Dilution flue gas flow	Calculation Number	$100 \times (\text{FG flow out KSCFM}/\text{FG flow in KSCFM} - 1.0)$
Lime useage lb mol\min	Calculation Number	$\text{Lime flow gpm} \times 8.3456 \times \text{Slurry SGU} \times (\text{Slurry Solids \%}/100)$ Lime mol wt.
SO ₂ removed lb mol\min	Calculation Number	$(\text{FG flow in KSCFM} \times \text{SO}_2 \text{ inlet ppm}/1000) \times (\text{SO}_2 \text{ reduction \%}/100)/379$
Lime utilization %	Calculation Number	$100 \times \text{SO}_2 \text{ removed lb-mol}\backslash\text{min}/\text{Lime useage lb mol}\backslash\text{min}$

Lime Storage and Slurry Preparation – Continuous Operation

Lime Slurry Feed System – Continuous Operation

Lime Slurry Injection – Continuous Operation

Lime Utilization Calculations

GIVEN:

$$\text{Lime Sp. Gr.} = 2.29 = 142.965 \text{ lb/cu ft} \quad (2.29 \times 62.43)$$

$$1 \text{ gal H}_2\text{O} = 8.345677 \text{ lb} = 0.13368 \text{ cu ft}$$

THEN:

Slurry Conc WT %	Slurry Wt LB/GAL	Slurry Vol CU FT	Slurry SG
16%	9.94	0.1448	1.0991
15%	9.82	0.1440	1.0923
14%	9.70	0.1432	1.0856
13%	9.59	0.1424	1.0790
12%	9.48	0.1416	1.0725
11%	9.38	0.1409	1.0661
10%	9.27	0.1402	1.0597
9%	9.17	0.1395	1.0534
8%	9.07	0.1388	1.0472
7%	8.97	0.1381	1.0411
6%	8.88	0.1374	1.0350
5%	8.78	0.1368	1.0290
4%	8.69	0.1361	1.0231
3%	8.60	0.1355	1.0172
2%	8.52	0.1349	1.0114
1%	8.43	0.1343	1.0057
0%	8.35	0.1337	1.0000

$$\text{Slurry Wt calculation} \quad 8.345677 / (1 - \text{slurry conc. wt.\% lime})$$

$$\text{Slurry Vol calculation} \quad ((\text{slurry wt} \times \text{slurry lime conc}) / 142.965) + 0.13368$$

$$\text{Slurry SG calculation} \quad (\text{slurry wt} / \text{slurry vol}) / 62.43$$

Lime Used, in LB-MOLS/Minute:

For Dolomitic Lime

$$(\text{Slurry flow [gpm]} \times 8.34568 \times \text{Slurry SG} \times \text{Lime conc. [\%*.01]}) / 70.4$$

For Calcitic Lime

$$(\text{Slurry flow [gpm]} \times 8.34568 \times \text{Slurry SG} \times \text{Lime conc. [\%*.01]}) / 74$$

SO₂ Removed, in LB-MOLS/Minute:

$$(((\text{Flue gas in [KSCFM]} \times \text{SO}_2 \text{ in [PPM]}) / 1000) \times \text{SO}_2 \text{ removed [\%*.01]}) / 379$$

Lime Utilization:

$$(\text{LB-MOLS SO}_2 \text{ Removed} / \text{LB-MOLS Lime used}) \times 100$$

Lime Utilization Calculations

TONS LIME PER HOUR (Dry Weight)

Slurry Lime Concentration, Wt. %

Slurry Flow GPM		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	5	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12	0.14	0.15	0.17	0.19	0.20	0.22	0.24
	10	0.03	0.05	0.08	0.10	0.13	0.16	0.19	0.22	0.25	0.28	0.31	0.34	0.37	0.41	0.44	0.48
	15	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.33	0.37	0.42	0.46	0.51	0.56	0.61	0.66	0.72
	20	0.05	0.10	0.15	0.21	0.26	0.32	0.38	0.44	0.50	0.56	0.62	0.68	0.75	0.82	0.88	0.95
	25	0.06	0.13	0.19	0.26	0.33	0.40	0.47	0.54	0.62	0.70	0.77	0.85	0.94	1.02	1.10	1.19
	30	0.08	0.15	0.23	0.31	0.40	0.48	0.57	0.65	0.74	0.83	0.93	1.02	1.12	1.22	1.33	1.43
	35	0.09	0.18	0.27	0.37	0.46	0.56	0.66	0.76	0.87	0.97	1.08	1.19	1.31	1.43	1.55	1.67
	40	0.10	0.20	0.31	0.42	0.53	0.64	0.75	0.87	0.99	1.11	1.24	1.37	1.50	1.63	1.77	1.91
	45	0.11	0.23	0.35	0.47	0.59	0.72	0.85	0.98	1.11	1.25	1.39	1.54	1.68	1.83	1.99	2.15
	50	0.13	0.26	0.39	0.52	0.66	0.80	0.94	1.09	1.24	1.39	1.55	1.71	1.87	2.04	2.21	2.38
	55	0.14	0.28	0.43	0.57	0.72	0.88	1.04	1.20	1.36	1.53	1.70	1.88	2.06	2.24	2.43	2.62
	60	0.15	0.31	0.46	0.63	0.79	0.96	1.13	1.31	1.49	1.67	1.86	2.05	2.24	2.45	2.65	2.86
		8.43	8.52	8.60	8.69	8.78	8.88	8.97	9.07	9.17	9.27	9.38	9.48	9.59	9.70	9.82	9.94

Slurry Weight, Lb./Gal.

Appendix I

Buell ESP Fields Operating Log

Seward Plant Buell ESP Fields Operating Log

Page 1

12/3/92

20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
10/14/92	800	21.0	0.0	11.6	11.2	27.9	3.1	25.5	9.3	51.4	5.5	35.2	8.7	29.9	14.9	41.7	9.4	36.3	9.9	51.5	4.9
10/14/92	815	25.0	0.0	11.4	10.2	28.2	3.0	30.3	8.5	56.7	2.9	40.3	5.7	28.8	11.8	41.4	7.8	35.0	1.1	52.8	3.3
10/14/92	830	25.6	0.0	12.9	12.4	27.8	3.0	30.6	5.6	57.0	3.5	40.3	6.0	30.4	16.8	38.7	10.5	34.8	1.2	51.8	3.1
10/14/92	845	0.0	24.9	12.9	11.9	29.7	3.1	28.6	5.2	57.2	3.0	39.7	8.3	29.7	14.3	44.0	10.5	35.5	8.9	49.8	3.0
10/14/92	900	0.0	25.0	12.8	12.2	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	28.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	915	0.0	25.0	12.0	14.4	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	930	0.0	25.3	14.9	16.2	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	945	0.0	25.4	14.7	17.5	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1000	0.0	25.3	15.8	20.2	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1015	0.0	25.4	17.1	23.2	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1030	0.0	28.9	15.9	20.8	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1045	0.0	34.6	12.2	14.4	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1100	0.0	33.0	9.4	13.9	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1115	0.0	32.0	10.1	14.8	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1130	0.0	32.0	12.8	15.4	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1145	0.0	31.8	12.9	15.7	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1200	0.0	32.4	14.2	17.1	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1215	0.0	32.3	15.0	17.5	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1230	0.0	32.7	14.9	19.6	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1245	0.0	32.8	13.4	21.0	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1300	0.0	33.9	14.1	18.0	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1315	0.0	35.3	12.9	16.6	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1330	0.0	34.2	14.9	18.7	29.4	3.1	28.9	5.5	56.5	3.7	39.7	7.5	26.6	16.2	42.1	10.6	35.2	1.1	48.4	3.0
10/14/92	1345	0.0	34.0	13.0	17.1	34.5	1.2	31.2	2.0	54.8	1.6	43.2	1.3	64.4	1.7	48.4	1.9	40.0	1.5	53.9	1.2
10/14/92	1400	0.0	35.1	16.3	19.8	0.0	?	0.0	?	0.0	?	0.0	?	0.0	?	0.0	?	0.0	10.0	0.0	?
10/14/92	1415	0.0	34.4	16.6	21.5	29.1	3.1	21.5	15.0	47.7	8.8	38.9	6.5	30.7	13.9	45.7	10.4	38.9	1.0	50.0	3.3
10/14/92	1430	0.0	34.2	18.1	25.6	29.7	3.0	18.9	16.0	39.6	10.2	36.0	11.1	31.8	13.2	42.3	10.5	34.7	1.1	47.3	3.9
10/14/92	1445	0.0	35.2	16.0	22.3	29.4	3.1	19.1	16.8	38.6	10.6	36.5	9.8	33.4	11.8	43.9	10.0	36.9	1.0	47.1	3.8
10/14/92	1500	0.0	35.5	15.0	22.4	29.4	3.1	19.1	16.8	38.6	10.6	36.5	9.8	33.4	11.8	43.9	10.0	36.9	1.0	47.1	3.8
10/14/92	1515	0.0	35.0	16.3	21.9	28.5	3.0	22.2	13.5	49.8	8.8	38.6	3.7	30.1	22.0	44.4	13.5	36.7	1.1	43.6	3.1
10/14/92	1530	0.0	34.7	15.3	23.2	29.3	3.1	22.7	14.8	50.3	7.4	38.7	5.7	35.0	16.7	47.4	7.3	40.2	8.1	49.3	3.0
10/14/92	1545	0.0	35.0	16.6	20.7	28.4	3.0	23.9	13.1	53.1	7.7	37.4	3.3	33.4	20.2	48.8	10.8	39.5	8.7	49.8	5.2
10/14/92	1600	0.0	34.4	15.8	26.4	29.3	3.2	22.7	15.1	51.0	9.6	37.5	10.1	28.5	17.6	43.8	12.3	35.6	9.1	47.4	3.2
10/14/92	1615	0.0	34.1	14.7	19.9	29.4	3.1	23.1	15.8	56.7	4.2	38.1	3.0	30.1	16.9	45.4	11.4	37.0	7.9	51.2	3.1
10/14/92	1630	0.1	33.5	17.2	18.2	29.2	3.0	26.2	10.6	58.5	5.9	38.7	3.0	30.7	16.1	45.0	9.3	36.0	1.0	47.4	3.6
10/14/92	1645	0.1	36.1	14.4	17.0	28.7	3.2	28.8	9.8	57.5	3.6	37.5	3.0	31.6	15.3	48.2	11.1	39.2	8.3	45.7	3.1
10/14/92	1700	0.1	32.9	15.6	20.1	29.4	3.1	25.7	10.1	56.6	6.9	38.8	3.2	32.6	11.1	48.8	8.4	38.8	8.0	50.1	3.1
10/14/92	1715	0.1	32.8	17.1	20.4	29.1	3.1	24.7	10.8	55.4	7.1	39.0	3.3	33.0	12.7	50.4	9.2	41.1	8.6	50.1	3.1
10/14/92	1730	0.1	32.4	16.8	21.0	29.2	3.1	24.8	15.3	56.3	5.6	39.3	3.7	32.0	18.7	51.8	10.2	41.2	8.8	47.4	3.3
10/14/92	1745	0.1	31.9	16.1	20.8	29.1	3.2	23.0	13.6	54.7	6.9	39.2	3.6	33.2	10.6	50.7	8.0	41.3	8.0	49.5	3.3
10/14/92	1800	0.1	31.8	15.3	17.8	29.2	3.1	25.3	9.5	59.3	4.1	38.0	3.0	30.3	13.8	50.9	8.6	40.7	1.0	50.5	3.0
10/14/92	1815	0.1	32.7	14.5	17.5	29.1	3.0	27.6	7.2	59.4	3.2	39.5	3.3	30.5	14.8	48.4	8.5	39.9	8.6	48.0	3.0
10/14/92	1830	0.1	34.2	16.1	17.9	28.6	3.0	27.2	10.2	60.7	3.4	38.4	3.0	28.2	11.4	46.5	6.6	37.3	9.2	45.0	3.0
10/14/92	1845	0.1	33.3	17.0	18.9	28.9	3.0	25.5	11.4	58.4	6.1	39.2	3.2	34.0	10.8	43.2	7.9	39.1	8.3	49.2	3.5
10/14/92	1900	0.1	32.9	16.2	18.7	28.7	3.2	26.0	10.8	58.8	4.0	39.1	3.0	33.7	11.1	52.9	5.1	43.3	8.7	50.8	3.7
10/14/92	1915	0.0	32.5	16.4	18.8	28.9	3.0	25.1	11.6	58.7	5.4	39.0	3.1	32.9	16.3	49.8	7.8	41.6	7.8	50.8	3.0
10/14/92	1930	0.0	33.0	16.7	19.4	28.5	3.2	25.8	11.3	58.3	5.3	38.9	3.8	33.2	10.0	49.8	7.9	40.6	8.7	50.4	3.0
10/14/92	1945	0.0	36.4	15.0	14.5	27.7	3.0	27.3	5.1	59.0	3.0	37.2	3.0	31.8	11.7	48.4	8.0	40.1	7.4	50.3	3.0
10/14/92	2000	0.0	28.0	19.5	18.6	29.2	4.7	21.6	14.7	57.5	4.4	38.3	3.3	32.4	11.4	49.1	6.9	40.8	8.2	49.8	3.0
10/14/92	2015	0.0	29.8	17.5	20.1	29.0	3.1	24.3	12.6	56.5	4.2	39.0	3.7	32.2	13.5	48.6	9.4	40.1	1.1	48.9	3.0
10/14/92	2030	0.0	31.5	16.0	21.2	29.1	3.1	23.4	11.8	56.0	6.0	39.1	3.4	32.9	13.2	47.5	10.2	39.3	1.2	46.4	3.0
10/14/92	2045	0.0	29.7	17.9	21.1	28.0	3.2	23.0	15.5	54.9	3.5	38.8	3.7	31.7	12.8	46.9	7.4	38.6	8.6	46.4	3.1
10/14/92	2100	29.0	0.0	21.0	27.1	28.1	3.0	18.6	16.4	47.2	7.2	33.9	8.4	28.4	16.6	44.0	10.4	36.0	1.0	45.1	3.6
10/14/92	2115	26.3	0.0	19.9	25.1	27.0	3.0	14.7	21.4	37.7	10.6	20.4	3.8	29.1	16.2	45.6	9.0	37.5	9.5	43.9	3.9
10/14/92	2130	39.6	0.0	13.9	14.1	31.2	3.0	21.3	12.7	56.7	3.7	38.5	3.0	29.5	13.2	45.2	10.5	36.5	1.1	51.2	3.2
10/14/92	2145	20.9	0.0	12.9	19.3	27.9	3.1	16.1	20.0	42.5	10.8	33.7	11.2	25.3	12.8	43.7	10.1	35.0	9.2	46.0	3.1
10/14/92	2200	25.6	0.0	14.1	21.4	27.5	3.2	14.6	18.4	44.6	7.0	37.5	8.9	28.9	14.2	42.9	9.9	34.8	1.0	47.2	3.3
10/14/92	2215	25.7	0.0	15.8	20.4	27.2	3.0	15.4	16.4	43.4	7.5	35.8	8.9	25.3	17.4	41.2	13.7	31.3	9.9	48.4	4.1
10/14/92	2230	25.8	0.0	16.6	23.7	27.2	5.5	13.5	19.6	39.6	8.8	32.7	10.0	26.7	18.4	41.3	12.1	33.0	1.1	46.9	3.6
10/14/92	2245	25.8	0.0	15.8	23.3	27.5	3.1	14.0	19.3	39.4	9.1	32.3	11.1	27.3	18.6	39.9	13.2	32.8	1.1	45.8	3.1

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
10/15/92	15	30.8	0.0	11.6	9.9	29.3	3.0	30.8	6.2	55.2	2.9	39.6	3.0	28.0	12.9	42.6	7.4	33.2	7.9	49.1	3.0
10/15/92	30	30.4	0.0	9.9	11.5	29.1	3.0	28.8	8.7	54.8	3.0	39.7	3.0	27.8	19.5	43.2	10.5	34.9	8.3	52.5	3.0
10/15/92	45	30.4	0.0	10.0	10.5	28.9	3.0	30.0	6.6	55.9	2.9	38.4	3.0	25.7	14.2	41.4	11.1	31.8	8.6	50.2	3.0
10/15/92	100	30.5	0.0	16.3	15.3	29.5	3.0	26.3	8.1	54.9	2.9	40.7	3.7	28.9	15.0	38.6	11.9	33.1	9.2	43.5	3.0
10/15/92	115	30.5	0.0	10.4	11.8	29.0	3.0	26.3	8.1	54.5	3.0	40.6	3.1	25.4	18.9	43.2	11.0	32.8	8.8	49.4	3.2
10/15/92	130	30.6	0.0	11.6	14.8	28.9	3.0	25.2	8.5	54.3	3.0	40.9	3.1	27.2	13.9	44.1	10.6	34.8	9.3	53.2	3.0
10/15/92	145	30.6	0.0	10.9	15.0	28.9	3.0	25.6	7.8	54.6	2.9	40.6	3.9	28.7	14.4	43.5	11.0	34.4	9.7	53.4	3.1
10/15/92	200	30.6	0.0	17.6	18.2	29.4	3.0	23.1	8.5	52.8	4.3	40.6	7.3	24.6	16.1	39.2	12.1	31.1	8.9	53.3	3.1
10/15/92	215	30.7	0.0	12.7	13.9	29.4	3.0	24.6	14.7	53.9	3.7	41.4	7.6	26.4	16.1	40.2	11.5	32.5	1.1	52.0	3.0
10/15/92	230	29.0	0.0	18.8	13.4	28.9	3.0	26.4	7.1	54.2	2.9	41.7	3.1	28.2	13.9	42.5	9.6	34.8	9.2	52.6	3.2
10/15/92	245	28.1	0.0	11.0	12.0	28.5	3.0	31.2	5.1	55.4	2.9	40.5	3.0	25.8	15.0	40.7	12.1	32.4	1.1	52.2	3.0
10/15/92	300	26.9	0.0	19.5	10.1	29.1	3.0	30.7	9.8	55.4	2.9	40.2	3.0	29.5	13.2	37.5	12.8	31.0	1.1	50.2	3.0
10/15/92	315	25.7	0.0	9.9	9.0	28.6	3.0	33.0	3.3	55.8	2.9	40.1	3.0	31.4	12.6	45.3	13.5	36.8	7.1	46.5	3.0
10/15/92	330	25.9	0.0	11.3	9.9	28.8	3.0	33.7	3.2	56.0	2.9	39.7	3.0	31.4	12.8	41.1	8.6	33.3	8.7	51.4	3.0
10/15/92	345	25.8	0.0	12.2	9.0	28.6	3.0	33.0	3.1	56.3	2.9	37.4	3.0	31.5	10.4	40.6	5.8	33.9	5.8	52.1	3.2
10/15/92	400	25.6	0.0	10.7	8.5	29.2	3.0	33.8	3.1	56.2	2.9	38.1	3.0	30.5	12.9	38.1	6.4	31.1	6.8	50.9	3.2
10/15/92	415	25.6	0.0	15.6	8.8	28.7	3.0	30.3	3.1	56.0	2.9	35.0	3.0	27.3	15.0	35.2	12.6	28.8	1.1	47.3	6.5
10/15/92	430	25.8	0.0	14.1	8.5	29.0	3.0	32.8	3.1	56.1	2.9	36.9	3.0	27.7	21.7	35.1	17.2	29.4	1.3	51.9	3.0
10/15/92	445	24.9	0.0	13.8	8.3	28.8	3.0	32.5	3.1	56.3	2.9	36.3	3.0	32.1	10.1	40.3	11.5	33.5	8.5	50.2	3.1
10/15/92	500	24.3	0.0	11.9	8.4	28.8	3.0	33.5	4.8	56.0	2.9	37.0	3.0	31.9	11.9	40.0	12.4	33.9	1.2	50.9	3.0
10/15/92	515	23.9	0.0	11.6	8.4	28.7	3.0	31.7	4.7	55.6	2.9	38.1	3.0	28.9	15.8	37.1	18.3	29.2	9.7	50.9	3.0
10/15/92	530	23.9	0.0	11.4	9.6	28.4	3.0	32.3	4.7	55.8	2.9	37.5	3.0	28.9	14.8	38.3	10.6	31.0	1.0	49.7	3.0
10/15/92	545	21.7	0.0	11.5	11.6	28.4	3.0	25.0	13.8	52.7	4.4	40.6	3.6	24.8	16.6	38.2	12.0	31.2	1.0	51.4	3.0
10/15/92	600	23.7	0.0	35.0	17.1	28.1	13.4	21.0	16.0	51.0	5.0	41.7	7.2	24.1	24.8	40.4	13.7	31.8	1.2	43.7	3.0
10/15/92	615	23.8	0.0	11.4	15.6	28.5	4.2	19.1	14.3	48.9	5.8	40.5	6.9	28.5	27.3	42.7	16.3	33.3	1.2	49.0	3.0
10/15/92	630	24.2	0.0	13.0	19.3	28.1	3.0	14.7	18.1	38.3	10.2	32.4	10.6	27.2	14.0	42.3	9.7	33.5	8.8	47.3	3.0
10/15/92	645	23.9	0.0	13.1	19.7	28.2	3.7	15.2	18.1	38.9	9.4	33.2	9.3	27.4	17.0	44.3	10.6	34.8	8.6	49.6	3.0
10/15/92	700	23.4	0.0	13.5	19.9	28.3	3.7	15.2	16.6	38.3	7.7	32.1	8.3	27.9	15.8	45.2	9.6	35.2	7.0	41.8	3.0
10/15/92	715	23.4	0.0	12.6	17.9	28.2	4.1	16.6	15.7	40.6	6.7	34.3	9.4	28.1	13.8	42.1	11.1	34.0	1.0	41.9	3.0
10/15/92	730	25.3	0.0	13.8	18.6	27.7	3.0	16.4	17.0	42.4	7.4	33.7	9.5	28.6	13.1	43.9	10.0	35.8	8.7	48.1	3.0
10/15/92	745	27.3	0.0	13.6	20.4	27.9	3.2	18.4	13.6	45.0	6.0	35.4	8.6	30.0	13.9	43.3	11.1	34.4	8.5	48.6	3.0
10/15/92	800	27.9	0.0	11.9	17.4	27.9	3.0	19.9	13.5	49.5	4.7	37.4	8.4	28.8	15.6	43.1	11.2	33.6	8.9	51.6	3.7
10/15/92	815	28.0	0.0	12.5	15.0	27.9	3.0	20.5	11.8	48.1	5.9	38.1	9.5	29.2	12.5	44.4	11.0	35.0	8.7	49.7	3.0
10/15/92	830	27.8	0.0	13.1	16.2	27.9	3.0	21.7	12.3	49.4	4.7	38.3	6.8	29.6	13.3	46.7	6.3	35.8	7.6	49.8	3.0
10/15/92	845	27.9	0.0	12.2	17.1	27.9	3.0	20.9	13.7	50.8	4.7	37.4	9.3	29.5	13.6	43.7	11.1	34.0	9.3	49.1	3.0
10/15/92	900	27.8	0.0	0.1	15.7	27.8	3.0	21.4	13.3	50.1	4.8	38.1	8.8	29.3	12.5	42.9	11.3	35.1	1.1	47.7	3.0
10/15/92	915	27.8	0.0	12.5	16.4	28.0	3.0	21.2	12.5	50.5	5.8	39.9	8.1	30.9	11.4	40.8	12.0	33.4	9.6	52.1	3.6
10/15/92	930	27.8	0.0	11.9	16.7	27.8	3.0	21.2	11.9	51.4	4.4	37.9	9.1	29.9	11.1	44.9	10.3	34.7	1.0	49.1	3.0
10/15/92	945	27.8	0.0	11.0	17.0	28.0	3.0	21.7	11.3	50.7	4.3	37.8	8.8	29.7	13.8	45.1	10.0	35.5	1.1	48.5	3.0
10/15/92	1000	26.0	0.0	9.8	14.6	28.2	3.0	23.2	11.2	53.4	3.6	40.9	7.9	31.2	15.8	45.8	11.3	36.8	9.2	53.6	3.0
10/15/92	1015	27.1	0.0	12.1	13.4	28.3	3.0	22.9	10.1	51.8	6.0	40.7	7.8	30.3	13.9	45.8	12.9	34.8	9.4	53.5	3.0
10/15/92	1030	28.9	0.0	12.0	14.5	28.3	3.0	25.9	7.8	53.4	4.1	41.9	7.2	28.7	12.6	44.4	11.4	34.3	9.1	53.3	3.0
10/15/92	1045	27.6	0.0	10.1	13.7	28.3	3.0	27.5	7.3	55.2	3.1	42.9	5.8	28.8	15.1	43.6	10.6	34.3	8.7	53.9	3.0
10/15/92	1100	29.0	0.0	8.6	12.6	28.5	3.0	27.9	4.6	54.9	3.4	41.4	4.4	28.8	13.3	43.4	11.9	33.8	9.0	53.0	3.0
10/15/92	1115	28.9	0.0	10.8	11.7	28.2	3.0	28.7	8.1	57.0	3.3	42.4	3.0	28.5	15.1	41.1	16.2	31.3	8.5	50.8	3.0
10/15/92	1130	26.2	0.0	10.0	14.3	29.0	3.0	26.8	10.3	57.0	3.5	41.9	8.6	25.5	16.6	42.1	12.4	31.0	1.0	50.4	3.0
10/15/92	1145	26.3	0.0	10.3	15.0	28.5	3.0	21.4	12.3	51.1	6.0	38.7	7.6	25.8	13.0	40.3	12.2	31.0	9.3	53.8	3.0
10/15/92	1200	35.6	0.0	10.6	13.9	28.7	3.0	33.8	5.1	59.6	2.9	40.8	3.0	27.0	14.2	42.9	14.4	32.9	9.4	54.2	3.1
10/15/92	1215	34.7	0.0	13.5	12.0	28.1	3.0	35.4	3.1	60.9	2.9	39.7	3.0	27.2	14.3	42.8	12.9	33.2	9.3	51.5	3.0
10/15/92	1230	34.0	0.0	9.6	12.6	28.2	3.0	35.3	3.2	61.2	2.9	39.5	3.0	27.9	14.8	42.8	11.2	33.9	1.1	54.4	3.0
10/15/92	1245	34.5	0.0	14.8	13.4	28.5	3.0	34.7	3.1	61.4	2.9	38.8	3.0	27.9	12.8	42.6	10.6	33.4	9.2	54.3	3.0
10/15/92	1300	34.2	0.0	9.0	12.0	28.1	3.0	34.5	3.1	61.5	3.0	38.9	3.0	27.1	15.3	40.9	12.3	30.9	1.1	46.3	3.0
10/15/92	1315	33.1	0.0	8.3	12.3	28.3	3.0	34.7	3.3	61.7	3.0	38.6	3.0	28.3	18.7	41.1	10.6	32.3	1.1	54.9	3.0
10/15/92	1330	29.5	0.0	12.7	12.6	28.7	3.0	33.5	7.9	61.8	3.0	38.8	3.0	24.4	16.4	40.8	11.8	30.2	8.7	53.8	3.0
10/15/92	1345	32.9	0.0	14.4	13.6	28.4	3.0	34.5	3.8	61.7	3.0	38.9	3.0	25.3	16.3	40.4	12.0	31.7	1.1	54.1	3.0
10/15/92	1400	35.5	0.0	12.7	11.9	28.7	3.0	34.5	3.2	62.2	3.0	37.9	3.0	25.2	15.9	38.4	16.7	30.8	1.1	53.0	3.0
10/15/92	1415	34.3	0.0	13.1	11.4	28.8	3.0	36.1	3.1	61.6	3.0	39.3	3.3	25.0	19.0	40.0	13.3	30.3	1.1	48.2	3.0
10/15/92	1430	33.8	0.0	11.7	11.3	28.3	3.0	35.5	3.1	61.4	3.0	38.9	3.0	24.8	16.0	38.4	13.6	29.3	1.1	54.7	3.0
10/15/92	1445	31.4	0.0	13.4	18.1	28.7	3.0	35.6	3.2	62.0	3.0	39.7	3.0	24.0	17.6	40.1	14.3	30.3	1.1	51.0	3.0
10/15/92	1500	35.3	0.0	10.0	13.5	28.6	3.0	34.6	3.3	62.4	3.0	38.0	3.0	21.4	21.0	38.2	13.2	25.9	1.1	54.0	3.0
10/15/92	1515	30.7	0.0	10.																	

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spk/ min	D 2 KW	D 2 spk/ min	D 3 KW	D 3 spk/ min	D 4 KW	D 4 spk/ min	C 1 KW	C 1 spk/ min	C 2 KW	C 2 spk/ min	C 3 KW	C 3 spk/ min	C 4 KW	C 4 spk/ min
10/15/92	1630	0.1	27.7	11.5	19.1	28.6	3.1	24.4	12.9	59.2	5.8	41.1	7.1	23.6	17.0	40.1	10.5	31.3	9.5	53.8	3.0
10/15/92	1645	0.1	27.7	14.3	23.2	28.3	3.3	21.7	13.6	54.4	6.8	40.6	7.4	23.7	19.8	37.7	16.1	29.2	1.2	51.1	3.0
10/15/92	1700	0.1	26.8	15.1	47.8	28.5	3.1	20.8	14.7	53.3	6.4	38.3	8.6	22.9	18.3	38.4	14.8	28.5	1.1	48.8	3.0
10/15/92	1715	0.1	26.6	13.5	23.5	28.3	3.5	20.4	16.6	50.8	9.9	38.7	9.3	21.4	20.8	37.7	15.3	27.9	1.2	49.3	3.0
10/15/92	1730	0.2	30.0	14.7	22.2	28.4	3.0	22.6	12.2	57.4	6.2	39.9	4.9	23.7	20.4	37.8	16.8	28.1	1.1	49.8	3.0
10/15/92	1745	0.2	29.7	12.7	19.4	28.5	3.8	24.0	12.6	58.5	5.4	40.4	3.8	22.2	21.0	38.8	15.0	27.5	9.9	52.2	3.0
10/15/92	1800	0.2	30.0	12.4	18.3	28.5	3.0	25.0	11.5	57.5	7.5	40.6	6.0	22.9	28.4	37.8	22.9	27.7	1.7	51.2	3.0
10/15/92	1815	0.2	29.7	12.6	17.4	28.5	3.1	24.4	10.6	56.9	5.5	40.8	5.0	22.3	24.0	38.2	16.6	29.0	1.1	50.3	3.0
10/15/92	1830	0.2	29.9	12.8	17.1	28.4	3.0	24.9	10.3	57.1	3.9	40.9	4.2	23.0	23.7	38.2	16.7	27.0	1.2	49.2	3.0
10/15/92	1845	0.1	30.2	13.3	16.7	28.4	3.1	24.4	10.6	57.7	5.7	41.1	3.8	23.0	20.0	38.5	14.5	26.7	9.9	44.5	3.0
10/15/92	1900	0.1	29.6	15.1	17.7	28.4	3.1	24.1	11.0	54.8	4.1	40.8	4.4	22.2	26.7	39.5	16.1	28.8	1.0	51.5	3.0
10/15/92	1915	0.1	29.5	16.4	17.4	28.4	3.0	24.2	11.4	56.3	6.5	40.5	4.3	26.0	17.8	38.6	14.3	29.6	10.0	51.8	3.1
10/15/92	1930	0.1	29.4	17.3	18.3	28.5	3.0	23.4	14.0	54.8	5.3	40.0	10.3	21.8	32.5	35.7	20.4	25.0	1.3	49.9	3.0
10/15/92	1945	0.1	28.7	14.5	16.9	28.5	3.0	24.1	13.3	55.8	4.7	40.1	3.8	23.5	28.5	38.3	20.0	28.2	1.2	50.2	3.0
10/15/92	2000	0.1	29.4	16.4	18.4	28.7	3.1	23.4	12.6	54.3	4.8	40.2	4.7	25.8	17.4	38.1	12.6	27.6	1.2	50.5	3.5
10/15/92	2015	0.1	28.7	17.7	19.5	27.8	4.2	22.0	13.5	52.1	4.3	39.7	4.5	25.1	20.9	39.4	14.3	29.7	1.0	50.2	3.0
10/15/92	2030	0.1	28.0	16.9	23.3	28.7	3.0	20.8	14.3	50.6	7.6	38.4	5.4	26.5	14.4	38.2	16.6	27.0	1.2	48.5	3.7
10/15/92	2045	0.1	27.7	15.2	25.4	28.2	3.1	20.7	14.1	54.0	6.9	37.7	11.7	27.1	15.9	36.5	16.3	27.7	1.1	43.7	3.0
10/15/92	2100	0.1	28.0	15.4	24.0	28.3	3.0	20.7	14.5	51.1	7.9	38.4	6.3	25.4	17.8	36.1	17.0	26.2	1.0	47.1	3.0
10/15/92	2115	0.1	27.2	14.4	26.5	28.7	3.1	21.5	14.6	54.1	4.9	38.5	5.5	23.4	17.2	33.8	14.2	24.4	1.1	46.5	3.2
10/15/92	2130	0.1	26.9	15.6	28.5	28.6	3.2	20.7	14.7	49.0	5.2	37.6	4.2	27.9	21.3	38.6	15.3	28.3	1.1	43.6	3.0
10/15/92	2145	0.1	26.6	17.0	30.1	28.8	4.6	20.3	13.6	53.2	3.8	37.6	3.7	29.6	13.6	38.4	15.1	29.9	1.0	45.9	3.0
10/15/92	2200	0.1	26.6	16.3	31.0	28.1	3.0	21.1	13.8	53.0	4.4	36.9	4.1	29.1	16.8	37.4	14.0	29.3	1.0	45.8	3.2
10/15/92	2215	0.1	27.4	17.0	31.4	28.7	3.0	21.2	12.3	54.3	6.4	37.9	3.4	27.7	13.1	39.0	12.8	31.2	1.1	47.8	3.0
10/15/92	2230	0.0	26.6	18.7	34.3	0.0	?	0.0	?	0.0	?	0.0	?	0.0	?	0.0	?	0.0	10.0	0.0	?
10/15/92	2245	0.0	25.6	21.8	41.9	27.5	12.0	19.7	15.0	51.7	7.5	36.9	9.5	27.8	15.9	39.9	17.7	31.0	8.6	46.4	3.0
10/15/92	2300	0.0	28.6	18.0	28.2	29.0	3.0	20.9	13.3	52.0	7.0	38.5	5.6	26.0	18.3	40.8	13.5	30.4	9.4	47.7	3.1
10/15/92	2315	0.0	29.4	15.2	24.9	28.6	3.9	19.9	12.0	54.7	5.4	39.8	4.6	28.6	15.9	36.9	13.5	28.5	1.1	49.3	3.0
10/15/92	2330	0.0	29.4	13.9	23.2	28.4	3.0	21.9	13.8	54.6	4.2	41.1	4.3	27.8	13.2	39.6	14.9	28.3	1.0	50.6	3.0
3/15/92	2345	0.0	28.9	13.8	24.0	28.4	3.1	21.7	11.2	54.6	4.1	41.1	5.2	26.7	20.8	37.0	18.7	27.2	1.4	50.4	3.6
10/16/92	0	0.0	28.5	14.9	24.1	28.6	3.1	22.2	12.7	57.7	3.0	39.8	7.7	28.4	15.6	40.8	11.4	30.3	1.1	49.1	3.0
10/16/92	15	0.0	29.8	14.5	23.2	27.8	3.1	22.0	12.8	57.5	3.1	40.8	3.8	31.2	11.8	40.6	13.8	30.9	8.4	47.4	3.0
10/16/92	30	0.0	32.8	10.7	15.7	28.2	3.0	26.6	11.3	52.1	3.1	43.3	3.0	26.5	15.4	39.7	12.1	29.2	9.7	48.1	3.0
10/16/92	45	0.0	27.6	12.6	22.8	28.7	3.1	21.9	12.5	54.7	5.2	41.9	9.5	23.8	17.2	40.2	11.3	30.4	8.0	51.1	3.1
10/16/92	100	0.0	26.8	16.9	30.1	28.7	3.0	25.0	11.1	54.8	2.9	38.9	3.0	26.6	14.1	40.7	11.5	30.9	1.0	47.2	3.0
10/16/92	115	0.0	28.4	17.2	27.4	29.3	6.4	23.7	10.8	56.5	3.0	39.7	3.0	29.4	18.4	44.3	12.7	33.3	1.0	48.7	3.0
10/16/92	130	0.0	28.4	13.8	25.7	27.9	3.0	23.1	10.4	56.0	3.6	41.2	4.3	28.8	16.2	36.9	16.0	28.6	1.1	49.3	3.0
10/16/92	145	0.0	28.4	10.7	21.2	27.7	3.0	22.8	10.5	56.4	3.0	42.3	6.2	30.7	13.0	38.0	15.2	28.7	1.1	48.1	3.2
10/16/92	200	0.0	28.5	11.0	16.8	27.7	3.0	22.7	11.4	53.9	3.5	41.9	3.7	29.2	14.6	38.5	13.7	27.5	9.7	46.3	3.0
10/16/92	215	0.0	28.5	9.3	14.3	28.5	3.0	26.1	9.5	51.6	3.7	43.3	3.4	29.6	17.5	37.8	11.7	30.7	1.1	52.7	3.2
10/16/92	230	0.0	25.0	9.4	17.0	27.6	3.0	21.1	13.4	55.6	3.0	42.2	6.0	30.7	11.3	35.5	13.6	28.3	1.1	51.6	3.0
10/16/92	245	0.0	26.6	7.6	12.4	28.2	3.0	27.3	7.6	53.1	2.9	42.8	3.0	30.1	17.0	35.3	14.4	27.6	1.0	53.1	3.0
10/16/92	300	0.0	25.7	7.5	15.6	28.1	3.0	23.1	15.1	52.6	3.8	42.7	4.3	32.2	13.3	35.7	13.2	29.9	1.1	52.5	3.4
10/16/92	315	0.0	25.6	9.0	16.2	27.8	3.0	21.8	11.8	52.9	4.0	42.9	6.0	36.0	9.7	39.3	10.9	32.8	1.1	51.5	3.0
10/16/92	330	0.0	25.2	10.4	16.7	27.6	3.0	20.8	12.5	55.6	6.0	41.1	5.2	35.5	12.4	40.9	10.2	33.2	10.0	50.7	4.4
10/16/92	345	0.0	25.0	11.0	17.3	27.6	3.0	22.2	9.9	54.2	5.1	42.4	4.9	31.3	8.8	38.0	14.3	29.6	1.1	51.7	3.0
10/16/92	400	0.0	25.1	13.4	17.4	27.5	3.0	21.3	12.2	56.2	2.9	42.1	5.3	31.5	14.8	38.4	13.7	30.3	1.1	48.5	3.0
10/16/92	415	0.0	25.0	8.6	13.9	27.6	3.0	24.3	10.5	53.5	3.4	43.1	3.0	33.1	13.4	38.4	11.7	32.0	1.1	44.5	3.0
10/16/92	430	0.0	25.6	12.0	14.1	28.6	3.0	23.2	10.5	52.7	2.9	44.0	3.6	33.5	11.9	38.3	12.3	32.0	1.1	48.5	3.3
10/16/92	445	0.0	25.6	10.1	13.9	28.1	3.0	21.7	12.3	49.6	5.0	43.1	4.7	30.9	10.0	37.5	11.9	32.4	1.0	51.5	3.2
10/16/92	500	0.0	29.2	8.9	12.5	29.5	3.0	25.5	10.3	53.4	2.9	43.1	3.0	33.2	9.6	38.8	11.2	33.2	1.0	51.4	3.0
10/16/92	515	0.0	25.0	9.0	15.6	27.8	3.0	22.6	10.5	54.7	3.7	41.8	3.9	34.1	9.3	38.1	10.1	32.7	10.0	51.0	3.0
10/16/92	530	0.0	25.2	10.9	17.8	27.7	3.2	21.5	10.9	56.8	2.9	40.6	3.0	34.7	10.6	39.9	9.4	35.0	1.1	50.8	3.1
10/16/92	545	0.0	25.1	11.4	20.4	27.7	3.0	22.6	9.9	56.0	3.3	39.6	4.5	34.9	10.0	41.5	7.6	35.7	6.9	44.6	3.0
10/16/92	600	0.0	25.2	37.3	30.8	28.3	4.0	20.7	12.2	52.2	3.3	38.2	3.0	30.1	10.4	41.2	10.6	33.3	9.8	45.8	3.4
10/16/92	615	0.0	25.3	17.8	27.6	28.6	3.1	22.3	13.4	53.1	2.9	38.9	3.8	27.8	16.6	40.7	10.3	34.0	9.6	46.3	4.5
10/16/92	630	0.0	25.6	16.9	27.5	28.2	3.0	22.3	10.4	53.6	3.1	37.1	3.2	31.8	10.4	42.4	11.4	35.8	8.8	47.2	3.6
10/16/92	645	0.0	25.5	18.0	32.9	28.7	3.0	22.1	13.3	51.2	2.9	38.1	3.1	34.4	9.9	43.2	9.3	36.6	8.4	46.0	3.0
10/16/92	700	0.0	29.6	12.7	20.4	27.2	3.0	23.4	11.2	57.0	3.3	40.2	3.0	33.0	11.0	42.7	9.5	35.9	9.6	48.4	3.0
10/16/92	715	0.0	27.9	19.2	31.6	27.4	4.9	20.0	14.5	51.5	2.9	35.8	5.3	33.7	8.5	43.7	10.2	36.7	9.6	43.6	3.0

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/mn	D2 KW	D2 spk/mn	D3 KW	D3 spk/mn	D4 KW	D4 spk/mn	C1 KW	C1 spk/mn	C2 KW	C2 spk/mn	C3 KW	C3 spk/mn	C4 KW	C4 spk/mn
10/16/92	845	28.3	0.0	14.0	18.8	28.1	3.0	18.9	15.3	45.6	8.1	40.6	10.3	26.9	13.8	43.0	12.8	35.0	8.9	48.8	3.0
10/16/92	900	28.2	0.0	12.6	18.3	28.1	3.0	17.4	16.5	43.7	7.8	38.8	9.6	27.8	14.4	42.7	11.3	34.1	1.0	50.2	3.4
10/16/92	915	27.9	0.0	14.2	19.4	28.2	3.0	17.4	14.3	43.2	6.0	37.7	8.6	30.7	14.2	44.3	11.6	36.2	9.4	49.4	3.0
10/16/92	930	31.4	0.0	14.4	15.4	29.4	3.0	21.5	11.2	51.8	3.2	45.3	6.4	30.1	12.0	43.3	10.7	34.8	8.1	52.2	3.2
10/16/92	945	35.0	0.0	12.3	12.8	30.2	3.0	28.6	5.3	53.5	2.9	43.0	3.6	29.8	10.4	43.4	10.8	34.3	1.2	51.7	3.0
10/16/92	1000	35.4	0.0	10.3	10.9	29.7	3.0	31.5	3.8	55.0	2.9	41.0	3.0	29.5	14.5	39.1	9.7	32.8	8.2	48.8	3.0
10/16/92	1015	35.6	0.0	11.3	11.4	29.3	3.0	33.2	3.1	55.8	3.0	39.8	3.0	30.4	14.2	43.3	11.2	35.5	8.9	48.6	3.3
10/16/92	1030	35.0	0.0	12.3	10.3	29.0	3.0	33.3	3.6	56.8	2.9	39.4	3.0	31.1	15.5	43.9	10.9	36.1	9.8	49.7	3.0
10/16/92	1045	35.6	0.0	11.1	10.4	29.2	3.0	33.7	3.1	56.5	3.0	39.4	3.0	28.8	11.1	39.9	8.1	34.1	1.1	51.8	3.0
10/16/92	1100	38.5	0.0	8.7	11.4	29.1	3.0	33.8	3.2	57.8	2.9	38.8	3.0	29.0	17.5	42.5	12.3	33.7	1.0	53.4	3.1
10/16/92	1115	35.4	0.0	15.9	10.6	28.9	3.0	33.7	3.4	56.9	3.0	39.3	3.0	27.8	10.8	42.8	9.5	34.1	9.5	53.3	3.0
10/16/92	1130	35.9	0.0	15.7	10.9	29.1	3.0	33.7	3.2	57.2	2.9	39.9	3.0	29.2	13.8	42.0	12.0	33.8	9.4	51.0	3.0
10/16/92	1145	35.7	0.0	9.8	11.3	28.8	3.0	34.5	3.1	58.1	2.9	39.3	3.0	27.8	17.9	43.8	11.5	31.9	9.6	53.4	3.1
10/16/92	1200	35.5	0.0	10.3	11.8	28.6	3.0	34.6	3.5	58.5	2.9	39.2	3.0	27.6	15.9	40.6	13.4	32.4	9.9	53.8	3.0
10/16/92	1215	35.4	0.0	12.3	11.9	28.7	3.0	34.5	3.2	58.3	3.1	39.1	3.0	27.7	14.1	41.7	13.0	33.7	1.2	52.3	3.0
10/16/92	1230	35.4	0.0	12.9	11.9	28.6	3.0	34.8	3.1	58.5	2.9	38.9	3.0	27.4	11.7	41.2	9.5	33.1	9.9	53.4	3.0
10/16/92	1245	35.2	0.0	12.7	11.0	28.2	3.0	34.5	3.8	58.8	3.0	38.5	3.0	27.9	16.7	42.3	10.8	33.9	9.4	52.6	3.0
10/16/92	1300	35.4	0.0	12.2	11.3	28.3	3.0	35.1	3.1	58.7	2.9	40.1	3.0	28.8	12.4	42.2	11.4	33.4	9.7	52.7	3.0
10/16/92	1315	35.1	0.0	12.7	14.7	28.4	3.0	35.1	3.1	58.8	3.0	39.8	3.0	25.7	15.7	40.4	12.9	32.3	1.1	50.3	3.0
10/16/92	1330	35.6	0.0	13.2	11.6	28.2	3.0	33.4	3.1	59.6	3.0	37.4	3.0	27.2	15.7	41.4	14.6	32.9	1.1	51.0	3.0
10/16/92	1345	33.5	0.0	12.8	10.8	28.2	3.0	34.7	3.1	58.6	3.0	38.7	3.0	27.0	15.5	43.7	12.3	33.9	8.5	51.9	3.0
10/16/92	1400	32.4	0.0	11.0	12.0	28.2	3.0	34.6	3.1	58.8	3.0	38.4	3.1	28.2	14.4	42.9	12.3	34.0	9.5	48.3	3.0
10/16/92	1415	32.6	0.0	10.9	13.2	28.5	3.1	34.9	3.2	58.2	3.0	39.8	3.0	28.4	16.5	41.7	11.9	33.8	1.0	46.6	3.0
10/16/92	1430	32.6	0.0	11.9	12.0	28.1	3.1	34.7	3.7	58.0	2.9	40.3	3.0	28.8	17.5	43.7	12.2	35.7	1.0	45.2	3.0
10/16/92	1445	29.6	0.0	16.1	29.0	28.9	3.2	27.3	11.1	52.7	7.0	38.1	8.3	28.0	14.2	43.8	10.4	34.1	8.7	47.0	3.0
10/16/92	1500	0.0	33.0	11.2	12.8	28.9	3.2	30.2	12.4	57.6	2.9	40.9	3.0	27.6	16.1	43.6	12.5	34.1	8.7	47.3	3.0
10/16/92	1515	0.0	35.0	10.8	11.5	28.3	3.0	31.8	6.0	57.9	2.9	40.5	3.0	28.5	17.3	42.4	12.1	34.5	1.1	52.1	3.0
10/16/92	1530	0.0	35.2	10.7	11.5	28.0	3.0	34.5	3.8	58.2	2.9	40.1	3.0	28.5	16.5	43.3	11.9	34.9	9.4	52.4	3.0
10/16/92	1545	0.0	35.4	10.2	10.6	28.3	3.1	34.8	3.1	58.7	2.9	39.5	3.0	27.6	31.0	46.6	13.2	36.7	9.3	51.7	3.0
10/16/92	1600	0.0	34.4	12.0	12.6	29.4	3.2	33.7	3.1	58.7	3.0	38.4	3.0	27.3	18.9	44.7	12.8	33.4	1.1	51.8	3.0
10/16/92	1615	0.0	34.3	12.0	12.3	29.4	3.1	33.7	3.6	58.7	3.0	39.4	3.0	22.8	34.4	40.4	21.7	29.4	1.5	51.2	3.0
10/16/92	1630	0.0	33.9	12.2	11.5	28.7	3.0	33.5	4.9	57.7	3.0	40.3	3.0	24.4	16.7	39.4	17.5	27.1	1.1	51.9	3.0
10/16/92	1645	0.0	34.1	12.3	11.4	28.7	3.1	32.5	4.6	58.3	2.9	40.0	3.0	24.2	22.0	39.7	17.5	28.5	1.0	51.5	3.0
10/16/92	1700	0.0	33.3	11.9	11.3	29.0	3.1	31.8	5.8	58.0	2.9	40.3	3.0	26.1	18.4	39.7	13.3	30.3	1.1	47.7	3.0
10/16/92	1715	0.0	33.2	12.1	12.0	28.9	3.1	31.2	6.2	58.1	2.9	40.2	3.0	25.0	20.4	40.6	12.5	30.5	9.5	49.1	3.0
10/16/92	1730	0.0	31.7	11.8	12.2	28.9	3.0	27.9	10.6	58.3	3.0	39.9	3.0	25.5	15.7	40.0	14.3	30.6	1.2	50.8	3.0
10/16/92	1745	0.0	31.2	13.9	13.3	28.2	3.1	26.6	8.9	58.6	3.0	39.9	3.0	25.0	15.2	40.4	13.1	30.4	8.8	50.4	3.0
10/16/92	1800	0.0	31.5	13.6	13.0	28.2	3.2	26.1	10.8	57.6	3.8	40.1	3.1	25.5	17.1	41.5	11.8	31.7	9.1	49.0	3.0
10/16/92	1815	0.0	33.0	12.6	12.3	28.2	3.0	26.5	8.5	57.1	3.6	39.7	3.0	24.8	14.6	39.7	16.0	29.8	1.0	47.9	3.0
10/16/92	1830	0.0	30.8	13.9	15.1	27.9	3.0	25.0	12.8	55.2	5.9	39.4	3.0	24.8	16.9	37.1	13.8	29.1	1.1	48.6	3.0
10/16/92	1845	0.0	31.1	14.0	16.6	27.6	3.0	22.2	12.9	55.2	5.3	39.7	7.5	23.6	18.0	38.3	13.7	29.5	9.8	45.2	3.0
10/16/92	1900	0.0	30.5	14.8	18.7	27.6	3.0	20.9	13.0	51.1	5.4	39.4	6.3	23.3	16.5	35.9	13.9	28.7	1.2	48.1	6.8
10/16/92	1915	0.0	30.1	16.6	19.5	27.6	3.0	19.7	14.1	50.2	6.1	38.0	5.9	23.7	21.8	34.8	14.2	27.1	1.2	46.5	3.1
10/16/92	1930	0.0	29.6	15.7	19.9	27.5	3.0	19.1	16.8	47.8	6.4	37.9	3.8	24.4	19.3	35.1	13.1	27.9	1.4	41.7	3.0
10/16/92	1945	0.0	28.8	16.3	20.3	27.4	3.0	19.0	15.2	47.7	6.5	37.7	8.1	25.6	17.4	36.3	16.2	27.6	1.0	46.2	4.9
10/16/92	2000	0.0	28.2	15.8	22.4	27.4	3.1	17.6	14.2	46.4	7.2	37.5	4.3	26.8	15.4	33.1	17.3	23.7	1.1	45.4	3.0
10/16/92	2015	0.0	27.9	18.0	25.6	27.4	3.0	16.9	17.9	45.7	9.2	36.1	6.9	26.0	14.5	35.9	16.8	26.7	1.1	44.3	3.1
10/16/92	2030	0.0	27.2	18.5	29.0	27.2	4.9	16.8	18.1	45.3	10.8	35.7	9.1	25.5	13.8	36.9	14.1	26.3	1.3	42.0	4.4
10/16/92	2045	0.0	26.8	18.6	32.0	27.6	3.0	15.9	15.8	38.6	8.4	33.6	8.0	24.9	15.1	34.8	14.0	26.3	1.0	40.2	3.0
10/16/92	2100	0.0	27.7	18.6	32.1	27.7	3.0	16.5	17.9	43.5	9.5	35.7	4.4	28.4	17.1	36.0	14.2	27.3	9.6	41.5	3.1
10/16/92	2115	0.0	27.5	17.9	34.4	27.7	3.1	16.2	18.4	37.0	9.5	34.3	11.1	25.5	17.4	35.8	13.8	27.8	1.2	36.5	3.0
10/16/92	2130	18.5	0.0	21.9	38.7	27.7	3.7	15.3	22.3	42.3	12.5	34.0	12.8	25.4	23.8	33.4	14.4	26.5	1.2	43.7	4.3
10/16/92	2145	29.3	0.0	13.1	21.7	29.8	3.1	16.0	15.3	39.1	8.2	33.6	9.5	26.3	14.3	35.8	14.7	28.1	1.1	44.2	3.1
10/16/92	2200	30.2	0.0	12.0	18.3	31.1	3.1	16.9	14.8	41.7	6.1	36.7	8.0	27.8	15.3	35.4	15.0	27.7	1.2	44.0	3.0
10/16/92	2215	27.0	0.0	12.6	21.1	29.0	4.1	14.3	20.5	32.1	10.4	31.2	9.9	25.7	13.8	35.3	14.8	28.0	1.2	45.8	4.0
10/16/92	2230	25.9	0.0	14.0	26.8	28.6	6.2	12.9	20.6	31.0	11.8	28.1	11.3	26.3	16.3	35.8	14.6	28.7	1.1	45.4	3.5
10/16/92	2245	27.1	0.0	15.3	25.8	28.4	4.2	15.0	18.4	38.0	7.9	33.0	9.0	25.9	15.4	34.7	14.6	27.5	1.2	47.1	3.9
10/16/92	2300	27.7	0.0	16.9	23.3	28.8	5.6	15.1	16.5	38.0	7.4	33.6	9.0	26.8	13.8	35.7	12.8	28.6	9.5	46.9	13.0
10/16/92	2315	27.9	0.0	14.6	19.4	30.2	3.0	14.7	18.0	36.9	8.5	31.0	10.5	25.6	19.1	35.3	14.8	28.3	1.1	48.7	5.3
10/16/92	2330	28.3	0.0	13.9	17.7	30.6	3.0	16.9	14.1	37.8	7.4	33.2	8.8	28.4	13.3	35.0	12.7	28.2	1.0	49.0	10.3
10/16/92	2345	2																			

Seward Plant Buell ESP Fields Operating Log

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20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn								
10/17/92	100	0.0	31.4	10.7	14.0	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	115	0.0	34.8	0.1	10.3	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	130	0.0	34.6	12.1	9.5	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	145	0.0	33.9	16.6	9.7	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	200	0.0	35.1	12.9	9.3	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	215	0.0	36.5	9.4	11.2	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	230	0.0	34.9	9.5	8.6	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	245	0.0	35.4	7.0	8.5	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	300	0.0	34.9	9.4	9.8	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	315	0.0	34.1	9.7	8.7	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	330	0.0	34.0	11.0	9.1	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	345	0.0	33.5	9.2	9.2	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	400	0.0	33.6	9.1	9.4	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	415	0.0	36.8	9.4	11.5	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	430	0.0	33.5	8.7	8.8	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	445	0.0	32.7	8.5	9.8	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	500	0.0	32.8	8.9	9.1	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	515	0.0	32.4	6.4	9.4	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	530	0.0	32.9	6.9	9.6	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	545	0.0	32.4	7.2	9.8	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	600	0.0	32.7	6.7	9.2	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	615	0.0	33.5	7.2	8.9	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	630	0.0	32.1	7.0	10.6	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	645	0.0	31.7	8.0	12.0	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	700	0.0	32.3	7.9	11.4	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	715	0.0	31.5	8.7	13.3	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	730	0.0	30.7	12.0	19.0	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	745	0.0	34.0	8.9	13.5	30.9	3.2	18.0	14.6	42.7	6.0	32.3	9.3	25.8	16.0	30.3	16.7	24.2	1.2	48.2	8.5
10/17/92	800	0.0	32.8	10.3	15.1	0.0	?	0.0	?	0.0	?	0.0	?	0.0	?	0.0	?	0.0	10.0	0.0	?
10/17/92	815	0.0	32.9	10.5	13.5	28.1	3.1	21.0	8.0	52.8	3.4	41.5	3.1	32.1	9.8	42.8	8.7	37.8	9.3	50.0	5.7
10/17/92	830	0.0	34.4	10.8	16.8	27.7	3.0	18.2	15.8	53.7	3.9	40.4	4.0	35.7	11.8	46.5	7.9	40.3	9.5	50.9	5.8
10/17/92	845	0.0	32.1	11.0	17.6	27.4	3.3	19.0	14.2	52.9	3.1	41.1	3.3	38.5	10.4	51.4	3.8	43.3	5.0	48.9	5.0
10/17/92	900	0.0	31.5	13.1	22.7	26.6	5.1	16.7	16.5	54.3	3.5	39.2	3.9	32.6	15.1	43.6	10.9	37.1	9.6	48.4	10.0
10/17/92	915	0.0	30.2	12.6	51.0	27.0	3.0	17.7	17.2	53.7	3.3	39.3	5.4	34.6	12.3	45.5	8.8	38.9	8.5	46.8	3.4
10/17/92	930	0.0	31.1	12.5	24.2	27.3	3.0	17.4	17.5	54.1	3.7	39.6	3.9	34.4	8.3	45.5	8.3	39.0	9.5	49.9	6.9
10/17/92	945	0.0	32.4	12.6	18.0	27.7	3.1	19.8	11.6	52.9	3.4	40.9	3.5	32.6	9.1	44.0	7.8	38.0	9.2	47.1	3.1
10/17/92	1000	0.0	33.1	10.4	17.8	27.1	3.0	20.2	10.5	53.0	3.2	41.8	3.6	33.4	9.5	43.2	5.8	39.3	8.2	44.7	3.6
10/17/92	1015	0.0	30.2	34.8	22.7	27.2	3.6	15.6	16.5	40.6	7.5	38.3	9.3	34.3	10.8	44.2	8.8	37.6	9.5	49.4	7.4
10/17/92	1030	0.0	32.0	13.7	19.9	27.3	3.0	17.6	13.9	48.4	6.1	42.4	3.7	38.0	9.3	44.0	9.3	38.4	8.6	50.7	7.0
10/17/92	1045	0.0	28.5	15.4	27.0	27.1	3.1	16.0	16.9	45.2	7.3	38.8	7.4	36.7	10.1	43.6	13.1	37.0	7.7	47.5	8.8
10/17/92	1100	0.0	25.2	17.8	31.4	27.1	3.3	13.3	19.5	28.1	12.3	29.3	10.7	32.9	15.9	43.0	10.6	36.6	8.9	38.4	5.0
10/17/92	1115	29.3	0.0	15.0	27.1	28.3	4.3	14.3	18.8	36.0	9.1	34.0	9.5	33.6	11.4	43.2	10.2	37.2	8.5	47.1	9.8
10/17/92	1130	28.9	0.0	16.2	24.4	28.9	4.1	13.5	17.9	33.6	10.8	32.6	9.8	35.8	9.0	43.6	9.5	37.6	8.5	44.9	5.3
10/17/92	1145	29.3	0.0	14.7	23.6	29.2	4.7	14.6	18.6	35.0	9.0	34.1	10.6	35.9	9.7	43.2	8.4	38.1	8.0	46.6	6.9
10/17/92	1200	29.8	0.0	15.4	23.8	30.1	3.5	14.3	17.7	36.0	8.9	33.6	10.4	35.7	12.2	44.8	8.6	39.2	9.2	47.7	4.2
10/17/92	1215	28.7	0.0	17.7	28.1	28.5	4.7	15.3	16.3	36.0	9.9	36.1	7.9	35.0	9.8	45.1	10.1	39.1	9.4	48.9	7.5
10/17/92	1230	32.0	0.0	13.8	19.0	26.1	5.0	12.3	13.8	28.8	6.9	26.0	8.8	34.4	10.0	44.5	9.5	38.6	8.9	46.9	3.9
10/17/92	1245	34.1	0.0	13.0	19.4	30.3	3.0	20.4	10.1	48.7	4.8	44.7	4.2	33.0	9.4	46.3	14.4	39.0	8.9	51.7	4.2
10/17/92	1300	35.1	0.0	11.8	16.8	30.4	3.0	20.9	12.1	47.9	5.5	41.7	6.4	36.2	8.7	47.7	8.3	41.3	7.9	52.6	5.0
10/17/92	1315	34.8	0.0	11.8	15.8	30.1	3.0	23.5	10.6	48.8	5.3	43.2	4.6	37.4	9.8	48.3	9.8	40.5	8.1	50.9	5.5
10/17/92	1330	35.3	0.0	9.7	12.9	30.6	3.0	25.5	7.7	51.2	3.8	43.7	3.4	35.0	12.9	43.8	9.9	38.4	9.1	51.1	5.7
10/17/92	1345	35.3	0.0	10.2	13.7	29.9	3.0	28.3	8.1	54.2	2.9	42.2	3.2	37.2	12.0	43.8	9.5	38.3	8.7	52.2	4.0
10/17/92	1400	35.1	0.0	12.0	15.4	29.4	3.0	21.4	12.1	44.6	7.6	39.9	8.1	36.0	9.3	44.9	9.4	39.3	1.0	49.8	4.9
10/17/92	1415	36.0	0.0	10.5	17.0	29.2	3.0	22.1	11.5	48.5	7.9	39.9	6.5	35.0	7.9	44.2	10.4	38.4	9.0	45.9	5.4
10/17/92	1430	35.1	0.0	11.9	16.2	29.4	3.0	21.7	14.2	44.4	6.1	39.4	7.0	35.0	10.3	42.8	8.2	36.3	9.9	49.6	6.2
10/17/92	1445	35.1	0.0	11.6	19.5	29.2	3.0	20.6	14.5	45.6	5.4	39.3	9.3	35.3	9.7	43.7	11.8	38.0	8.9	50.1	4.6
10/17/92	1500	35.3	0.0	13.1	17.4	29.2	3.0	21.6	15.2	45.3	6.9	39.5	7.9	34.4	16.8	43.4	12.5	37.3	9.6	47.4	3.7
10/17/92	1515	35.3	0.0	10.1	18.0	29.4	3.0	20.1	13.2	42.8	8.1	37.6	9.4	34.8	9.4	43.7	9.9	38.0	9.4	47.3	9.4
10/17/92	1530	35.2	0.0	12.1	18.6	29.1	3.0	22.1	12.4	45.9	7.2	38.7	9.7	35.0	12.8	43.7	9.0	37.7	1.3	49.9	6.1
01/17/92	1545	34.6	0.0	12.5	21.4	28.8	3.1	23.9	8.5	47.5	4.8	39.1	6.0	35.5	10.3	45.9	5.4	39.7	6.7	48.4	5.5
01/17/92	1600	30.7	0.0	11.1	22.4	28.4	3.0	17.8	16.4</												

12/3/92 20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW	D 2 KW	D 3 KW	D 4 KW	C 1 KW	C 2 KW	C 3 KW	C 4 KW								
10/17/92	1715	30.5	0.0	12.0	18.6	28.4	3.0	22.7	10.1	47.4	5.5	39.2	9.5	33.2	13.0	42.0	10.8	38.3	9.8	49.6	4.3
10/17/92	1730	30.8	0.0	12.0	19.6	28.8	3.0	21.3	13.1	42.7	8.7	34.9	8.4	33.2	13.2	43.1	8.5	37.3	8.9	45.4	4.9
10/17/92	1745	30.5	0.0	10.5	18.3	28.7	3.0	20.6	13.3	38.8	8.3	33.1	9.2	31.4	17.5	41.8	13.1	35.8	1.1	45.7	5.2
10/17/92	1800	30.6	0.0	10.4	19.9	28.9	3.0	20.7	13.6	40.7	8.0	33.4	10.0	33.7	18.2	43.1	8.8	38.7	9.6	48.8	4.6
10/17/92	1815	30.6	0.0	10.9	18.4	28.6	3.3	22.3	11.4	41.9	7.3	33.7	10.5	34.2	11.9	44.1	9.4	38.3	8.0	46.5	5.5
10/17/92	1830	30.5	0.0	11.1	17.1	28.6	3.0	20.4	14.0	40.7	8.8	33.2	10.1	33.2	18.1	44.5	11.0	37.4	7.7	49.8	4.6
10/17/92	1845	30.5	0.0	11.8	21.7	29.0	3.8	18.0	14.2	38.6	9.3	30.5	9.8	32.7	17.8	42.3	12.7	38.5	9.1	48.2	6.2
10/17/92	1900	31.2	0.0	14.4	17.7	29.5	3.0	20.9	12.5	41.7	6.8	33.8	9.7	34.4	19.0	44.7	9.6	38.1	1.2	49.2	3.7
10/17/92	1915	30.0	0.0	12.0	15.6	28.4	3.0	24.5	11.0	48.5	5.9	40.1	9.3	31.3	9.4	42.3	7.4	38.1	8.9	51.5	5.8
10/17/92	1930	30.5	0.0	11.5	17.0	28.9	3.0	23.5	11.4	45.6	5.7	35.9	8.4	33.3	14.3	40.7	11.0	37.1	8.7	50.7	4.8
10/17/92	1945	30.4	0.0	11.2	12.5	28.6	3.0	29.8	8.3	51.9	3.8	41.1	5.5	38.5	14.4	40.9	9.9	38.5	9.1	48.1	4.0
10/17/92	2000	30.4	0.0	10.1	13.4	28.8	3.0	28.4	8.9	51.0	5.4	38.6	8.6	34.5	16.2	42.2	9.4	37.5	8.6	51.4	7.7
10/17/92	2015	28.7	0.0	10.3	15.8	28.6	3.0	24.7	11.0	48.4	6.8	38.6	9.8	38.0	11.5	42.8	8.8	38.9	9.2	48.8	3.6
10/17/92	2030	28.7	0.0	10.5	12.5	28.8	3.0	24.8	11.0	47.8	5.4	37.0	8.7	33.1	13.2	42.7	11.1	38.7	1.0	48.6	3.6
10/17/92	2045	28.6	0.0	15.3	10.5	28.6	3.0	30.9	4.1	54.3	3.0	40.1	3.1	34.5	12.9	42.4	7.4	38.9	9.3	51.4	6.3
10/17/92	2100	28.5	0.0	8.4	12.2	28.6	3.0	24.7	10.3	47.5	6.0	37.4	9.3	34.4	9.8	42.1	8.8	37.8	8.8	49.3	4.0
10/17/92	2115	28.5	0.0	7.9	10.8	28.6	3.0	29.9	11.8	53.4	6.7	39.7	3.9	35.3	11.6	43.7	7.5	40.0	1.2	48.6	7.0
10/17/92	2130	28.5	0.0	8.8	14.2	29.0	3.0	25.4	10.2	47.5	5.4	37.8	8.1	33.8	10.9	44.7	9.1	39.0	9.9	50.4	6.6
10/17/92	2145	28.6	0.0	9.0	12.5	28.9	3.0	24.0	12.5	48.5	5.5	37.1	8.5	30.2	11.4	40.3	8.9	34.5	9.9	49.3	6.8
10/17/92	2200	28.6	0.0	7.9	12.3	29.1	3.0	23.5	11.2	46.0	5.1	37.4	8.7	36.6	11.9	44.0	11.3	39.4	9.5	49.6	4.5
10/17/92	2215	28.6	0.0	9.3	13.7	28.7	3.0	22.4	12.9	45.6	6.8	36.3	10.1	35.6	7.3	45.0	8.3	40.5	1.1	48.9	5.4
10/17/92	2230	28.5	0.0	10.5	13.4	29.1	3.0	21.7	10.9	41.3	6.7	34.0	8.4	34.6	12.2	44.2	8.8	37.7	9.9	48.2	4.7
10/17/92	2245	28.6	0.0	8.2	12.0	29.4	3.0	23.9	9.6	45.2	5.4	35.3	9.2	37.7	8.9	40.0	11.3	37.8	9.9	48.7	5.6
10/17/92	2300	28.5	0.0	9.1	11.4	29.1	3.0	27.9	6.9	52.2	3.9	39.0	7.4	35.8	13.5	38.7	10.8	37.7	1.2	49.8	7.2
10/17/92	2315	28.6	0.0	8.9	10.8	29.2	3.0	27.5	7.1	51.1	3.3	40.8	4.9	36.1	10.0	39.7	7.5	37.2	1.0	47.3	11.9
10/17/92	2330	28.6	0.0	7.9	9.9	29.0	3.0	28.8	5.7	52.4	3.8	40.5	3.4	36.2	9.2	42.3	8.9	35.7	7.8	50.3	8.9
10/17/92	2345	28.6	0.0	7.1	14.3	29.3	3.0	29.0	5.4	52.2	4.0	40.2	5.6	38.8	6.7	39.1	10.1	38.5	9.7	51.3	8.9
10/18/92	0	28.5	0.0	7.4	9.8	29.1	3.0	29.6	6.2	52.8	3.2	40.1	3.1	37.2	7.3	38.5	8.5	37.2	1.1	43.4	3.1
10/18/92	15	29.6	0.0	7.9	11.2	29.4	3.0	29.5	8.3	52.3	3.5	40.7	4.8	33.5	12.2	41.8	7.2	37.3	8.7	43.5	8.3
10/18/92	30	28.8	0.0	8.1	9.4	29.1	3.0	30.3	3.1	54.3	2.9	37.7	3.0	38.6	7.1	39.0	6.2	38.4	1.0	45.3	10.5
10/18/92	45	28.3	0.0	7.3	9.3	29.0	3.0	29.8	6.1	53.0	3.2	39.7	3.2	36.0	8.1	39.8	5.9	39.3	1.1	47.0	9.9
10/18/92	100	28.5	0.0	12.4	8.6	28.7	3.0	30.2	3.2	54.9	2.9	38.1	3.0	33.3	10.3	38.9	7.2	37.5	1.2	48.6	7.0
10/18/92	115	28.6	0.0	12.4	8.8	28.8	3.0	29.8	3.2	55.4	2.9	37.6	3.0	35.6	8.1	38.5	6.0	38.4	1.0	49.0	4.5
10/18/92	130	28.7	0.0	11.1	9.8	28.5	3.0	29.8	9.9	55.1	3.5	37.5	3.0	34.5	8.4	40.2	9.2	38.2	1.1	45.3	3.3
10/18/92	145	28.0	0.0	15.0	11.9	28.8	3.6	25.4	7.2	48.9	5.4	39.1	4.3	37.2	7.4	44.2	7.7	38.7	7.7	44.1	6.2
10/18/92	200	28.6	0.0	11.3	12.0	29.1	3.0	24.0	10.4	48.8	4.0	37.3	7.8	38.0	6.0	44.9	3.9	40.0	7.9	48.6	11.2
10/18/92	215	28.9	0.0	9.9	9.1	29.1	3.0	30.1	3.9	54.7	3.1	37.7	3.0	32.9	9.8	40.8	10.6	38.7	9.7	47.9	7.0
10/18/92	230	28.5	0.0	11.6	9.8	29.4	3.0	30.6	3.8	55.0	2.9	38.6	3.0	36.8	8.8	38.2	8.1	36.8	1.2	44.5	3.4
10/18/92	245	28.5	0.0	10.7	11.3	29.1	3.0	28.5	3.1	56.0	2.9	36.7	3.0	35.8	8.9	35.1	8.8	35.6	1.3	47.1	5.7
10/18/92	300	28.6	0.0	10.8	9.1	28.7	3.0	28.2	3.1	55.4	2.9	34.9	3.0	39.1	6.2	42.0	5.3	40.0	5.8	48.2	4.0
10/18/92	315	28.8	0.0	8.8	12.1	28.7	3.0	28.4	3.1	56.1	3.0	35.4	3.0	39.7	4.0	46.4	3.8	41.5	8.1	49.1	4.1
10/18/92	330	28.3	0.0	8.4	8.5	29.0	3.0	28.5	3.1	56.2	2.9	34.9	3.0	37.4	9.0	40.1	7.8	38.1	1.1	44.8	3.0
10/18/92	345	28.6	0.0	8.1	9.1	29.0	3.2	28.5	3.1	56.2	2.9	34.7	3.0	38.8	9.5	40.0	7.4	35.7	7.8	45.4	11.1
10/18/92	400	28.5	0.0	10.5	8.3	29.2	3.0	28.7	3.1	56.1	3.1	34.4	3.0	39.4	5.9	46.2	4.8	41.8	9.4	45.0	11.3
10/18/92	415	28.5	0.0	8.3	8.3	29.4	3.0	28.9	3.1	55.8	2.9	34.5	3.0	39.8	8.7	45.3	9.8	41.8	1.1	49.0	4.0
10/18/92	430	28.6	0.0	7.8	8.4	28.9	3.0	27.9	3.1	53.1	2.9	32.9	3.0	39.6	5.3	42.6	7.8	39.4	8.1	46.6	7.4
10/18/92	445	28.6	0.0	12.2	8.4	29.3	3.0	28.0	3.1	52.8	2.9	33.1	3.0	39.5	7.1	41.7	10.5	38.8	1.0	46.3	11.0
10/18/92	500	28.5	0.0	8.9	8.4	29.5	3.2	28.2	3.1	53.3	2.9	33.1	3.0	39.9	7.2	44.3	4.5	41.6	1.1	45.8	5.5
10/18/92	515	28.7	0.0	7.4	8.3	29.1	3.0	27.7	3.1	51.7	2.9	32.1	3.0	37.3	10.7	44.3	4.8	41.4	9.1	46.0	6.0
10/18/92	530	28.6	0.0	8.4	12.5	29.4	3.0	28.2	3.1	52.5	2.9	32.3	3.0	39.4	8.8	45.1	6.2	40.9	7.5	46.7	5.4
10/18/92	545	28.6	0.0	6.1	8.6	29.2	3.0	28.9	3.1	55.5	2.9	34.3	3.0	37.8	7.0	44.9	7.0	40.8	7.8	48.1	6.3
10/18/92	600	28.7	0.0	9.5	8.8	29.2	3.0	29.3	6.5	55.5	2.9	35.1	3.0	38.9	10.3	47.8	5.0	42.7	9.1	45.3	3.9
10/18/92	615	28.5	0.0	5.7	9.1	29.3	3.0	27.8	8.6	54.0	3.3	35.2	3.0	38.6	8.9	47.9	5.5	42.3	6.6	45.8	4.9
10/18/92	630	28.7	0.0	8.3	9.0	29.3	3.0	29.1	7.2	55.2	3.0	35.6	3.0	35.9	8.1	46.0	4.9	42.4	9.3	45.8	5.1
10/18/92	645	28.6	0.0	5.7	11.7	29.6	3.0	28.4	7.0	54.0	2.9	39.2	3.0	35.9	8.5	46.9	6.7	41.8	6.6	41.9	3.2
10/18/92	700	28.8	0.0	7.2	9.4	29.6	3.0	30.5	4.0	53.8	2.9	38.5	3.0	38.0	10.6	47.1	5.5	41.7	4.7	49.6	5.8
10/18/92	715	28.6	0.0	6.5	9.0	29.8	3.0	31.4	3.7	53.5	2.9	39.8	3.0	38.9	10.0	46.9	6.7	41.7	6.9	42.5	3.6
10/18/92	730	28.5	0.0	5.4	9.1	29.8	3.0	30.4	4.3	54.0	2.9	38.4	3.2	37.2	9.9	45.8	5.7	40.8	6.5	46.5	10.2
10/18/92	745	28.6	0.0	4.7	9.8	29.6	3.0	31.3	5.5	53.7	2.9	38.9	3.0	33.1	22.8	47.8	12.4	40.2	7.4	49.3	8.5
10/18/92	800	28.5	0.0	5.0	9.3	29.7	3.0	30.1	4.9	53.2	2.9	40.2	3.0	39.3	13.3	49.2	6.4	42.7	5.6	49.6	6.6
10/18/92	815	28.6	0.0	6.0	9.8	29.6	3.1	30.2	6.1	53.4	2.9	39.9	3.0	40.2	5.1	50.5	3.1	43.9	3.3	48.4	9.9

