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UMTRA
Ground Water Project

Performance Report on the Operations of the Pilot Plant for the Treatment of Vanadium in Ground Water New Rifle UMTRA Site, Rifle, Colorado

April 2002

Prepared by the
U.S. Department of Energy
Grand Junction Office

Work Performed Under DOE Contract No. DE–AC13–96GJ87335 for the U.S. Department of Energy
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Appendix A—Compilation of Operating Conditions, Parameters, and Results

1.0 Introduction

The former New Rifle processing site is located approximately 2.3 miles west of the town of Rifle, Colorado, as shown in Figure 1–1. Former vanadium and uranium processing activities at the site have contaminated the alluvial ground water system directly beneath and downgradient of the site. Processing wastes were disposed into holding ponds on the site and mill tailings were stored in piles that covered 33 acres. The holding ponds and other surface contamination associated with the processing activities were removed and the site remediated in 1996 in accordance with 40 *Code of Federal Regulations* (CFR) Part 192. Ground water modeling has demonstrated that most contaminants of concern (COCs) at the site will flush to applicable standards in the 100 years permitted by natural flushing (DOE 1999). However, vanadium will probably not reach its risk-based concentration of 0.33 milligrams per liter (mg/L) (EPA 2001) in 100 years because of its low mobility in the subsurface. Additionally, some soils at the site contain highly elevated concentrations of vanadium and may serve as a continuing source of ground water contamination (DOE 2000a). For this reason, a pilot ground water treatment plant was designed, constructed and operated at the New Rifle site to investigate the feasibility of using an active ex-situ method to reduce vanadium concentration.

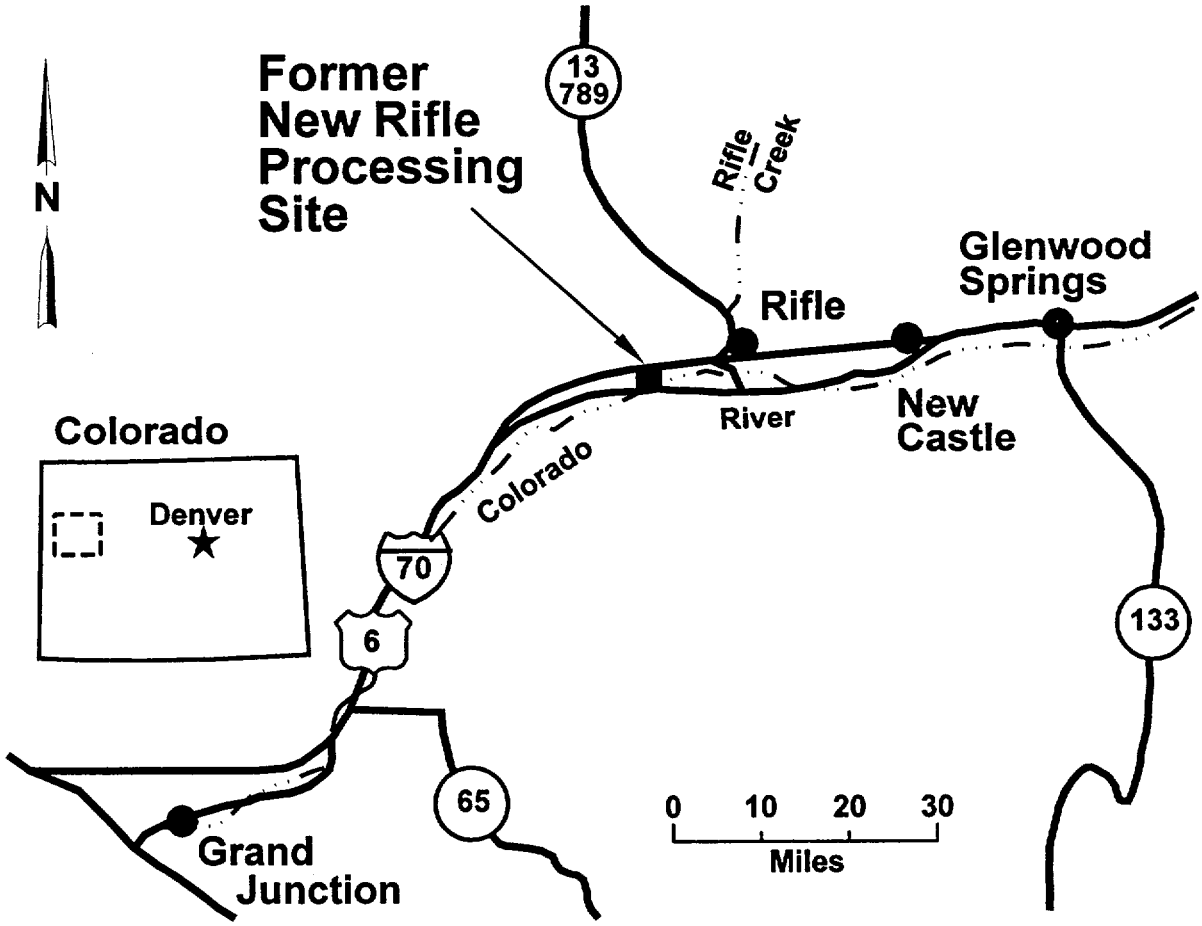

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Figure 1–1. Location of the New Rifle Site

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2.0 Background

A pilot study conducted at the former uranium and vanadium-processing site located west of Rifle, Colorado, investigated the feasibility of using an ex-situ zero valent iron (ZVI) through-medium process to reduce vanadium concentrations in the ground water to levels that will naturally flush within the 100-year period allowable by the UMTRA 40 CFR Part 192 standards. Prototype testing, consisting of laboratory treatability studies followed by bench scale field-studies provided performance data and design parameters required to scale up to higher flow rates for ground water remediation.

2.1 Prototype Testing

Laboratory treatability studies were performed at 0.005 gallons per minute (gpm) to test the feasibility of treating ground water using ZVI in a through-medium process (DOE 2000b). Results of the treatability test were encouraging and demonstrated that ZVI was able to effectively remove uranium, vanadium, and several other constituents from the ground water. Follow-up benchscale testing was then conducted at 0.5 gpm under field conditions to (1) evaluate treatment column and settling tank configurations, (2) optimize ZVI mesh size and residence times, (3) address issues expected in a larger scale such as permitting and "clean" water disposal, and (4) mimic conditions as close as possible to those expected for a full-scale cleanup (DOE 2000b). Prototype testing results indicated –60/+100 mesh ZVI was the most effective size to reduce vanadium concentrations; it was also effective in removing arsenic and uranium. Some design parameters for the 20 gpm pilot system determined from prototype tests:

- Column sizing based on 4 minute residence time:
  15-in dia x 3-ft high (4-columns at 5 gpm each)
  1,008 lbs -60/+100 mesh ZVI (485 lbs/c.f, 50% porosity)

- Sludge tank based on 4.3 gallons sludge/1,000 gallons:
  20 gpm total inflow
  124 gallons sludge/day
  1,240 gallon tank (10-day capacity)

These results provided the basis for the design of the pilot system.

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3.0 Pilot System Components

The pilot system consists of three components, (1) extraction system, (2) treatment system, and (3) infiltration system. Computer flow modeling was used to design the extraction and infiltration system. Results of the prototype testing were used to determine the design parameters for the treatment system. As built design drawings of the pilot system are presented in Plate 1. The three components of the pilot system are shown in Figure 3–1 and discussed in the following sections.

3.1 Extraction and Infiltration System

Results of a detailed characterization of vanadium contamination in the subsurface conducted in March and April 2000 indicate concentrations in the ground water are highest in the middle of the aquifer and are offset approximately 400-ft from the highest soil concentrations in a generally downgradient direction (DOE 2000a). This relationship is graphically illustrated in the block diagram shown in Figure 3–2. Ground water flow and optimization modeling was performed to determine the optimal number, locations, and pumping rates for the wells that are required to capture the vanadium plume.

Results of the ground water flow and optimization modeling determined the best configuration to meet the extraction design objectives consist of three extraction wells (862, 863, and 864) to remove contaminated ground water and an infiltration gallery to return the treated effluent to the aquifer at a downgradient location. Locations for the extraction wells are shown in Figure 3–3. Construction and operating information for the extraction system and the location of the infiltration gallery is presented in the Operating Manual for the Vanadium Pilot Study (DOE 2001). The objective of the extraction and infiltration system are as follows:

- Pumping wells to deliver up to 20 gpm continuously to the treatment system
- Extract a total of 2 million gallons of ground water in 8-months from plume

3.2 ZVI Treatment System

Contaminated ground water from the 6-inch extraction well 864 shown in Figure 3–3 was piped to an above ground ZVI system for treatment. Effluent from the treatment unit(s) was then piped to a series of 1,550 gallon settling tanks for iron filtration followed by neutralization in a 100-gallon tank before the treated water was returned to the aquifer via the infiltration gallery. The treatment configuration is shown in Figure 3–1. Engineering design drawings of the treatment system is provided in Plate 1. Operating information for the treatment system is presented in the Operating Manual for the Vanadium Pilot Study (DOE 2001).

The treatment system was operated to meet the following goals in the effluent water before discharge to the aquifer:

- pH >6<9
- Iron <11 mg/L
- Vanadium <0.33 mg/L

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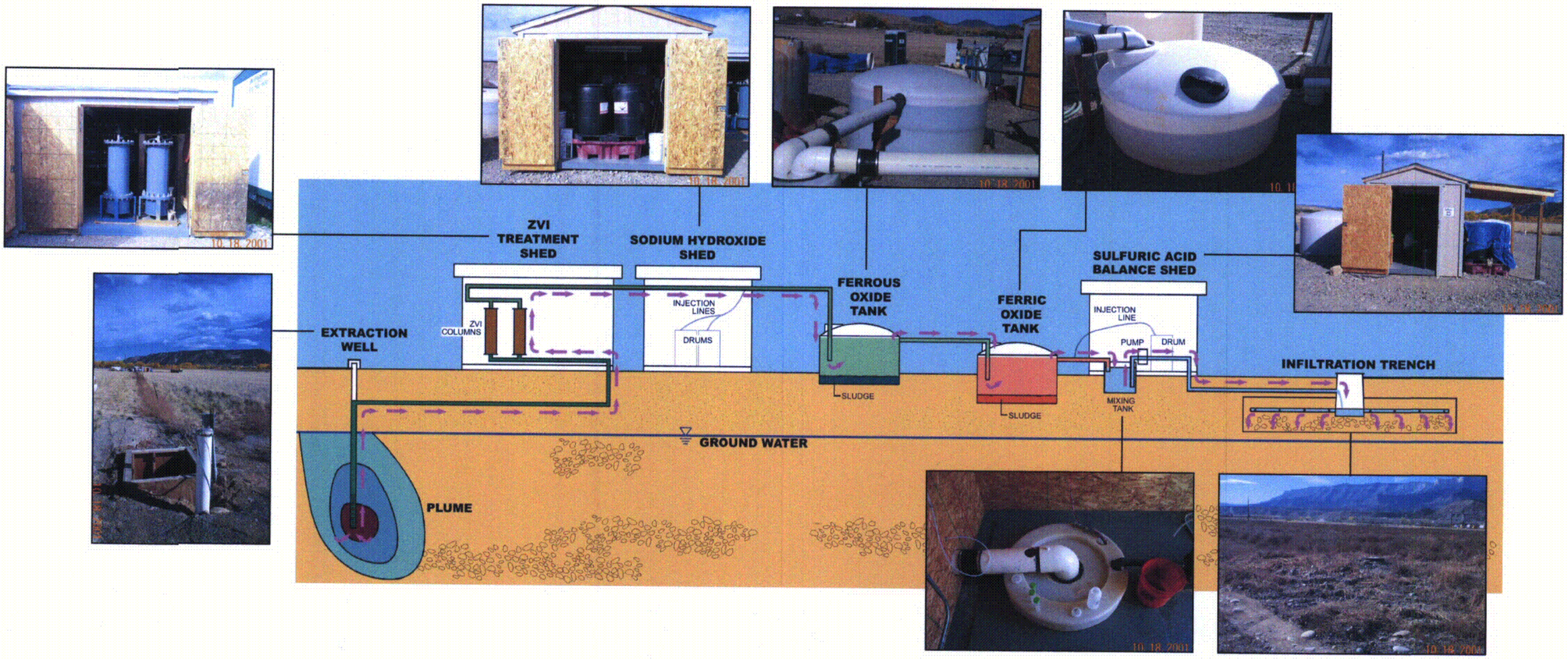

Figure 3–1. Pilot System Components

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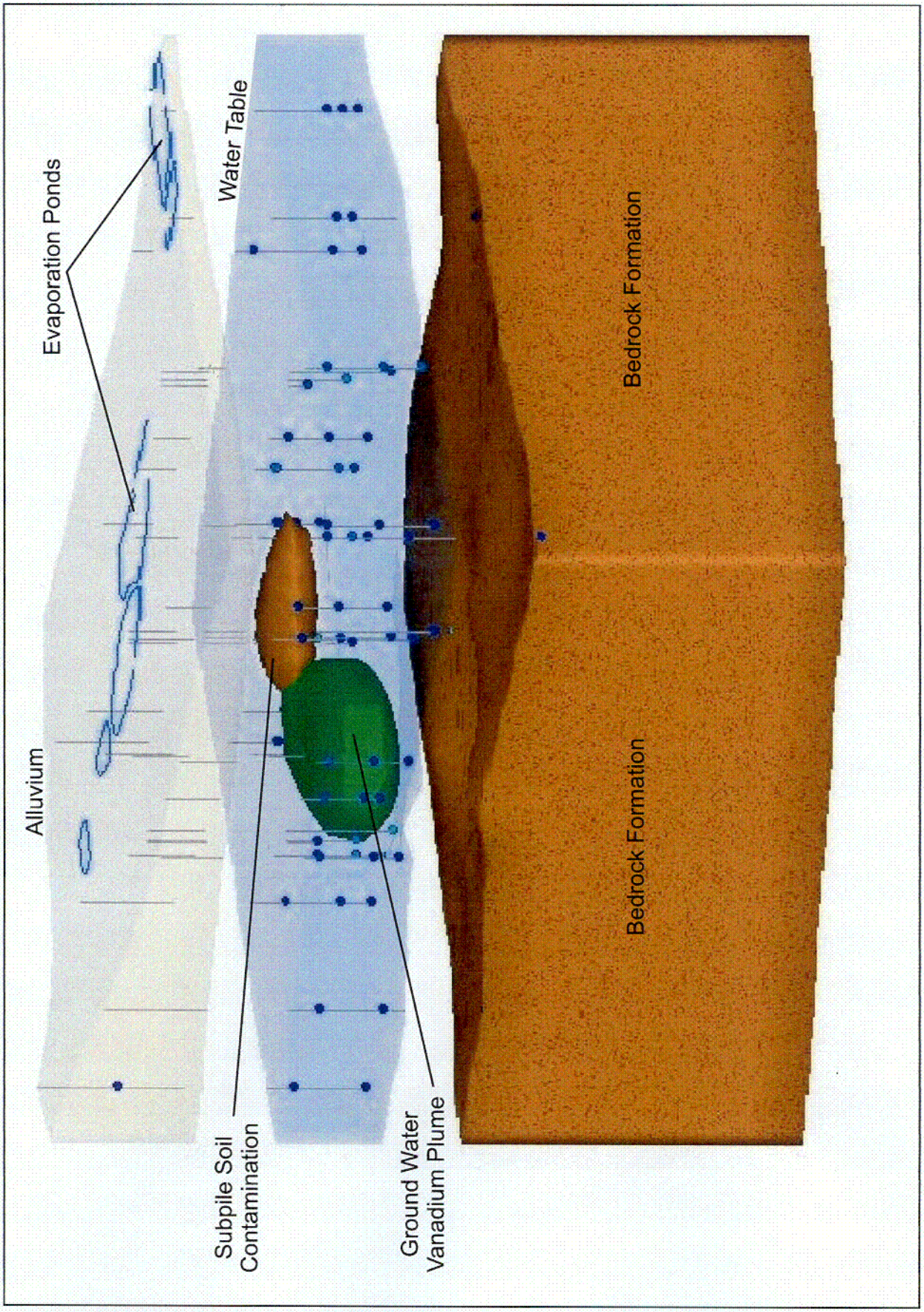

Figure 3–2. Block Diagram Showing Relationship Between the Vanadium Ground Water Plume and Subpile Soil Contamination

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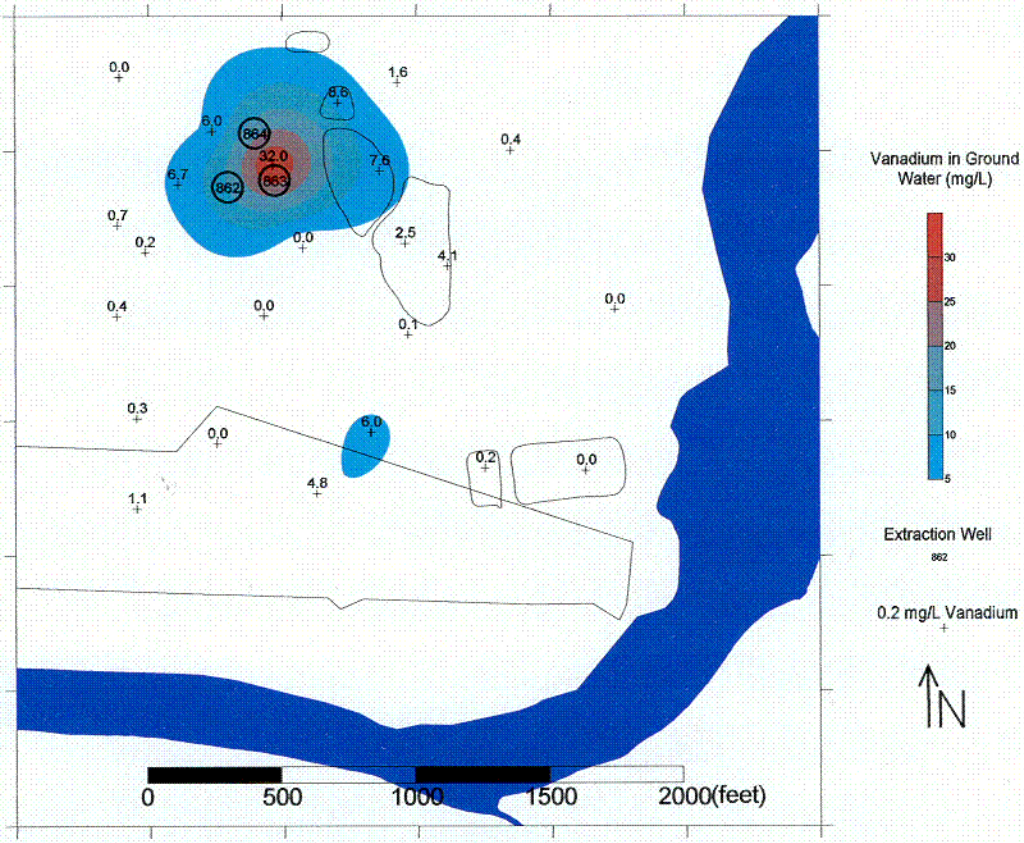

Figure3–3. Extraction Well Locations at the New Rifle Site

C03

4.0 Pilot System Performance Results

Treatment operations were initiated on January 29, 2001 and continued until November 19, 2001. During the treatment operations, a total of 2,942,350 gallons of contaminated ground water was treated. For details regarding the operation of the plant the reader is referred to the Operating Manual (DOE 2001). A compilation of operating conditions, parameters and results obtained during the course of the treatment operations is provided in Appendix A. Summary results for selected parameters are presented in Table 4–1.

Table 4–1. Results of Selected Operating Parameters

Parameter	Result
Volume treated	>2.9 million gallons
Average treatment rate	9.6 gpm
Average flow rate per column	2.3 gpm
Optimized column longevity (ZVI changeout)	30 days
Average vanadium influent concentration from plume	8.9 mg/L
Average vanadium concentration from column effluent	1.4 mg/L (6 fold reduction from 8.9 mg/L influent)
Average vanadium concentration from settling tanks effluent	0.08 mg/L (17 fold reduction from 1.4 mg/L influent)
Optimized gallons of water treated per pound of ZVI	>120 gallons per pound
Optimized sludge generated per gallon treated	4 to 5 gallons sludge per 1,000 gallon water treated

4.1 Influent Concentrations

A total of 2.9 million gallons of contaminated ground water was extracted from pumping well 864 located near the center of the vanadium plume as shown in Figure 3–3. Changes in vanadium concentration as a function of volume of water treated is presented in Figure 4–1.

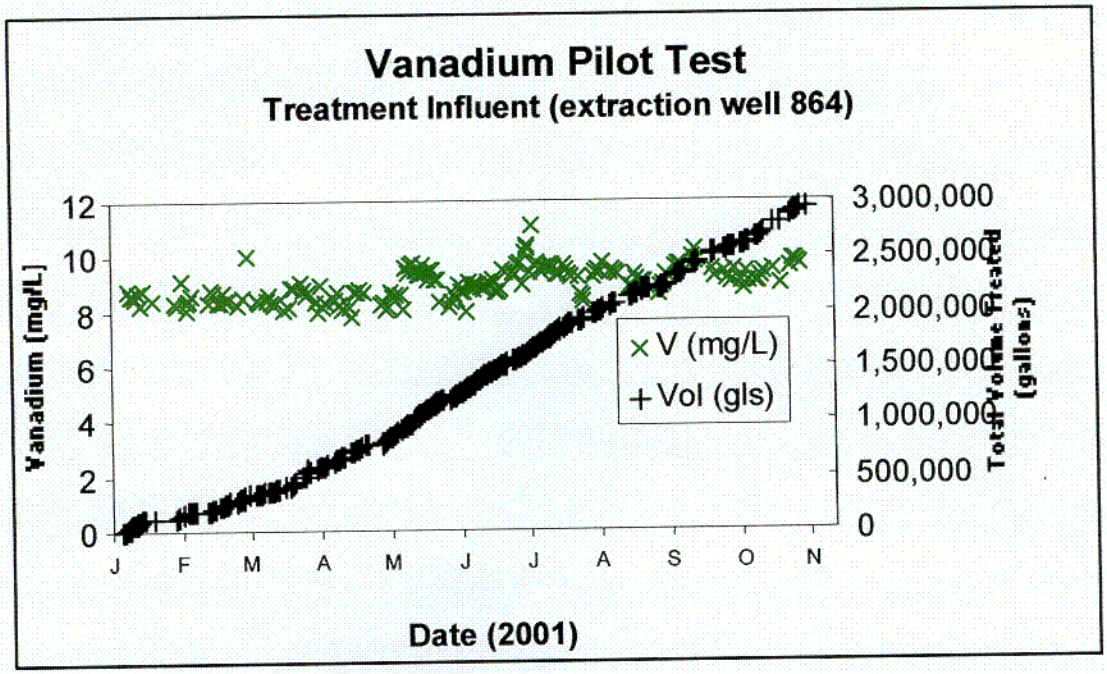

Figure 4–1. Influent Vanadium Concentrations from Extraction Well 864

C04

It is apparent from Figure 4–1 that vanadium concentrations in the aquifer were not significantly reduced after removing over 2.9 million gallons of contaminated ground water. The apparent lack of vanadium reduction is most likely due to the relatively low mobility of vanadium in the subsurface because of its affinity to adsorb to subsurface materias.

4.2 Treatment Columns and Settling Tanks

Vanadium and iron concentrations for ground water treated by column 2 (C–2) are presented in Figures 4–2, and 4–3, respectively. Similar results were obtained for the other treatment columns (Appendix A). Detailed in each of the referenced figures for C–2 are the concentrations and operational flow rates that correspond with the start of a new batch of ZVI on June 7, 2001 and ending on July 18, 2001 when the media was spent. The operational duration of this particular run was 38-days, 109,840 gallons of ground water treated, 625 pounds of ZVI, and an average flow through the column of 2.1 gallons per minute.

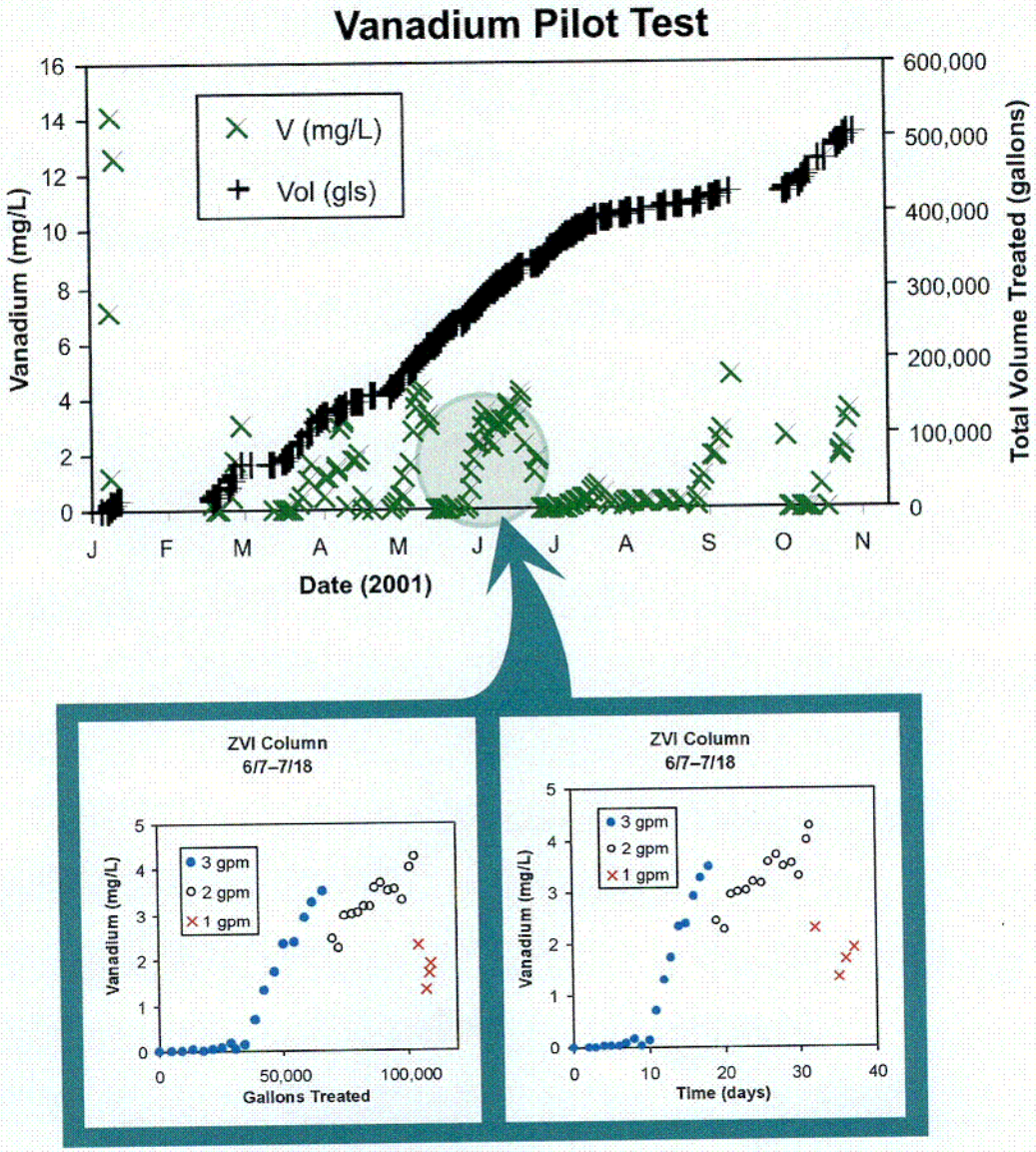

Figure 4–2. Vanadium Concentrations in Treated Ground Water From C–2.

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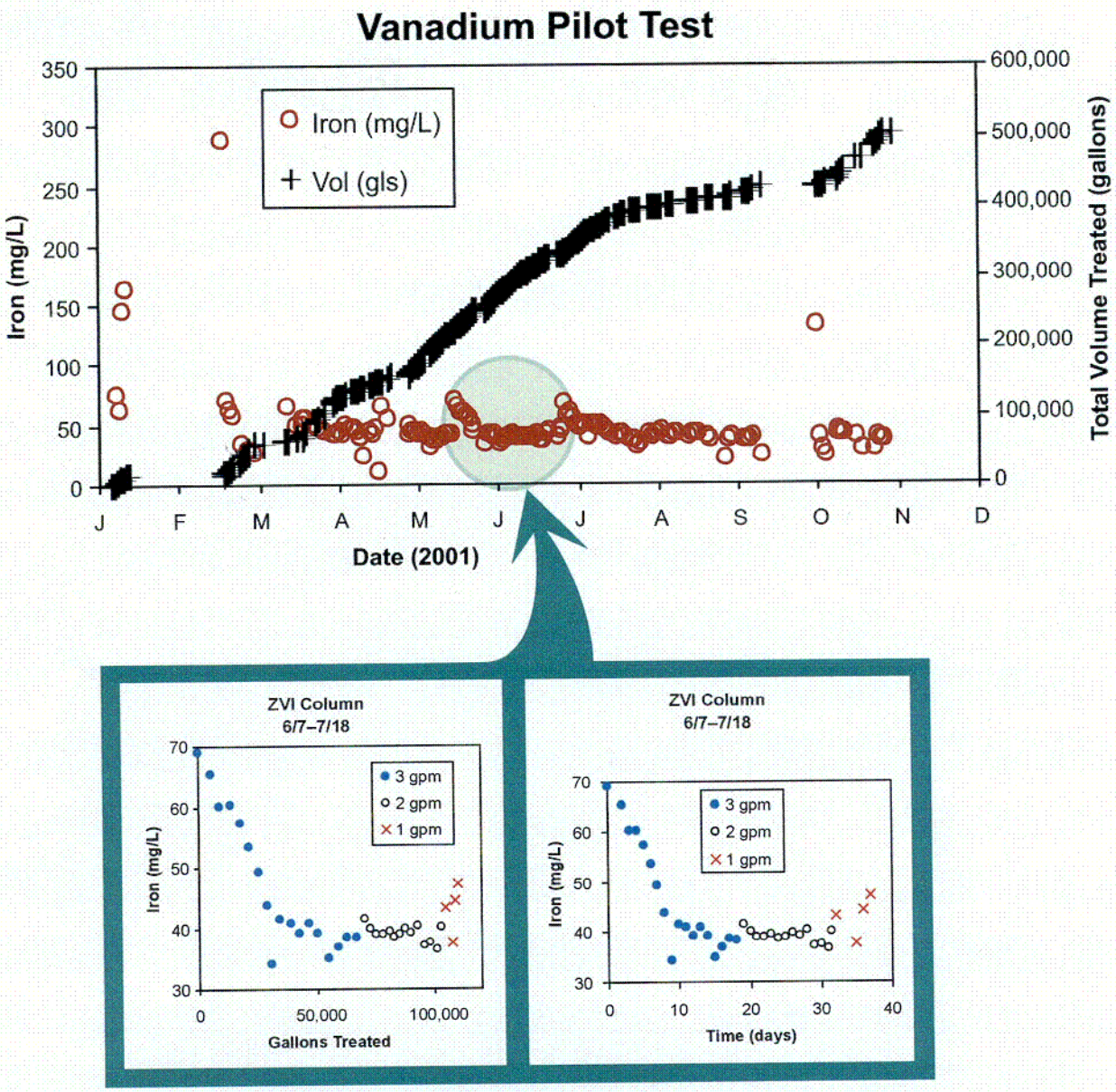

Figure 4–3. Iron Concentrations in Treated Ground Water From C–2.

As shown in Figures 4–2 and 4–3, the flow rates were decreased from an initial rate of 3 gpm, to 2 gpm at day 19, and finally to 1 gpm at day 32. The other columns were operated in a similar manner to extend the longevity of the ZVI.

Examination of the data presented in Table 4–2 indicates the amount of water treated per pound of ZVI during the first two months of operation ranged from 28 to 91 gl/lb. As operational experience was gained the treatment efficiencies improved significantly. This is graphically illustrated in Figure 4–4. Other examples of improved efficiencies include flow rate adjustments as shown in Figure 4–2 and 4–3, modifications to the columns to minimize preferential flow paths, coordinating the operation of fresh ZVI with columns having nearly spent ZVI, increasing the residence time in the iron removal settling tanks, etc.

C06

Table 4–2. ZVI Usage, Flow Rate and Operational Duration for Columns 1 through 5

End Date of Run	Days Operated	Column	Treated (gls)	ZVI (lbs)	gl/lb	Average gpm
02/05/2001	7	C–2	15,170	550	28	1.5
02/05/2001	7	C–4	34,119	550	62	3.4
02/22/2001	17	C–4	22,118	550	40	0.9
03/19/2001	16	C–4	49,776	550	91	2.2
03/24/2001	7	C–1	21,490	625	34	2.1
03/24/2001	7	C–2	44,630	625	71	4.4
03/24/2001	31	C–3	135,655	600	226	3.0
04/19/2001	22	C–3	61,400	625	98	1.9
04/19/2001	22	C–4	62,770	625	100	2.0
05/09/2001	29	C–1	71,150	612	116	1.7
05/09/2001	30	C–2	85,000	587	145	2.0
05/30/2001	30	C–3	105,115	625	168	2.4
05/30/2001	30	C–4	101,045	625	162	2.3
06/06/2001	21	C–1	74,180	612	121	2.5
06/07/2001	22	C–2	74,050	612	121	2.3
06/25/2001	21	C–3	89,260	625	143	3.0
07/11/2001	31	C–1	108,170	625	173	2.4
07/17/2001	18	C–3	52,440	625	84	2.0
07/18/2001	36	C–2	109,840	625	176	2.1
07/19/2001	27	C–4	92,450	725	128	2.4
08/14/2001	76	C–5	263,390	1,275	207	2.4
09/10/2001	49	C–4	168,530	750	225	2.4
09/13/2001	29	C–5	133,160	1,250	107	3.2
10/01/2001	67	C–2	97,060	575	169	1.0
10/01/2001	68	C–3	84,820	600	141	0.9
10/29/2001	42	C–4	166,430	700	238	2.8
11/16/2001	60	C–5	220,740	1,250	177	2.6
11/19/2001	23	C–1	78,760	700	113[a]	2.4
11/19/2001	26	C–2	52,370	700	75[a]	1.4
11/19/2001	26	C–3	75,500	700	108[a]	2.0
11/19/2001	18	C–4	63,300	700	90[a]	2.4
Mean	30		90,771	715	127	2.3

[a] ZVI was not completely spent when this run was terminated

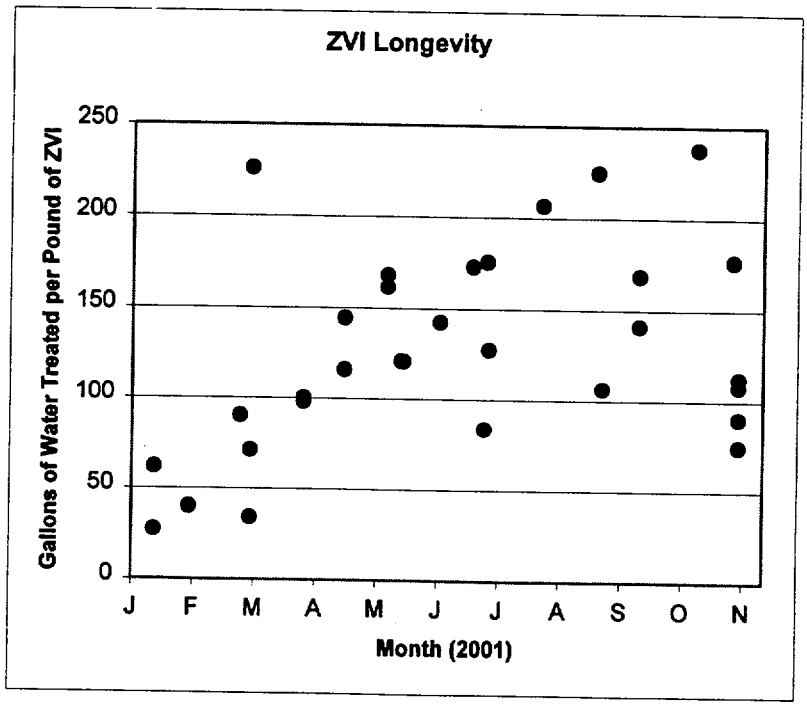

Figure 4–4. Gallons of Water Treated per Pound of ZVI Over Time

Efficiencies were also realized in the amount of sludge generated in the iron removal settling tanks. This was accomplished by pumping the sludge collected in the settling tanks to an above ground holding tank so the sludge could be consolidated, thus reducing the volume. The amount of sludge generated per 1,000 gallons of water treated over time is illustrated in Figure 4–5.

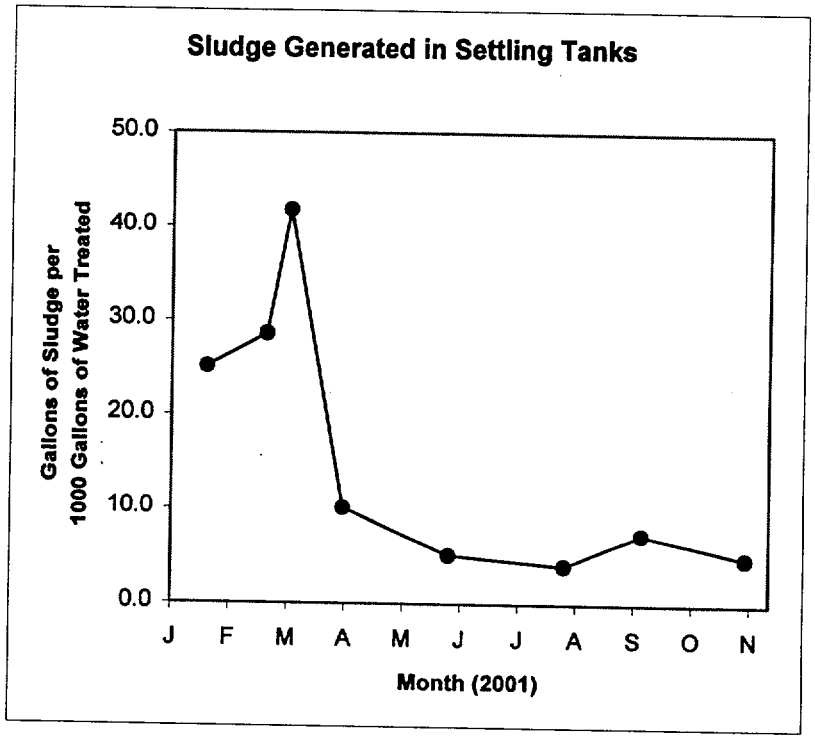

Figure 4–5. Sludge Generated in the Settling Tanks Over Time

4.3 Effluent Concentrations

The iron removal process also provided additional vanadium reductions. Increasing the residence time for the treated water in the iron removal settling tanks resulted in greater iron and vanadium reductions. However, as the sludge volume increased in the settling tanks, the residence time for the treated water decreases. This relationship was used to maximize the efficiency of the treatment and to stabilize the effluent concentrations. For example, as the ZVI in the columns decreased in efficiency, the sludge from the settling tanks was pumped to an above ground holding tank. This allowed maximum consolidate of the sludge while also maximizing the residence time for the treated water. The clean settling tanks and increased residence time decreased both iron and vanadium concentrations. As a result, the effluent concentrations were for the most part relatively stable and maintained within the treatment goals, as evident from Figure 4–6.

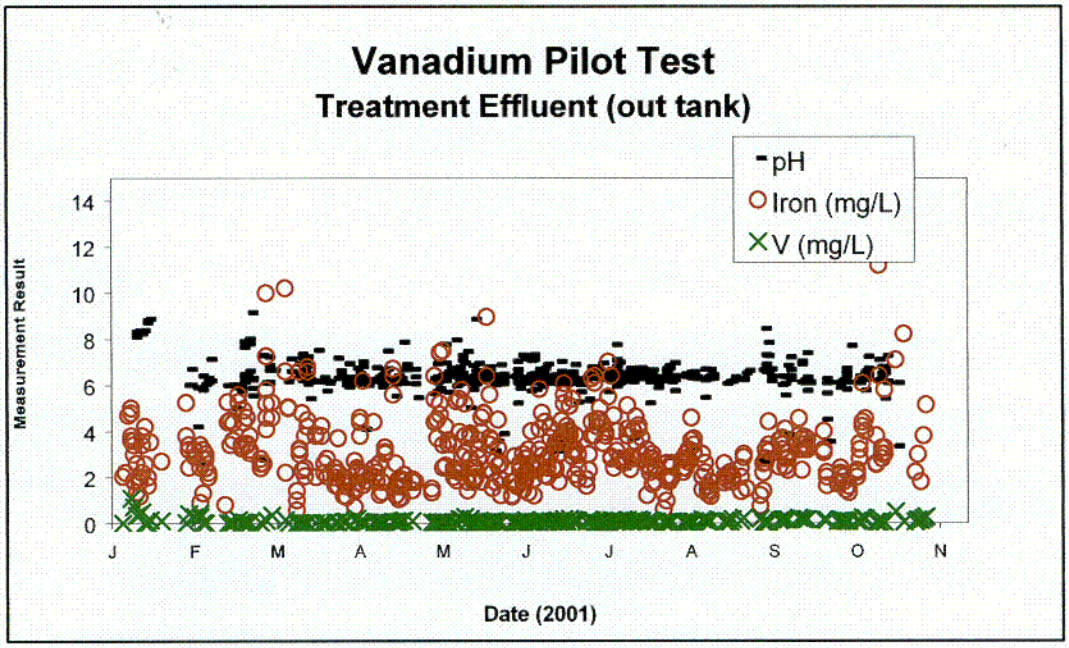

Figure 4–6. Effluent Vanadium, pH, and Iron Concentrations

4.4 Infiltration Gallery

An infiltration gallery was constructed down gradient from the extraction well field to return treated ground water to the aquifer. Construction details and the location of the gallery are provided in Plate 1. Regulatory approval to use the gallery was received on March 8, 2001. Before regulatory approval was received, the treated water was reinjected into an on-site monitor well (219) to accelerate startup of the system. Reinjection of treated water into monitor well 219 occurred during the period January 29, 2001 through March 8, 2001. During this time, numerous operational problems resulted because the well was not originally designed for reinjection. Most of the problems encountered were associated with screen clogging due to calcium carbonate precipitation and limitations from the relatively small casing diameter and short screen length of the monitor well. Low reinjection rates (1 to 2 gpm) combined with extensive screen maintenance was required to keep the pilot system operational.

C07

Treated ground water was returned to the aquifer via the infiltration gallery during the period March 8 through November 19, 2001. The performance of the gallery was monitored by collecting water elevation measurements with data loggers installed in two monitor wells (PT–680 and PT–682) located 50-ft down gradient of the gallery and monitor well PT–681 located 250-ft down gradient of the gallery. Water elevation measurements were collected with a hand held instrument at the infiltration gallery manhole that provides access to the center of the drain pipe. Results of the water elevation measurements collected at the man-hole, PT–680 and PT–681 are presented in Figure 4–7. None of the problems experienced with reinjecting treated water into monitor well 219 was observed with the infiltration gallery during the performance period, even when the pilot plant was operated at relatively high flow rates.

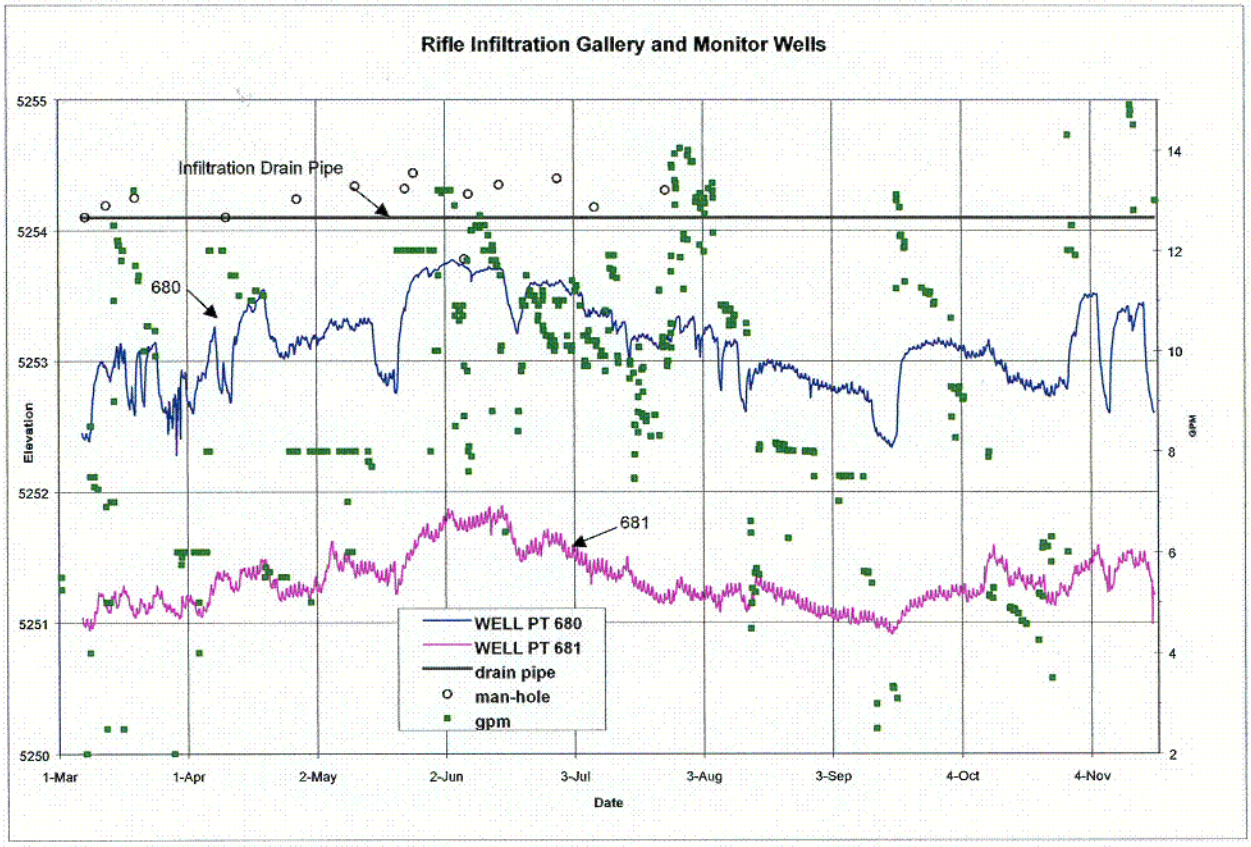

Figure 4–7. Water Elevation Measurements at the Infiltration Gallery

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5.0 Conclusions

Evaluation of the pilot pump and treat system considers both aquifer performance (pump) and treatment performance (treat). Aquifer performance relates to hydrogeologic characteristics that can effect the quantities and rates that ground water can be extracted or injected and geochemical characteristics such as mobility of contaminants in the subsurface that may limit extraction of the contaminant from the aquifer matrix (i.e. aquifer cleanup goals). Treatment performance relates to the adequacy and operation of the technology (e.g. chemical precipitation, ion exchange, etc.) to meet the chemical cleanup goals for the extracted ground water (i.e. treatment goals). Conclusions regarding aquifer and treatment performance of the pilot system are summarized in the following sections.

5.1 Aquifer Performance

Restoration potential for the aquifer (i.e. aquifer cleanup goals) using conventional extraction wells appears to be limited by the geochemical characteristics of vanadium. Relatively high adsorption of vanadium to the aquifer matrix is evidenced by the apparent lack of significant decreases in vanadium concentrations observed in ground water samples collected from extraction well 864 (Figure 4–1). This limitation is consistent with the relatively high distribution coefficients observed for vanadium at the site (DOE 1999 and 2000a).

Hydraulic parameters of the aquifer, such as permeability and conductivity, did not limit the amount of water or rate that water was extracted from the aquifer for the pilot study; extraction well 864 performed as designed. Similarly, the hydraulic parameters did not limit the amount or rate of water that was infiltrated back into the aquifer via the infiltration gallery. Both extraction goals, 1) deliver 20 gpm to the treatment system and 2) extract 2 million gallons of plume water, were achieved.

5.2 Treatment Performance

The treatment process consisted of flowing extracted ground water through a reactor column containing ZVI then removing the iron from the effluent in a series of downstream settling tanks. The ZVI column resulted in an average 6-fold reduction in vanadium concentrations (Table 4–1). The vanadium removal efficiency improved by the oxidation and precipitation of iron oxides in the downstream iron settling tanks. The settling tanks provided an additional 17-fold reduction in vanadium concentrations (Table 4–1) through coprecipitation with the iron oxides. All the chemical cleanup goals for the extracted ground water (i.e. pH, iron, and vanadium) were met, demonstrating the effectiveness of the treatment process.

The ZVI through-medium process and the iron removal system was relatively simple to design, construct, and operate. The system could potentially be simplified further by using only the iron removal portion of the treatment to coprecipitate vanadium with the iron oxides. Iron could be introduced to the treatment stream by injection of ferric chloride.

Actual variable costs to operate the pilot system at an average rate of 10 gpm are summarized in Table 5–1. Variable costs include ZVI, chemicals, sludge disposal, labor, and utilities.

Total costs to operate the pilot treatment system at 10 gpm are presented in Table 5–2 as a function of the volume of water treated. The fixed cost includes research and development, engineering design, and construction. The estimated cost to treat 5 million gallons of ground water is approximately $0.10 per gallon as shown in Table 5–2 and graphically illustrated in Figure 5–1.

Table 5–1. Actual Variable Costs Operating at 10 gpm

Treatment			Actual Amount						Total Cost
ZVI	0.0077 lbs ZVI/gl	x	0.35 $/lb	=	0.0027 $/gl	x	1000 gl	=	2.7 $/1000 gls
NaOH	1E–05 drums/gl	x	150 $/drum	=	0.0015 $/gl	x	1000 gl	=	1.5 $/1000 gls
H_2SO_4	1E–05 drums/gl	x	70 $/drum	=	0.0007 $/gl	x	1000 gl	=	0.7 $/1000 gls
							subtotal		4.9 $/1000 gls
Disposal									
sludge	0.0045 gl sludge/gl	x	0.21 $/gl sludge	=	9.5E–04 $/gl	x	1000 gl	=	0.95 $/1000 gls
ZVI	0.0077 lbs ZVI/gl	x	0.045 $/lb	=	3.5E–04 $/gl	x	1000 gl	=	0.35 $/1000 gls
							subtotal		1.30 $/1000 gls
Labor									
column	0.0077 lbs ZVI/gl	x	0.6 $/lb	=	0.005 $/gl	x	1000 gl	=	4.6 $/1000 gls
operations	2500 $/month	x	432000gls/month	=	0.006 $/gl	x	1000 gl	=	5.8 $/1000 gls
							subtotal		10.4 $/1000 gls
Utilities									
electricity	500 $/month	x	432000 gls/month	=	0.0012 $/gl	x	1000 gl	=	1.16 $/1000 gls
sewer	178 $/month	x	432000 gls/month	=	0.0004 $/gl	x	1000 gl	=	0.41 $/1000 gls
phone	100 $/month	x	432000 gls/month	=	0.0002 $/gl	x	1000 gl	=	0.23 $/1000 gls
trailer rent	172 $/month	x	432000 gls/month	=	0.0004 $/gl	x	1000 gl	=	0.40 $/1000 gls
trash	40 $/month	x	432000 gls/month	=	0.0001 $/gl	x	1000 gl	=	0.09 $/1000 gls
							subtotal		2.29 $/1000 gls
							Total Variable Cost		18.9 $/1000 gls

Table 5–2. Total Costs Operating at 10 gpm

Volume (gal)	Total cost ($) operating at 10 gpm			
	Variable Cost	Fixed Cost	Total Cost	Total Cost (1,000 gal)
1,000,000	18,885	400,000	418,885	419
2,000,000	37,770	400,000	437,770	219
3,000,000	56,656	400,000	456,656	152
4,000,000	75,541	400,000	475,541	119
5,000,000	94,426	400,000	494,426	99

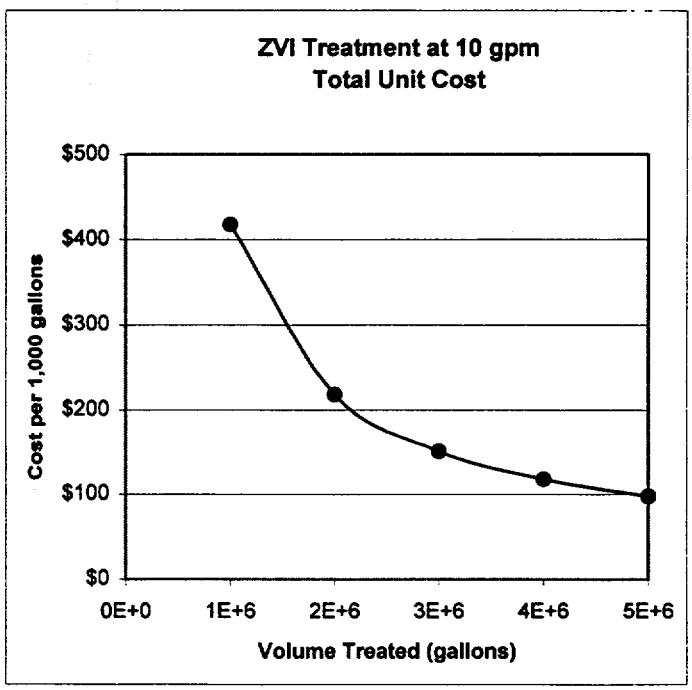

Figure 5–1. Total Unit Cost as a Function of Volume Treated

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6.0 Discussion and Implications

Sections 4.0 and 5.0 provide decision makers with cost, performance, and operating information that is useful if the pilot system is expanded to a full-scale remediation effort. This section provides additional information for decision makers to consider regarding the feasibility and practicality of expanding the pilot system to a full-scale operation.

The first discussion includes: *(a)* calculation of the mass of vanadium removed versus the mass remaining at the site, and *(b)* review of vanadium concentrations in other nearby monitor wells. In addition, *(c)* the hydraulic performance of the system is discussed, which includes a review of drawdown data, evaluation of the capture zone and *(d)* a comparison of the results of the extraction system with numerical model predictions.

(a) Mass of vanadium sorbed on the aquifer matrix is estimated at 31,766 kg, based on the amount of contaminated subpile soils in the saturated zone that could be providing a continuing source of ground water contamination. This estimate is based on the following assumptions from the *Work Plan for Vanadium Pilot Study* (DOE 2000a).

- Areal dimension of the subpile soil contamination is approximately 500-ft (W) x 500 ft (L).
- Thickness of contaminated subpile soil appears to be limited to the upper third of the saturated zone. The total saturated thickness is approximately 17.25-ft based on November 2000 water level measurements. The thickness of the upper third of the saturated thickness is therefore 5.75-ft (17.25/3).
- Mean concentration sorbed on the upper third of the saturated subpile soils is 553 mg/kg.

Mass of vanadium available in the soluble plume is estimated at 271 kg. The vertical and horizontal extent of the soluble plume is based on the *Work Plan for Vanadium Pilot Study* (DOE 2000a) and the mean concentration in the plume is based on the results presented in Table 4–1. The following assumptions apply:

- Areal dimension of the soluble plume is approximately 500-ft (W) x 500-ft (L).
- Vanadium contamination in the soluble plume appears to extend throughout the saturated zone. The total saturated thickness is approximately 17.25-ft based on November 2000 water level measurements.
- The average vanadium concentration in the soluble plume is 8.9 mg/L. This estimate is based on the average concentration from extraction well 864 observed during the pilot test (Table 4–1).

Mass of vanadium removed is estimated at 99 kg, based on the following assumptions:

- Average vanadium concentration extracted is 8.9 mg/L (Table 4–1).
- Volume extracted is 2,942,350 gallons (Section 4.0).

Using the above assumptions, the mass of vanadium remaining at the site is estimated at 31,938 kg. A removal rate of about 10 kg/month (99 kg/10 months) is estimated given that

99 kg was extracted during the 10 months that the pilot plant was operated. At this rate, it would require 266 years to remediate all of the vanadium remaining at the site. However, optimization modeling suggests that the maximum extraction rate that can be sustained is approximately 100 gpm. Therefore, assuming that the operating capacity of the system can be increased from the current average rate of 9.6 gpm (Table 4–1) to 100 gpm, it would require about 26 years to remediate all the vanadium (266 x [9.6/100]).

(*b*) A review of vanadium concentrations in nearby monitor wells is provided in Table 6–1. Analytical results of ground water samples collected between December 2000 and January 2001 before the treatment system was started, during the treatment operations in June 2001, and from the most recent sampling in December 2001, approximately 1 month after treatment operation was discontinued, are provided in the table for comparison.

Table 6–1. Results of Vanadium Sampling Before, During, and After Treatment Operations were Discontinued

Well ID	Description of sample location	Vanadium (mg/L)		
		Before treatment operations (12/00 -1/01)	During treatment operations (6/01)	One-month after treatment operations ceased (12/01)
864	Pumping well near center of soluble plume	8.8	7.9	8.53
855	New monitor well adjacent to well point 658 near center of subpile soil contamination	20.0	17.3	23.1
658	Well point near center of subpile soil contamination	6.9	15.4	5.7

(*c*) Drawdown at pumping well 864 could not be measured directly because of turbulence in the casing created from the pump and return flow to the well. The submersible pump installed in well 864 was designed to operate at or near full capacity around 25 gpm. Feed for the treatment system was diverted from the above ground discharge line from pumping well 864 and then all excess flow returned to the well, thus creating turbulence in the casing.

However, an estimate of drawdown in pumping well 864 can be obtained from aquifer test data collected after the well was installed (Calculation No. U0125100). Step-test results indicate that approximately 1.3-ft of drawdown can be expected in well 864 when the pump is operated at 10 gpm, the nominal operating rate during treatment. Extraction wells 862 and 863 are the nearest wells to pumping well 864, also located near the center of the soluble plume. Measured drawdown in these wells during the treatment operations are both about 5-inches. Wells 862 and 863 are located approximately 200 and 178-ft, respectively from the pumping well, a distance approximating the radius of influence.

Another first approximation of the radius of influence can be obtained by the equation:

$$r = [v/(\Pi)(b)(n)]^{0.5}$$

where;

r = radius (ft)
v = volume of water extracted (ft^3) during the treatment operations,
$\Pi = 3.14$,
b = total saturated thickness (ft), and
n = porosity

Using 393,392 ft^3 (2,942,350 gallons) as the volume of water extracted, and assuming a saturated thickness of 17.25-ft and an effective porosity of 0.25, results in a radius of influence of 170-ft. This value is in reasonable agreement with the 200 and 178-ft radius based on the drawdown observed in wells 862 and 863, respectively. Both first approximations underestimate the actual radius of influence.

(*d*) The numerical model MT3DMS (Zheng and Wang 1999) was used to evaluate the amount of vanadium in the ground water plume that could be expected to be recovered during the pilot test as a function of the linear distribution coefficient (Kd) and the volume extracted. The Kd (L/Kg) is equal to the first-order, sorption constant that describes the linear partitioning between the soil (mg/Kg) and ground water (mg/L). A relatively high Kd value favors partitioning to the soil (i.e. immobile phase) while a relatively low Kd favors partitioning to the ground water (i.e. mobile phase). The linear Kd retardation model assumes the system is in equilibrium between the solid and aqueous phases and does not account for the rate of mass-transfer between the soil and ground water. Characterization results of vanadium contamination from soil and ground water samples suggest a disequilibrium condition currently exists at the site (DOE 2000). However, for a first approximation, the bulk Kd parameter is used to describe the retardation of contaminant transport. For this modeling exercise, the actual Kd values obtained for the maximum (10.5), average (4.9), and minimum (1.2) measured at the New Rifle site (DOE 1999) were used as input parameters. Simulations were performed at a nominal extraction rate of 10 gpm at pumping well 864. A continuing source of ground water contamination in the subpile soil area was not modeled. Modeling results after extracting 3 million gallons of the soluble plume are shown in Figure 6–1. The simulations reveal that using the maximum Kd (10.5) the vanadium concentrations in the soluble plume at the pumping well can be expected to increase from the initial 8.80 mg/L to 8.82 mg/L, reflecting a rather stable concentration. Only a slight decrease to 8.61 mg/L is predicted using the average Kd (4.9). A significant decrease to 7.43 mg/L is predicted using the lowest Kd (1.2). The concentration increase observed for the lowest Kd that peaks after approximately 150,000 gallons of volume has been extracted reflects capture of the highest vanadium concentration located in the core of the soluble plume. This concentration "peak" is delayed and flatter for the higher Kds due to the greater partitioning to the solid phase. The greater partitioning to the solid phase results in relatively slower contaminant transport and explains the more stable vanadium concentrations.

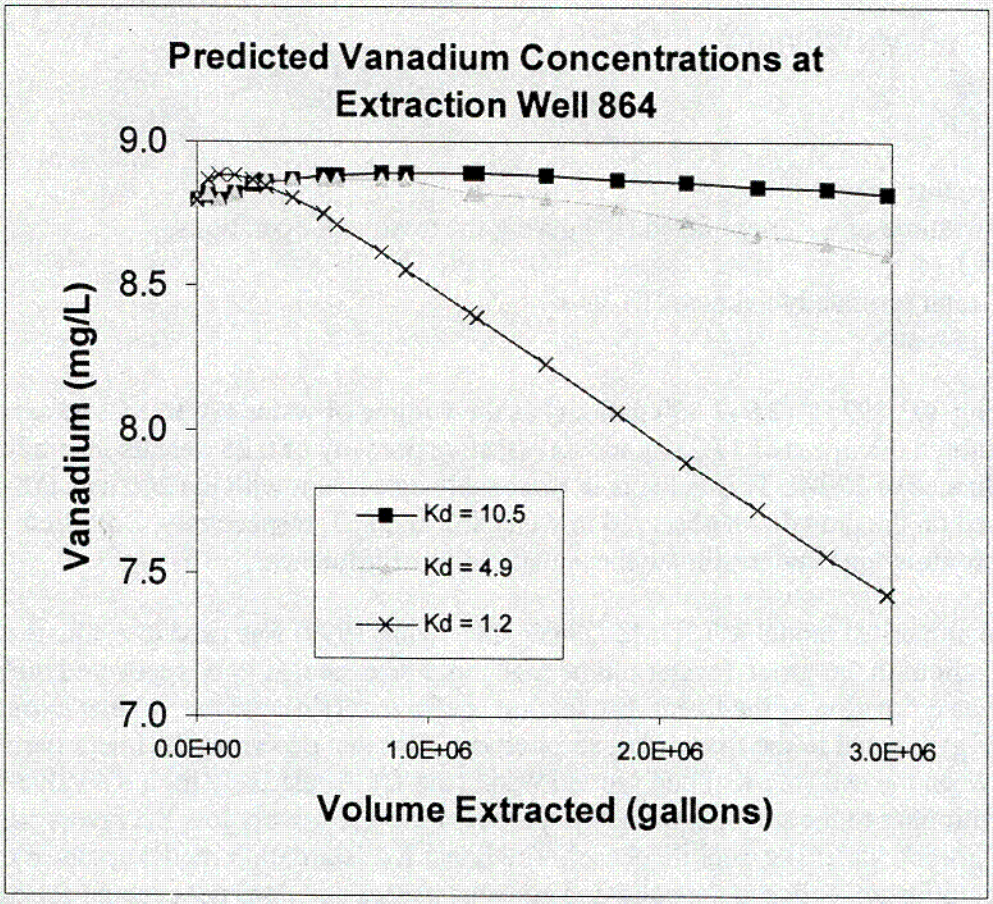

Figure 6–1. Results of MT3D model predictions using the maximum, average, and minimum Kd values measured for the site

A comparison of analytical results obtained for vanadium from grab-samples collected at extraction well 864 during operation of the treatment system (Appendix A) with the numerical model predictions is shown in Figure 6–2. The actual vanadium concentrations measured after extracting almost 3 million gallons of ground water are slightly higher (on average greater than 9 mg/L) than the initial 8.80 mg/L concentration. These measured results are more consistent with the predicted trend using the maximum and average Kd values than for the minimum Kd.

C09

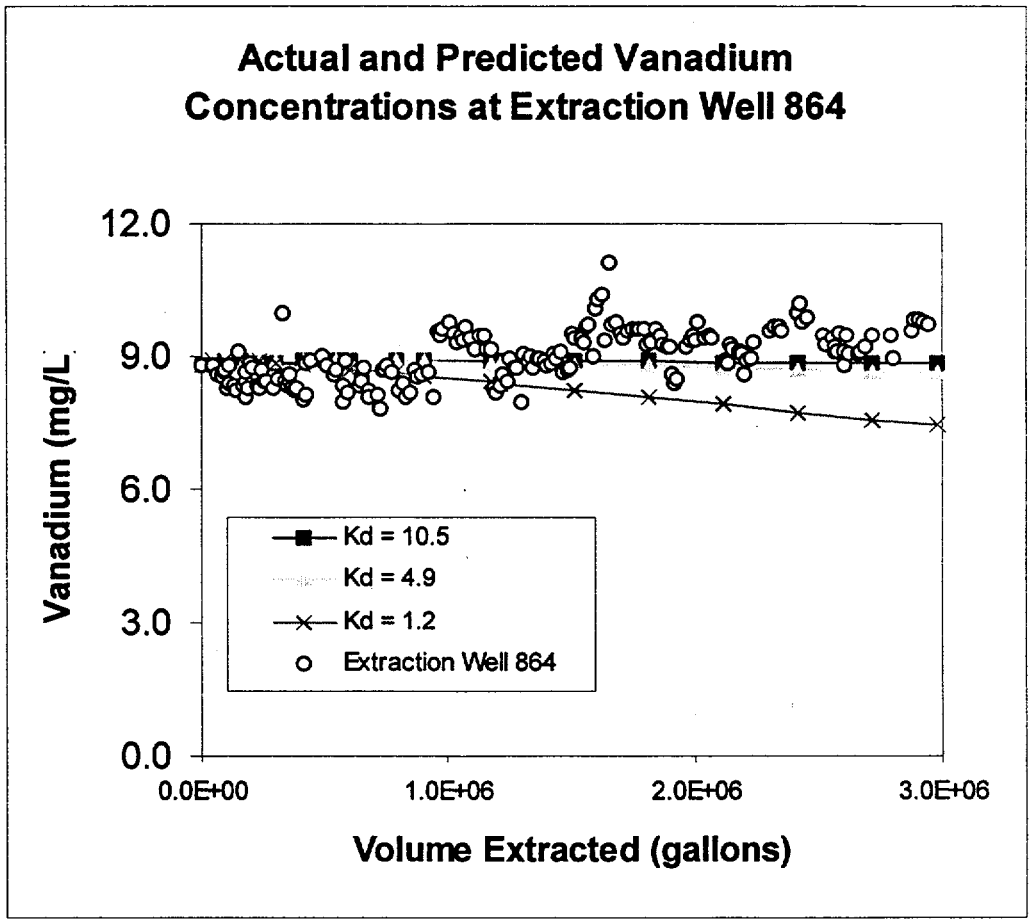

Figure 6–2. Comparison of Laboratory Analytical Results for Vanadium with the MT3D model predictions using the maximum, average, and minimum Kd values measured for the site.

An additional discussion regarding the geochemical conditions at the New Rifle site is provided to help decision makers answer questions such as; (*f*) What was the reason influent concentrations (9 mg/L) were well below plume concentrations (15 to 30 mg/L) shown in Figure 3-3? (*g*) Is it because the vanadium was being immobile? If so, would varying the pumping rates give us info to verify the hypothesis (if immobile, concentrations should decrease with increased flow rates)? (*h*) Would adding a lixivient verify the hypothesis by showing greatly increased concentrations at all pumping rates? (*i*) What are other explanations for stable influent concentrations over 3 million gallons? Is it just that this was a small fraction of the plume mass and there is still plenty there? Is the hot spot source just bleeding more off?

(*f*) The higher concentrations (15 to 30 mg/L) were measured during the vanadium characterization study from discrete 1-ft grab samples used to determine the vertical concentration profile of the plume (DOE 2000a). The highest concentration of 32 mg/L was found in the middle of the saturated zone of the aquifer. Concentrations ranged from 7 to 10 mg/L in the lower saturated zone and from 10 to 13 mg/L in the upper saturated zone. Excluding the highest concentration of 32 mg/L observed in the middle saturated zone, all the vanadium concentrations in grab samples collected from the soluble plume ranged from

6 to 13 mg/L. The average concentration (8.9 mg/L) obtained from extraction well 864 is consistent with the range in concentrations (6 to 13 mg/L) observed for most of the plume. Current concentrations from well 864 cannot be directly compared with the 1-ft grab samples. This is because the grab samples were collected from temporary boreholes in slightly different locations than well 864 and water collected from well 864 represents more of an integrated sample over the screen interval rather than a discrete sample, explaining the difference in concentrations.

(*g*) Even though the pump rates were not varied during the pilot test to specifically test the hypothesis that if vanadium is immobile then reduced concentrations should be correlated with increased flow rates, examining the pump rates plotted in Figure 4-7 can provide some insight. It is apparent from Figure 4-7 that the pump rates varied considerably during the pilot test. Considering one example, the pump rates were maintained constant at approximately 8 gpm from April 25 through May 14. The pump rates then increased to approximately 12 gpm and were maintained constant at this rate from May 21 through May 29. Vanadium concentrations versus the two different pumping rates are shown in Figure 6-3. No correlation between vanadium concentration and pump rate is apparent. In addition, the vanadium concentration during the 8 gpm period (April 25 through May 14) averaged 8.4 mg/L and during the 12 gpm period (May 21 through May 29) the concentrations also averaged 8.4 mg/L, indicating no significant difference in concentrations due to varying the pumping rates.

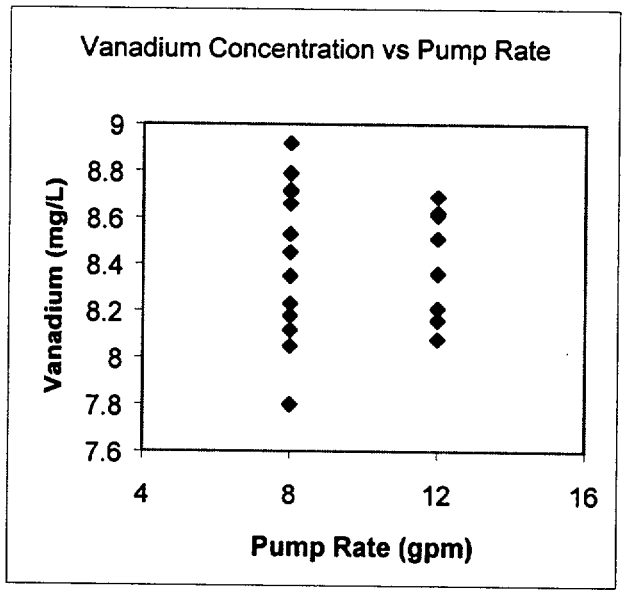

Figure 6–3. Vanadium Concentrations Versus Two Different Pump Rates

(*h*) The hypothesis that adding a lixiviant should result in greatly increased concentrations thereby verifying that vanadium is immobile was tested at the DOE ESL by a column experiment using contaminated subpile soil collected from 8 to 10 ft below ground surface adjacent to monitor well 658. The vanadium concentration measured in the subpile soil sample was 857 mg/Kg (DOE 2000a). Background ground water collected from up gradient monitor well 215 was used as influent to the column filled with subpile soil. Three column tests were conducted; no lixiviant, 0.5M citric acid, and 0.5M Na citrate. Results of the column experiment are presented in Figure 6-4.

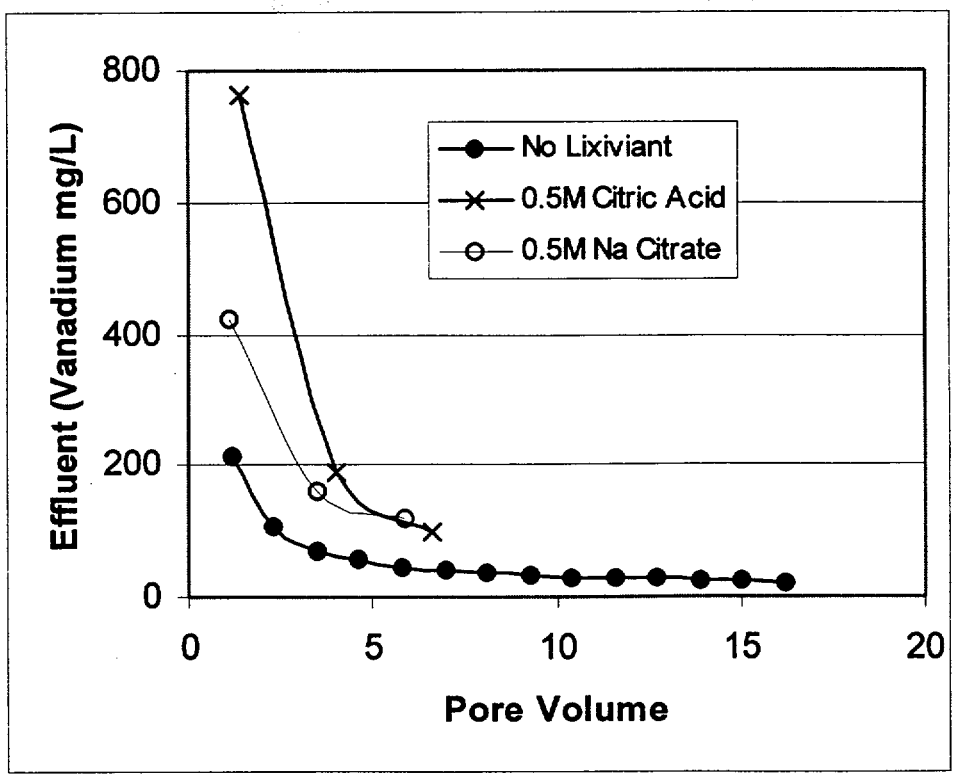

Figure 6–4. Vanadium Concentrations in Effluent from Column Experiment.

Evident from the data presented in Figure 6-4 are greatly increased vanadium concentrations at the beginning of the experiment using the two test lixiviants. Vanadium concentrations decreased by a factor of 4 using 0.5M Na citrate and by a factor of 8 using 0.5M citric acid after approximately 6 to 7 pore volumes, respectively. Concentrations decreased by approximately a factor of 5 using no lixiviant after a similar pore volume exchange.

It is also of interest to note that the rate of decrease in vanadium concentration observed using no lixiviant was greatly reduced after 5 to 6 pore volumes (Figure 6-4). This "tailing effect" suggests the partitioning between the solid and aqueous phase is not at equilibrium and that the linear Kd sorption model may not apply. The decrease in the rate of mass-transfer between the soil and ground water phase observed in the column experiment may help explain the relatively stable concentrations (i.e. "tailing effect") observed at extraction well 864.

Clement (1998) describes that in a rate-limited sorption reaction. . . "the exchange of contaminants between the soil and ground water is dictated by the value of the mass-transfer coefficient. When the mass-transfer rate is high (relative to the overall transport), the rate-limited model relaxes to the retardation model (i.e. Kd). On the contrary, very low mass-transfer coefficients would mimic fully sequestered conditions where the contaminants in the soil phase are assumed to be irreversibly adsorbed and trapped into the soil pores. Under this extreme condition, it might be possible to simply clean the ground water plume and leave the sequestered soil contaminants in the aquifer because the sorbed contaminants may not pose any potential risk to the environment. In either of the extreme

sorbed contaminants may not pose any potential risk to the environment. In either of the extreme conditions, pump-and-treat is the best option to remediate the ground water plume. Unfortunately, in most instances, the mass-transfer coefficient is expected to lie in an intermediate range, causing the well-known limitations to the pump-and-treat system".

This is the geochemical condition that exists for vanadium at the New Rifle site. Evidence that the soluble plume has migrated very slowly (approximately 400-ft in 40 years, DOE 2000a) in a cobble-gravel alluvial aquifer with high hydraulic conductivity and recharge from the Colorado River suggests a low mass-transfer coefficient relative to the more mobile constituents (i.e. uranium) that have migrated much further (DOE 1999). Site-specific distribution coefficients (Kds) are also consistent with a relatively low geochemical mobility for vanadium (DOE 1999). The presence of a continuing source of relatively immobile vanadium on the aquifer matrix is suggested by the "tailing effect" observed from the column experiment (Figure 6–4) and evidenced by the stable vanadium concentrations during the removal of a mass representing 37 percent of the soluble plume. It is apparent that the low geochemical mobility for vanadium is limiting the restoration potential of the aquifer.

(*i*) Another possible explanation for stable influent concentrations observed after recovering over 3 million gallons is the amount extracted is just a small fraction of the plume mass and there is still plenty there or the hot spot source is just bleeding more off. However, in actuality, a relatively large fraction of the soluble plume was removed during the pilot test. The mass of vanadium available in the soluble plume is estimated at 271 kg (see *a* above). The mass extracted is estimated at 99 kg. This represents 37 percent of the soluble plume. However, because removal of this mass did not result in a decrease in plume concentrations, a relatively immobile form of vanadium is present in the aquifer matrix that is providing a continuing source that is "bleeding off".

(*j*) Optimization modeling using a flow and particle-tracking algorithm was performed to evaluate the location of the pumping wells, the number of pumping wells, and the pumping rates to best design the extraction field. The modeling also considered reintroducing the treated water both up gradient and down gradient of the extraction field. Because the quality of the treated effluent required the water to be returned to the aquifer at a location within the plume boundary, the up gradient location for an infiltration gallery was relatively close to the extraction field. Modeling results indicated that several more extraction wells and 25 percent higher flow rates would be required to capture the plume by reintroducing the treated effluent to the aquifer at a nearby up gradient location rather than at a down gradient location. In addition, locating the infiltration galley in the down gradient McCauley pit area provided a source of higher water quality to the mitigation wetland, which will help dilute ammonia and nitrate concentrations and accelerate plume migration through the wetland.

7.0 References

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End of current text

Appendix A

Compilation of Operating Conditions, Parameters, and Results

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
1/29/01	1000	2278	0	132	61			32	0					580	0	2.9	40		
1/29/01	1615																		
1/30/01	1010																		
1/30/01	1300	6240	3962	78	60														
1/30/01	1417	7280	5002	81	60														
1/30/01	1615			81	60														
1/30/01	2010	11460	9182	80	60														
1/30/01	2045																		
1/30/01	2310	13220	10942	80	60														
1/30/01	2313																		
1/31/01	520																		
1/31/01	524	17310	15032	80	60														
1/31/01	930	20310	18032	80	60														
1/31/01	1030	20590	18312	80	60														
1/31/01	1100																		
1/31/01	1445	23480	21202	64	55									1080	520	3	18		
1/31/01	1530																		
1/31/01	1615																		
1/31/01	1705	25500	23222	62	54									1540	980	2.9	17		
1/31/01	2130																		
1/31/01	2149	29420	27142	63	54									2410	1850	2.9	18		
2/1/01	35	32260	29982	63	54									3040	2480	2.9	18		
2/1/01	350																		
2/1/01	355	34660	32382	63	54									3560	3000	2.9	20		
2/1/01	735	37780	35502	63	54									4240	3680	2.9	20		
2/1/01	910	39220	36942	63	54									4550	3990	2.88	20		
2/1/01	925																		
2/1/01	1140	41350	39072	63	54									5010	4450	2.87	22		
2/1/01	1150																		
2/1/01	1202																		
2/1/01	1215																		
2/1/01	1243					0.021	8.79											74.3	1.12
2/1/01	1540																		
2/1/01	1548	44840	42562	59	52			230	198					5740	5180	2.76	22		
2/1/01	1555																		
2/1/01	1559																		
2/1/01	1602																		
2/1/01	1608																		
2/2/01	1030	61420	59142	60	52									8998	8438	3	22		
2/2/01	1040																		
2/2/01	1050																		
2/2/01	1053																		
2/2/01	1120																		
2/2/01	1130	62010	59732	92	62									9130	8570	1.5	14		
2/2/01	1142																		
2/2/01	1310	62010	59732	92	62									9290	8730	1.4	14		
2/2/01	1315																		
2/2/01	1325																		
2/2/01	1330																		
2/2/01	1340																		
2/2/01	1500	63060	60782	0	0									9360	8800	0	0		
2/2/01	1515	63070	60792	92	62									9370	8810	1.5	0		
2/2/01	1630	63570	61292	92	62									9490	8930	1.5	0		
2/2/01	1641																		
2/2/01	1645					0.0132	8.61											62.9	7.14
2/2/01	1650																		
2/3/01	1200	71620	69342	92	62									11400	10840	1.5	0		
2/3/01	1215																		
2/3/01	1220																		
2/3/01	1223																		
2/3/01	1235																		
2/3/01	1245					0.0116	8.61											146	14.1
2/4/01	912	80230	77952	91	61									13430	12870	1.5	0		
2/4/01	930																		
2/4/01	950																		
2/4/01	954																		
2/4/01	1000																		
2/4/01	1437	82430	80152	91	61									13950	13390	1.5	0		
2/4/01	1505																		
2/4/01	1514																		
2/4/01	1530																		
2/4/01	1539					0.0116	8.55											163	12.6
2/4/01	1657	83070	80792	91	61									14100	13540	1.5	0		
2/4/01	1715																		
2/5/01	935	89840	87562	90	60									15730	15170	1.5	0		
2/5/01	953																		
2/5/01	958																		
2/5/01	1002																		
2/5/01	1012																		
2/5/01	1015																		
2/5/01	1432																		
2/5/01	1436																		
2/5/01	1437																		
2/5/01	1438	90233	87955	78	60														
2/5/01	1439																		
2/5/01	1440																		
2/5/01	1442																		
2/5/01	1445																		
2/5/01	1450																		
2/5/01	1453																		
2/5/01	1457																		
2/5/01	1500																		
2/5/01	1515					0.0311	8.66												
2/5/01	1530																		
2/5/01	1540																		
2/5/01	1545																		
2/5/01	1611																		
2/5/01	1615																		
2/6/01	910	96060	93782	61	52														
2/6/01	943	96370	94092	60	52														
2/6/01	954																		
2/6/01	1008																		
2/6/01	1012																		
2/6/01	1032	97170	94892	61	53														
2/6/01	1058																		
2/6/01	1410																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer	Vol	Pressure	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V
		(gls)	(gls)	up (psi)	dn (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)
2/6/01	1412					0.0336	8.7												
2/6/01	1438																		
2/6/01	1441																		
2/6/01	1545	99800	97522	72	59														
2/6/01	1640	100340	98062	95	64														
2/7/01	755	103110	100832	0	0														
2/7/01	840																		
2/7/01	1425																		
2/7/01	1520					0.0185	8.28												
2/7/01	1555	103690	101412	75	59														
2/8/01	1020	114720	112442	74	58														
2/8/01	1207					0.0116	8.81												
2/8/01	1230	115970	113692	74	58														
2/8/01	1235																		
2/12/01	1050																		
2/12/01	1130	116710	114432	73	60														
2/12/01	1534					0.0177	8.4												
2/12/01	1610	119230	116952	74	60														
2/12/01	1630	119430	117152																
2/21/01	1140	119430	117152																
2/21/01	1145																		
2/21/01	1155																		
2/21/01	1200																		
2/21/01	1205																		
2/21/01	1210																		
2/21/01	1230																		
2/21/01	1240																		
2/21/01	1615					0.0126	8.31												
2/21/01	1641																		
2/22/01	1005	134040	131762	70	58														
2/22/01	1035																		
2/22/01	1059																		
2/22/01	1120																		
2/22/01	1135																		
2/22/01	1415	136610	134332	70	58														
2/22/01	1425					0.0116	8.2												
2/22/01	1435																		
2/22/01	1450																		
2/22/01	1452																		
2/22/01	1455																		
2/22/01	1525																		
2/22/01	1532	137430	135152	84	62														
2/22/01	1600																		
2/24/01	747	153100	150822	86	61														
2/24/01	804																		
2/24/01	808																		
2/24/01	817																		
2/24/01	820																		
2/24/01	822																		
2/24/01	831																		
2/24/01	858					0.0274	9.09												
2/24/01	956	153930	151652	86	61														
2/26/01	845	171990	169712	86	60														
2/26/01	930																		
2/26/01	936					0.0116	8.35												
2/26/01	938																		
2/26/01	943																		
2/26/01	945																		
2/26/01	950																		
2/26/01	953																		
2/26/01	1535	172570	170292	100	65														
2/26/01	1542																		
2/26/01	1545																		
2/26/01	1609																		
2/26/01	1612																		
2/26/01	1617																		
2/26/01	1707					0.0298	8.07												
2/26/01	1709																		
2/27/01	830	176080	173802	96	64														
2/27/01	855																		
2/27/01	858																		
2/27/01	901																		
2/27/01	903																		
2/27/01	914																		
2/27/01	947																		
2/27/01	1345	177370	175092	96	66														
2/27/01	1529					0.0116	8.45												
2/27/01	1533																		
2/27/01	1610																		
2/27/01	1612																		
2/27/01	1630																		
2/27/01	1710																		
2/28/01	1050	180260	177982	96	64														
2/28/01	1100																		
2/28/01	1127																		
2/28/01	1129																		
2/28/01	1200																		
2/28/01	1330	180660	178382	96	96														
2/28/01	1455	181120	178842	64	64														
2/28/01	1603					0.0116	8.63												
2/28/01	1605																		
2/28/01	1608																		
2/28/01	1618																		
2/28/01	1625																		
3/1/01	1410	181640	179362	86	62														
3/1/01	1425																		
3/1/01	1430																		
3/1/01	1440																		
3/1/01	1450																		
3/1/01	1520																		
3/1/01	1530	182070	179792	86	62														
3/1/01	1600	182140	179862	86	62														
3/1/01	1655																		
3/1/01	1645																		
3/1/01	1700	182490	180212	86	62														
3/6/01	1000																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
3/7/01	1330	182510	180232	10	10														
3/7/01	1345	182530	180252	9	8														
3/7/01	1400	182550	180272	98	64														
3/7/01	1430	182600	180322	98	64														
3/7/01	1708	182900	180622	98	64														
3/7/01	1715																		
3/7/01	1720																		
3/7/01	1723																		
3/7/01	1803																		
3/8/01	1045	184780	182502	98	65														
3/8/01	1410	185130	182852	98	64														
3/8/01	1418																		
3/8/01	1448			78	59														
3/8/01	1510	185470	183192	75	59														
3/8/01	1515					0.0429	8.3												
3/8/01	1525																		
3/8/01	1530																		
3/8/01	1535																		
3/8/01	1730																		
3/8/01	1738																		
3/8/01	1740	186480	184202	76	58														
3/9/01	1326	195770	193492	78	59														
3/9/01	1335																		
3/9/01	1345					0.0074	8.82												
3/9/01	1400																		
3/9/01	1410																		
3/9/01	1515	196580	194302	78	59														
3/10/01	1030	205070	202792	79	60														
3/10/01	1045																		
3/10/01	1050																		
3/10/01	1055																		
3/10/01	1103																		
3/10/01	1113					0.0064	8.73												
3/10/01	1225																		
3/10/01	1228	205920	203642	80	60														
3/12/01	1013																		
3/12/01	1016																		
3/12/01	1023																		
3/12/01	1038																		
3/12/01	1049					0.0321	8.35												
3/12/01	1210																		
3/12/01	1222																		
3/12/01	1225																		
3/12/01	1300	226090	223812	88	60														
3/12/01	1425																		
3/12/01	1510																		
3/12/01	1715																		
3/12/01	1720	227430	225152	87	62														
3/12/01	1723																		
3/12/01	1730																		
3/13/01	920	232250	229972	87	62														
3/13/01	945																		
3/13/01	948																		
3/13/01	957																		
3/13/01	1003																		
3/13/01	1005																		
3/13/01	1245							260	228	1	8			15850	15290	1	8		
3/13/01	1347	233670	231392	79	62			310	278	1	5			15910	15350	1	14		
3/13/01	1445																		
3/13/01	1447					0.0118	8.3					50.2	0.61					287	0.197
3/13/01	1527	234300	232022	78	61			340	308	1	12/10			16020	15460	1	14		
3/13/01	1602																		
3/13/01	1605																		
3/13/01	1610																		
3/13/01	1720	235070	232792	80	61			430	398	1	12/10			16130	15570	1	14		
3/13/01	1735																		
3/14/01	830	241214	238936	80	59			1153	1121	1				17098	16538	1			
3/14/01	1005	241880	239602	70	59			1230	1198	2	20			17190	16630	2	21		
3/14/01	1015									3	44/22					3	28		
3/14/01	1050	242420	240142	56	52			1360	1328	2.5	42/20			17400	16840	5	48		
3/14/01	1315																		
3/14/01	1330																		
3/14/01	1403					0.0311	8.89					73.6	0.0341					71.2	0.0057
3/14/01	1500	245420	243142	57	52			1960	1928	2.5	44/20			18560	18000	5	48		
3/15/01	1000	254060	251782					3740	3708					21980	21420				
3/15/01	1015	254060	251782	58	52			3740	3708	2.7	44/23			21980	21420	4.5	48		
3/15/01	1020	254860	252582	59	53			3910	3878	2.5	44/22			22290	21730	4.7	49		
3/15/01	1030																		
3/15/01	1037																		
3/15/01	1105																		
3/15/01	1145	255130	252852					3960	3928					22400	21840				
3/15/01	1150	255130	252852					3960	3928	2.5	44/22			22400	21840	4.7	49		
3/15/01	1220																		
3/15/01	1230																		
3/15/01	1234																		
3/15/01	1235																		
3/15/01	1320																		
3/15/01	1340	256410	254132	59	53			4230	4198	2.5	44/22			22870	22310	4.6	49		
3/15/01	1452					0.0116	8.41					65	0.0052					63.1	0.0036
3/15/01	1504																		
3/15/01	1520																		
3/15/01	1522																		
3/15/01	1525																		
3/15/01	1612																		
3/15/01	1625	258420	256142	59	53			4640	4608	2.5	44/22			23630	23070	4.6	49		
3/16/01	820	263860	261582					5760	5728					25670	25110				
3/16/01	840	263860	261582	58	52			5760	5728	2.5	44/23			25670	25110	4.3	49		
3/16/01	905																		
3/16/01	910																		
3/16/01	920																		
3/16/01	1008	264720	262442	58	52			5910	5878	2.5	44/23			25980	25420	4.5	49		
3/16/01	1050																		
3/16/01	1100																		
3/16/01	1115	265340	263062					6080	6048	2.5	44/22			26210	25650		49		
3/16/01	1303	266080	263802	58	52			6240	6208	2.5	44/22			26780	26220	4.5	52		
3/16/01	1315																		
3/16/01	1317																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
3/16/01	1513					0.0271	8.41					59.8	0.0087					56.9	0.0022
3/16/01	1525																		
3/16/01	1530	267780	265502	59	52			6590	6558	2.5	44/22			27120	26560	4.5	52		
3/16/01	1545																		
3/16/01	1547																		
3/16/01	1549																		
3/16/01	1615																		
3/16/01	1617																		
3/16/01	1619																		
3/16/01	1620																		
3/16/01	1635																		
3/16/01	1645	268600	266322	60	52			6770	6738	2.5	44/21			27430	26870	4.5	52		
3/19/01	830	275460	273182					8170	8138					30090	29530				
3/19/01	915	275670	273392	52	48			8210	8178	2.6	44/20			30180	29620	6	44		
3/19/01	1645	280610	278332	59	53			9250	9218	2.6	50/18			32730	32170	6.8	46		
3/20/01	830	290230	287952	60	54			11500	11468	2.6	52/24			38130	37570	6.6	51		
3/20/01	1045	291390	289112	94	64			11780	11748	0.6	68/66			38750	38190	0.4	69		
3/20/01	1110	291410	289132	101	67			11790	11758		71/69			38760	38200		71		
3/20/01	1112																		
3/20/01	1115																		
3/20/01	1118																		
3/20/01	1119																		
3/20/01	1145	291590	289312	56	51			11830	11798	2	49/20			38860	38300	7	46		
3/20/01	1200																		
3/20/01	1205																		
3/20/01	1207																		
3/20/01	1210																		
3/20/01	1212					0.0122	8.27					40.4	0.305					32.6	0.43
3/20/01	1220	291990	289712					11910	11878					39080	38520				
3/21/01	1430	292110	289832					11940	11908					39160	38600				
3/21/01	1434	292110	289832					11940	11908	2.5	40/12			39160	38600	5	34		
3/21/01	1604																		
3/21/01	1606																		
3/21/01	1608																		
3/21/01	1612																		
3/21/01	1645																		
3/21/01	1650	293390	291112	63	56			12260	12228	2.5	41/13			39820	39260	5	34		
3/22/01	955	304050	301772	64	56			14830	14798	2.5	44/13			45420	44860	5.5	34		
3/22/01	1008																		
3/22/01	1016																		
3/22/01	1018																		
3/22/01	1022																		
3/22/01	1024																		
3/22/01	1030																		
3/22/01	1034																		
3/22/01	1135	305050	302772	63	54			15070	15038	2.5	42/12			45950	45390	5.5	34		
3/22/01	1150																		
3/22/01	1420	306760	304482	63	54			15480	15448	2.5	42/12			46840	46280	5.5	34		
3/22/01	1423																		
3/22/01	1425																		
3/22/01	1449																		
3/22/01	1450																		
3/22/01	1453																		
3/22/01	1507					0.0116	8.48					33.2	0.979					29.8	1.78
3/22/01	1535																		
3/22/01	1615																		
3/22/01	1620																		
3/22/01	1625	308050	305772	63	54			15790	15758	2.5	42/12			47510	46950	5.5	34		
3/22/01	1629																		
3/22/01	1631																		
3/24/01	815	332260	329972	65	56			21640	21608	2.4	45/15			60190	59630	5.5	37		
3/24/01	820																		
3/24/01	822																		
3/24/01	834					0.0116	10					33.7	2.25					26.4	3.05
3/24/01	840																		
3/24/01	846																		
3/24/01	925	332920	330642	65	56			21800	21768	2.4	44/16			60540	59980	5.2	39		
3/27/01	1200																		
3/28/01	1535	333000	330722					21810	21778					60560	60000				
3/28/01	1600	333000	330722	94	64														
3/28/01	1630	333060	330782	94	64														
3/28/01	1715	333130	330852	94	64														
3/28/01	1720																		
3/28/01	1721																		
3/29/01	1130	335110	332832	94	64														
3/29/01	1140																		
3/29/01	1142																		
3/29/01	1201	335280	333002	80	64														
3/29/01	1240																		
3/29/01	1242																		
3/29/01	1246																		
3/29/01	1430	336140	333862	80	61														
3/29/01	1517					0.0226	8.42												
3/29/01	1530																		
3/29/01	1607																		
3/29/01	1609																		
3/29/01	1615																		
3/29/01	1615	336720	334442	80	61														
3/30/01	1030	343120	340842	80	60														
3/30/01	1032																		
3/30/01	1037																		
3/30/01	1050																		
3/30/01	1445					0.0396	8.32												
3/30/01	1500																		
3/30/01	1520																		
3/30/01	1535	345230	342952	80	60														
3/31/01	1030	351880	349602	80	60														
4/2/01	1230	351890	349612	81	60														
4/2/01	1250																		
4/2/01	1330																		
4/2/01	1332																		
4/2/01	1343																		
4/2/01	1345																		
4/2/01	1440	352630	350352	81	62														
4/2/01	1446					0.0177	8.41												
4/2/01	1545	352990	350712	80	60														
4/2/01	1655	353390	351112	80	60														