12/3/92 20:40:39																					
Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D 1 KW	D 1 spk/mn	D 2 KW	D 2 spk/mn	D 3 KW	D 3 spk/mn	D 4 KW	D 4 spk/mn	C 1 KW	C 1 spk/mn	C 2 KW	C 2 spk/mn	C 3 KW	C 3 spk/mn	C 4 KW	C 4 spk/mn
10/18/92	930	28.5	0.0	6.0	11.2	30.1	3.0	30.2	6.4	52.5	3.1	41.3	4.6	37.5	9.9	45.4	7.8	40.7	8.5	50.2	5.8
10/18/92	945	28.5	0.0	5.5	9.8	30.4	3.0	30.4	4.8	53.0	2.9	41.4	3.3	38.3	5.7	47.3	5.8	41.8	7.8	50.4	5.3
10/18/92	1000	28.6	0.0	6.1	9.9	30.5	3.1	30.8	5.5	53.3	2.9	41.3	3.0	37.1	14.2	47.6	4.8	42.0	7.4	49.2	5.9
10/18/92	1015	28.6	0.0	6.1	9.8	29.9	3.0	30.2	6.2	53.4	2.9	41.4	3.4	37.8	6.8	48.6	3.8	42.8	8.0	49.9	4.9
10/18/92	1030	28.6	0.0	6.6	9.7	29.9	3.0	29.5	4.3	53.0	3.0	41.3	3.7	36.9	7.2	47.0	4.0	42.2	8.1	50.6	6.8
10/18/92	1045	28.7	0.0	6.2	10.2	30.5	3.1	29.7	4.5	52.7	2.9	42.2	4.4	35.7	6.9	49.3	3.5	42.9	5.0	51.4	7.1
10/18/92	1100	28.9	0.0	6.9	10.0	30.3	3.0	30.3	6.3	52.4	3.2	42.2	4.3	37.5	5.8	47.3	4.0	42.3	7.0	51.5	8.1
10/18/92	1115	27.9	0.0	5.9	12.9	29.9	3.0	27.8	8.4	51.3	5.5	39.7	7.9	37.6	7.2	49.9	4.3	43.5	9.4	50.8	6.7
10/18/92	1130	28.5	0.0	7.2	10.7	30.1	3.2	28.6	5.9	52.4	3.1	41.6	5.0	35.2	7.9	46.9	5.8	41.3	7.3	50.0	9.3
10/18/92	1145	28.6	0.0	6.5	11.0	30.0	3.0	28.8	7.8	52.3	3.5	41.4	4.2	33.7	8.6	44.6	6.8	39.9	7.4	44.1	3.6
10/18/92	1200	28.6	0.0	5.8	10.3	29.9	3.0	31.3	3.1	54.5	2.9	39.0	3.0	37.6	6.3	48.5	7.5	42.7	6.2	50.9	7.1
10/18/92	1215	28.6	0.0	5.5	11.1	30.1	3.0	31.4	3.3	54.4	2.9	40.1	3.0	37.1	6.9	47.9	5.6	42.9	6.4	51.3	4.9
10/18/92	1230	28.4	0.0	5.4	9.8	30.1	3.0	31.3	3.1	54.5	2.9	40.1	3.0	35.3	8.8	47.0	4.3	42.1	8.1	49.9	7.6
10/18/92	1245	28.0	0.0	5.6	11.4	30.3	3.0	31.9	5.9	54.1	2.9	41.3	10.2	36.1	5.9	49.1	5.0	42.3	6.7	49.6	5.8
10/18/92	1300	28.6	0.0	6.1	10.0	30.2	3.0	31.6	4.4	53.5	2.9	42.1	3.4	35.4	8.5	48.3	4.3	42.7	5.9	47.1	8.7
10/18/92	1315	28.6	0.0	6.1	10.7	30.4	3.0	28.0	7.6	53.4	2.9	41.7	5.9	39.6	4.7	50.5	3.4	44.1	3.9	49.7	9.5
10/18/92	1330	28.5	0.0	6.3	11.7	30.2	3.0	29.1	8.7	53.7	3.0	41.4	9.0	35.6	9.5	50.9	5.7	44.1	4.7	50.8	3.8
10/18/92	1345	28.7	0.0	5.9	9.8	30.2	3.0	31.6	4.6	54.4	2.9	41.5	3.1	35.2	6.8	50.7	4.2	43.8	4.9	51.9	5.1
10/18/92	1400	28.6	0.0	6.3	11.3	30.5	3.0	29.7	4.9	54.1	2.9	41.3	5.9	35.0	8.4	48.9	4.9	42.9	8.7	51.4	3.7
10/18/92	1415	28.8	0.0	7.8	10.3	30.0	3.0	31.7	4.4	53.5	3.0	41.1	3.1	34.5	11.8	50.7	4.5	43.4	6.7	50.1	6.3
10/18/92	1430	28.8	0.0	7.5	10.2	30.2	3.0	32.0	3.1	55.8	2.9	39.6	3.2	35.0	9.4	47.9	4.7	42.4	5.7	50.4	6.0
10/18/92	1445	28.5	0.0	6.1	10.9	30.1	3.0	32.1	3.2	55.4	2.9	40.7	3.0	35.4	8.8	48.6	5.8	41.9	5.1	50.3	9.2
10/18/92	1500	28.7	0.0	6.2	10.3	30.8	3.0	33.2	3.1	54.8	2.9	42.0	3.1	35.7	7.5	48.9	5.4	43.3	5.7	52.0	5.4
10/18/92	1515	28.6	0.0	8.0	11.6	30.7	3.0	32.8	4.1	54.6	3.1	42.1	3.4	35.7	7.8	47.8	6.0	42.9	1.0	48.9	3.4
10/18/92	1530	28.6	0.0	6.8	10.5	30.6	3.0	33.4	3.2	55.0	2.9	42.5	3.1	36.3	10.1	48.5	5.4	42.3	6.2	50.9	5.4
10/18/92	1545	0.0	31.9	8.9	18.1	29.4	3.0	32.1	3.1	56.0	2.9	41.2	3.0	30.3	10.8	46.5	6.8	40.1	6.6	51.4	5.5
10/18/92	1600	0.0	33.8	7.0	11.5	29.8	3.0	32.0	3.1	56.5	2.9	39.3	3.0	35.2	9.7	49.8	4.2	43.3	6.0	49.0	3.1
10/18/92	1615	0.0	34.1	18.8	14.5	29.5	3.0	31.4	3.1	56.8	2.9	39.2	3.0	35.2	8.9	50.9	6.2	43.8	7.6	47.0	3.6
10/18/92	1630	0.0	34.1	12.9	11.3	29.9	3.0	32.8	3.7	56.4	2.9	40.2	3.0	33.6	11.0	47.3	7.2	41.4	6.8	44.9	3.7
10/18/92	1645	0.0	35.1	10.3	12.2	30.8	3.0	32.6	3.6	56.7	2.9	39.5	3.0	31.2	10.4	44.0	10.0	34.9	7.0	50.3	6.0
10/18/92	1700	0.0	32.9	8.9	12.1	30.7	3.0	33.0	4.2	56.5	2.9	40.0	3.0	33.5	10.6	45.4	7.1	38.5	6.9	47.1	4.4
10/18/92	1715	0.0	31.6	9.6	10.5	30.0	3.0	31.7	5.1	56.5	2.9	40.3	3.0	35.2	8.9	46.2	6.3	41.0	8.1	50.8	4.3
10/18/92	1730	0.0	31.2	0.0	10.8	30.0	3.0	29.9	5.5	56.2	2.9	40.4	3.0	34.1	11.0	43.6	7.2	39.5	9.5	50.1	8.7
10/18/92	1745	0.0	31.7	8.8	11.1	30.4	3.1	28.2	7.5	55.9	3.0	40.4	3.2	34.0	10.7	43.6	10.8	37.5	8.2	44.6	3.5
10/18/92	1800	0.0	31.8	8.5	13.2	30.4	4.0	26.1	8.7	56.0	2.9	40.0	3.9	30.8	12.3	43.5	9.2	36.3	8.5	45.9	6.0
10/18/92	1815	0.0	32.9	8.8	14.9	30.6	5.1	23.4	10.0	52.8	3.8	40.0	3.1	32.7	13.8	43.5	7.4	39.9	7.6	48.0	6.0
10/18/92	1830	0.0	32.0	28.1	14.8	30.2	4.2	23.8	10.2	54.4	3.1	40.3	3.7	35.0	10.8	45.3	6.0	41.0	7.7	50.9	8.5
10/18/92	1845	0.0	31.7	13.5	15.3	29.7	4.6	23.3	11.1	52.0	5.2	40.1	8.8	34.1	11.9	46.5	7.2	40.7	8.7	49.4	4.4
10/18/92	1900	0.0	31.9	11.8	15.6	29.9	3.4	22.2	11.9	50.6	4.5	40.8	4.0	32.7	11.5	45.8	5.5	41.4	9.5	48.3	4.2
10/18/92	1915	0.0	32.0	11.9	17.2	29.5	4.3	21.0	12.5	49.8	5.0	40.6	4.2	33.9	12.0	45.3	8.1	40.2	9.3	49.1	7.0
10/18/92	1930	0.0	30.7	14.4	17.0	29.1	5.0	19.7	14.6	43.6	7.2	37.4	7.9	33.1	10.1	45.3	4.8	39.8	8.0	47.0	5.8
10/18/92	1945	0.0	29.9	13.5	21.0	28.5	3.1	18.6	14.6	41.9	7.1	36.1	8.8	34.7	8.3	44.9	5.6	41.0	9.2	45.5	5.3
10/18/92	2000	0.0	30.3	13.4	21.0	28.9	4.7	18.7	16.0	41.1	7.5	36.0	8.7	35.9	11.5	46.4	8.1	41.8	8.9	46.1	5.3
10/18/92	2015	0.0	32.8	12.3	17.1	29.7	3.2	22.4	12.2	51.3	8.5	40.6	3.0	35.2	13.0	45.5	10.3	41.0	1.5	45.5	4.8
10/18/92	2030	0.0	28.4	13.0	18.6	28.5	3.4	21.5	12.8	43.7	7.7	38.4	8.3	37.8	9.2	46.9	4.2	42.4	9.1	44.6	4.4
10/18/92	2045	29.1	0.0	12.8	17.1	30.1	6.2	18.5	15.4	46.5	6.5	39.2	7.5	36.0	12.5	46.2	4.9	41.2	8.3	45.8	3.6
10/18/92	2100	28.7	0.0	11.4	16.0	30.7	3.4	20.0	13.1	47.4	4.5	38.4	7.2	36.4	8.9	47.6	5.1	42.5	6.8	47.6	5.5
10/18/92	2115	0.0	23.0	14.1	18.4	28.0	3.0	21.7	11.8	47.2	6.8	38.3	9.5	34.1	27.8	39.7	13.7	38.1	1.3	48.8	8.6
10/18/92	2130	0.0	29.4	13.0	15.1	29.3	3.0	22.7	9.7	51.3	5.7	40.5	4.3	37.8	9.8	45.5	5.3	41.8	7.8	50.3	6.1
10/18/92	2145	0.0	30.4	10.3	12.5	29.2	3.0	29.3	7.7	55.3	4.0	38.9	3.3	37.3	18.4	44.5	8.7	41.8	8.9	49.2	4.9
10/18/92	2200	0.0	28.7	11.5	14.1	28.9	3.0	23.6	12.3	51.1	7.1	39.9	4.8	36.8	8.6	46.8	3.8	42.7	9.3	50.2	5.9
10/18/92	2215	0.0	29.2	13.4	17.6	28.8	3.1	20.7	13.1	48.1	7.5	39.1	8.4	36.5	12.1	48.3	6.0	43.0	8.3	43.0	3.9
10/18/92	2230	0.0	29.9	13.3	16.3	29.3	4.8	19.9	12.3	49.8	5.0	39.9	4.8	39.6	11.3	45.5	3.8	42.5	6.8	42.4	3.6
10/18/92	2245	0.0	29.7	13.1	20.3	28.9	3.0	20.9	11.6	50.6	5.1	40.1	4.7	35.9	12.5	45.7	5.3	42.1	1.2	45.5	10.9
10/18/92	2300	0.0	29.4	12.7	16.6	29.2	3.0	21.8	14.4	52.8	4.4	40.1	3.3	40.3	10.4	46.9	3.5	43.1	1.1	49.7	7.6
10/18/92	2315	0.0	31.7	12.6	16.1	28.3	3.0	28.0	13.2	54.6	7.1	39.1	4.5	37.7	8.7	50.8	4.6	44.3	8.3	47.5	4.7
10/18/92	2330	0.0	30.7	13.5	17.2	29.0	3.4	20.8	13.2	49.9	4.2	40.8	3.3	38.4	9.7	48.5	6.7	42.9	7.2	49.0	7.9
10/18/92	2345	0.0	30.6	14.4	16.8	29.1	3.0	21.3	14.7	50.9	8.9	39.6	5.1	37.3	6.8	48.9	3.3	43.6	8.7	48.4	5.4
10/19/92	0	0.0	32.9	13.4	12.4	30.0	3.0	30.9	5.8	55.6	2.9	38.1	3.0	39.7	8.0	44.4	4.1	41.7	9.3	49.9	6.6
10/19/92	15	0.0	31.4	12.0	11.4	29.3	3.0	28.3	6.5	54.0	3.2	39.7	3.1	37.2	6.5	47.0	5.4	42.9	1.0	49.5	5.4
10/19/92																					

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D1 KW	D1 spk/mn	D2 KW	D2 spk/mn	D3 KW	D3 spk/mn	D4 KW	D4 spk/mn	C1 KW	C1 spk/mn	C2 KW	C2 spk/mn	C3 KW	C3 spk/mn	C4 KW	C4 spk/mn
10/19/92	145	0.0	29.8	14.4	12.4	28.9	3.0	22.4	7.4	50.4	4.4	40.6	5.0	39.7	3.1	49.3	3.1	42.3	6.3	45.5	7.2
10/19/92	200	0.0	30.3	10.3	12.2	29.4	3.0	23.4	12.0	53.3	3.4	40.7	3.0	39.8	3.0	49.5	3.0	42.8	3.5	48.0	6.4
10/19/92	215	0.0	30.7	13.2	11.0	29.5	3.0	27.3	10.3	54.3	2.9	38.6	3.0	40.0	4.2	47.8	5.7	43.4	5.3	45.4	5.7
10/19/92	230	0.0	28.1	11.4	12.6	29.3	3.0	21.9	17.1	53.0	8.2	40.6	6.4	39.9	3.8	45.7	3.3	42.2	6.7	44.7	10.9
10/19/92	245	0.0	30.0	13.1	12.9	29.2	3.0	22.0	11.3	52.7	3.0	40.5	3.1	39.8	3.1	45.2	3.1	41.9	7.6	48.9	6.4
10/19/92	300	0.0	27.9	11.8	12.9	29.1	3.0	23.9	14.8	53.6	5.9	39.0	3.1	39.0	5.6	47.0	3.0	42.5	6.5	48.6	4.6
10/19/92	315	0.0	27.6	14.6	25.1	27.3	3.0	17.4	15.1	42.0	8.9	37.5	9.4	39.5	3.4	48.7	3.0	42.2	4.4	45.3	4.6
10/19/92	330	29.6	0.0	11.8	15.4	30.0	3.1	19.4	14.4	52.3	3.3	41.8	3.6	39.4	3.0	48.5	3.0	42.2	3.8	49.4	4.5
10/19/92	345	29.0	0.0	11.5	13.2	31.1	3.0	22.2	11.9	53.0	2.9	41.0	3.0	39.7	3.4	47.9	3.0	42.3	5.4	48.7	4.0
10/19/92	400	28.9	0.0	11.0	12.0	31.5	3.0	23.8	10.1	52.3	3.0	41.5	3.1	39.6	5.8	48.6	3.1	42.7	3.3	48.2	3.8
10/19/92	415	28.4	0.0	12.3	12.5	31.2	3.1	21.9	12.4	47.6	5.1	40.4	4.6	39.7	2.9	48.9	3.0	42.5	3.9	48.8	6.9
10/19/92	430	28.8	0.0	13.3	14.1	31.3	3.0	21.5	9.9	48.8	3.5	43.3	3.6	39.6	3.0	48.2	3.7	42.6	3.1	50.0	4.6
10/19/92	445	28.9	0.0	13.7	12.4	31.6	3.0	22.4	11.2	50.7	3.5	43.4	3.0	39.8	3.4	49.3	3.3	43.0	4.1	50.7	3.7
10/19/92	500	28.8	0.0	18.2	12.8	31.1	3.1	22.8	9.0	48.8	3.4	42.2	4.0	39.8	3.0	48.3	3.0	42.7	3.3	49.3	5.5
10/19/92	515	28.8	0.0	15.7	17.7	31.5	3.1	19.3	13.0	45.0	8.2	40.3	7.1	39.9	5.1	49.2	3.8	42.6	3.3	47.8	3.5
10/19/92	530	29.1	0.0	18.8	19.3	30.9	3.9	18.1	15.9	43.5	8.3	37.9	7.9	33.7	11.2	44.3	19.3	32.4	7.0	48.3	6.9
10/19/92	545	29.4	0.0	14.9	17.5	31.2	3.0	21.1	8.8	49.5	3.8	42.2	4.6	40.0	4.4	49.5	3.1	43.0	3.8	49.5	4.7
10/19/92	600	29.7	0.0	13.9	14.1	31.1	3.0	23.3	8.8	50.7	2.9	43.8	3.2	40.4	3.1	48.5	4.0	43.0	3.1	48.5	3.5
10/19/92	615	33.9	0.0	11.8	18.0	31.8	3.0	26.8	6.7	51.6	2.9	41.0	3.0	38.9	6.8	49.4	6.7	42.0	5.6	50.8	3.4
10/19/92	630	31.5	0.0	12.7	19.0	30.7	3.0	25.5	9.8	51.7	3.2	40.3	3.1	39.7	5.1	47.8	6.2	42.2	6.7	50.4	4.2
10/19/92	645	31.0	0.0	14.5	15.2	31.4	3.0	23.2	9.6	50.5	3.0	41.9	3.9	40.4	4.4	49.5	6.2	43.2	4.6	51.1	7.7
10/19/92	700	30.8	0.0	17.3	19.5	30.8	5.3	23.0	9.8	48.9	4.9	42.3	6.4	39.9	5.1	49.7	8.2	42.8	4.4	49.9	6.4
10/19/92	715	34.6	0.0	18.2	19.1	31.2	3.0	26.2	7.9	52.7	2.9	40.9	3.1	39.3	4.3	50.0	6.2	42.7	7.4	50.7	6.9
10/19/92	730	33.6	0.0	14.1	17.5	30.5	3.0	28.8	8.2	53.3	3.2	39.5	3.0	39.7	4.7	50.0	3.9	42.6	6.4	50.3	7.1
10/19/92	745	30.4	0.0	17.3	14.8	29.0	3.0	28.9	10.7	54.2	2.9	38.9	3.2	37.3	8.9	48.5	5.5	41.7	8.8	50.2	5.8
10/19/92	800	31.2	0.0	14.7	19.4	30.0	3.0	22.0	9.4	45.5	5.1	37.2	6.7	34.3	14.8	41.3	10.2	37.5	1.1	48.2	6.6
10/19/92	815	32.0	0.0	15.4	22.7	30.3	3.0	22.8	10.9	46.1	3.7	40.0	4.8	40.3	3.5	44.2	4.2	40.7	9.8	48.0	4.3
10/19/92	830	32.9	0.0	12.7	18.2	29.6	3.0	29.5	5.8	54.0	2.9	38.9	3.0	39.8	5.8	45.6	6.0	40.8	6.3	50.8	7.4
10/19/92	845	33.1	0.0	17.9	15.4	29.8	3.0	30.6	4.1	54.1	2.9	38.9	3.0	40.1	3.4	46.9	6.0	41.7	4.8	50.8	6.5
10/19/92	900	32.5	0.0	16.8	18.0	30.1	3.0	29.8	7.8	54.4	3.7	38.9	3.0	39.5	5.8	46.8	5.1	41.2	9.9	50.1	5.1
10/19/92	915	28.8	0.0	14.9	21.4	29.5	3.0	26.6	10.6	52.2	5.5	39.5	8.9	38.3	13.0	45.5	9.5	41.0	9.3	49.8	6.4
10/19/92	930	33.4	0.0	18.3	19.8	30.7	3.0	30.4	6.0	54.1	3.5	39.7	3.1	39.6	4.7	47.2	5.0	41.7	7.6	49.4	6.1
10/19/92	945	32.8	0.0	14.1	18.0	30.4	3.0	30.0	5.5	54.2	3.0	39.6	3.0	40.0	6.9	48.8	11.0	42.3	5.7	45.2	4.4
10/19/92	1000	30.1	0.0	15.3	21.2	30.0	3.0	26.8	9.3	52.8	3.4	39.6	7.3	40.3	4.3	40.3	5.4	39.5	1.1	47.7	5.9
10/19/92	1015	31.5	0.0	13.6	20.8	29.6	3.0	30.9	5.7	54.7	2.9	38.7	3.0	39.5	5.9	45.6	6.2	41.6	8.0	50.7	6.5
10/19/92	1030	30.4	0.0	14.5	18.3	29.5	3.0	27.9	6.8	53.2	3.0	40.1	3.1	37.4	18.0	46.5	9.8	41.3	8.3	51.1	6.9
10/19/92	1045	34.3	0.0	13.2	17.1	31.3	3.0	29.2	4.1	53.5	3.1	38.6	3.0	39.7	9.1	45.4	4.4	41.3	9.3	50.1	6.3
10/19/92	1100	31.5	0.0	15.6	12.7	30.5	3.0	31.3	7.5	54.3	2.9	40.5	3.1	39.7	8.4	49.4	6.0	42.8	7.5	50.0	3.5
10/19/92	1115	31.0	0.0	12.6	14.8	31.1	3.0	25.7	5.7	47.0	3.8	40.3	4.1	39.9	7.1	49.8	4.8	43.2	4.5	48.4	7.8
10/19/92	1130	34.9	0.0	12.6	16.5	31.6	3.0	32.2	3.2	54.5	2.9	40.0	3.0	38.9	5.7	49.9	3.7	43.4	5.6	44.0	3.8
10/19/92	1145	32.8	0.0	14.1	25.1	30.4	3.1	32.6	3.7	55.4	2.9	38.9	3.0	38.1	18.0	49.4	10.0	42.9	6.7	49.5	4.9
10/19/92	1200	0.0	36.6	13.9	11.7	30.3	3.0	33.0	3.1	55.1	2.9	38.0	3.0	40.2	4.3	49.8	3.1	42.9	5.4	48.0	8.9
10/19/92	1215	0.0	36.0	14.0	10.0	30.1	3.0	32.8	3.1	56.5	2.9	37.5	3.0	39.8	10.3	48.0	6.2	42.1	6.5	46.1	7.1
10/19/92	1230	0.0	35.6	17.1	10.4	30.0	3.0	32.8	3.1	56.8	2.9	37.6	3.0	40.0	8.4	49.8	5.5	43.0	5.4	46.9	3.2
10/19/92	1245	0.0	35.0	13.9	10.1	30.2	3.0	32.9	3.6	56.3	2.9	37.6	3.0	39.5	18.2	50.7	6.4	43.5	9.4	51.4	6.1
10/19/92	1300	0.0	35.3	14.9	10.1	30.5	3.0	32.5	3.5	56.4	2.9	37.4	3.0	39.5	20.2	50.1	3.8	43.4	9.3	51.3	8.0
10/19/92	1315	0.0	35.4	18.2	10.0	30.7	3.0	32.7	3.3	56.4	2.9	37.4	3.0	39.9	10.1	49.3	3.3	42.9	6.8	51.2	5.5
10/19/92	1330	0.0	35.3	13.4	10.5	30.8	3.0	31.2	5.3	56.4	2.9	37.4	3.0	39.0	10.5	46.5	4.2	42.3	5.6	50.8	7.4
10/19/92	1345	0.0	36.6	18.5	12.4	31.8	3.1	33.1	3.3	56.4	2.9	35.5	3.0	39.3	7.2	48.0	6.6	42.6	7.0	44.7	4.6
10/19/92	1400	0.0	37.8	16.8	9.3	30.6	3.0	33.0	3.1	56.7	2.9	35.4	3.0	38.7	7.4	48.7	4.5	43.1	6.3	47.4	7.1
10/19/92	1415	0.0	34.8	13.8	10.2	29.6	3.0	32.4	3.4	56.9	2.9	35.2	3.0	40.2	8.8	50.1	4.1	43.3	7.2	48.9	8.9
10/19/92	1430	0.0	33.7	13.9	10.8	29.9	3.5	27.8	7.5	56.2	2.9	36.8	3.0	39.8	6.2	49.9	3.5	43.2	5.2	50.1	5.7
10/19/92	1445	0.0	34.0	17.5	11.6	30.0	3.0	27.3	8.6	56.0	2.9	36.9	3.0	39.2	7.1	50.9	5.4	43.4	9.8	47.4	6.0
10/19/92	1500	0.0	34.3	14.3	11.3	29.4	3.5	28.2	6.1	56.1	2.9	37.6	3.0	34.4	6.0	47.6	5.6	41.5	6.1	50.6	5.9
10/19/92	1515	0.0	33.5	25.0	11.0	29.7	3.0	28.1	7.9	56.0	2.9	37.9	3.0	39.2	12.1	48.1	3.9	42.8	7.9	49.5	6.1
10/19/92	1530	0.0	33.5	14.2	11.6	29.7	3.0	25.9	9.6	56.1	2.9	38.0	3.0	38.7	5.4	48.2	3.4	42.4	6.5	47.6	5.9
10/19/92	1545	0.0	32.9	16.1	11.8	29.4	3.1	26.4	8.5	56.0	2.9	37.8	3.0	39.6	5.7	49.5	4.3	42.7	5.4	48.1	6.1
10/19/92	1600	0.0	32.4	16.5	15.2	28.6	3.0	24.7	14.6	56.1	2.9	37.2	3.6	35.1	9.1	50.5	4.0	43.5	6.3	46.7	11.9
10/19/92	1615	0.0	31.9	12.0	13.8	28.7	3.5	23.3	10.4	56.1	3.2	36.6	3.0	38.1	7.5	51.3	4.0	43.6	5.8	51.6	9.1
10/19/92	1630	0.0	32.3	10.8	12.5	28.8	3.0	24.8	8.7	56.3	2.9	38.0	3.0	38.2	6.5	50.9	4.6	42.8	4.5	50.2	5.6
10/19/92	1645	0.0	31.0	9.9	15.2	28.8	3.2	21.0	12.6	54.4	3.6	39.2	3.8	38.5	6.7	48.4					

Seward Plant Buell ESP Fields Operating Log

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20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
10/19/92	1800	0.0	33.4	11.2	13.7	30.0	3.0	24.8	8.0	54.3	3.0	38.9	3.0	38.7	8.0	49.6	3.3	43.2	5.2	48.7	5.0
10/19/92	1815	0.0	30.8	11.1	15.5	28.9	3.2	21.7	10.5	52.8	4.3	39.6	3.1	38.9	8.3	49.2	4.1	43.3	7.2	48.4	5.7
10/19/92	1830	0.0	31.3	15.1	15.2	29.4	3.0	19.5	12.0	52.7	4.6	40.5	3.9	38.9	7.7	43.2	4.5	41.0	1.0	51.1	6.0
10/19/92	1845	0.0	31.8	16.4	14.8	28.9	3.2	21.7	9.2	53.4	3.0	39.7	3.6	39.4	8.6	48.4	3.6	42.9	6.7	50.1	5.2
10/19/92	1900	0.0	31.9	15.1	14.3	28.2	3.0	24.5	11.6	53.3	3.1	38.5	3.2	33.7	10.4	48.4	8.1	40.9	5.7	50.3	5.8
10/19/92	1915	0.0	30.7	15.9	19.0	28.8	4.1	19.2	12.2	49.3	4.4	39.6	7.3	38.8	7.9	50.0	3.7	43.1	5.1	49.2	5.4
10/19/92	1930	0.0	30.1	14.6	17.5	28.5	4.1	19.4	16.4	49.4	5.5	39.6	3.2	35.8	9.8	48.6	8.1	41.4	7.3	48.9	3.5
10/19/92	1945	0.0	30.1	16.0	17.7	28.2	6.5	18.8	13.0	50.3	4.9	39.6	4.3	38.2	5.4	49.2	3.9	42.5	6.1	49.2	3.8
10/19/92	2000	0.0	30.6	15.1	18.3	28.4	3.0	21.1	13.5	52.4	3.0	40.1	4.8	39.7	7.2	49.7	3.9	43.3	6.0	50.5	5.6
10/19/92	2015	0.0	32.7	14.5	15.0	29.1	3.0	24.8	9.1	53.8	2.9	38.5	3.0	39.6	6.7	50.6	5.4	43.6	4.5	49.2	6.0
10/19/92	2030	0.0	29.9	15.3	16.2	28.7	3.0	21.0	12.4	51.9	3.9	39.5	5.8	39.7	9.2	50.3	5.1	43.1	5.3	49.1	6.9
10/19/92	2045	0.0	29.9	12.8	16.8	28.1	6.0	19.9	10.7	50.3	4.4	39.5	4.3	38.3	7.3	49.8	6.2	42.8	6.0	44.4	3.2
10/19/92	2100	0.0	29.8	12.4	18.1	28.4	3.0	19.8	11.6	50.9	5.9	39.5	4.2	38.9	7.8	49.4	3.9	42.7	9.7	48.9	6.3
10/19/92	2115	0.0	29.6	10.8	17.0	28.3	3.6	21.2	11.2	50.2	3.9	39.9	7.4	40.0	5.5	49.9	5.5	42.8	4.2	47.5	4.2
10/19/92	2130	0.0	29.8	10.5	19.2	28.4	3.3	18.9	13.0	50.4	4.2	39.4	4.3	38.9	9.3	50.6	5.1	42.9	5.8	50.0	4.1
10/19/92	2145	0.0	29.1	11.6	20.3	28.2	5.0	19.7	15.4	52.8	3.3	39.5	6.3	40.0	6.2	47.6	6.0	41.9	7.5	50.6	5.9
10/19/92	2200	0.0	33.6	9.6	16.0	28.6	3.4	22.5	9.3	53.1	3.0	39.1	3.0	38.9	9.8	50.1	5.0	42.6	8.6	49.3	4.1
10/19/92	2215	0.0	32.3	9.6	14.3	28.7	3.0	22.2	10.6	53.0	3.2	39.7	3.3	39.4	6.0	49.8	4.0	42.6	6.9	50.4	4.9
10/19/92	2230	0.0	32.4	10.5	16.6	28.6	3.0	21.9	13.0	53.2	4.2	39.7	3.0	39.5	5.3	50.9	3.7	42.8	6.9	50.2	4.3
10/19/92	2245	0.0	29.0	15.2	20.8	27.7	3.1	17.9	14.5	52.1	5.4	38.3	3.5	39.8	9.6	50.1	4.4	42.5	7.2	48.3	5.6
10/19/92	2300	0.0	28.7	12.3	22.6	27.4	3.0	16.2	17.5	45.3	6.6	37.9	6.8	39.8	7.3	51.1	5.2	42.8	6.8	48.4	3.3
10/19/92	2315	0.0	27.9	14.4	27.7	27.8	6.8	15.9	16.3	45.9	4.5	38.8	6.4	39.6	9.8	49.9	5.7	43.6	3.7	47.5	5.1
10/19/92	2330	0.0	29.3	11.6	21.4	27.8	3.0	20.1	16.6	51.1	7.1	39.9	4.5	39.5	8.3	50.1	4.7	43.6	3.5	49.0	4.2
10/19/92	2345	0.0	27.5	15.8	28.6	27.2	3.7	16.9	16.0	44.2	7.4	37.1	4.3	40.0	3.4	50.0	5.8	43.2	3.2	45.7	4.9
10/20/92	0	32.9	0.0	12.9	20.2	31.2	3.0	19.4	10.6	47.3	5.3	41.9	6.7	40.4	6.0	49.2	5.1	44.0	3.8	48.9	5.8
10/20/92	15	32.2	0.0	11.8	17.7	31.2	3.0	22.7	8.5	49.0	3.0	43.1	4.6	40.5	4.0	48.5	5.9	42.7	3.1	49.7	6.0
10/20/92	30	32.6	0.0	13.6	19.4	30.5	3.0	25.8	5.3	49.9	3.2	41.0	3.4	40.4	7.2	49.3	5.6	43.8	4.3	42.1	3.6
10/20/92	45	32.1	0.0	10.9	17.1	30.9	3.0	25.1	6.2	49.4	4.1	42.3	6.6	39.5	5.2	47.7	4.8	41.5	3.1	42.0	3.0
10/20/92	100	32.8	0.0	11.1	13.6	30.4	3.0	28.6	6.8	51.2	2.9	39.4	3.0	39.1	4.4	49.4	5.4	42.7	3.1	45.2	5.3
10/20/92	115	32.1	0.0	26.8	16.5	30.3	3.0	28.0	7.0	51.1	2.9	39.9	3.1	40.9	5.9	48.9	3.9	43.7	3.6	49.5	3.3
10/20/92	130	31.6	0.0	11.4	15.2	30.2	3.0	26.6	4.9	50.4	3.0	40.3	3.3	40.0	7.1	49.8	5.1	43.0	3.9	50.1	4.9
10/20/92	145	31.6	0.0	21.0	13.3	30.3	3.0	29.8	3.6	52.5	2.9	37.6	3.0	40.4	6.8	48.6	4.3	43.8	3.6	49.4	3.3
10/20/92	200	30.1	0.0	12.6	13.9	30.2	3.0	30.3	4.9	51.8	2.9	37.9	3.0	40.6	5.4	48.4	8.2	43.4	3.1	44.2	3.3
10/20/92	215	31.5	0.0	10.2	18.2	30.8	3.0	28.6	5.2	50.8	3.0	40.3	3.0	39.9	11.4	48.4	7.0	43.3	3.2	51.7	6.2
10/20/92	230	32.0	0.0	16.8	14.0	30.8	3.0	30.4	3.5	51.6	2.9	39.5	3.1	40.3	11.2	49.4	8.6	43.4	3.3	49.7	3.8
10/20/92	245	32.3	0.0	8.3	13.1	30.0	3.0	31.4	3.1	52.4	2.9	37.4	3.0	40.8	3.1	47.9	9.8	41.1	3.1	50.6	4.3
10/20/92	300	32.4	0.0	7.9	13.7	30.8	3.0	31.5	3.2	52.6	2.9	37.7	3.0	39.7	6.8	48.9	6.8	42.4	3.6	48.3	3.7
10/20/92	315	31.9	0.0	7.8	10.0	29.1	3.0	32.3	3.1	53.3	2.9	37.0	3.0	37.4	5.4	48.2	6.2	40.9	4.2	46.3	4.1
10/20/92	330	30.6	0.0	8.9	13.9	30.6	3.0	28.0	6.5	45.7	5.4	35.4	6.5	40.9	3.8	46.5	8.2	40.2	7.2	44.5	3.0
10/20/92	345	36.4	0.0	12.2	11.1	30.5	3.0	30.3	3.4	53.3	3.1	34.1	3.2	41.1	3.1	48.0	5.7	42.9	3.2	48.4	4.2
10/20/92	400	28.9	0.0	7.0	10.3	30.7	3.0	30.1	5.8	52.8	4.2	34.9	3.0	40.6	3.4	49.4	4.9	44.0	3.4	47.6	4.5
10/20/92	415	31.9	0.0	6.5	8.8	30.3	3.0	31.9	3.1	54.2	2.9	35.1	3.0	40.9	3.8	49.4	5.3	43.9	3.9	47.7	5.4
10/20/92	430	31.7	0.0	5.9	8.8	29.9	3.0	31.1	3.1	54.3	2.9	34.5	3.0	40.8	3.3	48.7	6.1	43.6	3.8	48.4	4.9
10/20/92	445	31.8	0.0	8.8	8.3	29.9	3.0	30.6	3.1	54.2	2.9	34.2	3.0	40.9	4.0	48.0	6.1	43.6	3.3	47.2	4.4
10/20/92	500	31.2	0.0	8.3	9.4	29.6	3.0	30.7	3.1	54.3	2.9	33.6	3.0	40.6	5.2	49.4	4.4	44.0	3.8	47.6	4.8
10/20/92	515	31.7	0.0	7.8	9.3	29.9	3.0	30.9	3.1	54.5	2.9	34.4	3.0	40.6	3.3	49.6	4.5	44.0	4.4	47.5	4.0
10/20/92	530	31.9	0.0	6.6	9.9	29.9	3.0	30.7	3.1	54.7	2.9	33.5	3.0	40.5	4.5	48.4	4.8	43.4	3.8	47.4	4.2
10/20/92	545	31.9	0.0	7.3	11.5	29.8	3.0	30.4	3.1	54.6	2.9	33.2	3.0	35.0	6.4	47.7	5.6	41.8	5.2	47.7	4.3
10/20/92	600	0.0	33.6	9.7	14.4	29.1	3.0	32.2	3.1	54.1	3.0	36.2	3.0	38.7	5.3	49.8	4.5	44.0	3.7	48.4	3.3
10/20/92	615	0.0	34.1	13.5	10.4	30.3	3.0	32.2	3.1	53.8	2.9	35.1	3.0	40.6	4.4	48.8	4.8	43.9	4.8	49.5	5.8
10/20/92	630	0.0	33.3	12.0	8.8	29.9	3.0	32.0	3.1	53.6	2.9	37.3	3.0	40.8	4.9	49.2	4.3	44.2	3.7	49.2	4.7
10/20/92	645	0.0	33.1	14.5	10.5	29.6	3.0	32.3	3.1	53.9	2.9	37.0	3.0	40.9	3.5	49.9	4.8	44.5	4.8	47.1	4.2
10/20/92	700	0.0	32.8	14.3	9.3	29.9	3.0	32.2	3.1	53.9	2.9	37.0	3.0	39.4	8.5	46.5	6.2	42.9	7.5	49.4	3.9
10/20/92	715	0.0	32.7	13.7	8.8	29.7	3.4	32.7	3.2	54.9	2.9	36.6	3.0	40.3	4.9	49.8	3.3	43.8	3.5	48.7	3.9
10/20/92	730	0.0	32.1	15.2	9.3	29.5	3.0	30.7	3.1	55.2	2.9	34.6	3.0	39.7	4.7	45.3	5.0	41.2	7.0	48.8	4.9
10/20/92	745	0.0	32.7	15.7	8.8	29.9	3.0	32.4	3.1	55.3	2.9	35.3	3.0	39.4	6.6	47.6	4.3	42.2	7.2	48.0	3.6
10/20/92	800	0.0	32.5	15.9	8.4	28.9	3.0	29.9	3.1	53.5	2.9	33.4	3.0	38.9	10.2	49.0	5.1	42.5	6.7	43.5	3.3
10/20/92	815	0.0	32.5	15.3	8.6	29.0	3.0	30.4	3.2	53.6	2.9	33.2	3.0	33.8	8.4	48.8	7.3	39.7	6.7	47.6	8.4
10/20/92	830	0.0	31.8	15.3	9.4	28.7	3.0	31.7	3.1	55.1	2.9	34.0	3.0	39.7	5.9	48.9	6.0	42.7	4.2	48.3	5.4
10/20/92	845	0.0	33.1	14.8	10.0	29.1	3.0	32.0	4.1	55.5	2.9	35.2	3.0	39.6	4.9	50.1	4.0	43.4	5.0	42.7	5.0
10/20/92	900	0.0	33.2	15.7	10.0	29.3	3.0	29.9	4.6	55.9	2.9	35.1	3.0	40.0	7.5</						

12/3/92

20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
10/20/92	1015	0.0	30.7	17.6	13.2	29.6	3.5	23.9	9.8	55.8	2.9	37.6	3.0	37.5	8.3	50.0	5.5	42.8	7.4	50.3	5.2
10/20/92	1030	0.0	30.7	16.3	12.7	29.6	3.0	23.4	7.9	54.7	3.1	36.7	3.2	39.8	5.0	50.6	5.4	43.3	8.1	50.6	6.0
10/20/92	1045	0.0	30.0	15.4	13.9	29.7	3.1	21.1	12.0	54.9	2.9	39.2	3.5	35.6	12.0	49.1	9.1	41.1	5.8	50.2	5.5
10/20/92	1100	0.0	30.2	18.5	15.4	30.1	3.9	20.2	12.0	52.9	5.1	39.5	5.0	39.8	11.5	50.6	3.8	43.6	4.2	42.3	11.7
10/20/92	1115	0.0	32.4	16.2	12.7	29.4	3.0	27.0	10.0	56.2	2.9	36.0	3.0	36.8	6.2	49.9	4.4	43.1	4.9	49.7	5.6
10/20/92	1130	0.0	33.3	15.8	13.1	30.2	3.0	27.4	7.1	56.4	2.9	36.3	3.0	37.3	9.7	50.6	5.8	43.5	7.1	50.5	5.4
10/20/92	1145	0.0	31.3	15.7	12.5	30.1	3.0	26.8	12.8	55.9	2.9	36.2	3.0	40.3	5.6	43.2	5.3	41.0	7.1	49.8	5.0
10/20/92	1200	0.0	27.1	19.4	20.5	28.9	4.1	16.9	17.1	48.1	6.9	36.7	4.1	40.0	6.8	48.4	7.7	42.8	6.3	46.9	6.1
10/20/92	1215	0.0	28.7	17.8	25.3	27.2	11.7	14.9	17.7	43.5	8.1	36.2	7.3	38.0	7.8	46.7	4.1	42.7	9.6	48.1	4.7
10/20/92	1230	0.0	29.0	20.0	27.0	28.0	3.6	14.2	18.3	36.8	8.6	35.1	10.6	40.0	5.7	49.9	5.7	42.8	4.3	46.3	4.7
10/20/92	1245	0.0	27.7	19.9	31.5	27.6	7.2	13.8	20.5	37.7	9.6	34.7	9.8	39.5	7.1	50.9	6.7	43.0	4.5	43.5	4.1
10/20/92	1300	0.0	27.5	17.6	27.1	27.4	3.1	15.7	21.7	36.9	10.3	35.0	9.5	37.8	9.8	47.3	9.8	36.8	6.5	44.2	7.8
10/20/92	1315	0.0	25.9	19.6	32.2	27.2	3.6	13.8	19.9	33.1	11.1	30.7	10.6	30.5	20.0	47.5	13.6	39.5	6.8	41.1	5.8
10/20/92	1330	11.7	0.0	23.5	40.9	24.4	10.3	10.9	21.3	26.5	12.4	23.2	11.2	37.5	11.8	46.9	7.1	41.7	8.7	45.0	10.5
10/20/92	1345	37.8	0.0	13.5	17.3	31.9	3.0	20.8	12.0	53.5	3.1	40.3	3.3	38.2	8.6	48.6	3.4	42.6	9.0	52.2	5.2
10/20/92	1400	32.4	0.0	12.7	17.4	30.7	3.0	22.8	13.1	51.5	8.2	39.0	9.7	39.0	8.9	47.8	3.3	42.1	8.7	51.8	4.2
10/20/92	1415	28.0	0.0	14.1	19.1	29.0	3.0	17.4	15.5	42.5	6.8	35.9	8.9	37.8	9.1	47.9	3.8	42.3	6.6	47.6	4.4
10/20/92	1430	28.4	0.0	13.8	20.3	29.4	3.0	17.1	15.7	42.5	6.2	35.6	8.3	38.5	12.7	43.3	3.2	40.5	1.1	45.6	4.2
10/20/92	1445	29.2	0.0	18.6	27.2	28.9	10.9	17.8	15.6	36.8	8.2	34.0	9.1	38.4	9.4	48.0	4.1	42.1	7.6	42.2	3.5
10/20/92	1500	29.1	0.0	15.8	24.6	29.2	3.0	17.4	15.1	42.6	7.5	34.3	8.7	38.4	13.3	46.6	8.1	41.2	7.5	49.6	9.6
10/20/92	1515	0.0	35.5	14.4	18.5	29.7	3.1	24.0	9.8	53.2	5.0	40.6	3.2	35.3	9.9	48.0	9.1	41.8	7.6	52.2	5.3
10/20/92	1530	0.0	35.5	16.3	15.4	29.2	3.1	24.4	10.8	54.0	3.2	40.0	3.1	37.8	14.1	47.3	6.8	41.7	8.2	48.9	3.5
10/20/92	1545	0.0	36.1	14.6	16.4	28.9	3.0	27.7	9.6	57.0	2.9	38.0	3.0	35.5	27.6	48.7	12.7	41.2	1.4	47.6	12.2
10/20/92	1600	0.0	36.6	16.5	14.5	28.9	3.0	29.4	17.6	56.9	2.9	37.4	3.0	36.6	15.1	50.3	6.0	42.9	8.6	50.3	3.8
10/20/92	1615	0.0	36.8	14.8	15.9	29.3	3.0	26.6	4.9	56.9	3.0	37.8	3.4	30.9	12.5	44.2	5.2	40.7	7.1	50.1	3.6
10/20/92	1630	0.0	36.3	14.2	13.3	29.4	3.0	25.5	10.6	56.4	3.0	38.1	3.0	35.7	8.9	40.9	3.4	42.6	7.4	51.5	4.8
10/20/92	1645	0.0	35.7	20.2	13.2	29.7	3.0	26.1	8.9	56.4	3.4	38.5	3.5	37.2	10.8	47.2	4.3	42.2	7.1	50.3	6.0
10/20/92	1700	0.0	35.5	16.3	14.1	29.1	3.0	24.6	10.2	56.5	5.0	38.0	3.3	35.9	10.1	47.2	4.3	42.1	8.4	51.3	11.0
10/20/92	1715	0.0	35.6	18.5	13.8	30.1	3.0	23.3	12.7	54.9	3.8	38.1	3.0	34.5	11.1	44.3	4.6	41.2	8.4	48.5	4.0
10/20/92	1730	0.0	36.7	16.8	11.1	29.6	3.0	31.9	3.7	56.9	3.0	38.5	3.0	38.9	10.2	48.4	7.8	42.2	7.3	45.4	7.8
10/20/92	1745	0.0	35.0	15.3	71.3	29.3	3.0	27.1	9.6	56.1	3.0	37.1	3.0	36.3	8.2	47.4	4.4	42.2	8.5	44.4	7.5
10/20/92	1800	0.0	35.8	15.8	11.4	29.6	3.0	28.5	8.2	57.5	3.0	36.8	3.0	37.4	8.3	45.4	6.1	41.2	8.1	49.6	11.5
10/20/92	1815	0.0	36.7	14.9	12.8	29.2	3.0	27.4	8.4	57.3	3.0	36.4	3.0	37.2	12.0	46.5	3.2	41.6	8.2	46.9	6.5
10/20/92	1830	0.0	37.6	14.2	13.1	28.0	3.0	32.6	3.9	57.7	3.0	34.8	3.0	36.4	10.7	46.7	4.8	41.9	9.4	45.3	10.8
10/20/92	1845	0.0	37.4	15.1	12.8	29.5	3.0	27.2	7.7	57.1	3.3	36.4	3.0	35.2	9.5	47.2	4.2	42.0	8.5	46.5	10.4
10/20/92	1900	0.0	36.8	14.4	13.3	29.5	3.1	28.0	7.5	57.8	3.0	36.4	3.0	36.6	10.0	49.5	4.7	42.6	7.4	48.0	5.5
10/20/92	1915	0.0	36.6	14.0	12.2	29.5	3.0	27.2	9.4	57.7	3.0	36.4	3.0	34.9	7.8	47.7	5.4	41.2	1.1	47.4	6.3
10/20/92	1930	0.0	36.5	14.5	12.1	29.7	3.0	27.5	7.2	55.7	3.1	37.2	3.0	37.2	7.7	49.2	3.8	43.4	5.2	47.2	5.1
10/20/92	1945	0.0	36.7	15.0	13.4	30.0	3.0	25.5	13.8	55.9	3.0	37.4	3.0	33.8	11.2	49.3	5.7	43.0	6.0	46.9	5.0
10/20/92	2000	0.0	36.3	15.9	12.3	29.8	3.0	26.9	7.4	56.5	3.4	37.0	3.0	36.4	7.5	47.4	4.4	42.5	5.7	47.4	11.4
10/20/92	2015	0.0	35.2	16.6	14.6	28.8	3.0	26.1	8.4	56.4	3.0	37.0	3.0	34.4	10.7	48.1	7.5	41.7	6.9	50.0	8.6
10/20/92	2030	0.0	35.3	13.3	13.9	29.6	3.3	23.7	10.0	56.1	3.1	37.9	3.4	34.5	9.8	49.6	6.5	42.6	7.6	48.2	8.8
10/20/92	2045	0.0	35.6	15.6	15.2	30.1	3.0	24.8	9.1	55.4	4.4	38.1	3.0	35.7	10.1	43.9	6.4	41.2	7.4	46.8	4.5
10/20/92	2100	0.0	34.9	13.5	15.0	29.8	3.0	24.1	11.5	56.2	2.9	38.5	3.3	35.6	12.0	49.5	5.3	42.5	6.1	50.6	9.8
10/20/92	2115	0.0	34.8	13.5	14.3	29.6	3.0	24.8	9.4	54.9	4.2	38.2	3.0	38.0	7.4	51.8	5.2	43.5	4.5	50.6	7.4
10/20/92	2130	0.0	34.0	14.0	15.2	29.5	3.4	24.0	8.5	55.3	3.1	38.2	3.0	38.9	8.2	49.2	4.3	42.8	6.2	50.1	10.1
10/20/92	2145	0.0	34.2	14.5	13.8	29.8	3.0	25.3	12.1	55.3	3.0	38.6	3.0	35.9	6.9	51.3	5.1	43.4	4.4	50.4	7.8
10/20/92	2200	0.0	33.3	12.9	16.4	29.2	3.0	23.7	10.2	54.7	3.4	39.3	3.1	36.4	6.9	51.3	5.2	43.6	4.4	49.7	8.2
10/20/92	2215	0.0	32.3	13.1	15.1	29.0	3.6	22.6	11.4	55.8	3.6	38.8	3.1	37.4	7.8	51.7	4.2	43.2	4.0	50.2	9.3
10/20/92	2230	0.0	31.7	11.7	14.1	29.5	3.0	23.6	9.5	55.1	3.8	39.1	4.0	37.5	7.8	50.9	4.8	42.8	6.1	50.2	10.7
10/20/92	2245	0.0	31.1	15.1	13.6	29.2	3.1	25.3	9.5	55.2	3.0	39.3	3.3	36.4	7.4	50.8	3.8	43.0	5.3	49.5	5.6
10/20/92	2300	0.0	31.6	14.7	13.7	29.5	3.0	24.1	7.5	55.6	3.7	39.0	3.0	39.4	6.6	51.0	3.6	43.2	5.6	49.4	9.2
10/20/92	2315	0.0	31.7	14.3	14.7	29.7	4.7	22.9	9.6	54.3	3.8	39.1	3.1	38.0	8.0	50.2	6.3	42.8	5.4	49.8	8.5
10/20/92	2330	0.0	27.6	15.4	15.7	27.5	4.1	23.1	12.2	56.9	2.9	38.0	3.0	38.4	7.9	50.6	7.7	42.5	5.5	47.3	6.8
10/20/92	2345	0.0	28.1	25.6	14.5	28.2	3.0	23.1	8.6	53.5	3.1	39.3	3.1	36.8	8.0	49.9	3.8	43.7	3.2	48.7	10.7
10/21/92	0	0.0	26.4	19.5	20.9	27.5	6.1	17.4	18.9	54.8	4.0	38.5	3.8	39.2	4.9	49.5	6.8	43.0	3.3	49.2	5.8
10/21/92	15	31.1	0.0	14.0	16.8	31.3	3.0	20.9	11.7	46.4	7.4	37.2	8.2	36.9	7.0	49.4	5.2	43.7	3.1	48.5	5.3
10/21/92	30	32.5	0.0	14.8	17.1	30.8	3.9	25.2	8.5	53.0	2.9	40.0	3.0	40.0	9.0	49.8	3.8	43.9	6.4	50.0	11.1
10/21/92	45	32.3	0.0	12.7	15.1	30.4	3.0	26.3	6.5	53.7	3.0	38.1	3.0	38.1	8.3	49.4	7.8	43.1	3.2	49.3	8.7
10/21/92	100	31.9	0.0	12.5	16.3	29.6	3.0	27.9	7.7	53.7	2.9	39.1	3.0	38.8	6.2	50.2	7.4	43.1	4.0	50.0	9.8
10/21/92	115</																				

12/3/92 20:40:39

Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spk/min	D 2 KW	D 2 spk/min	D 3 KW	D 3 spk/min	D 4 KW	D 4 spk/min	G 1 KW	G 1 spk/min	G 2 KW	G 2 spk/min	G 3 KW	G 3 spk/min	G 4 KW	G 4 spk/min
10/21/92	230	32.8	0.0	11.8	17.1	29.5	3.0	32.3	3.2	55.2	2.9	37.7	3.0	40.2	6.8	50.2	5.9	44.2	3.4	48.4	4.9
10/21/92	245	37.3	0.0	9.0	14.2	29.7	3.0	31.9	3.3	56.1	3.0	36.5	3.0	40.2	7.2	50.5	5.9	44.4	4.4	48.7	6.9
10/21/92	300	28.2	0.0	11.8	13.1	28.8	3.0	32.4	4.1	55.2	2.9	37.2	3.0	40.8	4.1	50.8	3.8	44.6	3.9	50.0	5.5
10/21/92	315	30.2	0.0	14.3	20.0	30.0	3.0	28.7	4.3	54.0	3.0	39.6	3.1	39.5	7.9	50.5	3.2	43.9	4.0	50.4	8.7
10/21/92	330	30.8	0.0	18.4	11.4	30.2	3.0	31.3	3.8	54.4	2.9	39.3	3.1	37.3	6.0	49.7	5.2	43.0	3.7	50.6	7.1
10/21/92	345	31.1	0.0	10.1	13.0	30.8	3.0	30.4	4.7	54.0	2.9	40.0	3.1	40.5	5.4	49.8	3.2	44.1	3.8	48.1	4.2
10/21/92	400	33.0	0.0	10.7	11.8	30.4	3.0	32.1	3.7	54.5	2.9	39.2	3.0	40.6	3.9	49.4	5.7	44.1	3.1	49.5	6.4
10/21/92	415	32.7	0.0	10.8	14.4	30.1	3.0	32.5	3.3	54.6	2.9	38.8	3.0	39.3	15.3	49.4	9.3	43.8	3.2	49.9	4.2
10/21/92	430	38.9	0.0	9.0	13.4	31.7	3.0	32.8	3.1	55.1	2.9	37.3	3.0	39.8	14.3	48.7	7.8	44.1	3.7	48.4	5.5
10/21/92	445	33.9	0.0	9.9	11.1	31.1	3.0	27.0	5.9	50.2	4.3	36.6	4.2	41.4	5.4	47.9	3.9	43.6	3.1	43.8	3.3
10/21/92	500	35.3	0.0	8.2	11.3	30.5	3.0	32.5	3.2	54.7	3.0	37.5	3.0	41.0	10.1	48.7	6.9	44.0	3.1	49.1	6.1
10/21/92	515	37.3	0.0	14.4	10.9	30.0	3.0	32.5	3.1	55.5	3.0	35.5	3.0	40.2	16.2	48.8	6.9	43.9	3.8	45.9	3.6
10/21/92	530	28.1	0.0	13.2	14.0	28.5	3.0	28.3	6.9	54.4	3.0	39.5	3.2	39.9	12.9	49.1	4.5	43.9	4.4	49.0	3.5
10/21/92	545	28.4	0.0	13.4	17.5	28.5	3.3	24.0	10.4	52.3	3.5	39.0	6.7	39.6	7.8	49.2	4.1	44.1	3.2	49.0	6.2
10/21/92	600	31.1	0.0	10.2	15.3	29.7	3.0	27.7	7.9	53.1	2.9	40.9	3.1	34.2	6.1	47.7	4.8	39.8	3.9	47.3	3.8
10/21/92	615	35.9	0.0	9.8	15.9	29.6	3.0	32.6	4.1	55.5	2.9	37.3	3.0	39.0	8.0	49.4	4.7	44.1	3.3	47.9	4.3
10/21/92	630	35.9	0.0	11.0	14.6	29.8	3.0	32.6	3.1	55.6	2.9	36.5	3.0	38.6	6.8	49.8	4.1	44.1	3.2	47.5	5.3
10/21/92	645	0.0	37.8	12.7	19.4	28.6	3.0	33.5	3.7	56.4	3.0	37.2	3.0	39.8	7.0	50.6	5.2	44.0	5.5	46.3	3.9
10/21/92	700	0.0	37.4	9.5	13.1	28.3	3.0	33.4	3.1	56.4	3.0	37.2	3.0	40.2	4.5	47.9	5.8	42.9	6.8	49.6	6.1
10/21/92	715	0.0	36.7	10.5	14.2	28.4	3.0	33.2	3.4	57.0	3.0	36.8	3.0	38.2	6.1	50.3	5.8	42.6	4.9	47.9	3.6
10/21/92	730	0.0	36.0	12.6	12.5	28.5	3.1	32.9	3.8	57.1	3.0	36.7	3.0	39.8	3.9	49.7	4.1	43.0	6.7	48.2	3.8
10/21/92	745	0.0	36.0	12.2	14.5	28.3	3.0	31.8	4.3	57.4	3.0	36.7	3.0	39.0	5.7	50.7	4.8	43.2	7.2	47.3	4.6
10/21/92	800	0.0	37.0	12.1	12.2	28.2	3.0	31.4	4.1	57.8	3.0	35.4	3.0	38.8	7.8	52.1	5.0	43.4	3.6	46.6	4.4
10/21/92	815	0.0	37.5	13.3	14.7	28.2	3.0	32.0	3.6	57.5	3.0	35.5	3.0	38.2	5.2	51.7	3.4	43.2	5.3	48.2	3.2
10/21/92	830	0.0	36.4	12.5	12.9	28.6	3.0	31.0	4.1	58.1	3.0	35.5	3.0	32.9	6.8	48.1	6.1	39.2	6.4	47.7	3.5
10/21/92	845	0.0	38.1	12.1	11.8	29.4	3.0	32.5	4.9	57.8	3.0	35.7	3.0	39.9	6.9	49.2	3.8	42.7	6.3	47.8	3.6
10/21/92	900	0.0	35.4	13.0	11.5	28.1	3.0	32.3	3.4	58.0	3.0	35.5	3.0	39.7	4.8	49.9	5.2	42.9	7.0	48.5	4.9
10/21/92	915	0.0	34.3	12.7	13.2	28.6	3.0	28.5	9.9	58.0	3.0	37.5	3.0	39.3	6.2	50.8	4.5	43.1	6.2	49.1	8.7
10/21/92	930	0.0	35.1	13.7	14.0	28.7	3.0	25.5	10.0	55.7	4.9	37.7	3.0	40.0	5.3	51.3	3.4	43.3	4.7	48.3	3.6
10/21/92	945	0.0	35.2	14.2	14.4	28.8	3.0	25.3	11.5	56.4	3.9	38.0	3.0	39.8	4.7	51.8	4.2	43.7	3.4	48.6	3.0
10/21/92	1000	0.0	35.4	13.9	14.4	29.2	3.7	25.1	10.0	55.4	4.9	38.1	3.0	39.0	5.1	51.7	3.3	43.6	4.1	48.1	4.0
10/21/92	1015	0.0	35.2	14.8	14.5	29.2	3.0	24.6	10.2	56.3	4.2	38.3	3.0	39.8	4.3	50.5	3.8	43.3	7.7	48.3	3.7
10/21/92	1030	0.0	34.8	16.8	14.8	28.7	3.0	24.5	11.4	55.3	3.9	38.3	3.2	39.9	4.9	51.2	5.4	43.6	5.9	46.5	3.4
10/21/92	1045	0.0	34.3	15.7	16.1	28.8	3.0	24.2	10.0	53.8	5.8	38.6	3.0	39.0	6.2	51.8	5.0	44.1	3.5	48.2	3.8
10/21/92	1100	0.1	39.0	14.1	12.9	29.7	3.0	31.0	4.3	58.5	3.1	37.2	3.0	35.5	7.9	51.3	5.9	43.2	7.1	49.0	3.2
10/21/92	1115	0.1	38.2	14.1	12.6	29.3	3.0	32.9	4.2	58.2	3.0	36.6	3.0	39.8	5.0	51.3	4.1	43.7	3.7	47.4	3.1
10/21/92	1130	0.1	37.9	14.3	12.8	29.0	3.0	32.8	6.4	58.3	3.0	36.3	3.0	39.9	4.4	51.8	3.4	43.7	5.4	46.9	3.1
10/21/92	1145	0.1	38.0	14.8	15.9	29.1	3.0	32.1	4.9	58.4	3.0	36.3	3.0	40.0	4.7	51.5	5.5	43.7	3.8	48.1	3.2
10/21/92	1200	0.1	38.1	12.7	12.0	28.9	3.0	32.3	4.2	57.0	3.0	34.5	3.0	40.0	7.4	51.4	3.8	43.7	3.5	47.4	3.7
10/21/92	1215	0.1	37.8	12.0	12.4	28.5	3.0	33.0	3.5	58.1	3.0	34.8	3.0	39.8	6.0	51.5	4.1	43.7	3.4	44.7	3.0
10/21/92	1230	0.1	37.1	12.8	12.8	29.0	3.2	28.9	6.6	58.7	3.0	36.5	3.0	39.8	4.2	52.0	4.9	43.8	5.2	49.1	3.3
10/21/92	1245	0.1	37.8	12.7	14.6	29.2	3.0	31.3	7.6	58.6	3.0	36.5	3.0	39.0	7.7	52.1	4.2	44.2	3.8	47.4	3.1
10/21/92	1300	0.1	37.9	13.9	12.8	29.4	3.0	33.2	4.2	58.6	3.0	36.8	3.0	39.7	5.2	47.9	4.5	42.4	6.7	46.8	3.0
10/21/92	1315	0.0	29.0	14.0	15.4	27.9	3.0	27.8	14.9	56.6	6.4	36.0	3.0	40.0	4.9	51.7	4.4	43.3	4.0	48.0	3.7
10/21/92	1330	0.0	31.1	14.7	19.4	27.3	3.0	21.7	15.1	55.5	6.8	37.8	3.2	35.5	13.0	48.1	8.7	41.0	9.8	46.4	3.9
10/21/92	1345	0.0	30.6	15.3	22.8	27.4	3.1	19.7	12.7	48.2	5.5	37.0	4.7	38.4	10.7	49.9	3.8	42.3	6.9	46.7	3.0
10/21/92	1400	31.9	0.0	14.6	17.2	30.1	3.0	21.5	11.7	56.2	4.1	39.6	3.7	39.6	5.1	49.2	3.4	42.2	6.9	48.6	3.0
10/21/92	1415	30.4	0.0	13.7	18.6	30.0	3.0	20.5	12.1	51.0	7.1	39.3	4.4	39.9	5.2	50.0	3.8	42.2	6.0	48.7	3.5
10/21/92	1430	30.0	0.0	14.3	20.3	29.4	3.2	18.1	14.2	45.1	10.3	37.3	10.4	39.7	6.5	51.9	3.0	42.9	5.0	47.3	3.0
10/21/92	1445	32.1	0.0	17.5	25.2	29.6	3.8	17.6	16.1	44.0	6.8	33.9	9.4	38.9	6.8	49.2	3.4	41.7	8.6	46.1	3.0
10/21/92	1500	30.7	0.0	17.2	23.6	30.3	3.9	19.8	12.2	49.3	7.4	39.1	8.5	39.0	9.8	47.0	3.5	41.3	8.2	48.5	3.3
10/21/92	1515	27.5	0.0	17.3	27.4	28.9	3.0	15.3	18.8	35.5	10.5	31.9	10.5	39.5	9.2	51.3	3.1	42.9	8.3	45.2	3.1
10/21/92	1530	28.8	0.0	15.8	19.7	29.0	3.0	21.6	13.8	49.5	7.4	40.7	7.2	39.2	5.7	49.3	3.0	42.9	7.6	49.8	3.0
10/21/92	1545	30.5	0.0	12.8	20.2	30.0	3.0	23.1	11.8	53.2	4.4	43.2	3.9	39.7	6.0	50.8	3.3	43.4	5.5	51.4	3.3
10/21/92	1600	31.9	0.0	12.2	13.4	29.7	3.0	30.5	4.7	55.6	3.5	41.1	3.2	39.8	4.8	52.3	4.0	43.9	5.0	53.2	3.0
10/21/92	1615	0.0	36.2	12.8	17.5	28.7	3.0	25.1	8.9	55.6	3.4	41.5	3.2	39.8	5.9	52.7	3.3	43.7	3.1	53.3	3.4
10/21/92	1630	0.0	35.0	11.7	14.7	28.4	2.9	28.1	10.2	56.1	2.9	40.7	3.0	33.7	8.1	50.6	3.5	43.3	5.1	51.0	3.3
10/21/92	1645	0.0	30.6	16.5	18.9	27.8	2.9	32.3	3.7	56.7	3.3	39.8	3.0	40.6	5.3	52.2	3.5	44.7	3.2	48.9	3.0
10/21/92	1700	0.0	27.0	17.2	27.6	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0	40.6	5.3	52.2	3.5	44.7	3.2	48.9	3.0
10/21/92	1715	34.4	0.0	14.5	16.3	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0	40.6	5.3	52.2	3.5	44.7	3.2	48.9	3.0
10/21/92	1730	29.9	0.0	13.3	17.3	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0	40.6	5.3	52.2	3.5	44.7			