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
4/2/01	1700																		
4/2/01	1705																		
4/2/01	1708																		
4/2/01	1710																		
4/3/01	900	359010	356732	80	60														
4/3/01	920																		
4/3/01	935																		
4/3/01	946																		
4/3/01	953																		
4/3/01	956																		
4/3/01	1140																		
4/3/01	1215	360130	357852	80	60														
4/3/01	1220																		
4/3/01	1224																		
4/3/01	1400	360790	358512	74	58														
4/3/01	1431					0.0463	8.6												
4/3/01	1440																		
4/3/01	1510	361320	359042	74	60														
4/3/01	1600	361840	359562	80	60														
4/3/01	1612																		
4/3/01	1614																		
4/3/01	1620																		
4/3/01	1622																		
4/3/01	1630	361780	359502	82	60														
4/3/01	1732																		
4/3/01	1735	362040	359762	80	60														
4/4/01	835	367430	365152	80	60														
4/4/01	900																		
4/4/01	910																		
4/4/01	914																		
4/4/01	935																		
4/4/01	937																		
4/4/01	1010																		
4/4/01	1640	370260	367982	80	61														
4/4/01	1645					0.041	8.3												
4/4/01	1647																		
4/4/01	1658																		
4/4/01	1700																		
4/4/01	1715																		
4/4/01	1730	370520	368242	80	61														
4/5/01	1120	376570	374292	81	61														
4/5/01	1145																		
4/5/01	1153																		
4/5/01	1156																		
4/5/01	1200																		
4/5/01	1204																		
4/5/01	1400																		
4/5/01	1400	377800	375522	81	61														
4/5/01	1507					0.0421	8.23												
4/5/01	1540	378000	375722	74	59			22020	21988	1	12			60970	60410	1	8		
4/5/01	1600																		
4/5/01	1604																		
4/5/01	1608																		
4/5/01	1611																		
4/5/01	1620	378320	376042	74	59			22060	22028	1	10			61010	60450	1	12		
4/5/01	1645																		
4/5/01	1645	378450	376172	74	59			22080	22048	1	10			61020	60460	1	12		
4/6/01	840	385540	383262	74	59			22980	22948	1	8			61840	61280	1	10		
4/6/01	905																		
4/6/01	908																		
4/6/01	912																		
4/6/01	920																		
4/6/01	940	385940	383662	60	53			23060	23028	3	18			61910	61350	3	25		
4/6/01	1035	386460	384182	60	53			23180	23148	3	18			62050	61490	3	25		
4/6/01	1050																		
4/6/01	1053																		
4/6/01	1130																		
4/6/01	1150																		
4/6/01	1402					0.0086	8.3					82	0.0174					64.5	0.0042
4/6/01	1415																		
4/6/01	1430																		
4/6/01	1433																		
4/6/01	1436																		
4/6/01	1438																		
4/6/01	1446																		
4/6/01	1455	389340	387062	60	54			23820	23788	3	18			62830	62270	3	25		
4/9/01	950	405650	403372					27420	27388					67300	66740				
4/9/01	1020	405650	403372	62	55			27420	27388	3	39/25			67300	66740	3	29		
4/9/01	1040			60	55														
4/9/01	1043	405820	403542	60	55			27460	27428	3	28/20			67350	66790	3	26		
4/9/01	1100																		
4/9/01	1125																		
4/9/01	1127																		
4/9/01	1131																		
4/9/01	1150																		
4/9/01	1230	406990	404712	60	54			27730	27698	3	19			67870	67110	3	25		
4/9/01	1233																		
4/9/01	1250																		
4/9/01	1308																		
4/9/01	1415	408110	405832	60	54			27980	27948	3	22			67970	67410	3	28		
4/9/01	1415					0.0472	8.03					45.4	0.0068					48.8	0.002
4/9/01	1550	408240	405962	59	54			28010	27978	3	26			68010	67450	3	28		
4/9/01	1605																		
4/9/01	1607																		
4/9/01	1610																		
4/9/01	1620																		
4/9/01	1630																		
4/9/01	1710	409030	406752	66	57			28200	28168	3	36			68220	67660	3	38		
4/9/01	1720									0						0			
4/11/01	1330	409150	406872					28230	28198					68240	67680				
4/11/01	1445																		
4/11/01	1615	410650	408372	58	52			28660	28628	2.5	18			68710	68150	3	24		
4/11/01	1640					0.0046	8.11					48.8	0.0008					49.4	0.0007
4/11/01	1720																		
4/11/01	1723																		
4/11/01	1735	411710	409432	59	52			28850	28818	2.5	19			68930	68370	3	23		
4/11/01	1745																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
4/12/01	700	421170	418892	58	52			30970	30938	2.5	20			71350	70790	3	25		
4/12/01	820																		
4/12/01	1130									0						0			
4/12/01	1445																		
4/12/01	1615					0.0025	8.83					53.5	0.002					54.6	0.0025
4/12/01	1620																		
4/12/01	1630	425390	423112	58	52			31920	31888	2.5	19			72430	71870	3	25		
4/12/01	1635																		
4/12/01	1655																		
4/12/01	1700																		
4/12/01	1703																		
4/12/01	1705	425810	423532	58	52			32020	31988	2.5	19			72540	71980	3	25		
4/12/01	1715																		
4/13/01	1235																		
4/13/01	1245																		
4/13/01	1257	439220	436942	58	52			35040	35008	2.7	54/20			76000	75440	2.8	26		
4/13/01	1330					0.035	8.88					53.1	0.004					54.7	0.0018
4/13/01	1340																		
4/16/01	915	485060	482782	58	53			45350	45318	2.5	22			87890	87330	2.9	26		
4/16/01	920																		
4/16/01	920																		
4/16/01	923																		
4/16/01	935																		
4/16/01	1000																		
4/16/01	1120	485810	483532					45510	45478					88090	87530				
4/16/01	1220	486370	484092	58	52			45650	45618	2.5	22			88230	87670	2.9	24		
4/16/01	1500					0.001	9.01					46.6	0.23					48.1	0.188
4/16/01	1512																		
4/16/01	1530	488510	486232	57	52			46120	46088	2.5	20			88790	88230	2.9	24		
4/16/01	1535																		
4/16/01	1538																		
4/16/01	1605																		
4/16/01	1638	489260	486982	57	52			46290	46258	2.5	20			88980	88420	2.9	23		
4/16/01	1645																		
4/17/01	1155	502370	500092	58	52			49180	49148	2.5	22			92370	91810	3	24		
4/17/01	1205																		
4/17/01	1208																		
4/17/01	1212																		
4/17/01	1215																		
4/17/01	1230																		
4/17/01	1505					0.0035	8.8					45.7	0.495					46.2	0.412
4/17/01	1512																		
4/17/01	1525	504860	502382	58	52			49690	49658	2.5	22			92970	92410	3	24		
4/17/01	1535																		
4/17/01	1537																		
4/17/01	1548																		
4/17/01	1652	505600	503322	58	52			49900	49868	2.5	22			93210	92650	3	24		
4/19/01	1100	553880	551602	58	52			56140	56108	2.5	22			100550	99990	2.9	25		
4/19/01	1107																		
4/19/01	1109																		
4/19/01	1115																		
4/19/01	1118																		
4/19/01	1205																		
4/19/01	1205	534560	532282	78	62			56290	56258	2.5	23			100740	100180	3	27		
4/19/01	1205																		
4/19/01	1325																		
4/19/01	1456	536170	533892	79	61			57020	56988	2.5	21			101600	101040	3	24		
4/19/01	1505					0.0049	8.57					43.4	1.18					44.6	1.08
4/19/01	1510																		
4/19/01	1512																		
4/19/01	1515																		
4/19/01	1520																		
4/19/01	1530	535690	533412	78	62			56810	56778	2.7	21			101340	100780	3	25		
4/20/01	852	541650	539372	79	62			59480	59448	2.6	21			104570	104010	3	26		
4/20/01	920																		
4/20/01	921																		
4/20/01	940																		
4/20/01	942																		
4/20/01	1030																		
4/20/01	1205	542740	540462	79	62			59970	59938	2.6	22			105160	104600	3	26		
4/20/01	1315	543130	540852	80	62			60150	60118	2.6	22			105370	104810	3	26		
4/20/01	1320																		
4/20/01	1323																		
4/20/01	1335																		
4/20/01	1337																		
4/20/01	1505					0.0046	8.71					41.4	1.54					42.9	1.61
4/20/01	1507	543770	541492	80	62			60440	60408	2.6	22			105710	105150	3	26		
4/20/01	1508																		
4/20/01	1525																		
4/20/01	1532																		
4/20/01	1534																		
4/20/01	1550	544040	541762	80	62			60660	60628	2.6	22			105870	105310	3	26		
4/23/01	1025	566820	564542	78	62			70780	70748	2.5	23			118160	117600	3	27		
4/23/01	1050																		
4/23/01	1055																		
4/23/01	1120																		
4/23/01	1130																		
4/23/01	1150																		
4/23/01	1330	567870	565592	78	62			71250	71218	2.5	23			118720	118160	3	27		
4/23/01	1338																		
4/23/01	1340																		
4/23/01	1355																		
4/23/01	1630					0.0051	8.34					39.5	2.45					40.6	3.31
4/23/01	1710	569000	566722	79	62			71760	71728	2.5	22			119320	118760	3	26		
4/23/01	1712																		
4/23/01	1714																		
4/23/01	1735																		
4/23/01	1742																		
4/24/01	820	574210	571932	79	62			74100	74068	2.5	22			122120	121560	3	27		
4/24/01	842																		
4/24/01	844																		
4/24/01	850																		
4/24/01	910																		
4/24/01	1300																		
4/24/01	1302																		
4/24/01	1310																		
4/24/01	1312																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
4/24/01	1445	576390	574112	79	62			75060	75028	2.5	22			123270	122710	3	27		
4/24/01	1500									1.5						2			
4/24/01	1515					0.0659	7.98					41.7	2.23					40.7	3.15
4/24/01	1530																		
4/24/01	1554	576790	574512	80	61			75260	75228	1.5	14			123440	122880	2	18		
4/24/01	1600																		
4/24/01	1606																		
4/24/01	1607																		
4/24/01	1705																		
4/24/01	1720	577260	574982	80	62			75330	75298	1.5	14			123600	123040	2	18		
4/25/01	1130																		
4/25/01	1210																		
4/25/01	1213	583640	581362	71	58			77020	76988	1	11			125900	125340	1	12		
4/25/01	1355																		
4/25/01	1358																		
4/25/01	1402																		
4/25/01	1403																		
4/25/01	1410																		
4/25/01	1435	584730	582452	71	59			77160	77128	1	12			126010	125450	1	12		
4/25/01	1500					0.0095	8.92					45.4	1.1					45.1	1.22
4/25/01	1550																		
4/25/01	1558																		
4/25/01	1559																		
4/25/01	1605																		
4/25/01	1607																		
4/25/01	1610																		
4/25/01	1620	585540	583262	71	59			77260	77228	1	13			126090	125530	1	14		
4/26/01	825	592700	590422	73	60			78130	78098	1	20			126840	126280	1	20		
4/26/01	900	592860	590582	78	58			78150	78118	1	12			126860	126300	1	12		
4/26/01	923																		
4/26/01	944																		
4/26/01	946																		
4/26/01	955																		
4/26/01	1002																		
4/26/01	1012	593440	591162	70	59			78210	78178	1	10			126930	126370	1	12		
4/26/01	1500					0.0148	8.18					41.6	0.454					41.8	0.508
4/26/01	1535	593530	591252					78220	78188					126940	126380				
4/26/01	1600	593670	591392	72	58			78240	78208	1	9			126960	126400	1	12		
4/26/01	1617																		
4/26/01	1625																		
4/26/01	1633																		
4/26/01	1635																		
4/26/01	1640																		
4/26/01	1712																		
4/26/01	1714	594250	591972	70	58			78310	78278	1	11			127030	126470	1	10		
4/27/01	900																		
4/27/01	1200					0.0078	8.35					45.8	1.19					48	1.2
4/27/01	1215																		
4/27/01	1220																		
4/27/01	1250	603720	601442	70	58			79500	79468	1	12			128130	127570	1	12		
4/27/01	1335																		
4/30/01	1210	635640	633362	72	59			83650	83618	1	9			131950	131390	1	12		
4/30/01	1230																		
4/30/01	1233																		
4/30/01	1242																		
4/30/01	1335	636320	634042	70	58			83740	83708	1	9			132030	131470	1	10		
4/30/01	1345																		
4/30/01	1450	636920	634642	70	58			83820	83788	1	9					1	10		
4/30/01	1508					0.102	8.53					40.3	2.34					47.8	1.51
4/30/01	1518																		
4/30/01	1525																		
4/30/01	1530																		
4/30/01	1550																		
4/30/01	1610																		
4/30/01	1615	637630	635352	70	58			83910	83878	1	9			132180	131620	1	10		
5/1/01	1125	645490	643212	70	58			84920	84888	1	10			133080	132520	1	12		
5/1/01	1135																		
5/1/01	1150																		
5/1/01	1153																		
5/1/01	1200																		
5/1/01	1225																		
5/1/01	1230	645940	643662	70	58			84980	84948	1	10			133130	132570	1	10		
5/1/01	1305											38.2	2.24						
5/1/01	1445	647020	644742	70	58			85120	85088	1	10			133260	132700	1	10		
5/1/01	1500																		
5/1/01	1504																		
5/1/01	1510																		
5/1/01	1512																		
5/1/01	1513					0.0123	8.45											45.6	1.38
5/1/01	1600	647620	645342	70	58			85190	85158	1	10			133330	132770	1	10		
5/2/01	800							86040	86008	0				134080	133520	0			
5/2/01	1130	655590	653312					86230	86198	1	9			134240	133680	1	10		
5/2/01	1148																		
5/2/01	1150																		
5/2/01	1155																		
5/2/01	1207																		
5/2/01	1215											37.6	2.5						
5/2/01	1220	656000	653722					86280	86248	0	0			134290	133730	2	17		
5/2/01	1512	657310	655032											134600	134040	2	17		
5/2/01	1513																		
5/2/01	1518																		
5/2/01	1520																		
5/2/01	1536					0.0101	8.72											43.2	2.93
5/2/01	1550																		
5/2/01	1640																		
5/2/01	1645	658070	655792											134790	134230	2	17		
5/3/01	840	665590	663312	70	60									136600	136040	2	17		
5/3/01	852																		
5/3/01	854																		
5/3/01	910																		
5/3/01	912																		
5/3/01	1003																	39.3	3.21
5/3/01	1020																		
5/3/01	1245	667500	665222	70	60									137040	136480	2	17		
5/3/01	1424					0.0218	8.23											39.7	3.26
5/3/01	1455																		
5/3/01	1510																		

Date	Time	Well 854						Column - 1						Column - 2					
		Totalizer	Vol	Pressure	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V
		(gls)	(gls)	up (psi)	dn (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)
5/3/01	1512																		
5/3/01	1600	669000	666722	70	60									137400	136840	2	17		
5/4/01	1020	677470	675192	71	60									139380	138820	2	17		
5/4/01	1025																		
5/4/01	1030																		
5/4/01	1115	677900	675622	74	61			86280	86248	1	12			139470	138910	1	12		
5/4/01	1445					0.039	8.05					24.5	0.0908					24.5	0.0891
5/4/01	1520	679800	677522	71	59			86510	86478	1	13			139700	139140	1	12		
5/4/01	1520																		
5/4/01	1540																		
5/4/01	1542																		
5/4/01	1550																		
5/4/01	1610																		
5/4/01	1620	680240	677962	71	59			86570	86538	1	12			139760	139200	1	11		
5/7/01	1257	711500	709222	72	59			90420	90388	1	12			143480	142920	1	14		
5/7/01	1305																		
5/7/01	1315																		
5/7/01	1318																		
5/7/01	1340																		
5/7/01	1430	712260	709982	71	59			90510	90478	1	11			143570	143010	1	12		
5/7/01	1510																		
5/7/01	1512																		
5/7/01	1515					0.006	8.12					46.5	0.794					44.9	1.77
5/7/01	1535																		
5/7/01	1548																		
5/7/01	1600	712950	710672	71	59			90600	90568	1	13			143650	143090	1	15		
5/8/01	822	720660	718382	71	59			91530	91498	1	11			144530	143970	1	12		
5/8/01	845																		
5/8/01	907																		
5/8/01	910																		
5/8/01	918																		
5/8/01	920																		
5/8/01	1050	721810	719532	70	59			91680	91648	1	12			144660	144100	1	12		
5/8/01	1455					0.0034	7.8					42.3	1.02					42.7	1.74
5/8/01	1515	723900	721622	70	59			91960	91928	1	10			144910	144350	1	11		
5/8/01	1520																		
5/8/01	1522																		
5/8/01	1540																		
5/8/01	1545																		
5/8/01	1625	724430	722152	70	59			92030	91998	1	10			144970	144410	1	12		
5/9/01	1015	732800	730522	71	59			93140	93108	1	11			145930	145370	1	12		
5/9/01	1033																		
5/9/01	1042											46.8	1.27					46.8	2.03
5/9/01	1045																		
5/9/01	1050	733090	730812	76	61			93170	93138	1				145970	145410				
5/9/01	1051																		
5/9/01	1102																		
5/9/01	1106																		
5/9/01	1420																		
5/9/01	1430	734400	732122	76	61														
5/9/01	1545	734830	732552	78	62														
5/9/01	1550					0.0188	8.71												
5/9/01	1640																		
5/9/01	1645																		
5/9/01	1855	735250	732972	78	60														
5/9/01	1700																		
5/9/01	1700																		
5/10/01	815	740890	738612	76	61														
5/10/01	835																		
5/10/01	841																		
5/10/01	858																		
5/10/01	935																		
5/10/01	1210	742350	740072	76	61														
5/10/01	1245			72	60			93170	93138					145970	145410				
5/10/01	1355	743060	740782	72	60			93280	93248	1	11			146000	145440	1	14		
5/10/01	1450																		
5/10/01	1504																		
5/10/01	1510																		
5/10/01	1510					0.008	8.71					21.4	0.0109					9.63	0.491
5/10/01	1513																		
5/10/01	1550																		
5/10/01	1600	743890	741612	70	58			93390	93358	1	12			146100	145540	1	14		
5/11/01	1010																		
5/11/01	1040																		
5/11/01	1052	752860	750582	70	59			94530	94498	1	10			147270	146710	1	12		
5/11/01	1215					0.0067	8.79					64.4	0.0203					64.4	0.0535
5/11/01	1245																		
5/11/01	1250																		
5/14/01	1100	786940	784662	70	59			98860	98828	1	12			151710	151150	1	13		
5/14/01	1115																		
5/14/01	1130																		
5/14/01	1135																		
5/14/01	1145	787300	785022	71	59			98910	98878	2.8	26			151760	151200	3	27		
5/14/01	1210																		
5/14/01	1222																		
5/14/01	1341	788150	785872	72	60			99210	99178	2.8	25			152070	151510	3	27		
5/14/01	1536	789000	786722	72	60			99510	99478	2.8	24			152390	151830	3	26		
5/14/01	1540					0.0062	8.66					58.6	0.058					54.5	0.0127
5/14/01	1545																		
5/14/01	1550																		
5/14/01	1555																		
5/14/01	1630	789400	787122	72	60			99850	99818	2.8	23			152540	151980	3	25		
5/15/01	825	796310	794032	72	60			102090	102058	2.7	25			155140	154580	3	27		
5/15/01	840																		
5/15/01	846																		
5/15/01	855																		
5/15/01	943	796860	794582					102290	102258					155350	154790				
5/21/01	1400	796860	794582	58	53			102290	102258	3	28			155350	154790	3	33		
5/21/01	1500																		
5/21/01	1504																		
5/21/01	1506																		
5/21/01	1518																		
5/21/01	1528	798790	796512	57	52			102830	102798	3	30			155850	155290	3	32		
5/21/01	1540					0.0381	8.21					43.3	0.0103					41.4	0.0049
5/21/01	1620	799410	797132	54	50			102990	102958	3	29			156000	155440	3	33		
5/22/01	818	810420	808142	54	50			106020	105988	3	30			158800	158240	3	33		
5/22/01	838																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V. (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
5/22/01	902																		
5/22/01	906																		
5/22/01	925																		
5/22/01	1010																		
5/22/01	1435																		
5/22/01	1445																		
5/22/01	1500					0.0056	8.36					48.7	0.0061					48.1	0.0094
5/22/01	1515																		
5/22/01	1550	815620	813342	54	50			107400	107368	3	30			160080	159520	3	33		
5/23/01	855																		
5/23/01	905																		
5/23/01	1030																		
5/23/01	1320																		
5/23/01	1322																		
5/23/01	1327																		
5/23/01	1435																		
5/23/01	1445					0.0071	8.08					45.5	0.0531					44.8	0.0822
5/23/01	1515																		
5/23/01	1530																		
5/23/01	1628																		
5/23/01	1640	831110	828832	54	48			111470	111438	3	29			163780	163220	3	32		
5/24/01	851																		
5/24/01	901																		
5/24/01	1430																		
5/24/01	1436																		
5/24/01	1457																		
5/24/01	1520					0.0055	8.16					43.3	0.183					43.3	0.226
5/24/01	1615																		
5/24/01	1618	846990	844712	54	48			115620	115588	3	28			167560	167000	3	32		
5/24/01	1621																		
5/25/01	807	858010	855732	53	50			118460	118428	3	30			170170	169610	3	33		
5/25/01	824																		
5/25/01	830																		
5/25/01	918	858730	856452	53	49			118650	118618	3	30			170340	169780	3	33		
5/25/01	1023																		
5/25/01	1030	859570	857292	70	62			118870	118838	3	32			170540	169980	3	36		
5/25/01	1352																		
5/25/01	1356																		
5/25/01	1405	862180	859902	72	62			119540	119508	3	30			171170	170610	3	35		
5/25/01	1445																		
5/25/01	1450					0.0143	8.69					48.2	0.469					40.7	0.448
5/25/01	1503																		
5/25/01	1515																		
5/25/01	1527	863120	860842	72	61			119780	119748	3	30			171400	170840	3	35		
5/26/01	803	874860	872582	72	62			122810	122778	3	32			174310	173750	3	35		
5/26/01	821																		
5/26/01	828																		
5/26/01	903	875510	873232	70	62			122980	122948	3	31			174470	173910	3	35		
5/26/01	1245																		
5/26/01	1302																		
5/26/01	1305					0.0166	8.51					43	0.375					43	0.446
5/26/01	1308	877170	874892	72	63			123420	123388	3	32			174890	174330	3	35		
5/27/01	1002	891480	889202	72	62			127270	127238	3	32			178550	177990	3	35		
5/27/01	1030																		
5/27/01	1035																		
5/27/01	1105					0.0219	8.61					40.2	1.15					40.5	1.12
5/27/01	1128	892390	890112	70	62			127510	127478	3	31			178770	178210	3	35		
5/29/01	950	920710	918432	70	62			134800	134768	3	32			185730	185170	3	34		
5/29/01	1115																		
5/29/01	1123																		
5/29/01	1145																		
5/29/01	1210	922310	920032					135170	135138	3				186130	185570	3			
5/29/01	1445	922310	920032					135170	135138	3	33			186130	185570	3	33		
5/29/01	1530																		
5/29/01	1540					0.0357	8.62					39.1	1.23					37.8	1.62
5/29/01	1600																		
5/29/01	1630																		
5/29/01	1638																		
5/29/01	1645																		
5/29/01	1647																		
5/29/01	1655	923920	921642	70	60			135590	135558	3	32			186540	185980	3	33		
5/29/01	1710																		
5/30/01	803	935070	932792	74	64			138500	138468	3	42			189270	188710	3	43		
5/30/01	820																		
5/30/01	822																		
5/30/01	914	935510	933232	64	58			138620	138588	3	33			189370	188810	3	33		
5/30/01	1005																		
5/30/01	1045																		
5/30/01	1108																		
5/30/01	1310																		
5/30/01	1410					0.0267	8.09					30.6	2.93					30.9	2.83
5/30/01	1500																		
5/30/01	1507																		
5/30/01	1545																		
5/30/01	1612	940530	938252	70	70			140100	140068	3	32			190730	190170	3	32		
5/30/01	1652																		
5/30/01	1700	940960	938682	73	73			140230	140198	3	32			190860	190300	3	33		
5/31/01	800	950310	948032	75	64			143170	143138	3	31			193620	193060	3	32		
5/31/01	824																		
5/31/01	827																		
5/31/01	858																		
5/31/01	921																		
5/31/01	1050	952100	949822	68	60			143730	143698	3	30			194150	193590	3	32		
5/31/01	1200																		
5/31/01	1200	952900	950622	65	58			143940	143908	3.3	31			194350	193790	3.3	33		
5/31/01	1207																		
5/31/01	1228																		
5/31/01	1350																		
5/31/01	1405					0.0053	9.59					37.8	3.58					37.3	3.59
5/31/01	1430	954840	952562	66	58			144430	144398	3.3	30			194820	194260	3.3	33		
5/31/01	1615																		
5/31/01	1618																		
5/31/01	1640	956490	954212	66	58			144840	144808	3.3	30			195220	194660	3.3	33		
5/31/01	1732																		
6/1/01	804	968180	965902	66	60			147790	147758	3.3	30			198070	197510	3.3	32		
6/1/01	815	968320	966042	67	60			147830	147798	3.3	30			198100	197540	3.3	32		
6/1/01	951																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
6/1/01	956																		
6/1/01	1035																		
6/1/01	1040																		
6/1/01	1200	971090	968812	66	58			148550	148518	3.3	31			198800	198240	3.3	34		
6/1/01	1410	972680	970402	66	58			148960	148928	3.3	30			199200	198640	3.3	34		
6/1/01	1515					0.0016	9.44					38.4	3.86					36.4	3.92
6/1/01	1525																		
6/1/01	1540																		
6/1/01	1615	974110	971832	66	58			149340	149308	3.3	30			199580	199020	3.3	32		
6/1/01	1617																		
6/1/01	1650																		
6/2/01	820	974110	971832	66	60			152470	152438	3.3	31			202700	202140	3.3	33		
6/2/01	835																		
6/2/01	855																		
6/2/01	905																		
6/2/01	1140	974110	971832	66	59			153120	153088	3.3	31			203320	202760	3.3	32		
6/2/01	1320																		
6/2/01	1325																		
6/2/01	1330					0.0037	9.63					36.4	4.12					37.6	4.25
6/2/01	1343	974110	971832	66	59			153510	153478	3.3	31			203700	203140	3.3	32		
6/3/01	805	1003420	1001142	66	60			157070	157038	3.3	30			207110	206550	3.3	32		
6/3/01	820																		
6/3/01	828																		
6/3/01	920	1004330	1002052	66	60			157300	157268	3.3	30			207340	206780	3.3	32		
6/3/01	921					0.0099	9.8					38.2	4.42					37.8	4.35
6/3/01	945																		
6/3/01	955																		
6/3/01	1025	1005180	1002902	66	59			157520	157488	3.3	30			207550	206990	3.3	32		
6/4/01	1100	1022740	1020462	67	60			162070	162038	3.3	30			211930	211370	3.3	32		
6/4/01	1120	1022970	1020692	81	66			162130	162098	1.1	12			211990	211430	1.1	12		
6/4/01	1130																		
6/4/01	1200	1023320	1021042	74	64			162170	162138	2.2	21			212030	211470	2.2	23		
6/4/01	1201					0.0026	9.52					43.7	3.22					42	3.29
6/4/01	1235																		
6/4/01	1308																		
6/4/01	1312	1024030	1021752	74	64			162320	162288	2.2	21			212170	211610	2.2	22		
6/4/01	1420																		
6/4/01	1525	1025370	1023092	74	64			162590	162558	2.2	20			212430	211870	2.2	22		
6/4/01	1535																		
6/4/01	1540																		
6/4/01	1550																		
6/4/01	1601																		
6/4/01	1612	1025830	1023552	74	64			162880	162848	2.2	20			212530	211970	2.2	22		
6/5/01	810	1034320	1032042					164410	164378					214210	213650				
6/5/01	845	1034320	1032042					164410	164378	2.2	22			214210	213650	2.2	24		
6/5/01	901																		
6/5/01	910																		
6/5/01	920																		
6/5/01	1133																		
6/5/01	1138																		
6/5/01	1211	1036460	1034182					164860	164828	2	21			214640	214080	2.2	23		
6/5/01	1245					0.0017	9.32					42.8	2.88					41.8	3.03
6/5/01	1415	1037720	1035442					165120	165088	2.2	20			214880	214320	2.2	23		
6/5/01	1520																		
6/5/01	1603																		
6/5/01	1605																		
6/5/01	1613																		
6/5/01	1620	1038950	1036672					165380	165348	2.2	20			215130	214570	2.2	22		
6/6/01	827	1048480	1046202	75	64			167370	167338	2.2	21			217020	216460	2.2	23		
6/6/01	833																		
6/6/01	838																		
6/6/01	907	1048910	1046632	84	66			167460	167428	2.2				217110	216550	2.2	24		
6/6/01	918																		
6/6/01	923																		
6/6/01	927																		
6/6/01	1223	1050500	1048222	83	66									217500	216940	2.2	24		
6/6/01	1355	1051250	1048972	83	66									217690	217130	2.2	23		
6/6/01	1400					0.0027	9.47											41.6	3.4
6/6/01	1535	1052040	1049762	80	66			167460	167428	1				217890	217330	2.2	23		
6/6/01	1605																		
6/6/01	1610																		
6/6/01	1618																		
6/6/01	1631																		
6/6/01	1645																		
6/7/01	906																		
6/7/01	915	1061600	1059322	78	65			168520	168488	1.1	17			220010	219450	2.2	24		
6/7/01	918																		
6/7/01	936																		
6/7/01	940	1061800	1059522	78	66			168540	168508	3.3	45			220050	219490	2.2			
6/7/01	945																		
6/7/01	954																		
6/7/01	1155	1062950	1060672	86	67			168930	168898	2.1	28								
6/7/01	1247																		
6/7/01	1251																		
6/7/01	1300					0.0065	9.35					65.6	0.0194						
6/7/01	1303																		
6/7/01	1420	1063960	1061682	86	66			169210	169178	2.1	28								
6/7/01	1435																		
6/7/01	1540	1064520	1062242	86	66			169370	169338	2.1	27			220050	219490	0.5			
6/7/01	1634																		
6/7/01	1645	1065010	1062732	85	66			169500	169468	2.1	27			220080	219520	0.5	7		
6/7/01	1702																		
6/8/01	848	1072040	1069762	85	67			171360	171328	2.1	29			220470	219910	0.5			
6/8/01	917																		
6/8/01	922																		
6/8/01	1000	1072650	1070372					171520	171488	3.1				220560	220000	3.1			
6/8/01	1031																		
6/8/01	1330					0.0034	9.69					64.1	0.007					69.1	0.0056
6/8/01	1405	1075610	1073332	130	71			172280	172248	3.1	45			221280	220720	3.1			
6/8/01	1415																		
6/8/01	1440																		
6/8/01	1445	1075980	1073702	130	71			172376	172344	3.1	45			221370	220810	3.1			
6/9/01	1312																		
6/9/01	1320	1091750	1089472	132	71			176410	176378	3.1	46			225216	224656	3.2			
6/9/01	1323																		
6/9/01	1330																		
6/9/01	1350					0.0054	9.43					57.8	0.0146					65.4	0.0049

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer	Vol	Pressure	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V
		(gls)	(gls)	up (psi)	dn (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)
6/9/01	1405																		
6/9/01	1430	1092560	1090282	132	71			176610	176578	3.1	46			225410	224850	3.2			
6/10/01	803	1104490	1102212	133	72			179620	179588	3.1	51			228290	227730	3.1	49		
6/10/01	830																		
6/10/01	836																		
6/10/01	902																		
6/10/01	920																		
6/10/01	956	1105810	1103532	132	72			179960	179928	3.1	51			228620	228060	3.1	48		
6/10/01	1247	1107800	1105522	132	72			180460	180428	3.1	50			229130	228570	3.2	48		
6/10/01	1250																		
6/10/01	1257																		
6/10/01	1320					0.0033	9.16					57.2	0.0026					60.1	0.0048
6/10/01	1325	1108230	1105952	132	71			180570	180538	3.1	50			229230	228670	3.2	48		
6/11/01	1040	1122930	1120652	134	72			184270	184238	2.9	53			232910	232350	3	50		
6/11/01	1058																		
6/11/01	1110																		
6/11/01	1116																		
6/11/01	1313	1124680	1122402	135	72			184710	184678	2.9	51			233350	232790	3.2	48		
6/11/01	1425					0.0149	9.47					58.1	0.0038					60.3	0.027
6/11/01	1520																		
6/11/01	1540																		
6/11/01	1545																		
6/11/01	1620	1126810	1124532	135	72			185240	185208	2.9	51			233870	233310	3.2	48		
6/12/01	930	1138500	1136222	136	73			188150	188118	3	53			236780	236220	3	50		
6/12/01	1015																		
6/12/01	1020																		
6/12/01	1025																		
6/12/01	1117	1139670	1137392	138	73			188430	188398	2.9	52			237070	236510	3.1	50		
6/12/01	1413	1141660	1139382	137	72			188920	188888	2.9	52			237560	237000	3	50		
6/12/01	1420					0.001	9.46					56.3	0.0006					57.3	0.0143
6/12/01	1437																		
6/12/01	1442																		
6/12/01	1448																		
6/12/01	1510																		
6/12/01	1600																		
6/12/01	1612																		
6/12/01	1622	1143100	1140822	137	72			189280	189248	2.9	52			237910	237350	3	50		
6/13/01	810	1153650	1151372	137	73			191870	191838	2.8				240500	239940	2.9			
6/13/01	852	1153690	1151412	136	72			191880	191848	2.8	55			240510	239950	2.9	55		
6/13/01	902																		
6/13/01	904																		
6/13/01	1100	1155110	1152832	137	73			192230	192198	2.9	54			240850	240290	3	54		
6/13/01	1226																		
6/13/01	1240																		
6/13/01	1308	1157150	1154872	136	73			192730	192698	2.9	54			241350	240790	3	54		
6/13/01	1400					0.0061	9.14					53.3	0.0019					53.5	0.0369
6/13/01	1520																		
6/13/01	1531																		
6/13/01	1552																		
6/13/01	1555	1158330	1156052	136	73			193030	192998	2.9	56			241640	241080	2.9	56		
6/14/01	815	1169160	1166882	136	73			195770	195738	2.9	57			244280	243720	2.8	52		
6/14/01	835																		
6/14/01	837																		
6/14/01	958																		
6/14/01	1125	1171190	1168912	135	73			196280	196248	2.8	56			244700	244140	2.8	52		
6/14/01	1222																		
6/14/01	1224																		
6/14/01	1320	1172440	1170162	135	73			196590	196558	2.8	56			245000	244440	2.8	52		
6/14/01	1420	1173110	1170832	135	73			196760	196728	2.8	56			245160	244600	2.8	52		
6/14/01	1425					0.009	9.16					52.3	0.003					49.2	0.0752
6/14/01	1610																		
6/14/01	1616																		
6/14/01	1628	1174450	1172172	135	72			197090	197058	2.8	55			245470	244910	2.8	52		
6/15/01	825	1184950	1182672	136	73			199720	199688	2.8	57			247940	247380	2.8	53		
6/15/01	840																		
6/15/01	845																		
6/15/01	855																		
6/15/01	918																		
6/15/01	920	1185550	1183272	142	75			199870	199838	2.9	58			248090	247530	2.9	54		
6/15/01	926																		
6/15/01	957																		
6/15/01	1145	1186880	1184602	140	74			200270	200238	2.9	58			248460	247900	2.9	53		
6/15/01	1210																		
6/15/01	1214																		
6/15/01	1245																		
6/15/01	1303	1187600	1185322	140	74			200490	200458	2.9	57			248670	248110	2.9	53		
6/15/01	1455					0.0157	8.3					45.2	0.00149					43.9	0.167
6/15/01	1500	1188680	1186402	140	74			200820	200788	2.9	57			248970	248410	2.9	53		
6/15/01	1511																		
6/15/01	1522																		
6/15/01	1542																		
6/15/01	1550	1189160	1186882	140	73			200960	200928	2.9	57			249110	248550	2.9	53		
6/16/01	820	1193530	1191252	142	74			202230	202198	2.7	60			250330	249770	2.6	58		
6/19/01	1300	1194060	1191782	149	75			202400	202368	2.6	56			250470	249910	2.6	52		
6/19/01	1310																		
6/19/01	1330																		
6/19/01	1420	1194880	1192602	149	75			202640	202608	2.6	55			250690	250130	2.7	50		
6/19/01	1435					0.0113	8.19					35.3	0.0007					34.2	0.0184
6/19/01	1600																		
6/19/01	1608																		
6/19/01	1621																		
6/19/01	1645	1196170	1193892	149	75			203010	202978	2.6	55			251040	250480	2.7	50		
6/19/01	1650																		
6/20/01	830	1204490	1202212	145	76			205390	205358	2.6	56			253290	252730	2.6	52		
6/20/01	850																		
6/20/01	900																		
6/20/01	905																		
6/20/01	1008																		
6/20/01	1110	1205810	1203532	145	76			205790	205758	2.6	56			253660	253100	2.6	51		
6/20/01	1440					0.0175	8.31					42.5	0.00453					41.4	0.135
6/20/01	1512	1207980	1205702	145	76			206390	206358	2.6	55			254230	253670	2.6	50		
6/20/01	1515																		
6/20/01	1520																		
6/20/01	1535																		
6/20/01	1545	1208270	1205992	145	86			206470	206438	3.2	67			254310	253750	3.3	64		
6/20/01	1600																		
6/20/01	1608																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
6/20/01	1620																		
6/20/01	1630																		
6/20/01	1638	1208800	1206522	145	86			206630	206598	3.2	67			254460	253900	3.3	64		
6/21/01	1004	1219340	1217062	146	85			209730	209698	3	68			257580	257020	3.4	64		
6/21/01	1020																		
6/21/01	1210																		
6/21/01	1445	1222170	1219892	145	84			210560	210528	3	65					3.2	62		
6/21/01	1450					0.0386	8.59					41.5	0.153					40.9	0.696
6/21/01	1545																		
6/21/01	1607																		
6/21/01	1615																		
6/21/01	1620																		
6/21/01	1650																		
6/21/01	1702	1223600	1221322	145	84			210950	210918	3	66			258810	258250	3.2	63		
6/22/01	1105	1234960	1232682	146	84			214080	214048	2.9	67			261970	261410	3.1	63		
6/22/01	1142																		
6/22/01	1150																		
6/22/01	1345					0.0059	8.41					40.6	0.635					39.2	1.31
6/22/01	1350	1236660	1234382	146	84			214550	214518	2.9	68			262440	261880	3.1	62		
6/22/01	1415																		
6/22/01	1422																		
6/22/01	1435	1237130	1234852	146	84			214680	214648	2.9	68			262570	262010	3.1	62		
6/23/01	1040	1249490	1247212	146	84			218090	218058	2.9	67			266030	265470	3.1	62		
6/23/01	1109	1249700	1247422	146	84			218140	218108	2.9	67			266080	265520	3.1	62		
6/23/01	1111																		
6/23/01	1117																		
6/23/01	1300	1250730	1248452	146	84			218420	218388	2.9	66			266320	265760	3	61		
6/23/01	1347	1251060	1248782	146	84			218520	218488	2.9	67			266460	265900	3	60		
6/23/01	1420																		
6/23/01	1600	1252390	1250112	146	84			218890	218858	2.9	66			266810	266250	3	61		
6/23/01	1605					0.0182	8.95					40.4	1.17					40.8	1.74
6/23/01	1608																		
6/23/01	1636																		
6/24/01	940	1262920	1260642	147	84			221880	221848	2.8	67			269660	269100	2.9	62		
6/24/01	1000																		
6/24/01	1010																		
6/24/01	1123	1263940	1261662	147	84			222160	222128	2.8	66			269940	269380	3	62		
6/24/01	1244	1264750	1262472	147	84			222390	222358	2.9	66			270160	269600	3	62		
6/24/01	1427																		
6/24/01	1435																		
6/24/01	1439					0.003	8.72					39.1	1.81					39.3	2.33
6/24/01	1440	1265910	1263632	147	84			222710	222678	2.9	66			270480	269920	3	62		
6/25/01	1140	1278550	1276272	146	84			226220	226188	2.9	66			273950	273390	3	62		
6/25/01	1150																		
6/25/01	1205																		
6/25/01	1208																		
6/25/01	1235																		
6/25/01	1310	1279390	1277112	146	84			226450	226418	3	66			274180	273620	3.1	63		
6/25/01	1435					0.0034	8.73					38.2	2.18					35	2.37
6/25/01	1540	1280860	1278582	146	84			226860	226828	2.9	66			274580	274020	3.1	62		
6/25/01	1545	1280910	1278632	146	84			226880	226848	3	66			274600	274040	3.1	62		
6/25/01	1600																		
6/25/01	1625																		
6/25/01	1637																		
6/25/01	1650																		
6/25/01	1717																		
6/25/01	1723	1281820	1279542	148	84			227150	227118	2.9	66			274870	274310	3.1	62		
6/26/01	825	1290390	1288112	148	84			229690	229658	2.9	67			277400	276840	3.1	63		
6/26/01	847																		
6/26/01	852																		
6/26/01	902																		
6/26/01	1035																		
6/26/01	1137	1292200	1289922	148	84			230240	230208	2.9	66			277940	277380	3.1	62		
6/26/01	1450					0.0034	7.99					36.3	2.56					36.9	2.93
6/26/01	1650																		
6/26/01	1701																		
6/26/01	1710																		
6/26/01	1725																		
6/26/01	1734	1295580	1293302	148	84			231260	231228	2.9	66			278960	278400	3.1	62		
6/27/01	820	1303890	1301612	148	84			233790	233758	2.9	67			281450	280890	3	62		
6/27/01	830																		
6/27/01	837																		
6/27/01	1050	1305270	1302992	148	84			234210	234178	2.9	66			281870	281310	3.1	63		
6/27/01	1112																		
6/27/01	1135																		
6/27/01	1315	1306640	1304362	148	84			234630	234598	3	66			282260	281720	3.1	62		
6/27/01	1321																		
6/27/01	1325																		
6/27/01	1425	1307300	1305022	148	84			234830	234798	3	66			282480	281920	3.1	62		
6/27/01	1430					0.0034	9.06					37.2	3.1					38.5	3.26
6/28/01	805	1317180	1314902	148	84			237870	237838	2.9	67			285460	284900	3	62		
6/28/01	823																		
6/28/01	834																		
6/28/01	900	1317820	1315542	148	84			238010	237978	3	67			285600	285040	3.1	62		
6/28/01	1232																		
6/28/01	1236																		
6/28/01	1237	1319630	1317352	149	84			238640	238608	2.9	68			286210	285650	3.1	62		
6/28/01	1400	1320410	1318132	148	84			238880	238848	2.9	66			286450	285890	3.1	62		
6/28/01	1520																		
6/28/01	1521																		
6/28/01	1522					0.0076	8.9					37.1	3.48					38.4	3.49
6/28/01	1523	1321320	1319042	147	84			239150	239118	2.9	65			286710	286150	3.1	62		
6/29/01	820	1331440	1329162	148	84			242000	241968	2.9	67			289520	288960	3	63		
6/29/01	843																		
6/29/01	846																		
6/29/01	930	1332140	1329862	148	84			242200	242168	2	51			289720	289160	2	43		
6/29/01	1211	1333800	1331522	148	84			242550	242518	2	48			290020	289460	2	42		
6/29/01	1214																		
6/29/01	1217																		
6/29/01	1400	1334900	1332622	148	84			242760	242728	2	48			290210	289650	2	42		
6/29/01	1437																		
6/29/01	1440																		
6/29/01	1450					0.0047	8.99					39	2.63					41.5	2.44
6/29/01	1455	1335480	1333202	148	84			242880	242848	2	48			290320	289760	2	42		
6/30/01	943	1346850	1344572	148	84			245120	245088	2	48			292410	291850	2	42		
6/30/01	1010																		
6/30/01	1013																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
6/30/01	1318	1347940	1345662	145	84			245340	245308	2	40			292620	292060	2	40		
6/30/01	1422	1348590	1346312	148	84			245470	245438	2	40			292730	292170	2	40		
6/30/01	1425					0.0251	8.74					38.8	2.39					40	2.26
6/30/01	1500																		
6/30/01	1503																		
7/1/01	1000	1359950	1357672	148	84			247880	247848	2	42			294910	294350	2	40		
7/1/01	1016																		
7/1/01	1027																		
7/1/01	1055	1360470	1358192	148	84			247990	247958	2.1	41			295010	294450	2	39		
7/1/01	1106																		
7/1/01	1111																		
7/1/01	1120					0.0095	8.94					37.8	3.28					38.9	2.95
7/1/01	1135	1360840	1358562	148	84			248070	248038	2.1	40			295080	294520	2	39		
7/2/01	810	1372220	1369942	148	84			250590	250558	2.1	42			297370	296810	2	40		
7/2/01	835																		
7/2/01	842																		
7/2/01	855																		
7/2/01	1000	1373240	1370962	148	84			250820	250788	2.1	42			297570	297010	2	40		
7/2/01	1213	1374420	1372142	148	84			251090	251058	2.1	41			297810	297250	2	39		
7/2/01	1223																		
7/2/01	1230																		
7/2/01	1239																		
7/2/01	1450	1375860	1373582	149	84			251410	251378	2.1	40			298100	297540	2	39		
7/2/01	1505					0.0091	8.95					37.1	3.37					38.9	3.01
7/2/01	1610	1376590	1374312	143	82			251580	251548	2.1	40			298250	297690	2	38		
7/2/01	1614																		
7/2/01	1620																		
7/2/01	1630	1376790	1374512	146	82			251620	251588	2.1	40			298290	297730	2	38		
7/2/01	1634																		
7/3/01	830	1386570	1384292	146	84			253520	253488	2.1	41			300020	299460	2	40		
7/3/01	845																		
7/3/01	851																		
7/3/01	900																		
7/3/01	1030																		
7/3/01	1040	1387860	1385582	146	84			253780	253748	2.1	40			300250	299690	2	40		
7/3/01	1130	1388360	1386082					253880	253848					300330	299770				
7/3/01	1300	1389020	1386742	147	83			254050	254018	2.1	40			300500	299940	2	38		
7/3/01	1430					0.0132	8.89					37.5	3.39					39.5	3.04
7/3/01	1445	1390090	1387812	147	83			254260	254228	2.1	40			300690	300130	2	38		
7/3/01	1455																		
7/3/01	1504																		
7/3/01	1508																		
7/3/01	1610	1390960	1388682	147	83			254430	254398	2.1	39			300840	300280	2	38		
7/4/01	1138	1402630	1400352	147	84			256710	256678	2	40			302940	302380	1.9	40		
7/4/01	1203																		
7/4/01	1205																		
7/4/01	1215					0.0026	8.77					36.8	3.55					38.5	3.18
7/4/01	1225	1403140	1400862	147	84			256800	256768	2	40			303030	302470	1.9	40		
7/5/01	830	1411520	1409242					258450	258418					304530	303970				
7/5/01	840	1411590	1409312	148	84			258460	258428	1.9	46			304540	303980	1.8	44		
7/5/01	905																		
7/5/01	911																		
7/5/01	916																		
7/5/01	1015																		
7/5/01	1112																		
7/5/01	1115																		
7/5/01	1218	1413600	1411322	140	84			258880	258848	2	40			304920	304360	1.9	39		
7/5/01	1448	1414950	1412672	150	84			259180	259148	2	40			305190	304630	2	39		
7/5/01	1500					0.0011	8.86					37.5	3.55					39	3.17
7/5/01	1610	1415670	1413392	150	84			259340	259308	2	40			305340	304780	2	39		
7/5/01	1715																		
7/5/01	1717																		
7/5/01	1722	1416300	1414022	150	84			259780	259748	2	40			305470	304910	2	39		
7/6/01	758	1423960	1421682	150	84			261200	261168	2	41			307070	306510	1.9	40		
7/6/01	814																		
7/6/01	820																		
7/6/01	841	1424370	1422092	148	84			261290	261258	2	40			307120	306560	2	38		
7/6/01	855																		
7/6/01	1030																		
7/6/01	1048	1425580	1423302	149	84			261540	261508	2	40			307350	306790	2	40		
7/6/01	1108																		
7/6/01	1327																		
7/6/01	1330																		
7/6/01	1350	1427380	1425102	148	84			261900	261868	2	39			307710	307150	2	39		
7/6/01	1405					0.0012	9.07					37.6	3.85					39.8	3.58
7/7/01	855	1438110	1435832	148	84			264120	264088	2	41			309810	309250	2	41		
7/7/01	907																		
7/7/01	913																		
7/7/01	916																		
7/7/01	1134	1439610	1437332	148	84			264430	264398	2	40			310100	309540	2	40		
7/7/01	1140																		
7/7/01	1144																		
7/7/01	1155	1439810	1437532	148	84			264470	264438	2	40			310140	309580	2	40		
7/7/01	1200					0.0026	8.96					37.1	3.98					39.3	3.89
7/8/01	1015	1452290	1450012	149	84			267070	267038	2	41			312600	312040	2	40		
7/8/01	1029																		
7/8/01	1036																		
7/8/01	1050	1452600	1450322	149	84			267140	267108	2	40			312660	312100	2	40		
7/8/01	1115																		
7/8/01	1311	1453750	1451472	148	84			267300	267268	2	40			312890	312330	2	40		
7/8/01	1348																		
7/8/01	1352																		
7/8/01	1358	1454160	1451882	148	84			267460	267428	2	40			312970	312410	2	40		
7/8/01	1410					0.009	9.09					37.9	3.8					40.3	3.49
7/8/01	1420																		
7/9/01	1055	1465710	1463432	149	84			269910	269878	2	42			316280	314720	2	40		
7/9/01	1110																		
7/9/01	1120																		
7/9/01	1129																		
7/9/01	1350	1467300	1465022	149	84			270250	270218	2	40			315600	315040	2	40		
7/9/01	1450					0.0376	8.65					35.3	3.96					37.1	3.55
7/9/01	1500																		
7/9/01	1505																		
7/9/01	1510																		
7/9/01	1515	1468080	1465802	149	84			270420	270388	2	40			315750	315190	2	40		
7/10/01	951	1478200	1475922	149	84			272580	272548	2	42			317790	317230	2	40		
7/10/01	1002																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
7/10/01	1030																		
7/10/01	1035																		
7/10/01	1115	1478950	1476672	149	84			272740	272708	2	41			317940	317380	2	40		
7/10/01	1321	1480110	1477832	144	82			272980	272948	1.9	40			318170	317610	2	39		
7/10/01	1406	1480360	1478082	147	84			273030	272998	2.2	43			318220	317660	2.2	43		
7/10/01	1425					0.0057	8.7					35.8	3.61					37.5	3.31
7/10/01	1505																		
7/10/01	1510																		
7/10/01	1517																		
7/10/01	1550	1481380	1479102	148	84			273250	273218	2.2	43			318430	317870	2.2	43		
7/11/01	1000	1491870	1489592	148	84			275520	275488	2.1	45			320600	320040	2.2	44		
7/11/01	1030																		
7/11/01	1030																		
7/11/01	1033															2.1	44		
7/11/01	1100											33.6	4.26					36.5	4.01
7/11/01	1445					0.0064	8.74												
7/11/01	1609																		
7/11/01	1620																		
7/11/01	1645	1496220	1493942	146	82			275630	275598		18			321410	320850	2.2	43		
7/12/01	930	1502000	1499722					275630	275598					322460	321900				
7/12/01	945	1502000	1499722	146	84			275630	275598		3			322760	322200	2.2	47		
7/12/01	1000																		
7/12/01	1006																		
7/12/01	1045	1502660	1500382	146	83									322590	322030	2.2	44		
7/12/01	1058																		
7/12/01	1400	1504730	1502452	146	83									322970	322410	2.2	44		
7/12/01	1412																		
7/12/01	1420																		
7/12/01	1442					0.0148	9.52											40.2	4.26
7/12/01	1535																		
7/12/01	1546																		
7/12/01	1601	1506020	1503742	146	83									323210	322650	2.2	44		
7/13/01	1000	1513340	1511062											324540	323980				
7/13/01	1008	1513340	1511062	146	84									324540	323980	2.2	45		
7/13/01	1025																		
7/13/01	1037																		
7/13/01	1105																		
7/13/01	1200	1514530	1512252	149	84									324760	324200	1.1	22		
7/13/01	1210																		
7/13/01	1213																		
7/13/01	1217																		
7/13/01	1230																		
7/13/01	1500	1516170	1513892	149	84									324940	324380	1.1	22		
7/13/01	1505					0.0121	9.42											43.3	2.3
7/13/01	1525																		
7/13/01	1535																		
7/13/01	1600	1516710	1514432	150	84									324990	324430	1.1	22		
7/16/01	940	1537910	1535632											327280	326720				
7/16/01	1000	1537910	1535632	150	84									327280	326720	1.2	24		
7/16/01	1040																		
7/16/01	1044																		
7/16/01	1051																		
7/16/01	1145																		
7/16/01	1145	1538820	1536542	150	84									327380	326820	1.2	22		
7/16/01	1200																		
7/16/01	1322	1539670	1537392	150	84									327470	326910	1.2	21		
7/16/01	1325																		
7/16/01	1340																		
7/16/01	1354	1539950	1537672	150	84									327490	326930	1.2	21		
7/16/01	1442					0.0243	9.42											37.7	1.34
7/17/01	835	1549720	1547442	150	84									328530	327970	1.2	22		
7/17/01	900																		
7/17/01	918																		
7/17/01	918	1550080	1547802	152	84									328570	328010	1.2	22		
7/17/01	940																		
7/17/01	947																		
7/17/01	1000																		
7/17/01	1143	1551050	1548772	154	84									328700	328140	1.2	21		
7/17/01	1405	1552020	1549742	154	84									328840	328280	1.2	21		
7/17/01	1435	1552230	1549952	152	84									328860	328300	1.2	21		
7/17/01	1445					0.0504	9.3											44.4	1.71
7/17/01	1517																		
7/17/01	1545																		
7/17/01	1620																		
7/17/01	1630	1553080	1550802	152	84									328970	328410	1.2	21		
7/18/01	825	1560380	1558102	152	84									329850	329290	1.2	23		
7/18/01	839																		
7/18/01	848																		
7/18/01	855																	47.3	1.92
7/18/01	912	1560740	1558462	151	84									329890	329330				
7/18/01	1001																		
7/18/01	1011																		
7/18/01	1150	1562070	1559792	151	84														
7/18/01	1445	1563350	1561072	150	84									329890	329330	0.5	0		
7/18/01	1545					0.0552	9.68												
7/18/01	1600	1564200	1561922	150	84									329910	329350	1.1	21		
7/18/01	1605																		
7/18/01	1615																		
7/18/01	1630	1564480	1562202	150	84									329940	329380	1.1	29		
7/19/01	813	1573030	1570752	150	84									330770	330210	1	26		
7/19/01	832																		
7/19/01	837																		
7/19/01	857																		
7/19/01	900	1573460	1571182	151	84									330810	330250	3.2	68		
7/19/01	910																		
7/19/01	937																		
7/19/01	956																		
7/19/01	1335	1575700	1573422	151	84									331616	331056	3.1	68		
7/19/01	1335					0.0398	9.72											66.9	0.0576
7/19/01	1448	1576310	1574032	151	84									331830	331270	3.1	66		
7/19/01	1625																		
7/19/01	1640																		
7/19/01	1655	1577410	1575132	150	83									332190	331630	3	66		
7/20/01	756	1585300	1583022	150	84									334750	334190	3	68		
7/20/01	815																		
7/20/01	818																		
7/20/01	1027																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
7/20/01	1033																		
7/20/01	1035	1586670	1584392	150	84									335190	334630	3	68		
7/20/01	1045					0.0039	8.98											57.7	0.022
7/21/01	1023	1598750	1596472	151	84									339110	338550	2.9	69		
7/21/01	1035																		
7/21/01	1040																		
7/21/01	1158																		
7/21/01	1204																		
7/21/01	1211	1599640	1597362	151	84									339400	338840	2.9	69		
7/21/01	1217					0.0419	10.1											58.6	0.0123
7/22/01	932	1610000	1607722	152	84									342730	342170	2.8	70		
7/22/01	945																		
7/22/01	949																		
7/22/01	1115	1610810	1608532	152	84									342990	342430	2.8	70		
7/22/01	1126																		
7/22/01	1150					0.0696	10.3											54.2	0.0076
7/22/01	1152	1611100	1608822	152	84									343080	342520	2.8	70		
7/22/01	1157																		
7/23/01	1207	1622410	1620132	152	84									346610	346050	2.5	72		
7/23/01	1226																		
7/23/01	1232																		
7/23/01	1249	1622740	1620462	148	83									346710	346150	2.5	68		
7/23/01	1345																		
7/23/01	1411	1623590	1621312	147	83									346900	346340	2.5	68		
7/23/01	1420					0.0068	10.4											48.4	0.0021
7/23/01	1440																		
7/23/01	1452																		
7/24/01	930	1635200	1632922	148	84									349440	348880	2.3	70		
7/24/01	1012																		
7/24/01	1116	1636180	1633902	148	83									349650	349090	2.25	70		
7/24/01	1139																		
7/24/01	1300	1637200	1634922	148	84									349870	349310	2.2	70		
7/24/01	1310																		
7/24/01	1355																		
7/24/01	1430																		
7/24/01	1430					0.0104	9.38											45.7	0.0012
7/24/01	1545	1638820	1636542	148	83									350220	349660	2.3	70		
7/25/01	830	1648400	1646122	148	84									352250	351690	2.2	72		
7/25/01	858																		
7/25/01	904																		
7/25/01	1035	1649670	1647392	148	83									352510	351950	2.1	70		
7/25/01	1055																		
7/25/01	1100																		
7/25/01	1250	1650950	1648672	148	83									352760	352200	2.1	71		
7/25/01	1424																		
7/25/01	1427																		
7/25/01	1529					0.0045	11.1											48.4	0.134
7/25/01	1530	1652550	1650272	148	83									353090	352530	2.2	70		
7/25/01	1533																		
7/26/01	808	1662120	1659842	148	84									355000	354440	2.1	72		
7/26/01	820																		
7/26/01	827																		
7/26/01	858																		
7/26/01	1007	1663270	1660992	148	84									355220	354660	2	72		
7/26/01	1030	1663380	1661102													1.9			
7/26/01	1040			145	100											2.5	86		
7/26/01	1147																		
7/26/01	1152																		
7/26/01	1223	1664660	1662382	144	100			275630	275596	0.5	0			355510	354950	2.4	85		
7/26/01	1340	1665560	1663282	136	96											2.4	81		
7/26/01	1355																		
7/26/01	1400					0.0089	9.7					1.25	0.127					48.5	0.0247
7/26/01	1405																		
7/26/01	1415																		
7/26/01	1423																		
7/26/01	1430																		
7/26/01	1440																		
7/26/01	1445																		
7/26/01	1602																		
7/26/01	1607	1667480	1665202	138	97			275810	275778					355990	355430	2.4	82		
7/27/01	806	1679950	1677672	140	97			276710	276678	0.9	20			357990	357430	2.1	85		
7/27/01	847																		
7/27/01	850																		
7/27/01	915																		
7/27/01	917	1680810	1678532	136	96			276780	276748	3.3	48			358120	357560	2.1	82		
7/27/01	1110											50.3	0.0026						
7/27/01	1117	1682390	1680112	138	96			276960	276928					358350	357790	2	84		
7/27/01	1128																		
7/27/01	1325					0.0193	9.6											50.2	0.0174
7/27/01	1330	1684150	1681872	140	96									358620	358060	2.2	82		
7/27/01	1515																		
7/27/01	1518																		
7/27/01	1535	1685760	1683482	140	96											2.2	82		
7/28/01	1524	1699500	1697222	136	96									361040	360480	2.1	82		
7/28/01	1540																		
7/28/01	1557																		
7/28/01	1625					0.0064	9.5											39.2	0.0311
7/28/01	1627	1700240	1697962	136	96									361170	360610	2.3	84		
7/28/01	1638																		
7/28/01	1645																		
7/29/01	1108	1712820	1710542	146	98									363480	362920	2	85		
7/29/01	1120																		
7/29/01	1129																		
7/29/01	1148	1713260	1710982	142	97									363560	363000	2.1	84		
7/29/01	1217	1713610	1711332	143	96									363620	363060	2.1	84		
7/29/01	1220					0.008	9.39											48.6	0.0582
7/29/01	1237																		
7/29/01	1240																		
7/30/01	1005	1728910	1726632	143	98			276960	276928					366170	365610	2.1	84		
7/30/01	1025																		
7/30/01	1036																		
7/30/01	1110	1729720	1727442	138	94			276970	276938	1.1	16			366300	365740	2	82		
7/30/01	1352																		
7/30/01	1403																		
7/30/01	1412	1732050	1729772	137	95			277180	277146	1	17			366630	366070	2	82		
7/30/01	1420					0.0057	9.55					27.5	0.0011					48.6	0.0835
7/30/01	1448	1732540	1730262	137	95			277190	277158	1	16			366690	366130	2	82		

Date	Time	Well 554						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
7/31/01	831	1746680	1744402	138	97			278230	278198	1	18			368620	368060	2	84		
7/31/01	850																		
7/31/01	900																		
7/31/01	1110																		
7/31/01	1118	1748860	1746582	138	96			278390	278358	1	18			368920	368360	2	83		
7/31/01	1126																		
7/31/01	1343	1750750	1748472	138	96			278530	278498	1	18			369180	368620	2	84		
7/31/01	1410					0.0297	9.62					40.5	0.191					47.3	0.102
7/31/01	1428																		
7/31/01	1510																		
7/31/01	1650	1753180	1750902	138	96			278700	278668	1	18			369510	368950	2	84		
8/1/01	800	1759170	1756892					279160	279128					370310	369750				
8/1/01	811	1759210	1756932	137	96			279160	279128	1	21			370310	369750	1.7	85		
8/1/01	833																		
8/1/01	841																		
8/1/01	852																		
8/1/01	923																		
8/1/01	1124																		
8/1/01	1125	1761880	1759402	140	96			279350	279318	1	18			370660	370100	1.9	83		
8/1/01	1130																		
8/1/01	1340	1763360	1761082	140	96			279490	279458	1	18			370890	370330	1.9	83		
8/1/01	1340					0.0061	9.64					30.1	0.0011					48.1	0.258
8/1/01	1535																		
8/1/01	1538																		
8/1/01	1545	1764930	1762652	140	96			279610	279578	1	18			371120	370560	1.9	83		
8/2/01	806	1772140	1769862	140	96			280180	280148	0.9	32			372100	371540	1.6	87		
8/2/01	927																		
8/2/01	929																		
8/2/01	938	1773250	1770972	140	96			280270	280238	1	20			372250	371690	1.8	84		
8/2/01	1126																		
8/2/01	1132																		
8/2/01	1153	1774970	1772692	140	96			280400	280368	1	21			372490	371930	1.8	84		
8/2/01	1419					0.0067	9.63					27	0.0086					47.6	0.29
8/2/01	1420	1776820	1774542	140	96			280550	280518	1	22			372730	372170	1.8	86		
8/2/01	1433																		
8/2/01	1436																		
8/2/01	1440	1777156	1774878	140	96			280580	280548	1	19			372780	372220	1.9	82		
8/3/01	807	1790010	1787732	145	98			281630	281598	0.9	38			374530	373970	1.5	88		
8/3/01	912																		
8/3/01	915																		
8/3/01	1120	1792290	1790012	140	96			281830	281798	1.1	23			374820	374260	1.7	85		
8/3/01	1125																		
8/3/01	1130																		
8/3/01	1408	1794420	1792142	140	96			282010	281978	1.1	24			375100	374540	1.7	85		
8/3/01	1415					0.0089	9.6					30.3	0.243					45.5	0.279
8/3/01	1520	1795420	1793142	140	96			282106	282074	1.1	22			375230	374670	1.7	83		
8/3/01	1520																		
8/3/01	1524																		
8/4/01	1004																		
8/4/01	1008																		
8/4/01	1101	1809860	1807582	139	96			283360	283328	1	24			377140	376580	1.7	85		
8/4/01	1105					0.0077	9.28					31.1	0.417					45.3	0.303
8/4/01	1120																		
8/4/01	1122																		
8/4/01	1129	1810210	1807932	140	96			283380	283348	1	24			377180	376620	1.7	85		
8/4/01	1134																		
8/5/01	1028	1825150	1822872	138	96			284660	284648	1	27			379100	378540	1.7	84		
8/5/01	1113																		
8/5/01	1116																		
8/5/01	1140	1826050	1823772	140	96			284750	284718	3.36	76			379220	378660	1.7	85		
8/5/01	1203																		
8/5/01	1207																		
8/5/01	1215																		
8/5/01	1235	1826770	1824492	140	96			284940	284908	3.2	76			379310	378750	1.7	85		
8/5/01	1240					0.0118	9.33					45.2	0.0016					41	0.376
8/5/01	1254	1826970	1824692	142	96			284990	284958	2.2	53			379340	378780	1.7	85		
8/7/01	935	1843110	1840832	144	98			288100	288068	1.1	59			381570	381010	1.7	87		
8/7/01	1015																		
8/7/01	1040																		
8/7/01	1052																		
8/7/01	1120																		
8/7/01	1145	1844500	1842222	146	98			288260	288228	1.1	32			381770	381210	1.7	87		
8/7/01	1350	1845760	1843482	146	97			288400	288368	1.1	31			381970	381410	1.7	86		
8/7/01	1410					0.0041	9.63					17.3	0.0025					40	0.401
8/7/01	1430																		
8/7/01	1440																		
8/7/01	1523																		
8/7/01	1530	1846790	1844512	146	96			288510	288478	1.1	30			382130	381570	1.7	86		
8/8/01	838																		
8/8/01	845																		
8/8/01	903																		
8/8/01	1108	1858850	1856572	148	98			289790	289758	1.1	32			383950	383390	1.7	87		
8/8/01	1342	1860330	1858052	148	98			289950	289918	1.1	32			384170	383610	1.7	87		
8/8/01	1450					0.0125	9.47					26.6	0.318					42.2	0.585
8/8/01	1501																		
8/8/01	1510																		
8/8/01	1525	1861390	1859112	148	92			290060	290028	1.1	31			384330	383770	1.6	87		
8/9/01	834	1871770	1869492	148	98			291150	291118	1.1	34			385880	385320	1.6	88		
8/9/01	945																		
8/9/01	1001																		
8/9/01	1020																		
8/9/01	1127	1873430	1871152	148	98			291330	291298	1.1	34			386120	385560	1.6	88		
8/9/01	1303	1874370	1872092	148	98			291420	291388	1.1	34			386260	385700	1.6	88		
8/9/01	1415					0.0059	9.27					27.4	0.0125					41.2	0.66
8/9/01	1427																		
8/9/01	1430	1875150	1872872	148	98			291510	291478	1.1	31			386370	385810	1.6	87		
8/9/01	1443																		
8/9/01	1536	1875790	1873512	148	98			291570	291538	1.1	31			386470	385910	1.6	88		
8/10/01	806	1885700	1883422	148	98			292600	292568	1.1	34			387930	387370	1.6	88		
8/10/01	822																		
8/10/01	831																		
8/10/01	907																		
8/10/01	948	1886700	1884422	148	98			292710	292678	1.1	34			388080	387520	1.6	88		
8/10/01	1121	1887630	1885352	148	98			292800	292768	1.1	34			388220	387660	1.6	88		
8/10/01	1124																		
8/10/01	1133																		
8/10/01	1412	1889310	1887032	148	98			292980	292948	1.1	36			388460	387900	1.6	88		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
8/10/01	1415					0.014	9.23					30.5	0.0131					38.8	0.775
8/10/01	1426																		
8/10/01	1435																		
8/10/01	1530	1890010	1887732	148	98			293050	293018	1.1	32			388560	388000	1.6	87		
8/13/01	1115	1901070	1898792	148	96			294190	294158	1.1	37			390170	389610	1.6	88		
8/13/01	1145																		
8/13/01	1153																		
8/13/01	1202																		
8/13/01	1212	1901560	1899282	148	98			294250	294218	2.6	84			390250	389690	1.5	88		
8/13/01	1216																		
8/13/01	1241																		
8/13/01	1551	1903670	1901392	148	98			294800	294768	2.6	84			390560	390000	1.5	87		
8/13/01	1619																		
8/13/01	1620					0.0041	9.19					35.5	0.0013					36.1	0.567
8/13/01	1631																		
8/13/01	1705	1904370	1902092	148	98			294990	294958	2.6	84			390660	390100	1.5	88		
8/14/01	835	1910580	1908302	154	102			296710	296678					391560	391000	1.6	92		
8/14/01	948	1910660	1908382	153	101									391580	391020	0.5	92		
8/14/01	1030	1910870	1908592	156	103									391620	391060	0.5	30		
8/14/01	1033																		
8/14/01	1038																		
8/14/01	1048																		
8/14/01	1115																		
8/14/01	1225	1911360	1909082	156	102									391670	391110	0.5	29		
8/14/01	1415	1911900	1909622	156	102									391720	391160	0.5	28		
8/14/01	1526																		
8/14/01	1540																		
8/14/01	1620																		
8/14/01	1620					0.0477	8.6											35.2	0.251
8/14/01	1632	1912620	1910342	156	102									391780	391220	0.5	28		
8/15/01	900	1917830	1915552	155	102									392200	391640	0.5	30		
8/15/01	916																		
8/15/01	929																		
8/15/01	930																		
8/15/01	1210	1918740	1916462	155	102									392290	391730	0.5	29		
8/15/01	1605	1919880	1917602	155	102									392390	391830	0.5	28		
8/15/01	1615					0.0107	8.36											30.4	0.174
8/15/01	1645																		
8/15/01	1657																		
8/15/01	1710	1920220	1917942	155	102									392410	391850	0.5	28		
8/16/01	835	1925030	1922752	156	102									392810	392250	0.5	30		
8/16/01	858																		
8/16/01	906																		
8/16/01	910	1925210	1922932	153	100									392820	392260	0.5	29		
8/16/01	921																		
8/16/01	931																		
8/16/01	945																		
8/16/01	1050																		
8/16/01	1102	1926050	1923772	152	100									392870	392310	0.5	29		
8/16/01	1403	1927420	1925142	152	100									392940	392380	0.5	28		
8/16/01	1416					0.017	8.49											32.9	0.177
8/16/01	1429																		
8/16/01	1441																		
8/16/01	1506																		
8/16/01	1535	1928020	1925742	152	100									392970	392410	0.5	27		
8/20/01	1058	1967720	1965442	153	99									395100	394540	0.5	28		
8/20/01	1130																		
8/20/01	1143																		
8/20/01	1229	1968410	1966132	152	100									395130	394570	0.5	28		
8/20/01	1410	1969180	1966902	152	100									395170	394610	0.5	28		
8/20/01	1421					0.0024	9.2											40.3	0.154
8/20/01	1432																		
8/20/01	1440																		
8/20/01	1452	1969510	1967232	152	100									395190	394630	0.5	28		
8/21/01	815	1977440	1975162	152	98									395580	395020	0.5	28		
8/21/01	833																		
8/21/01	841																		
8/21/01	1015	1978340	1976062	152	98									395630	395070	0.5	28		
8/21/01	1229	1979340	1977062	152	98									395680	395120	0.5	32		
8/21/01	1436	1980320	1978042	152	100									395730	395170	0.5	31		
8/21/01	1445					0.0556	9.37											40	0.181
8/21/01	1501																		
8/21/01	1511																		
8/21/01	1523	1980680	1978402	152	100									395750	395190	0.5	31		
8/22/01	848	1988600	1986322	152	99									396200	395640	0.5	31		
8/22/01	910																		
8/22/01	924																		
8/22/01	1001																		
8/22/01	1228	1990280	1988002	152	99									396290	395730	0.5	31		
8/22/01	1319	1990670	1988392	152	99									396310	395750	0.5	31		
8/22/01	1325					0.0044	9.47											40.8	0.205
8/22/01	1340																		
8/22/01	1351																		
8/22/01	1402	1990990	1988712	152	99									396330	395770	0.5	31		
8/23/01	809	1999240	1996962	152	98									396780	396220	0.5	32		
8/23/01	824																		
8/23/01	835																		
8/23/01	1034	2000330	1998052	152	98									396840	396280	0.5	32		
8/23/01	1211	2001060	1998782	152	98									396880	396320	0.5	32		
8/23/01	1300					0.0137	9.36											40.7	0.191
8/23/01	1351	2001820	1999542	152	98									396920	396360	0.5	31		
8/23/01	1418																		
8/23/01	1424																		
8/23/01	1442																		
8/23/01	1449	2002260	1999982	152	98									396950	396390	0.5	31		
8/24/01	854	2010450	2008172	152	98									397390	396830	0.5	32		
8/24/01	916																		
8/24/01	922																		
8/24/01	1031	2011190	2008912	152	98									397430	396870	0.5	32		
8/24/01	1315					0.0204	9.8											43.2	0.211
8/24/01	1329	2012530	2010252	152										397500	396940	0.5	30		
8/24/01	1331																		
8/24/01	1336																		
8/24/01	1412	2012850	2010572	152	98									397520	396960	0.5	30		
8/27/01	1153	2043980	2041702	152	98									399180	398620	0.5	32		
8/27/01	1210																		
8/27/01	1221																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
8/27/01	1243													399240	398680	0.5	31		
8/27/01	1423	2045080	2042802	152	98													39.9	0.192
8/27/01	1435					0.0075	9.43												
8/27/01	1447																		
8/27/01	1455													399260	398700	0.5	31		
8/27/01	1508	2045410	2043132																
8/27/01	1510													399700	399140	0.5	32		
8/28/01	828	2053750	2051472	152	99														
8/28/01	1030																		
8/28/01	1041																		
8/28/01	1048													399760	399200	0.5	30		
8/28/01	1234	2054630	2052352	152	99									399800	399240	0.5	30		
8/28/01	1417	2055700	2053422	152	99													39.9	0.189
8/28/01	1430					0.0156	9.49												
8/28/01	1604	2056380	2054102	152	99									399830	399270	0.5	30		
8/28/01	1800																		
8/29/01	1043	2064610	2062332	153	99									400260	399700	0.5	32		
8/29/01	1100																		
8/29/01	1126																		
8/29/01	1212													400360	399800	0.5	31		
8/29/01	1436	2066240	2063962	154	100									400370	399810	0.5	30		
8/29/01	1512	2066500	2064222	153	98													41	0.184
8/29/01	1521					0.005	9.4												
8/29/01	1524																		
8/30/01	1207																		
8/30/01	1218																		
8/30/01	1230																		
8/30/01	1257																		
8/30/01	1308																	40.3	0.183
8/30/01	1415					0.025	9.35												
8/30/01	1430																		
8/30/01	1437													403950	403390	0.5	40		
9/4/01	1039	2123400	2121122	154	100														
9/4/01	1110																		
9/4/01	1130													404040	403480	0.5	38		
9/4/01	1409	2124810	2122532	154	100													39.2	0.231
9/4/01	1555					0.0364	8.91												
9/4/01	1625																		
9/4/01	1631							296760	296728	0.5	84			404100	403540	0.5	38		
9/4/01	1642	2125770	2123492	154	100			297340	297308	0.5	92			404500	403940	0.5	44		
9/5/01	845	2132490	2130212	153	100			297350	297318	0.5	84			404510	403950	0.5	40		
9/5/01	905	2132640	2130362	153	100														
9/5/01	914																		
9/5/01	921																		
9/5/01	1204	2133950	2131672	153	100			297450	297418	0.5	83			404580	404020	0.5	40		
9/5/01	1334	2134610	2132332	153	100			297500	297468	0.5	82			404620	404060	0.5	39		
9/5/01	1350					0.0442	8.85					11.7	0.0745					40.5	0.249
9/5/01	1403																		
9/5/01	1412																		
9/5/01	1420	2134940	2132662	153	100			297530	297498	0.5	82			404640	404080	0.5	39		
9/6/01	815	2142770	2140492	153	99			298160	298128	0.5	80			405090	404530	0.5	40		
9/6/01	842																		
9/6/01	853																		
9/6/01	1147	2144300	2142022	153	99			298290	298258	0.5	80			405180	404620	0.5	40		
9/6/01	1307	2144870	2142592	153	99			298340	298308	0.5	80			405210	404650	0.5	40		
9/6/01	1320					0.0334	9.27					18.6	0.0207					41.9	0.259
9/6/01	1337																		
9/6/01	1345																		
9/6/01	1353	2145200	2142922	153	99			298360	298328	0.5	80			405230	404670	0.5	40		
9/7/01	900	2153490	2151212	153	100			299070	299038	0.5	82			405710	405150	0.5	42		
9/7/01	922																		
9/7/01	931																		
9/7/01	955					0.0362	9.13					20.7	0.0095					40.8	0.247
9/7/01	1003	2153940	2151662	153	100			299110	299078	0.5	82			405730	405170	0.5	42		
9/10/01	1029																		
9/10/01	1029	2184920	2182642	153	99			301810	301778	0.6	82			407510	406950	0.5	44		
9/10/01	1029																		
9/10/01	1100																		
9/10/01	1350	2186080	2183802	155	102			301940	301908	0.6	83			407590	407030	0.5	43		
9/10/01	1403																		
9/10/01	1523																		
9/10/01	1531																		
9/10/01	1550					0.0416	9.08					22	0.0053					38.2	0.249
9/10/01	1623	2186870	2184592	155	100			302030	301998	0.6	82			407650	407090	0.5	43		
9/11/01	827	2192080	2189802	156	102			302610	302578	0.6	86			408050	407490	0.5	47		
9/11/01	845																		
9/11/01	1010																		
9/11/01	1010					0.039	9.05					22.8	0.0044					37.3	0.24
9/11/01	1133	2192970	2190692	154	101			302700	302668	0.6	81			408120	407560	0.5	42		
9/11/01	1415	2193860	2191582	155	101			302800	302768	0.6	91			408190	407630	0.5	48		
9/12/01	1000	2200310	2198032	155	101			303550	303518	0.6	92			408760	408200	0.5	50		
9/12/01	1033																		
9/12/01	1040																		
9/12/01	1122																		
9/12/01	1130	2200640	2198362	158	101			303600	303568					408800	408240				
9/13/01	1230	2200640	2198362	158	100			303600	303568	0.5	80			408800	408240	0.5	51		
9/13/01	1343	2200830	2198552	158	104			303650	303618	0.5	83			408840	408280	0.5	52		
9/13/01	1405																		
9/13/01	1427																		
9/13/01	1434	2200970	2198692	158	104			303680	303648	0.5	83			408860	408300	0.5	50		
9/17/01	828	2200970	2198692	158	104			303680	303648	0.6	80			408860	408300	0.6	51		
9/17/01	937	2201150	2198872	158	105			303720	303688	0.6	82			408900	408340	0.6	52		
9/17/01	940																		
9/17/01	1045																		
9/17/01	1233	2201600	2199322	158	104			303810	303778	0.6	82			408990	408430	0.6	51		
9/17/01	1255																		
9/17/01	1302																		
9/17/01	1340																		
9/17/01	1350																		
9/17/01	1418	2201860	2199582	158	104			303860	303828	0.6	82			409040	408480	0.6	50		
9/17/01	1437					0.0603	8.6					8.9	0.0111					20.4	0.0681
9/17/01	1508	2201990	2199712	158	104			303890	303858	0.6	82			409060	408500	0.6	51		
9/18/01	1017	2204870	2202592	158	104			304470	304438	0.5	83			409640	409080	0.5	52		
9/18/01	1035																		
9/18/01	1047																		
9/18/01	1115																		
9/18/01	1126	2205040	2202762	158	104			304510	304478	0.5	83			409670	409110	0.5	52		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
9/18/01	1140	2205150	2202672	146	97			304510	304478	0.6	92			409680	409120	1	90		
9/18/01	1150																		
9/18/01	1241																		
9/18/01	1248																		
9/18/01	1348	2206500	2204222	142	96			304570	304538	0.6	89			409790	409230	1.5	87		
9/18/01	1419																		
9/18/01	1425																		
9/18/01	1435	2207080	2204802	142	96			304600	304568	0.6	89			409830	409270	1.5	87		
9/18/01	1445					0.034	8.91					30.8	0.0386					37.4	0.37
9/18/01	1520																		
9/18/01	1530	2207710	2205432	142	96			304630	304598	0.6	89			409870	409310	1.5	87		
9/19/01	850	2220230	2217952	142	96			305170	305138	0.5	90			410800	410240	1.5	87		
9/19/01	905																		
9/19/01	912																		
9/19/01	1015	2221180	2218902	142	96			305210	305178	0.5	89			410870	410310	0.9	87		
9/19/01	1143	2222240	2219962	142	96			305250	305218	0.5	89			410940	410380	0.9	87		
9/19/01	1420																		
9/19/01	1431																		
9/19/01	1437	2224310	2222032	142	96			305340	305308	0.5	89			411090	410530	0.9	87		
9/19/01	1440					0.0455	8.93					26.5	0.009					38.9	0.952
9/19/01	1520																		
9/19/01	1525	2224890	2222612	142	96			305370	305338	0.5	89			411130	410570	0.9	86		
9/20/01	846	2237180	2234902	143	96			305890	305858	0.5	90			412040	411480	0.9	88		
9/20/01	906																		
9/20/01	922																		
9/20/01	931																		
9/20/01	1005																		
9/20/01	1018	2238250	2235972	143	96			305940	305908	0.5	90			412120	411560	0.9	88		
9/20/01	1150	2239310	2237032	143	96			305980	305948	0.5	90			412190	411630	1	88		
9/20/01	1317	2240340	2238062	143	96			306030	305998	0.5	88			412270	411710	0.9	87		
9/20/01	1330					0.0323	9.29					29.6	0.0417					37.9	1.2
9/20/01	1340																		
9/20/01	1345																		
9/20/01	1353	2240740	2238462	143	96			306040	306008	0.5	88			412300	411740	0.9	87		
9/24/01	1151	2303980	2301702	145	97			308620	308588	0.5	90			417070	416510	0.9	88		
9/24/01	1200																		
9/24/01	1225																		
9/24/01	1350					0.042	9.55					30.5	0.0038					36.7	1.84
9/24/01	1408																		
9/24/01	1420																		
9/24/01	1434	2305800	2303522	145	97			308690	308658	0.5	89			417210	416650	0.9	87		
9/25/01	1237	2320280	2318002	145	97			309250	309218	0.5	90			418360	417800	0.9	88		
9/25/01	1240																		
9/25/01	1249																		
9/25/01	1315																		
9/25/01	1327	2320820	2318542	145	97			309270	309238	0.5	90			418490	417930	0.9	88		
9/25/01	1335					0.452	9.66					32.6	0.0036					36.8	1.92
9/25/01	1458																		
9/25/01	1507	2321910	2319632	145	97			309310	309278	0.5	89			418490	417930	0.9	87		
9/25/01	1510																		
9/26/01	831	2333260	2330982	145	97			309740	309708	0.5	90			419440	418880	0.9	88		
9/26/01	840																		
9/26/01	845																		
9/26/01	923																		
9/26/01	1007	2334290	2332012	145	97			309780	309748	0.5	90			419520	418960	0.9	88		
9/26/01	1131	2335170	2332892	145	97			309810	309778	0.5	90			419600	419040	0.9	88		
9/26/01	1307	2336220	2333942	145	97			309850	309818	0.5	90			419680	419120	0.9	88		
9/26/01	1310																		
9/26/01	1318																		
9/26/01	1341					0.0468	9.67					32.5	0.0018					35.2	2.46
9/26/01	1402																		
9/26/01	1427	2337090	2334812	145	97			309880	309848	0.5	89			419750	419190	0.9	87		
9/27/01	825	2348690	2346412	146	98			310300	310268	0.4	90			420710	420150	0.9	90		
9/27/01	843																		
9/27/01	850																		
9/27/01	930																		
9/27/01	1003	2349720	2347442	146	98			310340	310308	0.4	90			420800	420240	0.9	90		
9/27/01	1202	2350980	2348702	145	97			310390	310358	0.4	90			420900	420340	0.9	90		
9/27/01	1355	2352190	2349912	145	97			310430	310398	0.4	89			421000	420440	0.9	89		
9/27/01	1405					0.0412	9.59					32.7	0.0036					38.6	2.81
9/27/01	1418																		
9/27/01	1423																		
9/27/01	1445																		
9/27/01	1450	2352760	2350482	145	97			310450	310418	0.4	89			421050	420490	0.9	89		
10/1/01	1320	2413060	2410782	146	97			312470	312438	0.4	90			426910	426350	0.9	87		
10/1/01	1337																		
10/1/01	1345					0.0575	9.98					32.9	0.142					24.2	4.79
10/1/01	1348																		
10/1/01	1404	2413510	2411232	146	97			312480	312448	0.4	92			426950	426390				
10/1/01	1534																		
10/1/01	1544																		
10/1/01	1605			149	97			312520	312488	0.4	91			426950	426390				
10/1/01	1615																		
10/2/01	942	2424270	2421992	150	98			312880	312848	0.4	92								
10/2/01	955																		
10/2/01	959																		
10/2/01	1008																		
10/2/01	1048	2424880	2422602	150	98			312900	312868	0.4	92								
10/2/01	1350	2426540	2424262	150	98			312960	312928	0.4	92								
10/2/01	1410					0.0413	10.2					34.2	0.788						
10/2/01	1417																		
10/2/01	1421																		
10/2/01	1430	2426890	2424612	150	98			312980	312948	0.4	92								
10/3/01	852	2436660	2434382	150	99			313330	313298	0.4	92								
10/3/01	912																		
10/3/01	924																		
10/3/01	1035																		
10/3/01	1235	2438610	2436332	150	99			313400	313368	0.4	92								
10/3/01	1343	2439210	2436932	150	99			313420	313388	0.4	92								
10/3/01	1346																		
10/3/01	1355																		
10/3/01	1410					0.0776	9.8					31.6	0.136						
10/3/01	1416																		
10/3/01	1421	2439540	2437262	150	99			313440	313408	0.4	92								
10/4/01	911	2449370	2447092	150	99			313780	313748	0.4	93								
10/4/01	935																		
10/4/01	947																		

Date	Time	Well 864						Column - 1						Column - 2					
		Totalizer (gls)	Vol (gls)	Pressure up (psi)	Pressure dn (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
10/4/01	1103	2450340	2448062	150	99			313810	313778	0.4	92								
10/4/01	1314	2451460	2449182	150	99			313850	313818	0.4	92								
10/4/01	1338																		
10/4/01	1340					0.0455	9.87					31	0.0454						
10/4/01	1343																		
10/4/01	1400	2451870	2449592	150	99			313870	313838	0.4	92								
10/10/01	1107	2520770	2518492	153	100			315700	315668		96								
10/10/01	1140																		
10/10/01	1152																		
10/10/01	1233																		
10/10/01	1240	2521490	2519212	150	100			315710	315678		94								
10/10/01	1418																		
10/10/01	1421	2522330	2520052	150	100														
10/10/01	1430	2522390	2520112	156	103														
10/10/01	1431					0.07	9.47					22.1	0.0048						
10/10/01	1443																		
10/10/01	1453																		
10/10/01	1510																		
10/10/01	1518	2522630	2520352	156	103														
10/11/01	1120	2528860	2526582	155	102														
10/11/01	1138																		
10/11/01	1150																		
10/11/01	1344	2529370	2527092	156	103														
10/11/01	1348																		
10/11/01	1350					0.0869	9.25					19.2	0.003						
10/11/01	1354																		
10/11/01	1408																		
10/11/01	1458	2529750	2527472	156	103														
10/15/01	1145	2556940	2554662	156	102														
10/15/01	1207																		
10/15/01	1214																		
10/15/01	1233																		
10/15/01	1456	2557840	2555562	156	102														
10/15/01	1500					0.0468	9.42					12.2	0.0127						
10/15/01	1513																		
10/15/01	1521																		
10/15/01	1535																		
10/15/01	1540	2558050	2555772	156	102														
10/16/01	833	2562800	2560522	156	103														
10/16/01	904																		
10/16/01	915																		
10/16/01	1108	2563470	2561192	156	103														
10/16/01	1415	2564340	2562062	156	103														
10/16/01	1440					0.0537	9.1					9.66	0.025						
10/16/01	1457																		
10/16/01	1510																		
10/16/01	1517	2564630	2562352	156	103														
10/17/01	1008	2569810	2567532	156	102														
10/17/01	1021																		
10/17/01	1029																		
10/17/01	1037	2569940	2567662	157	103														
10/17/01	1115																		
10/17/01	1133																		
10/17/01	1138																		
10/17/01	1205																		
10/17/01	1213	2570370	2568092	157	103														
10/17/01	1425					0.15	9.19					8.46	0.0818						
10/17/01	1508																		
10/17/01	1537																		
10/17/01	1611	2571430	2569152	157	103														
10/18/01	808	2575650	2573372	157	103														
10/18/01	1510					0.101	9.08												
10/18/01	1524	2577550	2575272	157	102														
10/19/01	851	2582060	2579782	157	103														
10/19/01	917																		
10/19/01	920																		
10/19/01	933																		
10/19/01	950					0.0735	9.52												
10/19/01	1024	2582480	2580202	157	103														
10/19/01	1040																		
10/19/01	1045	2582550	2580272	157	103														
10/22/01	923	2599970	2597692	158	103														
10/22/01	942																		
10/22/01	950																		
10/22/01	958																		
10/22/01	1323	2600930	2598652	156	102									426950	426390	0.5	0		
10/22/01	1427	2601240	2598962	156	102									426980	426420	0.5	4		
10/22/01	1500					0.0878	9.08											131	2.52
10/22/01	1507																		
10/22/01	1514																		
10/22/01	1521	2601490	2599212	156	102									427000	426440	0.5	8		
10/23/01	830	2606380	2604102	156	102									427450	426890	0.5	8		
10/23/01	857																		
10/23/01	912																		
10/23/01	926	2606700	2604422	156	102									427510	426950	1	30		
10/23/01	953	2606750	2604472	154	102									427520	426960	1	14		
10/23/01	1057																		
10/23/01	1254	2607830	2605552	154	102									427700	427140	1	12		
10/23/01	1442	2608450	2606172	156	102									427800	427240	1	11		
10/23/01	1448					0.0741	8.8											38.5	0.0475
10/23/01	1502																		
10/23/01	1506																		
10/23/01	1517	2608650	2606372	156	102									427830	427270	1	11		
10/24/01	911	2614850	2612572	156	102									428840	428280	1	12		
10/24/01	932																		
10/24/01	941																		
10/24/01	1010																		
10/24/01	1156	2615790	2613512	156	102									429000	428440	1	13		
10/24/01	1405	2616520	2614242	156	102									429120	428560	1	13		
10/24/01	1415																		
10/24/01	1432					0.403	9.44											27.6	0.0178
10/24/01	1440																		
10/24/01	1447	2616750	2614472	156	102									429160	428600	1	13		
10/24/01	1448																		
10/25/01	1014	2623320	2621042	156	102									430240	429680	1	14		
10/25/01	1027																		
10/25/01	1040																		

Date	Time	Well 864 Totalizer (gls)	Well 864 Vol (gls)	Well 864 Pressure up (psi)	Well 864 Pressure dn (psi)	Well 864 Iron (mg/L)	Well 864 V (mg/L)	Column - 1 Totalizer (gls)	Column - 1 Vol (gls)	Column - 1 Flow (gpm)	Column - 1 Pressure in (psi)	Column - 1 Iron (mg/L)	Column - 1 V (mg/L)	Column - 2 Totalizer (gls)	Column - 2 Vol (gls)	Column - 2 Flow (gpm)	Column - 2 Pressure in (psi)	Column - 2 Iron (mg/L)	Column - 2 V (mg/L)
10/25/01	1125							315710	315678	0.5	0			430310	429750	1	14		
10/25/01	1127	2623720	2621442	156	102			315760	315728	0.5	6			430430	429870	1	14		
10/25/01	1335	2624490	2622212	156	102														
10/25/01	1351					0.245	9.03					3.34	0.0735					22.5	0.0496
10/25/01	1403																		
10/25/01	1406																		
10/25/01	1418							315780	315748	0.5	6			430470	429910	1	14		
10/25/01	1419	2624760	2622482	155	102			318030	317998	0.5	12			435550	434990	1	22		
10/29/01	1052	2656880	2654602	156	102														
10/29/01	1113																		
10/29/01	1123							318070	318038	0.5	12			435630	435070	1	22		
10/29/01	1219	2657360	2655082	156	102			318100	318068	4	34			435690	435130	4	51		
10/29/01	1327	2657730	2655452	136	94			318140	318108	4	32			435730	435170	4	50		
10/29/01	1339	2657910	2655632	143	96														
10/29/01	1440					0.0495	9.04					45.2	0.0038					41.6	0.0015
10/29/01	1545																		
10/29/01	1548							318630	318598	4	28			436200	435640	4	47		
10/29/01	1556	2659310	2657032	143	96														
10/29/01	1618							318740	318708	4	28			436300	435740	4	47		
10/29/01	1622	2659610	2657332	143	96			322570	322538	4	30			439990	439430	4	48		
10/30/01	833	2670690	2668412	144	97														
10/30/01	855																		
10/30/01	915																		
10/30/01	1055							323530	323498	4	30			440920	440360	4	50		
10/30/01	1243	2673460	2671182	144	96			323730	323698	4	31			441100	440540	4	50		
10/30/01	1334	2674040	2671762	143	96							50.6	0.0022					43.5	0.0024
10/30/01	1407					0.0092	9.08												
10/30/01	1416																		
10/30/01	1425																		
10/30/01	1443							324010	323978	4	34			441370	440810	4	53		
10/30/01	1447	2674880	2672602	143	96			328320	328288	3.4	50			445360	444800	4	66		
10/31/01	1119	2687360	2685082	148	96														
10/31/01	1132																		
10/31/01	1140							328420	328388	3.5	70			445440	444880	4	75		
10/31/01	1152	2687640	2685362	140	95														
10/31/01	1205							328510	328478	4	35			445500	444940	4	49		
10/31/01	1225	2687980	2685702	118	88														
10/31/01	1233																		
10/31/01	1352							328860	328828	4	34			445790	445230	4	49		
10/31/01	1353	2689470	2687192	120	89														
10/31/01	1405																		
10/31/01	1410											47.4	0.0043					42.3	0.0026
10/31/01	1416					0.0155	9.23												
10/31/01	1438							329060	329028	4	34			445960	445400	4	49		
10/31/01	1443	2690300	2688022	120	89			333690	333658	4	37			449950	449390	4	51		
11/1/01	1020	2709650	2707372	123	91														
11/1/01	1042																		
11/1/01	1051																		
11/1/01	1120							334090	334058	4	37			450300	449740	4	51		
11/1/01	1212	2711360	2709082	122	90			334460	334428	4	38			450610	450050	4	50		
11/1/01	1346	2712890	2710612	122	90							43.8	0.0042					41.7	0.0044
11/1/01	1403					0.084	9.44												
11/1/01	1408																		
11/1/01	1419																		
11/1/01	1423	2713510	2711232	122	90			334610	334578	4	38			450740	450180	4	50		
11/5/01	1006																		
11/5/01	1021											40.7	0.96					40.1	0.765
11/5/01	1041					0.0123	9.45												
11/5/01	1100							354670	354638	3.5	50			468660	468100	4	53		
11/5/01	957	2794580	2792302	110	88			354890	354858	3.5	50			468850	468290	4	53		
11/5/01	1055	2795430	2793152	110	88			354910	354878	4	40			468870	468310	4	55		
11/8/01	1213	2795510	2793232	126	94			355190	355158	4	41			469100	468540	4	56		
11/8/01	1324	2796550	2794272	130	92			355420	355388	4	42			469280	468720	4	56		
11/8/01	1421	2797380	2795102	130	93							31.7	0.0267					29.1	0.0194
11/8/01	1440					0.0048	8.97												
11/8/01	1503	2798000	2795722	130	93			355580	355548	4	42			469410	468850	4	56		
11/12/01	1005	2870100	2867822	90	80			374490	374458	3.6	42			485980	485420	4	52		
11/12/01	1308	2872310	2870032	86	78			375130	375098	3.4	43			486470	485910	4	51		
11/12/01	1411					0.0093	9.57					37.7	2.22					28.6	1.89
11/12/01	1424	2873260	2870982	96	84			375400	375368	3.7	40			486670	486110	4	54		
11/12/01	1512	2873880	2871602	92	81			375580	375548	3.7	40			486810	486250	4	53		
11/13/01	824	2883360	2881082	93	82			378310	378278	3.8	38			488900	488340	4	53		
11/13/01	1054	2885250	2882972	87	78			378860	378828	3.6	38			489300	488740	4	52		
11/13/01	1305	2886810	2884532	84	78			379320	379288	3.5	36			489640	489080	4	50		
11/13/01	1355					0.0102	9.84					36.6	2.49					38.1	2.02
11/13/01	1435	2887940	2885662	82	75			379650	379618	3.5	36			489680	489320	4	50		
11/14/01	816	2898370	2896092	82	75			382690	382658	3.5	37			492150	491590	4	50		
11/14/01	1024	2899840	2897562	78	72			383140	383108	3.4	36			492470	491910	2.7	50		
11/14/01	1328	2901980	2899702	92	92			383770	383738	4	42			492930	492370	3.3	58		
11/14/01	1345					0.0591	9.85					36.5	2.82					37.4	2.24
11/14/01	1408	2902540	2900262	94	94			383920	383888	4	43			493050	492490	3.3	59		
11/15/01	1128	2919790	2917512	137	95			388550	388518	4	58			497030	496470	3.4	60		
11/15/01	1318	2921240	2918962	136	95			388930	388898	4	58			497370	496810	3.4	60		
11/15/01	1452	2922470	2920192	137	95			389250	389218	4	59			497660	497100	3.4	60		
11/15/01	1455					0.0698	9.79					36.1	3.05					35.6	3.13
11/15/01	1529	2922970	2920692	138	96			389380	389348	4	59			497780	497220	3.4	60		
11/16/01	820	2936070	2933792	138	96			392770	392738	4	62			500920	500360	3.4	60		
11/16/01	1024	2937780	2935502	138	96			393210	393178	4	63			501340	500780	3.4	60		
11/16/01	1307	2939750	2937472	138	96			393710	393678	4	63			501820	501260	3.4	60		
11/16/01	1330					0.0201	9.7					38.2	3.31					37	3.49
11/16/01	1436	2940880	2938602	138	96			394000	393968	4	63			502090	501530	3.4	60		
11/19/01	1125	2940910	2938632	139	96			394010	393978	4	40			502100	501540	3.4	60		
11/19/01	1225	2941520	2939242	140	98			394210	394178	4	42			502250	501690	3.4	62		
11/19/01	1328	2942350	2940072	140	98			394470	394438	4	42			502450	501890	3.4	62		
									avg	2.1					avg	2.2			