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Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn
10/21/92	1845	0.0	33.4	15.9	16.8	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	1900	0.0	33.1	14.7	18.9	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	1915	0.0	34.1	15.4	19.4	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	1930	0.0	34.0	16.2	18.5	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	1945	0.0	33.9	13.9	21.0	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2000	0.0	34.1	13.5	18.4	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2015	0.0	34.0	13.9	16.8	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2030	0.0	34.0	13.9	18.2	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2045	0.0	34.7	15.8	15.8	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2100	0.0	35.2	13.8	16.2	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2115	0.0	35.8	13.1	15.4	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2130	0.0	36.1	15.2	15.3	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2145	0.0	36.8	13.2	13.3	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2200	0.0	34.3	15.6	13.5	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2215	0.0	31.5	13.4	19.4	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2230	0.0	31.9	14.6	16.6	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2245	0.0	32.8	13.5	14.8	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2300	0.0	32.7	20.8	14.5	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2315	0.0	33.5	12.7	15.0	27.8	2.9	32.3	3.7	56.7	3.3	39.6	3.0
10/21/92	2330	0.0	33.6	12.3	12.7	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/21/92	2345	0.0	34.4	17.2	16.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	0	0.0	34.6	12.8	11.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	15	0.0	35.4	14.1	14.2	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	30	0.0	35.8	14.1	20.7	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	45	0.0	37.4	14.7	15.2	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	100	0.0	38.1	15.5	16.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	115	0.0	35.2	12.2	11.8	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	130	0.0	29.1	10.9	12.9	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	145	0.0	27.6	12.2	14.9	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	200	0.0	28.1	0.1	13.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	215	0.0	27.9	12.0	18.9	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	230	0.0	19.0	31.7	37.0	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	245	0.0	28.0	9.6	16.4	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	300	0.0	28.1	10.1	11.1	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	315	0.0	34.0	30.8	16.5	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	330	0.0	27.7	12.0	19.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	345	0.0	31.0	14.4	20.8	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	400	0.0	31.2	17.6	16.4	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	415	0.0	34.3	14.4	14.7	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	430	0.0	34.6	13.1	13.0	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	445	0.0	35.3	31.2	14.8	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	500	0.0	35.5	13.1	14.4	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	515	0.0	36.4	13.0	14.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	530	0.0	36.0	11.9	12.9	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	545	0.0	35.2	13.0	13.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	600	0.0	36.9	13.3	15.3	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	615	0.0	37.1	14.3	13.2	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	630	0.0	35.9	15.7	15.5	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	645	0.0	29.1	16.5	19.4	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	700	0.0	30.9	11.0	16.0	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	715	0.0	30.2	15.9	19.8	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	730	0.0	28.2	15.1	14.6	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	745	0.0	28.9	15.0	18.5	28.0	2.9	31.9	7.1	56.6	3.0	39.7	3.0
10/22/92	800	0.0	28.5	16.4	18.4	28.6	3.3	20.1	14.6	50.8	6.0	37.9	8.8
10/22/92	815	0.0	29.1	16.6	19.5	28.8	3.0	19.1	13.2	45.9	7.4	37.6	8.8
10/22/92	830	0.0	32.1	13.5	17.1	29.5	3.0	23.7	10.8	55.1	3.1	38.4	3.3
10/22/92	845	0.0	30.3	13.7	15.4	28.4	3.0	21.4	12.8	54.4	4.1	40.1	3.7
10/22/92	900	0.0	29.0	12.7	15.1	28.1	3.2	21.2	12.0	53.0	5.1	40.0	3.7
10/22/92	915	0.0	29.0	12.7	15.1	28.1	3.2	21.2	12.0	53.0	5.1	40.0	3.7
10/22/92	930	0.0	29.0	12.7	15.1	28.1	3.2	21.2	12.0	53.0	5.1	40.0	3.7
10/22/92	945	0.0	30.3	13.7	18.9	29.3	3.0	20.3	12.3	50.6	6.3	39.3	8.5
10/22/92	1000	0.0	31.7	15.9	38.1	29.3	3.0	23.1	11.0	52.5	4.8	39.6	7.5
10/22/92	1015	0.0	31.7	10.9	18.6	29.1	4.1	22.6	11.9	52.9	5.4	39.5	5.1
10/22/92	1030	30.7	0.0	7.9	18.3	30.1	3.0	22.0	8.8	52.8	3.4	39.7	5.5
10/22/92	1045	0.0	31.7	10.5	19.7	29.3	3.0	23.9	10.0	54.2	3.3	39.7	7.9

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spk/min	D 2 KW	D 2 spk/min	D 3 KW	D 3 spk/min	D 4 KW	D 4 spk/min	C 1 KW	C 1 spk/min	C 2 KW	C 2 spk/min	C 3 KW	C 3 spk/min	C 4 KW	C 4 spk/min
10/22/92	1100	0.0	32.2	9.9	15.5	29.5	3.0	28.4	7.2	55.9	3.1	39.3	3.6	39.8	4.7	51.4	6.1	43.2	5.5	53.0	5.1
10/22/92	1115	0.0	32.7	7.1	16.6	29.8	3.0	28.2	5.5	56.5	3.1	39.2	3.0	37.8	7.2	52.0	4.9	43.3	4.8	51.3	5.7
10/22/92	1130	0.0	27.0	7.9	20.0	28.1	3.0	21.3	17.1	54.1	6.2	39.2	12.7	39.9	4.0	52.6	4.5	43.5	4.8	48.8	4.3
10/22/92	1145	0.0	27.1	11.1	19.3	27.8	4.7	18.1	12.9	52.3	7.5	38.2	8.4	40.1	3.8	51.7	3.3	43.4	6.3	51.3	4.9
10/22/92	1200	0.0	26.6	0.1	24.0	27.7	3.1	17.0	15.3	45.0	6.5	35.8	9.0	39.6	5.5	52.2	6.3	43.2	4.9	51.0	6.3
10/22/92	1215	0.0	26.7	0.1	23.5	27.6	3.0	18.2	15.4	44.9	6.0	35.2	6.2	39.9	4.7	51.8	4.6	42.6	6.0	50.9	5.1
10/22/92	1230	0.0	31.1	19.3	27.7	28.9	3.0	18.1	14.4	47.5	6.9	34.1	8.6	39.6	6.5	51.6	4.4	43.1	7.7	52.2	4.1
10/22/92	1245	32.3	0.0	17.7	26.3	30.2	4.1	21.1	11.5	52.3	5.7	38.2	8.5	39.9	4.4	50.5	4.5	43.0	6.8	54.6	3.4
10/22/92	1300	28.7	0.0	16.0	23.6	29.6	3.0	20.4	13.2	49.2	6.1	35.6	9.3	39.8	3.8	51.6	3.4	43.3	7.2	54.9	3.6
10/22/92	1315	28.8	0.0	14.2	22.6	30.2	3.0	22.0	11.2	51.8	6.2	37.6	8.2	39.8	6.8	50.3	4.9	43.1	1.1	52.5	3.0
10/22/92	1330	28.7	0.0	13.4	20.6	29.9	3.0	23.3	11.7	54.8	4.4	38.3	8.5	39.6	5.4	52.6	3.0	43.9	6.2	56.9	3.1
10/22/92	1345	28.0	0.0	17.9	24.1	29.7	3.0	20.5	12.3	50.4	6.7	35.2	10.4	33.8	14.4	47.9	11.7	39.4	8.7	56.4	3.7
10/22/92	1400	28.3	0.0	14.5	21.0	29.4	3.0	21.9	11.9	49.5	6.6	35.6	9.1	39.9	6.0	53.4	3.4	44.1	6.7	57.2	3.1
10/22/92	1415	0.0	34.8	14.8	21.6	29.9	3.0	24.5	8.1	58.4	4.3	42.8	4.7	39.4	6.0	53.0	3.0	44.0	5.9	56.6	3.2
10/22/92	1430	0.0	35.4	15.2	19.1	29.9	3.0	27.9	8.0	59.4	3.4	42.5	3.7	39.8	7.9	51.5	3.0	43.7	5.8	57.1	3.0
10/22/92	1445	0.0	35.0	12.0	16.0	30.1	3.2	28.1	7.3	58.2	3.1	41.7	3.6	40.2	8.9	52.1	3.4	43.9	5.7	55.1	3.0
10/22/92	1500	0.0	34.2	13.7	18.2	29.7	3.0	27.5	9.6	58.9	4.8	41.7	3.6	39.5	7.5	51.9	3.6	44.0	7.0	58.9	3.4
10/22/92	1515	0.1	34.4	13.4	21.6	30.5	4.1	24.7	7.1	57.5	3.7	41.5	3.2	38.8	4.2	52.3	3.3	43.9	6.9	58.5	3.1
10/22/92	1530	0.1	31.5	14.0	21.3	29.9	3.0	26.3	8.5	60.1	4.0	40.6	3.1	39.2	5.8	50.2	3.1	43.2	8.2	58.9	3.0
10/22/92	1545	0.1	36.2	13.6	15.9	29.1	3.0	30.5	6.5	62.7	2.9	40.1	3.0	40.1	6.0	50.2	3.8	43.2	7.2	55.3	3.0
10/22/92	1600	0.1	35.9	12.4	14.6	30.1	3.0	29.6	6.0	60.5	3.0	40.8	3.1	39.7	7.9	51.3	5.8	44.1	6.8	59.0	3.0
10/22/92	1615	0.1	36.3	15.3	14.2	29.9	3.0	28.6	5.5	60.2	3.5	39.8	3.0	38.1	18.3	51.0	12.2	42.9	6.5	58.1	3.0
10/22/92	1630	0.1	37.0	14.2	15.1	29.1	3.0	34.4	3.3	63.4	2.9	38.9	3.0	38.7	9.2	52.6	4.0	44.0	8.7	57.9	3.0
10/22/92	1645	0.1	37.7	11.2	16.2	29.5	3.0	33.5	5.5	63.0	2.9	38.9	3.0	38.9	10.8	52.8	3.8	43.9	4.2	57.7	3.2
10/22/92	1700	0.1	35.5	11.1	15.7	29.7	3.0	30.3	5.7	62.2	2.9	39.9	3.0	38.7	10.8	51.3	7.2	43.5	7.1	54.2	3.0
10/22/92	1715	0.1	36.9	12.6	14.3	30.1	3.0	31.0	6.7	61.7	3.1	39.9	3.0	39.0	12.6	52.7	3.7	44.1	8.5	55.5	3.0
10/22/92	1730	0.1	36.7	15.2	15.3	30.1	3.0	31.5	6.6	62.2	2.9	39.7	3.0	37.9	14.1	53.4	3.8	44.4	4.9	57.7	3.0
10/22/92	1745	0.1	37.2	14.3	15.4	29.8	3.0	30.2	5.4	62.6	2.9	38.4	3.0	39.3	5.9	52.9	3.7	44.2	6.5	55.8	3.0
10/22/92	1800	0.1	34.4	14.9	14.3	28.5	3.0	32.4	5.4	62.8	2.9	38.1	3.0	39.6	7.7	52.5	3.1	44.2	5.7	57.5	3.0
10/22/92	1815	0.1	35.4	11.2	13.1	29.4	3.0	28.8	6.4	61.4	2.9	39.1	3.0	39.3	5.7	52.3	3.0	44.0	6.1	49.8	3.0
10/22/92	1830	0.1	35.8	11.8	15.3	30.0	3.0	29.2	7.2	60.6	3.3	39.6	3.0	40.0	6.0	53.4	3.0	44.4	3.6	51.8	3.0
10/22/92	1845	0.1	35.9	12.3	19.9	30.2	3.0	29.5	6.6	59.0	3.0	39.3	3.0	39.7	7.6	53.0	3.1	44.6	4.0	53.1	3.0
10/22/92	1900	0.1	34.7	15.8	18.2	30.2	3.0	29.6	4.9	58.4	2.9	40.0	3.1	40.7	4.2	53.0	3.0	44.7	4.0	55.7	3.0
10/22/92	1915	0.1	36.6	11.9	14.8	30.6	3.0	30.4	5.7	57.6	2.9	39.5	3.0	39.4	6.1	51.6	3.1	44.8	3.3	51.9	3.0
10/22/92	1930	0.1	35.9	14.1	15.3	30.0	3.0	31.5	3.6	58.2	2.9	38.6	3.0	40.5	3.4	52.1	3.0	44.6	3.3	55.0	3.0
10/22/92	1945	0.1	35.2	12.7	15.3	29.8	3.0	31.4	5.0	58.3	2.9	38.5	3.0	37.9	4.9	52.0	3.7	44.3	3.1	55.4	3.0
10/22/92	2000	0.1	35.1	14.4	16.3	29.6	3.0	30.7	4.8	57.8	2.9	38.7	3.0	39.5	5.9	52.0	3.2	44.5	3.1	50.2	3.0
10/22/92	2015	0.0	35.1	19.3	15.8	30.0	3.0	29.6	8.2	57.4	2.9	39.0	3.0	40.6	3.3	51.8	3.1	44.6	3.3	49.9	3.0
10/22/92	2030	0.0	35.2	13.8	16.1	30.5	3.0	29.4	3.9	57.2	2.9	38.7	3.0	40.1	4.4	51.7	3.1	44.3	3.1	53.5	3.2
10/22/92	2045	0.0	38.2	14.7	16.1	30.8	3.0	32.6	3.1	58.9	2.9	38.2	3.0	39.2	4.3	51.4	3.0	44.4	3.0	52.4	3.0
10/22/92	2100	0.0	35.6	13.4	12.1	29.9	3.0	32.8	3.1	58.2	2.9	37.0	3.0	40.6	3.8	51.7	3.0	44.5	3.1	55.1	3.1
10/22/92	2115	0.0	35.2	12.3	12.3	30.2	3.0	32.5	3.1	57.9	2.9	38.8	3.0	39.4	3.9	51.9	3.0	44.3	4.1	54.8	3.1
10/22/92	2130	0.0	33.9	17.5	19.1	30.4	3.0	29.0	5.2	56.7	2.9	38.7	3.2	40.0	4.8	51.8	3.0	44.2	3.0	55.3	3.9
10/22/92	2145	0.0	32.8	11.6	12.6	30.1	3.0	30.7	4.7	56.5	2.9	38.5	3.0	40.8	5.5	51.5	3.0	44.3	3.0	55.2	4.3
10/22/92	2200	0.0	33.6	21.7	15.1	30.2	3.0	29.9	5.1	56.7	2.9	38.1	3.2	40.2	4.8	51.7	3.0	44.2	3.0	53.6	3.3
10/22/92	2215	0.0	33.2	13.2	14.9	30.3	3.0	28.8	4.5	56.3	2.9	38.4	3.1	40.6	3.6	51.3	3.0	44.1	3.4	53.8	4.6
10/22/92	2230	0.0	33.9	11.9	15.2	30.2	3.0	27.5	7.1	56.2	2.9	38.5	3.0	40.5	4.0	51.2	3.0	43.9	3.7	53.6	4.6
10/22/92	2245	0.0	32.7	10.6	14.8	30.4	3.0	27.7	6.6	55.9	2.9	38.5	3.0	40.0	4.5	51.3	4.0	44.0	3.0	50.5	4.8
10/22/92	2300	0.0	32.7	13.2	16.3	30.2	3.0	27.1	6.6	55.9	2.9	38.9	3.5	40.1	3.5	51.3	3.0	43.6	3.1	51.5	4.6
10/22/92	2315	0.0	36.7	13.8	16.6	30.8	3.0	29.0	4.5	57.1	2.9	38.3	3.4	40.4	4.2	51.1	3.1	43.7	3.0	50.0	4.0
10/22/92	2330	0.0	31.3	11.0	12.9	29.5	3.0	29.8	5.8	54.0	2.9	39.0	3.0	41.3	4.3	49.9	3.0	44.9	3.0	52.0	6.0
10/22/92	2345	0.0	32.7	14.4	14.5	29.7	3.0	27.7	4.6	53.4	2.9	39.7	3.0	39.8	8.1	49.9	3.0	44.6	3.3	54.1	4.3
10/23/92	0	0.0	31.6	12.5	12.5	30.5	3.0	27.0	5.7	52.7	2.9	40.0	3.0	41.1	3.1	50.2	3.2	44.6	3.4	53.2	4.7
10/23/92	15	0.0	29.6	11.8	19.4	29.4	3.0	26.6	4.8	52.4	2.9	40.8	5.0	41.1	3.7	49.7	4.4	44.1	3.0	53.5	4.4
10/23/92	30	0.0	30.3	20.0	22.1	30.8	3.2	22.8	8.8	51.0	3.7	39.2	7.7	41.2	3.8	49.2	4.1	44.0	3.0	50.4	3.6
10/23/92	45	0.0	30.2	12.3	14.1	29.6	3.1	25.0	8.7	51.8	3.0	40.5	3.2	41.0	3.4	49.5	3.7	44.2	3.1	52.3	4.3
10/23/92	100	0.0	30.4	15.7	18.4	29.9	3.0	25.2	5.3	51.4	3.0	41.5	3.9	41.0	4.9	49.8	3.1	44.0	3.0	53.6	4.3
10/23/92	115	0.0	29.6	11.7	13.2	27.9	3.0	28.2	5.2	51.5	2.9	40.9	3.2	41.1	4.0	49.4	3.1	44.3	3.0	52.5	4.0
10/23/92	130	0.0	29.1	15.6	18.8	30.3	3.0	21.0	10.1	48.3	4.1	39.1	6.7	38.1	5.0	49.9	4.2	42.9	3.9	45.1	4.3
10/23/92	145	27.9	0.0	15.1	18.7	30.0	3.0	20.6	8.5	48.3	4.3	35.3	7.3	41.0	3.0	49.5	4.3	44.3	3.0	51.5	7.3
10/23/92	200	29.2	0.0	16.6	16.4	30.4	3.0	26.7	4.7	51.4	2.9	41.2	3.7	41.4	4						

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
10/23/92	315	32.0	0.0	14.8	18.0	30.9	3.0	28.8	5.2	50.3	2.9	42.7	3.5	40.2	4.0	48.3	4.1	43.5	3.0	46.3	4.0
10/23/92	330	27.5	0.0	13.6	23.6	29.9	3.0	23.8	8.9	47.2	3.8	37.2	7.3	41.4	3.5	49.1	7.2	43.9	3.2	51.6	7.7
10/23/92	345	28.4	0.0	12.4	18.4	29.3	3.0	26.9	10.0	49.4	6.1	39.9	9.9	40.2	6.0	48.4	3.4	43.5	3.0	53.8	4.8
10/23/92	400	31.1	0.0	13.2	25.5	30.6	3.2	27.9	3.5	50.4	2.9	42.0	4.7	39.3	3.8	48.1	5.5	42.9	3.0	46.3	3.1
10/23/92	415	26.9	0.0	13.6	17.7	29.0	3.0	29.3	6.7	50.7	2.9	42.6	4.9	40.8	4.6	48.5	5.8	42.8	3.0	52.1	7.4
10/23/92	430	20.9	0.0	15.5	25.5	28.3	4.8	17.2	14.6	38.6	8.9	27.8	11.1	41.2	5.1	48.6	8.0	43.0	3.0	47.3	5.0
10/23/92	445	20.8	0.0	16.3	26.3	28.1	3.0	15.6	15.6	32.5	10.0	25.0	10.8	40.9	3.8	49.1	3.3	44.1	3.1	48.8	7.4
10/23/92	500	20.8	0.0	15.3	28.1	28.3	3.0	15.3	15.1	32.9	9.4	25.7	10.1	40.9	3.0	48.8	8.0	43.5	3.0	48.9	5.8
10/23/92	515	23.5	0.0	14.6	27.0	28.2	3.0	18.3	9.7	38.4	6.2	31.2	9.2	41.2	3.8	49.4	4.7	44.6	3.4	46.1	4.0
10/23/92	530	24.6	0.0	15.6	22.0	28.3	3.0	21.2	12.6	43.8	7.9	35.4	9.8	41.2	3.4	49.2	5.5	43.9	3.0	52.2	8.1
10/23/92	545	26.5	0.0	13.4	23.6	28.5	3.0	23.4	7.9	45.3	4.5	37.6	7.4	41.2	4.9	49.1	4.4	44.1	3.2	52.7	5.7
10/23/92	600	0.0	28.4	14.6	19.6	28.4	3.0	23.6	7.5	46.8	5.4	34.6	9.3	41.0	3.1	49.0	5.4	44.0	3.0	52.7	5.5
10/23/92	615	0.0	27.9	15.6	24.7	28.4	3.0	22.4	11.4	48.0	4.0	34.7	7.8	40.7	9.3	48.4	6.4	43.3	3.1	52.1	6.3
10/23/92	630	0.0	30.3	13.8	18.8	29.2	3.6	23.2	10.0	48.8	4.3	38.6	6.6	37.9	4.8	49.3	4.9	43.1	3.3	51.0	6.1
10/23/92	645	0.0	30.5	13.5	16.8	29.1	3.7	23.1	7.6	47.0	3.9	38.9	7.8	40.5	7.5	49.5	5.9	43.6	3.0	51.2	7.0
10/23/92	700	0.0	30.5	14.2	19.3	29.0	3.7	22.5	12.9	50.5	6.3	40.6	8.5	40.7	7.4	49.9	5.8	43.6	3.5	48.4	5.3
10/23/92	715	0.0	30.6	14.6	16.7	28.7	3.0	23.0	7.9	50.9	4.0	39.9	4.0	39.8	3.8	50.8	5.4	43.2	3.1	50.9	6.6
10/23/92	730	0.0	31.1	16.5	16.5	29.4	3.4	23.0	12.0	53.4	3.9	39.5	4.7	40.1	4.3	51.1	5.5	43.2	4.8	50.4	7.8
10/23/92	745	0.0	31.6	12.8	16.2	29.0	3.0	24.3	8.7	54.2	2.9	39.6	3.8	39.9	6.9	51.8	9.5	43.1	3.1	51.3	7.1
10/23/92	800	0.0	31.4	14.9	19.2	29.1	4.0	21.0	12.4	51.0	5.9	38.7	7.9	40.1	5.4	52.1	4.8	43.0	3.4	50.4	6.1
10/23/92	815	0.0	31.4	14.9	19.2	29.1	4.0	21.0	12.4	51.0	5.9	38.7	7.9	40.2	5.4	52.1	4.8	43.0	3.4	50.5	6.1
10/23/92	830	0.0	35.2	12.4	13.4	29.3	3.0	28.6	4.0	55.6	2.9	37.5	3.0	40.1	4.0	51.8	4.1	43.7	3.9	50.7	4.3
10/23/92	845	0.0	34.7	13.1	11.4	29.8	3.0	28.4	6.7	55.3	2.9	37.9	3.1	39.8	5.9	50.8	5.1	43.1	11.8	48.8	5.4
10/23/92	900	0.0	34.5	17.3	16.6	29.7	3.0	29.6	5.9	55.8	2.9	37.5	3.0	37.2	5.0	51.2	5.1	43.1	4.2	46.6	5.0
10/23/92	915	0.0	34.1	12.1	13.3	29.5	3.0	29.7	5.1	56.2	2.9	37.4	3.0	39.5	5.1	51.9	3.8	43.4	3.4	47.3	8.8
10/23/92	930	0.0	34.1	16.4	15.7	29.8	3.0	30.2	6.6	55.8	2.9	37.1	3.0	40.3	3.2	51.8	7.4	43.4	3.6	51.2	6.6
10/23/92	945	0.0	34.4	14.3	12.5	29.9	3.0	30.8	3.8	56.2	2.9	36.8	3.0	39.5	5.3	52.0	5.1	43.5	3.2	51.5	8.2
10/23/92	1000	0.0	34.5	13.3	12.8	29.9	3.0	31.4	4.0	55.7	3.0	36.7	3.0	39.1	4.9	51.8	8.0	43.3	3.9	50.4	5.1
10/23/92	1015	0.0	34.6	14.2	13.8	29.2	3.0	32.1	3.2	57.9	2.9	34.7	3.0	39.8	5.9	51.7	6.3	43.5	3.4	43.1	3.3
10/23/92	1030	0.0	33.8	12.3	10.8	29.0	3.0	32.5	4.5	57.8	2.9	35.4	3.0	40.0	4.1	52.0	4.9	43.3	5.3	50.2	5.6
10/23/92	1045	0.0	33.6	13.5	14.8	29.2	3.0	31.2	3.8	57.6	2.9	36.2	3.0	40.2	4.6	52.0	4.8	43.5	3.1	43.9	3.2
10/23/92	1100	0.0	35.8	14.1	12.3	29.9	3.0	31.9	3.5	57.9	2.9	36.5	3.0	40.2	3.4	52.3	5.9	43.5	4.1	51.2	6.3
10/23/92	1115	0.0	35.9	16.1	14.3	29.8	3.0	32.6	3.2	58.1	2.9	36.5	3.0	40.4	3.5	52.3	6.6	43.6	5.3	52.0	6.5
10/23/92	1130	0.0	36.2	14.2	14.2	30.3	3.0	32.4	4.3	58.4	2.9	36.7	3.0	37.5	5.8	52.2	7.1	42.9	4.6	52.2	7.0
10/23/92	1145	0.0	36.3	17.8	12.5	30.3	3.0	32.7	3.5	58.4	2.9	37.1	3.0	40.2	4.0	52.4	5.8	43.9	4.6	53.8	5.0
10/23/92	1200	0.0	36.2	13.1	18.1	30.0	3.0	32.9	3.3	58.7	2.9	37.4	3.0	40.6	3.4	51.6	4.0	43.7	5.5	51.1	5.2
10/23/92	1215	0.0	34.9	14.5	14.6	29.2	3.0	34.4	3.1	60.4	2.9	36.2	3.0	40.2	3.8	51.7	5.5	43.5	5.6	50.6	4.1
10/23/92	1230	0.0	33.6	14.1	13.3	28.7	3.0	31.9	6.7	60.6	2.9	36.5	3.0	40.2	5.5	52.0	4.5	43.7	8.0	47.5	4.3
10/23/92	1245	0.0	35.6	12.5	12.3	29.1	3.0	33.4	6.6	60.3	2.9	37.2	3.0	39.7	5.7	50.1	4.7	43.0	8.6	56.4	4.9
10/23/92	1300	0.1	36.4	14.0	13.3	30.0	3.0	32.3	4.6	59.9	2.9	38.2	3.0	40.5	5.8	52.1	4.5	44.0	4.5	56.4	4.5
10/23/92	1315	0.1	38.1	14.6	13.9	30.3	3.0	32.9	4.4	60.7	2.9	38.1	3.0	40.5	5.9	51.1	3.1	43.8	7.8	52.1	3.0
10/23/92	1330	0.1	38.6	16.8	13.2	29.9	3.0	34.8	3.1	61.6	2.9	37.3	3.0	40.4	5.7	50.2	4.3	43.4	6.8	49.7	3.0
10/23/92	1345	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1400	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1415	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1430	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1445	0.1	40.8	13.8	12.6	29.6	3.0	35.6	3.3	63.3	2.9	36.6	3.0	38.3	5.4	49.3	3.9	43.4	8.0	56.2	3.0
10/23/92	1500	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1515	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1530	0.1	38.5	13.0	14.9	29.7	3.0	34.0	4.2	62.0	2.9	37.3	3.0	39.8	5.0	49.2	4.4	43.0	7.3	52.0	3.0
10/23/92	1545	0.2	37.8	15.5	13.4	29.2	3.0	33.3	4.4	63.8	2.9	37.3	3.0	34.1	12.7	48.2	3.5	43.4	12.6	56.2	3.0
10/23/92	1600	0.2	33.6	16.5	12.6	28.2	3.0	32.8	4.9	62.6	2.9	36.6	3.0	35.6	9.1	50.2	6.1	44.2	7.3	54.7	3.0
10/23/92	1615	0.2	34.1	13.0	11.9	28.4	3.0	29.4	5.7	62.2	2.9	39.0	3.0	35.7	8.8	50.1	5.3	44.5	6.1	56.8	3.0
10/23/92	1630	0.2	36.2	11.8	13.7	29.4	3.0	30.0	7.3	61.9	2.9	40.0	3.0	28.5	13.0	47.4	7.8	37.0	7.8	57.5	3.0
10/23/92	1645	0.2	36.8	12.1	13.5	29.7	3.0	32.0	5.5	62.1	2.9	40.0	3.2	30.9	13.6	49.8	4.3	44.0	6.8	56.7	3.1
10/23/92	1700	0.2	36.9	13.0	14.3	29.8	3.0	31.6	5.9	61.8	2.9	40.3	3.0	31.3	11.4	50.2	5.4	44.0	7.1	57.8	3.0
10/23/92	1715	0.2	38.9	13.3	14.6	29.2	3.0	35.3	3.7	63.5	2.9	37.5	3.0	25.9	13.4	48.7	6.5	40.9	7.6	56.2	3.0
10/23/92	1730	0.2	31.6	15.1	14.8	28.1	3.0	24.9	10.8	61.2	3.0	40.7	3.1	30.1	9.4	46.7	4.2	42.0	8.1	51.2	3.0
10/23/92	1745	0.2	33.0	13.6	17.8	28.8	3.0	25.8	8.6	61.1	3.5	40.8	3.9	31.2	12.5	47.3	5.8	42.5	12.1	49.8	3.0
10/23/92	1800	0.2	34.8	12.6	16.5	28.5	3.5	29.9	6.1	61.2	2.9	40.3	3.0	31.5	12.7	52.2	3.7	45.0	8.6	57.5	3.0
10/23/92	1815	0.2	30.5	0.1	19.0	27.8	3.0	24.2	9.2	60.5	3.5	40.0	3.								

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn
10/23/92	1930	0.2	30.4	16.6	20.2	28.2 3.0	23.2 7.4	55.0 4.0	39.6 5.9	34.1 15.8	53.1 6.5	44.6 3.7	51.6 3.0
10/23/92	1945	0.2	27.7	13.0	17.9	27.9 3.0	24.4 14.4	57.1 5.7	40.2 4.5	35.2 7.1	53.9 3.8	48.0 6.0	55.3 3.0
10/23/92	2000	0.2	27.9	15.2	20.2	27.9 3.0	19.8 13.4	56.0 3.8	40.1 3.7	32.6 9.8	53.5 5.0	45.4 6.3	47.5 3.0
10/23/92	2015	0.2	29.0	16.8	23.6	27.7 3.0	21.7 11.3	55.3 4.9	38.9 7.4	33.6 15.3	52.8 3.3	45.1 4.7	51.9 3.0
10/23/92	2030	0.2	28.1	14.7	20.0	27.8 3.0	23.2 10.5	55.4 5.7	39.4 5.9	33.0 7.9	53.8 6.0	45.2 3.9	46.7 3.0
10/23/92	2045	0.1	30.5	15.4	19.3	28.2 3.0	20.2 13.1	52.5 4.8	40.6 7.9	33.5 13.6	51.8 4.7	44.2 4.9	51.5 3.0
10/23/92	2100	0.1	32.5	14.4	16.3	28.8 3.0	28.1 9.7	57.6 4.3	39.8 3.5	36.6 8.8	53.4 3.4	45.3 6.3	54.9 3.0
10/23/92	2115	0.1	34.5	12.8	13.6	29.2 3.0	27.9 5.5	57.3 3.0	39.1 3.0	34.9 10.4	51.5 7.9	43.0 5.5	53.4 3.0
10/23/92	2130	0.1	32.8	14.2	14.5	29.1 3.0	23.9 9.6	56.2 4.1	39.9 3.7	35.7 6.8	53.0 4.1	44.7 3.7	54.3 3.0
10/23/92	2145	0.1	33.8	14.8	15.2	29.8 3.0	25.9 7.3	56.6 3.7	39.1 3.0	35.3 8.8	52.5 3.1	44.4 5.4	54.1 3.0
10/23/92	2200	0.1	32.4	14.6	13.3	29.4 3.0	25.0 8.0	56.3 3.8	39.6 3.7	35.1 9.5	53.0 4.5	44.4 5.5	50.7 3.0
10/23/92	2215	0.1	35.2	14.7	13.4	29.0 3.1	25.5 5.4	56.0 3.1	37.9 3.6	35.9 9.1	49.6 3.6	43.0 6.6	52.5 3.0
10/23/92	2230	0.1	32.6	13.9	13.8	28.5 3.0	23.3 9.1	57.7 3.4	38.5 3.0	33.4 10.9	51.1 3.9	43.5 9.1	54.2 3.0
10/23/92	2245	0.1	32.5	15.1	15.6	29.0 3.0	22.9 10.2	55.8 3.7	38.9 3.4	35.2 9.8	48.9 3.8	42.6 6.3	51.0 3.2
10/23/92	2300	0.1	32.4	15.8	15.8	28.7 3.0	24.9 7.8	57.1 3.1	38.6 3.4	31.6 8.0	52.4 3.9	43.9 3.9	51.8 3.0
10/23/92	2315	27.8	0.0	14.6	20.6	29.3 3.0	20.0 10.3	48.5 6.0	35.8 9.1	34.6 6.0	51.1 3.8	44.4 3.4	48.1 3.0
10/23/92	2330	31.9	0.0	15.5	18.5	30.8 3.0	25.3 7.6	53.3 3.1	40.8 3.3	37.8 5.4	50.7 3.0	44.8 3.1	53.7 3.1
10/23/92	2345	31.9	0.0	15.5	18.5	30.8 3.0	25.3 7.6	53.3 3.1	40.8 3.3	37.8 5.4	50.7 3.0	44.8 3.1	53.7 3.1
10/24/92	0	31.1	0.0	13.9	13.4	29.9 3.0	27.8 7.0	54.0 2.9	39.6 3.0	38.4 6.4	51.1 3.3	44.5 3.0	52.6 4.0
10/24/92	15	31.1	0.0	13.9	13.4	29.9 3.0	27.8 7.0	54.0 2.9	39.6 3.0	38.4 6.4	51.1 3.3	44.5 3.0	52.6 4.0
10/24/92	30	31.1	0.0	13.9	13.4	29.9 3.0	27.8 7.0	54.0 2.9	39.6 3.0	38.4 6.4	51.1 3.3	44.5 3.0	52.6 4.0
10/24/92	45	31.1	0.0	13.9	13.4	29.9 3.0	27.8 7.0	54.0 2.9	39.6 3.0	38.4 6.4	51.1 3.3	44.5 3.0	52.6 4.0
10/24/92	100	33.9	0.0	14.9	12.2	30.8 3.0	29.6 3.3	53.1 3.0	40.0 3.0	37.8 7.4	50.6 3.2	44.3 3.1	53.2 3.8
10/24/92	115	33.9	0.0	14.9	12.2	30.8 3.0	29.6 3.3	53.1 3.0	40.0 3.0	37.8 7.4	50.6 3.2	44.3 3.1	53.2 3.8
10/24/92	130	33.6	0.0	20.4	12.9	28.7 3.0	30.2 3.1	56.1 2.9	33.4 3.0	34.4 6.3	50.8 5.4	44.6 3.9	49.9 4.3
10/24/92	145	33.6	0.0	20.4	12.9	28.7 3.0	30.2 3.1	56.1 2.9	33.4 3.0	34.4 6.3	50.8 5.4	44.6 3.9	49.9 4.3
10/24/92	200	29.6	0.0	10.7	7.8	28.8 3.0	31.7 3.1	57.4 2.9	34.3 3.0	33.9 8.2	50.4 4.2	44.1 3.3	50.2 4.6
10/24/92	215	30.2	0.0	11.5	37.6	29.2 3.0	31.8 3.1	57.3 2.9	34.0 3.0	30.6 9.1	51.4 4.6	43.9 4.3	51.3 3.2
10/24/92	230	29.9	0.0	21.5	8.6	29.0 3.0	32.0 3.1	57.3 2.9	33.9 3.0	32.6 10.1	50.3 5.6	43.5 3.5	49.3 4.1
10/24/92	245	29.9	0.0	19.6	8.6	29.0 3.0	31.5 3.1	56.5 3.2	33.8 3.0	33.4 9.5	49.3 5.6	42.0 3.1	50.5 4.9
10/24/92	300	29.9	0.0	17.5	17.6	29.7 3.1	28.7 3.1	52.9 2.9	32.3 3.0	33.4 10.5	46.5 5.7	42.2 6.1	49.0 4.2
10/24/92	315	30.3	0.0	14.6	8.4	29.0 3.0	29.6 3.1	54.0 2.9	32.6 3.0	36.9 8.8	50.5 5.6	43.1 6.6	49.2 3.6
10/24/92	330	29.8	0.0	10.6	10.7	29.2 3.0	29.5 3.1	53.8 2.9	32.5 3.0	36.5 7.0	51.0 3.7	44.3 4.3	44.1 3.0
10/24/92	345	30.6	0.0	11.7	9.2	29.1 3.0	29.0 3.1	53.0 2.9	32.0 3.0	36.3 7.2	50.2 4.6	43.8 3.6	42.6 3.1
10/24/92	400	30.5	0.0	11.5	8.4	29.3 3.0	29.0 3.1	52.6 2.9	31.7 3.0	33.8 9.3	51.2 4.6	44.1 3.4	49.8 4.4
10/24/92	415	29.8	0.0	11.8	8.4	29.0 3.0	28.3 3.1	51.5 2.9	31.1 3.0	35.2 10.2	50.9 3.9	44.3 3.5	42.2 3.3
10/24/92	430	30.1	0.0	17.7	8.8	29.0 3.0	28.2 3.1	51.2 2.9	30.9 3.0	36.4 9.2	50.7 4.4	44.7 4.2	48.4 5.2
10/24/92	445	30.1	0.0	13.8	8.5	28.7 3.0	28.0 3.1	50.9 2.9	30.7 3.0	36.3 7.4	51.8 3.6	44.9 3.5	48.0 3.5
10/24/92	500	30.3	0.0	13.0	8.3	28.7 3.0	27.9 3.1	50.6 2.9	30.6 3.0	36.9 7.6	50.5 4.4	44.5 3.1	47.0 3.6
10/24/92	515	29.6	0.0	13.6	16.6	28.6 3.0	27.8 3.0	50.5 2.9	30.6 3.0	37.3 8.1	50.5 4.3	43.7 3.7	45.0 4.2
10/24/92	530	29.9	0.0	12.7	8.1	28.9 3.0	28.0 3.0	50.7 2.9	30.6 3.0	35.5 10.3	51.1 3.8	44.2 4.3	43.4 4.2
10/24/92	545	29.7	0.0	11.9	8.2	28.8 3.0	28.0 3.1	50.8 2.9	30.8 3.0	34.8 8.1	50.3 4.1	43.5 3.4	42.8 4.3
10/24/92	600	30.4	0.0	14.1	8.4	29.0 3.0	27.9 3.1	50.4 2.9	30.9 3.0	34.3 9.9	50.9 4.3	43.8 4.7	43.0 5.7
10/24/92	615	30.2	0.0	11.8	8.0	29.4 3.0	28.6 3.0	52.0 2.9	31.0 3.0	35.3 8.5	50.0 3.9	42.4 3.3	48.3 5.4
10/24/92	630	30.1	0.0	11.6	8.1	29.4 3.0	28.6 3.1	52.2 2.9	31.1 3.0	34.7 9.4	51.3 4.9	43.9 4.3	43.8 3.8
10/24/92	645	30.1	0.0	13.7	8.3	29.6 3.0	28.8 3.1	52.7 2.9	31.4 3.0	32.8 8.1	48.5 6.9	41.2 4.6	45.6 4.5
10/24/92	700	27.4	0.0	11.0	8.2	29.1 3.0	30.2 3.1	56.5 2.9	32.9 3.0	35.0 9.2	50.8 3.6	43.3 6.0	48.0 3.4
10/24/92	715	27.9	0.0	13.5	9.0	28.8 3.0	31.5 3.1	57.0 2.9	33.9 3.0	34.2 13.3	51.7 3.4	44.6 4.0	50.9 3.3
10/24/92	730	27.9	0.0	16.3	12.0	28.8 3.0	31.9 4.0	56.3 2.9	36.1 3.0	34.3 10.3	51.1 4.7	44.5 3.2	49.6 3.3
10/24/92	745	28.0	0.0	16.7	14.1	28.5 3.0	28.6 6.9	54.9 2.9	39.1 3.1	34.4 13.3	51.8 3.8	44.6 3.1	53.3 4.4
10/24/92	800	27.9	0.0	16.3	12.2	29.0 3.0	29.6 4.1	55.1 2.9	39.2 3.0	34.7 14.1	52.4 6.8	44.2 3.6	53.0 3.6
10/24/92	815	27.1	0.0	13.5	14.3	29.1 3.4	24.9 11.2	52.4 4.9	39.9 3.2	38.4 5.4	52.8 4.1	44.2 3.1	43.2 3.0
10/24/92	830	27.9	0.0	15.6	14.6	28.6 3.0	24.7 8.0	51.8 3.5	41.1 6.2	37.3 12.6	51.7 5.1	43.8 5.0	50.8 3.0
10/24/92	845	27.4	0.0	15.5	23.3	28.9 3.0	23.9 13.6	51.7 5.7	41.0 7.6	36.2 9.2	52.8 4.6	45.1 3.9	53.1 4.6
10/24/92	900	25.7	0.0	13.9	20.1	29.9 3.0	25.4 9.2	50.8 3.8	41.1 5.1	35.2 12.2	52.9 3.6	44.5 5.1	54.1 4.3
10/24/92	915	26.0	0.0	14.4	21.9	30.6 3.1	25.8 7.4	50.4 3.8	43.1 7.0	32.5 8.5	47.8 4.7	39.8 4.8	54.4 4.4
10/24/92	930	27.1	0.0	16.4	15.8	28.4 3.0	22.0 9.7	44.8 7.5	35.7 7.7	36.8 12.5	52.6 5.0	44.8 5.9	54.1 5.3
10/24/92	945	26.6	0.0	15.0	14.4	29.8 3.0	24.1 10.9	48.7 7.1	38.3 8.8	37.8 12.6	52.4 3.7	44.9 3.1	54.7 3.2
10/24/92	1000	27.0	0.0	14.7	16.7	29.7 3.0	23.6 9.6	45.8 4.0	38.4 6.5	37.1 12.5	50.9 5.6	42.7 3.8	53.5 3.5
10/24/92	1015	27.0	0.0	20.2	20.9	29.6 3.0	25.2 7.5	50.7 6.1	41.6 8.5	37.1 8.8	52.7 3.7	45.0 3.3	53.6 3.1
10/24/92	1030	26.9	0.0	15.0	14.7	29.1 3.0	23.7 8.8	46.7 6.2	35.9 8.8	35.5 9.5	52.4 4.1	44.2 3.1	53.0 3.6
10/24/92	1045	27.1	0.0	12.8	14.1	29.0 3.4	23.0 8.3	45.4 4.2	37.3 7.2	35.0 8.5	53.1 3.7	44.9 3.2	49.8 3.0
10/24/92	1100	27.0	0.0	13.8	14.4	29.5 3.0	23.1 9.5	47.4 5.5	36.4 7.5	35.4 9.2	51.2 4.1	44.3 6.5	54.9 3.0
10/24/92	1115	27.2	0.0	17.0	17.0	29.8 3.0	23.2 9.0	46.9 5.8	36.9 9.8	35.5 11.2	53.3 3.3	45.1 3.5	54.7 3.0
10/24/92	1130	27.0	0.0	14.4	14.9	29.8 3.0	22.2 10.1	44.6 6.1	35.5 9.2	34.1 8.5	52.0 5.7	43.1 4.3	54.7 3.3

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 spk/mn	D 2 spk/mn	D 3 spk/mn	D 4 spk/mn	C 1 spk/mn	C 2 spk/mn	C 3 spk/mn	C 4 spk/mn								
						KW	KW	KW	KW	KW	KW	KW	KW								
10/24/92	1145	27.1	0.0	11.8	18.3	29.6	3.0	21.7	13.6	46.0	6.7	35.7	8.7	31.1	9.5	50.2	6.0	40.4	5.3	55.1	3.3
10/24/92	1200	27.2	0.0	12.8	15.8	29.5	3.0	21.3	11.1	43.6	5.3	34.3	8.4	34.4	8.1	51.2	4.1	44.7	4.3	53.5	3.0
10/24/92	1215	27.0	0.0	12.6	17.4	29.5	3.0	21.6	11.7	44.5	7.5	35.8	9.6	36.2	8.3	52.6	7.2	44.7	6.5	54.7	3.0
10/24/92	1230	26.9	0.0	12.7	14.6	29.4	3.0	22.7	9.0	44.1	6.6	34.6	8.2	32.2	12.9	49.5	7.5	40.9	5.2	53.3	3.0
10/24/92	1245	27.2	0.0	13.0	16.1	29.3	3.0	20.8	11.7	43.9	7.0	33.8	8.3	34.1	8.3	52.9	5.5	44.7	4.9	53.2	3.0
10/24/92	1300	26.9	0.0	13.3	14.9	29.7	3.0	20.3	10.0	44.5	8.3	34.1	8.4	33.3	9.5	53.0	4.8	44.7	6.9	53.8	3.1
10/24/92	1315	27.0	0.0	12.2	14.9	30.4	4.1	22.3	9.7	45.7	5.9	35.7	9.4	35.5	10.9	53.6	4.6	45.0	4.6	54.4	3.0
10/24/92	1330	27.0	0.0	13.4	16.6	30.7	3.0	26.4	9.3	52.8	5.7	43.8	8.0	34.2	8.7	51.4	4.4	44.1	6.1	55.2	3.0
10/24/92	1345	27.2	0.0	14.9	18.9	29.8	3.0	22.0	9.1	44.4	7.3	33.7	8.4	33.6	7.9	49.5	7.0	41.4	6.3	54.0	3.0
10/24/92	1400	27.2	0.0	13.8	16.2	29.8	3.0	22.3	10.4	46.5	6.6	34.7	8.6	33.9	8.6	51.9	7.1	43.0	7.6	51.4	3.0
10/24/92	1415	27.2	0.0	15.0	14.6	30.7	3.1	23.7	9.3	47.8	6.9	37.2	9.5	29.8	11.5	50.4	5.6	40.6	4.5	54.9	3.0
10/24/92	1430	26.3	0.0	14.5	17.9	29.8	3.0	20.1	12.8	39.8	8.3	31.3	9.6	32.6	10.2	50.6	4.9	41.6	7.2	45.8	3.0
10/24/92	1445	27.1	0.0	14.7	17.3	29.7	3.0	21.0	12.7	41.8	7.0	32.1	9.6	33.8	11.0	53.4	7.8	43.5	4.4	52.0	3.0
10/24/92	1500	27.2	0.0	12.6	16.6	29.7	3.0	21.4	10.5	43.1	6.5	34.4	8.9	35.9	7.2	53.4	4.9	44.3	3.7	53.3	3.6
10/24/92	1515	27.1	0.0	12.5	20.3	29.7	3.0	21.2	10.4	43.4	7.2	33.3	9.3	34.5	8.4	52.0	5.1	43.2	5.1	52.6	3.2
10/24/92	1530	27.2	0.0	13.8	18.1	29.9	3.0	26.5	11.6	51.4	7.6	41.1	9.6	34.0	12.7	51.4	7.2	42.7	3.8	50.8	3.0
10/24/92	1545	27.2	0.0	15.8	17.8	29.5	4.3	20.7	12.3	43.8	8.2	33.6	9.8	33.7	12.0	52.6	16.5	44.0	3.9	44.3	2.9
10/24/92	1600	27.3	0.0	13.2	17.7	29.0	3.0	21.4	11.9	41.8	7.0	32.7	9.6	33.8	12.4	50.0	10.4	40.8	5.1	48.2	3.0
10/24/92	1615	27.2	0.0	11.7	18.2	29.7	3.0	24.1	9.8	47.3	6.0	37.6	8.9	32.7	8.4	51.7	9.5	41.4	4.8	49.2	3.0
10/24/92	1630	27.2	0.0	13.4	20.7	29.0	3.1	21.2	11.7	43.2	7.1	32.4	9.1	32.5	11.8	50.9	5.8	42.0	7.4	53.5	3.2
10/24/92	1645	26.9	0.0	13.7	19.6	29.5	3.0	21.5	10.5	44.1	6.2	32.9	9.4	30.4	10.6	46.2	9.2	36.2	6.4	52.6	3.0
10/24/92	1700	27.1	0.0	13.9	17.4	29.1	3.0	22.7	8.1	46.3	3.8	37.0	5.4	33.3	10.8	50.4	6.0	42.5	6.6	50.3	3.0
10/24/92	1715	27.1	0.0	11.7	21.3	30.3	3.1	24.1	8.8	49.9	4.9	39.1	7.8	34.5	11.9	50.8	8.2	41.8	6.1	54.9	3.0
10/24/92	1730	27.2	0.0	11.6	19.8	30.1	3.1	25.3	9.9	49.6	4.7	39.1	7.9	33.5	8.3	50.6	6.5	40.8	5.1	50.2	3.0
10/24/92	1745	27.1	0.0	13.2	19.6	29.6	3.0	25.9	9.1	50.9	4.9	41.0	9.8	34.3	12.2	51.8	7.4	42.5	4.5	54.3	3.0
10/24/92	1800	27.1	0.0	13.8	23.4	29.0	3.0	21.4	11.1	39.9	7.8	31.5	9.8	34.1	8.2	49.3	6.8	40.9	9.5	48.6	3.2
10/24/92	1815	27.0	0.0	19.5	23.8	29.0	5.0	20.3	11.1	41.1	5.7	31.6	9.3	33.6	10.3	48.0	7.6	39.3	7.1	47.9	3.0
10/24/92	1830	27.0	0.0	18.6	20.1	28.9	3.0	21.8	9.6	42.9	7.8	33.3	8.9	32.4	12.9	49.2	8.0	39.9	4.6	52.1	3.4
10/24/92	1845	30.2	0.0	12.5	18.3	28.8	3.0	24.2	8.7	49.4	5.7	36.7	7.8	34.0	10.3	46.9	10.5	39.3	7.2	53.7	4.1
10/24/92	1900	30.5	0.0	13.4	17.6	28.7	3.0	25.0	9.1	51.8	4.4	38.2	9.3	32.4	11.0	47.3	11.8	39.4	7.9	54.4	3.4
10/24/92	1915	30.5	0.0	11.2	16.6	28.8	3.0	26.2	8.2	52.8	4.1	37.4	6.8	29.9	13.8	43.2	13.7	31.8	9.1	55.2	3.0
10/24/92	1930	28.0	0.0	10.7	15.4	28.9	3.0	23.2	10.0	50.1	4.6	37.1	8.0	34.6	8.4	46.9	9.0	37.3	5.4	54.4	3.3
10/24/92	1945	31.5	0.0	12.0	15.7	29.1	3.0	27.0	9.5	52.4	3.6	40.3	9.3	34.6	8.7	42.4	5.9	36.9	7.0	51.2	3.2
10/24/92	2000	30.5	0.0	11.6	12.8	28.9	3.0	29.1	4.5	54.8	2.9	41.4	3.5	35.0	12.5	46.9	5.4	42.0	6.7	52.7	3.3
10/24/92	2015	31.0	0.0	9.0	14.5	28.7	3.0	31.2	4.7	57.1	2.9	37.9	3.0	33.8	9.7	51.7	4.7	43.3	3.5	53.3	3.4
10/24/92	2030	30.6	0.0	9.5	11.7	29.4	3.0	28.5	6.3	54.6	4.0	40.7	5.1	33.4	11.1	49.2	7.1	43.0	6.7	53.0	3.7
10/24/92	2045	30.5	0.0	8.4	19.9	29.1	3.0	32.6	3.2	56.6	2.9	38.5	3.0	35.8	7.0	48.3	7.2	40.2	6.7	50.2	3.0
10/24/92	2100	30.6	0.0	8.7	10.8	29.0	3.0	31.1	4.6	57.1	2.9	37.9	3.3	33.3	13.4	47.8	12.0	40.7	8.5	51.4	3.6
10/24/92	2115	31.1	0.0	8.9	16.2	29.3	3.0	31.9	3.2	55.8	2.9	36.9	3.0	36.6	6.4	47.8	5.4	40.6	6.2	54.9	3.9
10/24/92	2130	31.0	0.0	10.7	10.5	29.4	3.0	31.3	4.3	55.2	3.0	39.2	3.0	35.4	11.5	47.5	7.2	42.1	7.9	54.4	4.0
10/24/92	2145	30.7	0.0	9.0	13.6	28.7	3.0	32.5	4.3	56.3	2.9	38.6	3.0	35.2	20.6	48.2	13.6	39.7	7.1	51.3	3.4
10/24/92	2200	30.5	0.0	9.5	12.2	28.9	3.0	28.2	5.9	55.2	3.6	39.5	3.7	34.0	11.2	50.3	11.5	41.8	6.4	52.2	3.9
10/24/92	2215	30.6	0.0	9.2	16.6	29.0	3.0	27.2	6.5	54.9	3.0	39.8	5.8	34.7	14.1	49.1	15.7	39.6	9.6	53.3	7.1
10/24/92	2230	30.7	0.0	11.4	14.3	28.9	3.2	27.0	6.5	54.5	3.7	39.9	6.5	35.3	13.9	49.9	8.8	41.8	6.7	51.3	4.4
10/24/92	2245	30.6	0.0	8.9	13.3	28.9	3.0	27.1	7.4	54.8	3.5	39.9	4.0	34.0	12.1	51.6	8.4	43.0	8.4	50.7	3.9
10/24/92	2300	29.9	0.0	10.7	12.7	29.0	3.0	26.3	8.0	54.1	3.6	39.3	8.4	33.9	19.5	48.7	11.0	39.7	7.1	46.7	3.2
10/24/92	2315	31.7	0.0	12.7	19.1	29.9	4.3	27.3	6.8	53.0	3.0	41.0	8.9	34.0	8.8	47.9	4.5	40.9	6.5	54.2	4.2
10/24/92	2330	30.7	0.0	9.1	16.7	30.0	3.0	26.0	6.7	53.0	3.3	38.4	6.9	34.3	13.6	47.5	8.1	39.9	6.9	55.2	5.7
10/24/92	2345	30.4	0.0	10.0	12.3	29.8	3.0	27.0	7.4	52.8	3.3	38.2	6.9	34.2	7.5	49.5	6.5	42.0	4.9	54.4	3.2
10/25/92	0	30.7	0.0	9.2	11.9	29.4	3.0	31.6	3.1	55.2	2.9	38.9	3.0	35.7	12.4	50.4	9.7	43.4	3.5	51.2	4.9
10/25/92	15	30.5	0.0	9.8	10.7	29.5	3.0	29.8	4.8	53.6	3.0	40.3	3.8	33.2	6.7	48.0	8.4	39.9	4.9	54.4	6.0
10/25/92	30	30.6	0.0	8.8	10.6	29.7	3.0	29.3	4.5	54.5	2.9	40.3	3.3	34.3	7.8	49.0	8.9	40.6	5.4	54.3	4.8
10/25/92	45	30.4	0.0	12.6	11.2	29.6	3.0	29.0	5.5	54.0	3.0	40.2	5.3	30.9	12.5	48.2	5.8	37.4	5.7	53.2	6.3
10/25/92	100	30.7	0.0	9.6	14.2	29.4	3.0	27.5	6.2	53.8	3.4	40.0	5.6	33.5	8.8	49.8	6.8	41.4	4.4	54.0	6.4
10/25/92	115	30.7	0.0	12.1	12.1	29.6	3.0	29.8	4.4	54.6	3.8	39.9	4.1	34.2	9.8	50.2	5.9	41.9	5.2	53.4	4.8
10/25/92	130	30.4	0.0	14.3	10.2	29.9	3.0	30.2	3.4	54.5	2.9	40.1	3.7	37.0	7.9	51.5	5.1	44.5	3.8	54.0	5.3
10/25/92	145	30.6	0.0	8.7	11.7	29.7	3.0	31.0	3.7	54.9	2.9	39.5	3.0	28.6	11.8	43.5	5.1	37.9	9.7	53.4	5.8
10/25/92	200	30.7	0.0	12.9	10.7	29.7	3.0	31.7	3.2	55.0	2.9	39.1	3.0	34.8	9.2	41.8	8.1	38.0	10.6	51.2	3.5
10/25/92	215	30.4	0.0	9.0	12.6	29.3	3.0	32.3	3.1	55.5	2.9	38.1	3.0	35.9	7.9	47.8	7.2	41.7	7.8	52.1	4.5
10/25/92	230	30.7	0.0	8.4	9.9	29.4	3.0	32.0	3.2	55.5	2.9	37.9	3.0	35.1	10.3	40.3	6.3	39.5	9.8	52.5	3.4
10/25/92	245	30.6	0.0	7.1	11.1	29.4	3.0	32.4	3.1	56.2	2.9	37.2									

12/3/92 20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
10/25/92	400	27.4	0.0	9.7	9.3	29.6	3.0	32.2	3.3	55.4	2.9	37.6	3.0	37.9	6.8	47.2	4.2	41.4	5.3	51.7	3.5
10/25/92	415	31.5	0.0	8.3	11.0	30.7	3.0	32.6	3.1	55.8	2.9	35.5	3.6	36.2	7.8	48.1	3.5	43.7	6.0	53.3	4.3
10/25/92	430	31.3	0.0	6.7	8.8	30.7	3.0	32.3	3.1	56.9	2.9	35.0	3.0	36.5	7.5	46.8	7.8	40.1	7.7	52.3	3.6
10/25/92	445	30.7	0.0	10.3	8.7	30.3	3.1	31.6	3.1	57.4	2.9	34.3	3.0	39.3	6.1	46.4	6.4	42.0	9.6	50.6	3.1
10/25/92	500	22.8	0.0	7.5	12.0	31.1	3.0	29.3	8.2	55.1	5.4	33.5	3.0	39.6	8.2	49.1	5.1	42.8	5.0	48.4	4.0
10/25/92	515	30.6	0.0	8.0	8.7	30.4	3.0	29.7	3.1	54.6	2.9	32.6	3.0	38.8	7.1	50.5	4.3	44.7	5.5	47.4	4.2
10/25/92	530	29.8	0.0	6.9	8.8	30.8	3.2	30.2	3.1	54.1	2.9	32.2	3.0	38.6	8.7	48.6	8.5	41.7	5.1	46.8	4.0
10/25/92	545	28.5	0.0	8.7	8.4	30.8	3.0	32.4	3.1	56.9	2.9	34.7	3.0	40.8	5.0	47.7	10.4	41.0	3.1	42.9	3.0
10/25/92	600	28.3	0.0	7.1	8.3	30.4	3.0	32.4	3.1	56.8	2.9	35.1	3.0	39.1	4.6	47.9	5.7	41.2	3.2	44.0	5.1
10/25/92	615	31.6	0.0	6.9	8.4	30.6	3.0	31.5	3.1	56.1	2.9	32.7	3.0	39.9	6.2	49.4	5.5	43.7	5.0	49.9	5.5
10/25/92	630	28.4	0.0	8.0	10.6	31.0	3.0	32.3	3.1	56.4	2.9	35.1	3.3	40.4	5.9	48.8	7.8	43.0	3.8	49.7	5.3
10/25/92	645	28.8	0.0	7.0	8.8	30.1	3.0	32.3	3.6	56.3	2.9	35.0	3.0	40.4	5.7	48.8	6.3	43.0	3.0	50.6	6.8
10/25/92	700	29.5	0.0	7.4	9.4	29.7	3.0	32.2	3.3	56.2	2.9	35.4	3.0	38.0	7.5	49.6	5.6	42.5	3.1	50.3	5.7
10/25/92	715	30.4	0.0	8.6	11.0	30.1	3.0	31.5	4.3	55.5	2.9	36.2	3.0	35.3	8.2	48.3	6.8	41.1	3.3	48.2	4.3
10/25/92	730	31.2	0.0	7.2	9.7	30.4	3.0	32.2	3.1	55.9	2.9	35.5	3.0	35.4	7.8	47.8	10.7	39.9	3.0	45.3	4.4
10/25/92	745	23.3	0.0	13.6	13.2	28.7	3.0	27.3	8.3	52.5	5.5	37.0	9.2	37.7	9.4	48.4	12.0	41.1	3.0	49.1	7.9
10/25/92	800	30.2	0.0	13.5	18.0	30.3	3.6	28.8	4.3	53.5	2.9	39.0	5.9	33.9	9.3	48.1	8.2	39.0	4.7	50.7	5.4
10/25/92	815	30.3	0.0	8.4	9.9	30.4	3.0	30.4	3.7	54.4	2.9	36.7	3.0	36.0	10.0	48.9	9.2	40.7	4.6	46.5	4.4
10/25/92	830	30.7	0.0	8.2	10.2	30.0	3.0	30.5	4.4	54.5	2.9	36.4	3.4	34.1	9.2	48.3	6.8	40.9	5.9	45.6	4.9
10/25/92	845	30.8	0.0	10.0	11.7	30.1	3.0	30.6	3.6	54.9	2.9	36.2	3.0	36.3	7.8	49.1	4.5	43.0	3.1	45.2	3.9
10/25/92	900	30.5	0.0	8.9	9.9	29.8	3.0	30.3	3.7	54.4	2.9	36.4	3.7	36.2	9.8	49.2	5.1	43.6	3.1	44.6	5.0
10/25/92	915	30.4	0.0	27.6	13.3	30.1	3.0	29.4	5.8	54.0	2.9	39.8	3.4	34.8	9.4	47.8	8.2	40.3	3.3	44.8	4.2
10/25/92	930	30.6	0.0	19.1	10.7	30.2	3.0	28.6	5.9	53.4	3.8	39.8	3.6	34.2	9.2	49.0	5.1	41.6	4.6	44.3	4.4
10/25/92	945	30.3	0.0	16.7	15.8	29.7	3.6	29.3	6.1	54.7	2.9	36.0	3.3	35.7	7.7	48.8	5.8	42.1	3.2	44.6	5.9
10/25/92	1000	30.4	0.0	16.0	12.7	29.7	3.0	30.6	3.4	54.6	2.9	36.9	3.1	35.9	6.3	50.5	3.7	42.8	3.3	50.2	7.8
10/25/92	1015	30.5	0.0	15.3	12.8	30.0	3.0	30.7	4.1	54.8	2.9	39.6	3.2	35.4	10.5	49.9	6.8	42.4	4.3	51.8	6.9
10/25/92	1030	30.6	0.0	0.1	15.6	29.4	3.0	32.2	3.1	56.7	2.9	35.7	3.0	34.3	8.9	50.0	4.8	42.3	4.7	52.7	7.4
10/25/92	1045	29.8	0.0	15.9	9.8	29.6	3.0	32.4	3.1	55.8	2.9	37.9	3.0	36.7	7.8	49.9	6.2	42.6	5.1	55.2	6.0
10/25/92	1100	29.8	0.0	16.3	10.6	29.6	3.0	32.0	3.3	56.1	2.9	36.2	3.0	35.8	7.0	49.3	5.9	42.5	5.9	54.9	5.1
10/25/92	1115	29.8	0.0	18.7	13.9	29.5	3.0	31.8	3.2	56.0	2.9	36.5	3.0	37.0	16.2	49.1	13.1	40.6	6.4	54.1	6.0
10/25/92	1130	30.0	0.0	19.7	11.6	29.9	3.0	31.3	3.7	56.5	2.9	37.8	3.0	36.4	8.9	48.0	9.9	39.1	6.9	54.7	6.4
10/25/92	1145	29.7	0.0	16.2	12.3	29.9	3.0	31.9	4.1	56.7	2.9	37.5	3.0	36.0	12.4	50.0	7.1	42.1	4.5	53.3	3.8
10/25/92	1200	29.9	0.0	18.1	12.0	29.8	3.0	31.2	4.2	55.5	3.0	39.2	3.0	32.2	10.1	46.3	5.1	37.5	4.9	54.2	3.4
10/25/92	1215	29.9	0.0	20.7	16.5	30.0	3.0	29.2	5.2	55.3	3.0	39.3	3.9	36.4	13.0	50.7	14.2	43.2	8.2	54.2	6.0
10/25/92	1230	29.6	0.0	16.6	12.5	29.7	3.0	30.1	7.1	55.5	3.4	36.8	4.0	36.7	9.8	48.9	4.6	42.7	5.8	53.1	3.6
10/25/92	1245	26.7	0.0	13.8	14.4	29.5	3.0	25.3	7.8	52.1	5.9	36.5	7.6	34.6	8.9	47.3	7.1	40.9	6.2	53.1	4.3
10/25/92	1300	31.1	0.0	14.6	11.9	30.8	3.0	28.3	6.2	53.7	2.9	40.1	3.7	35.1	12.1	50.2	6.9	42.8	4.8	50.4	4.3
10/25/92	1315	30.5	0.0	14.3	19.0	30.3	3.0	29.9	4.8	55.5	3.4	39.9	3.1	35.9	16.6	48.1	10.6	41.3	5.9	50.8	6.3
10/25/92	1330	29.8	0.0	16.8	11.7	29.9	3.2	29.2	4.0	55.0	2.9	39.5	3.3	35.0	14.4	50.5	6.4	42.8	3.3	53.7	4.2
10/25/92	1345	29.8	0.0	16.3	12.9	29.8	3.3	30.9	8.2	56.5	2.9	36.1	3.0	35.8	7.8	49.4	6.0	41.2	6.3	54.1	4.2
10/25/92	1400	30.0	0.0	19.6	10.9	30.1	3.0	30.4	6.4	55.8	2.9	36.7	3.0	36.0	6.7	49.5	6.4	42.0	3.3	53.7	5.3
10/25/92	1415	29.8	0.0	26.7	10.1	29.7	3.0	30.0	4.2	55.8	2.9	39.2	3.2	35.0	7.2	48.8	10.2	40.9	4.3	54.8	4.3
10/25/92	1430	30.4	0.0	12.8	10.1	30.2	3.0	30.9	3.9	56.0	3.1	36.9	3.0	30.8	8.3	47.8	6.6	38.9	10.9	52.8	5.0
10/25/92	1445	30.7	0.0	13.4	15.7	30.1	3.0	31.5	3.6	56.2	2.9	36.7	3.0	36.4	10.2	49.0	6.2	42.6	13.8	54.1	5.8
10/25/92	1500	30.8	0.0	14.8	11.3	30.0	3.0	31.0	4.8	56.0	3.4	36.5	3.2	34.6	7.3	48.1	4.7	41.3	6.4	50.3	3.7
10/25/92	1515	30.5	0.0	12.9	12.9	30.1	3.0	31.3	4.9	56.4	2.9	36.7	3.1	33.3	10.3	48.4	7.0	39.4	5.3	54.4	4.3
10/25/92	1530	30.6	0.0	15.2	11.3	30.0	3.0	31.8	3.9	56.9	2.9	36.5	3.0	35.1	8.8	49.5	6.6	41.2	5.4	54.3	4.5
10/25/92	1545	30.8	0.0	14.6	13.4	30.4	3.0	29.9	5.7	56.4	2.9	39.4	4.3	34.2	7.4	48.7	8.1	36.6	4.6	55.3	4.6
10/25/92	1600	30.8	0.0	14.9	12.2	30.5	3.2	31.0	4.2	56.8	2.9	39.0	3.2	36.5	10.2	49.6	5.1	43.0	5.2	55.1	4.0
10/25/92	1615	30.6	0.0	16.0	10.9	29.9	3.0	31.6	3.8	56.9	2.9	39.0	3.1	34.4	6.3	49.6	11.6	41.5	5.4	54.9	5.1
10/25/92	1630	30.7	0.0	17.0	14.7	30.3	3.0	30.9	4.7	56.2	3.4	39.1	3.1	36.6	8.5	49.2	6.5	41.9	5.3	54.3	6.8
10/25/92	1645	30.9	0.0	14.4	10.8	30.4	3.0	31.1	4.5	56.9	2.9	36.7	3.0	35.4	6.8	47.9	6.4	40.2	8.2	52.0	3.4
10/25/92	1700	30.8	0.0	16.0	10.5	30.2	3.0	32.1	4.8	57.3	2.9	36.8	3.0	30.6	10.9	44.6	6.8	36.5	5.4	54.6	5.5
10/25/92	1715	30.6	0.0	15.2	10.7	30.3	3.0	30.4	5.6	56.6	2.9	39.1	4.7	34.0	10.1	47.3	11.2	36.5	7.5	52.2	4.5
10/25/92	1730	30.6	0.0	16.6	12.5	30.1	3.0	28.6	5.1	55.5	3.0	39.4	3.3	33.3	10.0	47.9	8.5	39.0	5.6	49.1	3.3
10/25/92	1745	31.1	0.0	15.4	12.5	30.4	3.0	28.9	5.9	55.4	3.2	39.8	6.1	33.0	7.8	47.9	6.1	40.4	5.8	55.8	5.1
10/25/92	1800	31.0	0.0	13.3	12.5	30.8	3.0	28.1	4.6	55.6	2.9	36.8	6.5	34.1	8.3	49.6	7.6	41.4	5.1	54.8	5.1
10/25/92	1815	30.7	0.0	16.5	12.1	30.3	3.0	28.5	4.9	55.0	3.0	39.9	3.7	32.7	8.9	47.8	8.1	39.9	6.6	51.0	3.9
10/25/92	1830	32.2	0.0	18.9	48.8	30.3	3.3	30.2	6.2	54.9	3.0	37.3	3.3	33.0	7.2	47.8	8.2	39.1	6.4	51.4	4.1
10/25/92	1845	31.5	0.0	10.8	17.2	30.4	3.0	32.1	3.1	54.7	2.9	36.7	3.0	32.4	8.7	45.4	8.2	37.3	7.5	54.1	3.6
10/25/92	1900	31.9	0.0	35.7	10.7	30.8	3.0	31.2	4.0	55.0	2.9	39.8	3.0								