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
1/29/01	1000	1055	0	6.7	52			631	0	6.5	54								
1/29/01	1615																		
1/30/01	1010																		
1/30/01	1300	2130	1075	6.98	8			2430	1799	6.75	8								
1/30/01	1417	2630	1575	7.35	8			2890	2259	6.98	9								
1/30/01	1615																		
1/30/01	2010	4790	3735	6.5	8			4840	4209	5.5	8								
1/30/01	2045																		
1/30/01	2310	5670	4615	6.5	8			5670	5039	5.2	8								
1/30/01	2313																		
1/31/01	520																		
1/31/01	524	7740	6685	6.6	8			7630	6999	5.2	8								
1/31/01	930	9250	8195	6.7	8			9060	8429	6	8								
1/31/01	1030	9390	8335	6.3	8			9190	8559	5.5	8								
1/31/01	1100																		
1/31/01	1445	10710	9655	6.9	8			10490	9859	5.8	8								
1/31/01	1530																		
1/31/01	1615																		
1/31/01	1705	11500	10445	6.3	8			11230	10599	6.5	8								
1/31/01	2130																		
1/31/01	2149	13000	11945	6.5	8			12720	12089	6.5	8								
2/1/01	35	14080	13025	6.5	8			13800	13169	6.6	8								
2/1/01	350																		
2/1/01	355	15000	13945	6.4	8			14710	14079	6.6	8								
2/1/01	735	16190	15135	6.5	8			15910	15279	6.5	8								
2/1/01	910	16750	15695	6.54	8			16460	15829	6.68	8								
2/1/01	925																		
2/1/01	1140	17560	16505	6.54	8			17280	16649	6.72	8								
2/1/01	1150																		
2/1/01	1202																		
2/1/01	1215																		
2/1/01	1243					45.5	6.46					30.5	5.9						
2/1/01	1540																		
2/1/01	1548	18910	17855	7.6	10			18590	17959	6.5	8								
2/1/01	1555																		
2/1/01	1559																		
2/1/01	1602																		
2/1/01	1608																		
2/2/01	1030	26010	24955	6.6	6			24560	23929	6.83	6								
2/2/01	1040																		
2/2/01	1050																		
2/2/01	1053																		
2/2/01	1120																		
2/2/01	1130	26220	25165	3	4			24780	24149	3	4								
2/2/01	1142																		
2/2/01	1310	26510	25455	3	4			25040	24409	3	4								
2/2/01	1315																		
2/2/01	1325																		
2/2/01	1330																		
2/2/01	1340																		
2/2/01	1500	26640	25585	0	0			25160	24529	0	0								
2/2/01	1515	26640	25585	3	6			25170	24539	3	6								
2/2/01	1630	26830	25775	3	6			25340	24709	3	6								
2/2/01	1641																		
2/2/01	1645					24.5	5.26					26.7	4.96						
2/2/01	1650																		
2/3/01	1200	29950	28895	3	4			28220	27589	3	6								
2/3/01	1215																		
2/3/01	1220																		
2/3/01	1223																		
2/3/01	1235																		
2/3/01	1245					41.6	6.06					38.5	5.28						
2/4/01	912	33290	32235	3	1			31320	30689	2.9	7								
2/4/01	930																		
2/4/01	950																		
2/4/01	954																		
2/4/01	1000																		
2/4/01	1437	34140	33085	2.9	1			32110	31479	3	7								
2/4/01	1505																		
2/4/01	1514																		
2/4/01	1530																		
2/4/01	1539					45.2	5.92					29.5	6.02						
2/4/01	1657	34390	33335	2.9	2			32340	31709	2.75	8								
2/4/01	1715																		
2/5/01	935	37010	35955	3	2			34750	34119	3	7								
2/5/01	953																		
2/5/01	958																		
2/5/01	1002																		
2/5/01	1012																		
2/5/01	1015																		
2/5/01	1432				10						0								
2/5/01	1436			0.8	22					0.8	10								
2/5/01	1437			0.8	26					0.8	15								
2/5/01	1438	37158	36103	0.8	26			34892	34261	0.7	22								
2/5/01	1439			0.8	30					0.7	30								
2/5/01	1440			0.8	29					0.7	25								
2/5/01	1442			0.8	30					0.6	30								
2/5/01	1445			0.8	28					0.8	14								
2/5/01	1450			8	40					7	44								
2/5/01	1453			7.8	35					5.9	46								
2/5/01	1457			7	30					6	48								
2/5/01	1500			6	28						50								
2/5/01	1515					41.4	0.0088					50.2	0.0025						
2/5/01	1530			6.5	29					5.5	52								
2/5/01	1540																		
2/5/01	1545				29					5.8	54								
2/5/01	1611																		
2/5/01	1615																		
2/6/01	910	40410	39355	5.8	30			37340	36709	7	52								
2/6/01	943	40550	39495	6.4	25			37500	36869	7.4	49								
2/6/01	954																		
2/6/01	1008																		
2/6/01	1012																		
2/6/01	1032	40930	39875	7	25			37900	37269	7	48								
2/6/01	1058																		
2/6/01	1410																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
2/6/01	1412					42.7	0.405					56.3	0.0083						
2/6/01	1438																		
2/6/01	1441																		
2/6/01	1545	42120	41065	5.5	22			39280	38649	5	32								
2/6/01	1640	42410	41355	2.7	12			39520	38889	2.3	12								
2/7/01	755	43920	42865	0	0			40730	40099	0	0								
2/7/01	840																		
2/7/01	1425			2.7						2.3									
2/7/01	1520					66	0.13					40.3	0.0686						
2/7/01	1555	44230	43175	5	19			40980	40349	5									
2/8/01	1020	49780	48725	5	19			46240	45609	5	21								
2/8/01	1207					42.1	1.47					34.2	2.8						
2/8/01	1230	50380	49325	5	19			46840	46209	5	21								
2/8/01	1235																		
2/12/01	1050																		
2/12/01	1130	50750	49695	5	25			47200	46569	5	30								
2/12/01	1534					37.2	0.149					36.6	1.06						
2/12/01	1610	51910	50855	5	25			48480	47849	5	32								
2/12/01	1630	52000	50945	5				48580	47949	5									
2/21/01	1140	52000	50945					48580	47949										
2/21/01	1145			1	0					1	0								
2/21/01	1155			2.1	5					2	11								
2/21/01	1200			2.7	14					2.8	20								
2/21/01	1205			3.6	20					5.5	na								
2/21/01	1210			6	26					6	na								
2/21/01	1230																		
2/21/01	1240																		
2/21/01	1615					39.7	0.0903					34.3	0.358						
2/21/01	1641	53510	52455	6	24			50020	49389	5.5	na								
2/22/01	1005	59400	58345	5.5	24			55450	54819	5	na								
2/22/01	1035																		
2/22/01	1059																		
2/22/01	1120																		
2/22/01	1135																		
2/22/01	1415	60710	59655	5.5	24			56850	56019	5	na								
2/22/01	1425					27.4	4.09	57010	56379	5	na	27.1	3.19						
2/22/01	1435																		
2/22/01	1450																		
2/22/01	1452																		
2/22/01	1455																		
2/22/01	1525																		
2/22/01	1532	61160	60105	6	28														
2/22/01	1600																		
2/24/01	747	76540	75485	6.2	28														
2/24/01	804																		
2/24/01	808																		
2/24/01	817																		
2/24/01	820																		
2/24/01	822																		
2/24/01	831																		
2/24/01	858					26	4.66												
2/24/01	956	77350	76295	6.3	28														
2/26/01	845	95080	94025	6	28														
2/26/01	930																		
2/26/01	936					26.9	4.88												
2/26/01	938																		
2/26/01	943																		
2/26/01	945																		
2/26/01	950																		
2/26/01	953																		
2/26/01	1535							57030	56399	1.5	10								
2/26/01	1542									1.5	25								
2/26/01	1545									1.5	40/10								
2/26/01	1609									3.5	25								
2/26/01	1612									5	38								
2/26/01	1617									5.5	39								
2/26/01	1707											209	0.0088						
2/26/01	1709																		
2/27/01	830							60410	59779	3	68/62								
2/27/01	855																		
2/27/01	858																		
2/27/01	901																		
2/27/01	903																		
2/27/01	914																		
2/27/01	947																		
2/27/01	1345							61650	61019	2.8	68/62								
2/27/01	1529											74.5	0.0014						
2/27/01	1533																		
2/27/01	1610																		
2/27/01	1612																		
2/27/01	1630																		
2/27/01	1710																		
2/28/01	1050							64420	63789	2.8	67/64								
2/28/01	1100																		
2/28/01	1127																		
2/28/01	1129																		
2/28/01	1200																		
2/28/01	1330									2.75	68/64								
2/28/01	1455							65250	64619	2.8	68/64								
2/28/01	1603											53.7	0.0014						
2/28/01	1605																		
2/28/01	1608																		
2/28/01	1618																		
2/28/01	1625																		
3/1/01	1410							65750	65119	5.5	62/34								
3/1/01	1425																		
3/1/01	1430																		
3/1/01	1440																		
3/1/01	1450																		
3/1/01	1520																		
3/1/01	1530							66170	65539	5.5	64/28								
3/1/01	1600							66240	65609	5.5	64/28								
3/1/01	1655																		
3/1/01	1645																		
3/1/01	1700							66570	65939	5.25	62/28								
3/6/01	1000																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
3/7/01	1330	95620	94565	1	5			66590	65959	1	5								
3/7/01	1345	95630	94575	1	5			66600	65969	1	5								
3/7/01	1400	95650	94595	1	13			66610	65979	1	6								
3/7/01	1430	95680	94625	1	14			66630	65999	1	8								
3/7/01	1708	95820	94765	1	12			66770	66139	1	8								
3/7/01	1715																		
3/7/01	1720																		
3/7/01	1723																		
3/7/01	1803																		
3/8/01	1045	96670	95615	0.9	8			67750	67119	0.9	7								
3/8/01	1410	96820	95765	0.9	7			67940	67309	1	6								
3/8/01	1418			2	16					2	10								
3/8/01	1448	96910	95855	3	16			68020	67389	4.5	19								
3/8/01	1510	96970	95915	3	15			68120	67489	5.5	28								
3/8/01	1515					61.6	0.0093					76.1	0.0072						
3/8/01	1526			3	18					5.5	28								
3/8/01	1530																		
3/8/01	1535																		
3/8/01	1730																		
3/8/01	1738																		
3/8/01	1740	97320	96265	3	20			68730	68099	5.5	34								
3/9/01	1328	100470	99415	2.5	22			74660	74029	5	62/40								
3/9/01	1335																		
3/9/01	1345					63.4	0.0017					44.9	0.209						
3/9/01	1400																		
3/9/01	1410																		
3/9/01	1515	100750	99695	2.5	22			75170	74539	4.8	62/45								
3/10/01	1030	103680	102625	2.5	22			80520	79889	4.75	62/44								
3/10/01	1045																		
3/10/01	1050																		
3/10/01	1055																		
3/10/01	1103																		
3/10/01	1113					60.5	0.0016					39.5	1.06						
3/10/01	1225																		
3/10/01	1228	103980	102925	2.5	22			81050	80419	4.75	62/46								
3/12/01	1013																		
3/12/01	1016																		
3/12/01	1023																		
3/12/01	1038																		
3/12/01	1049	110780	109725	2.5	25	49.3	0.0037	92950	91895	4.4		32.9	2.27						
3/12/01	1210				25			93320	92265	0.7	8/6								
3/12/01	1222				25					1	12/10								
3/12/01	1225				25					2.5	22/18								
3/12/01	1300	111280	110225	2.5	25			93420	92365	2.5	28/23								
3/12/01	1425																		
3/12/01	1510											40.8	1.37						
3/12/01	1715																		
3/12/01	1720	111910	110855	2.5	25			94060	93005	2.5	28/22								
3/12/01	1723																		
3/12/01	1730																		
3/13/01	920	114230	113175	2.5	24			96430	95375	2.5	26/21								
3/13/01	945																		
3/13/01	948																		
3/13/01	957																		
3/13/01	1003																		
3/13/01	1005																		
3/13/01	1245			2.5	24					2.5	26/21								
3/13/01	1347	114870	113815	2.5	25			97060	96025	2.5	26/22								
3/13/01	1445																		
3/13/01	1447					49.2	0.0343					44.2	1.72						
3/13/01	1527	115110	114055	2.5	24			97320	96265	2.5	23/18								
3/13/01	1602																		
3/13/01	1605																		
3/13/01	1610																		
3/13/01	1720	115380	114325	2.5	22			97600	96545	2.5	23/18								
3/13/01	1735																		
3/14/01	830	117480	116425	2.5				99872	98817	2.5									
3/14/01	1005	117700	116645	2.5	20			100110	99055	2.5	22/18								
3/14/01	1015			2.5	20					2.5	22/18								
3/14/01	1050	117790	116735	2.5	24			100230	99175	2.5	24/19								
3/14/01	1315																		
3/14/01	1330																		
3/14/01	1403					44.6	0.18					39.4	2.15						
3/14/01	1500	118400	117345	2.5	23			100820	99765	2.5	23/18								
3/15/01	1000	119960	118905					102590	101535										
3/15/01	1015	119960	118905	2.5	26			102590	101535	2.5	23/19								
3/15/01	1020	120110	119055	2.5	26			102760	101705	2.5	25/22								
3/15/01	1030																		
3/15/01	1037																		
3/15/01	1105																		
3/15/01	1145	120170	119115					102810	101755										
3/15/01	1150	120170	119115	2.5	26			102810	101755	2.5	25/21								
3/15/01	1220																		
3/15/01	1230																		
3/15/01	1234																		
3/15/01	1235																		
3/15/01	1320																		
3/15/01	1340	120430	119375	2.5	26			103070	102015	2.5	25/21								
3/15/01	1452					44.4	0.208					85.1	2.2						
3/15/01	1504																		
3/15/01	1520																		
3/15/01	1522																		
3/15/01	1525																		
3/15/01	1612																		
3/15/01	1625	120820	119765	2.5	26			103470	102415	2.5	25/20								
3/16/01	820	121970	120915					104570	103515										
3/16/01	840	121970	120915	2.5	27			104570	103515	2.5	24/20								
3/16/01	905																		
3/16/01	910																		
3/16/01	920																		
3/16/01	1008	122140	121085	2.5	28			104750	103695	2.5	25/20								
3/16/01	1050																		
3/16/01	1100																		
3/16/01	1115	122270	121215		26			104870	103815		24/18								
3/16/01	1303	122430	121375	2.5	26			105020	103965	2.5	24/20								
3/16/01	1315																		
3/16/01	1317																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)
3/16/01	1513					43.4	0.25					60.8	2.37						
3/16/01	1525																		
3/16/01	1530	122760	121705	2.5	24			105370	104315	2.5	24/20								
3/16/01	1545																		
3/16/01	1547																		
3/16/01	1549																		
3/16/01	1615																		
3/16/01	1617																		
3/16/01	1619																		
3/16/01	1620																		
3/16/01	1635																		
3/16/01	1645	122920	121865	2.5	24					2.5	25/20								
3/19/01	830	124250	123195					106850	105795										
3/19/01	915	124290	123235	2.5	25			106880	105825	2.1	26/23								
3/19/01	1645	125230	124175	2.3	30			107230	106175										
3/20/01	830	127100	126045	2.2	28														
3/20/01	1045	127340	126285	0.5	67														
3/20/01	1110	127350	126295	0.1	71														
3/20/01	1112																		
3/20/01	1115																		
3/20/01	1118																		
3/20/01	1119																		
3/20/01	1145	127390	126335	2.5	28														
3/20/01	1200																		
3/20/01	1205																		
3/20/01	1207																		
3/20/01	1210																		
3/20/01	1212					40.2	1.01												
3/20/01	1220	127470	126415																
3/21/01	1430	127490	126435																
3/21/01	1434	127490	126435	2.5	17														
3/21/01	1604																		
3/21/01	1606																		
3/21/01	1608																		
3/21/01	1612																		
3/21/01	1645																		
3/21/01	1650	127780	126725	2.5	17														
3/22/01	955	130180	129125	2.5	17														
3/22/01	1008																		
3/22/01	1016																		
3/22/01	1018																		
3/22/01	1022																		
3/22/01	1024																		
3/22/01	1030																		
3/22/01	1034																		
3/22/01	1135	130400	129345	2.5	18														
3/22/01	1150																		
3/22/01	1420	130800	129745	2.5	18														
3/22/01	1423																		
3/22/01	1425																		
3/22/01	1449																		
3/22/01	1450																		
3/22/01	1453																		
3/22/01	1507					38.4	2.07												
3/22/01	1535																		
3/22/01	1615																		
3/22/01	1620																		
3/22/01	1625	131100	130045	2.5	18														
3/22/01	1629																		
3/22/01	1631																		
3/24/01	815	136560	135505	2.5	20														
3/24/01	820																		
3/24/01	822																		
3/24/01	834					36.9	2.23												
3/24/01	840																		
3/24/01	846																		
3/24/01	925	136710	135655	2.3	23			107210	106155										
3/27/01	1200																		
3/28/01	1535	136740	135685					107240	106185										
3/28/01	1600	136740	135685	1	14			107240	106185	1	15								
3/28/01	1630	136770	135715	1	14			107280	106225	1	16								
3/28/01	1715	136800	135745	1	14			107310	106255	1	16								
3/28/01	1720																		
3/28/01	1721																		
3/29/01	1130	137630	136575	0.75	9			108390	107335	1	10								
3/29/01	1140																		
3/29/01	1142																		
3/29/01	1201	137700	136645	3	27			108480	107425	3	24								
3/29/01	1240																		
3/29/01	1242																		
3/29/01	1246																		
3/29/01	1430	138120	137065	3	29			108910	107855	3	26								
3/29/01	1517					64.9	0.003					62.6	0.0059						
3/29/01	1530																		
3/29/01	1607																		
3/29/01	1609																		
3/29/01	1615																		
3/29/01	1615	138390	137335	3	32			109200	108145	3	28								
3/30/01	1030	141440	140385	2.75	28			112410	111355	3	22								
3/30/01	1032			3	28					3	22								
3/30/01	1037																		
3/30/01	1050																		
3/30/01	1445					59.7	0.0053					61	0.0055						
3/30/01	1500																		
3/30/01	1520																		
3/30/01	1535	142310	141255	2.9	32			113300	112245	3	24								
3/31/01	1030	145440	144385	3	28			116680	115625	3	22								
4/2/01	1230	145440	144385	3	31			116690	115635	3	24								
4/2/01	1250																		
4/2/01	1330																		
4/2/01	1332																		
4/2/01	1343																		
4/2/01	1345																		
4/2/01	1440	145790	144735	3	31			117060	116005	3	22								
4/2/01	1446					42.8	0.0023					47.7	0.0069						
4/2/01	1545	145960	144905	3	29			117240	116185	3	22								
4/2/01	1655	146150	145095	3	28			117440	116385	3	22								

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
4/2/01	1700																		
4/2/01	1705																		
4/2/01	1708																		
4/2/01	1710																		
4/3/01	900	148810	147755	3	29			120290	119235	3	23								
4/3/01	920																		
4/3/01	935																		
4/3/01	946																		
4/3/01	953																		
4/3/01	956																		
4/3/01	1140																		
4/3/01	1215	149340	148285	3	29			120860	119805	3	22								
4/3/01	1220																		
4/3/01	1224																		
4/3/01	1400	149620	148565	3	28			121170	120115	3	22								
4/3/01	1431					47.3	0.0029					57.1	0.0349						
4/3/01	1440																		
4/3/01	1510	149790	148735	3	27			121370	120315	3	22								
4/3/01	1600	149900	148845	2	27			121510	120455	3	22								
4/3/01	1612																		
4/3/01	1614																		
4/3/01	1620																		
4/3/01	1622																		
4/3/01	1630	149960	148905	2	22			121590	120535	2	22								
4/3/01	1732																		
4/3/01	1735	150080	149025	3	32			121720	120665	3	21								
4/4/01	835	152750	151695	3	36			124320	123265	3	23								
4/4/01	900																		
4/4/01	910																		
4/4/01	914																		
4/4/01	935																		
4/4/01	937																		
4/4/01	1010																		
4/4/01	1640	154120	153065	3	31			125690	124635	3	22								
4/4/01	1645					45.3	0.0015					49.6	0.115						
4/4/01	1647																		
4/4/01	1658																		
4/4/01	1700																		
4/4/01	1715																		
4/4/01	1730	154240	153185	3	31			125820	124765	3	22								
4/5/01	1120	157120	156065	3	31			128870	127815	3	23								
4/5/01	1145																		
4/5/01	1153																		
4/5/01	1156																		
4/5/01	1200																		
4/5/01	1204																		
4/5/01	1400																		
4/5/01	1400	157710	156655	3	31			129790	128735	3	23								
4/5/01	1507					43.6	0.0045					42.9	0.208						
4/5/01	1540	157800	156745	3	34			129590	128535	3	23								
4/5/01	1600																		
4/5/01	1604																		
4/5/01	1608																		
4/5/01	1611																		
4/5/01	1620	157920	156865	3	34			129720	128665	3	23								
4/5/01	1645																		
4/5/01	1645	157970	156915	3	34			129770	128715	3	23								
4/6/01	840	160510	159455	3	32			132390	131335	3	24								
4/6/01	905																		
4/6/01	908																		
4/6/01	912																		
4/6/01	920																		
4/6/01	940	160670	159615	3	35			132560	131505	3	25								
4/6/01	1035	160800	159745	3	35			132690	131635	3	25								
4/6/01	1050																		
4/6/01	1053																		
4/6/01	1130																		
4/6/01	1150																		
4/6/01	1402					46	0.0138					45.3	0.394						
4/6/01	1415																		
4/6/01	1430																		
4/6/01	1433																		
4/6/01	1436																		
4/6/01	1438																		
4/6/01	1446																		
4/6/01	1455	161520	160465	3	35			133400	132345	3	25								
4/9/01	950	165520	164465					137470	136415										
4/9/01	1020	165520	164465	3	41			137470	136415	3	34/30								
4/9/01	1040																		
4/9/01	1043	165560	164505	3	38			137510	136455	3	31/27								
4/9/01	1100																		
4/9/01	1125																		
4/9/01	1127																		
4/9/01	1131																		
4/9/01	1150																		
4/9/01	1230	165840	164785	3	36			137800	136745	3	26								
4/9/01	1233																		
4/9/01	1250																		
4/9/01	1308																		
4/9/01	1415	166110	165055	3	41			138070	137015	3	28								
4/9/01	1415					40.4	0.0075					39.7	0.0984						
4/9/01	1550	166140	165085	3	46			138100	137045	3	30								
4/9/01	1605																		
4/9/01	1607																		
4/9/01	1610																		
4/9/01	1620																		
4/9/01	1630																		
4/9/01	1710	166340	165285	3	47			138290	137235	3	38								
4/9/01	1720			0						0									
4/11/01	1330	166370	165315					138320	137265										
4/11/01	1445																		
4/11/01	1615	166790	165735	3	40			138680	137625	3	26								
4/11/01	1640					39.8	0.0097					40.4	0.0798						
4/11/01	1720																		
4/11/01	1723																		
4/11/01	1735	167010	165955	3	40			138890	137835	3	25								
4/11/01	1745																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
4/12/01	700	169470	168415	3	39			141260	140205	3	26								
4/12/01	820									0									
4/12/01	1130			0															
4/12/01	1445					45.4	0.0599					44	0.385						
4/12/01	1615																		
4/12/01	1620							142310	141255	3	27								
4/12/01	1630	170540	169485	3	42														
4/12/01	1635																		
4/12/01	1655																		
4/12/01	1700																		
4/12/01	1703							142410	141355	3	27								
4/12/01	1705	170650	169595	3	42														
4/12/01	1715																		
4/13/01	1235																		
4/13/01	1245							145790	144735	2.8	32/26								
4/13/01	1257	174040	172985	2.8	42							44.2	0.671						
4/13/01	1330					44.3	0.163												
4/13/01	1340							157460	156405	2.8	28								
4/16/01	915	185510	184455	2.8	42														
4/16/01	920																		
4/16/01	920																		
4/16/01	923																		
4/16/01	935																		
4/16/01	1000							157640	156585										
4/16/01	1120	185700	184645					157780	156725	2.8	27								
4/16/01	1220	185830	184775	2.8	44							40.7	1.4						
4/16/01	1500					39.6	1.12												
4/16/01	1512							158320	157265	2.8	27								
4/16/01	1530	186380	185325	2.8	42														
4/16/01	1535																		
4/16/01	1538																		
4/16/01	1605							158510	157455	2.8	25								
4/16/01	1638	186570	185515	2.8	43														
4/16/01	1645							161830	160775	2.9	27								
4/17/01	1155	189940	188885	2.8	44														
4/17/01	1205																		
4/17/01	1208																		
4/17/01	1212																		
4/17/01	1215																		
4/17/01	1230											38.9	1.8						
4/17/01	1505					38.4	1.68												
4/17/01	1512							162410	161355	2.8	26								
4/17/01	1525	190520	189465	2.9	43														
4/17/01	1535																		
4/17/01	1537																		
4/17/01	1548							162650	161595	2.8	27								
4/17/01	1652	190760	189705	2.9	43			169830	168775	2.9	27								
4/19/01	1100	197990	196935	2.8	44														
4/19/01	1107																		
4/19/01	1109																		
4/19/01	1115																		
4/19/01	1118																		
4/19/01	1205							170010	168955										
4/19/01	1205	198140	197085			39.1	2.41					38.6	2.54						
4/19/01	1205																		
4/19/01	1325																		
4/19/01	1456																		
4/19/01	1505																		
4/19/01	1510																		
4/19/01	1512																		
4/19/01	1515																		
4/19/01	1520																		
4/19/01	1530																		
4/20/01	852																		
4/20/01	920																		
4/20/01	921																		
4/20/01	940																		
4/20/01	942																		
4/20/01	1030																		
4/20/01	1205																		
4/20/01	1315																		
4/20/01	1320																		
4/20/01	1323																		
4/20/01	1335																		
4/20/01	1337																		
4/20/01	1505																		
4/20/01	1507																		
4/20/01	1508																		
4/20/01	1525																		
4/20/01	1532																		
4/20/01	1534																		
4/20/01	1550																		
4/23/01	1025																		
4/23/01	1050																		
4/23/01	1055																		
4/23/01	1120																		
4/23/01	1130																		
4/23/01	1150																		
4/23/01	1330																		
4/23/01	1338																		
4/23/01	1340																		
4/23/01	1355																		
4/23/01	1630																		
4/23/01	1710																		
4/23/01	1712																		
4/23/01	1714																		
4/23/01	1735																		
4/23/01	1742																		
4/24/01	820																		
4/24/01	842																		
4/24/01	844																		
4/24/01	850																		
4/24/01	910																		
4/24/01	1300																		
4/24/01	1302																		
4/24/01	1310																		
4/24/01	1312																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
4/24/01	1445	198160	197105					170020	168965										
4/24/01	1500	198160	197105	1				170020	168965	1									
4/24/01	1515																		
4/24/01	1530																		
4/24/01	1554	198200	197145	1	15			170060	169005	1	12								
4/24/01	1600																		
4/24/01	1606																		
4/24/01	1607																		
4/24/01	1705																		
4/24/01	1720	198290	197235	1	15			170140	169085	1	12								
4/25/01	1130																		
4/25/01	1210																		
4/25/01	1213	199550	198495	3	32			171140	170085	3	31								
4/25/01	1355																		
4/25/01	1358																		
4/25/01	1402																		
4/25/01	1403																		
4/25/01	1410																		
4/25/01	1435	199960	198905	3	33			171540	170485	3	32								
4/25/01	1500					67.8	0.0066					66.1	0.0024						
4/25/01	1550																		
4/25/01	1558																		
4/25/01	1559																		
4/25/01	1605																		
4/25/01	1607																		
4/25/01	1610																		
4/25/01	1620	200260	199205	3	33			171860	170805	3	35								
4/26/01	825	202820	201765	3	41			174710	173655	3	41								
4/26/01	900	202870	201815	3	34			174760	173705	3	34								
4/26/01	923																		
4/26/01	944																		
4/26/01	946																		
4/26/01	955																		
4/26/01	1002																		
4/26/01	1012	203060	202025	3	34			175000	173945	3	34								
4/26/01	1500					53.2	0.0046					54.4	0.0041						
4/26/01	1535	203110	202055					175030	173975										
4/26/01	1600	203160	202105	3	32			175090	174035	3	32								
4/26/01	1617																		
4/26/01	1625																		
4/26/01	1633																		
4/26/01	1635																		
4/26/01	1640																		
4/26/01	1712																		
4/26/01	1714	203370	202315	3	30			175300	174245	3	30								
4/27/01	900																		
4/27/01	1200					56.9	0.0044					56.4	0.01						
4/27/01	1215																		
4/27/01	1220																		
4/27/01	1250	206920	205865	3	36			178750	177695	3	34								
4/27/01	1335																		
4/30/01	1210	218750	217695	3	32			190260	189205	3	35								
4/30/01	1230																		
4/30/01	1233																		
4/30/01	1242																		
4/30/01	1335	219000	217945	3	38			190520	189465	3	36								
4/30/01	1345																		
4/30/01	1450			3	38						37								
4/30/01	1508					53.2	0.024					52.5	0.0468						
4/30/01	1518																		
4/30/01	1525																		
4/30/01	1530																		
4/30/01	1550																		
4/30/01	1610																		
4/30/01	1615	219480	218425	3	38			191010	189955	3	37								
5/1/01	1125	222360	221305	3	42			193910	192855	3	38								
5/1/01	1135																		
5/1/01	1150																		
5/1/01	1153																		
5/1/01	1200																		
5/1/01	1225																		
5/1/01	1230	222530	221475	3	40			194080	193025	3	38								
5/1/01	1305																		
5/1/01	1445	222930	221875	3	40			194470	193415	3	38								
5/1/01	1500																		
5/1/01	1504																		
5/1/01	1510																		
5/1/01	1512																		
5/1/01	1513					50.6	0.0945					50.6	0.116						
5/1/01	1600	223160	222105	3	39			194700	193645	3	38								
5/2/01	800	225600	224545	0				197100	196045	0									
5/2/01	1130	226130	225075	3	38			197600	196545	3	38								
5/2/01	1148																		
5/2/01	1150																		
5/2/01	1155																		
5/2/01	1207																		
5/2/01	1215																		
5/2/01	1220	226280	225225	3	38			197750	196695	3	38								
5/2/01	1512	226770	225715	3	38			198230	197175	3	38								
5/2/01	1513																		
5/2/01	1518																		
5/2/01	1520																		
5/2/01	1536					50.4	0.228					49.3	0.324						
5/2/01	1550																		
5/2/01	1640																		
5/2/01	1645	227050	225995	3	38			198510	197455	3	3								
5/3/01	840	229820	228765	3	39			201310	200255	3	39								
5/3/01	852																		
5/3/01	854																		
5/3/01	910																		
5/3/01	912																		
5/3/01	1003																		
5/3/01	1020																		
5/3/01	1245	230530	229475	3	39			202020	200965	3	39								
5/3/01	1424					44.2	0.38					44.8	0.665						
5/3/01	1455																		
5/3/01	1510																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
5/3/01	1512																		
5/3/01	1600	231080	230025	3	40			202590	201535	3	40								
5/4/01	1020	234220	233165	3	40			205770	204715	3	39								
5/4/01	1025																		
5/4/01	1030																		
5/4/01	1115	234370	233315	3	40			205930	204875	3	40								
5/4/01	1445					44.3	0.765					43.3	1.14						
5/4/01	1520	235060	234005	3	39			206640	205585	3	40								
5/4/01	1520																		
5/4/01	1540																		
5/4/01	1542																		
5/4/01	1550																		
5/4/01	1610																		
5/4/01	1620	235220	234165	3	39			206800	205745	3	39								
5/7/01	1257	246590	245535	3	42			218490	217435	3	42								
5/7/01	1305																		
5/7/01	1315																		
5/7/01	1318																		
5/7/01	1340																		
5/7/01	1430	246870	245815	3	41			218770	217715	3	40								
5/7/01	1510																		
5/7/01	1512											41.6	2.4						
5/7/01	1515					43.1	2.01												
5/7/01	1535																		
5/7/01	1548																		
5/7/01	1600	247630	246575	3	45			219020	217965	3	42								
5/8/01	822	250090	249035	3	43			221820	220765	3	40								
5/8/01	845																		
5/8/01	907																		
5/8/01	910																		
5/8/01	918																		
5/8/01	920																		
5/8/01	1050	250520	249465	3	43			222230	221175	3	40								
5/8/01	1455					41.1	2.42					39.6	2.57						
5/8/01	1515	251310	250255	3	43			222970	221915	3	40								
5/8/01	1520																		
5/8/01	1522																		
5/8/01	1540																		
5/8/01	1545																		
5/8/01	1625	251500	250445	3	42			223160	222105	3	40								
5/9/01	1015	254610	253555	3	43			226200	225145	3	40								
5/9/01	1033																		
5/9/01	1042																		
5/9/01	1045																		
5/9/01	1050	254720	253665	3	44			226310	225255	3	41								
5/9/01	1051																		
5/9/01	1102																		
5/9/01	1106																		
5/9/01	1420																		
5/9/01	1430	255370	254315	3	44			226940	225885	3	42								
5/9/01	1545	255590	254535	3	44			227180	226125	3	43								
5/9/01	1550					43.6	2.79					43.5	3.02						
5/9/01	1640																		
5/9/01	1645																		
5/9/01	1655	255790	254735	3	42			227350	226295	3	39								
5/9/01	1700																		
5/9/01	1700																		
5/10/01	815	258580	257525	3	43			230050	228995	3	40								
5/10/01	835																		
5/10/01	841																		
5/10/01	858																		
5/10/01	935																		
5/10/01	1210	259280	258225	3	43			230730	229675	3	40								
5/10/01	1245			3						3									
5/10/01	1355	259580	258525	3	42			231020	229965	3	40								
5/10/01	1450																		
5/10/01	1504																		
5/10/01	1510																		
5/10/01	1510					46.5	3.11					45.3	3.24						
5/10/01	1513																		
5/10/01	1550																		
5/10/01	1600	259880	258825	3	42			231320	230265	3	40								
5/11/01	1010																		
5/11/01	1040																		
5/11/01	1052	263170	262115	3	42			234530	233475	3	40								
5/11/01	1215					43.4	3.43					43.4	3.53						
5/11/01	1245																		
5/11/01	1250																		
5/14/01	1100	275630	274575	3	42			246720	245665	3	40								
5/14/01	1115																		
5/14/01	1130																		
5/14/01	1135																		
5/14/01	1145	275760	274705	1	18			246850	245795	1	17								
5/14/01	1210																		
5/14/01	1222																		
5/14/01	1341	275870	274815	1	18			246960	245905	1	17								
5/14/01	1536	275970	274915	1	17			247080	246025	1	16								
5/14/01	1540					44.3	1.76					44.8	1.89						
5/14/01	1545																		
5/14/01	1550																		
5/14/01	1555																		
5/14/01	1630	276020	274965	1	17			247130	246075	1	16								
5/15/01	825	276860	275805	1	17			248010	246955	1	17								
5/15/01	840																		
5/15/01	846																		
5/15/01	855																		
5/15/01	943	276930	275875					248080	247025										
5/21/01	1400	276930	275875	2	27			248080	247025	2	24			10	0	2	10		
5/21/01	1500																		
5/21/01	1504																		
5/21/01	1506																		
5/21/01	1518													250	240	2	10		
5/21/01	1528	277260	276205	2	26			248390	247335	2	24							55.3	0.313
5/21/01	1540					18.5	0.0782					16.9	0.0675						
5/21/01	1620	277350	276295	2	26			248470	247415	2	23			350	340	2	9		
5/22/01	818	279050	277995	2	35			250020	248965	2	23			2210	2200	2	10		
5/22/01	838																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
5/22/01	902																		
5/22/01	906																		
5/22/01	925																		
5/22/01	1010																		
5/22/01	1435																		
5/22/01	1445																		
5/22/01	1500					46.5	0.564					44.2	0.921					56.6	0.0008
5/22/01	1515																		
5/22/01	1550	279910	278855	2	26			250180	249125	2	27			3100	3090	2	10		
5/23/01	855																		
5/23/01	905																		
5/23/01	1030																		
5/23/01	1320																		
5/23/01	1322																		
5/23/01	1327																		
5/23/01	1435																		
5/23/01	1445					45.9	1.29					45	1.45					46.2	0.0048
5/23/01	1515																		
5/23/01	1530																		
5/23/01	1628																		
5/23/01	1640	282440	281385	2	26			250670	249615	2	24			5820	5810	2	10		
5/24/01	851																		
5/24/01	901																		
5/24/01	1430																		
5/24/01	1436																		
5/24/01	1457																		
5/24/01	1520					42.1	1.95					42.7	2.06					40.6	0.0179
5/24/01	1615																		
5/24/01	1618	285080	284025	2	25			253080	252025	2	25			8530	8520	2	10		
5/24/01	1621																		
5/25/01	807	286920	285865	2	28			254830	253775	2	27			10410	10400	2	12		
5/25/01	824																		
5/25/01	830																		
5/25/01	918	287046	285991	2	28			254950	253895	2	28			10530	10520	2	12		
5/25/01	1023																		
5/25/01	1030	287170	286115	1	16			255070	254015	1	17			10690	10680	4	19		
5/25/01	1352																		
5/25/01	1356																		
5/25/01	1405	287370	286315	1	14			255220	254165	1	13			11580	11570	4	18		
5/25/01	1445																		
5/25/01	1450					46.1	1.36					46	1.33					49.8	0.0009
5/25/01	1503																		
5/25/01	1515																		
5/25/01	1527	287495	286440	1	14			255342	254287	1	16			11910	11900	4	17		
5/26/01	803			1	32					1	35			15920	15910	4	15		
5/26/01	821																		
5/26/01	828																		
5/26/01	903			1	31					1	35			16150	16140	4	14		
5/26/01	1245																		
5/26/01	1302																		
5/26/01	1305					45.7	0.813					44.1	0.728					39	0.0016
5/26/01	1308			1	32					1	35			16730	16720	4	12		
5/27/01	1002			1	15					1	12			21600	21590	4	20		
5/27/01	1030																		
5/27/01	1035																		
5/27/01	1105					48.7	1					47.9	0.939					48.2	0.0028
5/27/01	1128			1	17					1	15			21920	21910	4	20		
5/29/01	950	287680	300745	1	16			255550	268615	1	14			31330	31320	4	24		
5/29/01	1115																		
5/29/01	1123																		
5/29/01	1145																		
5/29/01	1210	287680	301160	1				255550	269030	1				31910	31900				
5/29/01	1445	287680	301160	1	15			255550	269030	1	14			31910	31900	4	26		
5/29/01	1530																		
5/29/01	1540					45.2	0.835					42.1	0.791					38.8	0.137
5/29/01	1600																		
5/29/01	1630																		
5/29/01	1638																		
5/29/01	1645																		
5/29/01	1647																		
5/29/01	1655	287820	301300	1	16			255650	269130	1	14			32480	32470	4	26		
5/29/01	1710																		
5/30/01	803			1	30					1	28			36300	36290	4	39		
5/30/01	820																		
5/30/01	822																		
5/30/01	914	288740	302220	1	28			256530	270010	1	16			36450	36440	4	17		
5/30/01	1005																		
5/30/01	1045																		
5/30/01	1108																		
5/30/01	1310																	39.1	0.538
5/30/01	1410																		
5/30/01	1500																		
5/30/01	1507																		
5/30/01	1545																		
5/30/01	1612													38600	38590	4	24		
5/30/01	1652																		
5/30/01	1700													38770	38760	4	25		
5/31/01	800													42440	42430	4	26		
5/31/01	824																		
5/31/01	827																		
5/31/01	858																		
5/31/01	921																		
5/31/01	1050	288770	302250	0.5	1									43140	43130	5	32		
5/31/01	1200																		
5/31/01	1200	288800	302280	1.1	14									43510	43500	5.5	32		
5/31/01	1207																		
5/31/01	1228																		
5/31/01	1350																		
5/31/01	1405					25	0.014											44.1	1.02
5/31/01	1430	288945	302425	1.1	17									44340	44330	5.5	32		
5/31/01	1615																		
5/31/01	1618																		
5/31/01	1640	289070	302550	1.1	15									45050	45040	5.5	32		
5/31/01	1732																		
6/1/01	804	290010	303490	1.1	15									50030	50020	5.5	34		
6/1/01	815			3.3	15									50070	50060	3.25	34		
6/1/01	951																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)
6/1/01	956																		
6/1/01	1035																		
6/1/01	1040																		
6/1/01	1200	290720	304200	3.3	38									50750	50740	3.3	24		
6/1/01	1410	291120	304600	3.3	40									51110	51100	3.3	24		
6/1/01	1515					70.5	0.0036											46.1	0.708
6/1/01	1525																		
6/1/01	1540																		
6/1/01	1615	291490	304970	3.3	40									51450	51440	3.3	23		
6/1/01	1617																		
6/1/01	1650																		
6/2/01	820	294740	308220	3.3	41									54110	54100	3.3	26		
6/2/01	835																		
6/2/01	855																		
6/2/01	905																		
6/2/01	1140	295120	308600	3.3	41									54700	54690	3.3	25		
6/2/01	1320																		
6/2/01	1325																		
6/2/01	1330					66.4	0.0036											46.3	0.819
6/2/01	1343	295490	308970	3.3	41									55090	55080	3.3	22		
6/3/01	805	298780	312260	3.3	42									58320	58310	3.3	27		
6/3/01	820																		
6/3/01	828																		
6/3/01	920	298990	312470	3.3	42									58560	58550	3.3	27		
6/3/01	921					63	0.002											47.7	0.976
6/3/01	945																		
6/3/01	955																		
6/3/01	1025	299200	312680	3.3	42									58780	58770	3.3	27		
6/4/01	1100	303370	316850	3.1	46									63280	63270	3.2	28		
6/4/01	1120	303440	316920	3	46									63240	63230	3.3	28		
6/4/01	1130																		
6/4/01	1200	303560	317040	3	44									63470	63460	3.3	28		
6/4/01	1201					60.5	0.0016											45.6	1.09
6/4/01	1235																		
6/4/01	1308																		
6/4/01	1312	303770	317250	3.2	44									63690	63680	3.3	28		
6/4/01	1420																		
6/4/01	1525	304160	317640	3.2	44									64100	64090	3.3	28		
6/4/01	1535																		
6/4/01	1540																		
6/4/01	1550																		
6/4/01	1601																		
6/4/01	1612	304300	317780	3.2	44									64240	64230	3.3	28		
6/5/01	810	306800	320280											66830	66820				
6/5/01	845	306800	320280	3.1	47									66830	66820	3.3	28		
6/5/01	901																		
6/5/01	910																		
6/5/01	920																		
6/5/01	1133																		
6/5/01	1138																		
6/5/01	1211	307440	320920	3.1	47									67480	67470	3.3	28		
6/5/01	1245					57.3	0.001											44.5	1.16
6/5/01	1415	307800	321280	3.1	48									67860	67850	3.3	28		
6/5/01	1520																		
6/5/01	1603																		
6/5/01	1605																		
6/5/01	1613																		
6/5/01	1620	308160	321640	3.1	46									68240	68230	3.3	28		
6/6/01	827	310920	324400	3	23									71150	71140	3.3	30		
6/6/01	833																		
6/6/01	838																		
6/6/01	907	311040	324520	3.2	24									71280	71270	3.3	25		
6/6/01	918																		
6/6/01	923																		
6/6/01	927																		
6/6/01	1223	311620	325100	3.2	24									71880	71870	3.3	30		
6/6/01	1355	311900	325380	3.2	23									72170	72160	3.3	30		
6/6/01	1400					56.1	0.0023											45.3	1.39
6/6/01	1535	312190	325670	3.2	23									72470	72460	3.3	30		
6/6/01	1605																		
6/6/01	1610																		
6/6/01	1618																		
6/6/01	1631																		
6/6/01	1645																		
6/7/01	906																		
6/7/01	915	315230	328710	3	48									75820	75810	3.3	31		
6/7/01	918																		
6/7/01	936																		
6/7/01	940	315280	328760	3	48									75890	75880	3.3	32		
6/7/01	945																		
6/7/01	954																		
6/7/01	1155	315560	329040	3.1	50									76280	76270	2.8	24		
6/7/01	1247																		
6/7/01	1251																		
6/7/01	1300					50.1	0.0179											44.4	1.22
6/7/01	1303																		
6/7/01	1420	316090	329570	3.2	50									76590	76580	2.3	25		
6/7/01	1435																		
6/7/01	1540	316320	329800	3.2	49									76760	76750	2.3	25		
6/7/01	1634																		
6/7/01	1645	316520	330000	3.2	50									76890	76880	2.3	24		
6/7/01	1702																		
6/8/01	848	319330	332810	3.1	52									78860	78850	2.2	27		
6/8/01	917																		
6/8/01	922																		
6/8/01	1000	319530	333010	3.1										79040	79030	3.1			
6/8/01	1031																		
6/8/01	1330					47.9	0.139											44.2	1.53
6/8/01	1405	320270	333750	3.1	53									79780	79770	3.1	28		
6/8/01	1415																		
6/8/01	1440																		
6/8/01	1445	320360	333840	3.1	53									79870	79860	3.1	28		
6/9/01	1312																		
6/9/01	1320	324360	337840	3.1										83800	83790	3.1	28		
6/9/01	1323																		
6/9/01	1330																		
6/9/01	1350					45.2	0.528											41.8	1.65

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
6/9/01	1405													84010	84000	3.1	27		
6/9/01	1430	324570	338050	3.1										87020	87010	3.2	31		
6/10/01	803	327640	341120	3.05	55														
6/10/01	830																		
6/10/01	836																		
6/10/01	902																		
6/10/01	920													87340	87330	3.2	30		
6/10/01	956	327970	341450	3.1	55									87820	87810	3.2	30		
6/10/01	1247	328470	341950	3.2	54														
6/10/01	1250																		
6/10/01	1257																	42.7	1.79
6/10/01	1320					44.4	1.05							87930	87920	3.2	30		
6/10/01	1325	328580	342060	3.2	53									91570	91560	3	32		
6/11/01	1040	332310	345790	3.1	56														
6/11/01	1058																		
6/11/01	1110																		
6/11/01	1118													92000	91990	3.3	30		
6/11/01	1313	332760	346240	3.1	53													41.6	1.85
6/11/01	1425					43.8	1.71												
6/11/01	1520																		
6/11/01	1540																		
6/11/01	1545													92520	92510	3.3	30		
6/11/01	1620	333300	346780	3.1	53									95380	95370	3.2	32		
6/12/01	930	336370	349850	3.1	55														
6/12/01	1015																		
6/12/01	1020																		
6/12/01	1025													95670	95660	3.1	29		
6/12/01	1117	336670	350150	3.2	54									96170	96160	3	30		
6/12/01	1413	337200	350680	3.1	54													41	1.91
6/12/01	1420					43.8	2.27												
6/12/01	1437																		
6/12/01	1442																		
6/12/01	1448																		
6/12/01	1510																		
6/12/01	1600																		
6/12/01	1612													96520	96510	3	31		
6/12/01	1622	337580	351060	3.1	53									99130	99120	3.1			
6/13/01	810	340370	353850											99140	99130	3	30		
6/13/01	852	340380	353860	3.1	57														
6/13/01	902																		
6/13/01	904													99490	99480	3	33		
6/13/01	1100	340760	354240	3.2	56														
6/13/01	1226																		
6/13/01	1240													99990	99980	3	33		
6/13/01	1308	341300	354780	3.2	55													40.6	2.06
6/13/01	1400					41.5	2.57												
6/13/01	1520																		
6/13/01	1531																		
6/13/01	1552													100280	100270	3.1	32		
6/13/01	1555	341620	355100	3.1	55									102930	102920	3	31		
6/14/01	815	344490	357970	3.1	56														
6/14/01	835																		
6/14/01	837																		
6/14/01	958													103440	103430	3	32		
6/14/01	1125	345030	358510	3.1	56														
6/14/01	1222																		
6/14/01	1224													103750	103740	3	32		
6/14/01	1320	345360	358840	3.1	55									103920	103910	3	32		
6/14/01	1420	345540	359020	3.1	55													40	2.1
6/14/01	1425					40.5	2.95												
6/14/01	1610																		
6/14/01	1616													104250	104240	3	31		
6/14/01	1628	345900	359380	3.1	55									106860	106850	2.8	33		
6/15/01	825	348720	362200	3.1	56														
6/15/01	840																		
6/15/01	845																		
6/15/01	855																		
6/15/01	918													107010	107000	1.1	15		
6/15/01	920	348880	362360	3.1	57														
6/15/01	926																		
6/15/01	957													107140	107130	1.1	14		
6/15/01	1145	349410	362890	3.2	56														
6/15/01	1210																		
6/15/01	1214																		
6/15/01	1245													107200	107190	1.1	14		
6/15/01	1303	349550	363030	3.2	55													42	0.98
6/15/01	1455					39.7	3.34												
6/15/01	1500	349900	363380	3.2	55									107300	107290	1.1	10		
6/15/01	1511																		
6/15/01	1522																		
6/15/01	1542													107350	107340	1.1	12		
6/15/01	1550	350050	363530	3.2	55									107810	107800	1.1	14		
6/16/01	820	351460	364940		59														
6/19/01	1300	351830	365110	3.2	56														
6/19/01	1310																		
6/19/01	1330																		
6/19/01	1420	351900	365380	3.3	56													8.4	0.0354
6/19/01	1435					33.7	0.189												
6/19/01	1600																		
6/19/01	1608																		
6/19/01	1621																		
6/19/01	1645	352340	365820	3.3	56														
6/19/01	1650													109040	109030	1	13		
6/20/01	830	355150	368630	3.4	57														
6/20/01	850																		
6/20/01	900																		
6/20/01	905																		
6/20/01	1008													109190	109180	1.1	13		
6/20/01	1110	355620	369100	3.4	57													35.3	0.0718
6/20/01	1440					39	2.5												
6/20/01	1512	356330	369810	3.4	56									109420	109410	1.1	12		
6/20/01	1515																		
6/20/01	1520																		
6/20/01	1535													109450	109440	1.1	11		
6/20/01	1545	356430	369910	3.4	60														
6/20/01	1600																		
6/20/01	1608																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
6/20/01	1620																		
6/20/01	1630																		
6/20/01	1638	356600	370080	3.3	60									109500	109490	1.1	11		
6/21/01	1004	360020	373500	3.4	60									110450	110440	1.1	12		
6/21/01	1020																		
6/21/01	1210																		
6/21/01	1445			3.2	57			256550	270030	1.1	4			110710	110700	1	11		
6/21/01	1450					36.9	3.23											40.4	0.143
6/21/01	1545																		
6/21/01	1607																		
6/21/01	1615																		
6/21/01	1620																		
6/21/01	1650																		
6/21/01	1702	361340	374820	3.2	58			256660	270140	1.1	12			110830	110820	1	11		
6/22/01	1105	364650	378130	3.2	60			257540	271020	1	12			111780	111770	1	12		
6/22/01	1142																		
6/22/01	1150																		
6/22/01	1345					38.6	3.75					41	0.0007					41	0.201
6/22/01	1350	365140	378620	3.1	57			257670	271150	1	10			111920	111910	1	11		
6/22/01	1415																		
6/22/01	1422																		
6/22/01	1435	365270	378750	3.1	57			257700	271180	1	10			111960	111950	1	11		
6/23/01	1040	368830	382310	3.1	59			258660	272160	1	12			113010	113000	1	13		
6/23/01	1109	368880	382360	3.1	59			258700	272180	1	12			113020	113010	1	11		
6/23/01	1111																		
6/23/01	1117																		
6/23/01	1300	369180	382660	3.2	58			258780	272260	1	10			113110	113100	1	10		
6/23/01	1347	369280	382760	3.2	57			258800	272280	1	11			113140	113130	1	11		
6/23/01	1420																		
6/23/01	1600	369670	383150	3.1	57			258910	272390	1	10			113250	113240	1	10		
6/23/01	1605					39.4	3.74					35.7	0.0007					40	0.226
6/23/01	1608																		
6/23/01	1636																		
6/24/01	940	372730	386210	3	57			259700	273180	0.9	12			114150	114140	1	12		
6/24/01	1000																		
6/24/01	1010																		
6/24/01	1123	373020	386500	3	57			259780	273260	0.9	11			114230	114220	1	11		
6/24/01	1244	373260	386740	3.1	59			259840	273320	0.9	12			114300	114290	1	11		
6/24/01	1427																		
6/24/01	1435																		
6/24/01	1439					37.6	4.17					26.1	0.0007					41.3	0.253
6/24/01	1440	373660	387140	3.1	59			259930	273410	0.9	11			114400	114390	1	10		
6/25/01	1140	377340	390820	3.2	60			260860	274340	0.9	14			115450	115440	1	11		
6/25/01	1150																		
6/25/01	1205																		
6/25/01	1208																		
6/25/01	1235																		
6/25/01	1310	377590	391070	3.2	60			260920	274400	0.9	13			115520	115510	1	11		
6/25/01	1435					36.7	4.09					21.3	0.0007					37.8	0.239
6/25/01	1540	378030	391510	3.2	57			261030	274510	0.9	14			115640	115630	1	12		
6/25/01	1545							261040	274520	3.3	44			115650	115640	1.1	10		
6/25/01	1600																		
6/25/01	1625																		
6/25/01	1637																		
6/25/01	1650																		
6/25/01	1717																		
6/25/01	1723							261330	274810	3.3	40			115740	115730	1.1	10		
6/26/01	825							264090	277570	3.3	40			116500	116490	1	12		
6/26/01	847																		
6/26/01	852																		
6/26/01	902																		
6/26/01	1035																		
6/26/01	1137							264670	278150	3.3	39			116660	116650	1	11		
6/26/01	1450											45	0.0007					38.9	0.245
6/26/01	1650																		
6/26/01	1701																		
6/26/01	1710																		
6/26/01	1725																		
6/26/01	1734							265730	279210	3.3	39			116960	116950	1	12		
6/27/01	820							268320	281800	3.2	42			117690	117680	1	13		
6/27/01	830																		
6/27/01	837																		
6/27/01	1050							268750	282230	3.2	42			117820	117810	1	11		
6/27/01	1112																		
6/27/01	1135																		
6/27/01	1315							269180	282660	3.2	42			117940	117930	1	11		
6/27/01	1321																		
6/27/01	1325																		
6/27/01	1425							269380	282860	3.2	42			117990	117980	1	11		
6/27/01	1430											47.9	0.00159					40.9	0.265
6/28/01	805							272400	285880	3.1	42			118860	118850	1	13		
6/28/01	823																		
6/28/01	834																		
6/28/01	900							272540	286020	3.1	42			118900	118890	1	12		
6/28/01	1232																		
6/28/01	1236																		
6/28/01	1237							273150	286630	3.1	42			119080	119070	1	10		
6/28/01	1400							273380	286860	3.1	42			119150	119140	1	10		
6/28/01	1520																		
6/28/01	1521																		
6/28/01	1522					2.48	0.0282					47.9	0.0007					40.3	0.25
6/28/01	1523	378070	391550	1	23			273640	287120	3	42			119230	119220	1	10		
6/29/01	820	378970	392450	1	11			276420	289900	3	45			120060	120050	1	11		
6/29/01	843																		
6/29/01	846																		
6/29/01	930	379040	392520	3	27			276610	290090	3	43			120120	120110	1	10		
6/29/01	1211	379490	392970	3	24			277050	290530	3	43			120250	120240	1	10		
6/29/01	1214																		
6/29/01	1217																		
6/29/01	1400	379790	393270	3	25			277340	290820	3	42			120340	120330	1	10		
6/29/01	1437																		
6/29/01	1440																		
6/29/01	1450					57.5	0.0327					47.3	0.00142					40	0.245
6/29/01	1455	379950	393430	3	25			277500	290980	3	42			120390	120380	1	10		
6/30/01	943	383080	396560	3	28			280550	294030	3	46			121310	121300	1	11		
6/30/01	1010																		
6/30/01	1013																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
6/30/01	1318	383370	396850	3	60			280770	294250	3	47			121460	121450	1	10		
6/30/01	1422	383550	397030	3	60			280950	294430	3	42			121510	121500	1	8		
6/30/01	1425					177	1.12					42.2	0.0014					36.5	0.278
6/30/01	1500																		
6/30/01	1503																		
7/1/01	1000	385160	399640	2.1	60			284190	297670	3	45			122470	122460	1	9		
7/1/01	1016																		
7/1/01	1027																		
7/1/01	1055	386270	399750	2.2	60			284340	297820	3	43			122520	122510	1	8		
7/1/01	1106																		
7/1/01	1111																		
7/1/01	1120					138	0.385					45.6	0.0017					43.2	0.3
7/1/01	1135	386350	399830	2.2	60			284450	297930	3	43					1	8		
7/2/01	810	388620	402100	1.9				287810	301290	3	45			123560	123550	1	10		
7/2/01	835																		
7/2/01	842																		
7/2/01	855																		
7/2/01	1000	388810	402290	1.9	73			288110	301590	3	44			123650	123640	1	9		
7/2/01	1213	389040	402520	1.9	72			288460	301940	3	44			123750	123740	1	8		
7/2/01	1223																		
7/2/01	1230																		
7/2/01	1239																		
7/2/01	1450	389320	402800	2	72			288880	302360	3	44			123880	123870	1	8		
7/2/01	1505					47.3	0.0069					42.3	0.001					38.4	0.27
7/2/01	1610	389460	402940	3.3	40			289100	302580	3	43			123950	123940	1	8		
7/2/01	1614																		
7/2/01	1620																		
7/2/01	1630	389520	403000	3.3	31			289160	302640	3	43			123960	123950	1	8		
7/2/01	1634																		
7/3/01	830	392400	405880	3.2	34			291690	305170	2.9	45			124730	124720	1	10		
7/3/01	845																		
7/3/01	851																		
7/3/01	900																		
7/3/01	1030					48	0.0819												
7/3/01	1040	392760	406260	3.2	32			292030	305510	2.9	44			124830	124820	1	10		
7/3/01	1130	392930	406410					292160	305640					124870	124860				
7/3/01	1300	392940	406420	3.3	30			292400	305880	2.9	44			124940	124930	1	10		
7/3/01	1430					48	0.0777					42.4	0.0017					37.5	0.277
7/3/01	1445	393260	406740	3.3	31			292670	306150	2.9	44			125030	125020	1	10		
7/3/01	1455																		
7/3/01	1504																		
7/3/01	1508																		
7/3/01	1610	393520	407000	3.3	31			292900	306380	2.9	44			125100	125090	1	10		
7/4/01	1138	396950	410430	3.1 -	33			295920	309400	2.9	46			126020	126010	1	11		
7/4/01	1203																		
7/4/01	1205																		
7/4/01	1215					91.2	0.59					42.2	0.0029					38.9	0.285
7/4/01	1225	397090	410570	3.1	33			296050	309530	2.9	46			126060	126050	1	10		
7/5/01	830	399550	413030					298210	311690					126730	126720				
7/5/01	840	399580	413060	3	36			298230	311710	2.8	52			126740	126730	1	14		
7/5/01	905																		
7/5/01	911																		
7/5/01	916																		
7/5/01	1015					40.3	0.222					40.5	0.0036					36.8	0.236
7/5/01	1112																		
7/5/01	1115																		
7/5/01	1218	400070	413550	2	51			298760	312260	2.8	46			126910	126900	1	9		
7/5/01	1448	400340	413820	2	54			299160	312660	2.8	45			127030	127020	1	8		
7/5/01	1500					39.7	0.271					40.5	0.0036					36.8	0.236
7/5/01	1810	400480	413960	2	54			299380	312860	2.8	47			127100	127090	1	8		
7/5/01	1715																		
7/5/01	1717																		
7/5/01	1722	400600	414080	2	54			299570	313050	2.8	46			127150	127140	1	8		
7/6/01	758	402070	415550	2	67			301810	315290	2.8	48			127850	127840	1	10		
7/6/01	814																		
7/6/01	820																		
7/6/01	841	402160	415640	2.3	72			301930	315410	3	52			127890	127880	1	9		
7/6/01	855																		
7/6/01	1030																		
7/6/01	1048	402430	415910	2.2	72			302280	315760	3	51			127990	127980	1	8		
7/6/01	1108																		
7/6/01	1327																		
7/6/01	1330																		
7/6/01	1350	402830	416310	2.4	70			302810	316290	3	50			128160	128150	1	8		
7/6/01	1405					48.5	0.229					41.9	0.0248					40.1	0.28
7/7/01	855	405220	418700	2.2	73			305930	319410	3	52			129120	129110	1	10		
7/7/01	907																		
7/7/01	913																		
7/7/01	916																		
7/7/01	1134	405540	419020	2.2	73			306380	319860	3	52			129250	129240	1	10		
7/7/01	1140																		
7/7/01	1144																		
7/7/01	1155	405580	419060	2.2	73			306440	319920	3	52			129270	129260	1	9		
7/7/01	1200					48.9	0.106					40.4	0.19					40.5	0.318
7/8/01	1015	408230	421710	2.1	74			310160	323640	3	53			130390	130380	1	10		
7/8/01	1029																		
7/8/01	1036																		
7/8/01	1050	408290	421770	2.1	73			310250	323730	3	53			130420	130410	1	9		
7/8/01	1115																		
7/8/01	1311	408540	422020	2.2	73			310590	324070	3	51			130520	130510	1	6		
7/8/01	1348																		
7/8/01	1352																		
7/8/01	1358	408620	422100	2.2	74			310710	324190	3	51			130560	130550	1	6		
7/8/01	1410					48.8	0.103					40.4	0.484					40.4	0.323
7/8/01	1420																		
7/9/01	1055	411000	424480	2	75			314150	327630	2.9				131600	131590	1	6		
7/9/01	1110																		
7/9/01	1120																		
7/9/01	1129																		
7/9/01	1350	411320	424800	2	74			314630	328110	2.9				131750	131740	1	6		
7/9/01	1450					46.3	0.101					38	0.853					38.1	0.354
7/9/01	1500																		
7/9/01	1505																		
7/9/01	1510																		
7/9/01	1515	411480	424960	2	74			314860	328340	3				131800	131790	1	6		
7/10/01	951	413500	426980	2	75			317880	331360	2.9	54			132740	132730	1	6		
7/10/01	1002																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
7/10/01	1030																		
7/10/01	1035																		
7/10/01	1115	413650	427130	2	75			318110	331590	2.9	53			132810	132800	1	10		
7/10/01	1321	413880	427360	1.9	72			318450	331930	2.9	52			132920	132910	0.9	9		
7/10/01	1406	413920	427400	2	73			318520	332000	3.3	55			132940	132930	1.1	7		
7/10/01	1425					45.2	0.105					37.9	1.05					38.3	0.332
7/10/01	1505																		
7/10/01	1510																		
7/10/01	1517																		
7/10/01	1550	414120	427600	2	73			318830	332310	3.3	57			133040	133030	1.1	7		
7/11/01	1000	416040	429520	1.9	75			322040	335520	3.2	58			134010	134000	1	9		
7/11/01	1030																		
7/11/01	1030					45.8	0.13												
7/11/01	1033																		
7/11/01	1100			3.3	15					3.3	58					2.2	20		
7/11/01	1445					25.3	3.55					35.7	1.87					38.1	0.93
7/11/01	1609																		
7/11/01	1620																		
7/11/01	1645	417160	430640	3.1	14			323240	336720	3.2	58			134780	134770	2.2	20		
7/12/01	930	418730	432210					324830	338310					135880	135870				
7/12/01	945	418730	432210	3.2	13			324830	338310	3	60			135880	135870	2.2	19		
7/12/01	1000																		
7/12/01	1006																		
7/12/01	1045	418910	432390	3.2	12			325000	338480	3.2	57			136000	135990	2.2	21		
7/12/01	1058																		
7/12/01	1400	419490	432970	3.2	12			325580	339060	3.2	57			136390	136380	2.2	21		
7/12/01	1412																		
7/12/01	1420																		
7/12/01	1442					26	4.84					38.9	1.88					40.7	1.21
7/12/01	1535																		
7/12/01	1546																		
7/12/01	1601	419850	433330	3.2	12			325930	339410	3.2	57			136620	136610	2.2	21		
7/13/01	1000	421850	435330					327900	341380					137950	137940				
7/13/01	1008	421850	435330	3.2	12			327900	341380	2.9	12			137950	137940	2.2	21		
7/13/01	1025																		
7/13/01	1037																		
7/13/01	1105																		
7/13/01	1200	422190	435670	2.2	8			328220	341700	3.3	8			138180	138170	2.2	22		
7/13/01	1210																		
7/13/01	1213																		
7/13/01	1217																		
7/13/01	1230																		
7/13/01	1500	422560	436040	2.2	8			328760	342240	3.3	8			138520	138510	2.2	20		
7/13/01	1505					27.8	4.86					36.5	2.12					39.2	1.34
7/13/01	1525																		
7/13/01	1535																		
7/13/01	1600	422680	436160	2.2	8			328940	342420	3.3	8			138640	138630	2.2	21		
7/16/01	940	427620	441100					336190	349670					143350	143340				
7/16/01	1000	427620	441100	2.2	8			336190	349670	3.1	62			143350	143340	2.2	21		
7/16/01	1040																		
7/16/01	1044																		
7/16/01	1051																		
7/16/01	1145																		
7/16/01	1145	427850	441330	2.2	8			336500	349980	3.3	59			143550	143540	2.2	22		
7/16/01	1200																		
7/16/01	1322	428050	441530	2.2	8			336800	350280	3.3	58			143740	143730	2.2	22		
7/16/01	1325																		
7/16/01	1340																		
7/16/01	1354	428110	441590	2.2	8			336890	350370	3.3	58			143800	143790	2.2	22		
7/16/01	1442					27.4	5.08					37.1	1.77					35.4	0.672
7/17/01	835	430430	443910	2.2	8			340280	353760	3.2	60			145970	145960	2.2	23		
7/17/01	900																		
7/17/01	918																		
7/17/01	918	430510	443990					340410	353890	3.3	60			146050	146040	2.2	22		
7/17/01	940																		
7/17/01	947																		
7/17/01	1000																		
7/17/01	1143							340850	354330	3.3	59			146340	146330	2.2	22		
7/17/01	1405	430510	443990	0.5				341290	354770	3.3	59			146620	146610	2.2	21		
7/17/01	1435	430530	444010	1.1	12			341380	354860	3.3	58			146680	146670	2.2	22		
7/17/01	1445					26.7	5.88					35.2	3.19					38.3	1.83
7/17/01	1517																		
7/17/01	1545																		
7/17/01	1620																		
7/17/01	1630	430620	444100	1.1	32			341730	355210	3.3	60			146900	146890	2.2	22		
7/18/01	825	431620	445100	1.1	28			344610	358090	3.3	60			148750	148740	2.1	23		
7/18/01	839																		
7/18/01	848																		
7/18/01	855																		
7/18/01	912	431680	445160	2.9	70			344750	358230	3.1	60			148850	148840	2.1	23		
7/18/01	1001																		
7/18/01	1011																		
7/18/01	1150	432120	445600	3	70			345230	358710	3.3	59			149150	149140	2.1	22		
7/18/01	1445	432620	446100	3	69			345760	359240	3.2	9			149490	149480	2	22		
7/18/01	1545					62.9	0.0031					36.6	3.72					41.1	1.92
7/18/01	1600	432830	446310	3	68			345980	359460	3.2	59			149630	149620	2.1	21		
7/18/01	1605																		
7/18/01	1615																		
7/18/01	1630	432920	446400	3	69			346070	359550	3.1	59			149690	149680	2.2	21		
7/19/01	813	435490	448970	2.8	70			348870	362350	3.2	60			151450	151440	2	24		
7/19/01	832																		
7/19/01	837																		
7/19/01	857																		
7/19/01	900	435620	449100	2.9	70			349000	362480					151540	151530	2	23		
7/19/01	910											37.9	3.44						
7/19/01	937																		
7/19/01	956																		
7/19/01	1335	436360	449840	2.9	69									152060	152050	2	22		
7/19/01	1335					60.4	0.0016											40.5	1.92
7/19/01	1448	436560	450040	2.9	68			349010	362490	0.5				152200	152190	2	21		
7/19/01	1625																		
7/19/01	1640																		
7/19/01	1655	436900	450380	2.9	68			349070	362550	1.1	10			152430	152420	2	21		
7/20/01	756	439240	452720	2.6	70			349840	363320	1	12			154100	154090	2	24		
7/20/01	815																		
7/20/01	818																		
7/20/01	1027																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
7/20/01	1033																		
7/20/01	1035	439640	453120	2.7	71			349970	363450	1	10			154390	154380	2	23		
7/20/01	1045					50.6	0.0072					44.9	0.0051					38	1.92
7/21/01	1023	443110	456590	2.5	72			351120	364600	0.9	11			157040	157030	2	23		
7/21/01	1035																		
7/21/01	1040																		
7/21/01	1158																		
7/21/01	1204																		
7/21/01	1211	443360	456840	2.5	72			351210	364690	0.9	10			157240	157230	2	21		
7/21/01	1217					50.9	0.0004					43.3	0.042					43.4	2.19
7/22/01	932	446210	459690	2.3	74			352230	365710	1	11			159610	159600	2	23		
7/22/01	945																		
7/22/01	949																		
7/22/01	1115	446430	459910	2.3	73			352310	365790	1	11			159800	159790	2	22		
7/22/01	1126																		
7/22/01	1150					48.3	0.0027					28.6	0.0003					43.6	2.25
7/22/01	1152	446500	459980	2.3	73			352340	365820	1	11			159860	159850	2	22		
7/22/01	1157																		
7/23/01	1207	449480	462960	2.2	75			353560	367040	1	12			162560	162550	2	22		
7/23/01	1226																		
7/23/01	1232																		
7/23/01	1249	449560	463040	2.1	72			353600	367080	3	35			162640	162630	3	28		
7/23/01	1345																		
7/23/01	1411	449720	463200	2.1	72			353830	367310	3	32			162880	162870	3	28		
7/23/01	1420					40.6	0.0011					44.5	0.0011					39.8	2.56
7/23/01	1440																		
7/23/01	1452																		
7/24/01	930	457890	471370	1.9	74			357020	370500	2.9	34			165970	165960	2.6	30		
7/24/01	1012																		
7/24/01	1116	452070	465550	1.9	74			357280	370760	2.85	34			166220	166210	2.6	30		
7/24/01	1139																		
7/24/01	1300	452260	465740	1.9	74			357570	371050	2.8	33			166490	166480	2.6	30		
7/24/01	1310																		
7/24/01	1355																		
7/24/01	1430																		
7/24/01	1430					44.4	0.0011					45.3	0.0011					36.4	3.19
7/24/01	1545	452550	466030	2	73			358000	371480	2.8	34			166930	166920	2.4	29		
7/25/01	830	454280	467760	1.9	75			360640	374120	3	34			169550	169540	3			
7/25/01	858																		
7/25/01	904																		
7/25/01	1035	454500	467980	1.8	74			361000	374480	3	37			169910	169900	2.8			
7/25/01	1055																		
7/25/01	1100																		
7/25/01	1250	454720	468200	1.8	74			361360	374840	3	36			170280	170270	2.9			
7/25/01	1424																		
7/25/01	1427																		
7/25/01	1529					42.5	0.0011					45.1	0.0012					36.2	3.38
7/25/01	1530	454990	468470	1.7	76			361820	375300	3	35			170740	170730	2.9			
7/25/01	1533																		
7/26/01	808	456610	470090	1.8	76			364550	378030	3	36			173500	173490	2.9	34		
7/26/01	820																		
7/26/01	827																		
7/26/01	858																		
7/26/01	1007	456800	470280	1.7	74			364880	378360	3.3	42			173850	173840	3	35		
7/26/01	1030			1.6						3.2						2.8			
7/26/01	1040			2.1	89					3.3	43					3	34		
7/26/01	1147																		
7/26/01	1152																		
7/26/01	1223	457040	470520	2	69			365280	378760	3.3	42			174230	174220	3	34		
7/26/01	1340	457190	470670	2.4	86			365520	379000	3.2	40			174460	174450	5	50		
7/26/01	1355																		
7/26/01	1400					46.4	0.0043					45.8	0.0011					35.7	4.02
7/26/01	1405																		
7/26/01	1415																		
7/26/01	1423																		
7/26/01	1430																		
7/26/01	1440																		
7/26/01	1445																		
7/26/01	1602																		
7/26/01	1607	457450	470930	2.4	86			365948	379428	3.2	42			175160	175150	5	52		
7/27/01	808	459130	472610	1.8	88			368750	382230	3	46			179660	179650	5	58		
7/27/01	847																		
7/27/01	850																		
7/27/01	915																		
7/27/01	917	459250	472730	1.8	86			368940	382420	3.1	44			179960	179950	3	38		
7/27/01	1110																		
7/27/01	1117	459450	472930	1.8	87			369280	382760	3	46			186520	186510	5.5	66		
7/27/01	1128																		
7/27/01	1325					48.4	0.0037					47.5	0.0016					27.9	5.6
7/27/01	1330	459680	473160	1.9	86			369670	383150	3.1	41			181310	181300	5.5	62		
7/27/01	1515																		
7/27/01	1518																		
7/27/01	1535	459900	473380	1.8	87			370030	383510	3.1	41			182000	181990	5.5	61		
7/28/01	1524	461740	475220	1.7	87			373220	386700	3	44			187850	187840	6.5	48		
7/28/01	1540																		
7/28/01	1557																		
7/28/01	1625					20.7	0.22					38.3	0.0017					36	3.59
7/28/01	1627	461750	475230					373400	386880	3.2	40			188210	188200	5.7	58		
7/28/01	1638																		
7/28/01	1645																		
7/29/01	1108							376680	390160	3.1	42			194460	194450	5.5	60		
7/29/01	1120																		
7/29/01	1129																		
7/29/01	1148	451750	465230	1	51			376800	390280	3.1	41			194680	194670	5.5	60		
7/29/01	1217	461780	475260	0.9	52			376890	390370	3.1	42			194840	194830	5.5	60		
7/29/01	1220					11.1	0.263					46.7	0.0052					28.1	5.64
7/29/01	1237																		
7/29/01	1240																		
7/30/01	1005	462880	476360	1.1	56			380660	394140	3.1	44			201870	201860	5.3	62		
7/30/01	1025																		
7/30/01	1036																		
7/30/01	1110	462950	476430	1.7	85			380860	394340	3	43			202220	202210	5.5	64		
7/30/01	1352																		
7/30/01	1403																		
7/30/01	1412	463150	476630	1.7	85			381360	394840	3	42			203230	203220	5.6	64		
7/30/01	1420					49	0.0018					44.5	0.0045					27.9	5.73
7/30/01	1448	463210	476690	1.7	85			381460	394940	3.1	42			203440	203430	5.6	64		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
7/31/01	831	464870	478350	1.7	88			384450	397930	3	44			209340	209330	5.5	66		
7/31/01	850																		
7/31/01	900																		
7/31/01	1110																		
7/31/01	1118	465130	478610	1.7	88			384920	398400	3	44			210240	210230	5.5	66		
7/31/01	1126																		
7/31/01	1343	465350	478830	1.7	88			385320	398800	3	44			211030	211020	5.5	66		
7/31/01	1410					48.1	0.0021					43.4	0.016					27.9	5.91
7/31/01	1428																		
7/31/01	1510																		
7/31/01	1650	465630	479110	1.7	88			385850	399330	3	44			212040	212030	5.5	66		
8/1/01	800	466320	479800					387156	400636					214500	214490				
8/1/01	811	466330	479810	1.4	89			387160	400640	2.8	50			214520	214510	5.5	51		
8/1/01	833																		
8/1/01	841																		
8/1/01	852																		
8/1/01	923																		
8/1/01	1124																		
8/1/01	1125	466620	480100	1.6	86			387710	401190	3	44			215510	215500	5	56		
8/1/01	1130																		
8/1/01	1340	466820	480300	1.6	87			388090	401570	3	44			216160	216150	5	57		
8/1/01	1340					44.3	0.0047					40.5	0.0177					29.6	5.64
8/1/01	1535																		
8/1/01	1538																		
8/1/01	1545	467010	480490	1.6	88					3	44			216770	216760	5	58		
8/2/01	806	467850	481330	1.2	91			390060	403540	2.6	58			219640	219630	5.3	61		
8/2/01	927																		
8/2/01	929																		
8/2/01	938	467970	481450	1.5	87			390300	403780	3	43			220110	220100	5.3	58		
8/2/01	1126																		
8/2/01	1132																		
8/2/01	1153	468170	481650	1.6	87			390680	404160	2.9	43			220810	220800	5.1	59		
8/2/01	1419					45.6	0.172					42.3	0.0616					29.2	5.84
8/2/01	1420	468390	481870	1.6	87			391090	404570	2.9	43			221550	221540	5	59		
8/2/01	1433																		
8/2/01	1436																		
8/2/01	1440	468420	481900	1.6	85			391160	404640	3	41			221680	221670	5.1	58		
8/3/01	807			1.3	90					2.7	56			226830	226820	5.1	69		
8/3/01	912																		
8/3/01	915																		
8/3/01	1120	470160	483640	1.5	88			394530	408010	3	45			227760	227750	5.2	58		
8/3/01	1125																		
8/3/01	1130																		
8/3/01	1408	470400	483880	1.5	88			395000	408480	2.9	45			228630	228620	5	60		
8/3/01	1415					46.5	0.167					42.4	0.345					27.2	5.85
8/3/01	1520	470510	483990	1.5	88			395220	408700	3	43			229040	229030	5.1	58		
8/3/01	1520																		
8/3/01	1524																		
8/4/01	1004																		
8/4/01	1008																		
8/4/01	1101	472120	485600	1.5	88			398440	411920	2.9	45			234860	234850	5.6	52		
8/4/01	1105					43.8	0.0278					43.2	0.698					28.8	5.9
8/4/01	1120																		
8/4/01	1122																		
8/4/01	1129	472160	485640	1.5	88			398510	411990	2.9	45			235010	235000	5.6	55		
8/4/01	1134																		
8/5/01	1028	473770	487250	1.3	88			401810	415290	2.8	45			241150	241140	6	46		
8/5/01	1113																		
8/5/01	1116																		
8/5/01	1140	473866	487346	1.4	88			402000	415480	2.9	43			241540	241530	3.3	31		
8/5/01	1203																		
8/5/01	1207																		
8/5/01	1215																		
8/5/01	1235	473940	487420	1.4	88			402160	415640	2.9	42			241720	241710	3.3	28		
8/5/01	1240					40.3	0.0344					40.2	0.807					31.8	4.77
8/5/01	1254	473960	487440	1.4	88			402200	415680	2.9	42			241770	241760	3.6	30		
8/7/01	935	475820	489300	1.3	91			406110	419590	3	48			246040	246030	3.3	29		
8/7/01	1015																		
8/7/01	1040																		
8/7/01	1052																		
8/7/01	1120																		
8/7/01	1145	475990	489470	1.4	91			403460	416940	3	45			246460	246450	3.2	33		
8/7/01	1350	476160	489640	1.4	90			406810	420290	3	45			246820	246810	3.2	32		
8/7/01	1410					38.9	0.0531					38.7	0.81					38.3	3.78
8/7/01	1430																		
8/7/01	1440																		
8/7/01	1523																		
8/7/01	1530	476290	489770	1.4	90			407090	420570	3	45			247120	247110	3.2	32		
8/8/01	838																		
8/8/01	845																		
8/8/01	903																		
8/8/01	1108	477830	491310	1.4	46			410340	423820	3	46			250680	250670	3.1	34		
8/8/01	1342	478020	491500	1.4	46			410740	424220	3	46			251120	251110	3.2	34		
8/8/01	1450					43.4	0.128					40.3	1.67					35.5	4.8
8/8/01	1501																		
8/8/01	1510																		
8/8/01	1525	478150	491630	1.4	46			411030	424510	3	46			251430	251420	3.2	34		
8/9/01	834	479440	492920	1.3	92			413870	427350	3	48			254510	254500	3	37		
8/9/01	945																		
8/9/01	1001																		
8/9/01	1020																		
8/9/01	1127	479650	493130	1.4	91			414330	427810	3	48			255010	255000	3	37		
8/9/01	1303	479770	493250	1.4	91			414590	428070	3	48			255290	255280	3.2	35		
8/9/01	1415					42.5	0.203					39.5	1.92					35.2	4.75
8/9/01	1427																		
8/9/01	1430	479860	493340	1.4	91			414800	428280	3	45			255520	255510	3.2	30		
8/9/01	1443																		
8/9/01	1536	479940	493420	1.4	90			414970	428450	3	46			255710	255700	3.2	33		
8/10/01	806	481150	494630	1.3	91			417710	431190	3	47			258660	258650	3	36		
8/10/01	822																		
8/10/01	831																		
8/10/01	907																		
8/10/01	948	481280	494760	1.4	91			417990	431470	3	47			258960	258950	3	36		
8/10/01	1121	481390	494870	1.4	92			418250	431730	3	47			259230	259220	3.1	36		
8/10/01	1124																		
8/10/01	1133																		
8/10/01	1412	481590	495070	1.4	92			418720	432200	3	48			259730	259720	3.1	36		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
8/10/01	1415					40.4	0.271					36.6	2.31					31.7	4.47
8/10/01	1426																		
8/10/01	1435																		
8/10/01	1530	481680	495160	1.4	90			418910	432390	3	46			259940	259930	3.1	33		
8/13/01	1115	483020	496500	1.3	94			421990	435470	3	47			263260	263250	3.1	32		
8/13/01	1145																		
8/13/01	1153																		
8/13/01	1202																		
8/13/01	1212	483080	496560	1.3	93			422130	435610	4.5	66			263400	263390				
8/13/01	1216																		
8/13/01	1241																		
8/13/01	1551	483350	496830	1.3	93			423010	436490	4.5	65								
8/13/01	1619																		
8/13/01	1620					36.3	0.141					33.7	2.44					35.3	2.78
8/13/01	1631																		
8/13/01	1705	483440	496920	1.3	93			423300	436780	4.5	65								
8/14/01	835	484200	497680	1.1	98			425840	439320	3.5	80			263400	263390				
8/14/01	948	484220	497700	1.2	94			425880	439360	4.2	67								
8/14/01	1030	484250	497730	0.5	45			425990	439470	3	47								
8/14/01	1033																		
8/14/01	1038																		
8/14/01	1048																		
8/14/01	1115																		
8/14/01	1225	484310	497790	0.5	44			426320	439800	3	46			263400	263390	0.5	0		
8/14/01	1415	484370	497850	0.5	42			426640	440120	3	46			263450	263440	0.5	7		
8/14/01	1526																		
8/14/01	1540																		
8/14/01	1620																		
8/14/01	1620					40	2					39.5	2.35					6.36	2.82
8/14/01	1632	484440	497920	0.6	42			427030	440510	3.1	46			263580	263570	0.6	8		
8/15/01	900	484950	498430	0.6	44			429850	443330	3	48			264530	264520	1	8		
8/15/01	918																		
8/15/01	929																		
8/15/01	930																		
8/15/01	1210	485050	498530	0.6	43			430390	443870	3.1	47			264720	264710	1	8		
8/15/01	1605	485180	498660	0.6	42			431060	444540	3	45			264940	264930	1	8		
8/15/01	1615					31.7	0.0862					34.5	2.63					46.2	0.785
8/15/01	1645																		
8/15/01	1657																		
8/15/01	1710	485210	498690	0.6	43			431250	444730	3.1	46			265000	264990	1	8		
8/16/01	835	485680	499160	0.6	44			433870	447350	3	48			265890	265880	1	9		
8/16/01	858																		
8/16/01	906																		
8/16/01	910	485700	499180	0.6	44			433970	447450	3	47			265920	265910	3.5	18		
8/16/01	921																		
8/16/01	931																		
8/16/01	945																		
8/16/01	1050																		
8/16/01	1102	485760	499240	0.6	44			434270	447750	3	48			266300	266290	3.5	20		
8/16/01	1403	485840	499320	0.6	44			434760	448260	3	47			266900	266890	3.5	20		
8/16/01	1416					32.5	0.09					33.7	2.85					41.5	0.0187
8/16/01	1429																		
8/16/01	1441																		
8/16/01	1506																		
8/16/01	1535	485880	499360	0.6	43			435010	448490	3	47			267160	267150	3.5	19		
8/20/01	1058	488490	501970	0.6	46			449860	463340	3	48			284540	284530	3.5	23		
8/20/01	1130																		
8/20/01	1143																		
8/20/01	1229	488530	502010	0.6	46			450100	463580	3	47			284850	284840	3.5	24		
8/20/01	1410	488580	502060	0.6	45			450380	463860	3	47			285200	285190	3.5	24		
8/20/01	1421					39.8	0.26					37.5	4.08					42.3	0.0036
8/20/01	1432																		
8/20/01	1440																		
8/20/01	1452	488600	502080	0.6	45			450500	463980	3	47			285350	285340	3.5	24		
8/21/01	815	489090	502570	0.5	46			453360	466840	3	47			288930	288920	3.5	25		
8/21/01	833																		
8/21/01	841																		
8/21/01	1015	489150	502630	0.6	46			453680	467160	3	47			289330	289320	3.5	25		
8/21/01	1229	489210	502690	0.6	46			454050	467530	3	47			289790	289780	3.5	25		
8/21/01	1436	489270	502750	0.6	46			454400	467880	3	47			290230	290220	3.5	25		
8/21/01	1445					38.2	0.143					37.1	4.29					41	0.0204
8/21/01	1501																		
8/21/01	1511																		
8/21/01	1523	489290	502770	0.6	46			454530	468010	3	47			290390	290380	3.5	25		
8/22/01	848	489780	503260	0.6	47			457380	470860	3	49			293930	293920	3.5	26		
8/22/01	910																		
8/22/01	924																		
8/22/01	1001																		
8/22/01	1228	489880	503360	0.6	47			457990	471470	3	49			294680	294670	3.5	26		
8/22/01	1319	489900	503380	0.6	47			458140	471620	3	48			294850	294840	3.5	25		
8/22/01	1325					38.5	0.15					35.6	4.53					41	0.128
8/22/01	1340																		
8/22/01	1351																		
8/22/01	1402	489920	503400	0.5	46			458260	471740	3	48			294990	294980	3.5	25		
8/23/01	809	490420	503900	0.5	48			461270	474750	3	48			298660	298650	3.5	26		
8/23/01	824																		
8/23/01	835																		
8/23/01	1034	490490	503970	0.5	48			461670	475150	3	48			299150	299140	3.5	26		
8/23/01	1211	490540	504020	0.5	48			461940	475420	3	48			299470	299460	3.5	26		
8/23/01	1300					39	0.173					37.1	4.59					41.1	0.308
8/23/01	1351	490580	504060	0.5	47			462220	475700	3	47			299810	299800	3.5	26		
8/23/01	1418																		
8/23/01	1424																		
8/23/01	1442																		
8/23/01	1449	490610	504090	0.5	47			462370	475850	3	47			300000	299990	3.5	26		
8/24/01	854	491110	504590	0.5	48			465360	478840	3	48			303670	303660	3.5	27		
8/24/01	916																		
8/24/01	922																		
8/24/01	1031	491150	504630	0.5	48			465630	479110	3	48			304000	303990	3.5	27		
8/24/01	1315					38.2	1.3					36.9	4.78					40.7	0.552
8/24/01	1329	491230	504710	0.5	47			466120	479600	3	47			304610	304600	3.5	27		
8/24/01	1331																		
8/24/01	1336																		
8/24/01	1412	491250	504730	0.5	47			466230	479710	3	48			304750	304740	3.5	27		
8/27/01	1153	493160	506640	0.5	49			477610	491090	3	48			318660	318650	3.5	28		
8/27/01	1210																		
8/27/01	1221																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
8/27/01	1243																		
8/27/01	1423	493230	506710	0.5	49			476010	491490	3	48			319150	319140	3.5	28		
8/27/01	1435					37.5	2.31					34.8	5					37.1	1.52
8/27/01	1447																		
8/27/01	1455																		
8/27/01	1508	493250	506730	0.5	49			478130	491610	3	48			319290	319280	3.5	28		
8/27/01	1510																		
8/28/01	828	498760	512240	0.5	50			481200	494680	3	48			323020	323010	3.5	29		
8/28/01	1030																		
8/28/01	1041																		
8/28/01	1048																		
8/28/01	1234	493830	507310	0.5	49			481830	495110	3	47			323540	323530	3.5	28		
8/28/01	1417	493880	507360	0.5	49			481910	495390	3	47			323880	323870	3.5	28		
8/28/01	1430					34.9	2.22					35.6	5.1					37.7	1.86
8/28/01	1604	493920	507400	0.5	49			482170	495650	3	48			324180	324170	3.5	28		
8/28/01	1800																		
8/29/01	1043	494430	507910	0.5	50			485200	498680	3	48			327840	327830	3.5	29		
8/29/01	1100																		
8/29/01	1126																		
8/29/01	1212																		
8/29/01	1436	494540	508020	0.5	50			485840	499320	3	47			328610	328600	3.5	28		
8/29/01	1512	494560	508040	0.5	49			485940	499420	3	47			328730	328720	3.5	28		
8/29/01	1521					37.1	0.445					35.4	5.31					36.9	2.2
8/29/01	1524																		
8/30/01	1207																		
8/30/01	1218																		
8/30/01	1230																		
8/30/01	1257																		
8/30/01	1308																		
8/30/01	1415					24.5	0.19					35.6	4.46					35.8	2.6
8/30/01	1430																		
8/30/01	1437																		
9/4/01	1039	498250	511730	0.5	56			502360	515840	2	34			357270	357260	3.5	31		
9/4/01	1110																		
9/4/01	1130																		
9/4/01	1409	498340	511820	0.5	56			502740	516220	2	33			357990	357980	3.5	30		
9/4/01	1555					35.6	1.33					37.7	3.63					34.2	3.15
9/4/01	1625																		
9/4/01	1631																		
9/4/01	1642	498400	511880	0.5	56			502990	516470	2	33			358460	358450	3.5	30		
9/5/01	845	498800	512280	0.5	58			504670	518150	2	39			361600	361590	3.5	36		
9/5/01	905	498810	512290	0.5	54			504710	518190	2	33			361670	361660	3.5	32		
9/5/01	914																		
9/5/01	921																		
9/5/01	1204	498890	512370	0.5	54			505030	518510	2	33			362310	362300	3.5	32		
9/5/01	1334	498930	512410	0.5	54			505200	518680	2	33			362630	362620	3.5	31		
9/5/01	1350					36	0.548					39	3.78					33.5	3.82
9/5/01	1403																		
9/5/01	1412																		
9/5/01	1420	498950	512430	0.5	53			505280	518760	2	33			362790	362780	3.5	31		
9/6/01	815	499410	512890	0.5	56			507190	520670	2	34			366560	366550	3.5	32		
9/6/01	842																		
9/6/01	853																		
9/6/01	1147	499500	512980	0.5	56			507570	521050	2	34			367300	367290	3.5	32		
9/6/01	1307	499540	513020	0.5	56			507710	521190	2	34			367570	367560	3.5	32		
9/6/01	1320					37.5	0.434					38.5	3.92					34.9	4.1
9/6/01	1337																		
9/6/01	1345																		
9/6/01	1353	499560	513040	0.5	56			507790	521270	2	33			367730	367720	3.5	32		
9/7/01	900	500040	513520	0.5	57			509820	523300	2	35			371700	371690	3.5	33		
9/7/01	922																		
9/7/01	931																		
9/7/01	955					35.1	1.36					37.3	3.94					32.4	4.07
9/7/01	1003	500700	514180	0.5	57			509930	523410	2	34			371920	371910	3.5	33		
9/10/01	1029																		
9/10/01	1029	501820	515300	0.5	61			517500	530980	1.9	35			386730	386720	3.5	34		
9/10/01	1029											37.5	3.87						
9/10/01	1100																		
9/10/01	1350	501910	515390	0.5	60			517540	531020					387470	387460	3.5	34		
9/10/01	1403																		
9/10/01	1523																		
9/10/01	1531																		
9/10/01	1550					40.1	1.2											32.2	4.03
9/10/01	1623	501970	515450	0.5	61									387960	387950	3.5	34		
9/11/01	827	502370	515850	0.5	65									391270	391260	3.5	37		
9/11/01	845																		
9/11/01	1010																		
9/11/01	1010					35.9	1.27											31.8	4.23
9/11/01	1133	502430	515910	0.5	60									391830	391820	3.5	35		
9/11/01	1415	502500	515980	0.5	60									392400	392390	3.5	35		
9/12/01	1000	502990	516470	0.4	64									396420	396410	3.4	36		
9/12/01	1033																		
9/12/01	1040																		
9/12/01	1122																		
9/12/01	1130	503020	516500											396560	396550				
9/13/01	1230	503020	516500	0.5	61									396560	396550	0.5	0		
9/13/01	1343	503050	516530	0.5	70			517540	531020	0.5	0			396590	396580	0.49	0		
9/13/01	1405																		
9/13/01	1427																		
9/13/01	1434	503070	516550	0.5	70			517560	531040	0.5	5			396610	396600	0.49	2		
9/17/01	828	503070	516550	0.6	46			517560	531040	0.5	7			396610	396600	0.5	3		
9/17/01	937	503090	516570	0.6	58			517580	531060	0.5	8			396640	396630	0.5	9		
9/17/01	940																		
9/17/01	1045																		
9/17/01	1233	503140	516620	0.6	56			517630	531110	0.5	9			396710	396700	0.5	10		
9/17/01	1255																		
9/17/01	1302																		
9/17/01	1340																		
9/17/01	1350																		
9/17/01	1418	503170	516650	0.6	54			517660	531140	0.5	9			396750	396740	0.5	10		
9/17/01	1437					13.4	0.0484					1.34	0.148					3.99	0.775
9/17/01	1508	503180	516660	0.6	54			517680	531160	0.5	10			396770	396760	0.5	10		
9/18/01	1017	503520	517000	0.7	50			518020	531500	0.4	9			397190	397180	0.5	13		
9/18/01	1035																		
9/18/01	1047																		
9/18/01	1115																		
9/18/01	1126	503540	517020	0.7	50			518040	531520	0.4	10			397210	397200	0.5	13		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
9/18/01	1140	503550	517030	0.8	92			518060	531540	3	50			397260	397250	5	53		
9/18/01	1150																		
9/18/01	1241																		
9/18/01	1248																		
9/18/01	1348	503640	517120	0.9	87			518410	531890	3.2	37			397920	397910	6	50		
9/18/01	1419																		
9/18/01	1425																		
9/18/01	1435	503680	517160	0.8	87			518550	532030	3.2	38			398200	398190	6	50		
9/18/01	1445					32.9	0.321					54.2	0.0093					55.1	0.0194
9/18/01	1520																		
9/18/01	1530	503710	517190	0.8	87			518710	532190	3.2	38			398510	398500	6	50		
9/19/01	850	504450	517930	0.8	92			521840	535320	3.2	38			404740	404730	6	50		
9/19/01	905																		
9/19/01	912																		
9/19/01	1015	504500	517980	0.8	90			522070	535550	3.2	38			405220	405210	6	47		
9/19/01	1143	504560	518040	0.8	90			522330	535810	3.2	37			405760	405750	6	47		
9/19/01	1420																		
9/19/01	1431																		
9/19/01	1437	504670	518150	0.8	90			522840	536320	3.2	37			406800	406790	6	47		
9/19/01	1440					38.3	0.726					55.5	0.0086					53.1	0.0141
9/19/01	1520																		
9/19/01	1525	504710	518190	0.8	90			522980	536460	3.2	37			407090	407080	6	47		
9/20/01	846	505390	518870	0.7	91			526040	539520	3.1	39			413240	413230	6	50		
9/20/01	906																		
9/20/01	922																		
9/20/01	931																		
9/20/01	1005																		
9/20/01	1018	505450	518930	0.7	91			526310	539790	3.1	39			413780	413770	6	50		
9/20/01	1150	505510	518990	0.7	91			526570	540050	3.1	39			414310	414300	6	50		
9/20/01	1317	505560	519040	0.7	90			526830	540310	3.1	39			414830	414820	6	50		
9/20/01	1330					39.4	0.845					48.2	0.0026					47.1	0.573
9/20/01	1340																		
9/20/01	1345																		
9/20/01	1353							526930	540410	3.1	39			415030	415020	6	50		
9/24/01	1151	509040	522520	0.7	90			542560	556040	2.8	48			446740	446730	5.5	53		
9/24/01	1200																		
9/24/01	1225																		
9/24/01	1350					34.4	1.85					39.9	0.0023					37.5	3.05
9/24/01	1408																		
9/24/01	1420																		
9/24/01	1434	509160	522640	0.7	90			542990	556470	2.8	47			447650	447640	5.5	52		
9/25/01	1237	510040	523520	0.7	91			546440	559920	2.7	50			454900	454890	5.5	54		
9/25/01	1240																		
9/25/01	1249																		
9/25/01	1315																		
9/25/01	1327	510070	523550	0.7	91			546570	560050	2.7	50			455170	455160	5.5	53		
9/25/01	1335					36.6	1.82					42.8	0.0022					38.5	3.55
9/25/01	1458																		
9/25/01	1507	510140	523620	0.7	91			546820	560300	2.7	50			455720	455710	5.5	52		
9/25/01	1510																		
9/26/01	831	510610	524290	0.7	92			549500	562980	2.7	52			461420	461410	5.5	55		
9/26/01	840																		
9/26/01	845																		
9/26/01	923																		
9/26/01	1007	510870	524350	0.7	92			549740	563220	2.7	52			461940	461930	5.5	55		
9/26/01	1131	510920	524400	0.7	91			549950	563430	2.7	52			462390	462380	5.5	54		
9/26/01	1307	510980	524460	0.7	91			550190	563670	2.7	52			462920	462910	5.5	53		
9/26/01	1310																		
9/26/01	1318																		
9/26/01	1341					36.7	1.87					42.5	0.0039					36.5	3.85
9/26/01	1402																		
9/26/01	1427	511030	524510	0.7	90			550390	563870	2.7	51			463360	463350	5.5	52		
9/27/01	825	511710	525190	0.7	91			553090	566570	2.6	53			469220	469210	5.5	55		
9/27/01	843																		
9/27/01	850																		
9/27/01	930																		
9/27/01	1003	511770	525250	0.7	91			553330	566810	2.6	53			469750	469740	5.5	55		
9/27/01	1202	511840	525320	0.7	91			553620	567100	2.6	53			470390	470380	5.5	54		
9/27/01	1355	511910	525390	0.7	90			553900	567380	2.6	53			471000	470990	5.5	53		
9/27/01	1405					35.8	1.95					43.9	0.0032					47.1	5.31
9/27/01	1418																		
9/27/01	1423																		
9/27/01	1445																		
9/27/01	1450	511940	525420	0.7	90			554030	567510	2.6	52			471290	471280	5.5	52		
10/1/01	1320	515310	528790	0.6	91			567530	581010	2.5	56			501760	501750	5.4	44		
10/1/01	1337																		
10/1/01	1345					32.2	2.85					41.7	0.0272					36.1	5.02
10/1/01	1348																		
10/1/01	1404	515330	528810					567630	581110	2.5	56			501990	501980	5.5	44		
10/1/01	1534																		
10/1/01	1544																		
10/1/01	1605	515330	528810					567920	581400	2.5	57			502670	502660	4.9	53		
10/1/01	1615																		
10/2/01	942							570410	583890	2.5	58			508500	508490	5.5	56		
10/2/01	955																		
10/2/01	959																		
10/2/01	1008																		
10/2/01	1048							570570	584050	2.5	58			508870	508860	5.5	56		
10/2/01	1350							570990	584470	2.5	58			509880	509870	5.5	54		
10/2/01	1410											42.8	0.096					36.6	5.28
10/2/01	1417																		
10/2/01	1421																		
10/2/01	1430							571090	584570	2.5	78			510080	510070	4.5	36		
10/3/01	852							574650	588130	3.4	79			514970	514960	4.5	39		
10/3/01	912																		
10/3/01	924																		
10/3/01	1035																		
10/3/01	1235							575360	588840	3.5	79			515940	515930	4.5	39		
10/3/01	1343							575580	589060	3.5	78			516240	516230	4.5	39		
10/3/01	1346																		
10/3/01	1355																		
10/3/01	1410											39.6	0.579					37.3	4.61
10/3/01	1418																		
10/3/01	1421							575710	589190	3.5	78			516400	516390	4.5	38		
10/4/01	911							579320	592800	3.4	80			521290	521280	4.4	41		
10/4/01	935																		
10/4/01	947																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)	Totalizer (gls)	Vol (gls)	Flow (gpm)	Pressure in (psi)	Iron (mg/L)	V (mg/L)
10/4/01	1103							579670	593150	3.4	79			521770	521760	4.4	41		
10/4/01	1314							580090	593570	3.4	78			522330	522320	4.4	40		
10/4/01	1338																		
10/4/01	1340											40.7	1.1					38.4	4.76
10/4/01	1343																		
10/4/01	1400							580240	593720	3.4	78			522530	522520	4.4	40		
10/10/01	1107							605840	619320	2.9	84			557040	557030	4.3	42		
10/10/01	1140																		
10/10/01	1152																		
10/10/01	1233																		
10/10/01	1240							606110	619590	2.9	80			557410	557400	4.3	39		
10/10/01	1418																		
10/10/01	1421							606410	619890	2.9	80			557840	557830	4.3	38		
10/10/01	1430							606440	619920	3.3	82			557870	557860	1	8		
10/10/01	1431											36.8	2.95					34.9	3.88
10/10/01	1443																		
10/10/01	1453																		
10/10/01	1510																		
10/10/01	1518							606590	620070	3.3	82			557910	557900	1	8		
10/11/01	1120							610390	623870	3.3	83			558980	558970	1	10		
10/11/01	1138																		
10/11/01	1150																		
10/11/01	1344							610830	624310	3.3	82			559120	559110	1.2	10		
10/11/01	1348																		
10/11/01	1350											33.9	3.23					35.2	0.581
10/11/01	1354																		
10/11/01	1408																		
10/11/01	1458							611060	624540	3.3	81			559190	559180	1.2	10		
10/15/01	1145							628140	641620	3.2	84			564550	564540	1	12		
10/15/01	1207																		
10/15/01	1214																		
10/15/01	1233																		
10/15/01	1456							628710	642190	3.2	84			564730	564720	1	12		
10/15/01	1500											34.7	3.81					37.5	0.669
10/15/01	1513																		
10/15/01	1521																		
10/15/01	1535																		
10/15/01	1540							628840	642320	3.2	84			564770	564760	1	12		
10/16/01	833							631880	645360	3.2	84			565740	565730	1	12		
10/16/01	904																		
10/16/01	915																		
10/16/01	1108							632310	645790	3.2	84			565870	565860	1	12		
10/16/01	1415							632870	646350	3.2	83			566040	566030	1	12		
10/16/01	1440											32.9	3.72					35.6	0.658
10/16/01	1457																		
10/16/01	1510																		
10/16/01	1517							633060	646540	3.2	83			566100	566090	1	12		
10/17/01	1008							636440	649920	3.2	83			567130	567120	1	12		
10/17/01	1021																		
10/17/01	1029																		
10/17/01	1037							636500	649980	3.2	84			567160	567150	1	12		
10/17/01	1115																		
10/17/01	1133																		
10/17/01	1138																		
10/17/01	1205																		
10/17/01	1213							636800	650280	3.2	84			567240	567230	1	12		
10/17/01	1425											33.4	3.85					36.6	0.742
10/17/01	1508																		
10/17/01	1537																		
10/17/01	1611							637510	650990		84			567460	567450	1	12		
10/18/01	808							640330	653810	3.1	84			568330	568320	1	12		
10/18/01	1510											33.5	3.88					35.9	0.686
10/18/01	1524							641600	655080	3.1	83			568720	568710	1	12		
10/19/01	851							644650	658130	3.1	85			569670	569660	1	13		
10/19/01	917																		
10/19/01	920																		
10/19/01	933																		
10/19/01	950											34.5	4.06					37.3	0.774
10/19/01	1024							644920	658400	3.1	85			569750	569740	1	13		
10/19/01	1040																		
10/19/01	1045							644980	658460	3.1	85			569770	569760	1	13		
10/22/01	923							657040	670520	3	86			573570	573560	1	15		
10/22/01	942																		
10/22/01	950																		
10/22/01	958																		
10/22/01	1323	515330	528810	0.5	0			657710	671190	2.9	84			573760	573770	1	14		
10/22/01	1427	515360	528840	0.5	6			657890	671370	2.9	85			573840	573830	1	14		
10/22/01	1500					1.62	0.415					34.5	3.84					34.9	0.661
10/22/01	1507																		
10/22/01	1514																		
10/22/01	1521	515380	528860	0.5	8			658040	671520	2.9	85			573890	573880	1	14		
10/23/01	830	515820	529300	0.5	10			660870	674350	2.9	86			574790	574780	1	15		
10/23/01	857																		
10/23/01	912																		
10/23/01	926	515870	529350	1	34			661010	674490	2.5	87			574840	574830	1	30		
10/23/01	953	515880	529360	1	18			661040	674520	2.9	85			574850	574840	1	24		
10/23/01	1057																		
10/23/01	1254	516070	529550	1	16			661440	674920	2.9	84			575010	575000	1	14		
10/23/01	1442	516180	529660	1	17			661830	675310	2.9	84			575100	575090	1	14		
10/23/01	1446					36.4	0.028					34.6	3.68					35	0.619
10/23/01	1502																		
10/23/01	1506																		
10/23/01	1517	516210	529690	1	17			661920	675400	2.9	84			575130	575120	1	14		
10/24/01	911	517280	530760	1	16			664850	678330	2.9	86			576060	576050	1	16		
10/24/01	932																		
10/24/01	941																		
10/24/01	1010																		
10/24/01	1156	517440	530920	1	17			665290	678770	2.9	86			576200	576190	1	16		
10/24/01	1405	517570	531050	1	18			665640	679120	2.9	85			576320	576310	1	16		
10/24/01	1415																		
10/24/01	1432					29.3	0.0088					33.7	3.68					36.7	0.686
10/24/01	1440																		
10/24/01	1447	517610	531090	1	17			665750	679230	2.9	85			576350	576340	1	16		
10/24/01	1448																		
10/25/01	1014	518750	532230	1	18			668870	682350	2.8	86			577350	577340	1	17		
10/25/01	1027																		
10/25/01	1040																		