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D 1 KW	D 2 KW	D 3 KW	D 4 KW	C 1 KW	C 2 KW	C 3 KW	C 4 KW
						ap/mn	ap/mn	ap/mn	ap/mn	ap/mn	ap/mn	ap/mn	ap/mn
10/25/92	2015	31.5	0.0	9.9	11.5	30.4	3.0	31.1	3.3	55.8	2.9	36.8	3.0
10/25/92	2030	31.7	0.0	11.2	10.5	30.9	3.0	31.2	3.5	55.2	2.9	37.8	3.0
10/25/92	2045	31.5	0.0	10.7	10.9	30.2	3.0	31.2	3.3	55.4	2.9	37.2	3.0
10/25/92	2100	31.6	0.0	12.1	11.4	31.3	3.0	30.8	3.7	54.3	2.9	38.1	3.1
10/25/92	2115	31.6	0.0	10.2	11.3	30.8	3.0	31.8	3.8	55.9	2.9	35.3	3.0
10/25/92	2130	31.5	0.0	10.8	18.1	31.1	3.0	32.1	3.1	55.4	2.9	36.8	3.0
10/25/92	2145	31.2	0.0	11.1	9.8	30.6	3.0	32.1	3.6	55.5	2.9	36.3	3.0
10/25/92	2200	29.8	0.0	8.7	10.3	30.6	3.0	31.2	3.5	55.8	2.9	37.1	3.0
10/25/92	2215	30.2	0.0	9.4	12.4	30.7	3.0	30.1	6.4	54.1	2.9	38.6	3.0
10/25/92	2230	30.4	0.0	13.5	14.4	31.3	3.0	28.1	4.6	52.1	3.3	40.2	3.4
10/25/92	2245	30.0	0.0	9.9	10.5	30.5	3.0	31.5	5.6	54.7	2.9	37.8	3.0
10/25/92	2300	29.7	0.0	12.7	8.9	30.6	3.0	32.0	3.1	55.0	2.9	37.7	3.0
10/25/92	2315	29.5	0.0	12.2	9.0	30.5	3.0	32.1	3.1	55.2	2.9	36.4	3.0
10/25/92	2330	29.7	0.0	9.9	8.8	30.8	3.0	32.1	3.1	55.3	2.9	36.5	3.0
10/25/92	2345	29.7	0.0	12.0	10.3	30.5	3.0	32.1	3.1	55.6	2.9	36.0	3.0
10/26/92	0	29.3	0.0	10.2	9.2	30.2	3.0	32.0	3.1	55.1	2.9	34.2	3.0
10/26/92	15	28.7	0.0	11.8	17.7	30.1	3.0	31.5	3.2	55.5	2.9	35.7	3.0
10/26/92	30	27.7	0.0	9.8	14.9	30.1	3.0	31.8	3.2	54.5	2.9	37.1	3.0
10/26/92	45	26.8	0.0	10.7	9.2	29.5	3.0	31.6	3.3	55.2	2.9	36.1	3.0
10/26/92	100	32.4	0.0	11.7	10.6	30.9	3.0	32.1	3.1	55.3	2.9	35.8	3.0
10/26/92	115	30.3	0.0	8.9	9.1	30.7	3.0	31.7	3.1	54.8	2.9	37.0	3.0
10/26/92	130	30.1	0.0	16.8	9.9	30.7	3.0	31.6	3.5	54.8	2.9	35.2	3.0
10/26/92	145	33.0	0.0	13.8	9.8	31.7	3.0	31.8	3.1	55.1	2.9	35.4	3.0
10/26/92	200	29.6	0.0	14.7	18.6	30.4	3.6	31.5	3.8	55.3	2.9	34.8	3.0
10/26/92	215	34.8	0.0	12.4	10.2	30.3	3.0	31.6	3.1	55.6	2.9	34.2	3.0
10/26/92	230	33.1	0.0	13.9	11.4	31.2	3.0	31.9	3.1	55.3	2.9	35.1	3.0
10/26/92	245	28.7	0.0	9.9	15.7	30.3	3.0	31.2	3.6	54.2	2.9	37.6	3.0
10/26/92	300	28.8	0.0	9.1	10.6	30.4	3.0	29.1	3.8	54.2	2.9	37.6	3.2
10/26/92	315	29.0	0.0	9.7	13.7	31.1	3.0	27.8	5.0	52.8	2.9	38.4	4.4
10/26/92	330	28.9	0.0	32.9	12.0	30.1	3.0	30.9	3.2	54.0	2.9	37.4	3.0
10/26/92	345	25.9	0.0	11.2	13.3	30.4	3.0	29.3	6.3	52.1	5.5	37.7	7.7
10/26/92	400	28.5	0.0	13.0	9.8	29.0	3.0	31.9	3.1	55.0	2.9	35.7	3.0
10/26/92	415	28.6	0.0	12.1	9.8	30.4	3.0	31.6	3.7	53.9	2.9	37.6	3.0
10/26/92	430	29.4	0.0	11.1	13.2	30.7	3.0	30.8	3.2	53.6	2.9	37.4	3.0
10/26/92	445	29.1	0.0	11.0	10.1	30.6	3.0	31.4	3.2	53.9	2.9	36.6	3.0
10/26/92	500	28.4	0.0	10.5	9.1	30.2	3.0	31.6	4.4	54.2	2.9	36.9	3.0
10/26/92	515	29.1	0.0	11.0	9.0	30.6	3.0	32.0	3.7	55.3	2.9	35.2	3.0
10/26/92	530	29.3	0.0	10.9	9.4	29.8	3.0	32.0	3.1	55.8	2.9	34.7	3.0
10/26/92	545	28.8	0.0	47.8	11.8	30.5	3.0	31.8	3.2	55.3	2.9	35.8	3.0
10/26/92	600	28.8	0.0	10.5	9.7	30.2	3.0	32.0	3.1	55.3	2.9	35.7	3.0
10/26/92	615	28.7	0.0	12.1	12.8	30.0	3.0	32.1	3.1	55.3	2.9	35.8	3.0
10/26/92	630	28.9	0.0	12.2	9.1	30.0	3.0	32.0	3.1	55.2	2.9	35.7	3.0
10/26/92	645	28.8	0.0	9.9	11.3	29.9	3.6	31.9	3.2	55.3	2.9	35.7	3.0
10/26/92	700	28.8	0.0	11.3	11.1	30.4	3.0	30.7	4.1	54.8	2.9	35.4	3.6
10/26/92	715	28.8	0.0	9.5	13.2	30.5	3.0	30.4	8.0	54.7	2.9	35.5	3.0
10/26/92	730	29.4	0.0	16.4	10.7	31.1	3.0	29.8	3.9	54.0	2.9	37.3	3.3
10/26/92	745	29.0	0.0	20.2	12.5	30.5	3.0	29.7	4.0	53.5	2.9	37.5	3.1
10/26/92	800	29.7	0.0	18.1	10.5	30.8	3.0	30.1	4.3	53.7	3.0	37.1	3.0
10/26/92	815	29.2	0.0	16.1	9.5	31.9	3.0	30.9	3.9	54.1	3.0	37.0	3.2
10/26/92	830	31.2	0.0	20.5	12.4	30.3	3.0	31.5	3.4	57.1	2.9	35.2	3.1
10/26/92	845	31.5	0.0	11.6	9.0	30.3	3.0	31.0	3.2	55.7	2.9	34.1	3.0
10/26/92	900	31.1	0.0	17.1	16.1	29.4	3.0	29.6	3.1	53.0	2.9	32.4	3.0
10/26/92	915	29.3	0.0	9.9	9.2	29.6	3.0	30.0	3.0	54.5	2.9	33.7	3.0
10/26/92	930	22.4	0.0	15.4	12.6	28.4	3.0	28.2	6.2	52.9	5.1	35.9	6.7
10/26/92	945	30.0	0.0	9.8	10.0	30.2	3.0	32.1	3.4	57.4	2.9	35.7	3.0
10/26/92	1000	31.4	0.0	10.5	9.7	30.5	3.0	31.7	3.1	57.4	2.9	34.8	3.0
10/26/92	1015	30.5	0.0	27.7	9.3	30.2	3.0	31.2	3.0	56.4	2.9	34.3	3.0
10/26/92	1030	30.7	0.0	12.6	9.8	30.5	3.0	31.4	4.9	57.5	2.9	34.6	3.0
10/26/92	1045	30.8	0.0	17.8	11.0	31.1	3.0	30.5	3.1	53.9	2.9	33.1	3.0
10/26/92	1100	30.3	0.0	11.8	27.1	31.0	3.0	32.1	4.6	57.5	2.9	35.7	10.0
10/26/92	1115	30.0	0.0	22.8	21.0	29.3	3.0	27.2	5.0	47.3	5.0	33.0	3.1
10/26/92	1130	30.8	0.0	12.8	15.3	29.5	4.0	28.0	4.5	48.6	5.3	32.8	3.1
10/26/92	1145	28.3	0.0	21.2	20.4	28.5	3.1	28.0	10.1	48.9	8.5	32.7	3.1
10/26/92	1200	28.0	0.0	14.4	9.8	32.8	3.4	27.1	8.9	48.8	3.9	33.3	3.1
10/26/92	1215	18.5	0.0	12.6	8.6	35.3	3.4	26.3	3.1	49.6	2.9	32.4	3.0

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D1 KW sps/ min	D2 KW sps/ min	D3 KW sps/ min	D4 KW sps/ min	C1 KW sps/ min	C2 KW sps/ min	C3 KW sps/ min	C4 KW sps/ min
10/26/92	1230	10.0	0.0	12.4	10.7	29.4 3.0	27.8 12.6	48.6 9.7	27.5 11.9	12.0 38.0	12.5 40.6	14.0 29.5	20.9 32.3
10/26/92	1245	7.3	0.0	12.9	12.6	28.6 3.0	21.5 10.5	31.3 10.4	24.0 11.8	11.3 38.0	7.5 37.8	11.0 28.6	20.5 32.5
10/26/92	1300	0.0	0.0	14.7	19.2	23.6 11.5	11.0 34.3	22.2 17.9	19.2 16.5	14.6 39.9	14.1 38.0	17.1 31.7	24.4 28.0
10/26/92	1315	0.0	0.0	17.8	23.1	21.0 13.3	9.9 30.3	20.3 21.8	18.0 19.3	10.7 39.9	11.3 40.3	13.4 28.4	21.2 33.8
10/26/92	1330	0.0	0.0	16.2	25.8	20.1 15.2	9.5 31.7	19.4 22.6	18.1 20.5	11.6 33.3	12.3 38.0	14.2 30.8	23.8 26.7
10/26/92	1345	0.0	0.0	16.5	29.0	19.6 16.6	9.2 35.0	19.1 21.6	17.2 21.8	12.2 40.9	14.5 29.4	15.6 25.0	22.2 31.5
10/26/92	1400	0.0	0.0	17.9	31.5	19.2 16.9	9.0 42.9	18.6 24.8	17.9 23.3	11.3 41.0	12.9 29.8	15.6 24.6	25.2 25.0
10/26/92	1415	0.0	0.0	18.7	30.5	18.8 18.3	8.9 35.3	18.4 25.4	18.0 22.0	13.0 41.2	15.6 27.1	16.2 25.0	27.0 27.5
10/26/92	1430	0.0	0.0	18.9	29.5	18.4 17.0	8.9 41.4	18.7 25.7	17.9 22.7	12.7 41.9	13.5 24.5	17.1 24.8	24.1 27.2
10/26/92	1445	0.0	0.0	17.3	29.3	19.1 19.0	8.8 42.3	18.7 26.1	17.9 23.8	12.9 42.1	14.0 28.1	17.0 29.3	23.8 26.7
10/26/92	1500	0.0	0.0	9.8	8.3	34.5 3.4	27.5 3.0	51.0 2.8	33.8 2.9	40.7 3.0	50.1 2.9	39.7 3.0	50.3 3.0
10/26/92	1515	0.0	0.0	10.1	8.9	30.5 3.2	29.2 3.4	52.4 4.3	36.9 7.2	39.8 3.2	51.1 3.2	41.9 3.2	54.9 3.2
10/26/92	1530	0.0	0.0	10.8	8.9	29.3 3.0	24.0 8.0	45.2 7.7	26.2 10.2	40.0 2.9	52.0 3.0	43.0 3.1	53.9 3.0
10/26/92	1545	0.1	0.0	14.7	28.0	16.2 22.3	7.2 40.7	14.9 28.9	12.1 22.3	12.7 43.3	13.8 31.3	13.3 23.3	23.7 21.9
10/26/92	1600	0.1	0.0	13.9	20.9	15.5 23.1	7.8 41.6	15.5 29.1	11.1 22.5	13.5 42.5	14.7 28.7	14.5 21.0	23.2 20.8
10/26/92	1615	0.1	0.0	15.3	24.2	15.6 22.3	8.0 42.1	16.2 29.0	13.5 23.0	14.3 38.4	16.0 22.0	16.5 22.3	25.1 20.8
10/26/92	1630	0.1	0.0	17.0	22.3	14.9 22.7	8.1 42.4	16.9 28.5	13.5 23.6	17.9 25.6	18.5 16.5	20.5 17.4	26.9 20.5
10/26/92	1645	0.1	0.0	17.0	22.3	14.9 22.7	8.1 42.4	16.9 28.5	13.5 23.6	17.9 25.6	18.5 16.5	20.5 17.4	26.9 20.5
10/26/92	1700	0.1	0.0	13.0	18.4	16.1 20.8	8.6 42.1	16.8 27.5	13.8 25.2	29.0 16.9	24.5 17.0	24.0 13.4	32.3 17.8
10/26/92	1715	0.1	0.0	12.7	18.3	16.7 18.3	8.8 36.0	3.8 30.7	13.8 25.1	37.7 6.3	33.7 11.9	33.5 13.3	20.6 14.4
10/26/92	1730	0.1	0.0	12.9	16.0	17.3 16.6	9.1 33.7	0.0 34.4	13.8 24.7	42.0 3.4	34.4 3.7	39.1 11.6	8.0 13.5
10/26/92	1745	0.1	0.0	11.7	16.0	17.9 15.2	9.4 33.2	17.1 28.9	13.6 23.7	41.6 2.9	45.9 3.0	43.7 10.7	38.8 13.8
10/26/92	1800	0.1	0.0	12.3	13.7	18.0 16.2	9.5 31.8	0.1 0.0	13.4 23.0	40.7 2.9	45.1 3.0	44.4 11.2	20.9 9.8
10/26/92	1815	0.1	0.0	12.6	12.8	18.9 14.8	9.8 31.1	34.9 32.0	13.1 21.3	40.0 2.9	51.3 3.0	44.2 4.8	38.4 12.3
10/26/92	1830	0.1	0.0	13.2	12.2	19.7 12.5	10.3 29.4	0.0 0.0	12.9 19.3	39.7 2.9	50.9 3.0	43.3 3.2	0.0 4.5
10/26/92	1845	0.1	0.0	15.9	12.7	20.3 11.7	10.5 27.8	0.0 0.0	12.6 21.3	39.7 2.9	51.3 3.0	43.2 3.2	0.0 3.0
10/26/92	1900	0.1	0.0	14.0	10.1	20.9 10.9	10.5 30.0	0.0 0.0	13.3 20.6	39.4 2.9	51.7 3.0	42.9 3.2	0.0 3.0
10/26/92	1915	0.1	0.0	13.9	7.5	20.5 13.8	10.7 27.7	0.0 2.4	12.2 22.8	39.4 2.9	52.0 3.0	42.9 3.2	0.0 3.0
10/26/92	1930	0.1	0.0	14.1	7.7	19.5 15.5	10.3 31.0	0.0 5.1	12.7 22.0	39.7 2.9	51.7 3.0	43.4 3.2	3.3 3.0
10/26/92	1945	0.1	0.0	14.6	7.4	19.0 15.2	10.0 31.6	0.3 6.8	13.0 21.7	39.8 3.0	51.7 3.0	43.7 3.1	5.5 3.0
10/26/92	2000	0.1	0.0	16.9	8.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	6.0 0.0	2.1 0.0	1.7 0.0	0.0 0.0
10/26/92	2015	0.1	0.0	16.2	9.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2030	0.1	0.0	18.2	13.6	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2045	0.0	0.0	19.0	11.6	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2100	0.0	0.0	17.7	10.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2115	0.0	0.0	15.4	9.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2130	0.0	0.0	14.8	8.3	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2145	0.0	0.0	15.3	7.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2200	0.0	0.0	20.4	7.5	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2215	0.0	0.0	15.3	7.3	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2230	0.0	0.0	14.4	7.2	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2245	0.0	0.0	15.0	7.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2300	0.0	0.0	14.3	6.9	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2315	0.0	0.0	14.6	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2330	0.0	0.0	12.9	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/26/92	2345	0.0	0.0	13.6	6.7	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	0	0.0	0.0	13.2	6.7	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	15	0.0	0.0	13.2	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	30	0.0	0.0	13.8	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	45	0.0	0.0	12.5	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	100	0.0	0.0	12.1	6.5	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	115	0.0	0.0	12.1	6.4	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	130	0.0	0.0	12.4	6.4	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	145	0.0	0.0	0.1	7.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	200	0.0	0.0	20.2	6.9	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	215	0.0	0.0	13.7	6.9	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	230	0.0	0.0	14.7	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	245	0.0	0.0	14.8	6.8	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	300	0.0	0.0	15.0	6.7	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	315	0.0	0.0	16.8	6.7	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	330	0.0	0.0	15.2	6.6	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	345	0.0	0.0	14.6	6.6	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	400	0.0	0.0	14.5	6.5	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	415	0.0	0.0	15.3	6.4	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/27/92	430	0.0	0.0	15.5	6.5	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D 1 KW	D 2 KW	D 3 KW	D 4 KW	C 1 KW	C 2 KW	C 3 KW	C 4 KW
10/27/02	445	0.0	0.0	14.5	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	500	0.0	0.0	14.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	515	0.0	0.0	14.4	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	530	0.0	0.0	15.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	545	0.0	0.0	14.7	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	600	0.0	0.0	15.8	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	615	0.0	0.0	15.8	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	630	0.0	0.0	16.7	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	645	0.0	0.0	16.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	700	0.0	0.0	16.6	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	715	0.0	0.0	15.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	730	0.0	0.0	16.5	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	745	0.0	0.0	16.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	800	0.0	0.0	15.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	815	0.0	0.0	18.4	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	830	0.0	0.0	20.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	845	0.0	0.0	17.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	900	0.0	0.0	15.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	915	0.0	0.0	16.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	930	0.0	0.0	14.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	945	0.0	0.0	15.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1000	0.0	0.0	15.2	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1015	0.0	0.0	15.2	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1030	0.0	0.0	14.8	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1045	0.0	0.0	15.5	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1100	0.1	0.0	14.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1115	0.1	0.0	14.6	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1130	0.1	0.0	14.5	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1145	0.1	0.0	15.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1200	0.1	0.0	17.2	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1215	0.1	0.0	15.9	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1230	0.1	0.0	15.7	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1245	0.1	0.0	15.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1300	0.1	0.0	15.3	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1315	0.0	0.0	14.3	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1330	0.0	0.0	16.6	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1345	0.0	0.0	15.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1400	0.0	0.0	16.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1415	0.0	0.0	15.5	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1430	0.0	0.0	16.6	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1445	0.0	0.0	16.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1500	0.0	0.0	16.7	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1515	0.0	0.0	15.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1530	0.0	0.0	15.9	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1545	0.0	0.0	18.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1600	0.0	0.0	15.5	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1615	0.0	0.0	16.3	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1630	0.0	0.0	29.7	57.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1645	0.0	0.0	55.3	63.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/27/02	1700	0.1	0.0	28.5	33.0	19.6	16.2	16.7	20.6	24.3	18.8	18.6	20.9
10/27/02	1715	0.1	0.0	23.4	10.8	19.4	15.5	16.7	17.9	23.2	18.8	18.2	20.3
10/27/02	1730	0.1	0.0	20.5	9.1	19.2	15.8	16.6	19.1	22.4	20.7	17.5	20.2
10/27/02	1745	0.1	0.0	19.8	9.5	19.1	14.5	16.4	18.8	21.8	18.7	17.4	19.1
10/27/02	1800	0.1	0.0	15.3	8.0	18.8	15.7	16.5	18.3	21.8	20.5	17.1	20.7
10/27/02	1815	0.1	0.0	16.6	8.3	18.5	17.1	16.3	20.0	22.2	18.7	17.0	20.6
10/27/02	1830	0.1	0.0	16.2	14.1	19.0	14.5	16.5	19.7	22.2	19.5	16.8	19.2
10/27/02	1845	0.1	0.0	17.7	16.2	19.2	14.4	16.8	18.9	21.9	19.0	17.3	21.3
10/27/02	1900	0.1	0.0	18.2	11.7	19.2	14.7	16.8	18.9	21.8	19.7	17.1	19.9
10/27/02	1915	0.1	0.0	26.0	11.8	19.4	15.2	16.7	19.5	21.5	20.3	16.6	19.8
10/27/02	1930	0.1	0.0	12.0	7.8	19.2	16.5	16.2	18.1	21.2	19.6	16.5	19.4
10/27/02	1945	0.1	0.0	10.5	7.4	19.1	15.1	16.3	19.3	20.5	19.3	16.2	20.9
10/27/02	2000	0.1	0.0	9.5	7.2	19.1	14.5	16.3	18.9	16.5	26.2	15.4	20.8
10/27/02	2015	0.1	0.0	47.4	7.4	19.2	15.7	16.1	18.8	19.2	20.0	15.4	19.6
10/27/02	2030	0.1	0.0	9.1	7.8	18.8	14.6	15.9	20.0	20.4	19.4	15.8	19.6
10/27/02	2045	0.1	0.0	12.2	7.7	19.1	14.3	16.0	18.4	20.1	19.7	15.4	20.4

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn
10/27/92	2100	0.1	0.0	9.1	7.4	19.1 13.2	18.1 18.5	19.6 19.7	18.1 20.7	39.8 3.0	83.7 3.1	43.8 3.2	48.2 3.1
10/27/92	2115	0.1	0.0	9.4	12.5	19.0 14.7	18.0 19.0	3.9 22.0	18.1 19.6	39.5 3.0	84.3 3.1	43.5 3.2	28.0 3.1
10/27/92	2130	0.1	0.0	9.0	15.0	18.4 15.1	15.5 20.7	17.7 19.7	15.3 21.4	39.5 3.0	84.3 3.1	43.5 3.1	52.0 3.1
10/27/92	2145	0.1	0.0	10.3	19.0	19.2 17.0	15.3 24.7	7.4 20.8	15.8 21.2	39.4 3.0	84.6 3.1	43.4 3.1	38.3 3.1
10/27/92	2200	0.1	0.0	14.2	31.0	20.7 15.6	18.4 20.4	0.0 0.0	15.0 21.0	39.2 3.0	85.5 3.1	43.1 3.1	0.0 3.1
10/27/92	2215	0.1	0.0	9.8	9.1	22.8 11.0	18.4 16.8	0.0 0.0	14.4 20.6	39.1 3.0	85.8 3.1	43.0 3.2	0.0 3.1
10/27/92	2230	0.0	0.0	8.3	7.8	25.6 8.7	21.5 12.4	0.0 0.0	15.3 16.8	39.0 3.0	85.2 3.0	43.0 3.2	0.0 3.1
10/27/92	2245	0.0	0.0	31.5	6.9	28.6 6.0	25.6 10.2	21.5 18.6	15.9 16.5	39.2 3.0	84.8 3.1	42.9 3.1	44.0 3.1
10/27/92	2300	0.0	0.0	11.0	8.8	26.6 8.6	22.0 11.9	21.0 16.7	15.3 16.8	39.0 3.0	85.8 3.0	42.4 3.1	45.2 3.1
10/27/92	2315	0.0	0.0	10.9	12.7	29.3 4.7	23.8 11.4	21.2 15.6	15.3 16.3	39.1 2.9	85.9 3.0	42.1 3.1	38.0 3.1
10/27/92	2330	0.0	0.0	9.0	8.8	29.2 3.0	25.0 10.2	20.3 15.6	15.6 15.8	39.4 2.9	85.4 3.0	41.9 3.1	38.7 3.0
10/27/92	2345	0.0	0.0	8.7	8.8	29.3 3.0	27.3 9.6	20.8 14.8	15.6 13.9	39.7 3.0	85.1 3.0	42.1 3.1	40.2 3.1
10/28/92	0	0.0	0.0	12.7	14.8	29.0 3.1	28.6 4.3	20.2 19.7	15.5 14.4	39.7 2.9	85.3 3.0	42.0 3.1	47.7 3.1
10/28/92	15	0.0	0.0	8.8	7.9	28.4 3.0	28.1 3.3	17.1 20.0	15.9 14.5	39.7 2.9	85.5 3.0	42.0 3.1	50.9 3.1
10/28/92	30	0.0	0.0	9.3	8.8	28.2 3.1	27.8 3.1	19.5 20.9	16.5 13.7	39.8 2.9	85.1 3.0	42.0 3.1	47.5 3.1
10/28/92	45	0.0	0.0	10.0	7.1	28.3 3.1	28.0 4.5	22.5 12.9	17.3 13.9	40.4 2.9	84.5 3.0	42.6 3.1	45.9 3.1
10/28/92	100	0.0	0.0	10.8	17.8	28.6 3.1	28.0 3.3	0.0 0.0	20.9 12.0	40.7 2.9	84.5 3.0	44.5 3.3	0.0 3.1
10/28/92	115	0.0	0.0	8.5	7.1	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	130	0.0	0.0	10.3	7.1	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	145	0.0	0.0	8.2	6.1	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	200	0.0	0.0	11.3	14.4	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	215	0.0	0.0	9.8	7.0	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	230	0.0	0.0	9.0	7.2	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	245	0.0	0.0	13.8	6.9	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	300	0.0	0.0	10.7	10.9	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	315	0.0	0.0	9.9	6.9	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	330	0.0	0.0	10.1	7.4	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	345	0.0	0.0	10.5	6.8	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	400	0.0	0.0	10.5	9.4	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	415	0.0	0.0	11.4	6.9	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	430	0.0	0.0	10.7	7.3	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	445	0.0	0.0	12.2	8.0	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	500	0.0	0.0	12.2	10.2	28.5 3.2	27.6 3.1	6.3 3.0	22.1 12.3	40.5 2.9	85.1 3.0	45.2 3.1	38.7 3.1
10/28/92	515	0.0	0.0	12.1	9.8	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	530	0.0	0.0	12.0	12.6	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	545	0.0	0.0	12.1	11.2	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	600	0.0	0.0	13.3	12.0	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	615	0.0	0.0	10.8	10.2	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	630	0.0	0.0	11.0	10.4	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	645	0.0	0.0	12.2	10.4	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	700	0.0	0.0	12.7	11.1	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	715	0.0	0.0	12.7	10.1	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	730	0.0	0.0	13.3	10.4	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	745	0.0	0.0	14.3	12.0	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	800	0.0	0.0	13.1	12.7	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	815	0.0	0.0	10.4	11.8	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	830	0.0	0.0	15.0	10.6	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	845	0.0	0.0	11.8	11.2	27.9 14.3	27.1 22.4	5.3 0.0	22.0 15.6	39.5 33.2	83.6 37.2	44.0 25.8	33.8 24.0
10/28/92	900	0.0	0.0	8.8	11.5	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/28/92	915	0.0	0.0	9.5	12.7	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/28/92	930	0.0	0.0	9.2	13.5	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
10/28/92	945	0.0	0.0	11.4	12.8	13.9 21.7	15.9 31.3	0.0 0.0	15.1 24.3	15.9 38.6	10.6 42.0	11.5 33.1	0.0 31.8
10/28/92	1000	0.0	0.0	9.5	13.6	13.9 20.9	16.0 32.5	0.0 0.0	15.2 24.8	16.4 38.6	10.6 42.1	11.4 32.7	0.0 32.4
10/28/92	1015	0.0	0.0	10.3	14.0	14.0 21.8	16.2 33.5	0.0 0.0	14.4 25.1	16.6 38.1	10.4 42.4	11.4 25.3	0.0 34.4
10/28/92	1030	0.0	0.0	9.6	15.5	14.7 21.7	17.1 34.9	0.0 0.0	14.1 24.5	16.9 38.4	10.8 41.9	10.6 33.0	0.0 33.8
10/28/92	1045	0.0	0.0	11.0	15.2	14.4 21.7	17.6 30.8	0.0 0.0	16.0 25.6	18.0 35.8	11.3 42.1	12.2 32.8	0.0 33.1
10/28/92	1100	0.0	0.0	9.6	57.2	14.9 20.0	17.8 31.5	0.0 0.0	15.5 24.4	18.4 34.5	11.5 41.1	12.4 33.0	0.0 32.0
10/28/92	1115	0.1	0.0	10.3	14.4	14.8 23.8	17.9 32.6	0.0 0.0	15.1 25.0	18.7 31.8	11.5 41.9	12.6 32.3	0.0 33.9
10/28/92	1130	0.1	0.0	10.2	15.0	14.8 21.7	18.4 32.2	0.0 0.0	15.1 25.3	18.7 32.6	11.5 41.9	12.4 32.5	0.0 33.9
10/28/92	1145	0.1	0.0	9.7	14.0	15.6 19.0	18.6 30.2	0.0 0.0	15.5 25.0	20.7 28.4	12.1 37.3	14.4 32.9	0.0 30.2
10/28/92	1200	0.1	0.0	9.9	15.0	15.6 20.6	19.0 29.3	0.0 0.0	16.2 24.3	21.5 27.3	12.1 36.8	14.7 33.0	0.0 30.2
10/28/92	1215	0.1	0.0	13.2	31.5	17.0 14.6	19.1 25.1	0.0 0.0	18.8 20.6	21.1 35.8	12.4 35.4	15.3 30.2	0.0 25.0
10/28/92	1230	0.1	0.0	17.1	35.3	20.6 13.5	17.7 24.6	28.6 17.7	21.1 18.2	28.6 27.4	12.5 34.8	17.4 31.4	21.6 24.8
10/28/92	1245	0.1	0.0	15.5	30.4	19.6 14.7	18.7 24.3	29.5 13.6	21.6 17.1	29.9 24.9	13.2 30.6	18.9 30.8	22.4 22.2
10/28/92	1300	0.1	0.0	14.7	27.7	21.7 13.2	19.7 19.9	28.4 15.4	22.5 15.1	29.8 22.1	13.3 31.8	18.3 32.3	22.8 23.3

12/3/92 20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	S Op %	D 1 KW	D 1 spk/min	D 2 KW	D 2 spk/min	D 3 KW	D 3 spk/min	D 4 KW	D 4 spk/min	C 1 KW	C 1 spk/min	C 2 KW	C 2 spk/min	C 3 KW	C 3 spk/min	C 4 KW	C 4 spk/min
10/28/92	1315	0.1	0.0	16.4	27.7	25.6	8.4	17.9	25.7	28.2	13.8	22.7	13.5	28.2	24.4	13.3	28.5	18.8	30.0	23.4	23.1
10/28/92	1330	0.1	0.0	17.2	30.8	27.6	3.0	17.8	22.7	27.0	12.9	30.7	10.2	28.9	20.2	13.9	28.2	19.4	28.8	25.4	19.6
10/28/92	1345	0.1	0.0	13.8	28.3	28.1	3.0	21.0	14.9	27.9	10.4	34.4	4.2	31.8	15.3	13.3	20.8	21.7	25.4	28.4	17.5
10/28/92	1400	0.2	0.0	13.9	28.1	28.1	3.0	21.1	17.4	32.1	11.1	34.1	10.9	31.5	16.9	15.1	22.1	21.6	24.0	28.9	18.0
10/28/92	1415	0.2	0.0	10.3	18.6	28.1	3.0	2.1	10.6	30.2	10.7	28.4	10.7	31.7	16.0	15.3	20.8	21.6	21.8	29.2	15.4
10/28/92	1430	0.2	0.0	11.6	21.9	28.2	3.0	27.0	3.1	33.7	9.4	35.9	8.9	33.9	12.5	16.0	18.7	23.0	21.9	32.2	13.5
10/28/92	1445	0.2	0.0	13.7	20.6	27.2	3.0	25.5	4.7	28.4	13.3	29.0	12.0	31.2	18.4	15.1	21.5	22.4	25.0	29.1	18.6
10/28/92	1500	0.2	0.0	11.9	17.0	27.3	3.0	25.9	3.1	28.2	11.7	28.8	10.7	32.9	14.0	15.8	20.2	23.0	22.4	29.9	18.0
10/28/92	1515	0.2	0.0	10.5	14.2	27.0	7.6	25.8	8.7	25.3	13.6	23.6	13.8	34.1	15.6	15.3	19.1	24.0	21.5	30.7	16.3
10/28/92	1530	0.2	0.0	14.0	16.9	26.4	5.3	25.7	5.0	25.0	13.5	23.3	12.1	31.7	15.7	17.0	18.2	24.9	21.1	31.2	17.8
10/28/92	1545	0.2	0.0	10.4	15.5	27.0	4.7	25.6	4.4	24.6	13.9	21.5	14.4	31.8	17.1	17.3	16.1	25.3	21.3	31.5	17.4
10/28/92	1600	0.2	0.0	10.1	13.8	25.2	9.2	25.7	15.9	23.4	14.3	20.1	14.4	32.6	15.0	17.7	17.3	25.4	20.3	32.6	14.8
10/28/92	1615	0.2	0.0	12.0	15.8	26.2	8.9	25.6	11.1	23.5	15.7	19.0	16.4	29.6	17.9	18.8	17.1	25.2	19.7	33.1	16.0
10/28/92	1630	0.2	0.0	12.0	16.2	25.7	10.1	24.3	14.1	22.3	15.6	18.3	15.0	28.2	20.7	18.2	16.5	25.3	22.2	33.1	21.4
10/28/92	1645	0.2	0.0	11.0	15.6	24.0	10.0	23.5	14.2	22.0	14.8	17.7	15.0	28.4	16.4	18.7	16.2	25.2	20.1	33.0	16.1
10/28/92	1700	0.3	0.0	10.9	15.3	23.0	10.8	23.0	16.3	21.1	16.7	17.1	15.8	28.1	22.6	18.8	17.2	25.6	19.9	29.4	19.8
10/28/92	1715	0.3	0.0	11.2	16.9	23.4	10.6	23.3	14.1	20.7	15.9	16.7	16.6	27.9	18.7	19.4	17.0	25.3	19.3	33.9	15.2
10/28/92	1730	0.3	0.0	12.9	19.6	22.9	12.0	22.7	14.5	20.8	15.1	15.8	18.4	28.6	17.6	19.3	16.0	24.5	19.5	33.7	14.7
10/28/92	1745	0.3	0.0	14.6	20.6	22.6	10.0	23.4	13.8	20.2	16.9	15.4	16.2	25.7	24.1	19.4	18.1	24.3	19.4	34.8	15.0
10/28/92	1800	0.3	0.0	0.1	23.5	21.3	12.5	21.3	16.0	19.3	16.6	15.2	17.4	24.5	22.5	20.1	18.6	24.0	20.6	35.3	16.6
10/28/92	1815	0.3	0.0	13.7	20.4	20.6	11.8	20.8	16.4	19.0	16.6	14.3	18.2	24.3	24.0	20.8	18.9	22.0	18.3	33.7	15.1
10/28/92	1830	0.3	0.0	13.0	20.3	20.3	12.1	20.3	17.9	16.1	17.7	14.1	17.8	24.2	28.5	20.8	18.7	24.3	18.5	36.1	13.7
10/28/92	1845	0.3	0.0	12.7	20.4	20.5	13.4	20.3	16.3	9.1	20.1	13.5	18.2	22.7	42.3	21.1	27.9	22.9	20.1	33.6	15.1
10/28/92	1900	0.3	0.0	29.5	23.4	20.7	12.6	20.2	15.3	0.0	0.0	13.9	17.1	23.6	24.7	21.3	17.1	22.8	17.8	0.0	12.9
10/28/92	1915	0.3	0.0	16.6	23.7	20.6	11.8	20.8	14.0	18.7	15.5	13.6	17.9	23.4	25.7	21.7	20.5	23.6	18.0	36.4	13.6
10/28/92	1930	0.3	0.0	14.4	20.8	20.5	12.2	21.4	14.0	18.0	16.0	13.2	16.0	22.5	25.2	21.8	16.8	23.9	19.8	36.5	14.3
10/28/92	1945	0.3	0.0	14.0	22.2	22.2	11.0	24.1	13.5	18.2	11.0	14.3	16.4	22.7	25.8	23.7	17.9	24.6	16.8	37.7	13.9
10/28/92	2000	0.3	0.0	14.9	24.9	19.9	15.2	20.7	19.8	0.0	0.0	13.2	18.0	21.0	38.9	22.4	22.7	21.6	18.1	0.0	15.6
10/28/92	2015	0.2	0.0	14.4	26.3	20.4	19.6	20.6	20.3	0.0	0.0	13.1	19.5	21.3	32.2	22.5	24.2	21.9	17.7	0.0	13.2
10/28/92	2030	0.2	0.0	13.9	24.6	20.3	14.0	22.0	13.3	0.0	0.0	13.1	18.5	20.8	38.8	23.1	22.7	21.6	16.8	0.0	14.0
10/28/92	2045	0.2	0.0	20.5	23.6	20.5	14.5	21.1	14.0	18.0	16.5	12.6	19.1	20.9	31.2	23.3	19.7	22.0	16.8	36.0	13.0
10/28/92	2100	0.2	0.0	15.9	22.9	20.0	12.7	21.3	15.3	17.5	18.5	12.5	18.1	21.0	27.6	23.8	20.9	21.7	16.6	37.4	13.1
10/28/92	2115	0.2	0.0	16.9	20.8	20.9	13.1	21.3	15.2	17.0	16.4	12.8	19.0	20.2	25.2	24.1	18.4	21.1	16.2	37.7	13.3
10/28/92	2130	0.2	0.0	16.5	22.3	20.8	13.5	22.1	13.9	17.2	16.9	12.8	18.3	21.1	25.8	24.4	22.6	21.8	16.7	37.5	13.5
10/28/92	2145	0.2	0.0	18.3	22.5	21.2	11.7	21.8	14.1	11.2	19.4	12.3	19.0	21.0	27.8	24.9	20.0	21.2	15.6	32.8	14.5
10/28/92	2200	0.2	0.0	16.7	25.2	20.2	14.7	20.8	16.8	0.0	41.8	12.3	19.7	21.4	23.0	24.7	18.5	20.8	15.6	0.0	13.2
10/28/92	2215	0.2	0.0	14.5	20.6	25.2	8.2	25.4	7.5	14.3	5.0	13.4	15.7	21.5	29.4	23.8	22.1	21.4	17.3	42.2	14.2
10/28/92	2230	0.2	0.0	15.7	20.7	25.2	8.2	25.4	7.5	14.3	5.0	13.4	15.7	21.5	29.4	23.8	22.1	21.4	17.3	42.2	14.2
10/28/92	2245	0.2	0.0	15.7	25.1	25.2	8.2	25.4	7.5	14.3	5.0	13.4	15.7	21.5	29.4	23.8	22.1	21.4	17.3	42.2	14.2
10/28/92	2300	0.2	0.0	14.2	19.5	25.2	8.2	25.4	7.5	14.3	5.0	13.4	15.7	21.5	29.4	23.8	22.1	21.4	17.3	42.2	14.2
10/28/92	2315	0.2	0.0	13.9	21.1	25.2	8.2	25.4	7.5	14.3	5.0	13.4	15.7	21.5	29.4	23.8	22.1	21.4	17.3	42.2	14.2
10/28/92	2330	0.2	0.0	13.1	20.4	21.9	11.8	21.4	14.8	11.7	3.8	11.8	20.3	21.1	22.5	23.5	18.5	21.3	15.5	45.3	11.7
10/28/92	2345	0.2	0.0	14.4	25.0	22.4	9.6	21.8	12.4	5.6	61.2	12.1	17.0	22.7	14.6	27.5	12.2	23.0	12.3	27.0	8.9
10/29/92	0	0.2	0.0	15.1	25.5	20.6	10.3	21.0	12.3	0.3	0.0	12.2	18.6	23.2	19.8	30.8	15.9	25.9	16.3	11.5	8.5
10/29/92	15	0.2	0.0	15.7	27.3	21.3	12.6	20.9	15.0	1.2	0.0	12.6	19.1	20.5	25.2	27.4	25.5	21.1	14.5	10.6	10.8
10/29/92	30	0.2	0.0	14.0	27.2	21.3	13.1	20.0	16.5	0.0	0.0	12.1	18.5	22.5	22.4	27.0	29.3	20.8	17.5	0.0	11.4
10/29/92	45	0.2	0.0	13.6	23.3	22.6	13.0	20.7	16.9	0.0	0.0	12.0	18.0	23.4	23.2	26.7	21.0	21.9	14.5	0.0	12.5
10/29/92	100	0.2	0.0	13.9	25.0	21.7	12.2	20.1	15.5	0.0	0.0	11.9	17.5	25.2	22.1	31.6	22.4	25.9	13.2	0.0	4.4
10/29/92	115	0.2	0.0	13.9	21.5	22.0	13.2	19.9	17.0	0.0	0.0	11.4	20.1	23.2	24.9	25.8	25.0	20.7	15.6	0.0	12.1
10/29/92	130	0.2	0.0	14.2	22.7	24.7	12.7	23.1	16.9	0.0	0.0	12.2	21.8	23.3	25.3	25.5	30.9	20.7	14.6	0.0	11.6
10/29/92	145	0.2	0.0	13.6	23.6	23.8	11.0	21.5	13.9	0.0	0.0	12.4	17.7	25.9	20.0	29.0	21.4	22.7	15.3	0.0	13.2
10/29/92	200	0.2	0.0	14.2	55.4	24.4	11.8	21.6	14.4	0.0	0.0	12.3	17.8	25.3	16.9	25.8	17.5	24.0	14.7	0.0	12.4
10/29/92	215	0.2	0.0	13.9	23.4	23.4	12.4	20.5	17.3	0.0	3.8	12.0	19.7	24.2	23.6	27.9	23.8	22.3	14.7	11.1	11.6
10/29/92	230	0.2	0.0	14.0	21.0	22.6	15.1	20.3	15.7	14.3	3.4	11.4	19.3	24.2	23.0	28.2	19.3	23.2	14.3	43.5	13.6
10/29/92	245	0.2	0.0	12.6	20.5	24.4	11.0	21.0	15.0	14.4	3.4	11.5	18.8	25.3	28.0	25.4	18.8	23.5	19.1	46.9	11.4
10/29/92	300	0.2	0.0	11.3	21.2	24.3	13.0	21.5	17.0	14.4	3.4	12.2	18.0	25.5	21.6	28.2	19.8	23.2	13.9	48.1	9.9
10/29/92	315	0.2	0.0	9.8	20.0	24.4	10.9	21.1	14.6	9.8	6.7	12.0	18.7	25.2	20.1	28.7	23.6	23.5	14.2	38.9	12.4
10/29/92	330	0.2	0.0	12.1	24.5	24.6	12.7	21.3	18.9	0.0	0.0	11.7	19.9	25.5	20.5	28.6	18.4	24.4	13.7	0.0	11.8
10/29/92	345	0.2	0.0	11.8	25.0	24.9	11.1	21.2	15.5	0.0	0.0	11.8	18.7	25.1	19.8	30.7	19.8	23.6	14.8	0.0	10.2
10/29/92	400	0.2	0.0	11.3	21.5	24.9	11.0														

12/3/02

20:40:29

Date	Time	Water Flow gpm	Lime Flow gpm	Sik Op %	S Op %	D1 KW ap/ln	D2 KW ap/ln	D3 KW ap/ln	D4 KW ap/ln	C1 KW ap/ln	C2 KW ap/ln	C3 KW ap/ln	C4 KW ap/ln
10/29/02	830	0.2	0.0	18.9	32.0	21.2 14.7	19.5 17.6	17.3 17.3	11.9 17.4	24.2 21.1	32.1 19.7	24.7 18.9	40.7 8.6
10/29/02	845	0.2	0.0	18.0	39.7	22.9 12.8	20.2 18.1	17.4 19.0	12.2 18.8	24.0 19.3	32.5 18.7	24.2 13.2	42.0 10.4
10/29/02	860	0.2	0.0	17.4	35.0	22.6 13.7	19.6 18.2	0.0 0.0	11.7 18.0	24.6 19.9	32.6 21.9	25.5 12.1	0.0 9.7
10/29/02	815	0.2	0.0	18.4	33.8	22.8 15.0	19.5 17.4	7.4 25.7	11.9 18.8	23.4 28.5	32.9 18.0	25.3 13.0	36.5 5.5
10/29/02	830	0.2	0.0	17.0	33.3	23.5 13.2	20.2 16.7	0.0 0.0	11.8 18.5	24.3 20.6	31.8 17.4	25.3 11.7	0.0 4.4
10/29/02	845	0.2	0.0	14.8	31.3	23.4 11.7	20.5 16.5	17.1 16.4	12.0 16.9	23.6 19.4	34.6 18.2	28.2 12.2	45.4 4.1
10/29/02	700	0.2	0.0	18.3	38.4	22.9 13.9	20.1 16.5	0.0 48.0	11.8 17.8	22.7 21.8	32.1 20.1	25.3 12.3	0.0 12.6
10/29/02	715	0.2	0.0	16.5	35.8	21.8 13.1	19.5 15.4	0.0 43.8	11.8 19.8	23.9 24.0	33.1 18.7	25.1 13.1	0.7 6.2
10/29/02	730	0.2	0.0	18.1	43.1	23.7 13.3	20.0 16.1	0.0 0.0	11.7 20.1	23.5 19.3	33.5 19.0	24.5 13.8	0.0 3.1
10/29/02	745	0.2	0.0	15.5	32.7	24.8 12.1	20.9 16.8	17.3 19.7	12.0 18.3	24.8 23.1	34.2 16.7	25.5 13.1	45.7 4.4
10/29/02	800	0.2	0.0	14.2	31.1	24.2 13.6	20.3 17.2	17.4 18.9	11.9 19.4	24.2 19.3	34.4 18.0	25.4 12.0	44.3 8.7
10/29/02	815	0.2	0.0	18.3	36.4	24.3 13.3	20.6 16.5	0.0 0.0	11.8 18.9	23.6 25.9	29.8 20.5	23.7 16.0	0.0 3.3
10/29/02	830	0.2	0.0	12.3	29.2	24.5 14.3	20.9 17.2	17.4 17.8	12.1 19.6	24.9 21.2	33.5 17.3	25.9 12.9	45.9 5.3
10/29/02	845	0.2	0.0	13.3	31.1	25.0 13.5	21.0 18.5	0.0 0.0	12.0 19.0	23.5 21.9	33.2 19.2	25.2 14.0	3.2 3.3
10/29/02	900	0.2	0.0	14.8	32.3	25.0 13.7	21.3 15.5	0.0 38.6	12.0 19.9	24.1 23.1	33.1 17.0	25.3 12.6	17.2 3.1
10/29/02	915	0.2	0.0	11.5	30.8	25.4 15.5	21.2 17.1	0.0 29.9	12.0 18.4	24.8 24.0	34.0 17.8	25.3 12.3	29.6 3.1
10/29/02	930	0.2	0.0	16.5	32.3	25.5 15.0	21.5 18.4	0.0 0.0	12.0 17.4	24.1 20.8	34.4 17.5	25.9 15.1	0.0 3.7
10/29/02	945	0.2	0.0	13.5	30.8	25.6 17.9	21.7 17.9	8.7 22.5	12.3 18.7	25.4 23.6	30.8 20.9	25.0 14.4	45.8 3.6
10/29/02	1000	0.2	0.0	12.8	30.6	24.7 23.2	21.7 25.7	8.8 22.9	12.3 20.4	24.7 32.2	34.2 24.8	25.8 14.3	45.7 3.0
10/29/02	1015	0.2	0.0	14.5	31.0	25.2 12.3	21.8 16.7	0.0 0.0	12.2 16.8	25.4 35.3	34.2 19.3	25.8 12.5	0.0 3.8
10/29/02	1030	0.2	0.0	13.8	28.2	24.7 16.6	22.1 17.3	18.4 34.8	12.6 17.6	25.6 18.8	34.1 16.1	25.8 12.5	44.3 3.0
10/29/02	1045	0.2	0.0	13.6	27.8	25.6 11.0	22.5 13.7	0.0 0.0	12.4 17.7	25.3 19.1	35.1 15.3	25.3 12.4	0.0 3.0
10/29/02	1100	0.2	0.0	12.8	29.8	25.1 13.1	22.6 15.6	0.0 0.0	12.7 17.6	25.0 18.9	35.3 16.0	25.5 12.4	0.0 3.0
10/29/02	1115	0.2	0.0	14.9	30.0	25.7 12.4	23.2 14.0	0.0 0.0	12.8 17.1	25.8 20.6	34.9 15.4	25.5 12.6	0.0 3.5
10/29/02	1130	0.2	0.0	11.9	25.2	25.2 12.8	22.8 15.3	18.7 25.4	12.9 17.3	24.2 16.5	34.5 17.1	25.4 11.7	44.8 3.0
10/29/02	1145	0.2	0.0	11.0	23.6	25.6 10.2	23.5 13.9	19.3 30.6	13.0 16.2	25.1 25.5	34.4 18.4	25.3 13.0	44.7 3.0
10/29/02	1200	0.2	0.0	13.1	28.1	25.4 12.5	22.6 16.9	0.0 0.0	12.6 18.7	24.4 16.1	34.0 18.1	25.0 12.9	0.0 3.1
10/29/02	1215	0.3	0.0	12.0	28.1	25.0 11.8	22.8 15.3	0.0 0.0	12.8 20.3	24.3 23.9	33.7 20.1	25.0 13.8	0.0 3.0
10/29/02	1230	0.3	0.0	13.4	28.4	25.2 9.8	22.3 14.7	0.0 0.0	12.6 18.0	24.3 23.5	31.4 21.9	24.5 13.7	0.0 3.0
10/29/02	1245	0.3	0.0	10.9	25.5	25.6 10.3	23.2 13.8	19.8 31.0	13.0 17.2	24.6 19.1	34.7 18.4	25.0 12.2	45.4 3.3
10/29/02	1300	0.3	0.0	12.4	23.5	23.0 9.9	22.0 14.5	19.0 31.3	12.8 18.2	24.0 18.5	33.4 16.6	24.5 13.8	45.7 3.2
10/29/02	1315	0.2	0.0	11.0	24.5	25.8 10.0	22.7 14.3	5.1 39.3	12.8 18.1	23.6 20.6	32.7 17.0	25.1 16.8	25.8 3.0
10/29/02	1330	0.2	0.0	12.0	28.1	25.4 11.5	22.9 13.2	0.0 0.0	12.2 21.9	22.0 20.6	32.8 19.4	24.2 14.1	0.0 3.0
10/29/02	1345	0.2	0.0	11.7	24.8	25.4 9.8	23.1 13.5	19.3 30.8	13.0 18.8	23.2 22.2	32.9 16.4	23.4 11.9	45.1 3.6
10/29/02	1400	0.2	0.0	10.3	21.7	25.4 10.2	23.0 14.1	19.5 34.0	12.8 17.1	23.1 19.6	32.5 17.3	23.9 12.4	45.7 3.0
10/29/02	1415	0.2	0.0	12.7	27.9	25.2 12.1	23.1 16.4	0.0 0.0	12.8 19.1	23.9 20.5	32.4 20.9	24.5 15.1	0.0 3.3
10/29/02	1430	0.2	0.0	12.2	28.2	25.5 10.7	22.4 15.4	0.0 0.0	12.6 19.4	23.1 18.5	31.4 18.2	23.0 12.4	0.0 7.2
10/29/02	1445	0.3	0.0	13.6	25.5	25.0 11.7	22.6 15.8	0.0 0.0	12.6 17.9	22.7 25.2	31.5 18.8	23.9 13.3	0.0 4.2
10/29/02	1500	0.3	0.0	12.3	27.4	25.7 10.4	23.0 13.2	0.0 0.0	12.8 19.1	22.7 22.1	32.0 19.5	23.6 15.0	0.0 3.5
10/29/02	1515	0.3	0.0	11.8	24.8	25.8 11.7	23.0 25.4	19.9 31.5	12.9 19.0	23.2 22.0	31.4 17.1	23.6 13.5	41.1 3.0
10/29/02	1530	0.3	0.0	12.7	22.3	25.6 10.1	22.7 13.8	20.1 30.3	12.8 20.1	23.3 21.0	31.9 23.9	23.6 15.1	40.2 3.0
10/29/02	1545	0.3	0.0	9.8	21.4	25.3 12.9	23.3 15.3	20.5 28.3	13.0 17.5	22.7 18.9	31.8 18.5	23.4 13.1	43.3 3.0
10/29/02	1600	0.3	0.0	10.9	21.6	27.2 9.4	24.0 11.0	20.4 28.6	13.1 16.8	24.4 18.8	35.4 16.7	25.6 12.4	43.5 3.0
10/29/02	1615	0.3	0.0	10.9	24.7	25.7 11.8	22.8 15.4	10.1 28.9	12.9 18.6	22.3 18.6	32.2 17.9	23.9 12.2	37.9 3.6
10/29/02	1630	0.3	0.0	11.0	19.7	25.9 9.2	23.2 13.7	7.3 9.9	13.1 17.2	21.2 21.7	31.3 21.1	22.9 13.5	38.1 3.0
10/29/02	1645	0.3	0.0	10.3	21.7	25.9 7.8	23.5 11.4	2.6 41.2	13.2 15.9	24.5 17.2	37.4 12.9	29.3 14.8	19.3 3.0
10/29/02	1700	0.3	0.0	14.5	17.6	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1715	0.3	0.0	6.7	17.2	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1730	0.3	0.0	7.2	17.7	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1745	0.3	0.0	7.8	18.5	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1800	0.3	0.0	7.8	18.5	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1815	0.3	0.0	7.8	18.2	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1830	0.3	0.0	9.9	22.0	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1845	0.3	0.0	9.1	20.7	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1900	0.3	0.0	8.6	19.8	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1915	0.3	0.0	12.2	24.3	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1930	0.3	0.0	9.6	20.6	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	1945	0.3	0.0	8.0	18.4	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	2000	0.3	0.0	23.5	25.7	24.4 11.9	22.9 15.9	1.0 15.3	13.2 17.7	22.5 18.9	37.9 15.1	29.0 11.2	9.3 3.0
10/29/02	2015	0.3	0.0	14.4	22.3	25.8 4.0	24.8 3.6	0.0 6.0	13.3 17.0	29.3 19.8	35.0 15.3	29.9 14.3	0.0 8.1
10/29/02	2030	0.3	0.0	13.2	25.5	25.1 12.3	24.9 6.6	0.0 5.8	13.5 15.5	28.1 17.5	33.9 17.0	29.0 13.4	0.8 8.4
10/29/02	2045	0.3	0.0	13.0	23.5	29.0 7.9	24.8 3.4	0.0 0.0	13.1 16.8	25.4 17.0	32.8 18.0	27.8 14.0	0.0 4.5
10/29/02	2100	0.3	0.0	16.0	34.9	25.9 12.0	25.0 13.5	0.0 0.0	13.9 16.7	25.7 20.0	32.7 16.7	25.7 13.5	0.0 3.1
10/29/02	2115	0.3	0.0	13.0	27.0	25.4 8.4	24.8 4.6	0.0 0.0	13.0 16.7	27.4 16.9	32.4 15.3	25.6 13.9	0.0 3.1
10/29/02	2130	0.3	0.0	13.1	24.6	27.4 9.3	24.9 8.8	3.6 17.9	13.2 16.6	24.1 22.5	31.4 15.8	25.4 12.4	14.9 3.5

12/3/92

20:40:00

Date	Time	Water Flow gpm	Lime Flow gpm	Sol Op %	S Op %	D1 KW	D1 spk/mn	D2 KW	D2 spk/mn	D3 KW	D3 spk/mn	D4 KW	D4 spk/mn	C1 KW	C1 spk/mn	C2 KW	C2 spk/mn	C3 KW	C3 spk/mn	C4 KW	C4 spk/mn
10/29/92	2145	0.3	0.0	16.7	23.6	28.4	8.8	24.8	8.1	0.0	0.0	13.1	18.0	25.6	22.8	31.2	17.1	25.9	18.1	0.0	5.4
10/29/92	2200	0.3	0.0	10.7	24.3	27.9	11.9	24.7	11.4	0.0	0.0	12.9	17.9	25.3	20.3	30.0	18.0	26.7	13.2	0.0	3.0
10/29/92	2215	0.3	0.0	12.6	25.5	28.2	8.4	24.7	8.8	0.0	0.0	13.5	14.8	25.7	18.7	30.0	14.0	27.1	12.5	0.0	3.6
10/29/92	2230	0.3	0.0	12.1	27.2	28.2	10.4	24.9	8.2	0.0	0.0	13.2	18.9	25.8	22.3	31.5	18.2	26.8	12.8	0.0	3.6
10/29/92	2245	0.3	0.0	13.1	28.5	28.4	13.0	24.8	8.4	0.0	0.0	13.1	18.8	25.6	22.7	31.9	18.8	26.9	14.4	0.0	3.0
10/29/92	2300	0.3	0.0	13.0	31.7	28.3	20.9	24.7	22.2	0.0	0.0	13.3	18.0	26.4	18.6	31.4	18.4	26.2	12.8	0.0	3.5
10/29/92	2315	0.3	0.0	14.4	28.8	27.9	8.1	24.9	8.2	0.0	0.0	13.1	18.2	25.7	17.1	30.6	16.6	25.4	16.7	0.0	4.8
10/29/92	2330	0.3	0.0	14.0	28.5	28.1	8.4	25.0	11.3	0.0	0.0	13.1	17.0	25.0	16.2	31.4	18.3	26.4	12.5	0.0	3.9
10/29/92	2345	0.3	0.0	12.4	25.1	28.3	7.5	25.0	13.6	0.0	0.0	12.9	17.1	24.3	24.8	31.6	18.2	26.2	12.3	0.0	3.0
10/30/92	0	0.3	0.0	13.3	35.0	27.7	17.5	25.0	20.2	0.0	0.0	13.7	18.4	23.7	28.9	32.5	22.5	25.5	13.0	0.0	6.4
10/30/92	15	0.3	0.0	22.8	27.3	28.4	9.1	25.0	8.1	0.0	0.0	13.1	18.3	23.1	17.7	37.6	18.8	29.5	15.1	0.0	4.1
10/30/92	30	0.3	0.0	14.0	28.5	27.6	11.0	24.6	13.4	0.0	0.0	13.0	17.3	23.7	18.3	35.1	14.0	27.7	12.2	0.0	3.5
10/30/92	45	0.3	0.0	14.2	28.0	28.0	8.0	24.8	8.3	0.0	0.0	12.9	18.4	25.0	16.5	37.6	17.8	30.0	14.0	0.0	3.0
10/30/92	100	0.3	0.0	12.4	28.0	27.4	11.9	25.0	17.4	0.0	0.0	14.0	18.9	21.0	22.4	28.9	17.7	21.9	14.0	0.0	3.1
10/30/92	115	0.3	0.0	11.9	23.4	28.6	8.7	25.0	7.4	0.0	0.0	13.7	18.2	22.3	24.9	29.5	18.3	22.5	12.7	0.0	3.2
10/30/92	130	0.3	0.0	13.4	28.7	27.6	12.8	25.1	8.0	0.0	0.0	13.1	18.1	22.9	18.7	30.5	16.8	23.6	12.6	0.0	3.9
10/30/92	145	0.3	0.0	12.6	24.7	28.7	8.7	25.1	3.5	0.0	0.0	13.4	15.5	24.0	21.5	30.5	17.2	23.0	13.5	0.0	3.0
10/30/92	200	0.3	0.0	12.7	25.2	28.6	8.3	25.0	7.4	0.0	0.0	13.0	15.8	22.1	21.4	30.5	16.9	23.3	13.5	0.0	10.2
10/30/92	215	0.3	0.0	13.1	24.6	28.8	8.3	25.0	7.0	0.0	0.0	12.9	15.5	22.6	22.6	30.3	16.9	23.7	15.8	0.0	3.0
10/30/92	230	0.3	0.0	13.7	27.8	28.2	8.4	24.8	9.8	0.0	0.0	12.7	18.7	22.5	17.7	28.7	23.9	20.7	14.3	0.0	3.3
10/30/92	245	0.3	0.0	12.3	24.2	29.0	4.7	25.0	8.3	0.0	0.0	13.0	17.2	24.2	20.2	29.8	17.5	23.4	16.1	0.0	3.0
10/30/92	300	0.3	0.0	12.6	28.4	29.5	7.9	25.3	7.2	0.0	0.0	12.8	18.3	21.1	23.6	28.8	16.8	22.8	13.8	0.0	8.2
10/30/92	315	0.3	0.0	12.5	25.4	28.9	7.1	24.9	8.7	0.0	0.0	13.0	15.9	23.5	19.3	30.9	16.2	24.2	12.1	0.0	3.6
10/30/92	330	0.3	0.0	10.7	21.2	29.6	6.2	25.1	4.0	0.0	0.0	13.0	17.1	21.0	23.7	29.8	14.9	22.7	13.7	0.0	3.7
10/30/92	345	0.2	0.0	11.7	20.5	27.7	7.1	25.0	6.7	0.0	0.0	13.0	18.9	22.0	18.5	29.8	16.5	22.1	14.0	0.0	3.3
10/30/92	400	0.2	0.0	9.6	20.8	29.2	11.2	25.1	3.8	0.0	0.0	13.1	18.1	20.7	22.6	28.1	17.0	22.1	13.9	0.0	4.8
10/30/92	415	0.2	0.0	10.9	19.8	29.4	8.5	25.0	5.3	0.0	0.0	13.1	16.4	22.5	18.1	29.8	20.4	22.6	13.4	0.0	3.0
10/30/92	430	0.2	0.0	11.2	25.7	28.9	10.3	25.1	9.6	0.0	0.0	13.1	17.1	23.2	18.6	30.1	16.6	23.6	13.5	0.0	3.0
10/30/92	445	0.2	0.0	10.2	16.9	29.6	8.8	25.1	8.3	0.0	0.0	12.8	17.7	23.5	19.1	28.4	16.9	23.2	15.3	0.0	3.9
10/30/92	500	0.2	0.0	10.4	17.8	29.6	8.0	24.9	8.8	0.0	0.0	12.9	16.9	23.7	18.8	27.8	20.4	22.1	14.5	0.0	3.8
10/30/92	515	0.2	0.0	17.7	16.9	30.2	8.1	25.3	4.5	0.0	0.0	13.0	16.2	24.1	17.8	29.8	21.4	24.1	14.3	0.0	3.0
10/30/92	530	0.2	0.0	12.5	17.9	30.1	8.1	25.3	4.1	0.0	0.0	12.7	17.1	24.4	18.4	29.7	18.1	23.7	13.0	0.0	3.0
10/30/92	545	0.2	0.0	13.2	19.4	30.0	8.9	25.4	4.1	0.0	0.0	13.1	15.9	24.2	17.5	31.1	16.8	23.9	13.9	0.0	3.0
10/30/92	600	0.2	0.0	14.8	21.5	29.8	9.8	25.5	3.7	0.0	0.0	13.0	16.2	22.7	19.0	29.3	17.1	23.3	12.2	0.0	3.0
10/30/92	615	0.2	0.0	14.6	23.1	28.5	9.5	25.3	7.0	0.0	0.0	13.3	16.7	21.8	20.4	31.9	18.1	24.1	12.7	0.0	3.0
10/30/92	630	0.2	0.0	34.6	23.8	28.3	8.0	25.5	7.7	0.0	0.0	13.0	15.8	19.1	20.5	30.5	16.8	21.9	14.4	0.0	3.3
10/30/92	645	0.2	0.0	25.8	28.4	28.9	8.6	24.2	9.8	0.0	0.0	12.8	17.1	21.4	18.1	30.1	16.0	22.8	14.1	0.0	3.6
10/30/92	700	0.2	0.0	12.2	24.4	27.6	11.4	25.3	8.3	0.0	0.0	13.2	18.4	22.1	22.9	30.3	16.9	23.6	13.2	0.0	3.0
10/30/92	715	0.2	0.0	13.4	23.3	28.6	8.3	24.9	9.1	0.0	0.0	13.2	18.7	21.7	18.6	30.9	15.2	23.9	13.9	0.0	3.0
10/30/92	730	0.2	0.0	13.6	24.4	28.0	8.8	24.7	10.2	0.0	0.0	13.2	18.0	21.7	20.3	30.2	16.4	22.4	14.3	0.0	3.0
10/30/92	745	0.2	0.0	12.1	21.8	27.1	7.3	24.6	8.1	0.0	0.0	13.2	18.7	23.4	18.0	31.0	16.5	24.0	13.1	0.0	3.2
10/30/92	800	0.2	0.0	12.9	27.0	27.7	9.4	25.0	12.8	0.0	0.0	13.2	18.8	23.3	20.7	31.1	18.0	23.9	14.2	0.0	3.3
10/30/92	815	0.2	0.0	11.8	23.3	27.8	9.1	24.9	7.9	0.0	0.0	13.4	16.9	23.0	18.4	30.6	15.9	23.9	13.2	0.0	3.0
10/30/92	830	0.2	0.0	10.8	27.6	27.9	9.8	25.1	5.6	0.0	0.0	13.4	17.2	23.5	18.6	31.4	14.2	23.4	12.9	0.0	3.0
10/30/92	845	0.2	0.0	11.5	24.5	28.0	8.7	24.9	8.6	0.0	0.0	13.4	15.9	23.2	18.7	30.4	16.5	23.1	14.8	0.0	4.1
10/30/92	900	0.2	0.0	11.1	25.3	27.9	8.8	24.9	9.7	0.0	0.0	13.3	16.1	23.7	18.2	31.0	15.7	23.3	13.7	0.0	3.4
10/30/92	915	0.2	0.0	11.2	22.2	28.5	8.2	25.0	10.4	0.0	0.0	13.5	15.7	23.5	21.1	29.8	19.5	21.8	13.6	0.0	3.5
10/30/92	930	0.2	0.0	10.4	22.1	28.0	6.5	24.9	5.9	0.0	0.0	13.4	15.2	23.1	18.4	28.4	23.0	21.9	12.5	0.0	3.0
10/30/92	945	0.2	0.0	10.4	25.2	27.7	9.3	25.0	10.7	0.0	0.0	13.3	16.9	23.7	18.8	30.5	15.5	24.0	14.6	0.0	3.0
10/30/92	1000	0.2	0.0	10.6	24.6	28.0	10.7	24.9	12.2	0.0	0.0	13.4	16.7	22.7	23.9	30.2	16.5	23.4	13.7	0.0	3.6
10/30/92	1015	0.2	0.0	10.9	24.0	28.0	11.1	25.0	13.4	20.4	28.2	13.4	17.1	23.5	25.1	30.0	17.8	22.8	12.7	40.4	3.1
10/30/92	1030	0.2	0.0	9.9	20.3	27.0	10.0	25.3	7.4	23.5	22.7	13.5	15.2	22.4	28.9	29.4	17.8	22.8	13.7	43.7	5.0
10/30/92	1045	0.2	0.0	9.9	19.9	27.6	10.0	25.0	8.5	24.0	24.8	13.4	16.0	24.3	17.7	30.8	19.8	21.2	13.7	44.5	3.6
10/30/92	1100	0.2	0.0	8.3	18.9	26.4	18.7	25.1	20.2	24.4	24.8	13.1	17.2	24.0	19.1	30.5	18.1	24.1	14.3	45.1	3.7
10/30/92	1115	0.2	0.0	8.5	19.5	28.1	12.5	25.3	13.6	25.0	22.4	13.3	16.0	24.3	22.0	29.8	18.1	22.8	15.0	44.7	3.9
10/30/92	1130	0.2	0.0	9.0	22.2	28.7	9.7	25.4	11.5	25.1	23.4	13.8	15.4	25.1	18.4	30.1	21.1	21.6	12.8	43.7	3.0
10/30/92	1145	0.2	0.0	9.0	21.0	28.1	13.3	24.6	15.4	25.1	25.3	13.6	16.0	22.4	19.1	29.4	18.2	22.5	13.1	41.7	3.2
10/30/92	1200	0.2	0.0	8.2	19.4	27.9	10.4	24.9	7.6	25.9	22.4	13.7	16.3	22.2	20.2	30.2	22.9	21.5	15.1	39.3	3.0
10/30/92	1215	0.2	0.0	12.1	20.1	27.8	20.7	25.0	17.5	24.8	24.8	13.7	15.8	23.0	24.6	31.0	18.9	23.0	13.8	45.1	7.8
10/30/92	1230	0.2	0.0	9.4	20.7	25.8	14.0	25.1	14.5	25.8	24.5	13.6	15.4	23.2	32.9	31.0	20.2	22.9	13.1	44.8	5.2
10/30/92	1245	0.2																			

12/3/92

20:40:39

Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	S Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
10/30/92	1400	0.2	0.0	12.2	16.6	28.2	5.7	25.2	4.6	25.4	23.1	13.6	16.0	23.0	16.6	30.2	17.7	22.3	13.0	44.6	3.7
10/30/92	1415	0.2	0.0	15.5	19.4	27.8	9.8	24.5	12.8	25.6	22.9	13.5	15.6	22.6	17.8	28.6	16.4	22.7	13.2	44.4	3.1
10/30/92	1430	0.2	0.0	14.5	19.8	27.8	8.1	25.1	10.1	25.5	22.4	13.4	15.6	24.1	25.1	30.3	23.5	22.2	13.9	44.9	3.3
10/30/92	1445	0.2	0.0	14.9	16.9	28.9	6.0	25.1	4.5	27.3	20.5	13.6	16.1	24.5	16.7	29.7	16.5	22.7	12.3	43.8	3.1
10/30/92	1500	0.2	0.0	12.4	19.1	28.9	18.4	24.9	19.7	27.6	23.7	13.7	16.0	24.1	19.0	30.8	18.1	22.3	12.9	45.4	3.1
10/30/92	1515	0.2	0.0	13.5	17.3	28.4	10.6	25.3	4.5	27.7	21.7	13.5	15.1	23.6	17.0	31.0	17.2	22.4	14.9	45.1	4.5
10/30/92	1530	0.2	0.0	12.6	20.4	28.2	8.8	25.1	7.2	26.6	22.7	13.7	15.4	24.6	17.4	30.9	18.2	24.0	13.5	44.4	3.4
10/30/92	1545	0.2	0.0	13.4	17.3	28.9	6.1	24.5	7.2	26.5	22.5	13.6	16.0	25.0	18.1	30.7	18.2	24.1	13.2	44.7	3.7
10/30/92	1600	0.2	0.0	12.7	19.7	27.6	8.8	25.1	9.3	26.1	22.4	13.6	15.9	24.7	14.7	30.8	17.1	22.9	12.7	45.6	3.4
10/30/92	1615	0.2	0.0	12.4	16.1	28.8	6.2	25.2	3.9	27.1	23.0	13.9	15.0	24.7	18.8	30.5	16.2	23.8	12.3	45.6	4.4
10/30/92	1630	0.2	0.0	12.7	18.8	27.6	6.1	24.8	7.4	27.3	22.4	13.6	14.9	24.2	15.3	31.0	15.2	23.7	13.9	45.1	3.4
10/30/92	1645	0.2	0.0	12.8	19.5	29.1	8.2	25.2	4.0	27.3	20.8	13.7	16.4	23.5	18.8	29.4	16.6	22.9	14.5	44.9	5.4
10/30/92	1700	0.2	0.0	12.1	17.5	28.5	9.6	25.2	3.4	32.2	19.0	14.6	15.1	24.4	15.8	31.8	17.1	23.9	12.9	47.4	6.4
10/30/92	1715	0.2	0.0	11.9	19.6	28.4	8.5	25.1	6.4	27.6	20.4	13.5	16.3	23.6	16.2	29.8	16.3	23.0	16.0	45.2	4.0
10/30/92	1730	0.2	0.0	12.3	18.7	28.6	7.4	25.2	4.3	27.8	21.7	13.4	16.2	25.5	16.6	29.6	16.2	23.5	13.3	45.7	3.2
10/30/92	1745	0.2	0.0	12.2	19.9	27.9	9.1	24.8	13.1	28.0	19.7	14.0	14.8	27.8	13.8	30.2	11.3	28.9	10.5	45.0	13.1
10/30/92	1800	0.2	0.0	12.3	18.1	28.4	10.7	25.2	3.5	33.0	22.0	14.3	15.8	21.5	21.1	28.6	19.5	20.8	14.2	45.9	4.0
10/30/92	1815	0.2	0.0	13.5	21.6	25.8	7.0	24.9	9.2	27.8	19.9	13.9	14.1	23.0	16.4	28.2	17.9	22.9	13.9	41.0	3.0
10/30/92	1830	0.2	0.0	12.8	19.7	28.4	9.5	24.6	7.9	27.5	22.0	13.6	15.6	22.7	16.6	29.3	15.9	21.9	13.2	38.9	3.0
10/30/92	1845	0.2	0.0	12.2	17.3	28.3	10.8	25.0	6.3	27.6	20.5	13.4	15.0	24.6	17.9	30.0	19.1	22.9	13.8	42.8	6.7
10/30/92	1900	0.2	0.0	12.6	18.7	29.1	8.5	25.1	3.1	35.1	22.4	15.0	15.3	24.9	17.4	30.7	17.1	23.7	13.8	47.5	6.4
10/30/92	1915	0.2	0.0	13.8	18.1	28.3	8.4	25.1	7.3	26.7	21.3	13.6	15.8	21.9	17.5	28.3	17.7	20.8	15.7	38.7	3.0
10/30/92	1930	0.2	0.0	14.4	20.1	27.1	11.1	24.7	12.8	26.8	21.6	13.5	17.8	21.9	21.4	28.7	17.8	22.5	15.3	43.0	3.8
10/30/92	1945	0.2	0.0	11.6	17.5	27.9	11.6	24.8	13.6	28.3	22.7	13.5	15.2	23.0	22.1	28.4	17.2	22.1	13.8	41.5	3.2
10/30/92	2000	0.2	0.0	12.3	19.7	28.0	7.8	25.3	6.5	28.8	19.1	13.5	14.9	22.8	18.5	28.7	16.9	21.4	13.6	44.3	5.7
10/30/92	2015	0.2	0.0	12.9	20.1	28.7	8.7	24.5	12.2	28.4	21.0	13.4	15.5	22.5	18.9	28.8	17.4	21.3	16.4	44.6	5.2
10/30/92	2030	0.2	0.0	11.9	17.1	27.8	9.5	24.6	9.3	27.3	22.6	13.4	15.7	22.8	20.3	28.4	19.5	21.2	13.4	44.5	4.9
10/30/92	2045	0.2	0.0	12.6	20.4	28.7	10.9	24.1	13.6	25.9	23.5	13.3	15.9	22.3	16.7	28.5	17.3	21.9	15.2	44.9	5.4
10/30/92	2100	0.2	0.0	12.9	19.9	27.0	9.8	24.4	11.6	25.8	22.7	13.6	17.5	23.0	22.7	27.5	18.1	21.6	14.3	42.6	3.0
10/30/92	2115	0.2	0.0	12.6	16.9	27.8	8.3	24.7	9.5	26.3	21.6	13.4	16.2	25.3	16.4	28.1	18.5	22.3	14.4	39.2	3.0
10/30/92	2130	0.2	0.0	11.0	16.9	28.9	7.1	24.5	10.5	25.7	23.0	13.3	17.6	23.5	16.7	29.1	15.4	22.5	14.9	44.3	3.0
10/30/92	2145	0.2	0.0	12.3	18.1	28.2	8.5	25.2	6.7	26.6	21.9	13.5	16.3	22.5	15.5	27.4	17.9	20.8	15.8	43.7	3.4
10/30/92	2200	0.2	0.0	10.1	22.2	28.7	15.4	25.2	15.9	30.8	25.4	14.1	15.8	23.8	17.0	28.6	20.6	22.3	15.9	47.2	4.0
10/30/92	2215	0.2	0.0	13.3	18.8	27.1	8.6	24.5	10.9	30.0	20.0	14.1	15.2	23.7	20.2	28.4	17.2	22.4	15.2	45.5	3.8
10/30/92	2230	0.2	0.0	10.5	17.7	28.6	7.3	25.2	8.6	28.5	22.2	13.4	15.9	23.8	20.4	27.9	17.2	20.9	14.0	44.2	3.1
10/30/92	2245	0.2	0.0	11.4	18.3	27.6	8.4	24.6	12.3	28.2	22.6	13.4	15.9	25.0	15.7	27.9	17.3	22.3	13.9	44.1	4.1
10/30/92	2300	0.2	0.0	12.2	19.9	27.8	10.1	24.9	13.7	28.0	23.9	13.6	16.6	24.5	25.0	29.2	18.1	23.3	14.9	43.5	3.1
10/30/92	2315	0.2	0.0	11.1	23.0	27.4	13.9	24.4	16.7	26.6	23.0	13.4	16.5	25.0	17.3	29.4	15.8	23.1	14.5	44.3	3.1
10/30/92	2330	0.2	0.0	11.3	18.4	28.8	9.1	24.6	10.8	28.8	20.1	13.6	15.1	24.5	13.6	28.6	17.5	23.0	13.5	45.1	3.1
10/30/92	2345	0.2	0.0	12.3	19.4	28.4	7.8	25.6	10.7	27.5	21.9	13.7	15.1	25.2	18.1	29.2	17.0	23.0	13.1	44.9	3.0
10/31/92	0	0.2	0.0	11.3	17.3	28.7	9.3	25.7	10.1	26.6	21.3	13.7	15.0	25.7	14.5	31.0	12.7	24.4	10.3	45.0	4.2
10/31/92	15	0.2	0.0	11.0	20.8	28.0	7.9	25.3	7.7	27.2	19.3	13.9	15.5	23.4	25.3	34.3	17.9	25.7	14.0	45.3	11.1
10/31/92	30	0.2	0.0	13.0	19.0	27.7	7.5	24.5	12.1	28.8	21.1	13.6	15.9	29.2	23.2	35.7	21.1	27.5	14.6	45.3	3.0
10/31/92	45	0.2	0.0	11.8	21.7	26.5	12.6	24.2	11.8	25.9	20.9	13.7	16.1	22.1	20.3	29.3	17.6	21.2	13.1	45.5	3.7
10/31/92	100	0.2	0.0	13.9	19.0	28.4	7.8	24.5	6.9	28.6	15.9	13.8	15.0	22.5	21.1	29.8	17.9	23.0	15.4	47.0	3.0
10/31/92	115	0.2	0.0	12.7	20.0	28.2	9.5	25.6	11.8	31.4	17.1	14.0	15.5	25.4	16.1	30.0	14.5	21.1	12.3	45.9	3.0
10/31/92	130	0.2	0.0	12.7	18.0	27.2	9.4	24.9	10.4	29.3	20.0	13.9	15.3	25.0	25.1	28.6	19.4	22.1	14.1	44.3	3.7
10/31/92	145	0.2	0.0	12.3	18.9	28.4	17.3	25.1	18.2	28.2	20.8	13.6	16.5	24.8	17.9	25.9	17.1	21.5	15.0	37.3	3.0
10/31/92	200	0.2	0.0	12.1	19.8	28.1	9.2	25.1	12.6	25.8	21.2	13.3	15.2	24.5	19.4	28.2	17.8	21.3	14.5	44.8	3.0
10/31/92	215	0.2	0.0	13.1	19.7	27.4	16.9	24.3	14.2	27.6	21.1	13.5	16.7	24.3	22.6	27.6	16.3	21.3	14.8	42.8	3.0
10/31/92	230	0.2	0.0	13.0	17.9	27.6	8.7	24.8	8.5	27.4	22.6	13.6	15.0	24.6	24.8	27.6	19.4	21.6	14.6	45.4	4.0
10/31/92	245	0.2	0.0	12.0	19.4	28.4	12.9	25.1	16.1	26.8	20.4	13.7	16.4	24.5	34.8	28.9	25.3	22.8	17.4	45.3	4.1
10/31/92	300	0.2	0.0	11.8	17.8	24.3	10.0	22.6	15.8	25.4	22.1	13.5	16.5	25.4	17.8	28.6	18.0	22.0	13.1	44.6	3.2
10/31/92	315	0.2	0.0	12.3	18.6	28.3	15.7	25.2	14.9	27.5	21.9	13.6	16.4	24.5	17.8	28.5	15.9	22.0	13.5	45.5	3.5
10/31/92	330	0.2	0.0	0.1	16.7	28.1	6.8	25.1	7.5	27.8	18.2	13.9	14.7	25.2	18.6	27.6	17.0	22.4	13.8	44.0	3.5
10/31/92	345	0.2	0.0	11.6	16.1	29.1	7.8	25.6	4.9	28.4	20.0	14.0	15.1	26.0	15.7	29.0	15.3	23.0	15.3	45.5	4.7
10/31/92	400	0.2	0.0	12.2	16.2	27.7	8.1	24.6	11.4	27.8	22.0	13.6	15.4	23.5	19.4	28.2	15.9	22.6	14.6	45.0	4.4
10/31/92	415	0.2	0.0	11.6	17.5	28.8	9.4	25.2	13.4	28.0	20.8	13.9	15.5	24.2	16.0	28.3	17.9	21.9	13.6	45.0	3.4
10/31/92	430	0.2	0.0	11.3	16.0	28.3	7.2	24.9	6.1	27.1	20.4	13.9	15.5	26.6	15.9	29.3	18.1	23.5	15.1	40.1	3.0
10/3																					

12/3/92

20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
10/31/92	615	0.2	0.0	11.7	15.2	28.7	6.6	25.5	7.0	28.2	18.6	14.0	14.3	25.3	14.7	28.8	16.0	22.7	13.2	43.9	3.0
10/31/92	630	0.2	0.0	12.1	16.0	28.1	6.4	25.5	6.2	26.7	21.7	14.0	15.5	24.5	14.3	28.8	16.7	22.2	13.6	43.5	3.0
10/31/92	645	0.2	0.0	12.1	16.0	28.7	6.7	25.1	9.3	27.1	19.9	13.7	15.7	25.7	18.6	30.3	16.4	23.8	13.3	42.6	4.1
10/31/92	700	0.2	0.0	13.1	17.0	28.2	8.6	25.2	6.2	27.8	21.1	14.0	15.0	28.9	14.3	30.5	13.9	24.4	13.7	39.8	11.8
10/31/92	715	0.2	0.0	11.0	17.0	28.0	8.4	25.4	8.2	27.7	21.5	13.8	15.1	25.8	15.2	30.3	13.5	24.7	12.8	45.3	3.2
10/31/92	730	0.2	0.0	13.4	18.0	28.0	9.4	24.6	12.9	27.6	20.7	13.7	14.9	25.4	18.9	29.8	18.2	22.8	14.7	45.8	4.1
10/31/92	745	0.2	0.0	12.9	17.9	28.5	7.8	24.8	9.8	26.8	21.1	13.6	15.6	24.5	16.3	30.2	15.6	23.8	13.0	42.4	3.0
10/31/92	800	0.2	0.0	12.4	16.6	28.5	6.8	25.1	9.1	26.8	21.7	13.7	15.3	25.8	17.9	30.2	15.2	24.6	13.4	45.2	4.9
10/31/92	815	0.2	0.0	12.4	16.4	27.8	6.7	25.1	4.1	29.6	19.0	14.3	14.6	26.4	15.4	34.0	14.7	28.9	12.1	46.0	4.4
10/31/92	830	0.2	0.0	13.5	16.4	26.5	9.9	24.9	6.8	28.7	20.3	13.9	16.3	24.6	15.5	28.7	18.0	22.0	13.7	45.9	3.0
10/31/92	845	0.2	0.0	13.7	16.5	27.5	7.0	24.6	8.2	27.9	22.1	13.9	17.0	25.7	18.4	29.0	17.1	23.1	15.1	43.1	3.0
10/31/92	900	0.2	0.0	12.6	16.9	27.6	7.2	24.6	15.6	27.9	22.2	14.1	15.6	25.4	15.6	29.2	16.7	22.4	13.9	45.2	3.1
10/31/92	915	0.2	0.0	12.5	15.6	28.8	6.8	25.2	9.7	28.3	20.9	14.0	15.9	27.4	15.8	30.7	18.2	24.2	13.1	45.4	3.4
10/31/92	930	0.2	0.0	13.6	17.1	27.1	7.6	24.8	11.1	27.3	21.3	13.8	16.1	24.7	21.2	28.0	18.0	21.8	16.0	43.9	4.4
10/31/92	945	0.2	0.0	13.3	16.4	27.8	9.8	25.4	4.3	27.3	21.2	13.9	15.3	24.5	15.1	28.0	14.3	22.5	13.0	45.6	3.0
10/31/92	1000	0.2	0.0	12.6	18.0	27.1	7.6	25.3	8.9	28.7	22.7	14.1	14.7	22.9	17.3	28.9	17.6	20.6	14.1	44.6	3.0
10/31/92	1015	0.2	0.0	12.9	16.2	28.5	11.4	25.3	7.2	28.2	21.3	14.1	16.5	24.9	18.9	29.9	16.3	23.2	14.4	45.4	3.0
10/31/92	1030	0.2	0.0	12.6	18.4	28.7	7.5	25.1	9.4	28.9	20.8	13.8	16.2	27.1	17.2	29.1	16.3	23.3	15.2	45.5	3.0
10/31/92	1045	0.2	0.0	10.0	15.2	29.4	8.7	25.4	5.9	29.1	19.0	13.9	16.4	27.1	13.9	29.5	15.0	23.5	14.5	45.0	3.3
10/31/92	1100	0.2	0.0	11.2	16.1	28.2	13.9	25.2	14.4	29.2	22.0	14.0	16.2	26.7	15.1	29.1	17.2	23.4	13.8	43.7	3.0
10/31/92	1115	0.2	0.0	11.0	15.8	29.5	5.9	25.6	4.3	29.2	19.0	14.0	15.9	25.9	16.3	29.5	15.6	23.4	14.4	46.5	3.0
10/31/92	1130	0.2	0.0	10.4	9.9	28.3	9.7	25.1	12.1	28.6	19.5	14.0	15.0	27.0	15.6	29.5	16.1	23.7	14.4	46.0	3.0
10/31/92	1145	0.2	0.0	10.0	16.6	29.0	5.9	25.6	3.5	29.3	21.3	14.1	14.9	27.4	13.1	30.4	15.8	24.0	13.6	45.3	3.2
10/31/92	1200	0.2	0.0	10.8	17.8	27.3	8.9	24.8	11.0	29.0	20.8	14.2	14.4	28.5	21.6	29.8	16.7	23.8	14.4	43.9	3.9
10/31/92	1215	0.2	0.0	10.8	16.1	29.3	7.3	25.6	7.0	30.0	20.0	14.2	14.9	28.6	14.0	30.0	15.0	24.5	14.1	46.8	4.1
10/31/92	1230	0.2	0.0	10.2	17.0	28.3	6.9	25.5	4.4	28.7	20.6	14.2	16.3	28.0	16.5	30.3	17.5	24.1	15.0	46.5	8.2
10/31/92	1245	0.2	0.0	10.9	15.7	29.2	9.3	25.6	6.2	28.7	18.6	14.1	17.7	25.4	15.8	30.1	17.5	24.1	13.6	46.6	3.0
10/31/92	1300	0.2	0.0	11.3	18.6	27.8	9.3	25.4	12.2	29.2	19.9	14.3	14.8	28.7	16.9	29.8	16.1	24.0	13.8	46.7	3.4
10/31/92	1315	0.2	0.0	10.6	15.0	29.2	10.1	25.6	5.2	28.5	20.3	14.3	15.9	25.8	16.3	30.1	15.1	24.6	17.1	46.7	3.0
10/31/92	1330	0.2	0.0	9.8	19.6	27.9	10.2	25.2	16.0	30.0	19.0	14.2	15.2	28.0	14.3	30.1	15.4	24.2	15.8	46.9	3.0
10/31/92	1345	0.2	0.0	10.3	16.2	29.4	7.0	25.6	6.7	29.0	21.2	14.3	15.1	27.3	14.2	30.5	16.8	23.9	13.7	46.9	3.0
10/31/92	1400	0.2	0.0	10.2	16.6	28.8	8.5	25.5	4.2	28.7	18.9	14.3	14.8	25.9	15.2	30.2	17.6	24.2	13.9	41.9	3.0
10/31/92	1415	0.2	0.0	10.2	16.7	28.2	10.1	25.6	4.4	28.1	21.5	14.3	15.6	26.9	14.7	30.5	14.8	24.4	14.6	46.2	3.0
10/31/92	1430	0.2	0.0	10.1	16.7	28.6	9.3	25.6	6.0	30.1	21.0	14.4	15.6	27.1	15.0	31.1	15.1	25.1	14.4	46.2	3.0
10/31/92	1445	0.2	0.0	10.9	18.1	28.1	13.4	25.5	14.7	29.5	20.8	14.4	14.9	25.5	17.5	28.3	15.3	22.8	14.1	45.9	3.0
10/31/92	1500	0.2	0.0	9.7	17.1	28.9	10.9	25.5	5.7	28.9	20.4	14.5	15.1	27.7	17.9	31.4	16.5	25.5	14.2	43.0	3.0
10/31/92	1515	0.2	0.0	10.0	18.6	29.2	10.0	25.5	7.2	29.6	22.8	14.1	16.7	25.7	18.0	28.5	16.4	23.6	14.5	43.4	3.0
10/31/92	1530	0.2	0.0	11.5	17.8	27.8	16.3	25.0	15.4	29.7	21.6	14.5	17.2	26.5	18.6	31.1	15.7	25.0	13.8	40.8	3.7
10/31/92	1545	0.2	0.0	11.1	17.5	29.5	10.2	25.6	3.4	30.1	17.2	14.2	15.9	27.9	19.6	30.5	23.0	25.1	13.4	47.7	3.6
10/31/92	1600	0.2	0.0	10.3	17.1	28.7	10.4	25.4	4.5	35.4	16.2	15.3	13.6	28.6	15.0	33.5	18.6	26.3	13.3	48.0	3.0
10/31/92	1615	0.2	0.0	12.4	20.8	27.8	8.9	25.6	3.4	32.3	16.1	15.2	14.2	26.8	19.1	30.6	18.0	24.2	13.7	45.8	3.0
10/31/92	1630	0.2	0.0	13.0	17.5	25.9	6.2	24.7	5.8	28.9	20.8	14.2	15.1	27.1	18.2	31.8	15.8	25.8	14.0	43.7	3.0
10/31/92	1645	0.2	0.0	12.1	15.0	27.9	12.5	25.6	3.1	33.2	19.1	15.0	14.2	26.5	37.7	30.3	19.2	23.9	15.4	46.6	3.0
10/31/92	1700	0.2	0.0	11.8	16.2	28.0	7.0	25.6	3.4	29.8	18.8	14.3	14.6	24.8	21.0	30.8	15.0	24.1	13.5	46.9	3.2
10/31/92	1715	0.2	0.0	12.1	16.4	28.4	11.3	25.5	6.6	30.8	20.1	14.2	14.5	27.1	16.7	31.5	16.1	25.4	12.7	47.5	3.2
10/31/92	1730	0.2	0.0	12.8	17.2	27.7	7.8	25.3	5.3	29.2	18.5	14.2	14.9	26.4	13.1	30.6	16.6	24.7	13.7	46.6	3.0
10/31/92	1745	0.2	0.0	12.7	18.2	28.0	7.9	25.4	7.2	29.1	18.4	14.1	14.6	26.8	14.0	30.1	15.7	25.1	14.5	46.6	3.0
10/31/92	1800	0.2	0.0	12.8	16.3	28.5	5.2	25.2	5.7	30.8	18.5	14.2	15.1	25.8	15.9	31.3	14.1	25.0	12.6	46.4	3.0
10/31/92	1815	0.2	0.0	12.5	17.7	27.4	10.8	25.1	5.3	29.4	24.6	14.2	18.3	25.0	20.6	28.5	16.9	23.2	15.3	47.0	3.0
10/31/92	1830	0.2	0.0	12.7	16.2	28.2	7.4	25.0	5.8	29.8	20.2	14.4	15.9	26.8	14.0	29.5	15.6	23.6	14.9	46.7	3.3
10/31/92	1845	0.2	0.0	12.2	15.8	28.8	8.9	25.2	6.7	28.6	21.1	14.1	15.5	27.8	13.6	30.0	16.2	23.9	13.0	43.8	3.0
10/31/92	1900	0.2	0.0	11.4	15.6	28.5	6.2	25.2	4.7	29.4	20.2	14.4	14.5	27.7	21.0	29.8	16.1	24.3	14.0	45.7	3.0
10/31/92	1915	0.2	0.0	12.0	17.4	28.9	5.5	25.4	3.7	30.3	17.4	14.2	15.1	26.4	13.4	28.8	19.3	21.9	13.3	46.0	3.0
10/31/92	1930	0.2	0.0	11.8	15.5	28.7	5.8	25.4	4.8	28.8	19.1	14.3	15.0	25.4	12.2	29.5	16.5	22.7	13.6	46.9	8.0
10/31/92	1945	0.2	0.0	11.9	15.3	29.6	7.7	25.4	3.2	34.0	13.5	15.5	13.2	28.8	15.8	32.4	17.1	25.7	13.6	48.4	3.2
10/31/92	2000	0.2	0.0	11.4	17.4	26.9	8.9	25.5	5.1	29.8	18.1	14.3	14.1	28.2	15.7	30.6	17.1	24.4	14.4	47.0	4.2
10/31/92	2015	0.2	0.0	14.4	15.8	28.3	4.4	25.3	4.5	29.6	19.2	14.2	16.1	27.3	14.6	28.6	15.7	23.0	13.6	47.4	4.0
10/31/92	2030	0.2	0.0	12.6	16.5	28.1	6.4	25.2	5.3	29.0	19.7	14.2	15.1	26.6	15.1	29.7	15.8	23.7	13.2	40.9	3.0
10/31/92	2045	0.2	0.0	12.7	16.0	28.5	6.2	25.2	3.7	34.1	17.8	15.2	14.3	28.5	16.4	30.4	13.7	25.3	15.3	42.1	3.0
10/31/92	2100																				

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
10/31/92	2230	0.1	0.0	12.4	16.5	29.2	10.3	25.1	4.1	29.7	20.3	14.4	16.2	28.1	15.8	29.0	14.1	24.4	16.0	45.9	3.0
10/31/92	2245	0.1	0.0	12.8	16.3	29.2	7.7	25.1	4.7	29.6	19.6	14.6	15.0	28.6	13.4	30.4	13.1	24.7	13.9	45.2	3.0
10/31/92	2300	0.1	0.0	14.4	17.7	25.7	8.2	23.9	8.7	29.1	20.0	14.3	14.7	27.5	17.8	29.6	17.3	24.7	13.3	45.1	3.0
10/31/92	2315	0.1	0.0	12.5	16.5	28.9	8.0	25.2	3.4	29.1	20.9	14.6	16.1	28.1	12.3	31.2	16.1	25.8	12.9	45.7	5.6
10/31/92	2330	0.1	0.0	15.3	17.5	26.6	7.6	23.7	9.9	27.7	20.7	14.5	16.3	28.3	13.8	31.3	15.5	25.2	12.1	42.6	3.0
10/31/92	2345	0.1	0.0	13.8	15.7	28.8	5.9	25.5	3.5	31.8	19.0	15.4	14.3	30.5	11.6	35.1	15.0	28.4	13.8	44.3	3.5
11/1/92	0	0.1	0.0	13.2	16.0	28.8	8.6	25.4	3.7	35.1	20.5	16.0	14.8	28.4	13.0	32.3	15.1	25.8	13.5	45.2	3.0
11/1/92	15	0.1	0.0	14.8	16.7	28.4	9.8	25.4	5.2	28.8	19.6	14.6	15.5	28.4	13.5	30.1	11.9	24.2	12.6	42.0	3.0
11/1/92	30	0.1	0.0	13.3	17.0	26.8	6.7	24.7	7.6	29.9	15.6	14.7	13.6	25.2	12.5	33.6	13.6	25.9	12.2	44.1	4.6
11/1/92	45	0.1	0.0	10.4	17.6	28.9	12.6	25.3	14.6	28.9	21.6	14.7	16.8	28.1	15.0	34.3	14.9	27.8	12.1	47.4	4.0
11/1/92	100	0.1	0.0	10.1	19.1	28.4	7.7	25.2	8.5	30.6	19.2	14.9	14.1	30.5	10.2	33.7	12.2	27.2	12.1	47.6	3.1
11/1/92	115	0.1	0.0	9.9	16.1	29.3	8.3	25.3	3.4	33.0	14.6	15.4	13.7	28.8	15.6	29.9	16.3	23.2	13.9	48.3	3.3
11/1/92	130	0.1	0.0	8.8	15.0	29.6	6.0	25.4	3.1	33.9	15.5	15.7	13.0	29.3	13.7	30.7	13.5	26.0	13.7	48.4	3.0
11/1/92	145	0.1	0.0	9.5	15.8	28.6	7.7	25.5	6.2	29.8	18.6	14.8	15.8	25.9	13.8	29.3	14.7	24.1	14.8	44.7	3.0
11/1/92	200	0.1	0.0	16.3	17.7	28.3	9.7	25.2	11.6	28.4	19.1	14.7	14.5	27.6	22.6	30.1	18.2	24.5	14.5	46.0	3.0
11/1/92	215	0.1	0.0	10.3	15.8	28.8	6.7	25.3	3.8	31.4	18.0	14.5	14.6	28.1	12.6	30.6	14.4	24.8	13.5	46.5	3.7
11/1/92	230	0.1	0.0	9.4	15.8	29.4	8.0	25.5	3.2	31.2	17.6	14.8	14.8	28.7	15.2	30.5	14.2	25.2	13.0	43.1	3.0
11/1/92	245	0.2	0.0	10.4	15.0	28.9	8.0	25.2	14.0	29.9	17.7	14.7	15.2	27.8	18.0	28.7	16.0	23.9	13.9	47.2	3.7
11/1/92	300	0.2	0.0	10.9	16.5	29.0	7.6	25.6	4.7	29.8	18.7	15.0	14.5	28.3	17.4	29.6	15.5	23.6	14.2	47.4	3.0
11/1/92	315	0.2	0.0	9.9	15.0	29.7	3.6	25.4	3.7	31.1	18.7	14.9	13.8	28.5	13.8	30.3	14.8	24.4	12.6	44.6	3.5
11/1/92	330	0.2	0.0	10.2	16.8	29.0	8.3	25.6	3.1	30.8	17.5	14.7	14.8	28.1	15.2	30.3	15.2	25.2	13.1	47.5	5.7
11/1/92	345	0.2	0.0	10.4	16.9	29.1	5.9	25.4	4.0	30.8	18.1	14.6	14.5	28.9	15.0	30.1	16.3	25.0	12.6	45.9	3.6
11/1/92	400	0.2	0.0	10.1	16.5	29.5	7.8	25.4	3.7	31.5	18.6	14.6	14.1	28.8	14.2	30.9	13.1	25.0	14.8	47.6	3.0
11/1/92	415	0.2	0.0	10.0	15.4	29.6	10.5	25.5	4.0	30.6	17.9	14.6	14.1	28.8	18.9	29.9	15.1	24.7	13.8	46.6	3.9
11/1/92	430	0.2	0.0	10.5	17.0	29.0	13.1	25.5	13.4	29.7	18.3	14.7	15.4	27.3	13.9	29.8	16.2	23.9	14.0	47.1	3.1
11/1/92	445	0.2	0.0	10.4	14.8	29.8	8.1	25.6	4.2	30.8	18.4	15.2	13.5	28.5	16.4	31.0	14.3	25.5	13.1	47.2	3.0
11/1/92	500	0.2	0.0	10.2	16.5	28.8	14.5	25.6	14.9	29.8	19.4	14.9	14.8	28.9	14.2	31.3	13.9	26.2	12.9	47.7	3.0
11/1/92	515	0.2	0.0	10.1	15.4	29.5	8.4	25.6	3.1	30.8	18.8	15.1	14.2	27.2	16.3	30.4	15.4	24.5	14.0	47.9	3.0
11/1/92	530	0.2	0.0	10.9	15.7	29.0	9.9	25.6	4.2	31.8	18.8	15.0	14.5	28.2	25.5	31.8	18.5	25.6	13.3	47.8	3.0
11/1/92	545	0.2	0.0	11.6	15.4	29.2	8.0	25.5	4.6	30.8	19.4	15.0	14.0	28.0	18.4	31.2	15.6	26.2	14.9	47.7	3.0
11/1/92	600	0.2	0.0	10.3	19.4	28.2	16.0	25.0	13.9	31.2	18.8	14.9	15.2	28.5	17.6	31.9	15.2	27.0	13.7	47.8	5.1
11/1/92	615	0.2	0.0	10.9	15.5	28.3	8.1	25.7	3.8	29.1	18.0	15.0	15.0	27.7	15.4	30.9	13.6	25.3	13.7	46.7	3.0
11/1/92	630	0.2	0.0	10.0	15.2	29.3	10.0	25.7	3.9	30.0	17.4	14.7	15.7	24.9	15.6	29.4	14.7	24.2	13.1	47.7	3.3
11/1/92	645	0.2	0.0	10.1	14.7	29.8	4.5	25.6	3.7	29.6	18.0	15.3	13.4	28.1	14.0	31.2	16.6	28.4	12.3	47.3	3.1
11/1/92	700	0.2	0.0	9.5	14.5	29.0	7.9	25.6	3.4	31.9	16.0	14.6	15.0	28.1	10.8	32.2	13.6	26.8	13.4	48.7	3.0
11/1/92	715	0.2	0.0	10.2	14.4	29.5	7.6	25.7	3.2	32.0	16.7	15.1	15.9	28.8	18.2	28.5	15.1	25.3	13.9	47.9	3.0
11/1/92	730	0.2	0.0	9.4	15.0	29.4	7.9	25.7	4.4	32.6	15.3	15.1	14.4	28.2	10.9	31.8	15.4	26.6	12.5	47.5	3.0
11/1/92	745	0.2	0.0	10.2	14.3	29.6	4.0	25.7	3.4	33.6	18.3	15.3	15.0	27.3	15.9	32.5	15.7	26.7	13.1	48.4	3.0
11/1/92	800	0.2	0.0	9.5	13.3	29.2	5.1	25.8	3.6	32.1	18.3	14.4	14.8	27.9	13.2	31.3	15.1	25.3	13.2	48.3	3.0
11/1/92	815	0.2	0.0	11.1	16.3	28.9	7.4	25.8	4.0	31.4	16.1	15.3	13.0	30.2	10.4	34.9	13.7	28.8	11.7	45.0	3.0
11/1/92	830	0.2	0.0	10.1	15.7	28.8	8.9	25.7	7.1	29.5	18.3	14.6	14.6	25.5	17.2	30.5	15.4	24.5	14.3	44.5	3.0
11/1/92	845	0.2	0.0	11.5	15.6	26.1	5.1	24.3	5.8	29.8	16.2	14.6	14.5	27.1	13.2	29.8	13.0	24.4	12.6	46.7	3.2
11/1/92	900	0.2	0.0	10.7	14.7	29.8	4.1	25.7	3.1	35.8	15.8	15.7	15.6	28.6	13.6	33.2	11.7	27.5	12.0	45.9	3.0
11/1/92	915	0.2	0.0	8.8	15.5	28.5	7.1	25.8	6.6	30.8	18.3	14.9	13.9	28.0	13.5	29.7	14.8	25.0	12.5	48.5	3.0
11/1/92	930	0.2	0.0	9.2	16.6	29.3	9.5	25.8	6.1	30.5	20.0	15.3	15.0	28.1	16.4	30.9	14.1	24.8	13.5	47.3	3.0
11/1/92	945	0.2	0.0	10.9	16.0	27.9	17.1	25.4	11.0	32.1	20.5	15.0	13.7	25.8	11.8	29.7	13.3	23.2	12.0	48.6	3.6
11/1/92	1000	0.2	0.0	10.4	15.4	28.7	7.9	25.8	3.8	30.6	18.6	15.0	14.2	25.6	12.7	31.4	15.4	25.1	13.1	48.2	3.8
11/1/92	1015	0.2	0.0	9.7	14.9	29.4	7.6	25.8	4.4	31.9	16.3	15.2	15.8	27.5	15.1	30.2	16.0	24.5	12.9	47.7	3.0
11/1/92	1030	0.2	0.0	8.7	14.8	29.6	8.3	25.8	3.9	32.0	16.8	15.0	14.8	27.0	14.6	30.8	14.0	25.4	13.2	48.3	4.8
11/1/92	1045	0.2	0.0	9.2	15.2	27.9	8.2	25.6	5.7	30.8	16.2	15.0	13.3	28.4	18.9	30.8	15.9	24.4	14.2	47.6	3.0
11/1/92	1100	0.2	0.0	10.2	13.6	29.1	5.0	25.5	5.4	31.6	17.7	14.8	15.1	24.8	16.1	30.0	16.7	23.9	12.2	47.7	3.0
11/1/92	1115	0.2	0.0	9.5	14.7	28.9	10.2	26.0	4.6	31.8	16.4	15.2	13.6	28.7	12.7	30.8	15.8	24.7	13.7	46.3	3.3
11/1/92	1130	0.2	0.0	9.9	14.1	29.9	4.6	26.0	3.2	31.1	18.1	15.4	15.1	28.7	11.2	31.4	12.2	24.9	12.5	42.6	3.1
11/1/92	1145	0.2	0.0	10.2	15.5	29.0	9.4	25.8	7.6	32.3	16.4	14.8	14.5	25.6	12.7	29.3	12.8	24.7	14.0	47.1	3.0
11/1/92	1200	0.2	0.0	9.8	15.4	27.9	7.1	25.6	8.6	30.0	18.6	15.1	15.2	25.5	16.0	30.9	15.6	24.8	13.0	48.2	3.0
11/1/92	1215	0.2	0.0	9.1	15.3	28.5	6.1	25.9	3.7	31.0	17.2	14.9	14.3	24.9	17.3	30.2	14.8	24.0	13.3	47.6	3.0
11/1/92	1230	0.2	0.0	10.4	16.7	28.9	7.2	25.5	9.7	31.8	16.1	15.1	13.4	25.0	18.5	30.5	15.2	24.5	12.7	44.2	3.0
11/1/92	1245	0.2	0.0	9.2	14.6	28.6	5.5	25.8	5.0	31.4	18.5	14.9	13.9	24.2	13.4	29.6	14.6	23.9	14.1	46.1	3.0
11/1/92	1300	0.2	0.0	9.7	14.9	29.1	7.2	25.9	5.4	32.3	18.5	15.3	14.2	23.5	19.1	30.7	16.1	24.4	13.6	46.9	3.0
11/1/92	1315	0.2	0.0	9.6	13.8	28.5	6.1	25.9	6.5	31.5	16.6	14.9	13.2	25.1	14.4	30.3	13.9</				

12/3/92 20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
11/1/92	1445	0.2	0.0	8.6	17.7	29.5	8.3	25.8	3.6	29.9	18.2	15.3	13.6	28.5	16.2	29.7	14.6	23.7	17.0	40.2	3.0
11/1/92	1500	0.2	0.0	9.6	15.3	29.3	6.3	25.8	4.8	29.7	17.2	14.5	13.7	25.2	15.7	29.4	14.9	23.5	14.0	47.4	3.2
11/1/92	1515	0.2	0.0	8.8	17.2	29.4	7.6	25.7	7.5	31.2	19.7	14.7	14.5	24.4	14.6	28.3	15.7	21.6	16.5	45.7	3.1
11/1/92	1530	0.2	0.0	8.7	15.1	29.5	8.1	25.9	4.6	29.7	19.3	14.7	15.8	24.0	17.1	28.6	15.5	23.0	15.5	47.8	3.4
11/1/92	1545	0.2	0.0	8.2	15.0	28.8	7.5	25.8	3.5	31.1	16.5	14.8	15.5	25.6	15.3	29.6	13.5	24.0	14.5	47.6	4.7
11/1/92	1600	0.2	0.0	9.1	14.3	29.4	5.6	25.8	4.1	30.9	16.0	15.1	14.2	24.0	16.1	30.1	13.9	23.8	12.7	44.8	11.0
11/1/92	1615	0.2	0.0	9.0	18.3	29.8	5.3	25.8	5.1	32.4	16.2	15.1	14.1	28.1	15.2	29.6	16.3	24.0	13.7	46.8	3.0
11/1/92	1630	0.2	0.0	10.3	16.3	28.4	7.0	25.8	4.9	36.7	14.1	15.9	13.3	23.6	19.5	30.4	17.0	24.1	12.6	49.2	15.3
11/1/92	1645	0.2	0.0	10.3	16.0	26.9	8.7	25.0	9.3	29.6	17.7	15.1	13.8	24.3	15.3	29.2	14.9	23.1	13.3	48.2	4.3
11/1/92	1700	0.2	0.0	10.0	15.2	29.4	8.2	25.8	4.3	31.0	18.4	15.0	15.0	24.9	17.1	29.4	14.6	23.8	12.6	48.9	3.1
11/1/92	1715	0.2	0.0	9.0	14.9	29.4	5.5	25.8	4.6	26.8	22.8	16.1	13.8	23.6	17.8	29.0	16.4	22.1	12.8	46.7	4.0
11/1/92	1730	0.2	0.0	8.9	17.3	28.3	9.2	25.7	9.5	28.1	20.3	15.0	14.7	22.6	20.6	26.9	18.1	21.5	15.2	47.0	3.8
11/1/92	1745	0.2	0.0	9.9	15.2	28.9	9.4	25.9	8.2	28.4	23.4	15.0	14.8	24.0	19.2	28.6	16.7	23.3	14.6	47.0	4.2
11/1/92	1800	0.2	0.0	8.7	16.2	28.8	11.2	25.6	11.6	28.2	17.5	15.0	15.5	22.5	18.0	28.1	15.3	22.7	14.0	46.8	3.1
11/1/92	1815	0.2	0.0	9.1	17.3	27.5	12.8	25.2	16.3	28.4	19.2	14.9	15.4	22.1	20.5	28.0	18.0	21.8	13.8	45.8	3.1
11/1/92	1830	0.2	0.0	8.7	14.1	29.2	8.7	25.6	7.6	30.4	19.2	14.8	13.6	23.6	17.1	29.0	16.0	23.1	12.6	47.2	3.1
11/1/92	1845	0.2	0.0	9.7	16.1	28.1	14.2	25.6	13.9	28.4	19.8	15.0	13.5	23.0	19.9	27.5	16.1	22.0	13.1	45.7	3.1
11/1/92	1900	0.2	0.0	9.5	15.4	29.2	9.4	25.6	4.5	30.7	19.8	15.3	14.1	26.7	16.9	28.9	16.3	24.5	13.6	46.8	3.4
11/1/92	1915	0.1	0.0	10.0	16.5	29.3	11.8	25.4	12.3	29.8	18.0	14.9	15.3	24.0	19.9	28.7	18.4	22.7	14.2	45.4	3.1
11/1/92	1930	0.1	0.0	10.1	14.6	29.7	8.0	25.6	4.8	28.6	19.1	14.9	14.2	23.7	33.0	27.9	21.3	23.5	16.6	44.9	5.7
11/1/92	1945	0.1	0.0	0.1	17.0	27.5	11.3	25.6	5.8	31.4	17.4	15.0	13.5	22.7	19.4	27.7	17.3	21.2	14.9	45.3	3.1
11/1/92	2000	0.1	0.0	9.7	14.8	28.8	7.9	25.4	5.1	29.3	17.6	15.2	13.1	25.2	18.5	28.5	16.0	22.8	13.6	45.7	3.0
11/1/92	2015	0.1	0.0	10.1	14.4	29.4	13.8	25.3	8.6	30.0	18.1	14.6	14.3	25.8	21.9	28.3	16.9	23.0	13.7	43.7	3.0
11/1/92	2030	0.1	0.0	9.8	14.9	29.6	6.3	25.3	5.0	31.1	13.3	15.0	13.9	27.0	12.6	30.5	13.9	24.6	12.6	45.4	3.0
11/1/92	2045	0.1	0.0	9.1	13.7	29.1	4.7	25.4	3.5	31.0	18.5	15.3	14.3	26.5	15.8	28.8	14.4	23.9	15.8	45.9	3.6
11/1/92	2100	0.1	0.0	8.7	14.7	30.0	4.9	25.3	3.8	30.6	18.8	15.2	13.5	24.8	16.0	28.1	15.1	23.0	12.1	44.8	3.0
11/1/92	2115	0.1	0.0	13.6	14.4	29.0	6.7	25.0	4.6	28.9	19.0	15.0	14.2	28.2	19.5	28.3	20.0	22.9	13.4	42.9	3.0
11/1/92	2130	0.1	0.0	16.4	14.4	30.1	6.2	25.3	3.6	29.0	18.9	15.0	14.3	28.1	12.9	29.0	13.9	24.6	13.1	42.7	3.2
11/1/92	2145	0.1	0.0	15.0	15.7	29.2	13.6	25.2	8.6	29.8	19.5	15.0	14.0	27.6	16.9	29.6	15.6	24.1	14.0	43.9	3.0
11/1/92	2200	0.1	0.0	13.4	14.1	29.4	5.3	25.3	4.8	29.0	19.5	15.2	14.1	24.3	15.1	28.2	14.7	22.6	12.7	46.2	7.3
11/1/92	2215	0.0	0.0	13.8	14.5	28.9	4.2	25.2	3.2	29.4	20.3	14.8	15.0	23.2	14.9	28.4	16.4	22.5	14.6	46.3	6.2
11/1/92	2230	0.0	0.0	15.9	13.3	30.3	3.6	25.1	3.9	29.4	18.6	15.1	13.8	25.7	12.2	28.5	16.3	23.4	12.7	46.0	3.5
11/1/92	2245	0.1	0.0	14.6	14.0	29.7	5.5	25.1	4.2	29.7	17.0	14.9	15.0	26.2	13.3	28.3	16.5	23.1	14.1	44.5	3.2
11/1/92	2300	0.0	0.0	14.6	14.3	30.0	5.5	25.1	4.3	31.9	17.3	15.3	14.3	26.8	13.7	28.6	15.6	22.9	13.8	47.0	3.7
11/1/92	2315	0.0	0.0	15.4	14.8	30.1	4.9	25.2	3.2	30.2	17.9	15.1	14.5	27.7	11.0	29.9	13.8	24.4	12.8	44.8	3.8
11/1/92	2330	0.0	0.0	14.9	14.8	29.9	6.7	25.1	3.1	30.9	17.0	15.4	13.8	25.8	14.8	29.6	17.1	23.9	14.3	46.6	9.7
11/1/92	2345	0.0	0.0	14.9	14.4	29.6	6.5	25.1	5.8	29.9	16.3	15.3	13.5	28.2	9.6	30.6	10.1	24.6	11.5	45.4	5.2
11/2/92	0	0.0	0.0	15.2	15.3	29.9	6.1	25.1	4.4	30.1	21.1	15.4	13.6	28.7	7.8	33.9	12.9	27.0	12.6	45.4	4.3
11/2/92	15	0.0	0.0	16.4	12.8	30.3	3.2	25.1	3.3	31.0	18.3	15.0	13.6	28.5	13.1	28.5	15.3	24.2	13.7	46.2	4.0
11/2/92	30	0.0	0.0	16.8	14.2	30.3	3.2	25.1	3.1	39.5	9.7	17.8	12.4	26.4	15.0	28.9	18.1	23.7	14.3	48.3	7.1
11/2/92	45	0.1	0.0	8.4	13.9	30.9	3.3	25.1	3.2	37.6	18.8	17.5	15.2	28.1	13.1	28.1	16.1	24.0	15.2	45.6	3.2
11/2/92	100	0.1	0.0	7.6	13.2	30.0	7.3	25.2	3.1	30.1	19.5	14.6	13.6	29.6	20.2	31.4	17.3	26.5	17.2	46.2	7.2
11/2/92	115	0.1	0.0	8.0	12.6	30.4	3.2	25.1	3.5	30.2	18.0	15.0	16.6	33.6	15.3	34.2	18.7	28.5	15.4	41.8	3.0
11/2/92	130	0.1	0.0	7.5	12.4	30.6	3.2	25.2	3.1	34.9	13.9	16.5	13.1	32.7	12.0	29.6	16.9	24.6	13.2	49.5	6.8
11/2/92	145	0.1	0.0	7.0	12.6	30.9	3.1	25.2	3.1	32.6	17.5	16.5	12.5	34.4	8.7	29.7	18.7	26.4	12.9	47.6	9.5
11/2/92	200	0.1	0.0	10.1	12.7	30.6	3.1	25.2	3.0	30.8	17.3	15.6	13.9	31.2	15.0	29.3	13.5	25.6	14.2	46.4	6.7
11/2/92	215	0.1	0.0	9.9	13.0	30.7	5.1	25.1	3.0	31.6	16.3	15.3	14.2	35.1	12.0	31.0	12.7	28.3	14.0	45.8	6.8
11/2/92	230	0.1	0.0	7.3	12.5	31.0	3.2	25.1	3.1	32.9	17.9	15.9	12.6	33.6	10.1	31.3	14.0	28.1	13.9	48.8	3.3
11/2/92	245	0.1	0.0	7.3	12.7	31.1	3.1	25.3	3.1	34.6	15.1	15.6	13.5	35.1	9.3	33.4	10.2	30.1	12.5	49.1	4.2
11/2/92	300	0.1	0.0	8.5	11.9	30.9	3.1	25.3	3.1	29.0	17.2	16.1	12.6	35.6	11.1	33.0	14.2	29.8	13.5	47.2	5.8
11/2/92	315	0.1	0.0	8.1	12.4	31.0	3.1	25.2	3.1	31.3	17.1	15.7	13.6	35.6	10.0	32.0	13.7	28.7	13.5	47.4	3.6
11/2/92	330	0.1	0.0	7.7	12.5	31.2	3.1	25.3	3.3	33.9	19.3	16.4	14.2	36.0	8.7	32.6	16.0	29.9	13.8	48.3	7.3
11/2/92	345	0.1	0.0	5.4	4.2	31.1	3.2	25.2	3.1	34.8	15.5	15.8	14.0	36.7	8.4	34.2	10.7	32.4	14.5	47.8	6.9
11/2/92	400	0.1	0.0	7.0	12.2	31.2	3.2	25.1	3.2	33.5	13.5	15.7	13.9	37.1	7.7	34.9	10.2	31.6	11.8	48.0	8.8
11/2/92	415	0.1	0.0	7.5	12.0	31.1	3.1	25.1	3.7	32.9	15.5	15.8	13.7	36.3	9.8	35.3	10.8	32.7	12.7	39.0	3.0
11/2/92	430	0.1	0.0	6.9	11.5	31.3	3.2	25.2	3.0	34.4	15.8	15.5	13.7	37.0	8.0	34.6	10.1	31.8	13.2	44.5	9.4
11/2/92	445	0.1	0.0	7.4	12.1	30.9	5.6	25.2	3.0	34.4	15.5	16.1	14.1	38.5	8.5	34.9	10.9	32.3	11.7	45.5	6.0
11/2/92	500	0.1	0.0	8.2	12.3	31.1	3.3	25.3	3.1	32.2	16.7	15.4	13.6	37.1	7.9	34.5	10.1	32.0	12.7	45.8	10.6
11/2/92	515	0.1	0.0	6.9	11.6	31.3	3.2	25.2	3.0	33.3	22.2	15.9	13.4	40.0	5.0	35.7	9.8	33.0	11.9	47.1	7.4
11/2/92	530	0.1	0.0	7.4	12.0	31.2	3.2	25.3	3.1	32.9	16.5	16.0	13.8	38.7	5.8	37.1	8.1	34.5	11.7	47.4	8.9

Seward Plant Buell ESP Fields Operating Log

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20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
11/2/92	700	0.1	0.0	8.7	11.8	31.0	3.5	25.1	3.0	32.8	16.5	15.9	13.6	39.4	11.0	38.6	10.3	33.5	12.1	45.2	9.4
11/2/92	715	0.1	0.0	8.4	12.5	31.1	8.2	25.0	3.0	32.0	17.0	16.0	13.4	38.3	8.5	34.4	10.8	32.1	11.4	45.2	3.8
11/2/92	730	0.1	0.0	29.2	12.4	31.0	3.1	25.0	3.2	32.7	17.4	16.0	14.1	39.4	7.7	34.4	13.1	32.5	12.3	45.1	4.8
11/2/92	745	0.1	0.0	11.8	11.8	31.1	3.2	25.1	3.0	33.0	18.6	15.6	14.3	39.8	5.9	35.6	11.0	32.8	12.8	45.5	9.1
11/2/92	800	0.1	0.0	10.3	12.2	31.3	3.9	25.1	3.0	34.3	15.7	15.8	14.4	39.0	11.3	35.0	10.2	33.0	11.6	47.0	7.2
11/2/92	815	0.1	0.0	10.3	12.6	30.8	3.1	25.0	3.0	34.0	17.3	16.5	13.9	38.4	21.3	38.1	11.5	33.9	12.5	47.1	7.7
11/2/92	830	0.1	0.0	10.1	13.0	31.1	3.9	25.1	3.0	35.0	16.8	16.4	14.4	39.7	7.8	34.6	11.5	34.2	11.4	47.5	5.7
11/2/92	845	0.1	0.0	9.0	12.5	31.0	3.2	25.2	3.0	34.1	17.7	16.5	14.5	38.0	7.9	35.0	10.2	34.4	16.2	47.1	5.1
11/2/92	900	0.1	0.0	9.9	12.2	30.7	3.2	25.0	3.2	33.7	17.2	16.7	13.8	38.5	11.2	38.9	16.1	32.0	11.8	42.9	4.5
11/2/92	915	0.1	0.0	10.1	13.2	30.6	4.0	25.0	3.0	36.7	14.7	16.7	14.1	38.3	4.4	48.7	3.2	41.9	6.3	42.1	12.9
11/2/92	930	0.1	0.0	10.7	11.1	30.7	3.6	25.1	3.0	34.5	18.6	16.5	14.6	38.3	9.4	35.1	19.3	32.0	12.6	44.2	6.7
11/2/92	945	0.1	0.0	9.9	13.0	30.5	3.5	25.0	3.0	33.9	16.5	16.5	13.1	34.3	8.9	36.4	13.6	32.6	12.3	46.4	10.2
11/2/92	1000	0.1	0.0	10.2	12.5	30.6	3.1	25.0	3.0	34.4	19.0	16.7	14.5	34.4	12.2	36.2	13.1	32.8	13.4	47.6	5.0
11/2/92	1015	0.1	0.0	10.2	12.0	30.3	3.3	25.0	3.0	33.9	18.6	16.0	13.2	33.3	11.8	36.4	11.7	33.2	13.8	46.2	4.2
11/2/92	1030	0.1	0.0	10.4	12.4	30.7	3.3	25.0	3.0	35.6	14.5	16.7	13.5	34.1	12.3	36.8	9.4	32.6	11.8	46.3	7.2
11/2/92	1045	0.1	0.0	10.6	12.0	30.5	3.2	25.0	3.1	33.7	16.4	16.1	13.4	34.3	12.3	37.7	10.4	33.9	13.3	46.1	8.9
11/2/92	1100	0.1	0.0	11.6	12.5	30.9	3.2	25.1	3.1	36.1	14.9	16.6	14.4	36.0	8.7	38.1	13.0	34.7	10.2	47.8	7.0
11/2/92	1115	0.1	0.0	11.7	12.4	30.9	3.3	25.1	3.4	33.3	16.4	16.3	14.2	35.2	8.4	37.2	12.8	33.5	13.9	46.8	9.6
11/2/92	1130	0.1	0.0	15.0	13.8	30.7	3.7	25.2	3.2	34.0	15.6	16.3	13.0	35.6	8.3	35.8	9.8	32.5	11.7	47.3	10.1
11/2/92	1145	0.1	0.0	10.9	11.9	30.9	4.0	25.2	3.3	34.0	19.5	16.3	14.2	35.3	11.9	36.7	10.7	33.1	12.8	47.1	6.4
11/2/92	1200	0.1	0.0	10.7	12.5	30.9	5.8	25.2	3.2	36.0	15.3	16.7	14.6	37.6	7.4	36.3	12.1	32.9	12.7	43.7	6.4
11/2/92	1215	0.1	0.0	10.9	12.5	30.9	4.3	25.2	3.3	37.8	12.5	17.2	12.4	36.6	10.4	39.3	9.6	35.4	11.0	43.8	10.3
11/2/92	1230	0.1	0.0	9.4	11.7	30.6	4.6	25.2	3.1	35.4	15.6	16.3	13.7	36.1	8.8	36.9	10.4	33.8	11.8	44.9	10.7
11/2/92	1245	0.1	0.0	11.0	12.2	31.1	5.2	25.3	3.1	35.2	14.8	16.2	13.5	37.2	6.9	37.3	12.7	33.8	10.9	46.5	9.7
11/2/92	1300	0.1	0.0	11.4	11.9	31.0	3.3	25.2	3.5	33.9	16.9	16.7	13.8	36.8	11.0	36.3	10.2	33.4	11.3	46.0	4.3
11/2/92	1315	0.1	0.0	11.1	12.4	30.6	3.2	25.2	3.1	33.3	19.3	16.2	14.8	35.3	10.2	36.0	12.0	32.8	12.8	46.9	5.1
11/2/92	1330	0.1	0.0	12.2	12.1	30.7	3.4	25.2	3.1	35.4	17.4	16.8	14.3	38.5	8.2	37.4	11.6	35.0	14.8	46.7	8.1
11/2/92	1345	0.1	0.0	11.4	12.1	30.9	3.2	25.2	3.5	35.1	14.5	17.1	13.7	39.9	6.4	40.1	12.3	36.9	10.7	46.3	9.7
11/2/92	1400	0.1	0.0	13.5	12.4	30.2	4.0	25.0	3.3	36.1	12.7	16.9	13.4	38.5	6.4	40.7	8.8	37.4	16.8	46.1	6.7
11/2/92	1415	0.0	0.0	17.9	12.2	31.0	3.0	25.5	3.1	39.6	13.4	18.5	12.7	39.4	6.6	37.6	9.5	36.2	11.8	47.4	3.5
11/2/92	1430	0.1	0.0	11.4	12.1	30.8	3.1	25.3	3.4	38.4	14.3	18.0	12.9	39.2	9.3	39.4	10.6	37.9	12.4	44.2	3.5
11/2/92	1445	0.1	0.0	11.7	11.7	30.8	3.1	25.3	3.2	37.0	17.0	17.3	13.0	37.7	7.5	39.4	7.1	37.9	11.9	43.5	6.0
11/2/92	1500	19.5	0.0	12.0	13.5	32.4	3.3	26.8	3.2	53.9	3.7	28.1	10.3	39.3	6.0	40.8	8.7	38.8	10.8	46.7	8.2
11/2/92	1515	22.2	0.0	13.4	12.1	32.9	3.3	27.7	3.3	52.0	3.1	33.6	7.7	39.6	7.0	40.5	8.3	39.1	10.7	44.6	4.7
11/2/92	1530	25.5	0.0	12.8	12.9	32.0	3.2	27.9	3.3	48.3	3.1	45.2	4.1	40.0	4.2	41.2	7.8	38.8	9.5	42.2	6.1
11/2/92	1545	28.5	0.0	11.3	10.7	30.5	3.3	28.3	3.3	46.4	3.3	43.3	3.0	39.7	5.0	41.6	5.0	39.7	9.6	46.7	7.0
11/2/92	1600	28.6	0.0	12.8	10.0	32.2	3.2	28.9	3.3	45.9	3.1	41.8	3.0	39.7	4.2	44.0	8.5	40.3	9.3	42.4	3.4
11/2/92	1615	0.1	26.9	12.3	10.1	33.8	3.4	29.3	3.4	46.0	3.1	42.3	3.0	39.8	3.2	43.2	7.5	40.3	13.5	47.1	6.4
11/2/92	1630	0.1	31.3	11.8	10.6	32.9	3.2	29.4	3.4	45.1	3.1	39.9	3.0	39.7	3.2	42.0	6.8	40.0	10.8	44.8	11.0
11/2/92	1645	0.1	31.7	11.7	9.9	31.8	3.0	29.4	3.2	44.8	3.1	39.0	3.0	39.6	4.1	43.1	4.1	40.2	11.0	45.6	5.3
11/2/92	1700	0.1	30.8	12.9	9.9	32.5	3.3	29.4	3.3	44.7	3.1	38.2	3.0	39.8	3.2	42.9	10.8	39.4	13.5	46.8	6.8
11/2/92	1715	0.1	29.7	12.6	12.1	30.4	3.1	28.6	3.4	45.2	3.1	38.7	3.0	39.9	3.5	43.7	6.0	40.4	12.9	40.8	3.6
11/2/92	1730	0.0	30.7	11.7	9.5	31.2	3.3	29.1	3.3	44.8	3.1	37.2	3.0	39.9	3.5	44.6	3.5	40.8	9.3	42.7	3.2
11/2/92	1745	0.0	33.3	11.7	9.5	31.7	3.2	29.1	3.4	44.7	3.1	36.5	3.0	39.8	4.2	43.4	3.7	40.4	9.9	43.5	3.4
11/2/92	1800	0.0	34.6	12.0	10.2	30.0	3.0	28.9	3.3	44.5	3.0	35.8	3.0	40.1	6.5	45.9	7.0	41.0	10.8	43.8	11.2
11/2/92	1815	0.1	34.2	14.6	10.0	30.0	3.0	28.9	3.2	44.3	3.0	34.9	3.0	38.5	9.4	44.2	5.7	39.2	10.0	46.0	5.6
11/2/92	1830	0.1	33.0	13.2	9.4	30.8	3.0	28.9	3.4	44.7	3.0	35.6	3.0	39.7	4.1	43.5	6.8	39.8	10.5	43.9	4.6
11/2/92	1845	0.1	35.2	13.1	9.5	29.2	3.0	28.6	3.3	44.7	3.1	35.6	3.0	38.7	7.2	44.8	5.5	40.8	9.9	39.6	3.0
11/2/92	1900	0.1	33.2	13.3	9.0	30.2	3.0	28.3	3.3	45.1	3.0	36.4	3.0	39.5	4.0	43.8	3.5	40.2	11.3	41.0	8.7
11/2/92	1915	0.1	33.9	12.4	9.1	29.8	3.0	28.4	3.3	45.3	3.0	35.6	3.0	39.4	3.4	43.3	6.7	39.9	10.5	46.8	7.0
11/2/92	1930	0.1	33.3	17.6	9.9	30.6	3.1	28.8	3.3	45.2	3.0	36.5	3.0	39.6	3.0	44.5	3.5	40.4	9.8	47.1	6.0
11/2/92	1945	0.1	33.3	14.8	8.9	30.1	3.2	29.0	3.3	45.2	3.0	36.7	3.0	39.8	3.9	44.7	3.3	40.4	9.4	44.6	4.5
11/2/92	2000	0.1	34.4	12.9	9.6	29.6	3.0	28.1	3.2	45.9	3.0	37.4	3.0	39.3	6.2	44.2	8.2	39.0	8.8	42.8	3.5
11/2/92	2015	0.1	34.1	14.0	9.2	30.1	3.0	28.0	3.3	45.9	3.0	37.1	3.0	39.7	9.7	43.7	6.8	40.2	7.6	44.7	5.1
11/2/92	2030	0.1	33.2	13.8	8.8	30.1	3.1	29.0	3.3	45.4	3.0	36.8	3.0	39.8	3.3	44.0	3.4	40.5	9.7	44.3	5.2
11/2/92	2045	0.1	34.1	14.5	13.0	29.5	3.0	29.3	3.3	44.7	3.0	34.8	3.0	39.7	8.6	43.5	5.4	40.4	8.4	43.9	7.0
11/2/92	2100	0.1	32.0	13.2	8.5	28.8	3.0	28.3	3.3	45.8	3.0	36.4	3.0	39.9	6.1	45.8	5.2	41.1	8.3	44.1	4.7
11/2/92	2115	0.1	32.8	14.8	9.1	28.3	3.0	28.2	3.3	45.0	3.0	35.7	3.0	39.5	3.8	44.7	4.5	40.4	9.5	43.6	8.1
11/2/92	2130	0.1	32.6	15.8	8.5	28.6	3.0	28.5	3.4	45.0	3.0	35.9	3.0	39.7	3.2	43.8	7.1	40.4	8.3	46.6	9.4
11/2/92	2145	0.1	32.6	14.0	8.6	28.3	3.0	28.2	3.3	44.9	3.0	35.7	3.0	39.4	3.3	44.2	5.5	40.2	10.1	40.7	3.0
11/2/92	2200	0.1	31.9	14.1	8.8																

12/3/92 20:40:39

Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn								
11/2/92	2315	0.1	30.6	13.4	8.8	28.5	3.0	28.1	3.3	45.3	3.0	38.7	3.0	39.6	3.1	45.5	3.8	40.2	9.8	46.7	4.5
11/2/92	2330	0.2	30.4	13.0	8.9	29.2	3.0	28.2	3.2	46.8	3.4	38.0	3.0	40.2	3.9	46.4	4.9	42.1	8.0	46.8	8.8
11/2/92	2345	0.2	29.4	14.8	8.8	32.4	3.3	29.8	3.4	45.8	3.0	37.0	3.0	40.0	3.1	46.2	4.5	41.2	5.7	44.9	10.4
11/3/92	0	0.2	29.6	12.6	8.7	31.7	3.2	29.1	3.4	45.9	3.0	37.7	3.0	40.9	3.2	48.7	3.5	42.6	6.5	47.7	9.0
11/3/92	15	0.2	30.0	10.5	9.2	30.4	3.0	28.8	3.3	47.0	3.0	39.1	3.0	40.3	4.8	49.5	4.9	43.6	7.3	42.4	8.9
11/3/92	30	0.2	29.7	10.0	8.9	33.4	3.3	29.6	3.4	46.1	3.0	38.1	3.0	39.9	5.7	47.9	5.9	41.2	6.9	42.4	9.4
11/3/92	45	0.2	29.5	10.1	8.8	32.8	3.3	29.5	3.4	46.3	3.0	38.7	3.0	39.8	3.0	46.9	3.4	42.4	5.8	44.5	14.4
11/3/92	100	0.2	29.4	9.4	8.8	32.9	3.2	29.6	3.3	45.8	3.0	37.8	3.0	39.4	6.3	50.4	3.9	43.3	5.4	45.6	9.3
11/3/92	115	0.2	29.5	10.1	9.6	33.0	3.0	29.5	3.3	46.1	3.0	38.3	3.0	40.1	4.7	47.1	5.5	41.3	8.4	47.6	3.3
11/3/92	130	0.2	28.7	10.9	9.5	31.2	3.3	28.6	3.4	46.9	3.0	39.7	3.0	40.2	6.0	50.9	9.9	42.7	11.1	46.5	3.5
11/3/92	145	0.2	29.4	11.7	9.3	32.9	3.3	29.4	3.4	46.7	3.5	39.7	3.0	40.1	2.9	52.8	3.0	43.3	4.5	44.0	5.2
11/3/92	200	0.2	28.8	10.1	9.0	31.3	3.3	28.7	3.4	47.1	3.3	40.3	3.0	39.9	3.5	44.6	4.5	41.1	7.8	45.8	3.4
11/3/92	215	0.2	29.3	10.4	9.0	30.6	3.0	28.5	3.3	46.7	3.4	39.7	3.0	40.1	3.4	47.6	5.0	42.3	7.6	47.4	8.2
11/3/92	230	0.2	29.0	11.0	9.7	30.0	3.0	28.1	3.3	47.5	3.8	40.9	3.0	39.9	7.3	45.6	6.8	41.0	8.5	46.9	7.8
11/3/92	245	0.2	28.7	10.2	9.0	30.4	3.1	28.2	3.3	47.1	3.1	40.3	3.0	39.7	3.8	51.3	3.2	42.6	7.0	46.7	5.1
11/3/92	300	0.2	29.3	11.6	9.2	29.6	3.0	28.1	3.3	46.9	3.1	38.9	3.0	40.3	4.4	45.7	4.8	41.8	9.5	46.8	7.0
11/3/92	315	0.2	29.4	14.0	8.8	29.3	3.0	28.5	3.3	45.9	3.1	38.0	3.0	40.2	5.2	44.7	5.1	41.3	9.2	46.1	4.2
11/3/92	330	0.2	29.0	13.2	8.8	30.1	3.0	28.2	3.3	46.9	3.1	39.9	3.0	38.6	7.5	45.6	6.7	41.2	7.7	47.5	5.5
11/3/92	345	0.2	29.1	11.8	9.1	29.9	3.0	28.3	3.3	46.8	3.1	40.0	3.0	40.2	3.2	45.0	3.9	41.5	7.5	45.7	4.1
11/3/92	400	0.2	29.4	12.1	9.1	29.5	3.1	28.0	3.3	46.8	3.1	40.1	3.0	40.1	4.5	44.7	3.9	41.1	9.5	46.7	5.8
11/3/92	415	0.2	29.9	24.1	9.2	29.4	3.0	28.4	3.3	45.4	3.0	37.6	3.0	39.7	6.3	45.0	4.1	40.9	9.2	45.9	7.4
11/3/92	430	0.2	29.9	11.4	9.0	29.7	3.0	28.3	3.3	45.2	3.1	37.7	3.0	39.8	3.3	42.4	8.7	39.7	10.7	38.5	3.0
11/3/92	445	0.1	31.3	9.4	10.3	28.4	3.0	28.1	3.3	44.8	3.0	35.7	3.0	39.8	3.1	45.3	4.8	41.1	8.7	45.4	7.4
11/3/92	500	0.1	30.0	9.0	8.8	29.6	3.0	27.9	3.2	46.3	3.1	39.4	3.0	39.8	5.8	45.7	4.1	41.5	9.2	46.7	4.5
11/3/92	515	0.2	29.9	9.4	8.8	29.8	3.1	28.2	3.3	45.8	3.0	38.7	3.0	39.9	4.7	41.8	3.8	40.0	9.9	46.6	5.1
11/3/92	530	0.1	29.0	9.2	8.7	30.3	3.0	28.4	3.3	45.9	3.1	38.7	3.0	39.9	3.0	44.1	5.9	40.9	10.1	46.4	6.8
11/3/92	545	0.1	29.3	9.9	8.7	29.3	3.0	28.0	3.3	46.1	3.0	39.2	3.0	40.0	6.7	45.2	6.3	41.6	8.4	45.6	4.4
11/3/92	600	0.1	28.5	9.9	8.8	30.1	3.1	28.2	3.2	46.1	3.0	39.3	3.0	37.0	8.9	44.0	5.3	40.7	8.3	46.2	5.2
11/3/92	615	0.1	29.2	9.8	8.7	29.9	3.1	28.1	3.3	45.8	3.0	38.7	3.0	40.1	3.1	46.4	4.4	41.7	8.3	45.9	4.0
11/3/92	630	0.1	29.8	10.7	8.7	29.2	3.0	28.0	3.3	46.0	3.0	38.9	3.0	40.1	3.7	42.9	8.0	40.3	6.9	45.9	7.6
11/3/92	645	0.1	29.0	12.0	8.7	30.1	3.1	28.3	3.3	45.6	3.0	38.6	3.0	39.9	3.4	43.1	5.9	40.8	10.7	46.3	4.3
11/3/92	700	0.1	29.4	12.6	9.0	29.6	3.1	27.9	3.3	45.1	3.0	38.0	3.0	39.6	5.2	44.0	3.8	40.3	8.4	44.9	6.8
11/3/92	715	0.1	29.7	14.0	8.5	29.3	3.0	28.0	3.3	44.3	3.0	37.0	3.0	39.3	7.1	43.2	3.9	39.9	8.7	43.4	3.3
11/3/92	730	0.1	30.0	13.7	8.7	29.5	3.0	28.3	3.3	44.1	3.0	36.6	3.0	39.5	3.4	43.7	3.9	40.0	8.4	41.4	6.5
11/3/92	745	0.1	29.8	11.3	8.5	29.0	3.1	28.0	3.3	44.5	3.0	36.9	3.0	39.8	3.9	43.5	5.1	40.0	7.6	37.2	3.0
11/3/92	800	0.1	29.8	11.0	8.6	29.2	3.0	27.8	3.3	44.1	3.0	36.2	3.0	39.8	4.3	43.8	4.4	39.3	9.8	38.4	6.1
11/3/92	815	0.1	29.2	59.0	9.0	29.1	3.1	28.0	3.3	44.6	3.0	36.6	3.0	39.7	6.2	45.7	4.4	41.2	9.0	43.9	9.7
11/3/92	830	0.1	30.4	12.2	8.5	28.5	3.0	27.6	3.3	44.5	3.0	36.6	3.0	39.2	12.0	46.9	8.4	41.0	7.9	45.3	4.0
11/3/92	845	0.1	30.5	12.0	9.7	28.9	3.0	28.5	3.3	43.5	3.0	34.7	3.0	39.5	5.7	46.2	4.9	41.0	8.2	43.4	5.0
11/3/92	900	0.1	29.9	12.0	8.8	29.8	3.0	28.3	3.3	44.0	3.0	35.4	3.0	39.6	4.5	46.0	3.2	40.8	8.8	44.6	3.7
11/3/92	915	0.1	28.7	11.6	8.7	29.3	3.1	27.9	3.3	44.9	3.0	37.1	3.0	39.2	6.4	47.4	3.5	41.2	8.7	45.9	9.1
11/3/92	930	0.1	29.3	10.3	9.3	28.9	3.0	27.6	3.2	45.7	3.0	38.2	3.0	39.4	5.4	47.2	4.8	41.4	7.5	45.8	4.9
11/3/92	945	0.1	28.6	11.0	9.1	29.5	3.0	28.0	3.2	46.1	3.0	38.7	3.0	38.9	8.3	47.3	3.1	41.6	6.1	44.3	4.6
11/3/92	1000	0.1	30.4	10.4	9.1	29.1	3.0	28.2	3.3	45.9	3.0	38.0	3.0	39.8	5.4	44.3	3.2	40.6	9.0	45.1	7.1
11/3/92	1015	0.1	28.7	11.8	9.3	29.3	3.0	28.6	3.3	45.8	3.0	38.0	3.0	39.3	3.7	47.4	5.5	41.4	10.8	46.1	8.9
11/3/92	1030	0.1	29.8	11.7	10.0	29.3	3.0	28.3	3.2	46.3	3.0	38.5	3.0	39.4	3.2	46.4	4.9	40.9	9.8	46.4	5.7
11/3/92	1045	0.1	30.4	11.4	9.5	28.9	3.0	28.5	3.2	46.2	3.0	38.1	3.0	39.3	3.1	45.8	4.7	40.9	8.9	45.0	4.6
11/3/92	1100	0.1	30.4	10.4	9.4	29.1	3.0	29.0	3.3	45.9	3.0	37.3	3.0	38.7	18.7	44.1	14.5	40.1	11.3	46.6	4.4
11/3/92	1115	0.1	35.5	12.4	9.3	29.5	3.0	29.5	3.3	44.8	3.0	34.6	3.0	39.3	2.9	43.0	6.9	39.7	8.7	45.5	4.3
11/3/92	1130	0.1	36.4	10.5	9.3	29.0	3.0	29.9	3.3	44.4	3.0	33.9	3.0	39.4	3.1	45.7	4.1	41.0	9.6	43.9	6.1
11/3/92	1145	0.1	34.7	11.5	9.3	29.1	3.0	30.0	3.4	44.7	3.0	34.3	3.0	39.5	3.1	44.2	4.0	40.6	10.7	45.0	4.7
11/3/92	1200	0.1	34.9	12.4	8.7	29.0	3.0	29.9	3.3	44.7	3.0	34.0	3.0	39.3	2.9	45.3	5.8	40.9	8.9	44.8	5.7
11/3/92	1215	0.1	34.7	11.1	8.7	29.4	3.0	29.8	3.3	45.4	3.0	34.5	3.0	39.6	6.9	44.7	6.0	40.8	9.3	44.3	8.1
11/3/92	1230	0.1	34.9	10.6	8.8	29.4	3.0	29.8	3.3	45.6	3.0	34.4	3.0	39.4	3.0	46.1	3.3	41.1	11.0	46.8	7.2
11/3/92	1245	0.1	34.4	10.8	9.1	29.3	3.0	29.9	3.3	45.8	3.0	34.7	3.0	39.8	4.9	44.9	7.9	41.2	9.6	40.1	7.0
11/3/92	1300	0.0	35.0	12.1	8.6	29.5	3.0	29.8	3.2	46.1	3.0	34.8	3.0	39.6	2.9	46.6	3.7	41.4	10.4	46.5	8.4
11/3/92	1315	0.0	34.6	11.0	8.7	29.5	3.0	29.9	3.3	46.1	3.0	35.0	3.0	39.7	3.1	43.3	4.1	40.7	9.6	44.0	9.3
11/3/92	1330	0.0	33.9	13.0	8.5	29.1	3.0	30.1	3.3	46.0	3.0	34.7	3.0	39.7	2.9	45.2	4.8	41.2	9.9	45.0	7.1
11/3/92	1345	0.1	35.1	11.9	8.5	29.7	3.0	29.6	3.3	46.3	3.0	34.9	3.0	39.6	3.9	42.8	5.8	39.8	10.1	45.9	9.3
11/3/92	1400	0.1	34.5	12.3	8.7	29.4	3.0	29.8	3.2	46.3	3.0	35.0	3.0	39.7	3.1	44.2	3.8	40.9	10.5	48.4	3.9
11/3/92	1415	0.1	33.8	11.3	8.5	29.3	3.0	29.9	3.2	46.3	3.0	34.9	3.0	39.6	2.9	44.8	8.8	41.0	11.9	40.4	3.0
11/3/92	1430	0.1	34.4	12.0	8.9	29.7	3.0	29.5	3.2	46.6	3.0										