Date	Time	Column - 3						Column - 4						Column - 5					
		Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V	Totalizer	Vol	Flow	Pressure	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)	(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)
10/25/01	1125																		
10/25/01	1127	518820	532300	1	18			669060	682540	2.8	86			577420	577410	1	18		
10/25/01	1335	518950	532430	1	18			669400	682880	2.8	86			577530	577520	1	18		
10/25/01	1351																		
10/25/01	1403					20.3	0.0043					34.3	3.67					35.9	0.653
10/25/01	1406																		
10/25/01	1418																		
10/25/01	1419	518990	532470	1	19			669510	682990		86			577560	577550	1	17		
10/29/01	1052	524280	537760	1	28			683590	697070	2.5	87			582250	582240	1	26		
10/29/01	1113																		
10/29/01	1123																		
10/29/01	1219	524360	537840	1	28			683800	697280	2.5	87			582320	582310	1	26		
10/29/01	1327	524420	537900	3	68			683950	697430	2.3	80			582370	582360	1	24		
10/29/01	1339	524450	537930	3	69			683970	697450					582380	582370	1	22		
10/29/01	1440																		
10/29/01	1545					36.5	0.0009					34.2	2.98					33.5	0.333
10/29/01	1548																		
10/29/01	1556	524810	538290	3	79									582480	582470	1	19		
10/29/01	1618																		
10/29/01	1622	524880	538360	3	70									582500	582490	1	19		
10/30/01	833	527590	541070	3	71									583270	583260	1	22		
10/30/01	855																		
10/30/01	915																		
10/30/01	1055																		
10/30/01	1243	528260	541740	3	70			683970	697450	0.5	0			583460	583450	1	22		
10/30/01	1334	528400	541880	3	70			683990	697470	0.5	6			583500	583490	1	23		
10/30/01	1407					40.8	0.0009					23.7	0.596					39	0.327
10/30/01	1416																		
10/30/01	1425																		
10/30/01	1443																		
10/30/01	1447	528600	542080	3	72			684020	697500	0.5	11			583560	583550	1	26		
10/31/01	1119	531490	544970	3	80			684390	697870	0.5	28			584420	584410	1	42		
10/31/01	1132																		
10/31/01	1140																		
10/31/01	1152	531550	545030	3.1	85			684410	697890	4	86			584440	584430	2	81		
10/31/01	1205																		
10/31/01	1225	531590	545070	3.1	67			684510	697990	4	25			584490	584480	3.5	70		
10/31/01	1233																		
10/31/01	1352																		
10/31/01	1353	531810	545290	3.1	67			684850	698330	4	24			584790	584780	3.5	72		
10/31/01	1405																		
10/31/01	1410																		
10/31/01	1416					39.5	0.0009					59.1	0.0043					36.9	0.847
10/31/01	1438																		
10/31/01	1443	531930	545410	3.1	68			685030	698510	4	24			584950	584940	3.5	72		
11/1/01	1020	534750	548230	3	70			689390	702870	4	27			588480	588470	3.5	75		
11/1/01	1042																		
11/1/01	1051																		
11/1/01	1120																		
11/1/01	1212	535000	548480	3	70			689790	703270	4	28			588780	588770	3.5	74		
11/1/01	1346	535220	548700	3	70			690140	703620	4	28			589060	589050	3.5	74		
11/1/01	1403					40.6	0.0015					59.1	0.002					35.3	1.61
11/1/01	1408																		
11/1/01	1419																		
11/1/01	1423	535310	548790	3	70			690290	703770	4	28			589170	589160	3.5	74		
11/5/01	1006																		
11/5/01	1021																		
11/5/01	1041					40.5	0.001					47.1	0.0052					37.9	1.31
11/5/01	1100																		
11/5/01	957	547240	560720	3	72			709590	723070	4	37			601040	601030	3.5	77		
11/5/01	1055	547370	560850	3	72			709800	723280	4	37			601140	601130	3.5	76		
11/8/01	1213	547320	560800	3	76			709820	723300	4	32			601150	601140	3.5	80		
11/8/01	1324	547510	560990	3.1	76			710080	723560	4	32			601290	601280	3.5	80		
11/8/01	1421	547630	561110	3.1	76			710260	723760	4	32			601400	601390	3.5	80		
11/8/01	1440					20.5	0.0173					39.2	0.0009					25.2	0.648
11/8/01	1503	547710	561190	3.1	76			710440	723920	4	32			601480	601470	3.5	80		
11/12/01	1005	557820	571300	3	70			728760	742240	4	36			609740	609730	1.5	70		
11/12/01	1308	558100	571580	3.1	68			729320	742800	4.1	36			609990	609980	1.3	68		
11/12/01	1411					40	0.0085					42.5	0.606					41.3	1.88
11/12/01	1424	558220	571700	3.1	72			729550	743030	4.1	33			610100	610090	1.5	73		
11/12/01	1512	558300	571780	3.1	70			729700	743180	4.1	32			610170	610160	1.5	71		
11/13/01	824	559510	572990	3.1	72			732120	745600	4	32			611210	611200	1.9	72		
11/13/01	1054	559760	573240	1.7	72			732600	746080	4.1	32			611410	611400	1.5	69		
11/13/01	1305	559970	573450	1.7	70			733010	746490	4	31			611580	611570	1.5	67		
11/13/01	1355					40	0.0094					41.5	0.899					40.9	1.86
11/13/01	1435	560110	573590	1.7	70			733290	746770	4.1	30			611700	611690	1.5	65		
11/14/01	818	561500	574980	1.6	70			735970	749450	4.1	31			612780	612770	1.3	66		
11/14/01	1024	561690	575170	1.5	68			736360	749840	4	32			612930	612920	1.2	64		
11/14/01	1328	561970	575450	2	85			736910	750390	4.2	34			613130	613120	2	82		
11/14/01	1345					39.9	0.0182					41.9	1.33					39.8	1.82
11/14/01	1408	562050	575530	1.9	85			737050	750530	4.2	36			613200	613190	2	82		
11/15/01	1128	564470	577950	2	86			741440	754920	4.3	41			615080	615070	1.8	82		
11/15/01	1318	564680	578160	1.9	86			741810	755290	4.3	42			615240	615230	1.8	84		
11/15/01	1452	564850	578330	1.9	86			742130	755610	4.2	42			615380	615370	1.8	83		
11/15/01	1455					40.3	0.0838					40.2	2.06					41.9	2.36
11/15/01	1529	564920	578400	1.9	86			742250	755730	4.2	42			615440	615430	1.8	83		
11/16/01	820	566810	580290	2	86			745610	759090	4.3	44			616800	616790	1.8	84		
11/16/01	1024	567050	580530	2	87			746050	759530	4.3	44			616970	616960	1.8	85		
11/16/01	1307	567340	580820	2	87			746550	760030	4.3	44			617170	617160	1.8	84		
11/16/01	1330					42.2	0.201					42	2.51					43.6	2.24
11/16/01	1436	567500	580980	2	88			746840	760320	4.2	44			617300	617290	1.8	84		
11/19/01	1125	567500	580980	1.8	88			746850	760330	3.8	38								
11/19/01	1225	567580	581060	1.8	88			747030	760510	3.8	35								
11/19/01	1328	567700	581180	1.8	88			747270	760750	3.8	35								
			avg	2.3					avg	2.9					avg	2.7			

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
1/29/01	1000											16.1			
1/29/01	1615													2.03	0.0028
1/30/01	1010														
1/30/01	1300											13.73			
1/30/01	1417											14.33			
1/30/01	1615							8.82						2.2	
1/30/01	2010											12			
1/30/01	2045							8.87							
1/30/01	2310											11.7			
1/30/01	2313							8.78							
1/31/01	520							8.71							
1/31/01	524											11.8			
1/31/01	930											12.7			
1/31/01	1030											11.8			
1/31/01	1100							8.87							
1/31/01	1445											15.7			
1/31/01	1530							8.73							
1/31/01	1615													4.7	
1/31/01	1705											15.7			
1/31/01	2130							8.81							
1/31/01	2149											15.9			
2/1/01	35											16			
2/1/01	350							8.81							
2/1/01	355											15.9			
2/1/01	735							8.82				15.9		5	
2/1/01	910											16.1			
2/1/01	925							8.8						4.8	
2/1/01	1140											16.13			
2/1/01	1150							8.73	-299						
2/1/01	1202							8.3							
2/1/01	1215													3.6	
2/1/01	1243													3.8	1.08
2/1/01	1540														
2/1/01	1548											16.86			
2/1/01	1555							8.78							
2/1/01	1559								-282						
2/1/01	1602							8.36							
2/1/01	1608													3.8	
2/2/01	1030											16.43			
2/2/01	1040							8.69							
2/2/01	1050								-274						
2/2/01	1053												8.3		
2/2/01	1120							8.98							
2/2/01	1130											7.5			
2/2/01	1142													3.4	
2/2/01	1310											7.4			
2/2/01	1315									8.97					
2/2/01	1325										-301				
2/2/01	1330												8.31		
2/2/01	1340													3.6	
2/2/01	1500														
2/2/01	1515											7.5			
2/2/01	1630									8.78		7.5			
2/2/01	1641										-288				
2/2/01	1645												8.1	1.83	0.716
2/2/01	1650													3	
2/3/01	1200											7.5			
2/3/01	1215									8.8					
2/3/01	1220										-323				
2/3/01	1223												8.36		
2/3/01	1235													2.6	
2/3/01	1245													1.35	0.341
2/4/01	912											7.4			
2/4/01	930									8.81					
2/4/01	950										-300				
2/4/01	954												8.24		
2/4/01	1000													2	
2/4/01	1437											7.4			
2/4/01	1505									8.82					
2/4/01	1514										-322			1.8	
2/4/01	1530												8.24		
2/4/01	1539													1.18	0.41
2/4/01	1657											7.15			
2/4/01	1715									8.99					
2/5/01	935											7.5			
2/5/01	953									9.01					
2/5/01	958													2.2	
2/5/01	1002										-292				
2/5/01	1012												8.38		
2/5/01	1015														
2/5/01	1432														
2/5/01	1436											1.6			
2/5/01	1437											1.6			
2/5/01	1438											1.5			
2/5/01	1439											1.5			
2/5/01	1440											1.5			
2/5/01	1442											1.4			
2/5/01	1445											1.6			
2/5/01	1450											15			
2/5/01	1453											13.7			
2/5/01	1457											13			
2/5/01	1500											6			
2/5/01	1515													3.4	0.484
2/5/01	1530											12		3.8	
2/5/01	1540									9.1					
2/5/01	1545											5.8			
2/5/01	1611										-276				
2/5/01	1615												8.38		
2/6/01	910											12.8			
2/6/01	943											13.8			
2/6/01	954													4.2	
2/6/01	1008									9.03					
2/6/01	1012												8.82		
2/6/01	1032											14			
2/6/01	1058										-242				
2/6/01	1410									9.02					

Date	Time	Column - 8						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
2/6/01	1412													2.56	0.0066
2/6/01	1436										-378				
2/6/01	1441												8.72		
2/6/01	1545											10.5			
2/6/01	1640											5			
2/7/01	755														
2/7/01	840									9.05			8.88	2	
2/7/01	1425											5			
2/7/01	1520													1.64	0.0058
2/7/01	1555											10			
2/8/01	1020											10			
2/8/01	1207													3.53	0.146
2/8/01	1230											10			
2/8/01	1235														
2/12/01	1050														
2/12/01	1130											10			
2/12/01	1534													2.69	0.0979
2/12/01	1610											10			
2/12/01	1630											10			
2/21/01	1140														
2/21/01	1145											2			
2/21/01	1155											4.1			
2/21/01	1200											5.5			
2/21/01	1205											9.1			
2/21/01	1210											12			
2/21/01	1230							9							
2/21/01	1240												6.01		
2/21/01	1615													5.24	0.0178
2/21/01	1641									8.83	101	11.5		3.8	
2/22/01	1005											10.5			
2/22/01	1035							9.04		9.03				3.4	
2/22/01	1059												6.02		
2/22/01	1120								97						
2/22/01	1135										120				
2/22/01	1415											10.5			
2/22/01	1425											5		2.42	0.403
2/22/01	1435										243			3.2	
2/22/01	1450								-304						
2/22/01	1452							9.01							
2/22/01	1455												6.7		
2/22/01	1525														
2/22/01	1532											6			
2/22/01	1600									9.01					
2/24/01	747											6.2			
2/24/01	804							9.26	-376						
2/24/01	808									9.2	-375				
2/24/01	817									9.05					
2/24/01	820							9.05							
2/24/01	822												4.2		
2/24/01	831													3.2	
2/24/01	858												5.9	2.9	0.281
2/24/01	956											6.3			
2/26/01	845											6			
2/26/01	930									9.01					
2/26/01	936													2.42	0.425
2/26/01	938										-337				
2/26/01	943							8.99							
2/26/01	945								-340						
2/26/01	950												5.8		
2/26/01	953													3.4	
2/26/01	1535											1.5			
2/26/01	1542											1.5			
2/26/01	1545											1.5			
2/26/01	1609											3.5			
2/26/01	1612											5			
2/26/01	1617											5.5			
2/26/01	1707													0.899	0.261
2/26/01	1709												6.4		
2/27/01	830											3			
2/27/01	855							9.37							
2/27/01	858								-398						
2/27/01	901										-396				
2/27/01	903									9.36					
2/27/01	914												2.85		
2/27/01	947													3.2	
2/27/01	1345											2.8			
2/27/01	1529													1.31	0.0112
2/27/01	1533													2.8	
2/27/01	1610							9.26							
2/27/01	1612								-451						
2/27/01	1630							9.05							
2/27/01	1710												6.05		
2/28/01	1050											2.8			
2/28/01	1100							9.06							
2/28/01	1127													2.4	
2/28/01	1129								-433						
2/28/01	1200												6.31		
2/28/01	1330											2.75			
2/28/01	1455											2.8			
2/28/01	1603													3.02	0.0014
2/28/01	1605												6.12		
2/28/01	1608							9.16							
2/28/01	1618								-407						
2/28/01	1625													2.8	
3/1/01	1410											5.5			
3/1/01	1425							8.77							
3/1/01	1430								-414						
3/1/01	1440												7.14		
3/1/01	1450													2.2	
3/1/01	1520							9.03							
3/1/01	1530											5.5			
3/1/01	1600											5.5			
3/1/01	1655												6.2		
3/1/01	1645													2	
3/1/01	1700											5.25			
3/6/01	1000														

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
3/7/01	1330											2			
3/7/01	1345											2			
3/7/01	1400											2			
3/7/01	1430											2			
3/7/01	1708											2			
3/7/01	1715							9							
3/7/01	1720								-751						
3/7/01	1723													0.8	
3/7/01	1803												6		
3/8/01	1045											1.8			
3/8/01	1410											1.9			
3/8/01	1418											4			
3/8/01	1448											7.5			
3/8/01	1510											8.5			
3/8/01	1515													5.27	0.0052
3/8/01	1525											8.5			
3/8/01	1530							9							
3/8/01	1535													4.4	
3/8/01	1730												6		
3/8/01	1738								-458						
3/8/01	1740											8.5			
3/9/01	1326											7.5			
3/9/01	1335							9.09	-461						
3/9/01	1345													4.47	0.0041
3/9/01	1400												6.01	3.4	
3/9/01	1410							9.05	-435						
3/9/01	1515											7.3			
3/10/01	1030											7.25			
3/10/01	1045							9.06							
3/10/01	1050								-427						
3/10/01	1055													3.6	
3/10/01	1103												5		
3/10/01	1113													4.36	0.019
3/10/01	1225												5.9		
3/10/01	1228											7.25			
3/12/01	1013							9.13							
3/12/01	1016								-414						
3/12/01	1023													5.6	
3/12/01	1038												5.91		
3/12/01	1049											6.9		5.27	0.138
3/12/01	1210											0.7			
3/12/01	1222											1			
3/12/01	1225											2.5			
3/12/01	1300											5			
3/12/01	1425									9.07	-465				
3/12/01	1510														
3/12/01	1715												5.75		
3/12/01	1720											5			
3/12/01	1723									9.24					
3/12/01	1730										-309				
3/13/01	920											5			
3/13/01	945									9.07					
3/13/01	948										-690				
3/13/01	957												6.48		
3/13/01	1003												6.35		
3/13/01	1005												7.65		
3/13/01	1245											7			
3/13/01	1347											7			
3/13/01	1445													3.4	
3/13/01	1447													3.27	0.028
3/13/01	1527											7			
3/13/01	1602									9.01					
3/13/01	1605										-448				
3/13/01	1610												7.89		
3/13/01	1720											7			
3/13/01	1735												6.14		
3/14/01	830											7			
3/14/01	1005											9			
3/14/01	1015											11			
3/14/01	1050											12.5			
3/14/01	1315												6.42	4.9	
3/14/01	1330									9.24	-264				
3/14/01	1403													4.39	0.0382
3/14/01	1500											12.5			
3/15/01	1000														
3/15/01	1015											12.2			
3/15/01	1020											12.2			
3/15/01	1030									8.93					
3/15/01	1037										-701				
3/15/01	1105									9.21					
3/15/01	1145														
3/15/01	1150											12.2			
3/15/01	1220									9.28					
3/15/01	1230													4.6	
3/15/01	1234										-570				
3/15/01	1235												8.01		
3/15/01	1320												6.62		
3/15/01	1340											12.1			
3/15/01	1452													3.46	0.0166
3/15/01	1504													3.4	
3/15/01	1520									9.34					
3/15/01	1522										-592				
3/15/01	1525												7.79		
3/15/01	1612												6.26		
3/15/01	1625											12.1			
3/16/01	820														
3/16/01	840											11.8			
3/16/01	905									9.47					
3/16/01	910										-482				
3/16/01	920												9.15		
3/16/01	1008											12			
3/16/01	1050													3.8	
3/16/01	1100									9.21					
3/16/01	1115											2.5			
3/16/01	1303											12			
3/16/01	1315									9.31					
3/16/01	1317										-484				

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
3/16/01	1513													3.06	0.0221
3/16/01	1525													3.2	
3/16/01	1530											12			
3/16/01	1545												6.3		
3/16/01	1547												5.55		
3/16/01	1549												5.87		
3/16/01	1615							9.45							
3/16/01	1617								-735						
3/16/01	1619									9.46					
3/16/01	1620										-739				
3/16/01	1635												6.24		
3/16/01	1645											12			
3/19/01	830														
3/19/01	915											13.2			
3/19/01	1645											11.7			
3/20/01	830											11.4			
3/20/01	1045											1.5			
3/20/01	1110											0.1			
3/20/01	1112									12.46					
3/20/01	1115										-866				
3/20/01	1118												2.75		
3/20/01	1119													2.8	
3/20/01	1145											11.5			
3/20/01	1200													2.6	
3/20/01	1205									9.66					
3/20/01	1207										-706				
3/20/01	1210												7.29		
3/20/01	1212													2.4	0.0109
3/20/01	1220														
3/21/01	1430														
3/21/01	1434											10			
3/21/01	1604							9.18							
3/21/01	1606								-602						
3/21/01	1608									9.1					
3/21/01	1612													2.6	
3/21/01	1645												6.11		
3/21/01	1650											10			
3/22/01	955							9.18				10.5			
3/22/01	1008							8.38							
3/22/01	1016								-449						
3/22/01	1018							9.05							
3/22/01	1022									9.01					
3/22/01	1024										-428				
3/22/01	1030													10	
3/22/01	1034												6.85		
3/22/01	1135								-720			10.5			
3/22/01	1150												6.08		
3/22/01	1420											10.5	6.66		
3/22/01	1423							8.9							
3/22/01	1425								-407						
3/22/01	1449							9.08							
3/22/01	1450												7.24		
3/22/01	1453													5.8	
3/22/01	1507													7.26	0.114
3/22/01	1535													5.2	
3/22/01	1615												6.12		
3/22/01	1620							9.04							
3/22/01	1625											10.5		4.6	
3/22/01	1629								-361						
3/22/01	1631													4.1	
3/24/01	815											10.4			
3/24/01	820							9.18							
3/24/01	822								-720						
3/24/01	834													5.24	0.341
3/24/01	840												6.66		
3/24/01	846													4.6	
3/24/01	925											9.9			
3/27/01	1200														
3/28/01	1535														
3/28/01	1600											2			
3/28/01	1630											2			
3/28/01	1715											2			
3/28/01	1720							9.1							
3/28/01	1721								7						
3/29/01	1130											1.75			
3/29/01	1140							8.29							
3/29/01	1142								-634						
3/29/01	1201											6			
3/29/01	1240							9.1							
3/29/01	1242								-739						
3/29/01	1246													2.2	
3/29/01	1430											6			
3/29/01	1517													10.2	0.137
3/29/01	1530													6.6	
3/29/01	1607												6.17		
3/29/01	1609							9.11							
3/29/01	1615								-453						
3/29/01	1615											6			
3/30/01	1030											5.75			
3/30/01	1032											6			
3/30/01	1037							9.1	-558						
3/30/01	1050												7.15		
3/30/01	1445													5.04	0.0009
3/30/01	1500												6.6	5	
3/30/01	1520							6.08	-560						
3/30/01	1535											5.9			
3/31/01	1030											6			
4/2/01	1230											6			
4/2/01	1250							9.69							
4/2/01	1330							9.11							
4/2/01	1332								-742						
4/2/01	1343												6.94		
4/2/01	1345													1	
4/2/01	1440											6			
4/2/01	1446													0.563	0.0018
4/2/01	1545											6			
4/2/01	1655											6			

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
4/2/01	1700												6.37		
4/2/01	1705													1.4	
4/2/01	1708							8.94							
4/2/01	1710								-754						
4/3/01	900											6			
4/3/01	920							8.8							
4/3/01	935							9.1							
4/3/01	946								-545						
4/3/01	953												7.21		
4/3/01	956													6.6	
4/3/01	1140												6.2		
4/3/01	1215											6			
4/3/01	1220							9.15							
4/3/01	1224								-409						
4/3/01	1400											6			
4/3/01	1431													3.24	0.0202
4/3/01	1440													3.2	
4/3/01	1510											6			
4/3/01	1600											5			
4/3/01	1612							9.12							
4/3/01	1614								-521						
4/3/01	1620													3	
4/3/01	1622												7.34		
4/3/01	1630											4			
4/3/01	1732												6.53		
4/3/01	1735											6			
4/4/01	835											6			
4/4/01	900														
4/4/01	910														
4/4/01	914							-725							
4/4/01	935												7.11		
4/4/01	937													4.8	
4/4/01	1010												6.88		
4/4/01	1640											6			
4/4/01	1645													2.3	0.0014
4/4/01	1647														
4/4/01	1658														
4/4/01	1700							-616							
4/4/01	1715												6.67		
4/4/01	1730											6			
4/5/01	1120											6			
4/5/01	1145							8.94							
4/5/01	1153							9.11							
4/5/01	1156								-550						
4/5/01	1200													3.8	
4/5/01	1204												6.84		
4/5/01	1400												6.05		
4/5/01	1400											6			
4/5/01	1507													2.04	0.0022
4/5/01	1540											8			
4/5/01	1600							9.17							
4/5/01	1604								-429						
4/5/01	1608													2.4	
4/5/01	1611												7.24		
4/5/01	1620											8			
4/5/01	1645												6.46		
4/5/01	1645											8			
4/6/01	840											6			
4/6/01	905							8.89							
4/6/01	908								-561						
4/6/01	912													6.6	
4/6/01	920												6.19		
4/6/01	940											12			
4/6/01	1035											12			
4/6/01	1050							9.1							
4/6/01	1053								-730						
4/6/01	1130													6.8	
4/6/01	1150												6.25		
4/6/01	1402													4.48	0.0013
4/6/01	1415							9.18							
4/6/01	1430							9.1							
4/6/01	1433								-730						
4/6/01	1436												5.43		
4/6/01	1438													4.2	
4/6/01	1446												6.16		
4/6/01	1455											12			
4/9/01	950														
4/9/01	1020											12			
4/9/01	1040														
4/9/01	1043											12			
4/9/01	1100							9.31							
4/9/01	1125							9.09							
4/9/01	1127								-771						
4/9/01	1131													2	
4/9/01	1150												6.15		
4/9/01	1230											12			
4/9/01	1233							9.05							
4/9/01	1250							9.1							
4/9/01	1308								-778						
4/9/01	1415											12			
4/9/01	1415													3.85	0.0011
4/9/01	1550											12			
4/9/01	1605							9.11							
4/9/01	1607								-498						
4/9/01	1610												7.52		
4/9/01	1620													3.8	
4/9/01	1630												6.18		
4/9/01	1710											12			
4/9/01	1720														
4/11/01	1330														
4/11/01	1445													3.8	
4/11/01	1615											11.5			
4/11/01	1640													4.23	0.0035
4/11/01	1720							9.12							
4/11/01	1723								-446						
4/11/01	1735											11.5			
4/11/01	1745												6.33		

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
4/12/01	700											11.5			
4/12/01	820									9.16			6.17		
4/12/01	1130														
4/12/01	1445														
4/12/01	1615													2.18	0.0038
4/12/01	1620													2.6	
4/12/01	1630											11.5			
4/12/01	1635									6.9					
4/12/01	1655									9.11					
4/12/01	1700										-467				
4/12/01	1703												5.75		
4/12/01	1705											11.5			
4/12/01	1715												6.13		
4/13/01	1235									9.21					
4/13/01	1245													2.8	
4/13/01	1257											11.1			
4/13/01	1330													2.05	0.0083
4/13/01	1340												6.1		
4/16/01	915											11			
4/16/01	920									9.23					
4/16/01	920													2.2	
4/16/01	923										-587				
4/16/01	935												6.3		
4/16/01	1000													1.64	0.0347
4/16/01	1120														
4/16/01	1220											11			
4/16/01	1500													1.99	0.0214
4/16/01	1512													2.4	
4/16/01	1530											11			
4/16/01	1535									9.13					
4/16/01	1538										-602				
4/16/01	1605												7.16		
4/16/01	1638											11			
4/16/01	1645												6.3		
4/17/01	1155											11.2			
4/17/01	1205									9.1					
4/17/01	1208										-546				
4/17/01	1212													3.7	
4/17/01	1215												6.63		
4/17/01	1230												6.42		
4/17/01	1505													1.6	0.0249
4/17/01	1512													2.2	
4/17/01	1525											11.2			
4/17/01	1535										9.17				
4/17/01	1537														
4/17/01	1548												6.31		
4/17/01	1652											11.2			
4/19/01	1100											11.1			
4/19/01	1107									9.19					
4/19/01	1109										-486				
4/19/01	1115													2	
4/19/01	1118												6.01		
4/19/01	1205									9.12					
4/19/01	1205											5.5			
4/19/01	1205														
4/19/01	1325												6.05		
4/19/01	1456											5.5			
4/19/01	1505													1.19	0.0532
4/19/01	1510									9.08					
4/19/01	1512										-105				
4/19/01	1515													1.8	
4/19/01	1520												6.24		
4/19/01	1530											5.7			
4/20/01	852											5.6			
4/20/01	920										-107				
4/20/01	921									9.11					
4/20/01	940												6.94		
4/20/01	942													1.8	
4/20/01	1030												6.19		
4/20/01	1205											5.6			
4/20/01	1315											5.6			
4/20/01	1320									9.04					
4/20/01	1323										-164				
4/20/01	1335												5.92		
4/20/01	1337													1.8	
4/20/01	1505													1.13	0.0766
4/20/01	1507											5.6			
4/20/01	1508													1.6	
4/20/01	1525												6.35		
4/20/01	1532									9.08					
4/20/01	1534										68				
4/20/01	1550											5.6			
4/23/01	1025											5.5			
4/23/01	1050									9.18					
4/23/01	1055										-385				
4/23/01	1120													2.7	
4/23/01	1130												6.74		
4/23/01	1150												6.05		
4/23/01	1330											5.5			
4/23/01	1338									9.12					
4/23/01	1340										-389				
4/23/01	1355													1.5	
4/23/01	1630													0.702	0.126
4/23/01	1710											5.5			
4/23/01	1712									9.06					
4/23/01	1714										-379				
4/23/01	1735													1.4	
4/23/01	1742												6.13		
4/24/01	820											5.5			
4/24/01	842							9.11							
4/24/01	844								-304						
4/24/01	850													2.4	
4/24/01	910												6.34		
4/24/01	1300							9.11							
4/24/01	1302								-267						
4/24/01	1310													2.3	
4/24/01	1312												6.35		

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
4/24/01	1445											5.5			
4/24/01	1500											5.5			
4/24/01	1515													1.77	0.197
4/24/01	1530													2.2	
4/24/01	1554											5.5			
4/24/01	1600							9.49							
4/24/01	1606							9.17							
4/24/01	1607								-309						
4/24/01	1705												6.51		
4/24/01	1720											5.5			
4/25/01	1130							9.11							
4/25/01	1210								-570						
4/25/01	1213											8			
4/25/01	1355							9.11							
4/25/01	1358								-611						
4/25/01	1402													3.8	
4/25/01	1403												7.02		
4/25/01	1410												6.28		
4/25/01	1435											8			
4/25/01	1500													4.59	0.0509
4/25/01	1550							8.95							
4/25/01	1558							9.1							
4/25/01	1559								-193						
4/25/01	1605												6.82		
4/25/01	1607													4.4	
4/25/01	1610												6.32		
4/25/01	1620											8			
4/26/01	825											8			
4/26/01	900											8			
4/26/01	923							8.79							
4/26/01	944							9.1							
4/26/01	946								-334						
4/26/01	955													6.2	
4/26/01	1002												6.24		
4/26/01	1012											8			
4/26/01	1500													1.66	0.0447
4/26/01	1535														
4/26/01	1600											8			
4/26/01	1617							9.4							
4/26/01	1625													2.2	
4/26/01	1633							9.16							
4/26/01	1635								-748						
4/26/01	1640												4.1		
4/26/01	1712												6.22		
4/26/01	1714											8			
4/27/01	900							9.18	-750						
4/27/01	1200													1.83	0.0038
4/27/01	1215												6		
4/27/01	1220													2.1	
4/27/01	1250											8			
4/27/01	1335							9.22							
4/30/01	1210											8			
4/30/01	1230							9.26							
4/30/01	1233								-498						
4/30/01	1242													4.4	
4/30/01	1335											8			
4/30/01	1345												6.27		
4/30/01	1450											5			
4/30/01	1506													2.03	0.0105
4/30/01	1518													2.4	
4/30/01	1525							9.28							
4/30/01	1530								-481						
4/30/01	1550												6.77		
4/30/01	1610												6.23		
4/30/01	1615											8			
5/1/01	1125											8			
5/1/01	1135							8.92							
5/1/01	1150							9.36							
5/1/01	1153								-768						
5/1/01	1200													2.2	
5/1/01	1225												6.37		
5/1/01	1230											8			
5/1/01	1305														
5/1/01	1445											8			
5/1/01	1500							9.27							
5/1/01	1504								-706						
5/1/01	1510												6.16		
5/1/01	1512													1.8	
5/1/01	1513													1.84	0.0159
5/1/01	1600											8			
5/2/01	800														
5/2/01	1130											8			
5/2/01	1148							9.12							
5/2/01	1150								-610						
5/2/01	1155													2.6	
5/2/01	1207												6.43		
5/2/01	1215														
5/2/01	1220											8			
5/2/01	1512											8			
5/2/01	1513							9.42							
5/2/01	1518							9.16							
5/2/01	1520								-551						
5/2/01	1536													1.24	0.0099
5/2/01	1550												5.93		
5/2/01	1640												6.18		
5/2/01	1645											8			
5/3/01	840											8			
5/3/01	852							9.26							
5/3/01	854								-527						
5/3/01	910												6.59		
5/3/01	912													1.8	
5/3/01	1003														
5/3/01	1020												6.22		
5/3/01	1245											8			
5/3/01	1424													1.34	0.0266
5/3/01	1455							9.35	-582						
5/3/01	1510												6.14		

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
5/3/01	1512													1.8	
5/3/01	1600											8			
5/4/01	1020											8			
5/4/01	1025							9.36	-555						
5/4/01	1030												6.72	3.3	
5/4/01	1115											8			
5/4/01	1445													3.03	0.0224
5/4/01	1520											8			
5/4/01	1520													3.1	
5/4/01	1540							9.11							
5/4/01	1542								-513						
5/4/01	1550												7.48		
5/4/01	1610												6.13		
5/4/01	1620											8			
5/7/01	1257											8			
5/7/01	1305							9.06	-370						
5/7/01	1315												5.52		
5/7/01	1318													6.4	
5/7/01	1340												6.05		
5/7/01	1430											8			
5/7/01	1510							9.11							
5/7/01	1512								-508						
5/7/01	1515													6.71	0.0547
5/7/01	1535													5.6	
5/7/01	1548												6.24		
5/7/01	1600											8			
5/8/01	822											8			
5/8/01	845							8.92							
5/8/01	907							9.1							
5/8/01	910								-460						
5/8/01	918													2.6	
5/8/01	920												6.4		
5/8/01	1050											8			
5/8/01	1455													1.21	0.0298
5/8/01	1515											8			
5/8/01	1520							9.09							
5/8/01	1522								-390						
5/8/01	1540													1.6	
5/8/01	1545												6.12		
5/8/01	1625											8			
5/9/01	1015											8			
5/9/01	1033							9.11	-230						
5/9/01	1042														
5/9/01	1045													1.9	
5/9/01	1050											7			
5/9/01	1051												6.22		
5/9/01	1102							9.39							
5/9/01	1106							9.12	-176						
5/9/01	1420												6.29		
5/9/01	1430											6			
5/9/01	1545											6			
5/9/01	1550													1.04	0.0436
5/9/01	1640							8.89							
5/9/01	1645							9.09	-322						
5/9/01	1655											6			
5/9/01	1700												6.09		
5/9/01	1700													1.6	
5/10/01	815											6			
5/10/01	835							9.3	-183						
5/10/01	841													1.9	
5/10/01	858												7.86		
5/10/01	935												6.69		
5/10/01	1210											6			
5/10/01	1245											6			
5/10/01	1355											8			
5/10/01	1450							8.85							
5/10/01	1504							9.11	-332						
5/10/01	1510													1.6	
5/10/01	1510													1.12	0.09
5/10/01	1513												6.67		
5/10/01	1550												6.08		
5/10/01	1600											8			
5/11/01	1010							9.14	-477						
5/11/01	1040												6.9		
5/11/01	1052											8			
5/11/01	1215													1.82	0.109
5/11/01	1245													2.1	
5/11/01	1250												6.67		
5/14/01	1100											8			
5/14/01	1115							9.24	-445						
5/14/01	1130													1.8	
5/14/01	1135												6.68		
5/14/01	1145											7.8			
5/14/01	1210												6.06		
5/14/01	1222							9.32							
5/14/01	1341											7.8			
5/14/01	1536											7.8			
5/14/01	1540													1.43	0.0789
5/14/01	1545							9.15	-571						
5/14/01	1550													1.9	
5/14/01	1555												6.36		
5/14/01	1630											7.8			
5/15/01	825											7.7			
5/15/01	840							9.44							
5/15/01	846							9.12	-602						
5/15/01	855												5.45	1.8	
5/15/01	943														
5/21/01	1400											12			
5/21/01	1500							9.12	-724						
5/21/01	1504													1.5	
5/21/01	1506												5.64		
5/21/01	1518												6.29		
5/21/01	1528											12			
5/21/01	1540													1.33	0.0341
5/21/01	1620											12			
5/22/01	818											12			
5/22/01	838							8.85							

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
5/22/01	902							9.07	-734						
5/22/01	906													6.4	
5/22/01	925												6.94		
5/22/01	1010												6.36		
5/22/01	1435							9.13	-738						
5/22/01	1445												5.73	4.4	
5/22/01	1500													5.39	0.0037
5/22/01	1515												6.11		
5/22/01	1550											12			
5/23/01	855							9.36	-777						
5/23/01	905												5.85	4.5	
5/23/01	1030												6.32		
5/23/01	1320							9.14							
5/23/01	1322								-746						
5/23/01	1327												6.97	3.7	
5/23/01	1435												6.35		
5/23/01	1445													3.7	0.0377
5/23/01	1515							9.09	-734						
5/23/01	1530												6.96		
5/23/01	1628												6.29		
5/23/01	1640											12			
5/24/01	851							9.11	-555						
5/24/01	901												6.39	7.4	
5/24/01	1430							9.13	-743						
5/24/01	1436												6.45	5.2	
5/24/01	1457												6.29		
5/24/01	1520													4.73	0.0269
5/24/01	1615							9.14	-736						
5/24/01	1618											12			
5/24/01	1621												6.35		
5/25/01	807											12			
5/25/01	824							8.98	-649						
5/25/01	830												6.97	7.5	
5/25/01	918											12			
5/25/01	1023												6.28		
5/25/01	1030											12			
5/25/01	1352							9.21	-504						
5/25/01	1356												7.76	3.4	
5/25/01	1405											12			
5/25/01	1445												6.35		
5/25/01	1450													2.41	0.0429
5/25/01	1503							9.05							
5/25/01	1515												6.19		
5/25/01	1527											12			
5/26/01	803											12			
5/26/01	821							9.29	-390						
5/26/01	828												6.56	4.2	
5/26/01	903											12			
5/26/01	1245												5.69		
5/26/01	1302							9.32	-366						
5/26/01	1305													2.49	0.0176
5/26/01	1308											12			
5/27/01	1002											12			
5/27/01	1030							9.08	-53						
5/27/01	1035												6.74	3.6	
5/27/01	1105													3.44	0.0319
5/27/01	1128											12			
5/29/01	950											12			
5/29/01	1115							9.22							
5/29/01	1123							9.1	-475						
5/29/01	1145													2.3	
5/29/01	1210											8			
5/29/01	1445											12			
5/29/01	1530													3.4	
5/29/01	1540													2	0.0281
5/29/01	1600												7.96		
5/29/01	1630												5.97		
5/29/01	1638							9.15	-440						
5/29/01	1645													2.4	
5/29/01	1647												6.54		
5/29/01	1655											12			
5/29/01	1710												6.38		
5/30/01	803											12			
5/30/01	820							9.18	-372						
5/30/01	822												6.55	5.3	
5/30/01	914											12			
5/30/01	1005							8.96	-479						
5/30/01	1045							9.11	-505						
5/30/01	1108												6.77		
5/30/01	1310												6.27		
5/30/01	1410													1.85	0.0293
5/30/01	1500							9.23	-534						
5/30/01	1507													2.3	
5/30/01	1545												6.45		
5/30/01	1612											10			
5/30/01	1652												6.06		
5/30/01	1700											10			
5/31/01	800											10			
5/31/01	824							9.47	-435						
5/31/01	827												6.52	2.2	
5/31/01	858												6.24		
5/31/01	921							9.16							
5/31/01	1050											11.5			
5/31/01	1200							9.05	-480						
5/31/01	1200											13.2			
5/31/01	1207												7.07		
5/31/01	1226							9.08	-404						
5/31/01	1350												6.15		
5/31/01	1405													3.97	0.178
5/31/01	1430											13.2			
5/31/01	1615							8.95	-420						
5/31/01	1618												7.29	5.4	
5/31/01	1640											13.2			
5/31/01	1732												6.24		
6/1/01	804											13.2			
6/1/01	815											13.15			
6/1/01	951							8.97	-686						

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
6/1/01	956												6.95	5.8	
6/1/01	1035												6.37		
6/1/01	1040							9.18							
6/1/01	1200											13.2			
6/1/01	1410											13.2			
6/1/01	1515													2.33	0.14
6/1/01	1525													2.9	
6/1/01	1540							8.99	-592						
6/1/01	1615											13.2			
6/1/01	1617							9.07							
6/1/01	1650												6.34		
6/2/01	820											13.2			
6/2/01	835							8.95	-486						
6/2/01	855												7.46	5.2	
6/2/01	905							9.09							
6/2/01	1140											13.2			
6/2/01	1320												6.28	3.8	
6/2/01	1325							9.11	-408						
6/2/01	1330													3.06	0.264
6/2/01	1343											13.2			
6/3/01	805											13.2			
6/3/01	820									8.98	-444				
6/3/01	828												5.02	1.8	
6/3/01	920											13.2			
6/3/01	921													1.41	0.0445
6/3/01	945												6.2		
6/3/01	955									9.18					
6/3/01	1025											13.2			
6/4/01	1100											12.9			
6/4/01	1120											8.5			
6/4/01	1130									9.69					
6/4/01	1200											10.7			
6/4/01	1201													3.9	0.181
6/4/01	1235									9.19	-535		6.86		
6/4/01	1308													3.8	
6/4/01	1312											10.9			
6/4/01	1420												6.38		
6/4/01	1525											10.9			
6/4/01	1535									9.22	-355				
6/4/01	1540													2.8	
6/4/01	1550												5.82		
6/4/01	1601												6.08		
6/4/01	1612											10.9			
6/5/01	810														
6/5/01	845											10.8			
6/5/01	901							9.17	-332						
6/5/01	910													2.4	
6/5/01	920												8.86		
6/5/01	1133												6.05		
6/5/01	1138							9.25	-591						
6/5/01	1211											10.6			
6/5/01	1245													1.92	0.0227
6/5/01	1415											10.8			
6/5/01	1520							9.24	-520						
6/5/01	1603													1.8	
6/5/01	1605												6.62		
6/5/01	1613												6.09		
6/5/01	1620											10.8			
6/6/01	827											10.7			
6/6/01	833							9.05	-619						
6/6/01	838												6.94	2.4	
6/6/01	907											10.9			
6/6/01	918							9.3	-472						
6/6/01	923												6.24		
6/6/01	927							9.12							
6/6/01	1223											8.7			
6/6/01	1355											8.7			
6/6/01	1400													1.98	0.0332
6/6/01	1535											9.7			
6/6/01	1605													2	
6/6/01	1610							9.33	-580						
6/6/01	1618							9.13							
6/6/01	1631							9.15							
6/6/01	1645												6.27		
6/7/01	906													3.2	
6/7/01	915											9.6			
6/7/01	918							8.91	-578						
6/7/01	936							9.09							
6/7/01	940											11.8			
6/7/01	945												6.39		
6/7/01	954							9.13							
6/7/01	1155											8			
6/7/01	1247							9.31							
6/7/01	1251							9.14	-521						
6/7/01	1300													2.82	0.0129
6/7/01	1303													3.6	
6/7/01	1420											7.6			
6/7/01	1435												6.25		
6/7/01	1540											8.1			
6/7/01	1634							9.05	-555						
6/7/01	1645											8.1			
6/7/01	1702												6.32		
6/8/01	848											7.9			
6/8/01	917							8.93	-579						
6/8/01	922												6.49	1.8	
6/8/01	1000											12.4			
6/8/01	1031							9.03							
6/8/01	1330													3.97	0.0132
6/8/01	1405											12.4			
6/8/01	1415												6.37	4.6	
6/8/01	1440							9.07	-765						
6/8/01	1445											12.4			
6/9/01	1312													4.8	
6/9/01	1320											12.5			
6/9/01	1323							9.11	-509						
6/9/01	1330												6.54		
6/9/01	1350													4.77	0.023