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	B Op %	D1 spk/mn	D2 spk/mn	D3 spk/mn	D4 spk/mn	C1 spk/mn	C2 spk/mn	C3 spk/mn	C4 spk/mn
						KW	KW	KW	KW	KW	KW	KW	KW
11/3/92	1530	0.1	32.4	12.8	8.8	28.9	3.0	29.6	3.3	46.9	3.0	39.8	3.0
11/3/92	1545	0.1	31.4	12.6	9.3	28.9	3.0	29.4	3.2	47.4	3.0	39.8	2.9
11/3/92	1600	0.1	31.2	12.4	8.8	28.4	3.0	29.7	3.3	46.9	3.0	39.8	3.1
11/3/92	1615	0.1	31.6	13.8	9.3	29.1	3.0	29.3	3.2	47.5	3.0	39.9	3.0
11/3/92	1630	0.1	31.6	12.5	9.3	28.8	3.1	29.0	3.3	47.8	3.0	39.8	3.5
11/3/92	1645	0.1	32.1	12.5	9.5	29.1	3.0	28.8	3.2	48.0	3.0	39.3	7.7
11/3/92	1700	0.1	30.6	11.9	9.5	29.4	3.1	29.1	3.3	47.3	3.0	39.6	3.4
11/3/92	1715	0.2	30.8	12.1	10.1	29.1	3.0	28.7	3.3	47.6	3.0	40.0	3.1
11/3/92	1730	0.2	30.1	12.5	9.7	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1745	0.2	29.9	11.7	10.2	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1800	0.2	29.2	11.9	10.4	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1815	0.2	29.6	12.3	10.3	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1830	0.2	29.7	12.1	10.4	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1845	0.2	28.1	13.5	10.6	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1900	0.2	28.4	12.7	11.0	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1915	0.2	28.2	12.2	10.5	28.8	3.0	28.3	3.2	48.1	3.0	39.7	3.4
11/3/92	1930	0.2	28.3	12.8	10.6	30.3	3.0	28.1	3.2	47.1	3.0	39.9	3.0
11/3/92	1945	0.2	28.2	12.0	11.2	30.3	3.2	28.2	3.3	47.6	3.0	39.7	6.8
11/3/92	2000	0.2	28.0	0.1	1.8	30.2	3.1	28.0	3.2	47.3	3.0	39.8	5.0
11/3/92	2015	0.2	28.6	13.1	11.7	30.1	3.2	28.1	3.2	47.6	3.0	40.0	3.1
11/3/92	2030	0.2	28.9	14.1	11.8	30.7	3.2	28.3	3.3	45.9	3.0	39.5	5.0
11/3/92	2045	0.2	28.2	15.0	11.4	29.9	3.2	27.7	3.3	46.9	3.0	39.4	3.1
11/3/92	2100	0.2	28.6	14.0	11.8	30.5	3.1	28.1	3.2	46.2	3.0	39.7	2.9
11/3/92	2115	0.2	29.0	12.0	11.7	28.1	3.0	28.8	3.2	47.6	3.0	39.3	5.7
11/3/92	2130	0.2	28.9	12.3	11.5	28.3	3.0	28.8	3.1	47.6	3.0	39.3	2.9
11/3/92	2145	0.2	28.6	14.3	11.9	28.4	3.0	28.7	3.2	47.4	3.0	39.3	3.8
11/3/92	2200	0.1	28.8	12.7	12.4	28.9	3.0	28.8	3.1	47.8	3.0	39.7	6.0
11/3/92	2215	0.1	28.9	13.1	11.7	28.8	3.0	28.7	3.2	47.4	3.0	39.4	3.4
11/3/92	2230	0.1	28.0	14.3	13.8	29.4	4.1	28.7	3.1	48.1	3.0	39.4	5.7
11/3/92	2245	0.1	28.6	13.2	12.2	29.4	3.0	28.7	3.2	47.9	3.0	39.2	5.8
11/3/92	2300	0.1	28.6	12.6	13.8	29.7	3.2	28.7	3.2	48.0	3.0	39.4	3.1
11/3/92	2315	0.1	28.2	15.5	13.3	30.6	3.2	27.1	3.2	48.7	3.0	39.8	2.9
11/3/92	2330	0.1	28.2	12.2	12.1	30.2	3.1	27.0	3.1	49.3	3.0	39.9	3.1
11/3/92	2345	0.1	30.2	12.3	11.4	28.5	3.0	28.5	3.1	48.9	3.0	39.6	2.9
11/4/92	0	0.1	30.8	13.8	11.7	28.3	3.0	28.7	3.1	48.1	3.0	39.6	3.1
11/4/92	15	0.1	30.1	15.0	11.8	28.3	3.0	28.8	3.1	47.7	3.0	39.8	4.0
11/4/92	30	0.1	30.6	11.5	11.9	29.5	3.0	27.4	3.1	46.6	3.0	40.0	3.5
11/4/92	45	0.1	31.4	11.6	11.6	28.0	3.0	28.7	3.1	47.2	3.0	39.8	5.8
11/4/92	100	0.1	33.1	10.7	11.0	28.2	3.0	28.6	3.1	46.5	3.0	39.5	10.4
11/4/92	115	0.1	32.9	10.9	10.0	29.6	3.2	27.7	3.2	44.8	3.0	39.6	4.7
11/4/92	130	0.1	33.4	10.8	10.3	30.0	3.1	28.5	3.3	43.7	3.0	39.8	4.8
11/4/92	145	0.1	33.9	10.6	9.6	28.8	3.0	28.0	3.3	43.7	3.0	39.7	3.1
11/4/92	200	0.1	33.1	10.8	9.8	28.8	3.0	28.1	3.2	43.5	3.0	39.6	4.9
11/4/92	215	0.1	34.6	12.8	9.7	30.0	3.0	27.0	3.2	44.1	3.0	39.6	4.0
11/4/92	230	0.1	33.4	11.4	9.4	29.2	3.0	27.3	3.2	43.1	3.0	39.2	3.0
11/4/92	245	0.1	34.0	11.0	9.2	29.4	3.0	27.2	3.2	43.3	3.0	39.8	3.9
11/4/92	300	0.1	33.5	10.0	9.5	28.7	3.0	27.3	3.2	42.9	3.0	39.3	4.2
11/4/92	315	0.1	32.6	10.7	9.3	28.5	3.0	27.3	3.2	42.8	3.0	39.3	2.9
11/4/92	330	0.1	32.8	13.6	8.9	28.7	3.0	27.5	3.2	42.4	3.0	39.2	3.2
11/4/92	345	0.1	32.5	12.3	10.2	28.7	3.0	27.5	3.2	42.3	3.0	39.7	5.2
11/4/92	400	0.1	32.1	12.2	9.0	28.6	3.0	27.0	3.2	43.1	3.0	39.3	4.8
11/4/92	415	0.1	31.4	14.1	9.7	28.3	3.0	27.4	3.2	42.8	3.0	39.3	3.2
11/4/92	430	0.1	31.9	11.5	9.8	28.8	3.0	27.1	3.2	43.3	3.0	39.5	5.0
11/4/92	445	0.1	31.6	10.9	9.5	28.4	3.0	27.2	3.2	43.1	3.0	39.4	2.9
11/4/92	500	0.1	31.5	9.7	9.6	28.6	3.0	27.2	3.2	43.5	3.0	39.3	2.9
11/4/92	515	0.1	31.3	10.0	10.2	28.6	3.0	27.0	3.2	43.7	3.0	39.5	3.0
11/4/92	530	0.1	31.3	9.6	9.9	28.5	3.0	27.4	3.2	43.4	3.0	39.4	3.0
11/4/92	545	0.1	27.5	9.3	10.3	29.5	3.1	27.9	3.3	42.6	3.0	39.6	3.1
11/4/92	600	0.1	28.5	9.3	12.2	30.2	3.2	27.3	3.2	45.0	3.0	39.8	3.5
11/4/92	615	0.1	28.1	12.2	12.0	30.6	3.0	27.1	3.2	46.0	3.0	39.5	5.9
11/4/92	630	0.1	25.9	13.0	13.0	30.3	3.1	27.0	3.2	47.0	3.0	39.6	4.2
11/4/92	645	0.1	25.9	12.9	11.8	30.9	3.2	27.3	3.2	46.7	3.0	40.0	3.1
11/4/92	700	0.1	27.4	13.2	11.2	29.4	3.1	26.9	3.2	45.9	3.0	39.4	3.8
11/4/92	715	0.1	26.4	15.4	11.3	30.4	3.1	27.3	3.2	44.6	3.0	39.3	3.0
11/4/92	730	0.1	25.7	14.4	13.1	29.5	3.0	26.8	3.2	46.3	3.0	39.3	4.0

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn								
11/4/92	745	0.1	25.7	14.6	13.2	30.0	3.1	26.8	3.2	46.8	3.0	38.4	3.0	39.2	3.8	47.2	4.2	40.5	7.9	45.2	10.1
11/4/92	800	0.1	26.8	14.7	13.8	29.5	3.0	26.6	3.2	46.8	3.0	38.7	3.0	39.2	3.8	46.5	3.1	40.4	7.6	47.0	6.4
11/4/92	815	0.1	26.6	14.0	13.2	29.9	3.1	26.7	3.2	47.0	3.0	40.5	3.0	39.2	3.0	47.8	3.0	40.9	7.9	47.0	3.7
11/4/92	830	0.1	27.0	14.9	14.0	29.7	3.0	26.7	3.2	47.4	3.0	40.5	3.0	39.5	5.2	45.9	6.0	40.3	7.3	47.4	4.4
11/4/92	845	0.1	27.6	14.0	13.5	29.4	3.0	26.7	3.2	47.2	3.0	40.2	3.0	39.8	6.5	46.5	4.9	40.4	8.2	46.6	5.6
11/4/92	900	0.1	27.7	13.9	12.0	29.2	3.1	26.7	3.2	47.2	3.0	39.6	3.0	39.3	4.4	46.0	3.8	40.5	8.0	46.5	4.5
11/4/92	915	0.1	30.1	12.5	12.2	28.9	3.0	26.9	3.2	45.9	3.0	37.1	3.0	39.3	3.3	44.4	3.4	40.0	8.6	45.4	5.5
11/4/92	930	0.1	30.2	12.5	12.3	29.0	3.0	27.2	3.2	45.5	3.0	37.0	3.0	39.3	3.8	47.5	3.7	41.1	7.7	44.7	4.8
11/4/92	945	0.1	28.6	14.6	12.8	29.3	3.1	27.1	3.2	46.0	3.0	37.7	3.0	39.2	3.1	46.6	6.1	40.0	7.9	45.8	7.8
11/4/92	1000	0.1	27.3	14.1	14.2	29.1	3.1	27.4	3.2	45.6	3.0	37.3	3.0	39.6	4.0	47.4	3.2	41.1	6.6	45.5	6.0
11/4/92	1015	0.1	29.6	14.6	12.8	29.0	3.2	27.1	3.2	46.5	3.0	38.3	3.0	39.3	3.5	47.2	3.4	41.2	7.6	47.1	5.4
11/4/92	1030	0.1	28.2	14.2	13.2	30.6	3.2	27.7	3.2	45.7	3.0	37.0	3.0	39.2	3.7	46.2	3.4	40.6	11.1	46.2	6.2
11/4/92	1045	0.1	26.9	13.8	12.7	30.5	3.1	27.9	3.2	45.4	3.0	37.1	3.0	39.2	3.0	47.0	3.0	40.8	8.3	44.3	3.9
11/4/92	1100	0.1	29.6	14.4	12.1	29.4	3.1	27.6	3.2	46.3	3.0	37.0	3.0	39.4	3.0	49.3	3.1	41.9	6.1	46.9	5.3
11/4/92	1115	0.1	33.3	13.9	10.9	28.8	3.0	27.8	3.2	44.9	3.0	35.5	3.0	39.6	5.9	47.3	3.0	41.2	9.3	45.7	7.3
11/4/92	1130	0.1	34.1	12.6	10.4	29.5	3.0	27.7	3.2	44.5	3.0	33.8	3.0	39.6	2.9	48.0	3.5	41.7	7.2	44.7	9.2
11/4/92	1145	0.1	35.3	15.7	11.0	29.3	3.0	28.2	3.1	43.5	3.0	32.6	3.0	39.6	3.2	48.8	3.1	41.9	8.4	42.4	3.4
11/4/92	1200	0.1	35.1	14.8	10.2	29.4	3.0	27.6	3.2	44.7	3.0	34.0	3.0	39.6	2.9	50.5	3.2	42.4	8.3	44.1	10.4
11/4/92	1215	0.1	35.0	13.5	9.6	29.5	3.0	27.6	3.2	44.6	3.0	33.9	3.0	39.4	3.0	50.9	3.0	42.4	6.2	44.6	4.7
11/4/92	1230	0.1	34.5	14.0	9.3	29.5	3.0	27.7	3.1	44.8	3.0	33.8	3.0	39.6	2.9	50.4	3.4	42.5	7.0	46.3	7.2
11/4/92	1245	0.1	36.0	14.9	9.0	29.3	3.0	28.1	3.1	43.4	3.0	32.2	3.0	39.5	3.1	47.5	3.0	41.1	7.6	43.9	5.2
11/4/92	1300	0.1	34.9	16.6	9.8	29.0	3.0	28.3	3.2	43.4	3.0	32.1	3.0	39.5	3.9	50.6	3.0	42.1	6.1	43.3	9.5
11/4/92	1315	0.1	34.6	39.3	9.2	29.4	3.0	27.9	3.2	43.6	3.0	32.3	3.0	39.3	2.9	49.4	5.3	41.5	8.6	42.5	9.3
11/4/92	1330	0.1	35.2	8.7	9.5	29.2	3.0	28.0	3.1	43.7	3.0	32.3	3.0	39.4	2.9	48.5	3.5	41.4	8.0	45.2	6.5
11/4/92	1345	0.1	35.5	64.5	9.0	29.0	3.0	28.0	3.2	43.6	3.0	32.2	3.0	39.4	11.8	49.5	3.0	41.6	8.6	45.4	5.3
11/4/92	1400	0.2	34.9	0.1	9.1	29.0	3.0	28.1	3.2	43.7	3.0	32.2	3.0	39.4	3.0	49.1	3.2	41.0	8.6	45.2	5.2
11/4/92	1415	0.2	35.9	15.5	9.1	28.8	3.0	28.3	3.2	43.5	3.0	32.1	3.0	39.3	2.9	49.0	3.2	41.4	8.7	44.2	4.3
11/4/92	1430	0.2	35.0	13.9	9.4	28.8	3.0	28.1	3.2	43.4	3.0	31.8	3.0	39.3	4.1	49.2	3.2	41.3	8.0	39.6	6.7
11/4/92	1445	0.2	34.9	13.6	9.0	28.8	3.0	28.0	3.1	43.4	3.0	31.9	3.0	39.3	2.9	50.2	3.0	41.6	7.2	37.6	3.1
11/4/92	1500	0.2	34.6	12.4	9.2	29.2	3.0	27.9	3.2	43.7	3.0	32.0	3.0	39.4	3.1	50.1	3.1	41.9	7.6	45.3	8.3
11/4/92	1515	0.2	34.4	14.8	9.7	29.0	3.0	27.8	3.1	43.9	3.0	32.3	3.0	39.4	2.9	51.7	3.0	42.2	7.1	44.7	10.0
11/4/92	1530	0.2	35.0	12.7	9.2	29.1	3.0	28.0	3.2	43.6	3.0	31.8	3.0	39.4	3.0	49.9	3.0	41.7	7.0	45.4	6.0
11/4/92	1545	0.2	34.5	14.4	8.9	29.0	3.0	27.8	3.1	43.8	3.0	32.0	3.0	39.4	2.9	53.2	3.1	42.6	3.7	44.8	7.0
11/4/92	1600	0.2	34.6	13.7	9.1	29.2	3.0	27.8	3.2	43.7	3.0	31.8	3.0	39.5	3.3	50.0	3.2	41.9	8.4	44.8	4.9
11/4/92	1615	0.2	33.9	12.9	8.8	29.4	3.0	27.8	3.1	43.6	3.0	31.6	3.0	39.7	3.0	50.8	3.0	42.2	5.9	44.7	3.3
11/4/92	1630	0.2	30.9	13.8	9.4	28.8	3.0	27.4	3.1	44.6	3.0	33.2	3.0	39.4	2.9	51.3	3.0	42.3	5.6	45.4	5.3
11/4/92	1645	0.2	30.1	13.9	9.7	28.7	3.0	27.1	3.1	45.2	3.0	33.8	3.0	39.8	2.9	53.1	3.0	43.0	4.4	43.1	4.4
11/4/92	1700	0.2	31.1	12.8	9.6	28.9	3.0	27.1	3.1	45.2	3.0	33.9	3.0	39.5	2.9	52.6	3.4	43.0	4.0	46.0	8.3
11/4/92	1715	0.2	31.4	17.2	9.9	28.8	3.0	27.2	3.1	45.0	3.0	33.7	3.0	39.7	3.5	52.0	3.4	42.9	3.5	43.4	3.1
11/4/92	1730	0.2	32.0	18.4	9.7	29.0	3.0	26.9	3.2	44.8	3.0	33.8	3.0	39.6	4.0	51.9	3.1	42.6	4.6	45.2	3.8
11/4/92	1745	0.1	32.0	16.4	9.3	28.7	3.0	26.9	3.1	44.5	3.0	33.5	3.0	39.4	3.1	52.7	3.0	42.8	4.5	44.6	3.4
11/4/92	1800	0.1	31.6	15.7	9.4	28.3	3.0	27.4	3.2	43.8	3.0	33.7	3.0	39.8	4.1	52.6	3.2	42.7	5.3	40.8	4.7
11/4/92	1815	0.1	31.8	14.6	9.2	28.4	3.0	27.0	3.1	43.9	3.0	33.4	3.0	39.3	2.9	50.4	3.0	41.7	6.5	44.4	5.9
11/4/92	1830	0.1	31.8	14.0	9.3	29.0	3.0	26.5	3.1	44.2	3.0	33.7	3.0	39.4	3.5	52.2	3.0	42.6	7.0	44.2	6.1
11/4/92	1845	0.1	31.3	15.3	9.5	28.7	3.0	26.6	3.1	44.0	3.0	33.5	3.0	39.4	4.0	49.7	3.0	41.7	6.6	44.5	4.4
11/4/92	1900	0.1	31.8	14.1	9.5	28.6	3.0	26.6	3.1	43.9	3.0	33.3	3.0	39.3	3.6	51.1	3.1	42.0	5.8	42.6	3.7
11/4/92	1915	0.1	31.5	13.8	9.6	28.4	3.0	26.6	3.1	43.7	3.0	33.3	3.0	39.5	2.9	50.5	3.0	41.8	5.3	40.9	3.2
11/4/92	1930	0.1	31.5	14.3	9.2	28.7	3.0	26.4	3.1	43.7	3.0	33.3	3.0	39.5	3.0	49.5	4.8	41.6	6.4	42.2	5.2
11/4/92	1945	0.1	31.7	15.7	9.0	28.3	3.0	26.6	3.1	43.3	3.0	32.9	3.0	39.3	2.9	52.3	3.0	42.5	3.7	41.2	3.6
11/4/92	2000	0.1	31.8	14.0	9.2	28.6	3.0	26.6	3.1	43.7	3.0	33.4	3.0	39.6	2.9	50.4	3.4	41.8	4.4	44.0	13.4
11/4/92	2015	0.1	28.5	16.1	11.3	28.7	3.0	26.8	3.2	43.5	3.0	33.3	3.0	39.8	4.4	42.7	3.1	39.3	9.1	42.8	3.3
11/4/92	2030	0.1	30.6	15.4	10.5	28.5	3.0	26.2	3.1	44.3	3.0	34.4	3.0	39.8	3.1	50.3	5.4	41.9	9.4	43.8	7.9
11/4/92	2045	0.1	29.8	13.8	10.7	28.4	3.0	26.2	3.1	44.2	3.0	34.4	3.0	39.5	2.9	48.3	3.0	41.0	6.0	43.0	4.9
11/4/92	2100	0.1	30.1	15.5	11.1	28.3	3.0	26.1	3.1	44.3	3.0	34.6	3.0	39.2	3.0	47.8	3.8	40.7	8.7	44.1	5.1
11/4/92	2115	0.1	29.9	15.6	11.0	28.3	3.0	25.9	3.1	44.3	3.0	34.6	3.0	39.4	3.1	46.0	3.0	40.1	8.5	42.7	10.9
11/4/92	2130	0.1	30.9	14.9	10.9	28.3	3.0	26.0	3.1	44.3	3.0	34.6	3.0	39.3	3.0	46.4	3.3	40.3	8.7	43.0	3.5
11/4/92	2145	0.1	29.4	15.3	11.2	28.2	3.0	26.1	3.1	44.3	3.0	34.6	3.0	39.3	3.4	48.1	3.1	40.9	8.9	44.4	3.6
11/4/92	2200	0.1	30.2	16.9	11.9	28.1	3.0	26.1	3.1	44.3	3.0	34.1	3.0	39.3	2.9	46.9	3.2	40.5	8.0	42.2	4.3
11/4/92	2215	0.1	30.3	15.0	12.1	28.2	3.0	25.7	3.1	44.4	3.0	34.9	3.0	39.1	2.9	47.4	3.1	40.4	7.0	45.1	6.7
11/4/92	2230	0.1	30.3	10.6	10.8	28.2	3.0	25.8	3.1	44.1	3.0	34.2	3.0	39.1	3.1	48.6	3.1	41.0	9.0	43.8	5.5
11/4/92	2245	0.1	29.5	10.9	11.5	28.1	3.0	25.7	3.1	44.3	3.0	34.9	3.0	39.2	3.1	44.2	5.6	39.2	11.1	45.2	4.2
11/4/92	2300	0.1	29.9	11.4																	

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spl/ mn	D 2 KW	D 2 spl/ mn	D 3 KW	D 3 spl/ mn	D 4 KW	D 4 spl/ mn	G 1 KW	G 1 spl/ mn	G 2 KW	G 2 spl/ mn	G 3 KW	G 3 spl/ mn	G 4 KW	G 4 spl/ mn
11/5/92	0	0.1	29.9	10.7	11.0	28.2	3.0	25.6	3.1	44.5	3.0	34.4	3.0	39.5	2.9	50.3	3.8	41.3	4.9	44.7	7.4
11/5/92	15	0.1	30.1	54.1	11.1	28.3	3.0	25.8	3.1	45.0	3.0	34.6	3.0	39.7	3.8	48.8	3.0	40.4	7.4	44.9	5.9
11/5/92	30	0.1	29.3	10.9	11.7	28.1	3.0	25.9	3.1	44.2	3.0	34.5	3.0	39.2	3.8	42.9	3.0	39.3	13.8	42.8	4.2
11/5/92	45	0.1	29.5	10.4	12.3	28.3	3.0	25.7	3.1	44.2	3.0	33.8	3.0	39.7	3.4	45.5	6.6	40.2	6.4	39.3	3.1
11/5/92	100	0.1	29.9	10.2	10.8	28.1	3.0	26.1	3.1	44.2	3.0	33.9	3.0	39.7	3.8	44.2	4.8	40.0	8.9	43.3	3.7
11/5/92	115	0.1	29.5	11.2	11.3	28.2	3.0	26.0	3.1	43.9	3.0	33.4	3.0	39.5	3.1	45.3	3.0	40.1	6.8	42.9	5.3
11/5/92	130	0.1	29.5	10.3	11.8	28.8	3.0	26.2	3.1	44.2	3.0	34.0	3.0	39.4	4.0	46.4	3.7	41.0	7.7	42.6	4.0
11/5/92	145	0.1	30.6	9.7	11.3	28.6	3.0	26.1	3.1	44.1	3.0	33.6	3.0	39.9	3.8	46.4	3.5	40.9	6.2	40.7	3.2
11/5/92	200	0.1	28.0	11.3	12.6	29.3	3.0	26.1	3.2	45.0	3.0	35.1	3.0	40.0	3.0	45.8	3.0	40.3	7.1	43.1	5.6
11/5/92	215	0.1	25.6	12.2	15.6	28.8	3.1	25.6	3.1	45.8	3.0	37.1	3.0	39.6	3.4	47.8	4.0	41.0	8.6	44.0	5.7
11/5/92	230	0.1	27.9	10.1	14.1	28.3	3.0	25.9	3.1	45.5	3.0	35.9	3.0	39.4	3.1	45.7	3.8	40.6	8.3	43.7	6.2
11/5/92	245	0.1	27.1	9.4	11.8	28.4	3.0	25.8	3.2	45.3	3.0	35.3	3.0	39.3	9.8	46.5	3.4	40.7	9.2	41.3	3.4
11/5/92	300	0.1	25.6	15.0	15.1	28.9	3.1	25.7	3.1	46.1	3.0	38.4	3.0	39.2	5.0	49.2	7.2	41.0	7.8	43.4	8.2
11/5/92	315	0.1	27.8	15.1	13.3	28.1	3.0	25.3	3.1	47.1	3.0	40.0	3.0	39.4	3.4	50.8	3.4	41.6	3.7	43.3	4.5
11/5/92	330	0.1	28.4	13.7	11.0	28.5	3.0	25.1	3.0	47.1	3.0	38.8	3.0	39.5	2.9	46.8	3.1	40.7	10.6	44.2	3.5
11/5/92	345	0.1	28.4	12.4	10.4	28.7	3.0	25.3	3.1	45.9	3.0	38.7	3.0	39.4	5.5	46.4	6.7	40.6	9.1	43.4	4.1
11/5/92	400	0.1	28.1	12.8	11.7	28.3	3.0	25.5	3.1	45.6	3.0	37.4	3.0	39.2	4.1	47.1	3.7	40.8	6.4	44.5	8.6
11/5/92	415	0.1	28.7	12.3	11.9	28.4	3.0	25.3	3.1	46.5	3.0	38.7	3.0	39.6	4.8	46.6	3.9	41.4	7.5	45.2	4.6
11/5/92	430	0.1	29.1	13.1	11.9	28.5	3.0	25.2	3.1	46.8	3.1	38.9	3.0	39.5	3.0	47.6	5.8	41.1	6.9	45.4	4.1
11/5/92	445	0.1	29.2	12.4	10.8	28.3	3.0	25.4	3.1	46.6	3.0	38.1	3.0	39.6	3.7	49.7	8.4	42.0	5.1	41.7	3.1
11/5/92	500	0.1	30.7	12.1	10.8	28.7	3.0	25.3	3.0	46.1	3.1	37.6	3.0	39.3	8.4	47.2	6.7	41.1	6.7	45.3	3.9
11/5/92	515	0.1	31.1	12.5	9.9	29.0	3.0	25.7	3.1	44.8	3.0	35.3	3.0	39.5	3.8	48.7	4.7	41.7	8.0	44.4	5.9
11/5/92	530	0.1	32.3	15.8	9.4	29.1	3.0	25.9	3.1	44.0	3.0	34.2	3.0	39.5	3.0	46.9	4.4	41.2	9.1	43.8	5.1
11/5/92	545	0.1	32.2	12.5	9.1	29.0	3.0	28.3	3.1	43.1	3.0	32.6	3.0	39.6	2.9	48.5	6.4	41.8	7.8	43.1	5.1
11/5/92	600	0.1	30.9	12.0	9.8	29.2	3.0	25.6	3.1	44.4	3.0	34.7	3.0	39.4	3.2	46.7	6.4	40.8	7.1	41.3	11.0
11/5/92	615	0.1	31.1	10.8	10.2	29.1	3.0	25.7	3.1	44.3	3.0	34.4	3.0	39.6	3.0	45.6	5.5	40.7	8.6	42.1	5.3
11/5/92	630	0.1	32.0	9.8	9.3	29.2	3.0	26.0	3.1	43.3	3.0	32.6	3.0	39.4	4.5	46.0	6.9	40.5	7.2	43.1	5.1
11/5/92	645	0.1	31.2	12.2	9.8	28.7	3.0	25.6	3.1	43.5	3.0	33.4	3.0	39.2	2.9	47.6	7.1	41.0	8.7	43.0	5.1
11/5/92	700	0.1	30.5	11.2	9.8	28.8	3.0	25.6	3.1	43.9	3.0	34.0	3.0	39.3	3.0	48.0	8.4	41.1	6.9	42.8	4.9
11/5/92	715	0.1	30.1	11.3	10.1	28.8	3.0	25.4	3.1	44.1	3.0	34.1	3.0	39.2	3.0	45.7	5.6	40.1	8.4	42.9	4.6
11/5/92	730	0.1	29.7	11.0	9.8	28.1	3.0	25.8	3.1	43.5	3.0	33.3	3.0	39.1	2.9	47.4	5.2	40.7	8.6	41.9	6.7
11/5/92	745	0.1	30.4	11.5	9.7	28.3	3.0	25.6	3.1	43.7	3.0	33.5	3.0	39.2	3.0	48.7	7.3	41.0	7.4	43.3	6.2
11/5/92	800	0.1	30.3	12.4	10.2	28.3	3.0	25.4	3.1	43.7	3.0	33.6	3.0	39.9	3.3	45.0	5.5	39.5	7.8	43.0	6.1
11/5/92	815	0.1	30.0	12.0	10.4	28.1	3.0	25.6	3.1	43.6	3.0	33.7	3.0	39.0	2.9	46.9	4.2	40.1	8.2	39.1	3.7
11/5/92	830	0.1	29.9	8.2	10.6	28.2	3.0	25.4	3.1	43.9	3.0	34.1	3.0	39.0	2.9	45.9	5.3	39.8	10.0	38.9	3.2
11/5/92	845	0.1	29.9	8.4	10.9	28.1	3.0	25.4	3.1	43.9	3.0	34.2	3.0	38.9	2.9	46.5	5.8	40.1	7.5	40.1	4.2
11/5/92	900	0.1	29.6	8.8	11.7	28.5	3.0	25.1	3.1	44.7	3.0	35.1	3.0	38.1	5.8	46.0	7.3	39.9	8.0	39.5	3.6
11/5/92	915	0.1	29.4	9.5	11.7	28.1	3.0	25.3	3.1	44.7	3.0	35.1	3.0	39.1	3.0	46.9	5.2	40.3	7.4	42.8	10.6
11/5/92	930	0.1	29.2	11.3	12.5	28.2	3.0	25.2	3.1	45.1	3.0	35.7	3.0	39.2	3.2	47.1	4.5	40.2	6.2	44.1	4.7
11/5/92	945	0.1	29.3	12.0	11.3	28.4	3.0	25.2	3.1	45.3	3.0	35.7	3.0	39.1	3.8	47.2	6.1	40.5	6.7	38.7	3.7
11/5/92	1000	0.1	30.7	9.8	11.6	28.8	3.0	25.1	3.1	45.3	3.0	35.5	3.0	39.0	2.9	46.9	5.7	40.3	6.9	45.1	5.4
11/5/92	1015	0.1	29.5	9.8	11.0	28.2	3.0	25.3	3.1	44.9	3.0	35.2	3.0	39.0	2.9	46.1	7.2	40.0	8.6	44.7	7.1
11/5/92	1030	0.1	30.0	9.3	11.0	28.8	3.0	25.3	3.1	44.9	3.0	35.0	3.0	39.0	2.9	46.2	5.1	39.9	8.8	44.3	4.3
11/5/92	1045	0.1	29.8	9.9	11.0	28.6	3.0	25.6	3.1	44.0	3.0	33.2	3.0	39.3	3.0	46.6	5.4	40.8	9.4	44.0	5.9
11/5/92	1100	0.1	30.4	11.4	11.5	28.2	3.0	25.6	3.1	44.4	3.0	33.9	3.0	39.8	2.9	46.2	4.8	40.5	7.1	43.6	6.3
11/5/92	1115	0.1	28.7	13.3	12.1	28.0	3.0	25.6	3.1	44.6	3.0	34.7	3.0	39.0	3.1	42.1	4.9	38.4	9.4	41.9	7.5
11/5/92	1130	0.1	33.7	10.6	9.8	29.2	3.1	25.2	3.1	44.3	3.0	33.7	3.0	38.7	5.8	45.8	5.3	39.6	6.5	43.8	7.3
11/5/92	1145	0.1	27.4	12.0	12.0	28.3	3.0	25.6	3.1	44.7	3.0	35.3	3.0	38.8	3.4	46.2	6.0	40.3	6.9	38.7	6.2
11/5/92	1200	0.1	27.8	11.3	12.4	28.2	3.0	25.5	3.1	44.9	3.0	35.6	3.0	39.0	3.1	46.2	4.5	40.5	6.5	42.8	4.0
11/5/92	1215	0.1	28.5	0.1	5.9	28.3	3.0	25.5	3.1	45.2	3.0	35.3	3.0	38.9	2.9	49.2	4.8	40.9	5.9	45.3	8.2
11/5/92	1230	0.1	27.9	11.8	11.9	28.3	3.0	25.7	3.1	44.9	3.0	35.1	3.0	38.9	2.9	50.1	5.8	41.2	6.7	45.4	6.6
11/5/92	1245	0.1	27.9	12.5	11.9	28.4	3.0	25.7	3.1	44.6	3.0	34.9	3.0	38.8	4.1	48.4	4.8	40.5	7.9	44.8	5.6
11/5/92	1300	0.1	28.4	12.1	11.4	28.1	3.0	25.6	3.1	44.5	3.0	34.6	3.0	38.9	2.9	49.2	4.9	40.8	6.3	44.4	6.2
11/5/92	1315	0.1	28.3	14.8	10.6	28.3	3.0	25.6	3.1	44.2	3.0	33.9	3.0	38.8	3.0	50.2	5.8	41.0	4.2	44.3	9.2
11/5/92	1330	0.1	27.9	14.2	11.3	28.0	3.0	25.5	3.1	44.3	3.0	34.6	3.0	38.9	2.9	49.0	6.2	40.9	6.3	43.8	7.9
11/5/92	1345	0.1	28.3	12.6	11.5	28.0	3.0	25.3	3.1	44.1	3.0	34.6	3.0	38.8	3.2	50.3	7.5	40.9	5.3	42.1	4.6
11/5/92	1400	0.1	29.6	12.9	10.8	28.3	3.0	25.3	3.1	43.8	3.0	34.1	3.0	38.4	10.3	46.5	11.6	39.4	7.7	43.9	5.0
11/5/92	1415	0.1	27.3	14.8	11.6	28.3	3.0	25.7	3.1	42.8	3.0	32.5	3.0	38.9	4.9	48.8	6.3	40.5	5.6	36.2	11.7
11/5/92	1430	0.1	28.6	13.9	11.1	28.2	3.0	25.6	3.2	43.0	3.0	32.5	3.0	38.7	2.9	48.6	4.5	40.2	8.6	43.0	4.2
11/5/92	1445	0.0	28.6	15.2	13.0	28.6	3.0	24.9	3.0	44.0	3.0	35.1	3.0	38.8	2.9	48.9	6.9	40.3	5.9	43.1	6.4
11/5/92	1500	0.0	27.1	15.1	11.1	28.0	3.0	25.2	3.1	43.3	3.0	33.0	3.0	38.8	3.0	49.8	6.7	40.9	7.6	42.6	5.8
11/5/																					

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Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn								
11/5/92	1815	00	32.0	116	92	286	30	255	31	416	30	305	30	38.8	2.9	51.2	6.9	41.4	3.5	39.4	16.3
11/5/92	1830	00	34.8	116	102	291	30	257	31	408	30	306	30	38.7	8.7	48.4	6.1	40.2	7.6	38.2	5.8
11/5/92	1845	00	31.1	108	89	283	30	257	31	409	30	305	30	38.7	3.3	50.1	7.5	41.1	5.6	38.8	11.9
11/5/92	1700	00	33.3	97	92	294	30	252	31	412	30	303	30	39.0	2.9	49.2	6.3	40.6	6.2	39.7	10.1
11/5/92	1715	01	31.3	142	90	292	30	253	31	416	30	303	30	38.9	2.9	50.1	7.7	41.1	5.4	39.4	10.9
11/5/92	1730	01	31.8	155	91	294	30	250	31	416	30	303	30	38.8	2.9	50.5	7.0	41.3	6.1	38.7	10.9
11/5/92	1745	00	31.0	125	92	291	30	252	31	416	30	302	30	38.8	3.4	48.0	7.3	40.4	6.2	38.7	11.9
11/5/92	1800	00	31.3	146	95	291	30	250	31	414	30	302	30	38.9	3.1	50.0	4.3	41.2	7.6	38.1	12.1
11/5/92	1815	00	31.8	157	94	290	30	253	31	410	38	300	30	38.7	3.1	47.8	4.1	40.2	6.1	38.8	13.3
11/5/92	1830	01	31.5	154	86	297	30	251	31	411	30	300	30	38.7	3.0	41.9	5.0	37.7	9.6	37.2	6.1
11/5/92	1845	01	34.5	137	84	305	30	250	31	411	31	300	30	38.8	2.9	44.3	5.2	38.5	8.0	41.7	6.8
11/5/92	1900	00	31.1	149	89	294	37	249	31	413	30	301	30	38.7	2.9	47.8	3.8	39.7	7.7	40.5	4.9
11/5/92	1915	00	31.9	134	88	292	30	251	31	413	30	299	30	38.7	2.9	50.7	4.4	40.7	4.3	40.7	10.7
11/5/92	1930	00	33.2	34.0	87	293	30	253	31	408	30	299	30	38.7	2.9	48.9	5.2	40.0	7.2	41.0	8.2
11/5/92	1945	01	32.5	134	84	299	32	254	31	408	30	299	30	38.7	2.9	49.1	3.7	40.1	6.1	40.3	5.4
11/5/92	2000	00	34.1	160	130	295	31	259	32	404	30	304	30	39.0	2.9	50.5	3.6	40.7	4.8	40.7	9.5
11/5/92	2015	00	32.0	150	86	300	39	255	31	408	30	303	30	39.0	2.9	51.1	4.0	41.1	3.8	39.9	10.8
11/5/92	2030	00	32.7	131	84	301	30	254	31	409	30	301	30	38.9	2.9	49.2	4.5	40.2	4.8	41.3	10.2
11/5/92	2045	00	33.2	146	84	301	30	252	31	407	30	300	30	38.8	2.9	52.0	4.9	41.1	3.7	37.8	14.5
11/5/92	2100	00	32.3	130	85	300	30	252	31	407	30	299	30	38.7	2.9	52.0	3.4	40.9	3.7	40.2	11.4
11/5/92	2115	00	33.4	143	88	305	30	248	30	409	30	299	30	38.8	2.9	51.9	5.8	40.9	5.2	39.7	8.5
11/5/92	2130	00	35.2	137	93	311	30	245	31	413	30	300	30	38.8	2.9	48.2	4.5	39.7	6.7	39.4	8.1
11/5/92	2145	01	34.6	156	98	301	30	245	30	414	30	299	30	38.9	2.9	48.2	5.0	39.5	8.2	40.2	10.6
11/5/92	2200	01	34.4	141	115	290	30	246	30	416	30	302	30	39.1	4.1	51.2	5.8	40.5	6.1	40.1	11.8
11/5/92	2215	01	36.7	132	122	290	30	247	30	415	30	299	30	39.2	3.2	49.8	5.5	40.1	6.3	41.7	9.5
11/5/92	2230	01	35.6	134	123	285	30	243	31	422	30	313	30	39.0	3.8	51.8	8.2	40.9	5.7	40.6	5.9
11/5/92	2245	01	36.1	143	124	288	30	242	30	426	30	316	30	39.3	3.0	49.5	5.3	40.1	6.5	42.4	8.0
11/5/92	2300	01	34.7	146	118	281	30	244	30	426	30	319	30	39.2	3.7	49.1	3.4	40.0	7.1	42.3	12.5
11/5/92	2315	01	33.7	152	130	275	30	245	31	427	30	320	30	39.1	3.8	52.2	5.9	41.1	5.5	41.5	4.1
11/5/92	2330	01	35.7	146	144	285	30	246	30	444	30	336	30	39.9	4.1	50.4	5.8	41.2	6.7	43.5	10.1
11/5/92	2345	01	36.0	137	125	284	30	247	31	444	30	333	30	39.8	3.4	51.9	4.2	41.8	3.6	43.2	6.1
11/6/92	0	01	36.0	129	138	284	30	248	30	440	30	327	30	40.0	5.2	51.8	5.4	42.1	5.3	43.0	4.2
11/6/92	15	00	36.3	147	157	284	30	246	31	444	30	341	30	40.1	3.5	52.4	4.5	41.7	3.9	43.8	6.3
11/6/92	30	00	36.9	135	140	287	30	245	31	446	30	340	30	39.9	5.5	51.7	3.5	41.8	4.4	43.1	4.2
11/6/92	45	00	36.3	143	152	283	31	246	30	445	30	342	30	40.3	3.3	52.4	4.1	41.7	4.0	40.6	3.0
11/6/92	100	01	35.9	116	157	282	30	247	31	447	30	343	30	39.9	5.5	51.3	3.7	41.5	4.6	44.2	8.1
11/6/92	115	01	35.2	94	130	286	30	246	30	449	30	342	30	39.6	7.7	52.0	3.9	41.5	7.7	44.0	5.9
11/6/92	130	01	32.4	109	168	281	33	248	31	451	30	349	30	39.7	5.8	49.6	4.5	40.9	5.3	44.6	9.7
11/6/92	145	01	35.2	92	159	286	30	245	30	453	30	343	30	39.8	7.8	50.0	4.4	41.2	6.4	45.2	4.9
11/6/92	200	06	00	256	49.8	27.7	13.4	23.8	22.6	28.5	35.5	24.5	17.2	40.1	3.8	53.0	3.2	41.5	4.2	40.4	5.3
11/6/92	215	01	29.7	148	28.9	30.1	3.1	25.3	3.2	45.0	3.1	35.9	5.6	39.7	6.7	50.4	3.3	41.5	5.7	40.9	3.7
11/6/92	230	01	29.9	14.5	22.4	29.2	30	25.1	3.1	45.2	30	38.0	3.1	39.9	4.9	51.3	4.0	41.8	4.6	40.3	5.0
11/6/92	245	01	30.2	13.4	27.1	29.3	32	25.2	3.1	45.7	33	37.6	4.9	39.7	5.1	50.7	5.3	41.7	7.2	42.7	3.9
11/6/92	300	01	31.6	9.8	17.4	28.9	30	24.8	3.1	47.4	30	38.6	3.0	40.2	10.6	52.3	5.1	42.2	5.8	45.1	3.4
11/6/92	315	01	32.5	9.7	18.7	28.4	30	24.7	3.1	47.4	3.1	39.3	3.0	39.7	4.1	52.6	4.5	41.8	3.2	42.1	3.9
11/6/92	330	01	33.1	9.3	18.4	28.1	30	24.6	3.1	47.6	3.1	39.5	3.1	39.8	4.4	52.3	3.8	42.0	3.1	41.8	4.8
11/6/92	345	01	32.2	11.2	15.5	28.2	30	24.6	3.1	47.7	3.0	39.2	3.0	39.8	4.2	51.8	4.2	42.0	4.0	43.1	4.3
11/6/92	400	01	33.7	11.9	18.0	28.6	4.6	24.8	3.1	48.6	3.1	37.8	3.0	39.8	7.8	51.4	4.2	42.2	6.5	42.0	3.2
11/6/92	415	01	33.8	10.0	13.1	28.5	30	24.6	3.1	48.0	3.1	37.2	3.0	39.7	4.8	51.0	4.1	41.8	5.7	46.0	6.8
11/6/92	430	01	32.8	10.4	16.6	28.0	30	24.6	3.1	47.5	3.1	38.2	3.4	39.9	7.9	52.6	4.2	42.4	3.3	44.7	11.2
11/6/92	445	01	32.9	8.7	15.4	28.3	30	24.6	3.1	48.4	3.1	38.2	3.0	40.1	3.0	52.0	5.8	42.4	3.1	46.5	5.9
11/6/92	500	01	34.0	8.9	16.9	28.3	30	24.6	3.1	48.1	3.0	37.6	3.0	39.9	7.8	52.1	4.9	42.3	3.9	46.5	4.8
11/6/92	515	01	32.5	8.1	13.8	28.6	30	24.8	3.1	47.8	3.1	35.9	3.0	40.0	7.8	51.4	5.4	42.3	3.6	45.9	4.4
11/6/92	530	01	31.6	8.4	14.0	28.3	30	24.8	3.1	47.2	3.0	35.8	3.0	39.9	4.5	51.4	4.5	42.0	3.6	45.0	5.8
11/6/92	545	01	32.8	9.3	17.2	28.3	3.2	24.7	3.1	47.7	3.0	37.1	3.0	39.9	4.1	52.3	7.4	42.3	4.2	45.8	5.0
11/6/92	600	01	29.8	11.8	24.0	28.4	30	24.6	3.1	46.6	3.1	37.6	3.2	38.8	11.7	51.2	7.6	41.5	8.4	45.2	7.2
11/6/92	615	01	29.4	16.7	19.9	28.7	30	24.6	3.1	48.0	3.1	38.7	3.2	40.1	3.5	51.8	4.5	42.1	5.3	46.3	8.4
11/6/92	630	01	29.3	13.1	21.0	28.3	3.1	24.4	3.1	48.1	3.1	39.1	3.2	40.1	6.2	52.1	4.8	42.3	4.1	46.4	5.6
11/6/92	645	01	30.4	12.3	17.3	28.3	30	24.4	3.1	49.4	3.1	39.6	3.0	39.2	5.5	52.3	3.5	42.3	3.5	43.1	3.5
11/6/92	700	01	32.7	13.3	18.6	28.5	30	24.4	3.0	50.3	3.6	39.9	3.2	40.4	4.3	52.7	5.3	42.6	3.6	47.7	8.1
11/6/92	715	01	30.8	12.8	21.4	28.1	3.9	24.3	3.0	48.2	3.1	38.8	3.2	40.2	4.1	53.0	4.8	42.2	3.3	46.0	3.5
11/6/92	730	01	30.5	13.6	25.5	28.1	30	24.2	3.0	47.9	3.1	38.6	3.3	40.0	6.4	52.8	6.2	42.3	3.2	46.5	4.8
11/6/92	745	01	31.4	12.9	21.8	28.0	30	24.2	3.0	48.4	3.0	38.9	3.1	40.1	9.3	51.9	6.0	41.8	6.2	46.3	3.7
11/6/92	800	01	35.6	11.5	16.3	28.7	30	24.6	3.0	50.1	3.0	38.3	3.0	40.1	9.7						

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D1 KW	D1 spk/min	D2 KW	D2 spk/min	D3 KW	D3 spk/min	D4 KW	D4 spk/min	G1 KW	G1 spk/min	G2 KW	G2 spk/min	G3 KW	G3 spk/min	G4 KW	G4 spk/min
11/6/92	800	0.1	33.9	105	160	28.6	3.0	24.5	3.0	49.0	3.0	38.3	3.0	39.9	13.3	52.7	5.0	42.6	3.1	42.2	3.9
11/6/92	845	0.1	34.4	105	140	28.6	3.0	24.7	3.0	49.1	3.0	35.8	3.0	40.3	3.0	52.7	5.1	42.1	3.2	44.7	12.6
11/6/92	900	0.1	33.8	11.7	154	28.3	3.0	24.5	3.0	48.4	3.2	37.8	3.0	40.5	3.5	51.6	4.8	42.0	5.0	47.8	5.8
11/6/92	915	0.1	34.0	11.1	170	28.4	3.0	24.5	3.0	48.4	3.0	38.9	3.0	38.0	5.8	48.6	5.5	39.9	6.2	46.8	5.5
11/6/92	930	0.1	34.6	12.1	158	28.8	3.3	24.5	3.0	49.1	3.0	37.8	3.0	40.5	4.4	52.7	5.0	42.5	4.5	47.7	5.4
11/6/92	945	0.1	35.6	108	131	29.0	3.0	24.7	3.0	48.4	3.0	38.0	3.0	40.2	3.2	52.7	5.3	42.4	4.1	47.6	3.3
11/6/92	1000	0.1	30.9	108	132	28.6	3.0	24.6	3.0	48.1	3.0	38.0	3.0	39.9	3.2	50.9	4.3	41.8	7.3	47.3	4.0
11/6/92	1015	0.1	31.5	105	9.8	28.7	3.0	24.8	3.0	47.6	3.0	34.2	3.0	39.5	2.9	50.9	5.2	41.8	5.8	42.1	3.1
11/6/92	1030	0.1	30.9	108	100	29.0	3.0	24.8	3.0	47.8	3.0	34.6	3.0	39.5	2.9	51.8	3.9	42.0	5.5	47.5	3.6
11/6/92	1045	0.1	30.4	102	9.7	29.4	3.0	24.9	3.0	48.6	3.0	33.5	3.0	39.5	2.9	52.2	4.0	42.1	3.4	48.8	4.7
11/6/92	1100	0.1	29.8	10.7	9.8	29.1	3.0	24.9	3.0	47.0	3.0	34.0	3.0	39.5	3.0	52.0	5.7	42.0	3.9	47.0	4.3
11/6/92	1115	0.1	29.9	10.2	9.8	29.7	3.0	25.0	3.0	47.1	3.0	33.9	3.0	39.5	2.9	51.7	7.8	41.9	3.7	45.1	3.4
11/6/92	1130	0.1	29.7	11.6	9.8	29.5	3.0	25.1	3.0	46.9	3.0	33.5	3.0	39.6	2.9	51.5	5.8	41.9	3.2	46.6	9.9
11/6/92	1145	0.1	31.4	10.7	9.4	29.7	3.0	25.0	3.0	45.4	3.0	32.0	3.0	39.3	5.3	51.9	5.1	41.8	4.6	44.6	5.4
11/6/92	1200	0.1	29.4	11.3	11.0	30.0	3.0	24.9	3.1	45.9	3.0	33.2	3.0	39.5	2.9	52.3	7.2	41.8	3.5	44.4	11.8
11/6/92	1215	0.1	32.3	10.4	11.0	30.1	3.0	24.9	3.0	45.9	3.0	33.0	3.0	39.5	3.4	52.6	7.7	41.8	3.9	44.6	4.7
11/6/92	1230	0.1	34.2	10.6	11.5	30.1	3.0	24.9	3.1	45.7	3.0	32.0	3.0	39.7	5.2	52.8	7.0	41.8	3.7	42.4	3.9
11/6/92	1245	0.1	34.2	11.1	13.1	29.6	3.0	24.9	3.0	46.3	3.0	33.7	3.0	39.9	3.2	52.9	7.8	41.9	3.4	42.6	4.2
11/6/92	1300	0.1	35.7	11.7	13.5	29.8	3.0	24.9	3.0	46.8	3.0	34.4	3.0	39.3	5.2	52.7	5.9	41.9	5.8	42.6	4.7
11/6/92	1315	0.1	35.3	11.6	14.6	29.6	3.4	25.0	3.0	47.3	3.0	34.8	3.0	40.0	3.4	50.3	5.3	41.0	4.7	47.1	7.7
11/6/92	1330	0.1	35.4	11.2	14.4	28.9	3.0	25.0	3.0	47.5	3.0	35.0	3.0	39.9	5.8	52.9	5.0	42.0	3.4	46.3	5.1
11/6/92	1345	0.1	35.0	11.5	14.8	29.0	3.0	25.0	3.0	47.7	3.0	35.0	3.0	40.0	3.2	53.2	3.8	42.2	3.6	46.8	5.7
11/6/92	1400	0.1	34.8	11.7	14.5	28.9	3.0	24.9	3.0	48.0	3.0	35.3	3.0	39.9	4.4	52.7	5.9	42.1	5.0	45.6	3.8
11/6/92	1415	0.1	34.6	12.0	13.7	29.6	3.0	25.0	3.0	47.7	3.0	34.0	3.0	39.1	17.0	53.2	11.8	42.0	7.7	46.7	4.7
11/6/92	1430	0.1	31.7	12.5	17.8	28.4	3.0	24.7	3.0	46.7	3.0	35.3	3.0	39.9	4.9	53.4	5.2	42.3	5.2	46.7	5.5
11/6/92	1445	0.1	32.3	13.1	18.9	28.2	3.0	24.6	3.0	47.1	3.0	35.5	3.0	39.6	9.3	52.9	5.2	41.9	7.0	41.6	3.7
11/6/92	1500	0.1	32.4	13.7	20.9	27.8	4.0	24.4	3.0	46.7	3.0	35.8	3.0	40.0	7.3	53.1	5.9	42.1	5.1	43.1	4.5
11/6/92	1515	0.1	33.0	13.3	15.7	28.1	3.0	24.6	3.0	47.8	3.1	35.7	3.0	39.9	5.0	51.2	5.1	41.4	5.3	45.0	5.3
11/6/92	1530	0.1	35.5	10.9	12.4	29.6	3.8	24.8	3.0	48.4	3.0	35.3	3.0	39.9	5.8	53.0	4.1	42.2	3.9	43.6	5.8
11/6/92	1545	0.1	31.7	13.3	19.1	28.1	3.7	24.6	3.0	47.3	3.0	35.5	3.0	39.8	5.8	53.3	5.0	42.3	4.2	46.2	7.8
11/6/92	1600	0.1	32.7	13.3	17.1	28.4	3.0	24.6	3.0	47.9	3.1	35.6	3.0	39.8	7.1	51.5	5.0	41.5	4.7	47.1	5.5
11/6/92	1615	0.1	32.8	13.1	18.5	28.5	3.0	24.6	3.0	47.8	3.0	35.8	3.0	39.9	3.9	52.1	4.5	41.8	5.1	46.6	5.2
11/6/92	1630	0.1	32.9	13.7	19.6	28.6	3.0	24.6	3.0	48.0	3.2	35.8	3.0	39.7	4.3	50.8	4.7	41.1	5.6	47.4	5.2
11/6/92	1645	0.1	33.5	13.4	17.5	28.4	3.0	24.6	3.0	48.1	3.0	35.8	3.0	40.0	3.7	52.3	3.8	41.9	4.9	43.9	4.4
11/6/92	1700	0.1	33.8	14.0	17.4	28.5	3.2	24.6	3.4	48.1	3.1	35.9	3.0	39.8	5.5	52.6	5.5	41.7	5.8	47.2	7.5
11/6/92	1715	0.1	33.0	13.5	17.8	28.5	3.0	24.7	3.1	48.3	3.0	37.0	3.0	40.1	5.3	49.5	4.2	40.8	7.2	45.7	7.5
11/6/92	1730	0.1	33.3	14.4	18.5	28.7	3.1	24.6	3.0	47.9	3.0	37.0	3.0	40.1	3.8	51.9	3.7	41.9	4.5	47.2	5.3
11/6/92	1745	0.1	33.3	12.3	18.0	28.3	3.0	24.6	3.0	48.4	3.0	37.0	3.0	39.9	5.3	52.3	4.7	42.0	5.1	47.1	5.1
11/6/92	1800	0.1	33.4	13.8	18.4	28.5	3.0	24.6	3.0	48.3	3.0	37.0	3.0	39.6	5.0	51.1	5.0	41.4	5.3	47.7	5.2
11/6/92	1815	0.1	33.4	13.9	19.1	28.3	3.0	24.6	3.0	48.3	3.0	37.2	3.0	38.8	9.7	50.0	4.8	41.0	5.8	46.8	5.0
11/6/92	1830	0.1	34.0	12.8	16.7	28.6	3.0	24.6	3.0	48.5	3.0	37.2	3.0	39.6	5.1	52.1	3.7	41.8	4.9	47.6	5.6
11/6/92	1845	0.1	33.6	13.1	18.6	28.6	3.0	24.6	3.1	48.6	3.0	37.7	3.0	39.3	4.9	50.0	5.4	41.2	5.2	46.3	10.6
11/6/92	1900	0.1	33.9	14.9	19.9	28.4	3.0	24.5	3.0	48.3	3.4	37.8	3.0	39.7	4.7	53.0	5.8	42.0	4.1	44.7	5.4
11/6/92	1915	0.1	33.3	16.3	21.1	28.3	3.0	24.5	3.1	48.5	3.0	37.7	3.0	39.8	4.1	50.6	5.3	41.3	7.4	47.2	9.1
11/6/92	1930	0.1	33.3	16.2	20.7	28.4	3.0	24.4	3.0	48.2	3.5	37.8	3.0	39.2	5.0	51.1	4.5	41.0	5.0	46.6	10.7
11/6/92	1945	0.1	33.3	14.5	21.5	28.0	3.0	24.5	3.0	48.3	3.0	37.8	3.0	39.8	3.5	53.1	3.9	42.0	4.2	47.1	5.0
11/6/92	2000	0.1	32.7	14.1	18.7	28.4	3.1	24.6	3.0	49.0	3.0	37.8	3.0	40.1	3.7	51.5	5.3	41.8	5.8	47.8	9.3
11/6/92	2015	0.1	35.2	14.2	17.1	28.8	3.0	24.8	3.1	49.6	3.1	37.0	3.0	39.9	5.2	52.7	4.8	42.1	5.3	46.0	4.2
11/6/92	2030	0.1	35.2	0.1	16.7	28.5	3.0	24.7	3.0	48.8	3.0	36.7	3.0	39.9	5.1	52.2	4.3	42.1	4.8	46.9	10.3
11/6/92	2045	0.1	31.7	17.0	21.6	27.9	3.0	24.3	3.0	47.6	3.0	35.5	3.0	38.4	7.3	50.9	5.2	41.2	5.5	46.3	7.0
11/6/92	2100	0.1	31.2	15.1	22.1	27.9	3.0	24.3	3.0	47.5	3.0	35.9	3.0	39.4	5.5	52.5	4.9	41.8	5.4	44.7	4.2
11/6/92	2115	0.1	31.1	17.1	24.3	28.0	3.1	24.3	3.0	47.6	3.1	35.7	3.0	39.3	9.7	52.7	4.8	42.4	5.8	43.3	5.8
11/6/92	2130	0.1	31.1	17.2	24.6	28.1	3.6	24.2	3.0	47.2	3.1	35.8	3.3	38.6	9.9	51.0	7.1	41.2	7.7	44.8	4.5
11/6/92	2145	0.1	35.1	16.6	19.7	27.8	3.0	24.4	3.0	48.1	3.0	35.5	3.0	39.2	5.3	51.3	5.8	41.3	5.0	46.6	5.0
11/6/92	2200	0.1	35.4	13.8	17.5	28.6	3.0	24.6	3.0	48.9	3.0	37.3	3.0	39.4	3.8	52.8	5.5	41.7	3.8	45.7	5.0
11/6/92	2215	0.1	35.1	12.9	15.0	28.8	3.0	24.8	3.0	49.4	3.2	37.5	3.0	39.5	4.1	52.3	4.4	41.4	5.1	48.6	7.4
11/6/92	2230	0.1	34.7	12.9	12.2	29.5	3.1	24.9	3.0	49.2	3.0	35.3	3.0	39.9	7.0	49.5	5.1	40.7	7.5	46.9	5.9
11/6/92	2245	0.1	34.5	12.5	11.5	28.8	3.0	24.6	3.0	48.3	3.0	35.4	3.0	39.0	7.1	52.5	4.8	41.5	5.3	47.0	7.4
11/6/92	2300	0.1	34.0	13.9	12.9	28.9	3.0	24.6	3.0	47.7	3.0	35.2	3.0	39.8	5.5	52.5	5.8	41.5	5.6	47.2	5.3
11/6/92	2315	0.1	34.4	12.4	12.5	28.8	3.0	24.7	3.0	48.1	3.0	35.3	3.0	39.7	5.3	53.1	4.3	42.0	5.8	41.8	5.2
11/6/92	2330	0.1	34.6	11.8	11.6	29.2	3.0	24.7	3.0	47.9	3.0	34.8	3.0	39.4	7.5	52.0	3.9	41.5	5.6	40.9	3.0
11/6/92	2345	0.1	34.1	10.7	11.3	28.6</															

12/3/02

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	S Op %	D 1 KW spl/ mn	D 2 KW spl/ mn	D 3 KW spl/ mn	D 4 KW spl/ mn	C 1 KW spl/ mn	C 2 KW spl/ mn	C 3 KW spl/ mn	C 4 KW spl/ mn
11/7/02	45	01	34.5	10.8	15.9	28.5	3.0	24.6	3.0	47.9	3.0	34.9	3.0
11/7/02	100	01	34.6	10.2	14.8	28.4	3.1	24.7	3.0	48.2	3.0	35.2	3.0
11/7/02	115	01	35.6	10.3	15.3	28.8	3.0	24.7	3.0	48.4	3.0	35.9	3.0
11/7/02	130	01	35.1	11.3	16.8	28.5	3.0	24.7	3.0	48.1	3.0	35.7	3.0
11/7/02	145	01	34.5	8.3	12.1	29.1	3.0	24.8	3.0	48.7	3.0	35.2	3.0
11/7/02	200	01	34.5	8.2	12.6	28.7	3.0	24.8	3.1	48.8	3.0	35.5	3.0
11/7/02	215	01	34.2	10.5	16.3	28.6	3.1	24.8	3.0	48.1	3.0	35.8	3.0
11/7/02	230	01	34.5	10.2	17.2	28.8	3.0	24.8	3.1	48.3	3.1	35.1	3.0
11/7/02	245	01	35.9	9.6	14.8	29.3	3.0	24.8	3.1	48.4	3.1	35.0	3.0
11/7/02	300	01	34.2	9.7	15.4	28.9	3.0	24.7	3.1	47.8	3.1	35.1	3.0
11/7/02	315	01	33.0	8.8	13.5	28.5	3.0	24.8	3.1	48.2	3.1	34.8	3.0
11/7/02	330	01	32.0	10.6	15.4	27.5	4.3	24.6	4.0	47.5	3.1	35.3	3.0
11/7/02	345	01	33.0	9.8	17.0	28.1	3.0	24.5	3.1	47.6	3.1	35.4	3.0
11/7/02	400	01	31.7	10.2	16.8	27.7	3.0	24.4	3.1	47.2	3.1	35.0	3.0
11/7/02	415	01	31.7	10.0	13.8	28.2	3.0	24.5	3.1	47.9	3.1	35.1	3.0
11/7/02	430	01	31.7	9.1	12.8	28.0	3.0	24.5	3.1	48.2	3.1	35.2	3.0
11/7/02	445	01	31.8	9.6	16.2	28.1	3.0	24.5	3.1	48.4	3.1	35.2	3.0
11/7/02	500	01	32.1	9.9	13.9	27.8	3.0	24.5	3.1	48.3	3.1	35.1	3.0
11/7/02	515	01	31.3	9.2	13.9	28.1	3.0	24.6	3.1	49.0	3.1	35.5	3.0
11/7/02	530	01	32.1	9.1	13.7	28.2	3.0	24.6	3.0	48.6	3.0	35.0	3.0
11/7/02	545	01	31.1	10.5	18.0	27.9	3.5	24.5	3.1	47.8	3.0	35.6	3.0
11/7/02	600	01	30.9	9.4	16.2	28.0	3.5	24.5	3.1	48.1	3.2	35.0	3.0
11/7/02	615	01	30.3	11.4	19.9	28.1	3.0	24.5	3.1	48.0	3.1	35.8	3.0
11/7/02	630	01	30.7	10.8	18.6	28.2	3.0	24.5	3.2	48.2	3.0	35.1	3.0
11/7/02	645	01	31.2	12.1	19.5	28.3	3.0	24.5	3.1	48.5	3.1	35.3	3.0
11/7/02	700	01	31.2	12.8	22.5	28.3	3.0	24.5	3.1	48.3	3.0	35.2	3.0
11/7/02	715	01	32.1	10.7	20.4	28.1	3.0	24.5	3.1	49.4	3.1	35.9	3.0
11/7/02	730	01	33.1	9.8	17.4	28.1	3.6	24.6	3.0	49.3	3.1	37.2	3.0
11/7/02	745	01	33.1	10.8	16.3	28.4	3.0	24.5	3.1	48.8	3.1	35.9	3.0
11/7/02	800	01	33.1	9.1	15.7	28.1	3.0	24.3	3.1	48.5	3.1	35.7	3.0
11/7/02	815	01	33.7	9.8	17.0	27.9	3.1	24.4	3.1	48.5	3.0	35.7	3.0
11/7/02	830	01	34.3	11.8	15.6	28.4	3.0	24.5	3.1	49.0	3.1	35.9	3.0
11/7/02	845	01	34.1	12.3	16.7	28.2	3.0	24.5	3.0	48.9	3.0	35.5	3.0
11/7/02	900	01	35.1	12.7	15.9	28.6	3.0	24.5	3.1	48.2	3.1	35.5	3.0
11/7/02	915	01	35.5	17.2	14.1	28.9	3.0	24.6	3.0	48.3	3.0	34.7	3.0
11/7/02	930	01	34.6	12.9	13.6	28.5	3.0	24.6	3.1	48.0	3.0	35.3	3.0
11/7/02	945	01	34.2	13.3	13.7	28.4	3.0	24.6	3.0	48.1	3.0	35.4	3.0
11/7/02	1000	01	34.4	11.2	12.9	28.3	3.0	24.6	3.0	48.4	3.4	35.1	3.0
11/7/02	1015	01	34.1	12.1	13.6	28.5	3.0	24.7	3.0	49.3	3.0	35.1	3.0
11/7/02	1030	01	33.4	12.1	12.6	28.6	3.0	24.6	3.0	48.1	3.0	34.9	3.0
11/7/02	1045	01	33.8	12.6	11.8	28.6	3.0	24.6	3.0	48.2	3.0	34.5	3.0
11/7/02	1100	01	33.2	13.4	11.3	28.4	3.0	24.5	3.0	47.8	3.0	34.1	3.0
11/7/02	1115	01	33.5	11.6	11.2	28.4	3.0	24.6	3.1	47.9	3.0	34.1	3.0
11/7/02	1130	01	32.4	11.1	14.2	28.0	3.0	24.5	3.1	47.4	3.0	33.8	3.0
11/7/02	1145	01	34.0	11.7	12.2	28.5	3.0	24.7	3.1	48.0	3.0	34.3	3.0
11/7/02	1200	01	32.6	14.5	13.6	28.0	3.0	24.6	3.0	47.4	3.0	34.4	3.0
11/7/02	1215	01	34.9	12.3	11.6	28.6	3.0	24.6	3.0	47.2	3.0	33.6	3.0
11/7/02	1230	01	32.8	12.2	12.0	27.8	3.0	24.5	3.0	47.1	3.0	33.8	3.0
11/7/02	1245	01	32.5	12.7	12.8	27.7	3.0	24.4	3.0	47.0	3.0	34.2	3.0
11/7/02	1300	01	31.9	13.3	13.1	27.8	3.0	24.4	3.0	46.8	3.0	33.7	3.0
11/7/02	1315	01	33.5	13.4	16.1	28.4	3.0	24.5	3.0	47.2	3.0	34.3	3.0
11/7/02	1330	01	34.4	14.1	19.2	28.5	4.7	24.6	3.1	47.1	3.0	34.6	3.0
11/7/02	1345	01	31.8	13.8	17.2	28.0	3.0	24.7	3.0	48.3	3.0	35.7	3.0
11/7/02	1400	01	34.7	12.6	14.0	28.7	3.0	24.8	3.1	48.8	3.0	34.9	3.0
11/7/02	1415	01	32.7	14.5	16.0	28.0	3.0	24.6	3.0	48.0	3.0	35.4	3.0
11/7/02	1430	01	31.3	13.6	17.7	27.8	3.0	24.6	3.1	48.4	3.0	35.1	3.0
11/7/02	1445	01	31.2	15.1	17.6	27.8	3.0	24.7	3.0	48.7	3.5	35.3	3.0
11/7/02	1500	01	30.8	13.7	17.4	28.0	3.0	24.7	3.0	49.2	3.0	35.6	3.0
11/7/02	1515	01	30.7	14.2	16.7	27.8	3.0	24.6	3.1	48.2	3.4	35.9	3.0
11/7/02	1530	01	32.1	13.9	14.6	28.1	3.0	24.8	3.0	49.5	3.2	35.6	3.0
11/7/02	1545	01	32.1	13.5	14.4	28.1	3.0	24.8	3.1	49.5	3.1	35.5	3.0
11/7/02	1600	01	32.6	13.9	13.6	28.1	3.4	24.6	3.0	49.3	3.1	35.0	3.0
11/7/02	1615	01	31.7	14.2	15.0	28.1	3.0	24.6	3.1	49.0	3.0	34.9	3.0
11/7/02	1630	01	33.1	14.0	13.8	28.1	3.0	24.6	3.0	48.8	3.0	35.5	3.0
11/7/02	1645	01	35.6	12.0	11.8	29.1	3.0	24.7	3.0	49.2	3.0	34.1	3.0

12/3/92

20:40:59

Date	Time	Water Flow gpm	Line Flow gpm	Ssk Op %	S Op %	D1 KW	D1 spv/ mn	D2 KW	D2 spv/ mn	D3 KW	D3 spv/ mn	D4 KW	D4 spv/ mn	G1 KW	G1 spv/ mn	G2 KW	G2 spv/ mn	G3 KW	G3 spv/ mn	G4 KW	G4 spv/ mn
11/7/92	1700	01	34.6	124	120	28.6	3.0	24.7	3.0	48.6	3.0	34.2	3.0	38.2	17.1	81.6	12.9	41.3	12.6	47.6	4.7
11/7/92	1715	01	32.0	139	160	28.0	3.0	24.6	3.0	48.5	3.0	35.4	3.0	38.7	4.8	83.9	6.1	41.8	3.8	44.4	3.5
11/7/92	1730	01	33.1	153	213	28.2	3.0	24.6	3.1	47.3	3.0	35.1	3.0	38.7	3.4	83.4	3.2	42.2	5.9	44.0	3.3
11/7/92	1745	01	32.9	143	162	28.2	3.0	24.6	3.0	48.2	3.0	35.6	3.0	38.9	6.6	83.9	4.3	42.3	3.9	43.7	5.5
11/7/92	1800	01	33.7	144	122	28.8	3.0	24.8	3.1	49.3	3.1	35.5	3.0	38.8	3.1	83.6	4.0	42.3	4.2	48.2	10.2
11/7/92	1815	01	33.6	140	126	28.6	3.0	24.7	3.0	48.6	3.0	34.9	3.0	38.7	6.5	83.6	12.4	42.0	4.2	47.8	6.9
11/7/92	1830	01	34.2	132	129	28.8	3.0	24.8	3.1	48.7	3.4	34.7	3.0	38.8	4.5	83.6	6.7	42.2	4.3	47.5	5.3
11/7/92	1845	01	32.3	127	134	28.3	3.0	24.6	3.0	48.2	3.0	33.7	3.0	38.9	8.4	84.0	5.5	42.4	3.9	46.7	9.7
11/7/92	1900	01	34.9	132	132	28.9	3.0	24.8	3.0	48.2	3.0	35.4	3.0	38.7	3.3	82.3	4.7	41.7	4.5	46.4	9.6
11/7/92	1915	01	32.3	141	155	28.3	3.0	24.7	3.1	47.6	3.0	35.0	3.0	38.8	4.3	83.6	5.3	42.1	3.3	44.8	10.9
11/7/92	1930	01	31.6	137	147	28.2	3.0	24.7	3.0	47.8	3.0	35.5	3.0	38.4	8.1	83.7	5.3	42.3	4.1	44.7	7.9
11/7/92	1945	01	31.6	147	154	28.1	3.3	24.6	3.1	48.0	3.1	35.5	3.0	38.6	3.6	83.6	5.3	42.1	3.6	43.1	8.4
11/7/92	2000	01	32.0	149	149	28.2	3.0	24.6	3.0	48.4	3.1	35.4	3.0	38.9	3.3	83.5	3.4	42.0	5.3	45.8	11.4
11/7/92	2015	01	32.3	141	153	28.1	3.1	24.7	3.1	48.3	3.1	35.6	3.0	38.9	3.3	83.0	3.4	42.0	4.6	46.6	10.5
11/7/92	2030	01	32.2	129	132	28.3	3.0	24.8	3.0	49.4	3.0	35.6	3.0	38.8	2.9	83.2	3.1	42.3	3.8	47.1	10.2
11/7/92	2045	01	32.9	140	158	28.3	3.0	24.9	3.1	49.1	3.2	35.9	3.0	40.2	4.3	83.5	3.5	42.4	4.3	47.5	5.9
11/7/92	2100	01	32.8	142	162	28.5	3.0	24.8	3.1	48.9	3.0	37.0	3.0	38.8	4.0	83.5	6.4	42.3	3.5	44.0	8.9
11/7/92	2115	01	33.4	145	158	28.4	3.0	24.8	3.0	48.5	3.0	35.5	3.0	38.9	3.3	84.1	3.3	42.2	3.4	46.4	5.4
11/7/92	2130	01	32.8	133	143	28.1	3.0	24.7	3.1	48.6	3.1	35.4	3.0	38.9	3.0	83.8	3.8	42.0	3.4	40.2	3.0
11/7/92	2145	01	32.6	150	148	28.0	3.0	24.7	3.0	48.5	3.0	35.3	3.0	38.9	5.0	84.0	3.8	42.0	3.2	44.6	10.9
11/7/92	2200	01	32.3	127	126	28.9	3.1	24.9	3.1	49.0	3.0	35.2	3.0	38.3	3.4	84.0	4.0	42.0	3.9	47.1	11.2
11/7/92	2215	01	32.6	132	159	28.3	3.7	24.5	3.0	47.5	3.0	35.7	3.0	38.7	4.8	84.0	5.5	41.9	5.4	46.2	5.6
11/7/92	2230	01	34.8	139	152	28.8	3.0	24.8	3.1	48.5	3.0	35.0	3.0	40.2	3.9	81.7	3.8	41.3	6.9	46.1	10.6
11/7/92	2245	01	33.1	132	132	28.2	3.0	24.5	3.0	48.1	3.0	34.7	3.0	38.7	3.2	84.3	4.2	42.1	4.6	45.9	4.9
11/7/92	2300	01	34.2	133	141	28.4	3.0	24.6	3.0	47.8	3.0	34.9	3.0	38.8	3.8	83.7	3.3	41.8	3.8	45.5	7.7
11/7/92	2315	01	33.9	144	164	28.6	3.0	24.8	3.1	47.8	3.3	35.6	3.0	38.7	3.9	84.1	4.0	42.0	5.0	44.0	4.3
11/7/92	2330	01	31.9	147	171	28.2	3.1	24.7	3.0	47.7	3.5	35.4	3.0	38.7	5.4	83.7	3.7	42.2	3.7	46.9	6.5
11/7/92	2345	01	32.0	131	160	28.3	3.0	25.1	3.1	49.8	3.1	37.0	3.0	40.0	3.4	82.8	4.0	42.4	3.3	43.7	3.2
11/8/92	0	01	31.4	133	173	28.1	3.0	24.9	3.0	49.6	3.0	35.5	3.0	40.2	2.9	83.0	3.5	42.6	3.4	48.0	5.0
11/8/92	15	01	33.1	130	155	28.8	3.0	25.5	3.1	51.1	3.1	37.5	3.0	40.4	3.3	82.4	3.0	43.0	3.2	48.5	6.3
11/8/92	30	01	33.0	148	138	28.3	3.0	25.3	3.1	52.2	3.1	37.3	3.0	40.5	3.8	82.5	3.0	43.0	3.2	48.6	3.4
11/8/92	45	01	33.5	136	190	28.4	6.6	24.8	6.5	49.2	3.0	38.7	3.0	40.0	5.9	83.5	3.9	42.7	3.8	42.8	3.1
11/8/92	100	01	32.8	143	212	28.4	3.0	24.8	3.1	49.1	3.0	35.8	3.0	38.8	10.6	82.7	3.8	42.3	14.0	47.5	7.0
11/8/92	115	01	32.6	150	204	28.0	3.3	24.6	3.1	48.1	3.2	35.9	3.0	40.3	3.5	83.3	3.0	42.9	3.5	46.3	3.4
11/8/92	130	01	31.9	107	192	28.4	3.0	24.6	3.1	49.3	3.1	35.0	3.0	40.1	4.0	83.3	3.1	42.8	4.2	47.9	5.6
11/8/92	145	01	31.1	107	168	28.3	3.0	24.6	3.0	49.2	3.0	35.3	3.0	40.5	3.0	83.4	3.0	42.6	4.0	46.4	6.1
11/8/92	200	01	31.3	106	168	27.9	3.0	24.8	3.1	50.1	3.1	37.0	3.0	38.9	5.2	83.1	3.2	42.8	3.4	44.7	6.7
11/8/92	215	01	33.9	91	141	29.0	3.0	24.9	3.1	49.8	3.1	36.1	3.0	38.7	4.3	83.3	3.7	42.9	4.2	46.4	6.3
11/8/92	230	01	30.2	100	168	28.3	3.0	24.7	3.1	49.6	3.1	37.0	3.0	38.8	5.3	82.8	3.2	42.4	3.8	47.3	8.6
11/8/92	245	01	29.5	118	204	28.4	3.1	24.5	3.0	48.3	3.0	35.6	3.0	38.9	4.9	83.1	3.2	42.2	3.4	44.2	5.0
11/8/92	300	01	30.1	117	210	28.0	3.0	24.6	3.0	49.2	3.1	35.8	3.3	38.6	15.4	82.4	14.9	41.5	18.0	48.3	11.3
11/8/92	315	01	31.2	9.5	164	28.3	3.0	24.9	3.1	50.6	3.1	35.9	3.0	38.1	10.2	80.8	7.7	41.6	7.7	46.7	4.6
11/8/92	330	01	30.7	9.7	149	27.9	3.1	24.7	3.0	50.6	3.0	37.0	3.0	38.4	4.2	81.9	3.2	42.1	4.3	49.8	7.7
11/8/92	345	01	30.9	12.3	204	28.1	3.2	24.6	3.1	48.7	3.1	35.4	3.0	40.0	7.4	82.3	3.4	42.1	6.8	45.1	3.7
11/8/92	400	01	31.0	9.8	174	28.0	3.0	24.6	3.0	49.2	3.9	35.0	3.0	38.9	7.3	82.7	3.4	42.4	5.5	47.1	7.9
11/8/92	415	01	31.8	9.3	171	28.2	3.0	24.8	3.1	49.9	3.7	35.6	3.0	40.1	3.4	82.5	3.8	42.7	3.2	46.7	7.5
11/8/92	430	01	31.4	10.3	19.7	28.0	3.0	24.7	3.1	49.5	3.1	35.8	3.0	38.5	7.5	83.3	5.3	42.3	4.4	46.7	6.6
11/8/92	445	01	34.2	8.6	15.8	28.6	3.0	25.1	3.1	51.8	3.1	35.4	3.0	38.4	6.1	46.6	4.5	40.2	6.3	50.1	6.3
11/8/92	500	01	31.7	10.0	17.1	28.0	3.0	24.9	3.1	50.9	3.1	37.5	3.0	40.1	2.9	80.3	3.8	41.8	7.4	44.6	3.4
11/8/92	515	01	33.3	8.8	16.6	28.4	3.0	25.1	3.0	51.9	3.1	37.7	3.0	40.2	4.4	82.4	4.3	42.7	3.6	45.5	4.2
11/8/92	530	01	33.1	9.5	16.6	28.7	3.0	25.2	3.1	52.2	3.1	37.9	3.0	40.3	4.6	82.4	3.8	42.7	3.8	49.6	5.5
11/8/92	545	01	32.3	8.4	15.4	28.5	3.0	25.1	3.0	52.5	3.1	37.7	3.0	38.6	5.2	82.1	5.4	42.5	4.6	48.7	5.1
11/8/92	600	01	32.2	8.2	14.2	28.3	3.0	25.1	3.1	52.8	3.2	37.8	3.0	40.9	3.2	82.3	3.9	43.0	6.3	49.7	8.8
11/8/92	615	01	32.2	9.1	18.2	28.3	3.2	25.1	3.1	52.6	3.1	38.4	3.0	40.3	3.8	82.2	5.1	42.7	5.4	50.0	9.3
11/8/92	630	01	33.2	7.3	12.5	29.2	3.0	25.1	3.1	52.2	3.1	38.5	3.0	40.2	5.5	81.7	3.2	42.7	3.8	50.4	7.4
11/8/92	645	01	35.7	6.5	10.4	29.8	3.0	25.2	3.1	52.0	3.1	35.7	3.0	40.2	3.0	82.5	4.8	42.9	3.5	50.2	5.2
11/8/92	700	01	32.1	7.1	12.2	29.0	3.0	25.2	3.0	51.3	3.0	35.7	3.0	38.8	2.9	82.4	4.4	42.7	3.1	49.8	5.3
11/8/92	715	01	31.6	8.3	14.3	28.1	3.0	25.0	3.1	50.1	3.1	37.0	3.0	38.5	3.9	46.7	4.1	41.1	5.3	48.5	5.3
11/8/92	730	01	32.4	8.3	16.6	28.5	3.0	25.1	3.0	50.5	3.1	37.2	3.0	40.0	3.5	82.1	4.7	42.2	5.5	46.9	7.1
11/8/92	745	01	32.8	8.8	16.2	28.3	3.0	25.2	3.1	51.2	3.1	37.4	3.0	38.9	4.3	80.4	6.3	41.4	6.7	49.3	10.2
11/8/92	800	01	32.9	8.7	17.2	28.7	3.0	25.2	3.1	51.4	3.1	37.8	3.0	38.9	4.8	82.4	6.3	42.3	4.7	44.1	3.8
11/8/92	815	01	35.5	9.3	16.2	29.3	3.0	25.2	3.1	52.0	3.1	37.6	3.0	40.3							

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Date	Time	Water Flow gpm	Lime Flow gpm	Sol Op %	S Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn
11/8/92	915	01	34.6	90	11.3	29.5 3.0	25.4 3.1	52.2 3.1	35.8 3.0	40.5 3.8	52.3 4.9	42.8 3.8	48.8 6.8
11/8/92	930	01	34.0	90	12.6	29.2 3.0	25.4 3.1	53.2 3.2	35.4 3.0	40.0 3.8	52.9 6.3	42.8 3.9	44.7 6.1
11/8/92	945	01	34.5	89	13.3	29.7 3.0	25.5 3.1	52.1 3.1	35.8 3.0	39.0 5.1	50.6 5.5	41.3 4.7	48.9 9.6
11/8/92	1000	01	33.1	90	11.5	28.8 3.0	25.2 3.1	51.8 3.1	35.1 3.0	40.4 3.8	53.1 6.2	42.1 4.0	45.7 7.3
11/8/92	1015	01	33.4	83	11.0	28.8 3.0	25.1 3.1	51.9 3.1	35.8 3.0	40.4 2.9	52.8 5.0	42.7 5.2	48.3 10.6
11/8/92	1030	01	33.5	92	13.5	29.4 3.0	25.3 3.0	51.4 3.1	35.1 3.0	40.5 3.0	52.8 4.7	43.2 3.7	49.6 7.6
11/8/92	1045	01	33.2	78	9.9	29.5 3.0	25.2 3.1	51.1 3.1	34.8 3.0	40.4 3.4	52.8 3.8	43.3 3.6	44.5 5.4
11/8/92	1100	01	34.5	90	11.2	29.7 3.0	25.4 3.0	51.4 3.1	35.1 3.0	40.2 3.4	52.9 6.8	43.1 3.6	48.0 10.7
11/8/92	1115	01	33.3	89	10.3	29.6 3.0	25.4 3.1	51.1 3.1	35.1 3.0	40.3 2.9	52.3 3.1	43.1 3.7	43.2 3.6
11/8/92	1130	01	31.8	98	11.3	28.5 3.0	25.1 3.1	50.9 3.1	34.5 3.0	40.4 3.1	52.6 3.8	43.3 3.2	48.9 5.3
11/8/92	1145	01	33.5	95	15.0	29.3 3.0	25.5 3.1	50.3 3.1	35.2 3.0	40.1 4.3	53.0 5.0	43.1 3.1	48.9 5.7
11/8/92	1200	01	32.8	83	14.7	28.8 3.0	25.6 3.1	50.8 3.1	35.1 3.0	40.4 3.3	51.1 4.2	42.4 4.8	48.7 5.7
11/8/92	1215	01	32.4	86	16.3	28.6 3.0	25.6 3.0	50.6 3.1	35.3 3.0	38.7 6.1	52.8 3.7	43.1 4.1	48.1 4.8
11/8/92	1230	01	33.0	80	15.7	29.2 3.0	25.6 3.1	51.5 3.1	35.7 3.0	40.1 3.5	52.8 3.5	43.1 3.3	48.4 9.6
11/8/92	1245	01	32.1	0.1	14.8	29.1 3.0	25.8 3.1	53.2 5.1	37.2 3.0	40.6 3.9	52.8 3.2	43.5 3.3	50.8 6.4
11/8/92	1300	01	32.1	7.5	13.5	28.9 3.0	25.7 3.1	53.0 3.1	36.9 3.0	40.4 3.1	47.9 3.5	41.3 10.6	50.0 7.7
11/8/92	1315	01	31.2	80	12.6	28.4 3.0	25.4 3.1	51.9 3.1	35.6 3.0	40.1 3.0	52.4 3.7	42.8 5.3	49.2 5.4
11/8/92	1330	01	32.4	99	12.4	28.9 3.0	25.6 3.1	52.7 3.1	35.7 3.0	40.3 3.1	52.6 3.0	42.9 4.3	47.6 7.4
11/8/92	1345	01	31.7	8.3	13.1	28.8 3.4	25.8 3.1	53.5 3.1	37.1 3.0	40.9 3.0	53.1 3.1	43.7 3.2	50.1 4.6
11/8/92	1400	01	32.4	8.4	14.1	28.5 3.0	25.5 3.1	52.4 3.1	35.0 3.0	40.7 3.1	53.3 3.3	43.3 4.4	46.5 6.7
11/8/92	1415	01	35.5	103	13.9	30.0 3.0	26.1 3.1	52.0 3.1	36.3 3.0	40.3 3.5	51.6 3.3	42.4 4.8	46.1 10.9
11/8/92	1430	01	34.8	90	16.2	29.2 3.0	26.0 3.1	52.0 3.1	35.7 3.0	40.9 3.8	50.6 3.4	42.5 7.3	45.0 5.3
11/8/92	1445	01	34.2	8.8	12.8	28.7 3.0	25.9 3.1	52.7 3.1	35.1 3.0	38.7 10.1	48.1 8.9	39.5 7.4	45.4 11.2
11/8/92	1500	01	33.2	7.1	12.5	28.7 3.0	25.9 3.0	52.6 3.1	37.7 3.0	40.5 3.7	53.5 3.2	43.4 3.5	44.4 8.1
11/8/92	1515	01	33.5	8.5	13.0	29.2 3.0	26.0 3.1	53.2 3.3	37.7 3.0	40.7 3.7	53.5 5.8	43.6 5.3	46.1 7.2
11/8/92	1530	01	33.7	6.8	12.6	28.9 3.0	25.8 3.1	52.9 3.1	37.4 3.0	40.4 3.2	53.3 3.1	43.2 3.7	44.6 3.4
11/8/92	1545	01	34.4	6.3	12.2	29.2 3.0	25.8 3.1	53.1 3.1	37.3 3.0	40.5 3.3	52.5 3.4	43.1 3.5	47.3 9.8
11/8/92	1600	01	34.2	6.5	11.7	28.8 3.0	25.3 3.1	52.9 3.1	35.4 3.0	40.3 3.0	53.2 3.0	43.3 3.8	50.0 6.6
11/8/92	1615	01	34.4	80	14.0	29.2 3.0	26.0 3.1	53.2 3.1	37.6 3.0	40.4 3.5	51.5 3.0	42.9 6.0	49.1 6.9
11/8/92	1630	01	33.7	9.1	14.5	28.6 3.0	25.8 3.1	52.7 3.2	37.5 3.0	40.9 4.5	53.1 3.1	43.9 3.1	45.6 6.6
11/8/92	1645	01	33.1	7.6	13.9	28.4 3.0	25.5 3.1	52.8 3.7	37.2 3.0	40.5 3.4	52.9 3.1	43.4 4.9	44.7 7.0
11/8/92	1700	01	33.2	7.9	15.8	28.4 3.0	25.4 3.1	52.0 3.1	35.6 3.0	40.6 4.2	52.7 3.4	43.6 3.2	45.9 7.7
11/8/92	1715	01	33.0	7.3	14.4	28.9 3.0	25.8 3.1	53.7 3.1	35.2 3.0	38.5 10.3	48.5 7.9	41.5 10.8	48.5 10.5
11/8/92	1730	01	33.6	7.6	13.0	29.2 3.0	25.7 3.1	53.5 3.1	35.1 3.0	40.5 4.2	52.6 3.9	43.6 3.2	50.3 9.5
11/8/92	1745	01	34.1	7.3	13.0	29.2 3.0	25.7 3.0	53.5 3.1	37.7 3.0	40.9 3.0	52.6 3.2	43.5 3.2	50.5 9.2
11/8/92	1800	01	33.6	8.8	15.4	29.1 3.0	25.7 3.1	53.1 3.1	37.9 3.0	40.9 4.2	52.6 3.1	43.5 4.0	47.6 7.9
11/8/92	1815	01	34.5	8.2	13.8	29.7 3.0	25.7 3.1	53.2 3.1	37.7 3.0	41.0 3.1	52.4 3.6	43.6 3.2	50.7 7.8
11/8/92	1830	01	32.9	7.3	13.3	28.9 3.0	25.3 3.1	51.9 3.1	35.6 3.0	40.8 3.5	53.1 4.9	43.8 3.2	46.0 7.0
11/8/92	1845	01	35.8	6.8	12.0	29.6 3.0	25.4 3.1	52.2 3.1	35.8 3.0	40.9 3.0	52.1 3.5	43.3 3.6	47.6 7.0
11/8/92	1900	01	33.9	7.1	13.0	29.7 3.0	25.5 3.0	52.5 3.1	35.8 3.0	41.3 3.0	52.2 3.2	43.6 3.1	49.0 9.7
11/8/92	1915	01	33.5	7.4	15.1	29.2 3.0	25.5 3.1	52.5 3.1	37.3 3.0	40.8 2.9	52.1 3.1	43.4 3.5	48.4 5.2
11/8/92	1930	01	34.2	7.9	13.8	29.4 3.0	25.7 3.1	52.7 3.1	37.2 3.0	40.5 3.0	52.5 4.2	43.3 3.4	50.3 7.0
11/8/92	1945	01	33.8	8.0	15.1	29.7 3.0	25.7 3.1	51.8 3.1	37.8 3.0	38.1 12.5	51.0 7.7	42.5 8.2	49.2 7.2
11/8/92	2000	01	34.0	7.7	14.1	29.5 3.2	25.8 3.1	52.4 3.1	37.7 3.0	40.5 3.4	51.8 3.8	43.1 5.7	49.6 4.4
11/8/92	2015	01	37.6	7.7	13.1	30.4 3.0	25.3 3.1	52.0 3.0	35.5 3.0	40.3 3.2	52.4 3.2	42.7 3.6	47.2 4.6
11/8/92	2030	01	34.2	7.8	13.9	29.3 3.0	25.2 3.1	50.6 3.1	35.2 3.0	40.6 3.0	52.3 3.4	43.0 3.1	46.2 8.2
11/8/92	2045	01	32.9	7.7	10.4	29.4 3.0	25.4 3.1	51.1 3.1	35.7 3.0	40.5 3.7	52.3 3.0	43.0 3.1	46.0 5.2
11/8/92	2100	01	33.3	6.8	12.6	29.6 3.0	25.3 3.1	52.4 3.1	35.4 3.0	40.6 3.6	52.3 3.3	42.9 4.7	49.7 6.8
11/8/92	2115	01	32.1	7.4	12.9	28.9 3.0	25.1 3.0	51.2 3.1	35.9 3.0	40.6 3.2	52.5 3.7	42.9 3.1	48.6 5.4
11/8/92	2130	01	35.4	6.8	12.0	30.1 3.0	25.2 3.1	51.2 3.1	35.2 3.0	40.4 3.7	52.6 5.1	42.8 3.6	48.9 9.0
11/8/92	2145	01	34.1	7.4	11.5	29.8 3.0	25.1 3.1	50.5 3.1	35.2 3.0	40.5 3.1	52.3 3.8	42.8 3.1	49.1 7.4
11/8/92	2200	01	32.9	7.8	13.3	29.3 3.0	25.2 3.1	50.4 3.1	35.5 3.0	40.5 5.7	52.7 5.2	42.8 3.2	47.8 6.7
11/8/92	2215	01	32.8	8.1	13.9	29.2 3.0	25.2 3.1	50.5 3.1	35.8 3.0	40.2 20.3	52.3 10.7	42.8 7.6	47.3 7.6
11/8/92	2230	01	33.3	8.5	13.4	29.7 3.0	25.0 3.0	50.6 3.1	35.3 3.0	40.4 3.1	52.5 5.0	42.7 3.7	42.8 3.3
11/8/92	2245	01	29.1	8.5	16.8	28.4 3.0	24.8 3.1	49.3 3.1	35.3 3.0	40.4 3.0	52.5 4.0	42.8 4.8	45.9 8.7
11/8/92	2300	01	29.8	9.5	17.5	28.3 3.1	25.1 3.1	50.5 3.1	35.5 3.0	41.0 3.4	52.8 4.4	42.7 3.9	49.1 4.4
11/8/92	2315	01	30.1	8.7	14.3	29.1 3.0	25.3 3.1	52.1 5.3	37.1 3.0	40.4 3.3	52.1 3.1	42.7 3.1	49.5 6.7
11/8/92	2330	01	30.1	7.7	10.1	29.8 3.0	25.1 3.1	52.1 3.1	35.2 3.0	40.0 2.9	51.5 4.5	42.5 3.3	48.1 7.4
11/8/92	2345	01	28.9	7.1	10.8	30.0 3.0	25.2 3.1	52.2 3.1	37.2 3.0	39.7 3.3	51.2 4.4	42.6 3.2	49.9 8.0
11/8/92	0	01	28.6	8.0	11.2	29.5 3.0	24.8 3.1	51.2 3.2	35.1 3.0	39.9 2.9	51.2 15.8	41.8 3.1	47.5 4.4
11/8/92	15	01	28.1	7.1	9.5	29.5 3.0	24.8 3.1	51.6 3.1	35.9 3.0	40.0 2.9	50.8 7.2	42.0 3.6	50.4 6.6
11/8/92	30	01	29.5	7.8	9.9	29.0 3.0	24.7 3.1	51.8 3.1	35.5 3.0	40.1 2.9	50.9 5.4	42.6 3.2	50.0 5.0
11/8/92	45	01	29.4	8.4	9.4	28.2 3.0	24.4 3.1	51.3 3.0	34.5 3.0	39.8 2.9	50.7 8.9	41.6 3.1	49.1 4.7
11/8/92	100	01	28.3	6.9	9.8	28.8 3.0	24.4 3.0	51.2 3.1	34.8 3.0	39.8 2.9	51.0 6.1	41.2 4.1	49.1 6.0
11/8/92	115	01	25.9	7.5	9.2	29.2 3.0	24.4 3.1	50.7 3.1	34.6 3.0	39.5 2.9	50.7 7.5	41.1 3.4	45.5 4.0

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Line Flow gpm	Sk Op %	B Op %	D1 KW spk/ mn	D2 KW spk/ mn	D3 KW spk/ mn	D4 KW spk/ mn	C1 KW spk/ mn	C2 KW spk/ mn	C3 KW spk/ mn	C4 KW spk/ mn
11/9/92	130	01	25.9	7.3	10.7	29.1 3.2	24.5 3.1	50.1 3.1	34.1 3.0	39.8 2.9	50.7 9.8	41.7 3.1	45.2 8.3
11/9/92	145	01	27.1	7.7	8.9	28.0 3.0	24.4 3.1	50.4 3.1	34.5 3.0	39.9 2.9	50.7 7.9	41.8 3.6	47.6 5.2
11/9/92	200	01	26.6	7.9	9.0	27.9 3.0	24.4 3.0	50.2 3.1	34.5 3.0	39.8 2.9	50.7 7.0	42.0 3.1	47.9 3.4
11/9/92	215	01	27.1	6.0	8.7	27.9 3.0	24.3 3.0	49.6 3.1	33.6 3.0	39.5 2.9	50.1 9.2	40.6 3.3	47.3 5.1
11/9/92	230	01	25.7	7.2	9.1	28.0 3.0	24.3 3.1	49.6 3.1	33.7 3.0	39.6 3.0	50.1 7.5	40.9 3.1	47.6 7.5
11/9/92	245	01	27.5	6.3	8.8	27.9 3.0	24.3 3.0	48.8 3.1	33.2 3.0	39.7 2.9	50.6 6.9	41.6 3.1	45.0 4.5
11/9/92	300	01	26.2	6.3	8.7	27.9 3.0	24.3 3.1	49.1 3.1	33.3 3.0	39.6 2.9	50.2 9.8	40.8 3.6	43.3 6.2
11/9/92	315	00	26.2	7.2	10.3	27.8 3.0	24.3 3.1	48.8 3.1	33.6 3.0	39.6 2.9	50.5 8.4	41.4 3.2	39.8 3.1
11/9/92	330	00	26.6	7.1	9.2	27.8 3.0	24.3 3.1	49.8 3.1	34.9 3.0	39.5 2.9	50.3 7.9	41.4 3.3	41.5 6.2
11/9/92	345	00	25.9	8.5	10.7	27.9 3.0	24.3 3.1	50.0 3.1	34.7 3.0	39.6 2.9	50.3 10.3	41.3 3.1	44.7 7.0
11/9/92	400	01	27.2	7.7	8.7	28.0 3.0	24.3 3.0	50.0 3.1	34.7 3.0	39.6 2.9	49.8 9.8	40.6 3.1	43.3 3.9
11/9/92	415	00	26.6	7.1	9.2	27.8 3.0	24.3 3.1	49.6 3.1	34.6 3.0	39.7 2.9	50.1 9.3	40.9 3.8	44.2 4.8
11/9/92	430	00	26.6	7.6	9.3	27.8 3.0	24.2 3.0	49.3 3.1	34.7 3.0	39.5 2.9	49.9 9.9	40.7 3.5	31.1 28.7
11/9/92	445	00	25.8	7.1	9.1	27.9 3.0	24.3 3.1	50.0 3.1	34.7 3.0	39.6 2.9	49.9 7.8	41.4 3.1	42.1 10.6
11/9/92	500	00	27.0	7.0	9.3	28.0 3.0	24.3 3.1	50.3 3.1	34.6 3.0	39.6 3.1	50.0 10.2	41.1 3.3	46.2 9.2
11/9/92	515	00	26.8	7.4	9.8	27.9 3.0	24.3 3.0	49.9 3.1	34.5 3.0	39.6 2.9	50.0 8.3	41.3 3.1	49.4 6.6
11/9/92	530	00	26.7	10.9	9.8	27.9 3.0	24.2 3.1	50.2 3.1	35.0 3.0	39.6 2.9	49.9 8.7	39.3 3.1	48.3 4.1
11/9/92	545	00	26.0	11.6	9.3	28.3 3.0	24.3 3.0	50.6 3.1	34.7 3.0	40.0 2.9	49.9 5.5	41.1 3.5	46.1 5.1
11/9/92	600	00	26.0	10.7	9.2	28.0 3.0	24.3 3.1	49.9 3.1	34.2 3.0	39.6 2.9	50.1 3.9	41.6 3.1	43.9 12.8
11/9/92	615	00	26.4	10.8	9.0	28.0 3.0	24.2 3.1	48.6 3.1	33.7 3.0	39.7 2.9	50.4 3.8	41.4 3.3	46.1 4.5
11/9/92	630	00	26.1	9.5	9.1	27.9 3.0	24.2 3.0	48.0 3.0	33.4 3.0	39.5 2.9	50.4 4.3	41.4 3.6	41.1 8.1
11/9/92	645	00	26.8	10.2	9.4	27.8 3.0	24.1 3.1	47.2 3.0	32.8 3.0	39.2 2.9	50.8 3.8	41.2 3.1	44.6 9.2
11/9/92	700	00	26.8	11.1	8.7	27.6 3.0	24.2 3.0	46.7 3.0	32.4 3.0	39.1 2.9	51.1 4.4	41.1 3.3	45.3 10.1
11/9/92	715	01	26.9	10.7	13.7	27.8 3.0	24.2 3.1	45.8 3.0	31.6 3.0	39.0 3.0	51.3 3.5	41.0 3.1	41.0 3.7
11/9/92	730	01	26.7	14.2	9.0	27.9 3.0	24.3 3.1	45.8 3.0	31.8 3.0	38.9 2.9	51.3 5.5	41.0 3.1	39.2 6.0
11/9/92	745	01	30.3	9.8	8.5	28.0 3.0	24.2 3.1	45.3 3.0	31.3 3.0	39.0 2.9	51.5 4.2	41.1 4.0	41.4 4.9
11/9/92	800	01	30.3	9.8	8.5	28.0 3.0	24.2 3.1	45.3 3.0	31.3 3.0	39.0 2.9	51.5 4.2	41.1 4.0	41.4 4.9
11/9/92	815	01	30.3	9.8	8.5	28.0 3.0	24.2 3.1	45.3 3.0	31.3 3.0	39.0 2.9	51.5 4.2	41.1 4.0	41.4 4.9
11/9/92	830	01	30.3	9.8	8.5	28.0 3.0	24.2 3.1	45.3 3.0	31.3 3.0	39.0 2.9	51.5 4.2	41.1 4.0	41.4 4.9
11/9/92	845	01	30.3	9.8	8.5	28.0 3.0	24.2 3.1	45.3 3.0	31.3 3.0	39.0 2.9	51.5 4.2	41.1 4.0	41.4 4.9
11/9/92	900	01	30.3	9.8	8.5	28.0 3.0	24.2 3.1	45.3 3.0	31.3 3.0	39.0 2.9	51.5 4.2	41.1 4.0	41.4 4.9
11/9/92	915	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	930	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	945	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1000	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1015	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1030	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1045	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1100	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1115	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1130	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1145	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1200	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1215	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1230	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1245	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1300	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1315	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1330	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1345	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1400	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1415	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1430	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1445	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1500	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1515	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1530	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1545	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1600	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1615	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1630	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1645	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1700	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1715	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8
11/9/92	1730	33.0	00	9.3	14.7	30.2 3.0	25.9 3.1	53.6 3.2	42.9 3.1	38.4 7.1	55.2 6.2	43.3 3.8	49.3 11.8

12/3/92 20:40:39

Date	Time	Water	Lime	Slk	B	D1	D2	D3	D4	C1	C2	C3	C4								
		Flow gpm	Flow gpm	Op %	Op %	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn						
11/9/92	1745	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1800	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1815	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1830	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1845	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1900	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1915	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1930	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	1945	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2000	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2015	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2030	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2045	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2100	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2115	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2130	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2145	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2200	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2215	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2230	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2245	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2300	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2315	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2330	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/9/92	2345	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	0	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	15	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	30	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	45	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	100	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	115	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	130	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	145	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	200	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	215	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	230	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	245	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	300	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	315	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	330	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	345	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	400	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	415	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	430	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	445	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	500	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	515	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	530	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	545	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	600	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	615	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	630	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	645	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	700	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	715	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	730	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	745	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	800	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	815	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	830	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	845	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	900	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
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Date	Time	Water	Line	Stk	B	D 1		D 2		D 3		D 4		C 1		C 2		C 3		C 4	
		Flow gpm	Flow gpm	Op %	Op %	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn	KW	spk/ mn
11/10/92	1000	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1015	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1030	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1045	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1100	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1115	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1130	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1145	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1200	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1215	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1230	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1245	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1300	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1315	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1330	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1345	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1400	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1415	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1430	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1445	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1500	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1515	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1530	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1545	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1600	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1615	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1630	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1645	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1700	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1715	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1730	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1745	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1800	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1815	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1830	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1845	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1900	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1915	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1930	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	1945	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2000	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2015	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2030	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2045	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2100	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2115	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2130	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2145	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2200	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2215	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2230	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2245	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2300	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2315	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2330	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/10/92	2345	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	0	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	15	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	30	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	45	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	100	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	115	33.0	0.0	9.3	14.7	30.2															

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Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D1 KW	D1 spk/ mn	D2 KW	D2 spk/ mn	D3 KW	D3 spk/ mn	D4 KW	D4 spk/ mn	C1 KW	C1 spk/ mn	C2 KW	C2 spk/ mn	C3 KW	C3 spk/ mn	C4 KW	C4 spk/ mn
11/11/92	215	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	230	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	245	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	300	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	315	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	330	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	345	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	400	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	415	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	430	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	445	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	500	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	515	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	530	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	545	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	600	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	615	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	630	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	645	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	700	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	715	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	730	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	745	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	800	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	815	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	830	33.0	0.0	9.3	14.7	30.2	3.0	25.9	3.1	53.6	3.2	42.9	3.1	36.4	7.1	55.2	6.2	43.3	3.8	49.3	11.8
11/11/92	845	33.4	0.0	9.8	15.7	30.3	3.0	25.8	3.1	53.1	3.1	42.6	3.0	36.4	10.5	55.1	4.2	43.2	3.6	50.9	10.1
11/11/92	900	30.5	0.0	19.8	27.4	30.8	3.0	26.2	3.1	49.9	8.8	40.0	6.7	37.7	9.3	55.4	3.5	42.7	3.4	47.2	10.4
11/11/92	915	25.6	0.0	12.6	20.5	29.3	3.0	25.6	3.1	53.1	9.7	40.5	3.0	39.1	6.9	54.8	3.0	42.9	4.0	48.7	7.5
11/11/92	930	25.6	0.0	12.6	20.5	29.3	3.0	25.6	3.1	53.1	9.7	40.5	3.0	39.1	6.9	54.8	3.0	42.9	4.0	48.7	7.5
11/11/92	945	25.6	0.0	12.6	20.5	29.3	3.0	25.6	3.1	53.1	9.7	40.5	3.0	39.1	6.9	54.8	3.0	42.9	4.0	48.7	7.5
11/11/92	1000	32.1	0.0	11.3	17.2	29.7	3.0	25.6	3.1	52.8	3.1	43.7	3.0	35.3	8.5	55.4	3.0	43.4	3.1	52.9	10.0
11/11/92	1015	31.2	0.0	11.9	19.0	29.5	3.0	25.5	3.1	53.0	3.1	44.1	3.7	34.5	9.9	55.2	4.4	43.3	3.3	52.2	10.2
11/11/92	1030	30.1	0.0	12.9	16.1	29.8	3.0	25.5	3.1	53.0	5.3	44.3	3.3	34.9	11.8	55.1	5.6	43.2	3.2	50.4	7.1
11/11/92	1045	31.3	0.0	12.7	17.5	30.0	3.0	25.7	3.1	52.0	3.1	44.4	3.4	38.8	7.7	54.8	4.8	43.7	3.1	51.9	9.5
11/11/92	1100	30.4	0.0	12.0	17.6	29.2	3.0	25.8	3.1	52.3	3.2	45.8	3.8	37.9	6.8	54.7	3.0	43.7	3.1	51.6	8.9
11/11/92	1115	31.2	0.0	13.1	15.6	29.4	3.0	25.5	3.1	51.9	3.1	45.5	3.1	37.6	8.5	54.6	3.1	43.7	3.4	53.1	6.5
11/11/92	1130	31.2	0.0	13.1	15.6	29.4	3.0	25.5	3.1	51.9	3.1	45.5	3.1	37.6	8.5	54.6	3.1	43.7	3.4	53.1	6.5
11/11/92	1145	31.3	0.0	12.6	18.1	28.9	3.0	25.3	3.1	53.2	3.1	43.9	3.0	38.0	12.1	55.7	4.5	43.2	4.3	51.8	9.6
11/11/92	1200	32.4	0.0	10.8	13.7	29.5	3.0	25.3	3.0	53.8	3.0	42.6	3.0	38.9	8.5	55.6	5.6	43.3	3.1	52.6	10.6
11/11/92	1215	32.8	0.0	12.0	16.6	30.3	3.0	25.4	3.1	53.8	3.1	43.3	3.0	38.6	10.8	55.5	3.2	43.2	3.6	52.5	5.3
11/11/92	1230	31.5	0.0	12.8	15.3	29.5	3.2	25.3	3.0	54.1	3.1	42.6	3.0	39.8	9.9	55.4	3.2	43.2	3.2	51.7	9.9
11/11/92	1245	32.4	0.0	12.2	16.9	29.4	3.0	25.4	3.1	54.4	3.1	41.8	3.0	35.8	12.2	55.5	5.3	43.4	4.1	52.1	6.3
11/11/92	1300	33.0	0.0	10.2	12.2	29.5	3.0	25.5	3.1	54.5	3.1	41.2	3.0	34.4	8.6	55.4	4.2	43.1	3.5	51.7	5.9
11/11/92	1315	34.0	0.0	11.7	14.6	29.2	3.0	25.5	3.0	55.5	3.1	40.0	3.0	33.8	13.8	55.7	8.0	43.5	3.2	46.9	4.5
11/11/92	1330	34.2	0.0	13.1	17.6	30.1	3.0	25.5	3.1	54.5	3.1	41.6	3.0	35.7	10.6	55.5	4.7	43.5	3.3	49.4	8.5
11/11/92	1345	31.7	0.0	12.5	11.9	29.7	3.0	25.5	3.0	54.7	3.1	41.8	3.0	37.8	21.5	55.5	8.4	43.1	3.1	52.3	8.6
11/11/92	1400	33.0	0.0	10.3	13.5	29.5	3.0	25.4	3.0	55.4	3.1	40.5	3.0	35.7	10.8	56.0	3.3	43.2	3.1	51.7	5.9
11/11/92	1415	33.0	0.0	33.2	13.1	30.1	3.0	25.5	3.0	54.0	3.0	41.5	3.0	38.5	9.5	55.2	3.2	43.8	3.1	47.6	3.2
11/11/92	1430	32.0	0.0	9.9	13.4	29.8	3.0	25.6	3.0	54.0	3.1	41.4	3.0	39.0	10.4	54.8	3.5	43.7	3.1	47.9	6.7
11/11/92	1445	32.0	0.0	9.9	13.4	29.8	3.0	25.6	3.0	54.0	3.1	41.4	3.0	39.0	10.4	54.8	3.5	43.7	3.1	47.9	6.7
11/11/92	1500	32.0	0.0	9.9	13.4	29.8	3.0	25.6	3.0	54.0	3.1	41.4	3.0	39.0	10.4	54.8	3.5	43.7	3.1	47.9	6.7
11/11/92	1515	35.9	0.0	12.2	15.5	30.3	3.0	25.8	3.1	55.5	3.1	39.1	3.0	37.4	9.2	55.1	3.4	43.3	3.1	49.7	10.6
11/11/92	1530	34.8	0.0	10.4	10.8	30.6	3.0	25.6	3.0	55.4	3.1	39.8	3.0	36.2	6.8	55.0	3.4	43.4	3.1	52.5	10.7
11/11/92	1545	35.5	0.0	11.5	14.5	30.5	3.0	25.7	3.1	55.4	3.1	39.8	3.0	38.3	5.5	55.1	3.0	43.3	3.1	52.8	10.7
11/11/92	1600	35.5	0.0	12.4	15.4	30.0	3.0	25.8	3.1	55.4	3.1	39.5	3.0	39.1	5.4	55.1	3.5	43.2	3.1	52.8	8.9
11/11/92	1615	35.8	0.0	12.6	13.8	30.5	3.0	25.7	3.1	55.5	3.1	39.2	3.0	37.1	13.7	55.7	3.4	43.2	3.1	51.7	7.4
11/11/92	1630	36.7	0.0	11.1	12.5	30.7	3.0	25.8	3.1	55.1	3.1	38.1	3.0	37.8	6.7	55.4	5.4	43.7	3.1	49.3	8.2
11/11/92	1645	34.9	0.0	25.7	15.8	30.6	3.0	25.7	3.1	55.2	3.1	39.6	3.0	37.2	6.2	55.0	3.5	43.6	3.2	52.5	8.2
11/11/92	1700	34.5	0.0	15.7	14.6	30.2	3.0	25.8	3.1	55.3	3.1	39.0	3.0	40.1	6.8	55.1	3.0	43.6	3.1	51.7	6.7
11/11/92	1715	34.8	0.0	17.4	13.5	30.1	3.0	25.7	3.1	55.1	3.1										

12/3/92

20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D 1 spk/mn	D 2 spk/mn	D 3 spk/mn	D 4 spk/mn	C 1 spk/mn	C 2 spk/mn	C 3 spk/mn	C 4 spk/mn
11/11/92	1830	36.4	0.0	16.0	14.6	30.9 3.0	25.9 3.1	53.0 3.1	37.4 3.0	40.5 4.3	55.0 3.1	43.4 3.2	49.7 11.0
11/11/92	1845	35.5	0.0	16.4	15.5	30.5 93.3	26.1 3.1	54.2 3.1	38.1 3.0	40.5 4.9	54.7 3.0	43.7 3.1	49.1 10.3
11/11/92	1900	35.4	0.0	19.2	13.8	30.2 3.0	25.9 3.0	53.8 3.1	38.0 3.0	38.5 6.2	55.0 3.1	43.6 3.6	49.8 10.9
11/11/92	1915	34.9	0.0	14.5	14.0	30.3 3.0	26.1 3.1	54.7 3.1	38.6 3.0	38.1 12.2	55.1 3.0	43.9 3.1	49.9 10.0
11/11/92	1930	34.9	0.0	15.5	14.3	30.7 3.0	25.9 3.1	53.5 3.1	38.2 3.0	37.8 6.3	55.7 4.1	43.9 3.4	48.2 12.1
11/11/92	1945	34.8	0.0	17.7	16.6	30.4 3.0	26.0 3.0	53.0 3.1	38.0 3.0	36.3 9.5	55.5 5.0	43.7 4.4	49.1 9.5
11/11/92	2000	35.2	0.0	14.2	13.7	30.7 3.0	25.9 3.1	52.8 3.1	37.7 3.0	37.4 7.4	55.5 3.4	43.8 3.5	50.8 10.6
11/11/92	2015	35.7	0.0	16.1	16.7	30.6 3.0	26.2 3.1	51.3 3.0	36.6 3.0	35.4 8.7	55.7 3.8	43.8 3.2	49.3 5.4
11/11/92	2030	34.7	0.0	17.1	14.8	30.3 3.0	26.0 3.1	52.2 3.1	37.5 3.0	32.6 7.9	55.1 5.8	43.1 4.4	47.5 7.4
11/11/92	2045	34.9	0.0	14.8	12.2	30.2 3.0	26.1 3.1	51.9 3.1	37.1 3.0	34.3 10.8	55.6 4.9	43.8 3.3	47.4 7.6
11/11/92	2100	34.7	0.0	15.5	13.4	30.2 3.0	26.1 3.2	51.7 3.0	37.3 3.0	34.1 9.8	56.0 3.5	44.2 3.3	48.9 6.9
11/11/92	2115	34.6	0.0	0.1	21.1	30.4 3.0	26.1 3.1	51.6 3.1	37.3 3.0	35.7 6.7	55.7 4.0	43.8 3.2	45.6 7.4
11/11/92	2130	34.5	0.0	18.1	14.9	30.4 3.0	26.0 3.1	51.8 3.1	37.4 3.0	36.2 8.9	54.9 3.1	43.5 7.6	46.6 11.7
11/11/92	2145	34.5	0.0	16.5	14.5	30.6 3.0	26.0 3.1	52.7 3.1	37.8 3.0	36.5 6.6	54.3 4.0	43.8 8.6	51.0 8.8
11/11/92	2200	35.9	0.0	19.4	19.5	31.0 3.0	26.3 3.1	51.0 3.1	38.1 3.0	35.9 11.1	55.5 5.0	44.1 3.2	49.3 7.0
11/11/92	2215	34.7	0.0	18.2	15.8	31.2 3.0	26.0 3.0	51.4 3.0	36.6 3.0	34.1 8.7	55.6 5.3	44.2 3.1	48.7 3.4
11/11/92	2230	35.3	0.0	16.6	13.3	31.0 3.0	26.0 3.1	51.4 3.1	36.8 3.0	35.0 7.0	55.9 3.2	44.1 3.1	50.2 5.5
11/11/92	2245	34.6	0.0	17.0	14.2	31.0 3.0	25.9 3.1	51.3 3.1	37.1 3.0	33.1 12.8	55.7 4.8	44.0 3.1	49.9 4.2
11/11/92	2300	34.7	0.0	18.6	14.6	30.7 3.0	25.9 3.1	51.3 3.0	36.9 3.0	31.7 11.7	55.2 8.5	42.6 3.7	50.0 4.0
11/11/92	2315	34.8	0.0	16.7	17.4	30.7 3.0	26.1 3.1	52.6 3.1	37.7 3.0	34.4 12.0	55.2 3.7	44.8 3.1	50.8 6.9
11/11/92	2330	34.5	0.0	18.1	11.7	32.3 3.0	25.8 3.0	53.7 3.1	38.6 3.0	31.9 8.4	52.5 4.3	41.4 3.5	50.7 7.2
11/11/92	2345	32.6	0.0	11.4	11.1	31.8 3.0	26.4 3.1	52.4 3.1	37.5 3.0	36.0 11.1	54.1 3.4	44.8 3.3	50.6 4.4
11/12/92	0	32.4	0.0	19.4	9.5	32.2 3.0	26.3 3.1	51.9 3.1	37.1 3.0	36.2 5.9	53.9 3.1	44.7 3.1	50.5 4.0
11/12/92	15	34.3	0.0	8.8	10.4	32.4 3.0	26.6 3.1	49.7 3.0	34.8 3.0	37.0 7.8	53.7 3.1	44.2 3.1	49.0 3.9
11/12/92	30	33.3	0.0	11.4	11.2	32.6 3.0	26.7 3.1	49.7 3.1	35.0 3.0	40.7 5.4	53.3 4.0	43.9 3.1	48.4 6.8
11/12/92	45	34.8	0.0	12.7	11.3	32.3 3.0	26.6 3.1	49.9 3.0	34.8 3.0	40.3 4.8	53.6 3.6	43.3 3.3	48.8 5.1
11/12/92	100	33.6	0.0	10.4	8.9	32.6 3.0	26.4 3.1	49.8 3.1	35.1 3.0	40.4 3.6	53.5 3.6	42.7 3.1	45.8 4.9
11/12/92	115	31.9	0.0	9.0	9.9	31.1 3.0	27.2 3.2	49.0 3.1	34.5 3.0	40.6 3.9	53.4 3.1	42.7 3.1	45.5 3.9
11/12/92	130	30.3	0.0	31.8	9.1	31.3 3.0	27.1 3.2	48.9 3.1	34.7 3.0	39.8 10.4	53.1 3.0	43.3 3.1	46.8 3.5
11/12/92	145	30.7	0.0	10.8	9.9	31.0 3.0	27.2 3.2	47.8 3.1	34.0 3.0	40.1 3.8	53.2 3.9	42.3 3.1	47.6 3.7
11/12/92	200	30.8	0.0	9.0	8.5	31.5 3.0	27.3 3.2	47.1 3.0	33.2 3.0	40.2 4.9	53.4 3.0	43.0 3.1	46.2 5.6
11/12/92	215	30.3	0.0	11.0	9.3	32.0 3.0	27.4 3.2	47.0 3.1	33.0 3.0	40.5 3.7	53.2 4.3	43.0 3.1	46.7 4.1
11/12/92	230	31.8	0.0	13.2	11.3	32.0 3.0	27.2 3.1	47.2 3.0	32.9 3.0	40.2 3.4	53.1 4.6	42.9 3.1	47.6 5.5
11/12/92	245	30.6	0.0	10.4	8.7	29.6 3.0	28.2 3.3	46.2 3.0	32.3 3.0	40.1 8.7	53.2 3.0	42.6 3.1	44.4 3.5
11/12/92	300	30.6	0.0	10.4	9.3	29.8 3.0	28.2 3.2	46.1 3.0	32.1 3.0	40.0 3.3	53.4 4.0	42.8 3.1	46.3 5.1
11/12/92	315	30.6	0.0	11.2	8.7	32.0 3.0	27.5 3.2	46.8 3.0	32.4 3.0	39.9 6.1	53.2 4.5	42.7 3.1	42.9 5.4
11/12/92	330	31.0	0.0	11.4	8.4	32.3 3.0	27.3 3.2	46.8 3.0	32.5 3.0	40.0 3.1	53.0 5.1	42.6 3.5	41.7 4.4
11/12/92	345	30.0	0.0	10.6	8.1	32.1 3.0	27.2 3.2	47.1 3.0	33.1 3.5	39.8 5.0	52.6 6.3	41.7 3.1	45.5 9.9
11/12/92	400	30.2	0.0	10.8	9.7	32.4 3.0	27.2 3.2	47.3 3.1	33.4 3.0	40.0 4.0	53.0 4.7	42.2 3.1	45.5 5.2
11/12/92	415	30.4	0.0	12.8	14.1	32.6 3.0	27.4 3.2	46.3 3.0	32.1 3.0	40.2 3.2	53.0 4.3	42.7 3.1	47.0 6.2
11/12/92	430	30.5	0.0	12.1	8.4	32.5 3.0	27.6 3.2	46.3 3.0	32.1 3.0	40.1 3.2	52.6 5.5	42.7 3.1	45.2 6.6
11/12/92	445	31.1	0.0	10.2	8.5	32.7 3.0	27.7 3.2	46.2 3.1	32.1 3.0	40.1 3.2	52.7 5.2	42.7 3.1	46.7 8.4
11/12/92	500	32.1	0.0	10.1	8.3	32.8 3.0	27.5 3.2	46.2 3.0	32.0 3.0	40.0 6.3	53.0 6.3	42.5 3.1	45.0 4.4
11/12/92	515	30.3	0.0	9.7	9.2	32.4 3.0	27.4 3.2	46.4 3.1	32.7 3.0	40.2 4.9	53.4 5.3	42.6 3.1	44.9 4.4
11/12/92	530	30.7	0.0	8.8	8.5	32.6 3.0	27.4 3.2	46.7 3.0	32.9 3.0	40.0 3.4	53.1 5.4	42.6 3.1	46.3 6.2
11/12/92	545	31.0	0.0	9.5	8.7	33.1 3.0	27.5 3.2	46.5 3.0	32.6 3.0	40.1 3.7	53.0 5.9	42.6 3.1	46.6 4.6
11/12/92	600	31.5	0.0	9.1	9.2	32.4 3.0	27.6 3.2	45.7 3.0	31.7 3.0	39.2 4.9	53.3 5.5	42.8 3.2	45.9 5.3
11/12/92	615	30.4	0.0	7.3	8.3	32.9 3.0	27.5 3.2	45.8 3.0	32.1 3.0	40.0 3.8	53.2 5.3	42.5 3.1	43.8 4.8
11/12/92	630	31.4	0.0	9.6	9.1	33.0 3.0	27.4 3.2	46.1 3.1	31.9 3.1	39.9 4.3	52.7 5.9	42.6 3.1	42.7 5.0
11/12/92	645	30.6	0.0	9.4	8.6	32.7 3.0	27.7 3.2	45.7 3.0	31.8 3.0	40.5 3.7	53.2 6.1	42.8 3.7	45.4 6.2
11/12/92	700	29.2	0.0	9.1	10.0	32.4 3.0	27.3 3.2	45.6 3.0	32.0 3.0	38.4 4.9	53.4 4.1	42.2 3.1	44.7 4.3
11/12/92	715	31.5	0.0	11.3	8.4	32.5 3.0	27.5 3.2	45.5 3.0	31.7 3.0	39.8 3.3	53.5 4.3	42.2 3.1	43.6 4.1
11/12/92	730	30.8	0.0	14.2	10.5	32.8 3.0	27.2 3.2	45.1 3.4	31.4 3.0	39.5 6.4	53.3 9.4	42.1 3.1	43.8 4.7
11/12/92	745	30.7	0.0	12.0	8.9	32.2 3.0	27.8 3.3	45.2 3.0	31.4 3.0	39.8 2.9	53.5 9.8	41.7 3.1	41.9 10.0
11/12/92	800	30.5	0.0	12.1	8.7	32.7 3.0	27.3 3.2	45.5 3.0	31.9 3.0	39.7 3.7	53.5 6.6	42.0 3.3	43.4 3.8
11/12/92	815	31.1	0.0	12.6	8.4	32.9 3.0	27.3 3.2	45.5 3.1	32.0 3.0	39.6 3.4	53.5 5.9	42.1 3.1	42.5 4.5
11/12/92	830	31.1	0.0	12.6	8.4	32.9 3.0	27.3 3.2	45.5 3.1	32.0 3.0	39.6 3.4	53.5 5.9	42.1 3.1	42.5 4.5
11/12/92	845	31.1	0.0	12.6	8.4	32.9 3.0	27.3 3.2	45.5 3.1	32.0 3.0	39.6 3.4	53.5 5.9	42.1 3.1	42.5 4.5
11/12/92	900	31.6	0.0	12.5	8.7	31.7 3.0	28.0 3.2	44.8 3.0	31.7 3.1	39.6 3.1	53.7 6.4	41.8 3.1	42.9 5.9
11/12/92	915	30.9	0.0	15.3	9.1	32.1 3.0	27.8 3.2	45.2 3.0	32.0 3.0	39.8 3.2	54.0 5.3	42.2 3.1	42.4 4.6
11/12/92	930	30.9	0.0	15.3	9.1	32.1 3.0	27.8 3.2	45.2 3.0	32.0 3.0	39.8 3.2	54.0 5.3	42.2 3.1	42.4 4.6
11/12/92	945	31.3	0.0	14.2	9.4	31.9 3.0	28.0 3.2	45.3 3.0	32.3 3.0	39.7 3.2	54.2 7.5	42.3 3.1	41.6 5.8
11/12/92	1000	31.6	0.0	13.4	10.5	32.0 3.0	28.2 3.2	45.6 3.0	32.4 3.0	39.3 5.9	53.8 6.2	42.0 3.6	41.1 3.2
11/12/92	1015	31.6	0.0	13.4	10.5	32.0 3.0	28.2 3.2	45.6 3.0	32.4 3.0	39.3 5.9	53.8 6.2	42.0 3.6	41.1 3.2
11/12/92	1030	31.6	0.0	13.4	10.5	32.0 3.0	28.2 3.2	45.6 3.0	32.4 3.0	39.3 5.9	53.8 6.2	42.0 3.6	41.1 3.2

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
11/12/92	1045	31.8	0.0	14.6	9.5	33.0	3.0	28.2	3.2	46.6	3.0	33.8	3.0	39.8	3.5	54.4	4.8	42.6	3.1	46.7	7.6
11/12/92	1100	33.5	0.0	15.4	9.6	33.2	3.0	28.5	3.2	47.2	3.0	34.2	3.0	40.1	3.0	54.2	5.0	42.8	3.1	46.9	5.0
11/12/92	1115	31.3	0.0	16.2	9.8	32.8	3.0	28.5	3.2	47.6	3.1	34.8	3.0	40.0	3.3	54.2	4.6	42.6	3.2	46.6	3.9
11/12/92	1130	0.1	37.1	16.8	9.9	31.1	3.0	29.4	3.2	47.1	3.0	34.4	3.0	40.0	4.0	54.3	5.2	42.8	3.3	46.6	4.1
11/12/92	1145	0.1	37.3	15.1	9.6	32.2	3.0	29.1	3.2	47.4	3.0	34.4	3.0	40.4	3.7	54.3	5.9	42.8	3.1	45.8	4.4
11/12/92	1200	0.1	37.5	16.7	9.8	32.0	3.0	28.8	3.2	46.9	3.0	33.9	3.0	39.9	3.6	55.0	4.7	42.6	3.1	45.1	3.9
11/12/92	1215	0.1	36.9	16.8	10.4	31.1	3.0	28.7	3.2	46.6	3.0	33.5	3.0	39.8	3.2	55.0	5.0	42.6	3.1	45.7	4.3
11/12/92	1230	0.1	36.9	17.2	9.9	30.9	3.0	28.6	3.2	46.5	3.0	33.4	3.0	39.9	7.0	54.9	5.1	42.6	4.2	45.9	4.7
11/12/92	1245	0.1	37.2	16.3	11.2	30.3	3.0	28.3	3.2	46.4	3.0	33.3	3.0	39.9	4.7	54.8	4.6	42.5	3.1	44.9	4.6
11/12/92	1300	0.0	37.0	18.0	10.5	30.3	3.0	28.3	3.2	46.3	3.0	33.2	3.0	39.1	10.2	54.7	5.3	42.5	3.1	41.6	5.0
11/12/92	1315	0.0	37.0	15.5	10.6	30.0	3.0	28.2	3.2	46.1	3.0	33.0	3.0	39.8	3.6	54.7	4.4	42.4	4.7	44.2	4.7
11/12/92	1330	0.0	36.9	18.2	10.9	29.4	3.0	28.1	3.2	46.0	3.0	33.0	3.0	39.8	3.8	54.6	5.3	42.3	3.1	45.7	5.8
11/12/92	1345	0.0	36.8	16.1	12.2	28.7	3.0	27.9	3.2	46.0	3.0	32.9	3.0	39.7	4.1	54.9	5.1	42.3	3.2	45.4	3.7
11/12/92	1400	0.0	36.8	24.1	11.8	28.9	5.9	27.8	3.1	45.9	3.0	32.8	3.0	39.3	6.7	54.6	8.5	42.3	3.1	45.1	6.0
11/12/92	1415	0.0	36.7	17.1	11.8	27.2	6.6	27.7	3.1	45.7	3.0	32.7	3.0	39.6	4.9	54.6	4.8	42.1	3.1	44.7	4.6
11/12/92	1430	0.0	36.5	18.6	12.0	28.6	9.6	27.2	3.1	46.0	3.0	32.8	3.0	39.7	3.2	54.7	4.8	42.2	3.1	45.5	5.0
11/12/92	1445	0.0	36.8	14.1	12.5	25.5	7.7	27.5	3.1	45.5	3.0	32.4	3.0	39.5	5.8	54.8	5.9	41.9	3.1	44.4	3.9
11/12/92	1500	0.0	36.5	14.3	11.5	28.5	8.4	27.5	3.1	45.1	3.0	32.0	3.0	39.6	6.0	54.5	4.1	42.1	3.1	44.8	6.1
11/12/92	1515	0.0	37.5	15.4	12.1	19.3	10.3	27.2	3.1	45.2	3.0	32.0	3.0	39.5	3.6	54.5	4.6	41.7	5.6	44.6	4.7
11/12/92	1530	0.0	37.7	14.2	12.0	25.7	8.0	27.0	3.1	45.5	3.0	32.1	3.0	39.6	12.7	54.9	10.1	42.0	3.7	44.9	6.2
11/12/92	1545	0.0	38.2	17.9	14.6	26.6	5.7	26.8	3.1	45.4	3.0	32.1	3.0	39.1	4.7	53.7	6.3	41.5	5.2	43.8	3.9
11/12/92	1600	0.0	39.9	15.8	17.4	26.6	8.0	26.6	3.2	45.8	3.0	32.4	3.0	38.5	11.8	55.5	7.8	42.3	4.1	44.2	7.5
11/12/92	1615	0.1	36.8	17.3	18.2	24.3	10.0	26.3	3.1	46.4	3.0	32.9	3.0	39.9	10.3	54.7	4.9	42.0	5.1	43.0	7.4
11/12/92	1630	0.1	39.5	14.2	16.3	26.3	7.3	26.9	3.1	46.0	3.0	32.6	3.0	38.4	13.9	55.4	6.4	42.2	3.5	43.1	5.4
11/12/92	1645	0.1	39.5	12.2	16.2	27.9	5.0	27.0	3.2	46.5	3.1	32.9	3.0	40.0	9.4	55.0	3.0	42.8	3.2	43.8	6.6
11/12/92	1700	0.0	39.8	12.4	17.6	27.4	5.9	26.9	3.2	46.3	3.0	33.6	3.0	37.8	16.0	55.0	11.1	42.8	13.9	45.6	8.4
11/12/92	1715	0.0	39.1	12.8	18.3	24.9	10.4	26.5	3.2	46.1	3.0	33.3	3.0	39.5	9.8	54.5	3.9	42.1	3.6	44.5	9.4
11/12/92	1730	0.1	39.5	12.9	17.1	29.0	5.2	26.4	3.2	46.2	3.0	33.3	3.0	37.9	14.5	54.8	11.3	42.3	4.0	45.1	7.7
11/12/92	1745	0.0	38.1	13.5	18.4	24.0	9.2	26.4	3.2	45.8	3.0	33.0	3.0	38.3	12.4	55.9	5.0	42.7	3.7	43.8	5.7
11/12/92	1800	0.0	38.1	13.7	19.3	26.9	8.8	26.3	3.2	45.9	3.0	33.3	3.0	35.3	6.2	54.2	4.6	41.8	4.7	41.7	3.3
11/12/92	1815	0.0	37.7	14.0	19.7	27.8	8.5	26.1	3.2	45.6	3.0	33.2	3.0	33.7	9.1	53.3	5.0	41.2	4.8	42.0	7.5
11/12/92	1830	0.0	37.5	14.5	20.7	28.0	13.7	26.1	3.1	45.8	3.0	33.1	3.0	37.0	6.9	55.0	3.8	42.5	4.6	43.4	5.0
11/12/92	1845	0.0	37.7	14.7	21.3	29.4	3.4	25.9	3.1	45.8	3.0	33.3	3.0	39.8	6.5	54.8	4.0	42.3	4.5	44.7	3.9
11/12/92	1900	0.0	37.1	15.6	20.1	29.4	3.4	25.8	3.1	46.0	3.0	33.3	3.0	35.3	8.9	54.9	10.4	41.4	3.4	45.1	10.5
11/12/92	1915	0.0	36.9	14.8	21.9	29.3	5.8	25.9	3.2	46.1	3.1	33.4	3.0	38.2	8.5	55.4	3.9	42.9	3.3	45.0	4.5
11/12/92	1930	0.0	36.9	15.3	22.9	29.1	3.0	25.7	3.1	45.9	3.0	33.3	3.0	38.0	8.8	55.4	5.1	42.6	5.8	44.9	6.5
11/12/92	1945	0.0	36.8	14.8	22.1	27.3	4.2	25.5	3.1	46.1	3.1	33.4	3.0	37.8	6.3	55.3	4.8	42.6	4.4	44.1	7.1
11/12/92	2000	0.0	37.5	16.0	22.2	29.3	3.2	25.5	3.1	45.8	3.0	33.3	3.0	36.1	5.6	54.1	3.7	41.9	6.0	43.4	4.6
11/12/92	2015	0.0	37.0	15.8	22.5	29.0	4.1	25.5	3.2	46.2	3.0	33.4	3.0	39.1	13.3	54.5	5.0	42.5	8.5	43.8	4.3
11/12/92	2030	0.1	36.8	17.0	29.3	27.1	11.4	25.5	3.2	45.3	3.0	32.9	3.0	37.2	7.1	53.1	4.3	41.8	10.2	43.7	7.5
11/12/92	2045	0.0	37.2	18.1	29.2	28.8	4.1	25.4	3.1	45.6	3.0	32.9	3.0	34.4	12.6	53.4	6.5	41.1	9.3	43.7	4.8
11/12/92	2100	0.0	35.9	14.0	19.9	29.7	3.1	25.0	3.1	46.8	3.0	33.5	3.0	38.7	7.0	55.1	3.3	42.5	3.8	45.7	5.1
11/12/92	2115	0.0	36.3	16.7	24.4	29.2	3.9	25.1	3.1	46.3	3.0	33.3	3.0	38.2	9.8	55.1	3.8	42.5	6.4	46.2	5.7
11/12/92	2130	0.0	36.0	15.0	22.1	29.7	3.0	24.9	3.1	46.9	3.1	33.6	3.0	38.8	7.1	56.1	3.0	42.8	3.7	43.3	3.3
11/12/92	2145	0.0	36.0	15.1	22.2	29.5	3.0	24.8	3.0	46.9	3.0	33.8	3.0	37.2	6.6	54.8	4.0	42.5	6.4	45.1	6.6
11/12/92	2200	0.0	35.9	15.5	20.0	30.4	3.8	24.7	3.0	46.7	3.0	33.2	3.0	34.7	16.1	54.5	6.6	42.5	6.7	45.6	5.3
11/12/92	2215	0.0	36.0	16.4	23.5	27.8	5.0	24.6	3.1	46.2	3.0	33.0	3.0	34.6	13.1	55.8	6.8	42.8	6.7	44.0	8.5
11/12/92	2230	0.0	37.3	19.6	30.6	28.9	3.1	24.4	3.1	45.6	3.4	32.9	3.0	33.4	11.0	53.3	4.8	42.0	5.7	43.5	5.3
11/12/92	2245	34.3	0.0	12.9	14.4	31.1	5.6	25.4	3.0	49.5	3.0	35.2	3.0	34.2	10.9	51.6	6.9	41.5	5.1	46.9	4.8
11/12/92	2300	30.9	0.0	18.0	18.2	31.7	3.6	25.1	3.0	49.0	3.0	35.8	3.2	33.5	12.4	54.0	3.9	42.7	7.9	44.9	4.1
11/12/92	2315	31.1	0.0	14.1	17.8	31.4	4.1	24.9	3.0	49.3	3.0	36.5	3.0	30.6	11.3	50.9	8.5	38.8	6.5	44.8	4.7
11/12/92	2330	31.7	0.0	13.9	13.8	32.0	3.0	25.1	3.0	50.1	3.0	37.0	3.0	36.0	10.2	51.7	6.0	41.0	7.8	44.1	4.8
11/12/92	2345	32.2	0.0	11.9	12.4	32.4	3.0	25.3	3.1	50.6	3.1	37.2	3.0	36.2	8.0	53.1	4.9	42.9	6.1	42.7	4.2
11/13/92	0	31.7	0.0	12.0	11.5	32.2	3.0	25.2	3.0	50.3	3.1	37.2	3.0	35.0	7.4	53.6	5.1	43.0	5.1	44.8	6.4
11/13/92	15	31.5	0.0	12.6	13.9	31.6	3.0	25.0	3.1	49.7	3.1	37.3	3.0	34.8	14.2	54.7	3.7	43.5	5.7	42.8	4.2
11/13/92	30	31.6	0.0	12.3	12.5	31.4	3.0	25.0	3.1	49.8	3.1	37.2	3.0	35.0	8.8	54.3	3.7	43.2	4.5	43.7	3.4
11/13/92	45	31.7	0.0	12.5	11.8	31.2	3.0	24.9	3.1	49.7	3.1	37.5	3.0	34.7	8.5	54.6	3.3	43.0	4.3	43.2	5.2
11/13/92	100	31.7	0.0	10.1	11.1	31.1	3.0	24.9	3.0	48.9	3.1	36.9	3.0	33.8	10.3	54.7	8.2	43.1	5.1	44.7	5.4
11/13/92	115	31.8	0.0	11.8	11.9	30.6	3.0	25.1	3.1	47.7	3.1	35.4	3.0	33.7	9.4	54.3	4.2	42.9	8.0	45.7	5.3
11/13/92	130	31.7	0.0	10.8	12.0	31.4	3.0	24.8	3.1	48.0	3.1	35.7	3.1	35.6	9.5	54.2	3.5	42.8	6.7	45.1	4.9
11/13/92	145	31.7	0.0	9.2	11.3	30.6	3.0	25.2													

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	B Op %	D 1 KW spk/ min	D 2 KW spk/ min	D 3 KW spk/ min	D 4 KW spk/ min	C 1 KW spk/ min	C 2 KW spk/ min	C 3 KW spk/ min	C 4 KW spk/ min								
11/13/92	300	31.7	0.0	15.6	10.6	30.6	3.0	25.4	3.1	46.5	3.1	35.2	3.0	34.6	10.2	54.0	6.2	42.8	4.6	44.8	5.1
11/13/92	315	32.5	0.0	12.1	15.9	30.3	3.0	25.8	3.1	45.5	3.0	34.2	3.0	35.0	10.3	52.3	4.3	42.2	6.3	41.5	3.6
11/13/92	330	32.6	0.0	10.1	10.8	28.6	3.0	26.8	3.1	44.8	3.0	33.8	3.0	33.9	11.0	49.7	5.8	41.5	6.3	42.3	5.5
11/13/92	345	32.7	0.0	11.4	12.9	29.0	3.0	26.7	3.2	45.0	3.0	33.9	3.0	36.5	11.2	52.2	4.2	42.5	5.2	43.1	7.5
11/13/92	400	32.7	0.0	9.7	10.9	30.5	3.0	25.9	3.1	45.7	3.0	34.6	3.0	36.7	9.9	54.3	4.1	42.7	3.2	43.6	5.2
11/13/92	415	32.7	0.0	10.2	11.1	30.6	3.0	26.0	3.1	45.4	3.0	34.2	3.0	34.8	15.0	54.3	7.1	42.7	3.6	44.1	6.5
11/13/92	430	33.1	0.0	11.8	10.1	30.9	3.0	26.5	3.2	45.3	3.0	33.6	3.0	35.3	11.0	50.6	6.8	41.1	5.1	43.3	4.1
11/13/92	445	32.4	0.0	9.5	10.4	30.3	3.0	26.5	3.1	44.3	3.0	33.0	3.0	34.9	10.2	53.5	9.8	42.9	6.2	41.9	5.9
11/13/92	500	32.6	0.0	9.9	11.3	30.7	3.0	25.6	3.2	45.7	3.0	34.3	3.0	35.6	12.4	53.2	6.1	43.0	4.9	42.2	6.3
11/13/92	515	32.7	0.0	8.9	11.7	30.8	3.0	26.1	3.2	45.6	3.0	34.3	3.0	36.4	8.2	52.5	8.0	42.2	6.3	43.1	6.5
11/13/92	530	32.6	0.0	10.9	13.2	30.8	3.0	26.1	3.2	45.5	3.1	34.2	3.0	37.7	12.0	53.1	5.7	42.0	3.7	40.3	3.3
11/13/92	545	32.6	0.0	11.0	15.1	30.9	3.0	26.3	3.2	45.2	3.0	34.0	3.0	36.9	6.2	53.9	3.8	43.6	3.3	41.2	4.4
11/13/92	600	32.6	0.0	8.2	12.3	31.0	3.0	26.2	3.1	45.2	3.0	33.8	3.0	35.6	14.6	53.7	6.5	42.8	3.1	39.8	3.2
11/13/92	615	32.6	0.0	9.9	13.7	31.3	3.0	25.7	3.1	46.1	3.0	34.8	3.0	35.2	9.0	54.3	3.9	43.4	4.3	41.8	4.1
11/13/92	630	33.0	0.0	11.8	11.7	31.7	3.0	25.9	3.2	46.1	3.0	36.2	3.1	36.6	11.7	53.6	5.0	43.5	4.0	43.1	7.7
11/13/92	645	32.5	0.0	13.8	15.2	31.0	3.0	25.9	3.2	44.9	3.0	34.6	3.0	35.5	23.3	54.0	13.3	43.2	3.6	43.2	7.4
11/13/92	700	32.7	0.0	10.5	12.6	30.9	3.0	26.1	3.2	45.4	3.0	35.1	3.0	36.5	11.8	53.7	7.4	43.6	4.0	42.8	4.0
11/13/92	715	32.5	0.0	15.8	15.6	31.0	3.0	25.8	3.1	45.7	3.0	35.3	3.0	33.4	9.7	54.2	7.8	43.1	4.7	43.5	11.0
11/13/92	730	32.7	0.0	13.7	16.6	30.9	3.0	25.5	3.1	45.9	3.0	35.5	3.0	37.9	7.7	53.6	3.6	42.8	5.0	43.0	8.7
11/13/92	745	32.7	0.0	11.7	15.3	30.8	3.0	25.4	3.1	45.7	3.0	35.3	3.0	36.1	10.8	54.4	3.8	43.1	5.9	42.1	7.8
11/13/92	800	33.2	0.0	12.5	15.5	31.3	3.1	25.0	3.2	47.5	3.3	36.1	3.1	37.7	6.5	54.0	10.8	42.6	3.9	42.7	7.2
11/13/92	815	32.8	0.0	12.9	16.4	30.9	3.0	25.6	3.1	47.6	3.0	37.5	3.0	34.4	8.6	54.0	4.6	42.5	3.9	42.7	6.5
11/13/92	830	32.9	0.0	8.7	9.9	29.5	3.0	25.3	3.2	46.1	3.1	36.9	3.0	34.2	10.0	54.9	4.9	43.0	3.5	42.0	6.7
11/13/92	845	0.0	32.1	12.4	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	900	0.0	32.4	8.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	915	0.0	32.1	8.8	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	930	0.0	32.0	9.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	945	32.7	0.0	8.8	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	1000	28.0	0.0	9.9	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	1015	27.6	0.0	14.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	1030	29.4	0.0	13.7	14.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/13/92	1045	28.6	0.0	12.8	14.3	29.7	3.0	25.9	3.1	49.9	3.0	39.5	3.1	34.9	8.8	54.6	8.8	43.0	4.1	46.1	3.2
11/13/92	1100	33.3	0.0	12.7	14.2	31.2	3.0	26.6	3.1	48.7	3.1	39.3	3.0	35.2	7.0	54.4	4.4	43.1	5.0	46.3	4.8
11/13/92	1115	32.5	0.0	11.0	12.5	30.6	3.0	26.8	3.2	48.1	3.0	39.0	3.0	35.2	8.2	54.1	7.0	42.5	6.3	46.7	8.6
11/13/92	1130	32.6	0.0	11.5	13.9	31.2	3.0	27.0	3.2	49.0	3.1	39.6	3.0	36.1	6.3	53.4	6.1	41.9	4.5	45.8	3.2
11/13/92	1145	32.3	0.0	12.1	15.4	32.1	3.0	26.9	3.1	48.7	3.0	39.5	3.0	34.7	9.2	52.6	4.7	42.9	5.1	47.3	4.5
11/13/92	1200	32.7	0.0	11.4	11.5	31.7	3.0	27.3	3.2	48.0	3.1	38.8	3.0	33.1	10.1	53.1	8.6	41.2	5.6	45.8	5.3
11/13/92	1215	32.6	0.0	10.5	12.0	30.9	3.0	26.3	3.3	46.5	3.0	37.2	3.0	31.7	10.6	50.7	8.6	39.3	8.0	44.8	3.4
11/13/92	1230	32.7	0.0	10.1	10.5	31.2	3.0	26.2	3.2	45.9	3.0	36.4	3.0	31.4	12.2	49.3	7.4	36.8	7.5	44.9	4.0
11/13/92	1245	32.6	0.0	23.3	14.4	31.0	3.0	26.5	3.2	46.0	3.0	36.0	3.0	28.4	10.8	48.7	7.7	35.3	6.9	44.8	5.2
11/13/92	1300	32.5	0.0	10.3	10.1	31.2	3.0	26.4	3.3	45.6	3.0	35.7	3.0	30.7	12.2	49.7	7.7	36.6	9.2	45.0	4.3
11/13/92	1315	32.5	0.0	12.3	13.2	31.3	3.0	26.5	3.3	45.4	3.0	35.0	3.0	34.2	9.7	49.0	7.5	40.1	11.0	44.5	6.3
11/13/92	1330	32.6	0.0	0.1	18.8	30.8	3.0	26.7	3.3	45.1	3.0	34.3	3.0	31.0	11.2	47.5	7.8	39.7	5.9	43.8	3.5
11/13/92	1345	32.5	0.0	12.6	9.5	30.9	3.0	26.7	3.3	45.0	3.0	34.0	3.0	29.0	12.5	51.4	5.1	41.0	6.1	44.2	9.7
11/13/92	1400	32.6	0.0	9.4	9.3	30.9	3.0	26.6	3.3	44.7	3.0	33.7	3.0	28.4	14.6	46.6	11.6	36.7	8.8	44.7	5.1
11/13/92	1415	32.6	0.0	8.9	9.9	30.6	3.0	26.9	3.3	44.4	3.0	33.4	3.0	28.9	25.0	51.0	13.6	36.9	7.2	43.7	5.9
11/13/92	1430	32.7	0.0	10.1	9.5	31.0	3.0	26.9	3.3	43.9	3.0	32.4	3.0	30.0	10.6	51.4	7.8	40.0	7.8	43.9	3.6
11/13/92	1445	32.6	0.0	9.6	11.1	30.6	3.0	26.9	3.3	44.0	3.0	32.7	3.0	27.5	16.0	51.2	7.0	40.1	6.6	43.5	4.2
11/13/92	1500	0.0	35.2	9.7	10.4	29.3	3.0	26.9	3.3	43.8	3.0	33.2	3.0	31.5	11.8	53.8	8.5	41.1	5.0	43.3	4.6
11/13/92	1515	0.0	36.3	10.3	9.9	29.1	3.0	26.7	3.3	43.8	3.0	33.0	3.0	31.4	12.7	55.9	3.9	44.5	4.6	43.4	5.6
11/13/92	1530	0.0	36.7	9.2	9.5	30.3	3.0	27.9	3.3	43.7	3.0	33.0	3.0	32.4	12.1	56.4	3.0	45.0	3.6	43.3	3.5
11/13/92	1545	0.0	36.9	9.0	9.8	29.7	3.0	27.6	3.2	43.8	3.0	33.3	3.0	34.8	8.5	56.2	3.2	44.6	3.5	42.8	11.2
11/13/92	1600	0.1	39.3	10.6	10.4	28.9	3.0	28.0	3.3	43.4	3.0	32.7	3.0	34.7	7.7	56.1	4.1	44.3	4.6	42.4	3.3
11/13/92	1615	0.1	39.6	10.1	10.7	29.2	3.0	27.5	3.2	44.1	3.0	33.4	3.0	25.7	11.5	52.7	8.2	37.9	3.5	42.1	10.5
11/13/92	1630	0.1	39.8	10.3	11.4	29.2	3.0	26.6	3.1	44.8	3.0	33.8	3.0	33.7	12.5	55.5	3.9	44.0	3.6	43.3	5.0
11/13/92	1645	0.1	40.0	10.4	11.9	29.3	3.0	25.9	3.1	45.5	3.0	34.2	3.0	31.7	11.7	55.9	6.1	44.5	4.6	44.1	6.1
11/13/92	1700	0.1	39.7	10.8	13.7	29.5	3.0	25.8	3.2	45.8	3.0	34.6	3.0	32.5	8.8	55.3	4.4	44.0	3.6	45.1	5.5
11/13/92	1715	0.1	39.1	11.5	12.1	29.1	3.0	25.6	3.1	46.0	3.0	35.0	3.0	31.3	9.9	55.0	4.7	43.6	3.3	45.0	3.4
11/13/92	1730	0.1	39.1	12.9	12.7	29.2	3.0	25.5	3.1	46.0	3.1	35.2	3.0	32.0	9.8	54.0	6.2	40.9	4.4	42.5	4.3
11/13/92	1745	0.1	38.8	13.4	12.7	29.0	3.0	25.4	3.1	46.0	3.0	35.3	3.0	33.4	10.1	54.8	4.8	43.1	3.1	41.6	5.1
11/13/92	1800	0.1	39.2	12.9	13.0	29.1	3.0	25.2	3.1	45.8	3.0	35.3	3.0	31.0	9.6	55.2	3.9	44.1	3.4	41.8	4.7
11/13/92	1815	0.1																			

12/3/92 20:40:39

Date	Time	Water Flow gpm	Lime Flow gpm	Stk Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
11/13/92	1915	0.1	36.9	13.4	15.0	28.8	3.0	25.0	3.1	45.7	3.0	35.2	3.0	32.3	9.5	55.1	5.7	43.8	3.1	41.4	9.2
11/13/92	1930	0.1	36.9	13.1	14.1	29.0	3.0	25.2	3.1	45.6	3.0	35.1	3.0	34.2	10.7	55.0	5.9	43.4	3.3	44.3	7.7
11/13/92	1945	0.1	36.7	13.3	14.6	29.0	3.0	24.7	3.0	46.8	3.0	35.9	3.0	31.0	9.7	54.1	5.4	43.1	4.4	46.1	8.0
11/13/92	2000	0.1	35.6	14.4	16.7	28.8	3.0	24.5	3.0	46.4	3.0	35.6	3.0	33.8	9.8	54.3	6.3	42.1	3.7	42.6	3.6
11/13/92	2015	0.1	35.3	12.8	14.4	28.8	3.0	24.6	3.1	47.3	3.1	36.3	3.0	36.0	7.8	52.7	6.1	41.1	4.2	46.6	6.1
11/13/92	2030	0.1	34.5	14.0	15.0	29.3	3.0	24.7	3.1	46.6	3.0	35.9	3.0	37.0	5.4	54.9	6.5	43.4	4.3	46.1	4.0
11/13/92	2045	28.6	0.0	13.8	14.0	28.9	3.0	24.8	3.0	46.8	3.1	35.8	3.0	35.9	8.2	54.6	6.5	43.5	4.2	45.2	3.9
11/13/92	2100	32.1	0.0	13.1	12.9	31.4	3.0	24.2	3.0	47.4	3.0	36.5	3.0	34.7	10.2	53.6	6.9	42.0	4.3	46.3	3.6
11/13/92	2115	31.8	0.0	13.4	13.8	31.2	4.1	24.3	3.0	48.3	3.1	37.7	3.0	33.4	10.9	51.1	8.2	40.4	6.9	44.1	8.2
11/13/92	2130	0.1	33.5	14.6	15.3	29.2	4.0	25.3	3.1	46.6	3.0	37.3	3.0	35.7	8.9	53.8	7.8	41.8	3.2	45.0	5.6
11/13/92	2145	0.0	39.0	12.3	11.6	32.6	3.0	25.2	3.1	45.5	3.1	36.1	3.0	35.8	11.1	53.8	7.7	42.3	3.2	43.8	4.7
11/13/92	2200	0.0	37.6	11.6	10.8	32.4	3.0	25.3	3.1	44.7	3.0	35.2	3.0	37.8	8.0	54.3	6.1	43.2	4.3	44.2	4.8
11/13/92	2215	0.0	36.5	13.6	12.0	31.1	3.0	25.2	3.1	44.7	3.0	35.3	3.0	33.6	9.8	50.2	9.1	39.6	7.6	42.6	3.8
11/13/92	2230	0.0	36.2	13.0	14.4	31.5	3.2	24.6	3.0	45.7	3.0	35.9	3.0	37.0	10.4	54.0	6.3	42.7	3.7	43.1	5.0
11/13/92	2245	0.0	36.5	12.9	14.0	30.8	3.0	24.9	3.1	45.1	3.0	35.3	3.0	39.5	6.2	54.3	6.3	42.9	3.8	44.6	5.9
11/13/92	2300	0.0	35.2	12.6	11.9	31.3	3.0	24.8	3.1	45.2	3.0	35.3	3.0	39.6	5.6	53.8	3.8	43.4	6.1	44.4	7.1
11/13/92	2315	0.1	34.6	12.5	11.5	31.0	3.0	25.1	3.1	44.8	3.0	35.0	3.0	38.9	7.8	54.3	6.1	43.7	3.2	44.3	5.9
11/13/92	2330	0.0	34.9	11.3	11.2	32.0	3.1	25.2	3.1	46.2	3.1	35.8	3.0	39.0	7.6	52.6	6.0	43.2	3.4	45.3	5.2
11/13/92	2345	0.0	34.4	12.3	12.4	31.7	3.1	25.0	3.1	46.3	3.0	35.7	3.0	34.9	14.2	52.1	6.9	42.6	6.1	45.6	4.0
11/14/92	0	0.0	34.6	11.4	11.6	32.0	3.0	25.0	3.1	46.2	3.1	35.5	3.0	39.6	7.3	52.0	8.8	42.1	5.0	44.7	5.5
11/14/92	15	0.0	35.5	12.0	13.5	31.5	3.0	25.0	3.1	45.9	3.0	35.0	3.0	39.8	8.7	53.4	3.5	43.6	3.1	43.7	4.3
11/14/92	30	0.0	36.7	11.2	13.6	32.1	3.1	24.9	3.1	46.1	3.1	35.0	3.0	38.5	9.8	53.2	6.6	43.2	4.2	43.0	6.9
11/14/92	45	0.0	29.2	11.6	17.6	30.2	3.6	25.3	3.1	44.9	3.0	34.3	3.0	33.9	12.7	51.5	11.1	40.7	7.1	42.4	8.7
11/14/92	100	0.0	36.3	10.0	13.2	32.4	3.2	24.9	3.1	45.5	3.1	34.6	3.0	36.0	6.7	52.6	5.1	42.5	4.8	42.0	6.7
11/14/92	115	0.0	35.5	9.9	13.3	31.5	3.0	24.8	3.1	45.6	3.1	34.9	3.0	35.9	11.1	53.2	3.4	43.1	3.2	41.5	5.8
11/14/92	130	0.0	35.4	9.7	15.2	31.6	3.0	24.6	3.1	46.0	3.1	35.0	3.0	39.7	6.6	52.7	5.4	43.2	3.4	40.4	4.3
11/14/92	145	0.0	37.3	16.4	12.7	32.6	3.0	24.8	3.1	45.5	3.1	34.5	3.0	35.0	8.9	53.6	4.4	42.5	3.5	41.1	5.2
11/14/92	200	0.0	36.7	11.5	12.1	32.3	3.0	24.9	3.1	45.3	3.0	34.1	3.0	36.2	8.7	53.3	9.3	42.8	3.2	41.3	9.1
11/14/92	215	0.0	36.0	9.7	12.8	32.6	3.1	24.7	3.1	45.9	3.1	34.9	3.0	35.0	11.6	52.0	5.3	41.9	4.2	41.1	3.1
11/14/92	230	0.0	35.4	11.6	11.7	31.8	3.0	25.5	3.1	44.3	3.0	33.3	3.0	37.2	7.3	51.8	5.6	42.2	3.4	43.8	4.4
11/14/92	245	0.0	34.2	9.7	13.4	31.8	3.0	24.9	3.1	45.7	3.1	34.4	3.0	34.9	13.6	52.8	6.8	42.7	3.5	44.6	5.4
11/14/92	300	0.0	36.1	9.8	12.4	33.3	3.0	24.4	3.1	46.2	3.0	34.5	3.0	40.2	5.3	53.2	4.5	43.1	3.3	44.2	7.6
11/14/92	315	0.0	36.2	8.5	11.6	31.8	3.0	24.9	3.1	45.2	3.0	34.0	3.0	39.2	12.0	53.5	5.4	43.8	3.1	43.2	6.5
11/14/92	330	0.0	36.6	9.0	10.6	32.7	3.0	25.3	3.1	43.6	3.0	32.4	3.0	35.7	10.3	52.4	5.1	42.7	3.3	42.1	4.5
11/14/92	345	0.0	33.6	9.4	11.1	32.3	3.0	25.2	3.1	44.3	3.0	32.9	3.0	37.8	9.5	52.5	5.8	43.0	3.8	39.6	3.9
11/14/92	400	0.0	36.9	8.7	12.1	32.0	3.8	24.8	3.1	44.9	3.1	33.3	3.0	37.5	9.1	51.4	8.1	41.7	3.9	42.7	3.6
11/14/92	415	0.0	35.7	9.0	13.6	32.5	3.1	24.4	3.0	46.0	3.0	34.4	3.0	33.9	14.8	50.9	8.0	40.5	3.7	42.0	7.3
11/14/92	430	0.0	35.3	8.5	13.4	32.5	3.3	24.4	3.1	46.5	3.1	34.7	3.0	32.2	5.8	50.6	7.3	39.4	4.1	43.8	3.5
11/14/92	445	0.0	35.1	8.7	13.6	31.9	3.0	24.3	3.0	46.4	3.1	34.7	3.0	39.7	11.7	52.8	5.2	43.3	3.1	44.3	3.9
11/14/92	500	0.0	35.7	10.4	14.0	32.8	3.0	24.4	3.1	46.1	3.1	34.2	3.0	36.5	8.1	51.2	4.8	41.8	3.7	44.0	3.6
11/14/92	515	0.0	37.4	8.2	13.3	33.4	4.0	24.2	3.0	46.0	3.1	33.6	3.0	37.6	5.3	50.6	5.8	39.9	3.7	44.7	10.6
11/14/92	530	0.0	33.0	8.8	12.7	32.0	3.0	24.2	3.1	46.9	3.1	35.0	3.0	40.6	8.1	51.9	4.4	43.0	4.3	45.5	8.2
11/14/92	545	0.0	33.8	8.1	11.1	33.1	3.0	24.6	3.1	46.0	3.0	33.9	3.0	40.0	5.1	52.5	4.3	43.1	3.8	44.7	6.6
11/14/92	600	0.0	33.4	8.6	12.7	32.1	3.0	24.5	3.1	46.1	3.1	33.8	3.0	38.7	5.3	51.2	4.6	42.2	3.1	44.9	7.1
11/14/92	615	0.0	33.8	10.2	15.5	31.8	3.0	24.2	3.1	47.6	3.1	35.3	3.0	40.8	4.4	51.3	4.7	42.5	3.1	45.0	4.6
11/14/92	630	0.0	34.9	11.0	15.5	31.3	3.1	24.1	3.1	47.7	3.1	35.7	3.0	38.9	7.0	52.3	5.1	43.3	3.2	45.9	4.1
11/14/92	645	0.0	33.9	11.3	17.4	30.9	3.0	24.0	3.0	47.9	3.1	35.8	3.0	39.1	4.8	51.4	4.9	42.4	3.1	40.8	3.7
11/14/92	700	0.0	32.1	9.7	14.1	31.3	3.0	24.3	3.1	46.6	3.0	34.5	3.0	36.1	6.4	51.7	4.8	42.4	4.4	44.6	3.7
11/14/92	715	0.0	33.2	9.9	14.7	31.2	3.0	24.0	3.1	46.3	3.1	35.2	3.2	39.9	6.9	53.5	4.2	43.4	3.9	41.2	10.2
11/14/92	730	0.0	34.6	10.3	15.5	31.0	3.0	23.9	3.0	46.4	3.7	35.3	3.0	39.8	4.9	54.0	4.0	43.9	4.3	45.1	11.6
11/14/92	745	0.0	33.1	9.9	19.2	30.5	3.1	23.7	3.1	46.0	3.1	35.2	3.0	39.9	9.8	54.0	6.9	43.1	4.6	44.2	4.9
11/14/92	800	0.0	31.8	10.4	19.0	29.5	3.0	23.6	3.0	46.2	3.0	35.6	3.0	40.3	7.0	54.3	5.0	43.6	3.5	43.8	5.8
11/14/92	815	0.0	29.7	15.2	34.3	28.0	3.2	23.6	3.0	45.3	3.1	35.1	3.4	39.7	7.6	54.4	4.7	43.6	3.7	43.3	5.0
11/14/92	830	0.0	30.8	17.4	31.3	26.9	4.1	23.5	3.0	46.6	3.1	35.0	3.0	39.5	8.7	54.7	3.8	43.9	5.2	43.2	4.7
11/14/92	845	0.0	31.6	17.8	33.3	27.1	3.0	23.5	3.1	46.2	3.0	35.0	3.0	37.1	7.4	52.4	8.8	39.8	6.8	25.5	31.5
11/14/92	900	0.0	30.8	16.6	31.7	26.4	3.0	23.7	3.1	47.2	3.1	35.8	3.0	39.9	6.6	54.7	5.4	44.1	3.6	40.0	6.1
11/14/92	915	0.0	33.3	13.9	23.1	28.8	3.2	23.5	3.0	48.3	3.1	36.9	3.0	36.9	8.7	54.5	4.5	43.6	3.9	42.7	4.3
11/14/92	930	0.0	30.7	14.8	26.1	26.3	5.3	23.4	3.0	47.7	3.1	36.6	3.0	33.9	8.5	54.1	6.9	42.7	5.8	41.8	6.0
11/14/92	945	0.0	29.1	17.3	33.6	27.8	4.4	23.8	3.1	46.9	3.2	36.0	3.0	38.7	6.8	54.7	4.9	42.7	3.2	43.7	8.0
11/14/92	1000	0.0	29.9	20.0	34.4	26.5	3.2	23.7	3.1	47.5	3.4	37.2	3.4	38.2	5.4	54.3	5.5	43.2	4.4	44.7	3.7
11/14/92	1015	30.6	0.0	14.3	20.9	29.9	3.0	23.9	3.1	52.3	3.1	39.6	3.0	37.6	7.8	54					

Seward Plant Buell ESP Fields Operating Log

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20:40:39

Date	Time	Water Flow gpm	Line Flow gpm	Stk Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
11/14/92	1130	35.0	0.0	14.2	10.8	33.0	3.0	24.7	3.1	45.5	3.0	33.9	3.0	38.5	8.1	53.9	6.0	43.1	4.3	40.7	4.3
11/14/92	1145	33.6	0.0	13.8	10.3	33.2	3.6	24.6	3.1	46.7	3.1	35.3	3.0	37.3	11.5	53.6	6.2	42.3	4.4	45.0	6.9
11/14/92	1200	34.9	0.0	15.0	12.0	32.1	3.0	24.8	3.1	44.3	3.0	33.3	3.0	31.7	10.8	53.4	9.1	40.9	6.3	42.6	3.7
11/14/92	1215	33.5	0.0	15.2	10.5	32.2	3.0	24.9	3.1	43.9	3.0	33.0	3.0	35.5	11.3	50.5	7.8	39.8	6.8	38.5	3.3
11/14/92	1230	32.4	0.0	14.6	10.6	31.9	3.0	24.6	3.0	44.6	3.0	33.8	3.0	35.2	9.3	53.8	8.7	40.7	4.0	41.8	6.7
11/14/92	1245	41.0	0.0	12.8	12.3	31.6	3.0	24.8	3.1	44.4	3.0	34.1	3.0	34.1	9.0	54.3	7.1	41.8	3.9	43.0	5.0
11/14/92	1300	0.0	36.3	14.9	12.1	31.4	3.0	24.7	3.1	45.3	3.0	34.5	3.0	37.5	8.5	55.2	5.0	44.1	4.4	42.7	5.1
11/14/92	1315	0.0	37.9	15.4	10.5	31.0	3.0	25.4	3.1	44.1	3.0	33.1	3.0	35.6	9.7	54.5	5.9	42.2	3.5	41.9	6.6
11/14/92	1330	0.0	40.0	9.3	10.5	31.7	3.0	25.4	3.1	43.8	3.0	32.5	3.0	35.7	8.3	55.2	6.1	43.3	3.8	41.9	3.8
11/14/92	1345	0.0	38.3	8.0	12.8	31.9	3.0	24.8	3.1	44.5	3.0	33.2	3.0	35.3	8.5	55.5	5.2	44.1	4.1	42.4	4.7
11/14/92	1400	0.0	37.9	7.2	10.7	31.9	3.0	24.8	3.1	44.8	3.0	33.2	3.0	37.0	7.5	55.3	4.5	43.8	3.3	42.7	4.4
11/14/92	1415	0.0	39.4	7.3	10.4	32.1	3.0	25.4	3.2	43.5	3.0	32.0	3.0	38.5	9.1	55.6	8.2	44.0	4.1	41.0	13.3
11/14/92	1430	0.0	38.4	8.5	10.5	32.4	3.0	24.8	3.1	44.4	3.0	32.6	3.0	34.4	19.4	53.6	12.7	41.2	9.0	43.3	9.4
11/14/92	1445	0.0	37.9	8.2	11.2	33.1	3.0	24.4	3.0	45.0	3.0	33.1	3.0	37.8	10.1	55.2	7.9	43.3	3.1	44.5	4.4
11/14/92	1500	0.0	37.7	7.3	11.2	33.2	3.0	24.4	3.0	45.4	3.0	33.6	3.0	36.8	7.4	55.8	5.7	43.8	3.4	44.6	4.7
11/14/92	1515	0.0	38.7	7.8	10.9	32.6	3.0	25.0	3.1	44.3	3.0	32.6	3.0	37.1	10.9	55.5	7.1	43.5	3.1	40.5	3.8
11/14/92	1530	0.0	41.7	7.4	10.9	33.3	3.0	24.7	3.1	44.3	3.0	32.3	3.0	37.3	7.8	55.5	7.2	43.5	3.3	42.2	5.2
11/14/92	1545	0.0	41.7	7.4	10.9	33.3	3.0	24.7	3.1	44.3	3.0	32.3	3.0	37.3	7.8	55.5	7.2	43.5	3.3	42.2	5.2
11/14/92	1600	0.0	36.8	9.1	13.7	31.3	3.6	24.5	3.0	45.7	3.0	33.2	3.0	40.4	4.7	55.5	6.2	43.5	3.6	44.1	7.4
11/14/92	1615	0.0	36.8	9.1	13.7	31.3	3.6	24.5	3.0	45.7	3.0	33.2	3.0	40.4	4.7	55.5	6.2	43.5	3.6	44.1	7.4
11/14/92	1630	0.0	0.0	0.0	14.9	30.6	3.0	24.3	3.1	47.5	3.1	34.8	3.0	37.8	5.9	53.9	7.1	42.3	4.3	45.1	5.4
11/14/92	1645	0.0	35.2	8.0	14.2	30.5	3.0	24.3	3.0	47.1	3.1	34.7	3.0	35.2	9.9	53.9	6.7	41.3	4.0	45.1	5.2
11/14/92	1700	0.0	35.5	10.3	15.2	30.0	3.0	24.2	3.1	47.6	3.1	35.1	3.0	35.5	23.9	55.1	7.8	44.2	4.7	43.0	3.1
11/14/92	1715	0.0	35.3	13.5	16.0	29.8	3.2	24.2	3.0	47.7	3.1	35.1	3.0	35.6	7.8	54.2	6.8	42.8	5.0	44.1	4.2
11/14/92	1730	0.0	35.4	15.3	14.1	31.0	3.0	24.4	3.1	46.6	3.1	33.9	3.0	38.9	7.7	55.0	4.9	44.1	4.8	45.6	4.5
11/14/92	1745	0.0	35.0	12.9	13.8	31.0	3.1	24.3	3.0	46.1	3.0	33.6	3.0	38.1	7.3	55.3	5.5	44.4	3.4	45.3	7.6
11/14/92	1800	0.0	35.8	15.3	16.4	30.5	3.0	24.1	3.1	47.3	3.1	34.8	3.0	38.5	9.7	54.2	6.8	43.5	5.3	45.4	5.8
11/14/92	1815	0.0	35.1	13.7	15.2	30.7	3.0	24.0	3.0	47.5	3.0	34.9	3.0	39.7	5.8	54.9	6.2	43.9	3.7	45.9	6.8
11/14/92	1830	0.0	34.6	15.2	14.0	30.6	3.0	24.1	3.0	47.4	3.0	34.9	3.0	38.1	5.8	54.8	4.7	43.6	3.8	45.4	7.0
11/14/92	1845	0.0	34.6	14.7	15.5	30.7	3.0	24.0	3.0	47.6	3.0	35.1	3.0	38.1	7.1	53.6	7.2	42.4	4.4	44.0	4.6
11/14/92	1900	0.1	34.7	14.8	14.3	31.2	3.0	24.0	3.0	47.9	3.1	35.3	3.0	38.6	6.4	53.5	4.4	43.5	5.5	43.9	4.0
11/14/92	1915	0.0	33.9	14.5	14.2	31.1	3.2	24.2	3.0	48.0	3.1	35.5	3.4	39.6	8.1	54.7	4.7	44.4	3.1	43.5	9.9
11/14/92	1930	0.1	34.3	14.5	14.6	30.9	3.0	24.0	3.0	47.5	3.0	35.3	3.0	39.9	7.2	54.8	7.0	43.3	3.9	44.1	7.1
11/14/92	1945	0.0	34.7	14.2	13.2	31.3	3.4	24.0	3.1	47.5	3.1	35.1	3.0	37.2	13.5	54.8	10.0	43.5	4.5	42.8	7.9
11/14/92	2000	0.0	34.3	14.2	13.9	31.1	3.6	24.0	3.0	47.2	3.0	34.7	3.0	38.8	6.9	55.1	4.8	44.0	3.4	45.6	9.0
11/14/92	2015	0.0	33.2	14.9	13.2	30.3	3.7	24.3	3.1	46.2	3.1	34.0	3.0	39.0	6.2	55.1	6.8	43.8	3.4	43.9	4.2
11/14/92	2030	0.0	34.5	13.4	12.2	31.2	3.0	24.3	3.0	45.8	3.0	33.5	3.0	39.3	5.3	54.8	6.8	44.1	3.3	44.8	8.3
11/14/92	2045	0.1	35.5	14.5	15.6	31.7	3.0	24.0	3.1	46.2	3.0	33.9	3.0	38.7	7.7	54.8	6.8	43.1	3.9	45.0	5.8
11/14/92	2100	0.1	33.5	15.9	15.9	30.8	3.7	23.9	3.0	46.9	3.0	34.8	3.0	38.8	6.8	54.9	4.8	43.6	3.2	45.0	4.8
11/14/92	2115	0.1	35.2	14.8	15.0	31.5	3.0	24.0	3.1	47.7	3.1	35.1	3.0	37.9	8.2	54.5	7.3	43.6	3.7	43.0	4.2
11/14/92	2130	0.0	34.0	14.6	14.3	31.1	3.0	24.0	3.0	47.5	3.0	34.9	3.0	37.3	6.0	54.7	5.8	43.1	3.4	46.6	6.3
11/14/92	2145	0.0	33.6	14.6	15.6	31.1	3.1	23.9	3.1	47.6	3.1	35.2	3.0	40.2	8.5	54.7	5.2	44.0	3.7	45.8	7.3
11/14/92	2200	0.0	33.5	16.0	13.9	31.3	3.4	23.9	3.0	47.3	3.0	35.0	3.0	38.0	7.1	54.1	6.0	43.1	4.3	44.4	4.9
11/14/92	2215	0.0	32.9	14.3	14.4	31.1	3.6	23.9	3.0	47.2	3.1	34.9	3.0	40.3	7.2	54.6	6.8	43.9	3.4	44.2	5.1
11/14/92	2230	0.1	32.3	14.5	16.3	30.8	5.4	23.9	3.1	47.5	3.1	35.1	3.0	37.9	6.2	52.9	5.9	42.0	4.0	44.4	4.1
11/14/92	2245	0.1	34.0	13.9	14.6	31.3	3.1	24.2	3.0	45.6	3.0	33.1	3.0	38.9	6.0	54.5	5.0	43.4	3.2	44.5	5.0
11/14/92	2300	0.1	34.2	16.6	14.4	30.9	3.1	24.2	3.1	45.4	3.0	33.1	3.0	35.8	8.8	54.0	7.1	42.5	3.4	44.0	5.7
11/14/92	2315	0.1	34.2	13.4	21.7	31.6	3.7	24.2	3.1	48.7	3.1	35.8	3.0	39.3	8.9	52.3	5.7	42.4	3.3	45.7	9.2
11/14/92	2330	0.1	35.9	12.3	19.1	31.8	5.3	24.1	3.1	48.6	3.1	36.3	3.0	38.0	6.9	52.5	5.4	42.5	4.1	46.0	6.1
11/14/92	2345	0.0	35.7	9.6	14.7	33.0	3.0	24.3	3.1	51.0	3.1	35.4	3.0	39.4	6.9	51.3	5.3	41.8	4.0	45.4	4.6
11/15/92	0	0.0	35.3	9.3	14.8	32.8	3.3	24.3	3.1	49.8	3.1	35.7	3.0	38.6	6.4	52.5	8.3	42.5	3.4	44.6	5.2
11/15/92	15	0.0	35.0	9.2	14.0	32.6	4.7	24.2	3.0	48.8	3.1	34.9	3.0	39.9	6.8	53.5	4.9	43.4	3.1	44.9	5.6
11/15/92	30	0.0	35.0	7.6	13.1	32.8	3.5	24.3	3.1	48.1	3.1	34.3	3.0	39.2	4.9	53.3	5.4	42.8	3.2	45.2	6.0
11/15/92	45	0.0	35.2	7.6	13.4	32.6	3.0	24.2	3.0	48.0	3.1	34.3	3.0	38.6	7.8	52.6	5.1	43.3	3.2	42.9	3.1
11/15/92	100	0.0	34.3	7.2	12.5	33.3	3.0	24.3	3.1	48.5	3.1	34.5	3.0	39.8	7.3	52.5	4.1	42.9	3.2	47.0	5.4
11/15/92	115	0.0	36.6	8.4	14.0	32.6	4.3	24.4	3.1	47.4	3.1	33.3	3.0	40.6	6.5	52.4	4.0	43.7	3.1	46.2	3.9
11/15/92	130	0.0	36.7	9.6	12.5	33.6	3.0	24.4	3.0	46.8	3.1	32.8	3.0	40.1	5.8	52.2	5.8	42.9	3.1	44.9	3.5
11/15/92	145	0.0	36.3	8.5	13.7	33.2	3.0	24.3	3.1	47.1	3.1	33.5	3.0	40.4	6.6	53.5	4.7	43.4	3.1	45.1	4.6
11/15/92	200	0.0	36.9	7.3	12.8	32.1	4.3	24.5	3.0	46.6	3.0	33.0	3.0	37.2	8.8	53.1	4.9	43.5	4.0	45.1	3.7
11/15/92	215	0.0	38.1	8.2	13.0	34.3	3.0	24.3	3.1	46.4	3.1	32.4	3.0	36.4	8.7	51.5	6.1	41.1	4.0	44.9	4.4
11/15/92	230	0.0	36.6	7.5	12.7	32.1	3.5	24.1	3.0	46.7	3.1	33.1	3.0	39.9	7.3	53.7	5.3	43			

12/3/92

20:40:39

Date	Time	Water Flow gpm	Line Flow gpm	Sik Op %	B Op %	D 1 KW	D 1 spk/ mn	D 2 KW	D 2 spk/ mn	D 3 KW	D 3 spk/ mn	D 4 KW	D 4 spk/ mn	C 1 KW	C 1 spk/ mn	C 2 KW	C 2 spk/ mn	C 3 KW	C 3 spk/ mn	C 4 KW	C 4 spk/ mn
11/15/92	345	0.0	35.5	8.8	15.2	33.3	3.2	24.1	3.1	47.5	3.1	33.5	3.0	40.2	5.8	52.7	6.2	42.9	3.1	45.3	6.4
11/15/92	400	0.1	35.6	10.3	15.0	33.9	3.6	24.1	3.1	48.0	3.1	34.0	3.0	40.7	4.8	53.9	4.4	43.5	3.1	44.6	4.7
11/15/92	415	0.1	35.7	9.9	15.8	33.7	3.8	24.3	3.1	49.2	3.1	34.8	3.0	40.8	5.1	52.2	5.7	42.1	3.1	45.5	7.2
11/15/92	430	0.1	35.7	9.9	16.7	33.2	3.0	24.2	3.1	48.7	3.1	34.8	3.0	40.2	6.0	51.9	7.9	41.1	3.1	45.0	3.6
11/15/92	445	0.0	35.8	8.2	14.2	33.3	3.0	24.2	3.1	48.2	3.1	33.8	3.0	38.5	7.5	51.4	5.3	40.4	3.8	45.2	4.6
11/15/92	500	0.0	35.8	8.2	13.2	33.5	3.1	24.3	3.1	48.6	3.1	34.0	3.0	39.6	6.8	51.8	8.9	41.2	3.9	45.6	7.3
11/15/92	515	0.0	34.5	8.7	13.2	33.2	4.1	24.3	3.1	48.0	3.1	33.7	3.0	40.1	10.0	52.0	7.1	41.7	3.2	46.2	5.6
11/15/92	530	0.0	35.8	8.9	13.4	33.8	3.0	24.3	3.1	48.0	3.1	33.5	3.0	40.5	7.5	52.2	5.3	42.9	3.1	45.6	3.6
11/15/92	545	0.0	33.5	0.1	21.4	33.0	3.4	24.1	3.0	48.2	3.1	34.6	3.0	40.5	10.7	51.9	6.5	42.3	3.1	48.0	4.3
11/15/92	600	0.0	34.5	8.3	13.7	33.2	3.3	24.3	3.1	48.5	3.1	33.7	3.0	40.6	7.2	52.2	5.9	43.2	3.1	46.4	7.4
11/15/92	615	0.0	34.4	8.0	13.3	33.1	4.5	24.3	3.1	47.9	3.1	33.3	3.0	40.6	6.8	52.3	7.9	43.4	3.1	41.3	3.1
11/15/92	630	0.0	35.1	9.0	15.9	33.2	3.0	24.3	3.1	47.9	3.1	33.2	3.0	41.1	4.1	52.1	4.8	43.2	3.1	39.1	4.1
11/15/92	645	0.0	33.8	8.9	17.6	32.6	3.0	24.1	3.0	48.2	3.1	34.1	3.0	40.5	4.4	51.7	7.0	42.3	3.1	39.5	3.1
11/15/92	700	33.4	0.0	6.3	11.7	35.1	3.0	24.7	3.1	49.2	3.1	33.9	3.0	40.8	9.0	51.7	5.8	42.6	3.1	46.0	8.5
11/15/92	715	31.5	0.0	6.0	11.3	34.3	3.0	24.4	3.1	48.6	3.1	33.0	3.0	38.1	5.5	51.2	5.4	40.4	3.3	44.9	4.3
11/15/92	730	0.1	32.4	11.2	20.8	31.3	3.0	24.3	3.1	47.9	3.1	34.1	3.0	41.0	5.2	50.3	8.1	40.7	3.8	46.8	5.7
11/15/92	745	0.1	33.2	11.7	23.9	32.1	3.1	24.1	3.1	49.1	3.1	35.2	3.0	41.1	3.7	50.3	8.4	40.6	3.1	45.5	3.8
11/15/92	800	0.0	34.3	9.0	18.4	32.3	3.0	24.1	3.1	50.8	3.1	35.3	3.0	39.3	6.1	49.8	7.4	39.7	3.3	43.7	4.0
11/15/92	815	0.0	33.1	8.6	15.8	32.0	3.0	24.2	3.1	50.9	3.1	35.6	3.0	41.0	3.1	50.9	8.3	41.5	3.1	48.3	6.4
11/15/92	830	0.0	34.4	10.8	21.6	32.2	3.2	24.0	3.0	50.2	3.1	35.2	3.0	40.8	5.8	50.5	9.7	40.3	3.8	48.1	5.1
11/15/92	845	0.0	34.4	11.5	24.0	31.1	3.6	23.9	3.1	49.0	3.1	35.8	3.0	41.1	3.7	51.4	6.2	40.5	3.4	46.4	4.3
11/15/92	900	32.1	0.0	9.5	18.2	31.7	3.2	24.6	3.1	52.4	3.1	39.5	3.0	40.5	4.4	50.9	8.4	39.4	3.9	48.0	4.2
11/15/92	915	32.6	0.0	6.7	12.6	35.3	3.0	25.4	3.1	51.3	3.1	36.6	3.0	40.5	6.5	50.4	10.7	38.5	4.1	42.9	3.6
11/15/92	930	32.8	0.0	6.8	14.3	35.8	3.0	25.6	3.1	51.2	3.1	36.6	3.0	41.0	6.5	50.4	10.7	38.6	4.1	42.8	3.6
11/15/92	945	37.3	0.0	6.9	11.3	35.8	3.0	25.6	3.1	51.2	3.1	36.6	3.0	41.0	6.5	50.4	10.7	38.6	4.1	42.8	3.6
11/15/92	1000	32.4	0.0	6.6	12.6	32.9	3.0	25.4	3.1	50.8	3.1	37.7	3.0	40.5	6.5	51.8	7.0	41.3	4.1	48.0	8.5
11/15/92	1015	32.5	0.0	7.0	13.8	32.8	3.0	25.3	3.1	50.8	3.1	37.9	3.0	40.9	4.0	51.8	8.3	41.6	3.5	47.6	4.0
11/15/92	1030	32.3	0.0	7.1	12.2	32.9	3.0	25.4	3.1	51.0	3.1	38.4	3.0	40.8	3.8	52.8	9.2	42.7	3.9	43.6	4.4
11/15/92	1045	32.6	0.0	7.4	14.5	32.9	3.0	25.4	3.1	50.8	3.1	38.3	3.0	40.3	3.7	52.4	7.3	41.6	3.1	47.6	5.7
11/15/92	1100	0.0	35.1	8.1	15.4	31.4	3.0	24.8	3.1	50.4	3.1	37.6	3.0	41.2	3.8	52.7	7.1	42.7	3.1	41.9	3.1
11/15/92	1115	0.0	35.0	7.2	14.3	30.6	4.2	24.8	3.1	51.2	3.2	37.7	3.0	40.1	6.3	53.3	6.5	43.2	3.2	48.2	5.9
11/15/92	1130	0.0	34.4	7.2	13.9	31.8	3.0	24.7	3.1	51.5	3.1	37.7	3.0	40.1	5.1	52.3	7.5	41.7	3.8	44.6	5.4
11/15/92	1145	0.0	34.0	8.3	14.8	31.7	3.0	24.6	3.1	51.4	3.1	37.5	3.0	40.8	3.8	52.3	5.7	41.6	3.2	46.5	7.2
11/15/92	1200	0.0	34.0	8.2	15.8	31.6	3.5	24.8	3.1	51.9	3.1	38.0	3.0	40.2	4.4	51.4	5.4	41.8	3.2	48.8	5.7
11/15/92	1215	0.0	34.3	7.2	13.0	31.5	3.0	24.6	3.0	50.2	3.0	36.0	3.0	33.8	9.0	48.2	9.4	35.4	5.0	46.2	5.5
11/15/92	1230	0.0	34.9	7.6	14.2	31.2	3.0	24.6	3.1	49.5	3.1	35.7	3.0	39.6	5.8	52.2	8.4	42.0	3.7	46.3	6.6
11/15/92	1245	0.0	35.0	7.5	15.1	31.4	3.1	24.7	3.1	50.2	3.1	35.5	3.0	41.0	8.0	53.4	8.7	42.9	3.6	47.7	7.4
11/15/92	1300	0.0	35.4	7.8	16.1	31.4	3.0	24.9	3.1	51.5	3.3	37.1	3.0	38.9	6.0	53.2	7.9	42.3	3.5	48.0	7.4
11/15/92	1315	0.0	34.9	8.4	16.2	31.7	3.2	25.0	3.1	51.4	3.1	37.3	3.0	40.9	4.4	53.6	6.8	43.5	4.2	45.4	4.6
11/15/92	1330	0.0	34.4	8.4	16.8	31.7	3.3	25.0	3.1	51.7	3.1	37.3	3.0	41.0	5.0	52.8	7.8	42.4	4.8	46.8	4.9
11/15/92	1345	0.0	34.4	8.7	16.3	31.3	4.7	25.1	3.1	51.9	3.1	37.2	3.0	39.8	6.0	52.1	6.9	41.2	3.1	48.2	5.3
11/15/92	1400	0.0	34.0	7.4	13.4	31.7	3.0	24.9	3.1	49.1	3.1	34.9	3.0	40.6	5.8	53.4	4.9	43.1	4.8	45.8	5.4
11/15/92	1415	0.0	34.3	8.7	15.4	31.5	3.0	24.9	3.1	49.5	3.1	35.2	3.0	40.5	4.3	52.5	6.3	42.7	7.5	45.6	4.5
11/15/92	1430	0.0	34.5	7.8	16.5	31.8	3.1	25.1	3.1	50.3	3.1	36.1	3.0	40.2	6.9	53.3	5.7	42.9	4.0	47.7	6.7
11/15/92	1445	0.0	33.7	8.9	17.3	31.2	3.0	25.3	3.1	51.6	3.1	36.9	3.0	38.2	9.8	53.3	5.8	43.1	3.2	47.3	6.5
11/15/92	1500	0.0	33.5	11.6	18.2	30.5	3.0	25.1	3.0	50.8	3.1	36.4	3.0	39.3	6.5	53.6	4.7	43.5	3.2	48.0	4.2
11/15/92	1515	0.0	33.4	8.4	16.5	30.7	3.0	25.1	3.1	51.0	3.1	36.3	3.0	41.3	3.8	53.8	4.7	44.0	4.2	47.7	10.4
11/15/92	1530	0.0	33.1	7.9	16.7	30.5	3.0	25.1	3.0	50.8	3.1	36.4	3.0	41.2	6.4	53.5	5.2	44.0	3.2	47.9	5.8
11/15/92	1545	0.0	32.9	8.2	18.5	29.9	3.0	24.8	3.1	50.7	3.1	36.5	3.0	41.2	3.9	53.1	6.4	43.3	3.1	47.5	4.4
11/15/92	1600	0.0	32.9	9.9	19.2	29.9	3.0	24.8	3.0	50.4	3.1	36.1	3.0	40.4	6.1	52.1	7.4	42.7	3.1	39.9	34.0
11/15/92	1615	0.0	33.4	11.3	25.7	29.4	4.4	24.7	3.1	50.4	3.1	36.3	3.0	39.0	7.3	52.5	6.8	42.1	3.6	46.6	5.6
11/15/92	1630	0.0	34.1	8.4	17.4	30.9	3.0	24.9	3.0	51.2	3.1	36.2	3.0	38.2	6.8	51.4	5.3	41.8	3.2	47.9	4.6
11/15/92	1645	0.0	34.9	9.3	19.2	31.1	4.8	24.8	3.1	50.7	3.1	35.8	3.0	38.6	7.9	49.5	4.2	41.0	7.5	47.7	8.1
11/15/92	1700	0.0	35.2	12.6	28.1	30.9	3.0	24.8	3.4	50.2	3.1	35.9	3.0	34.4	13.0	52.3	7.8	42.1	5.0	47.8	4.3
11/15/92	1715	0.0	34.7	12.2	25.5	30.5	3.1	24.7	3.1	50.9	3.1	35.5	3.0	35.2	14.0	51.6	9.8	42.0	3.8	47.8	6.7
11/15/92	1730	0.0	34.9	15.5	21.6	30.9	3.1	24.8	3.1	51.9	3.1	35.8	3.0	39.3	4.9	52.6	6.2	42.6	3.8	48.2	6.5
11/15/92	1745	0.0	34.2	13.0	22.3	30.6	3.0	24.6	3.0	51.0	3.1	36.6	3.0	36.3	6.5	52.2	4.1	42.3	7.0	48.2	1.8
11/15/92	1800	0.0	34.9	16.0	20.1	30.8	3.3	24.6	3.1	52.1	3.1	36.6	3.0	38.9	7.8	51.4	5.7	42.1	3.7	48.2	4.9
11/15/92	1815	0.0	35.2	12.0	18.9	31.3	3.0	24.5	3.1	50.5	3.1	35.7	3.0	37.8	8.8	52.3	5.2	42.2	3.2	47.3	10.4
11/15/92	1830	0.0	35.5	12.0	19.0	30.5	3.1	24.4	3.1	50.0	3.2	35.5	3.0	36.7	7.1	52.3	7.1	42.3	3.5	44.6	3.5
11/15/92	1845	0.0	34.7	13.7	22.0	29.5	13.1	24.5	3.0	50.1	3.1	35.9	3.0								

Seward Plant Buell ESP Fields Operating Log

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Date	Time	Water Flow gpm	Lime Flow gpm	Ssk Op %	B Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn								
11/15/92	2000	31.8	0.0	6.8	12.7	32.8	3.0	26.7	3.1	51.0	3.1	36.7	3.0	40.5	5.9	51.9	7.2	42.2	3.4	46.5	5.4
11/15/92	2015	31.7	0.0	6.8	12.8	32.7	3.0	26.6	3.1	50.5	3.1	36.6	3.0	41.2	3.5	52.4	6.5	43.1	3.0	47.1	4.4
11/15/92	2030	31.7	0.0	7.2	11.3	32.4	3.1	26.6	3.1	49.8	3.1	36.3	3.0	40.0	9.4	52.3	5.3	43.0	3.4	47.5	4.1
11/15/92	2045	31.8	0.0	6.9	12.0	32.4	3.0	26.3	3.0	49.2	3.1	36.0	3.0	40.6	3.8	52.8	5.3	43.6	4.6	45.9	4.4
11/15/92	2100	31.7	0.0	7.0	9.6	32.4	3.0	26.2	3.1	49.1	3.1	36.0	3.0	41.1	6.5	52.7	5.0	43.7	3.1	46.0	4.9
11/15/92	2115	31.8	0.0	6.0	9.4	32.0	3.0	24.8	3.1	48.0	3.1	36.4	3.0	41.2	3.8	52.1	7.7	42.7	3.9	43.5	6.9
11/15/92	2130	31.8	0.0	5.6	9.1	32.0	3.0	24.6	3.0	47.4	3.0	34.5	3.0	41.1	3.8	53.1	6.7	43.4	3.6	45.7	6.8
11/15/92	2145	31.5	0.0	6.1	9.3	31.8	3.0	24.6	3.1	47.5	3.1	34.8	3.0	40.3	4.1	51.5	6.6	42.0	3.2	44.8	3.8
11/15/92	2200	31.7	0.0	6.1	9.7	32.0	3.0	24.6	3.0	47.8	3.0	35.0	3.0	41.4	4.0	51.9	7.1	42.3	3.1	45.9	8.1
11/15/92	2215	32.2	0.0	6.6	9.6	30.6	3.0	24.5	3.1	45.6	3.1	33.4	3.0	40.4	5.1	51.5	7.0	41.3	3.1	42.6	9.0
11/15/92	2230	28.7	0.0	6.5	10.4	30.3	3.0	24.3	3.0	46.9	3.0	34.6	3.0	38.5	9.3	52.2	6.3	41.3	3.1	45.2	6.0
11/15/92	2245	29.8	0.0	6.4	10.6	31.2	3.0	24.6	3.1	49.2	3.1	36.7	3.0	40.3	7.0	53.0	6.4	43.3	3.2	46.5	6.9
11/15/92	2300	29.9	0.0	6.2	10.1	31.1	3.0	24.4	3.0	49.4	3.1	36.9	3.0	40.6	6.2	53.1	7.3	42.9	3.5	46.6	6.2
11/15/92	2315	29.8	0.0	6.5	9.8	31.4	3.0	24.4	3.1	49.0	3.1	36.9	3.0	40.8	3.8	52.2	5.9	43.0	3.4	46.3	4.7
11/15/92	2330	29.8	0.0	6.4	9.5	31.0	3.0	24.3	3.1	48.1	3.1	36.6	3.0	41.0	4.1	52.7	7.8	43.5	3.1	45.5	4.9
11/15/92	2345	29.7	0.0	6.6	9.6	30.8	3.0	24.3	3.1	48.1	3.1	36.3	3.0	38.7	6.1	52.6	5.8	42.3	3.1	40.5	3.0
11/15/92	0	29.7	0.0	6.5	10.5	31.1	3.0	24.3	3.1	48.3	3.1	36.5	3.0	40.8	4.4	52.7	6.8	43.3	3.1	39.3	5.2
11/15/92	15	30.6	0.0	7.3	10.9	29.6	3.0	24.8	3.0	46.3	3.0	34.8	3.0	40.2	4.7	53.4	7.7	43.4	3.1	43.3	6.0
11/15/92	30	29.8	0.0	7.8	9.8	30.5	3.0	24.4	3.1	47.3	3.1	35.9	3.0	40.7	3.3	53.0	7.8	42.5	3.1	45.6	6.4
11/15/92	45	29.6	0.0	6.5	10.2	30.8	3.0	24.5	3.1	46.5	3.0	34.9	3.0	40.8	5.5	53.1	4.9	43.0	3.2	45.4	5.3
11/15/92	100	29.7	0.0	6.1	9.5	30.8	3.0	24.6	3.1	45.6	3.1	34.3	3.0	40.1	8.0	52.2	8.0	42.2	3.1	44.9	4.6
11/15/92	115	30.0	0.0	6.7	9.0	31.2	3.0	24.3	3.0	46.8	3.1	35.6	3.0	39.3	6.9	52.9	8.4	42.4	3.4	45.8	4.8
11/15/92	130	29.5	0.0	6.6	10.0	29.3	3.0	25.1	3.1	45.5	3.1	34.6	3.0	40.9	5.1	52.6	5.0	42.9	3.1	44.2	6.3
11/15/92	145	29.8	0.0	7.1	9.5	29.7	3.0	24.9	3.1	45.9	3.0	35.0	3.0	40.3	4.9	53.3	4.7	43.5	3.3	41.3	9.7
11/15/92	200	29.8	0.0	6.8	9.5	30.1	3.0	24.7	3.1	47.0	3.1	36.0	3.0	40.3	3.8	52.8	6.0	41.8	3.1	44.8	4.1
11/15/92	215	29.8	0.0	8.4	12.1	28.9	3.0	25.5	3.2	45.8	3.0	35.1	3.0	40.1	5.1	52.8	5.9	43.6	3.7	43.7	4.0
11/15/92	230	29.7	0.0	9.4	12.9	29.8	3.0	25.2	3.2	46.2	3.0	35.4	3.0	39.5	7.7	52.1	7.7	41.7	3.3	44.9	3.5
11/15/92	245	29.7	0.0	7.4	8.8	30.8	3.0	24.5	3.1	46.9	3.1	35.1	3.0	40.5	4.1	52.5	9.6	42.2	3.1	44.7	4.5
11/15/92	300	29.8	0.0	7.4	8.8	31.3	3.0	24.5	3.0	46.7	3.0	35.2	3.0	40.6	3.1	46.9	7.1	40.1	5.8	45.3	3.3
11/15/92	315	29.7	0.0	7.3	8.8	30.5	3.0	25.3	3.1	45.1	3.1	34.4	3.0	39.3	6.9	53.2	8.8	42.2	3.8	43.7	5.2
11/15/92	330	29.7	0.0	6.9	9.4	31.0	3.0	25.2	3.1	44.9	3.0	34.1	3.0	40.7	3.7	53.5	7.4	42.6	3.6	44.0	5.4
11/15/92	345	29.7	0.0	7.6	10.2	31.1	3.0	24.8	3.1	46.2	3.1	35.5	3.0	39.5	5.9	52.0	6.5	41.7	4.6	43.5	5.3
11/15/92	400	29.9	0.0	7.6	9.4	30.7	3.0	24.7	3.1	45.1	3.0	34.7	3.0	40.5	5.2	54.4	7.2	43.3	3.1	43.9	4.8
11/15/92	415	29.8	0.0	10.6	9.4	30.7	3.0	25.0	3.1	45.2	3.1	34.8	3.0	40.3	4.8	53.2	9.4	42.0	3.5	43.6	4.5
11/15/92	430	29.7	0.0	7.1	9.0	31.0	3.0	25.0	3.1	45.1	3.1	34.7	3.0	40.6	3.8	53.6	6.8	42.8	4.8	43.3	6.1
11/15/92	445	30.7	0.0	8.4	9.0	31.3	3.0	25.2	3.1	45.2	3.0	34.5	3.0	40.7	5.4	53.0	7.3	42.4	3.1	43.9	4.7
11/15/92	500	29.6	0.0	8.9	8.8	31.2	3.0	25.1	3.1	44.9	3.0	34.8	3.0	40.0	5.4	53.0	6.3	42.4	3.1	43.3	4.9
11/15/92	515	29.4	0.0	8.9	10.0	31.5	3.0	24.9	3.1	45.2	3.0	34.8	3.0	40.8	4.5	53.3	6.7	42.7	3.1	42.8	5.1
11/15/92	530	29.8	0.0	8.5	11.0	31.5	3.0	25.1	3.1	44.8	3.0	34.5	3.0	40.8	3.5	52.7	6.7	42.0	3.6	38.2	7.6
11/15/92	545	29.7	0.0	8.1	8.1	31.4	3.0	25.1	3.1	45.0	3.0	34.7	3.0	40.8	3.0	53.5	3.8	43.8	3.1	38.8	8.5
11/15/92	600	29.9	0.0	6.3	11.9	31.5	3.0	25.1	3.1	45.6	3.0	35.3	3.0	40.5	4.0	53.1	4.0	43.6	3.1	41.9	10.1
11/15/92	615	29.9	0.0	7.9	10.4	31.7	3.0	25.1	3.1	46.2	3.0	35.7	3.0	40.9	3.8	53.3	4.4	43.9	3.2	41.6	4.0
11/15/92	630	29.6	0.0	8.4	11.1	32.1	3.0	24.9	3.1	46.5	3.0	35.7	3.0	40.9	3.8	53.1	4.4	44.1	3.2	42.7	4.0
11/15/92	645	30.1	0.0	8.8	10.7	32.1	3.0	24.9	3.1	46.5	3.0	35.7	3.0	40.9	3.8	53.1	4.4	44.1	3.2	42.7	4.0
11/15/92	700	29.8	0.0	11.6	13.3	32.1	3.0	24.9	3.1	46.5	3.0	35.7	3.0	40.9	3.8	53.1	4.4	44.1	3.2	42.7	4.0
11/15/92	715	29.7	0.0	13.6	16.5	31.4	3.0	25.0	3.1	45.6	3.1	35.6	3.0	39.9	7.5	43.6	7.0	39.7	6.6	41.8	3.6
11/15/92	730	29.6	0.0	12.7	11.3	31.3	3.0	24.9	3.1	45.2	3.0	35.4	3.0	38.1	5.2	54.2	5.3	43.1	3.8	42.7	5.9
11/15/92	745	29.8	0.0	11.2	12.0	31.1	3.0	24.9	3.1	44.8	3.1	35.2	3.0	40.1	10.1	54.1	7.0	43.1	3.6	43.1	3.8
11/15/92	800	30.1	0.0	11.0	12.6	31.5	3.0	25.0	3.1	45.2	3.0	35.6	3.0	40.1	9.3	54.4	5.8	43.2	3.1	44.1	5.4
11/15/92	815	29.7	0.0	11.5	14.6	30.8	3.0	25.4	3.1	44.4	3.0	34.7	3.0	40.3	5.0	54.2	6.5	42.6	3.2	43.8	8.1
11/15/92	830	29.8	0.0	10.5	11.9	31.1	3.0	25.4	3.2	44.4	3.0	35.2	3.0	40.4	6.5	54.5	4.3	43.1	3.4	41.2	3.9
11/15/92	845	29.7	0.0	15.3	11.7	31.2	3.0	24.9	3.2	46.4	3.0	37.3	3.0	41.3	3.9	54.6	3.9	43.6	3.1	43.0	10.1
11/15/92	900	29.4	0.0	13.7	15.7	31.2	3.0	24.9	3.1	46.3	3.1	36.5	3.0	39.1	7.0	54.4	8.3	43.0	3.1	43.1	4.9
11/15/92	915	29.6	0.0	12.1	12.3	31.2	3.0	25.2	3.1	45.9	3.0	36.9	3.0	41.3	7.2	54.7	5.8	43.5	3.4	39.1	3.1
11/15/92	930	29.8	0.0	12.5	13.3	31.2	3.0	25.3	3.1	46.0	3.1	37.1	3.0	40.8	6.6	54.7	6.0	43.5	3.1	39.1	4.0
11/15/92	945	29.2	0.0	13.2	13.5	30.8	3.0	25.2	3.1	46.7	3.0	39.0	3.5	40.6	6.9	54.5	7.0	43.2	3.1	39.4	3.7
11/15/92	1000	30.1	0.0	12.0	13.7	31.0	3.1	25.3	3.2	47.1	3.0	36.9	3.0	38.3	4.3	54.4	5.3	43.1	3.7	45.8	5.6
11/15/92	1015	30.1	0.0	13.9	14.0	31.3	3.0	25.3	3.1	48.0	3.0	39.4	3.0	40.2	10.7	54.8	7.8	43.1	3.1	47.2	4.0
11/15/92	1030	29.8	0.0	14.4	14.6	31.7	3.0	25.4	3.1	48.9	3.1	40.2	3.0	41.0	4.0	54.9	3.3	43.8	3.1	46.5	5.6
11/15/92	1045	29.8	0.0	14.3	17.6	30.9	3.0	25.7	3.1	48.7	3.1	39.9	3.0	40.6	7.1	55.2	6.2	43.8	3.1	46.8	6.0
11/15/92	1100	30.4	0.0	13.0	12.6	30.9	3.0	26.0	3.1	48.7	3.0	39.8	3.0	40.8	4.4	55.6	4.5	44.0	3.1	46.9	4.4
11/15/92	1115	29.7	0.0	13.5	15.3	31.															

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Date	Time	Water Flow gpm	Lime Flow gpm	Sk Op %	S Op %	D 1 KW spk/ mn	D 2 KW spk/ mn	D 3 KW spk/ mn	D 4 KW spk/ mn	C 1 KW spk/ mn	C 2 KW spk/ mn	C 3 KW spk/ mn	C 4 KW spk/ mn								
11/16/92	1215	29.1	0.0	14.1	14.9	30.1	3.0	27.1	3.2	47.9	3.1	38.6	3.0	40.1	4.8	55.2	6.1	43.9	3.1	47.4	6.2
11/16/92	1230	29.7	0.0	14.4	13.6	30.9	3.0	27.1	3.2	47.5	3.0	38.0	3.0	37.1	6.1	55.6	7.1	43.0	3.1	45.3	10.5
11/16/92	1245	30.1	0.0	12.5	12.5	31.5	3.0	26.6	3.1	50.3	3.1	40.9	3.0	40.4	4.4	55.2	6.8	43.4	3.1	48.9	8.1
11/16/92	1300	29.4	0.0	13.6	13.9	30.5	3.0	26.7	3.1	49.4	3.2	40.0	3.0	39.9	5.5	55.4	6.8	44.1	3.3	46.6	4.9
11/16/92	1315	29.4	0.0	14.5	17.6	30.9	3.0	26.5	3.1	49.7	3.0	39.8	3.0	39.9	4.4	55.7	7.2	42.9	4.1	47.2	3.7
11/16/92	1330	30.1	0.0	15.6	20.9	32.1	3.0	26.7	3.1	51.8	3.1	39.9	3.3	39.4	6.4	55.3	7.8	43.8	3.1	48.8	4.8
11/16/92	1345	29.6	0.0	15.3	16.0	30.8	3.0	26.7	3.2	49.9	3.0	39.9	3.0	38.5	7.4	55.7	8.3	42.1	3.1	46.1	4.4
11/16/92	1400	29.4	0.0	14.3	18.5	30.8	3.4	26.3	3.1	50.7	3.1	40.8	3.0	38.8	7.9	55.5	6.5	42.0	3.2	44.8	4.7
11/16/92	1415	29.8	0.0	14.7	15.2	30.8	3.0	26.3	3.1	51.1	3.1	41.1	3.1	35.6	7.8	55.6	7.0	41.8	3.4	43.3	3.6
11/16/92	1430	29.8	0.0	12.4	13.0	30.1	3.0	26.7	3.2	50.0	3.1	40.6	3.1	37.2	6.0	55.0	4.3	43.9	3.1	42.6	13.6
11/16/92	1445	29.8	0.0	13.4	12.9	30.6	3.0	26.6	3.1	49.8	3.0	40.3	3.0	35.6	9.5	55.6	6.4	43.6	3.8	47.4	6.9
11/16/92	1500	30.0	0.0	12.6	15.8	30.5	3.0	26.4	3.1	50.9	3.1	41.4	3.1	33.4	8.4	55.6	9.3	41.4	4.2	48.2	5.8
11/16/92	1515	30.1	0.0	12.9	14.4	30.6	3.0	26.4	3.1	50.7	3.0	41.1	3.0	35.3	10.6	55.9	7.5	43.7	3.1	46.6	5.2
11/16/92	1530	29.8	0.0	15.3	16.3	30.1	3.0	26.4	3.1	51.0	3.1	41.3	3.0	35.8	10.2	57.1	7.5	44.2	3.1	43.8	3.0
11/16/92	1545	29.8	0.0	13.1	17.9	30.4	3.0	26.4	3.1	51.0	3.1	41.5	3.8	35.2	7.7	55.7	6.0	43.6	3.1	50.0	8.2
11/16/92	1600	30.3	0.0	14.8	13.7	30.5	3.0	26.6	3.1	50.7	3.1	41.4	3.1	31.4	15.5	55.5	7.1	43.3	3.1	49.5	5.6
11/16/92	1615	30.5	0.0	11.7	11.7	30.2	3.0	26.6	3.1	50.5	3.1	41.3	3.7	30.0	14.8	55.6	7.1	41.0	3.4	49.5	3.7
11/16/92	1630	30.8	0.0	15.8	13.9	30.5	3.5	27.0	3.2	49.9	3.1	40.8	3.0	31.3	11.8	55.2	8.8	41.5	3.7	47.4	4.1
11/16/92	1645	30.7	0.0	12.7	15.2	30.9	3.0	26.7	3.2	50.5	3.1	41.6	3.0	30.6	10.5	54.7	9.4	40.9	3.6	44.1	3.6
11/16/92	1700	30.3	0.0	14.9	15.8	30.4	3.0	26.6	3.1	50.1	3.1	41.4	3.0	34.1	10.6	55.7	9.8	42.7	3.3	43.3	6.0
11/16/92	1715	30.8	0.0	13.3	15.8	29.1	3.0	27.7	3.2	47.9	3.0	39.7	3.0	31.5	10.4	55.8	6.1	42.8	3.2	46.0	7.4
11/16/92	1730	30.8	0.0	11.6	16.4	30.8	3.0	26.5	3.2	49.3	3.1	41.0	3.0	30.8	12.5	55.2	8.2	42.2	3.4	44.5	6.6
11/16/92	1745	30.9	0.0	15.3	13.5	30.5	3.0	25.9	3.2	47.7	3.1	38.9	3.0	34.2	10.3	55.0	5.1	44.0	3.4	45.0	7.5
11/16/92	1800	30.8	0.0	13.7	11.8	30.2	3.0	25.8	3.2	47.1	3.1	38.5	3.0	34.9	10.4	55.6	7.3	43.7	6.8	47.0	6.7
11/16/92	1815	30.8	0.0	12.0	12.3	30.2	3.0	25.6	3.2	46.9	3.0	38.5	3.0	33.0	9.7	55.2	5.3	41.6	3.1	46.1	5.1
11/16/92	1830	31.1	0.0	12.2	16.1	30.5	3.0	25.3	3.2	47.3	3.0	38.7	3.0	35.1	9.2	55.1	6.0	43.5	3.1	45.1	8.6
11/16/92	1845	28.5	0.0	31.9	16.6	28.9	3.0	25.0	3.1	49.0	3.1	40.5	3.5	35.6	7.7	55.7	6.4	44.3	3.3	46.4	5.5
11/16/92	1900	28.9	0.0	12.3	14.3	29.9	3.0	25.2	3.1	48.5	3.1	40.3	3.0	34.2	12.0	55.0	6.4	43.3	3.2	46.5	4.7
11/16/92	1915	29.6	0.0	13.5	16.8	30.2	3.0	25.3	3.1	48.5	3.1	40.5	3.0	34.1	8.7	53.4	7.8	39.5	3.1	42.6	3.2
11/16/92	1930	28.8	0.0	13.5	13.5	30.0	3.0	25.6	3.2	47.8	3.1	39.7	3.0	34.4	11.4	55.6	6.0	43.3	3.1	44.8	4.6
11/16/92	1945	29.0	0.0	11.8	12.8	30.1	3.0	25.3	3.2	47.6	3.1	39.9	3.0	30.7	11.9	54.9	7.5	41.3	3.2	43.6	6.7
11/16/92	2000	30.2	0.0	12.2	12.7	30.4	3.0	25.5	3.2	48.7	3.0	38.9	3.0	30.5	13.6	54.3	9.3	40.9	5.0	44.5	10.4
11/16/92	2015	30.5	0.0	11.9	16.3	30.6	3.0	25.4	3.2	46.7	3.1	38.4	3.0	33.8	9.1	55.3	6.8	42.5	3.3	46.0	6.4
11/16/92	2030	30.0	0.0	14.9	15.9	30.4	3.0	25.6	3.2	45.7	3.0	37.5	3.0	31.5	11.0	55.4	8.7	42.3	3.1	45.7	6.1
11/16/92	2045	30.1	0.0	11.6	13.1	30.6	3.0	25.3	3.2	45.9	3.1	37.5	3.0	32.6	13.2	55.8	8.9	42.8	3.1	44.8	7.5
11/16/92	2100	30.2	0.0	12.3	16.5	30.5	3.0	25.5	3.2	46.1	3.0	37.4	3.0	33.5	10.4	55.0	6.8	43.3	3.1	45.9	8.2
11/16/92	2115	30.2	0.0	13.7	10.7	29.8	3.0	25.9	3.2	45.1	3.1	36.8	3.3	30.4	13.0	55.1	6.4	42.1	3.1	44.7	8.9
11/16/92	2130	30.2	0.0	12.0	11.1	30.4	3.0	25.8	3.2	44.7	3.0	36.4	3.0	31.9	11.0	55.9	4.4	43.3	3.5	44.1	9.2
11/16/92	2145	30.2	0.0	12.2	13.5	30.6	3.0	25.2	3.1	46.7	3.1	36.5	3.0	32.5	10.6	54.4	7.8	40.7	3.9	45.7	7.0
11/16/92	2200	30.2	0.0	0.1	14.9	31.1	3.0	25.0	3.2	46.7	3.1	39.5	3.0	32.1	10.7	55.4	4.4	42.1	3.1	45.8	6.1
11/16/92	2215	30.2	0.0	12.4	13.2	30.6	3.0	25.2	3.1	46.4	3.1	39.0	3.0	35.0	11.3	55.0	6.7	43.4	3.1	40.9	3.0
11/16/92	2230	30.2	0.0	13.0	16.9	30.4	3.0	25.3	3.3	46.5	3.0	36.9	3.0	29.6	19.0	55.3	9.0	41.7	3.4	40.3	6.3
11/16/92	2245	30.2	0.0	13.1	16.5	30.6	3.0	25.3	3.2	46.4	3.1	36.8	3.0	33.6	11.4	54.9	7.0	41.4	3.8	45.2	10.0
11/16/92	2300	30.3	0.0	13.8	10.9	30.5	3.0	25.5	3.3	45.4	3.0	37.8	3.0	35.6	8.7	55.0	9.4	41.4	3.7	41.5	3.9
11/16/92	2315	30.3	0.0	9.6	17.9	30.6	3.0	25.6	3.2	45.4	3.0	37.6	3.0	35.9	10.6	55.8	7.5	42.9	3.3	45.3	5.4
11/16/92	2330	30.2	0.0	18.5	11.9	30.6	3.0	25.6	3.2	44.9	3.0	37.1	3.0	37.4	9.8	55.6	5.4	44.3	3.3	40.3	4.1
11/16/92	2345	30.1	0.0	9.1	13.3	30.3	3.0	25.9	3.2	44.8	3.0	36.7	3.0	35.0	5.4	55.9	6.7	43.4	3.1	45.1	7.8

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