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
6/9/01	1405												6.38		
6/9/01	1430											12.5			
6/10/01	803											12.45			
6/10/01	830							8.96	-755						
6/10/01	836												6.8	6.4	
6/10/01	902							9.03							
6/10/01	920												6.42		
6/10/01	956											12.5			
6/10/01	1247											12.7			
6/10/01	1250							9.17	-634						
6/10/01	1257												6.6		
6/10/01	1320													8.96	0.0449
6/10/01	1325											12.7			
6/11/01	1040											12			
6/11/01	1058							9.07	-551						
6/11/01	1110													5.6	
6/11/01	1118												6.17		
6/11/01	1313											12.5			
6/11/01	1425													3.71	0.0393
6/11/01	1520							909	-621						
6/11/01	1540													3.4	
6/11/01	1545												6.19		
6/11/01	1620											12.5			
6/12/01	930											12.3			
6/12/01	1015							9.19	-679						
6/12/01	1020													3.6	
6/12/01	1025												6.44		
6/12/01	1117											12.3			
6/12/01	1413											12			
6/12/01	1420													1.51	0.0682
6/12/01	1437							9.24	-611						
6/12/01	1442													2.2	
6/12/01	1448												3.14		
6/12/01	1510												6.02		
6/12/01	1600							9.13	-536						
6/12/01	1612												6.14		
6/12/01	1622											12			
6/13/01	810											8.8			
6/13/01	852											11.8			
6/13/01	902							9.12	-691						
6/13/01	904												6.32	2.7	
6/13/01	1100											12.1			
6/13/01	1226							9.2	-614						
6/13/01	1240												6.41		
6/13/01	1308											12.1			
6/13/01	1400													1.78	0.0926
6/13/01	1520							9.05	-567						
6/13/01	1531												3.56	1.8	
6/13/01	1552												6.13		
6/13/01	1555											12			
6/14/01	815											11.8			
6/14/01	835							8.95	-667						
6/14/01	837												6.89	4.5	
6/14/01	958														
6/14/01	1125											11.7			
6/14/01	1222							9.03	-540				6.07		
6/14/01	1224														
6/14/01	1320											11.7			
6/14/01	1420											11.7			
6/14/01	1425													3.27	0.0379
6/14/01	1610							9.07	-676						
6/14/01	1616												6.21	2.5	
6/14/01	1628											11.7			
6/15/01	825											11.5			
6/15/01	840							9.04	-532						
6/15/01	845													2.6	
6/15/01	855												6.48		
6/15/01	918												6.28		
6/15/01	920											10			
6/15/01	926							9.18	-421						
6/15/01	957												6.11		
6/15/01	1145											10.1			
6/15/01	1210							9.32	-494						
6/15/01	1214												3.68		
6/15/01	1245												6.06		
6/15/01	1303											10.1			
6/15/01	1455													1.2	0.0235
6/15/01	1500											10.1			
6/15/01	1511							9.31	-497						
6/15/01	1522													1.9	
6/15/01	1542												6.14		
6/15/01	1550											10.1			
6/16/01	820											6.4			
6/19/01	1300											8.4			
6/19/01	1310													1.8	
6/19/01	1330							9.15							
6/19/01	1420											8.8			
6/19/01	1435													1.15	0.0292
6/19/01	1600							8.96							
6/19/01	1608							9.1	-633						
6/19/01	1621													1.2	
6/19/01	1645											8.8			
6/19/01	1650												6.38		
6/20/01	830											9.6			
6/20/01	850							9.1	-634						
6/20/01	900													2.9	
6/20/01	905												7.04		
6/20/01	1008												6.1		
6/20/01	1110											9.7			
6/20/01	1440													1.82	0.018
6/20/01	1512											9.7			
6/20/01	1515							9.27	-490						
6/20/01	1520												5.22		
6/20/01	1535												6.17		
6/20/01	1545											11			
6/20/01	1600							8.9							
6/20/01	1608							9.07	-636						

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
6/20/01	1620												6.67		
6/20/01	1630												6.51		
6/20/01	1638											10.9			
6/21/01	1004											10.9			
6/21/01	1020							9.04	-668						
6/21/01	1210							9.1	-555						
6/21/01	1445											11.5			
6/21/01	1450													1.61	0.0412
6/21/01	1545							9.4							
6/21/01	1607							9.12	-647						
6/21/01	1615													1.6	
6/21/01	1620												5.86		
6/21/01	1650												6.18		
6/21/01	1702											11.5			
6/22/01	1105											11.2			
6/22/01	1142												7.31	2.5	
6/22/01	1150							9.15	-731						
6/22/01	1345													2.31	0.0284
6/22/01	1350											11.1			
6/22/01	1415												6.34	2.6	
6/22/01	1422							9.17	-690						
6/22/01	1435											11.1			
6/23/01	1040											11.1			
6/23/01	1109											11.1			
6/23/01	1111							9.2	-588						
6/23/01	1117												7.15	3	
6/23/01	1300											11.1			
6/23/01	1347											11.1			
6/23/01	1420							9.14	-497						
6/23/01	1600											11			
6/23/01	1605													1.46	0.0455
6/23/01	1608							9.16							
6/23/01	1636												6.26	1.8	
6/24/01	940											10.6			
6/24/01	1000							9.08	-620						
6/24/01	1010												6.13	1.9	
6/24/01	1123											10.7			
6/24/01	1244											10.9			
6/24/01	1427							9.24	-514						
6/24/01	1435												6.08	2.8	
6/24/01	1439													2.19	0.129
6/24/01	1440											10.9			
6/25/01	1140											11			
6/25/01	1150							9.21	-611						
6/25/01	1205													3.2	
6/25/01	1208												7.07		
6/25/01	1235												6.46		
6/25/01	1310											11.2			
6/25/01	1435													1.32	0.0522
6/25/01	1540											11.1			
6/25/01	1545											10.5			
6/25/01	1600							9.55							
6/25/01	1625							9.18	-757						
6/25/01	1637													2.2	
6/25/01	1650												5.75		
6/25/01	1717												6.13		
6/25/01	1723											10.4			
6/26/01	825											10.3			
6/26/01	847							9.19	-534						
6/26/01	852													4	
6/26/01	902												7.32		
6/26/01	1035												6.13		
6/26/01	1137											10.3			
6/26/01	1450													2.56	0.0316
6/26/01	1650							9.16	-511						
6/26/01	1701													2.6	
6/26/01	1710												7.11		
6/26/01	1725												6.49		
6/26/01	1734											10.3			
6/27/01	820											10.1			
6/27/01	830							9.16	-495						
6/27/01	837												6.38	2.5	
6/27/01	1050											10.2			
6/27/01	1112							9.16	-505						
6/27/01	1135												5.82		
6/27/01	1315											10.3			
6/27/01	1321							9.19	-512						
6/27/01	1325												6.1	1.9	
6/27/01	1425											10.3			
6/27/01	1430													1.19	0.0305
6/28/01	805											10			
6/28/01	823							9.25	-501						
6/28/01	834												6.69	2.3	
6/28/01	900											10.2			
6/28/01	1232							9.22	-492						
6/28/01	1236												6.55		
6/28/01	1237											10.1			
6/28/01	1400											10.1			
6/28/01	1520							9.31	-489						
6/28/01	1521												6.32	2.6	
6/28/01	1522													2.31	0.0534
6/28/01	1523											11			
6/29/01	820											10.9			
6/29/01	843							9.26	-372						
6/29/01	846												6.65	3.2	
6/29/01	930											11			
6/29/01	1211											11			
6/29/01	1214							9.31	-516						
6/29/01	1217												5.95		
6/29/01	1400											11			
6/29/01	1437							9.26	-485						
6/29/01	1440												6.48	4.1	
6/29/01	1450													5.83	0.0402
6/29/01	1455											11			
6/30/01	943											11			
6/30/01	1010							9.27							
6/30/01	1013												6.71	4.8	

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
6/30/01	1318											11			
6/30/01	1422											11			
6/30/01	1425													2.93	0.111
6/30/01	1500							9.31	-530						
6/30/01	1503												6.28		
7/1/01	1000											10.1			
7/1/01	1016							9.35	-498						
7/1/01	1027												6.91	4.4	
7/1/01	1055											10.3			
7/1/01	1106							9.26							
7/1/01	1111												6.28		
7/1/01	1120													2.08	0.0352
7/1/01	1135											10.3			
7/2/01	810											10			
7/2/01	835							9.39	-493						
7/2/01	842													2.8	
7/2/01	855												6.35		
7/2/01	1000											10			
7/2/01	1213											10			
7/2/01	1223							9.47	-621						
7/2/01	1230													2.4	
7/2/01	1239												6.13		
7/2/01	1450											10.1			
7/2/01	1505													2.02	0.0241
7/2/01	1610											11.4			
7/2/01	1614							9.26	-552						
7/2/01	1620													2.7	
7/2/01	1630											11.4			
7/2/01	1634												6.42		
7/3/01	830											11.2			
7/3/01	845							9.29	-734						
7/3/01	851													3	
7/3/01	900												6.18		
7/3/01	1030														
7/3/01	1040											11.2			
7/3/01	1130														
7/3/01	1300											11.3			
7/3/01	1430													4.15	0.0797
7/3/01	1445											11.3			
7/3/01	1455										9.32				
7/3/01	1504													3.7	
7/3/01	1508												6.07		
7/3/01	1610											11.3			
7/4/01	1138											10.9			
7/4/01	1203							9.11	-597						
7/4/01	1205												6.44	2.4	
7/4/01	1215													2.39	0.0532
7/4/01	1225											10.9			
7/5/01	830														
7/5/01	840											10.3			
7/5/01	905							9.35	-492						
7/5/01	911													3.5	
7/5/01	916												3.5		
7/5/01	1015													2.31	0.0791
7/5/01	1112							9.14	-519						
7/5/01	1115												3.13		
7/5/01	1218											9.7			
7/5/01	1448											9.8			
7/5/01	1500													2.31	0.0791
7/5/01	1610											9.8			
7/5/01	1715							9.33	-418						
7/5/01	1717												6.42	2.4	
7/5/01	1722											9.8			
7/6/01	758											9.7			
7/6/01	814							9.16	-471						
7/6/01	820												7.03	1.8	
7/6/01	841											10.3			
7/6/01	855												6.59		
7/6/01	1030												6.01		
7/6/01	1048											10.2			
7/6/01	1108							9.18	-524						
7/6/01	1327							9.21	-490						
7/6/01	1330												6.3	3	
7/6/01	1350											10.4			
7/6/01	1405													3.49	0.0505
7/7/01	855											10.2			
7/7/01	907							9.23	-463						
7/7/01	913												6.14		
7/7/01	916													3.8	
7/7/01	1134											10.2			
7/7/01	1140							9.14	-502						
7/7/01	1144												6.4	3.6	
7/7/01	1155											10.2			
7/7/01	1200													4.46	0.0693
7/8/01	1015											10.1			
7/8/01	1029							9.18	-456						
7/8/01	1036												6.35	5.2	
7/8/01	1050											10.1			
7/8/01	1115													6.06	0.074
7/8/01	1311											10.2			
7/8/01	1348							9.02	-495						
7/8/01	1352												3.35	5.6	
7/8/01	1358											10.2			
7/8/01	1410													3.61	0.171
7/8/01	1420												6.02		
7/9/01	1055											9.9			
7/9/01	1110							9.13	-493						
7/9/01	1120													3.6	
7/9/01	1129												6.47		
7/9/01	1350											9.9			
7/9/01	1450													4.22	0.0742
7/9/01	1500							9.15	-528						
7/9/01	1505													4	
7/9/01	1510												6.38		
7/9/01	1515											10			
7/10/01	951											9.9			
7/10/01	1002							9.2	-630						

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
7/10/01	1030													3.8	
7/10/01	1035												6.58		
7/10/01	1115											9.9			
7/10/01	1321	10	10									9.6			
7/10/01	1406	40	40		2							10.8			
7/10/01	1425													5.1	0.186
7/10/01	1505							9.17	-704						
7/10/01	1510													4	
7/10/01	1517												6.49		
7/10/01	1550											10.8			
7/11/01	1000	40	40									10.4			
7/11/01	1030							9.22	-301						
7/11/01	1030														
7/11/01	1033												6.89	5.4	
7/11/01	1100			1	16							11.9			
7/11/01	1445													3.13	0.0878
7/11/01	1609							9.12	-279						
7/11/01	1620												6.24	2.9	
7/11/01	1645	390	390	0.94	18							11.64			
7/12/01	930	900	900												
7/12/01	945	900	900	0.89	20							11.49			
7/12/01	1000							9.26	-747						
7/12/01	1006												5.26	2.1	
7/12/01	1045	950	950	0.82	21							11.62			
7/12/01	1058												6.05		
7/12/01	1400	1110	1110	0.81	28							11.61			
7/12/01	1412							9.24	-700						
7/12/01	1420												6.15	3.2	
7/12/01	1442					49	0.0011							3.83	0.0886
7/12/01	1535							9.21	-683						
7/12/01	1546												6.18	3.2	
7/12/01	1601	1230	1230	1.1	32							11.9			
7/13/01	1000	1950	1950												
7/13/01	1008	1950	1950	0.95	42							11.45			
7/13/01	1025							9.24	-722						
7/13/01	1037												6.02	1.9	
7/13/01	1105												6.09		
7/13/01	1200	2050	2050	1.1	51							9.9			
7/13/01	1210							9.33							
7/13/01	1213							9.09	-402						
7/13/01	1217												5.7	2.4	
7/13/01	1230												6.13		
7/13/01	1500	2270	2270	1	56							9.8			
7/13/01	1505						0.0069							2.96	0.0846
7/13/01	1525							9.22	-410						
7/13/01	1535												6.27	3	
7/13/01	1600	2320	2320	0.96	58							9.76			
7/16/01	940	4440	4440												
7/16/01	1000	4440	4440	0.75	64							9.45			
7/16/01	1040							9.49							
7/16/01	1044							9.2	-536						
7/16/01	1051												5.39	1.9	
7/16/01	1145												5.32		
7/16/01	1145	4510	4510	0.89	73							9.79			
7/16/01	1200												6.35		
7/16/01	1322	4590	4590	0.84	74							9.74			
7/16/01	1325							9.28	-683						
7/16/01	1340												6.38	1.9	
7/16/01	1354	4620	4620	0.83	74							9.73			
7/16/01	1442					35.4	0.0028							1.61	0.0601
7/17/01	835	5520	5520	0.76	76							9.56			
7/17/01	900									9.22	-686				
7/17/01	918												6.7	2.3	
7/17/01	918	5550	5550	0.77	77							7.47			
7/17/01	940									9.46	-432				
7/17/01	947									9.15	-435				
7/17/01	1000												6.78		
7/17/01	1143	5660	5660	0.75	76							7.45			
7/17/01	1405	5770	5770	0.74	76							7.94			
7/17/01	1435	5790	5790	0.73	76							8.53			
7/17/01	1445					41.3	0.0018							2.99	0.145
7/17/01	1517									9.2	-391				
7/17/01	1545												6.57	3	
7/17/01	1620												6.28		
7/17/01	1630	5880	5880	0.72	76							8.52			
7/18/01	825	6560	6560	0.68	76							8.38			
7/18/01	839									9.15	-694				
7/18/01	848												6.58	3.8	
7/18/01	855														
7/18/01	912	6600	6600	0.68	76							8.78			
7/18/01	1001									9.05					
7/18/01	1011												6.64		
7/18/01	1150	6710	6710	0.68	75							9.08			
7/18/01	1445	6830	6830	0.67	74							9.37			
7/18/01	1545					43	0.0021							6.29	0.116
7/18/01	1600	6880	6880	0.68	74							10.08			
7/18/01	1605									9.12	-636				
7/18/01	1615												6.48	4.4	
7/18/01	1630	6900	6900	0.67	74							10.07			
7/19/01	813	7520	7520	0.63	76							9.63			
7/19/01	832									9.17	-705				
7/19/01	837												6.76	6.4	
7/19/01	857												6.64		
7/19/01	900	7550	7550	0.65	76							8.75			
7/19/01	910														
7/19/01	937									9.2	-512				
7/19/01	956												6.39		
7/19/01	1335	7740	7740	0.68	75							8.68			
7/19/01	1335					43	0.002							6.1	0.0231
7/19/01	1448	7790	7790	0.66	74							9.18			
7/19/01	1625									9.26	-746				
7/19/01	1640												6.36	3.8	
7/19/01	1655	7880	7880	0.67	74							9.67			
7/20/01	756	8480	8480		76							8.6			
7/20/01	815									9.15	-737				
7/20/01	818												6.56	4.2	
7/20/01	1027									9.07	-692				

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
7/20/01	1033												6.41		
7/20/01	1035	8590	8590		76							8.7			
7/20/01	1045					42.2	0.0005							4.52	0.007
7/21/01	1023	9520	9520		76							8.3			
7/21/01	1035							9.22	-515						
7/21/01	1040												6.96	4.5	
7/21/01	1158												6.49		
7/21/01	1204							9.16	-605						
7/21/01	1211	9590	9590		76							8.3			
7/21/01	1217					45.4	0.0013							5.02	0.0202
7/22/01	932	10410	10410	0.62	77							8.72			
7/22/01	945							9.26	-662						
7/22/01	949												6.32	4.3	
7/22/01	1115	10480	10480	0.62	76							8.72			
7/22/01	1126							9.29	-547						
7/22/01	1150					44.7	0.0014							3.47	0.0129
7/22/01	1152	10500	10500	0.62	76							8.72			
7/22/01	1157												6.24		
7/23/01	1207	11420	11420	0.61	22							8.31			
7/23/01	1226							9.33	-575						
7/23/01	1232												5.7	3.8	
7/23/01	1249	11450	11450	0.6	28							11.2			
7/23/01	1345							9.07	-596						
7/23/01	1411	11500	11500	0.61	28							11.21			
7/23/01	1420					37.7	0.0011							3.95	0.0114
7/23/01	1440												6.22		
7/23/01	1452							9.13	-602						
7/24/01	930	12200	12200	0.57								10.27			
7/24/01	1012							9.1	-650				6.51		
7/24/01	1116	12260	12260	0.57								10.17			
7/24/01	1139												6.34		
7/24/01	1300	12320	12320	0.57								10.07			
7/24/01	1310							9.17	-672				6.65		
7/24/01	1355												6.44		
7/24/01	1430													5.5	
7/24/01	1430					42.2	0.0036							7.01	0.0198
7/24/01	1545	12410	12410	0.58								10.06			
7/25/01	830	13000	13000									10.1			
7/25/01	858							9.18	-695						
7/25/01	904												6.69	6.4	
7/25/01	1035	13090	13090									9.7			
7/25/01	1055							9.18	-635						
7/25/01	1100												6.57		
7/25/01	1250	13150	13150									9.8			
7/25/01	1424							9.21	-621						
7/25/01	1427												6.24	2.6	
7/25/01	1529					41.1	0.0042							2.89	0.108
7/25/01	1530	13250	13250					9.23	-530			9.8			
7/25/01	1533												6.18		
7/26/01	808	13820	13820	0.55	78							10.35			
7/26/01	820							9.18	-545						
7/26/01	827												7.07	2.4	
7/26/01	858												6.46		
7/26/01	1007	13890	13890	0.54	75							10.54			
7/26/01	1030			0.563								10.063			
7/26/01	1040			0.68	91							11.58			
7/26/01	1147							9.02	-524						
7/26/01	1152												6.58		
7/26/01	1223	13980	13980	0.69	71							11.69			
7/26/01	1340	14030	14030	0.7	86							13.7			
7/26/01	1355							8.9							
7/26/01	1400					41.5	0.558							4.68	0.0914
7/26/01	1405							9.1					7.75		
7/26/01	1415												7.1		
7/26/01	1423												6.8		
7/26/01	1430												6.6		
7/26/01	1440												6.3		
7/26/01	1445												5.95		
7/26/01	1602												6.02		
7/26/01	1607	14130	14130	0.65	88							13.65			
7/27/01	806	14760	14760	0.6	89							13.4			
7/27/01	847							9.23	-608						
7/27/01	850												6.98	4	
7/27/01	915												6.53		
7/27/01	917	14800	14800	0.63	87							13.93			
7/27/01	1110														
7/27/01	1117	14880	14880	0.61	88							12.91			
7/27/01	1128							9.05	-528						
7/27/01	1325					40.9	1							3.14	0.0704
7/27/01	1330	14970	14970	0.64	87							13.34			
7/27/01	1515							9.12	-437						
7/27/01	1518												6.08		
7/27/01	1535	15050	15050	0.64	87							13.24			
7/28/01	1524	15750	15750	0.74	88							14.04			
7/28/01	1540							9.27	-494						
7/28/01	1557												6.22	2.8	
7/28/01	1625					35.7	0.801							2.76	0.0918
7/28/01	1627	15790	15790	0.66	88							11.86			
7/28/01	1638												6.14		
7/28/01	1645							9.12							
7/29/01	1108	16530	16530	0.63	89							11.23			
7/29/01	1120							9.1	-453						
7/29/01	1129												2.4		
7/29/01	1148	16560	16560	0.63	88							12.33			
7/29/01	1217	16580	16580	0.63	88							12.23			
7/29/01	1220					41.1	0.472							2.65	0.0508
7/29/01	1237							9.14	-419						
7/29/01	1240														
7/30/01	1005	17410	17410	0.61	88							12.21			
7/30/01	1025							9.18	-669						
7/30/01	1036												6.24	2.8	
7/30/01	1110	17450	17450	0.59	84							13.89			
7/30/01	1352							9.11	-726						
7/30/01	1403												6.31	2.8	
7/30/01	1412	17560	17560	0.6	85							13.9			
7/30/01	1420					42.5	0.0686							2.63	0.0639
7/30/01	1448	17590	17590	0.6	85							14			

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
7/31/01	831	18210	18210	0.58	87							13.76			
7/31/01	850							9.09	-711						
7/31/01	900												6.72	3.6	
7/31/01	1110												6.47		
7/31/01	1118	18310	18310	0.56	87							13.76			
7/31/01	1126							9.14	-741					4.1	
7/31/01	1343	18390	18390	0.56	87							13.76			
7/31/01	1410					39.3	1.55							5.12	0.12
7/31/01	1428							9.11	-647						
7/31/01	1510												6.38		
7/31/01	1650	18500	18500	0.57	87							13.77			
8/1/01	800	18770	18770												
8/1/01	811	18770	18770	0.57	88							12.97			
8/1/01	833							9.24	-623						
8/1/01	841												3.7	2.9	
8/1/01	852												6.12		
8/1/01	923												6.35		
8/1/01	1124							9.22	-721						
8/1/01	1125	18880	18880	0.55	87							13.05			
8/1/01	1130												6.43		
8/1/01	1340	18960	18960	0.56	86							13.06			
8/1/01	1340					39.9	0.0945							2.34	0.0477
8/1/01	1535							9.19	-615						
8/1/01	1538												6.22		
8/1/01	1545	19030	19030	0.55	86							13.05			
8/2/01	806	19360	19360	0.51	88							12.11			
8/2/01	927							9.04	-599						
8/2/01	929												6.65	2.8	
8/2/01	938	19400	19400	0.54	85							13.14			
8/2/01	1126							9.09	-536						
8/2/01	1132												6.35		
8/2/01	1153	19480	19480	0.54	85							12.94			
8/2/01	1419					39.2	2.19							4.03	0.0703
8/2/01	1420	19560	19560	0.54	86							12.84			
8/2/01	1433							9.13	-366						
8/2/01	1436												6.46		
8/2/01	1440	19580	19580	0.54	86							13.14			
8/3/01	807			0.48	88							11.98			
8/3/01	912									8.98	-523				
8/3/01	915												6.73	3.5	
8/3/01	1120	20250	20250	0.54	86							13.04			
8/3/01	1125									9.19	-495				
8/3/01	1130												6.27		
8/3/01	1408	20340	20340	0.53	86							12.73			
8/3/01	1415					37	1.36							4.63	0.0834
8/3/01	1520	20390	20390	0.54	85							12.94			
8/3/01	1520									9.11	-549				
8/3/01	1524												6.42		
8/4/01	1004							9.1	-534						
8/4/01	1008												6.65	4.1	
8/4/01	1101	21030	21030	0.54	85							13.24			
8/4/01	1105					39	1.53							4.25	0.135
8/4/01	1120							9.14	-508						
8/4/01	1122												6.74		
8/4/01	1129	21040	21040	0.54	85							13.24			
8/4/01	1134												6.26		
8/5/01	1028	21710	21710	0.55	84							13.35			
8/5/01	1113							9.13	-540						
8/5/01	1116												6.66	3.7	
8/5/01	1140	21750	21750	0.53	85							13.19			
8/5/01	1203							9.27	-507						
8/5/01	1207							9.12							
8/5/01	1215												6.4		
8/5/01	1235	21780	21780	0.55	85							13.05			
8/5/01	1240					39.1	0.772							2.99	0.087
8/5/01	1254	21790	21790	0.55	85							12.35			
8/7/01	935	22580	22580	0.51	88							10.91			
8/7/01	1015							9.6	-382						
8/7/01	1040							9.27	-655						
8/7/01	1052												5.21	1.2	
8/7/01	1120												6.13		
8/7/01	1145	22650	22650	0.5	88							10.9			
8/7/01	1350	22720	22720	0.51	88							10.91			
8/7/01	1410					28.6	0.0559							2.54	0.0402
8/7/01	1430							9.19	-732						
8/7/01	1440												6.65	3.2	
8/7/01	1523												6.33		
8/7/01	1530	22770	22770	0.51	88							10.91			
8/8/01	838									9.15	-592				
8/8/01	845												6.65	2.8	
8/8/01	903												6.38		
8/8/01	1108	23390	23390	0.5	89							10.8			
8/8/01	1342	23460	23460	0.51	89							10.91			
8/8/01	1450					38.5	2.01							2.2	0.0921
8/8/01	1501									9.28	-720				
8/8/01	1510												6.31	2.4	
8/8/01	1525	23520	23520	0.52	89							10.82			
8/9/01	834	24060	24060	0.5	90							10.5			
8/9/01	945									9.02	-640				
8/9/01	1001									9.12					
8/9/01	1020												6.25	3	
8/9/01	1127	24150	24150	0.5	90							10.6			
8/9/01	1303	24190	24190	0.5	90							10.8			
8/9/01	1415					41	2.23							1.68	0.0852
8/9/01	1427									9.19	-431				
8/9/01	1430	24240	24240	0.54	90							10.84			
8/9/01	1443												6.12	2.8	
8/9/01	1536	24270	24270	0.52	90							10.82			
8/10/01	806	24790	24790	0.51	90							10.51			
8/10/01	822									9.2	-648				
8/10/01	831												5.87	1.8	
8/10/01	907												6.05		
8/10/01	948	24840	24840	0.51	90							10.61			
8/10/01	1121	24890	24890	0.51	90							10.71			
8/10/01	1124									9.22	-724				
8/10/01	1133												6.09	1.8	
8/10/01	1412	24980	24980	0.5	90							10.7			

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
8/10/01	1415					37.3	2.53							2.5	0.0591
8/10/01	1426									9.27	-736				
8/10/01	1435												6.35	2.4	
8/10/01	1530	25020	25020	0.51	90							10.71			
8/13/01	1115	25590	25590	0.45	90							10.55			
8/13/01	1145							9.31	-646						
8/13/01	1153							9.18							
8/13/01	1202												6.17	1.3	
8/13/01	1212	25610	25610	0.46	90							10.36			
8/13/01	1216							9.33							
8/13/01	1241												6.59		
8/13/01	1551	25720	25720	0.46	90							10.36			
8/13/01	1619							9.1	-650						
8/13/01	1620					28.8	0.112							0.609	0.0324
8/13/01	1631												6.7	1.3	
8/13/01	1705	25750	25750	0.45	90							10.35			
8/14/01	835	26060	26060	0.41	95							6.61			
8/14/01	948	26060	26060	0.48	94							6.38			
8/14/01	1030	26080	26080	0.48	95							4.48			
8/14/01	1033									10.98					
8/14/01	1038									9.23	-410				
8/14/01	1048												2.85	2	
8/14/01	1115												6.84		
8/14/01	1225	26130	26130	0.48	94							4.98			
8/14/01	1415	26190	26190	0.49	94							4.99			
8/14/01	1526									9.27	-756				
8/14/01	1540												6.72	2.6	
8/14/01	1620												6.35		
8/14/01	1620					35.4	0.282							0.974	0.0286
8/14/01	1632	26260	26260	0.48	94							5.28			
8/15/01	900	26740	26740	0.48	94							5.58			
8/15/01	916							9.12	-624						
8/15/01	929												6.13	1.8	
8/15/01	930					34.9	0.473								
8/15/01	1210	26750	26750									5.2			
8/15/01	1605	26760	26760	0.56	0							5.66			
8/15/01	1615													1.88	0.0362
8/15/01	1645							9.1	-370						
8/15/01	1657												6.15	2	
8/15/01	1710	26790	26790	0.47	23							5.67			
8/16/01	835	27220	27220	0.45	16							5.55			
8/16/01	858							9.13	-669						
8/16/01	906												6.4	2	
8/16/01	910	27240	27240	0.44	16							8.04			
8/16/01	921							8.97							
8/16/01	931							9.1	-661						
8/16/01	945												6.97		
8/16/01	1050												6.28	2.6	
8/16/01	1102	27290	27290	0.44	14							8.04			
8/16/01	1403	27390	27390	0.53	16							8.13			
8/16/01	1416					35	0.0079							2.47	0.0524
8/16/01	1429							9.19	-503						
8/16/01	1441												5.75	2	
8/16/01	1506												6.22		
8/16/01	1535	27430	27430	0.5	15							8.1			
8/20/01	1058	30040	30040	0.57	20							8.17			
8/20/01	1130							9.05	-681						
8/20/01	1143												6.47	2.8	
8/20/01	1229	30100	30100	0.56	24							8.16			
8/20/01	1410	30150	30150	0.55	24							8.15			
8/20/01	1421					21.3	0.0011							2.21	0.0261
8/20/01	1432							9.11	-715						
8/20/01	1440												6.36	2.4	
8/20/01	1452	30180	30180	0.54	23							8.14			
8/21/01	815	30750	30750	0.53	24							8.03			
8/21/01	833							9.1	-620						
8/21/01	841												6.4	2.4	
8/21/01	1015	30820	30820	0.53	24							8.13			
8/21/01	1229	30890	30890	0.54	24							8.14			
8/21/01	1436	30960	30960	0.53	24							8.13			
8/21/01	1445					18.8	0.0088							2.99	0.0324
8/21/01	1501							9.12	-670						
8/21/01	1511												6.43	2.8	
8/21/01	1523	30990	30990	0.54	24							8.14			
8/22/01	848	31550	31550	0.53	25							8.13			
8/22/01	910							9.07	-623						
8/22/01	924												6.54	3.2	
8/22/01	1001												6.35		
8/22/01	1228	31670	31670	0.53	25							8.13			
8/22/01	1319	31700	31700	0.53	25							8.13			
8/22/01	1325					20.5	0.0011							2.65	0.0266
8/22/01	1340							9.17	-718						
8/22/01	1351												6.31	2.8	
8/22/01	1402	31720	31720	0.53	25							8.03			
8/23/01	809	32310	32310	0.51	26							8.01			
8/23/01	824							9.13	-726						
8/23/01	835												3.3		
8/23/01	1034	32380	32380	0.51	26							8.01			
8/23/01	1211	32440	32440	0.52	26							8.02			
8/23/01	1300					19.9	0.0026							4.59	0.0508
8/23/01	1351	32490	32490	0.52	26							8.02			
8/23/01	1418							9.09	-665						
8/23/01	1424												6.57	3.6	
8/23/01	1442												6.4		
8/23/01	1449	32520	32520	0.52	26							8.02			
8/24/01	854	33090	33090	0.51	29							8.01			
8/24/01	916							9.12	-722						
8/24/01	922												6.26	3.1	
8/24/01	1031	33150	33150	0.51	29							8.01			
8/24/01	1315					22.1	0.0021							3.67	0.0417
8/24/01	1329	33240	33240	0.51	26							8.01			
8/24/01	1331							9.2	-671						
8/24/01	1336												6.32	3.4	
8/24/01	1412	33260	33260	0.51	26							8.01			
8/27/01	1153	35440	35440	0.49	30							7.99			
8/27/01	1210									9.1	-422				
8/27/01	1221												6.69	3	

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
8/27/01	1243												6.23		
8/27/01	1423	35510	35510	0.51	28							8.01			
8/27/01	1435					21.9	0.0011							1.45	0.141
8/27/01	1447									9.04	-424				
8/27/01	1455												5.46	2	
8/27/01	1506	35540	35540	0.51	28							8.01			
8/27/01	1510												6.21		
8/28/01	828	36120	36120	0.49	30							7.99			
8/28/01	1030							9.02	-387						
8/28/01	1041							9.12	-356						
8/28/01	1048												6.32	2.2	
8/28/01	1234	36200	36200	0.5	29							8			
8/28/01	1417	36250	36250	0.5	28							8			
8/28/01	1430					21.5	0.002							2.81	0.111
8/28/01	1604	36300	36300	0.5	30							8			
8/28/01	1800							9.26	-669						
8/29/01	1043	36870	36870	0.5	31							8			
8/29/01	1100									9.24	-426				
8/29/01	1126												6.67	1.6	
8/29/01	1212												6.27		
8/29/01	1436	36900	36900		27							7.5			
8/29/01	1512	36910	36910	0.47	35							7.97			
8/29/01	1521					7.02	0.0024							1.26	0.0584
8/29/01	1524									9.33			6.4	1.4	
8/30/01	1207									9.3					
8/30/01	1218												6.45	1.8	
8/30/01	1230									9.4	-382				
8/30/01	1257									9.18					
8/30/01	1308												6.26		
8/30/01	1415					27.7	0.0017							1.16	0.0641
8/30/01	1430									9.12	-416				
8/30/01	1437												6.31	1.4	
9/4/01	1039	41340	41340	0.51	40							7.01			
9/4/01	1110									9.13	-514				
9/4/01	1130												6.05	2.6	
9/4/01	1409	41450	41450	0.51	38							7.01			
9/4/01	1555					26.1	0.0026							1.75	0.0458
9/4/01	1625									9.33	-503				
9/4/01	1631												6.05	2	
9/4/01	1642	41520	41520	0.51	38							7.51			
9/5/01	845	42010	42010	0.49	44							7.49			
9/5/01	905	42020	42020	0.5	40							7.5			
9/5/01	914									9.19	-171				
9/5/01	921												6.14	2.1	
9/5/01	1204	42110	42110	0.51	40							7.51			
9/5/01	1334	42150	42150	0.51	39							7.51			
9/5/01	1350					33.7	0.6							1.86	0.0713
9/5/01	1403									9.18	-178				
9/5/01	1412														
9/5/01	1420	42180	42180	0.51	38							7.51			
9/6/01	815	42740	42740	0.5	40							7.5			
9/6/01	842									9.24	-188				
9/6/01	853												6.15	2.2	
9/6/01	1147	42850	42850	0.51	40							7.51			
9/6/01	1307	42890	42890	0.51	38							7.51			
9/6/01	1320					38.4	1.05							2.18	0.0594
9/6/01	1337									9.31	-179				
9/6/01	1345												6.17	2.2	
9/6/01	1353	42910	42910	0.51	38							7.51			
9/7/01	900	43500	43500	0.51	41							7.51			
9/7/01	922									9.13	-178				
9/7/01	931												6.35	2	
9/7/01	955					39.7	1.29							1.78	0.154
9/7/01	1003	43530	43530	0.5	42							7.5			
9/10/01	1029									9.18	-492				
9/10/01	1029	45740	45740	0.49	42							7.49			
9/10/01	1029														
9/10/01	1100												6.22	2.4	
9/10/01	1350	45850	45850	0.51	41							5.61			
9/10/01	1403									9.48	-438				
9/10/01	1523									9.15					
9/10/01	1531												6.26	2	
9/10/01	1550					30.6	0.117							1.38	0.0942
9/10/01	1623	45920	45920	0.5	40							5.6			
9/11/01	827	46410	46410	0.48	44							5.58			
9/11/01	845									9.04					
9/11/01	1010												6.52	3	
9/11/01	1010					32.8	1.85							2.86	0.217
9/11/01	1133	46490	46490	0.48	40							5.58			
9/11/01	1415	46580	46580	0.5	40							5.6			
9/12/01	1000	47170	47170	0.48	42							5.38			
9/12/01	1033									9.1					
9/12/01	1040												6.63	1.5	
9/12/01	1122									10.69					
9/12/01	1130	47210	47210												
9/13/01	1230	47210	47210	0.5	48							2.5			
9/13/01	1343	47250	47250	0.5	45							2.99			
9/13/01	1405									11.17					
9/13/01	1427									9.29					
9/13/01	1434	47280	47280	0.5	44							2.99			
9/17/01	828	47280	47280	0.53	54							3.33			
9/17/01	937	47310	47310	0.52	48							3.32			
9/17/01	940									10.88					
9/17/01	1045									9.11					
9/17/01	1233	47400	47400	0.5	46							3.3			
9/17/01	1255									8.95					
9/17/01	1302									9.08					
9/17/01	1340												2.68		
9/17/01	1350												6.64	1.2	
9/17/01	1418	47450	47450	0.49	46							3.29			
9/17/01	1437					22.8	0.0023							0.745	0.178
9/17/01	1508	47480	47480	0.49	46							3.29			
9/18/01	1017	48060	48060	0.49	46							3.09			
9/18/01	1035									9.22					
9/18/01	1047												7.3	1.4	
9/18/01	1115												6.9		
9/18/01	1126	48090	48090	0.49	46							3.09			

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
9/18/01	1140	48100	48100	0.84	88							11.24			
9/18/01	1150									8.3					
9/18/01	1241									9.12					
9/18/01	1248												8.44		
9/18/01	1348	48210	48210	0.91	87							13.11			
9/18/01	1419									9.28					
9/18/01	1425												6.76	2.6	
9/18/01	1435	48250	48250	0.9	87							13			
9/18/01	1445					33.3	0.0031							2.19	0.0193
9/18/01	1520												6.58		
9/18/01	1530	48300	48300	0.9	86							13			
9/19/01	850	49240	49240	0.86	87							12.86			
9/19/01	905									9.24					
9/19/01	912												7.84	3.2	
9/19/01	1015	49310	49310	0.88	87							12.28			
9/19/01	1143	49390	49390	0.88	86							12.28			
9/19/01	1420									9.21					
9/19/01	1431												7.26	2.8	
9/19/01	1437	49550	49550	0.91	86							12.31			
9/19/01	1440					35.8	0.003							2.63	0.0048
9/19/01	1520												6.56		
9/19/01	1525	49600	49600	0.91	86							12.31			
9/20/01	846	50530	50530	0.85	88							12.05			
9/20/01	906									9.35					
9/20/01	922									9.06					
9/20/01	931												6.68	3.1	
9/20/01	1005												6.37		
9/20/01	1018	50610	50610	0.86	88							12.06			
9/20/01	1150	50690	50690	0.87	88							12.17			
9/20/01	1317	50770	50770	0.87	86							12.07			
9/20/01	1330					39.2	0.0698							4.42	0.0327
9/20/01	1340									9.2					
9/20/01	1345												6.17	3.4	
9/20/01	1353			0.88	86							11.38			
9/24/01	1151	55700	55700	0.85	87							11.25			
9/24/01	1200									9			6.02		
9/24/01	1225													3.6	
9/24/01	1350					38.5	0.483							2.44	0.103
9/24/01	1408									9.16					
9/24/01	1420												6.38	3.6	
9/24/01	1434	55850	55850	0.85	86							11.25			
9/25/01	1237	56990	56990	0.85	87							11.15			
9/25/01	1240									9.17					
9/25/01	1249												5.55	3.4	
9/25/01	1315												6.06		
9/25/01	1327	57040	57040	0.87	87							11.17			
9/25/01	1335					39.3	0.807							3.7	0.14
9/25/01	1458									9.14					
9/25/01	1507	57130	57130	0.88	87							11.18			
9/25/01	1510												6.36	3.2	
9/26/01	831	58030	58030	0.83	88							11.13			
9/26/01	840									9.15					
9/26/01	845												6.84	4.1	
9/26/01	923												6.34		
9/26/01	1007	58110	58110	0.83	88							11.13			
9/26/01	1131	58180	58180	0.85	88							11.15			
9/26/01	1307	58270	58270	0.86	87							11.16			
9/26/01	1310									9.17					
9/26/01	1318												3.85	2.8	
9/26/01	1341					38.4	1.12							2.46	0.135
9/26/01	1402												6.38		
9/26/01	1427	58340	58340	0.87	86							11.17			
9/27/01	825	59280	59280	0.82	88							10.92			
9/27/01	843									9.16					
9/27/01	850												6.65	2.3	
9/27/01	930												6.22		
9/27/01	1003	59360	59360	0.83	88							10.93			
9/27/01	1202	59460	59460	0.84	87							10.94			
9/27/01	1355	59560	59560	0.86	87							10.96			
9/27/01	1405					38.4	1.36							3.05	0.138
9/27/01	1418									9.16					
9/27/01	1423												7.2	2.8	
9/27/01	1445												6.36		
9/27/01	1450	59610	59610	0.87	86							10.97			
10/1/01	1320	64480	64480	0.85	87							10.65			
10/1/01	1337									9.07					
10/1/01	1345					37.8	2.14							4.56	0.213
10/1/01	1348												7.03	3.8	
10/1/01	1404	64520	64520	0.88	88							9.28			
10/1/01	1534									9.18					
10/1/01	1544												6.91	3.2	
10/1/01	1605	64630	64630	0.88	88							8.68			
10/1/01	1615												6.11		
10/2/01	942	65550	65550	0.85	89							9.25			
10/2/01	955									9.31					
10/2/01	959									9.12					
10/2/01	1008												6.09	2.3	
10/2/01	1048	65610	65610	0.84	89							9.24			
10/2/01	1350	65770	65770	0.86	88							9.26			
10/2/01	1410					38.4	2.28							3.65	0.173
10/2/01	1417									9.24					
10/2/01	1421												6.2	3.2	
10/2/01	1430	65800	65800	0.87	89							8.27			
10/3/01	852	66760	66760	0.84	90							9.14			
10/3/01	912									9.13					
10/3/01	924												7.39	3.2	
10/3/01	1035												6.33		
10/3/01	1235	66960	66960	0.86	90							9.26			
10/3/01	1343	67020	67020	0.87	90							9.27			
10/3/01	1346									9.1					
10/3/01	1355												5.75	3.4	
10/3/01	1410					35.6	2.24							3.74	0.138
10/3/01	1418												6.25		
10/3/01	1421	67050	67050	0.88	89							9.28			
10/4/01	911	68030	68030	0.83	90							9.03			
10/4/01	935									9.17					
10/4/01	947												6.12	3.2	

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
10/4/01	1103	68120	68120	0.84	90							9.04			
10/4/01	1314	68240	68240	0.86	89							9.06			
10/4/01	1338									9.16					
10/4/01	1340					36.8	2.27							3.66	0.15
10/4/01	1343												6.06	3.3	
10/4/01	1400	68280	68280	0.88	89							9.08			
10/10/01	1107	75190	75190	0.69	92							7.89			
10/10/01	1140									9.03					
10/10/01	1152									9.08					
10/10/01	1233												5.64	4	
10/10/01	1240	75260	75260	0.78	90							7.98			
10/10/01	1418												6.27	3.2	
10/10/01	1421	75350	75350	0.79	90							7.99			
10/10/01	1430	75350	75350	0.82	94							5.12			
10/10/01	1431					36.3	2.15							3.07	0.141
10/10/01	1443									9.18					
10/10/01	1453												4.5		
10/10/01	1510												6.06	3.1	
10/10/01	1518	75390	75390	0.84	94							5.14			
10/11/01	1120	76380	76380	0.78	94							5.08			
10/11/01	1138									9.38	-424				
10/11/01	1150												3.53	2.2	
10/11/01	1344	76500	76500	0.79	94							5.29			
10/11/01	1348									9.41	-437				
10/11/01	1350					33.6	2.34							1.63	0.132
10/11/01	1354									9.18					
10/11/01	1408												6.1	2	
10/11/01	1458	76560	76560	0.78	94							5.28			
10/15/01	1145	80780	80780	0.68	94							4.88			
10/15/01	1207									9.47	-376				
10/15/01	1214									9.08	-413				
10/15/01	1233												6.08	1.8	
10/15/01	1456	80910	80910	0.69	94							4.89			
10/15/01	1500					34.4	1.72							1.7	0.0861
10/15/01	1513									9.32	-403				
10/15/01	1521												5.87	1.8	
10/15/01	1535												6.12		
10/15/01	1540	80950	80950	0.7	94							4.9			
10/16/01	833	81630	81630	0.63	94							4.83			
10/16/01	904									9.18	-394				
10/16/01	915												6.15	2.4	
10/16/01	1108	81730	81730	0.67	95							4.87			
10/16/01	1415	81850	81850	0.65	94							4.85			
10/16/01	1440					32.3	1.46							2.17	0.0893
10/16/01	1457									9.15	-319				
10/16/01	1510												6.19	2.1	
10/16/01	1517	81890	81890	0.65	93							4.85			
10/17/01	1008	82590	82590	0.57	94							4.77			
10/17/01	1021									9.08	-307				
10/17/01	1029												5.81	2	
10/17/01	1037	82600	82600	0.57	94							4.77			
10/17/01	1115												6.54		
10/17/01	1133									9.03	-311				
10/17/01	1138												6.7		
10/17/01	1205												6.14		
10/17/01	1213	82660	82660	0.58	94							4.78			
10/17/01	1425					35.4	1.26							1.78	0.0861
10/17/01	1508									9.05	-193				
10/17/01	1537												6.39	2	
10/17/01	1611	82810	82810	0.59	94							1.59			
10/18/01	808	83350	83350	0.52	94							4.62			
10/18/01	1510					34.6	0.85							1.44	0.077
10/18/01	1524	83580	83580	0.53	94							4.63			
10/19/01	851	84110	84110	0.46	94							4.56			
10/19/01	917									9.55					
10/19/01	920									9.06	-384				
10/19/01	933												7.69	1.6	
10/19/01	950					35.4	0.765							1.33	0.0636
10/19/01	1024	84160	84160	0.46	95							4.56			
10/19/01	1040												6.1		
10/19/01	1045	84170	84170	0.47	95							4.57			
10/22/01	923	85750	85750	0.25	96							4.25			
10/22/01	942									9.44	-420				
10/22/01	950									9.06					
10/22/01	958												6.08	2	
10/22/01	1323	85820	85820	0.26	94							5.16			
10/22/01	1427	85840	85840	0.28	95							5.18			
10/22/01	1500					32	0.255							2.3	0.07
10/22/01	1507									9.3	-420				
10/22/01	1514												6.38	2.2	
10/22/01	1521	85850	85850	0.27	94							5.17			
10/23/01	830	86100	86100	0.21	95							5.11			
10/23/01	857									9.27	-409				
10/23/01	912												6.27	2.8	
10/23/01	926	86120	86120	0.58	94							6.08			
10/23/01	953	86120	86120	0.27	94							6.17			
10/23/01	1057									9.1	-375				
10/23/01	1254	86170	86170	0.26	94							6.16			
10/23/01	1442	86200	86200	0.28	94							6.18			
10/23/01	1448					31.5	0.185							3.46	0.104
10/23/01	1502												6.39	3.2	
10/23/01	1508									9.05	-426				
10/23/01	1517	86210	86210	0.28	94							6.18			
10/24/01	911	86470	86470	0.21	94							6.11			
10/24/01	932									9.1	-701				
10/24/01	941												6.58	4.2	
10/24/01	1010												6.43		
10/24/01	1156	86500	86500	0.2	94							6.1			
10/24/01	1405	86530	86530	0.2	94							6.1			
10/24/01	1415									9.08	-722				
10/24/01	1432					36	0.426							6.08	0.221
10/24/01	1440												5.76	4.4	
10/24/01	1447	86540	86540	0.2	94							6.1			
10/24/01	1448												6.23		
10/25/01	1014				95							5.8			
10/25/01	1027									9.25	-730				
10/25/01	1040												7.24	4	

Date	Time	Column - 6						South Tank		North Tank		Acid Balance Tank (out)			
		Totalizer	Vol	Flow	Pressure	Iron	V	pH	ORP	pH	ORP	Rate	pH	Iron	V
		(gls)	(gls)	(gpm)	in (psi)	(mg/L)	(mg/L)		(mv)		(mv)	(gpm)		(mg/L)	(mg/L)
10/25/01	1125												6.46		
10/25/01	1127				95							6.3			
10/25/01	1335				95							6.3			
10/25/01	1351									9.28	-622				
10/25/01	1403					35.9	0.58							4.54	0.189
10/25/01	1406												6.71	4	
10/25/01	1416												6.29		
10/25/01	1419				95							3.5			
10/29/01	1052				95							6			
10/29/01	1113									9.34	-762				
10/29/01	1123												6.15	3.8	
10/29/01	1219				95							6			
10/29/01	1327				86							14.3			
10/29/01	1339				88							12			
10/29/01	1440									8.82			7.1		
10/29/01	1545					29	0.377							2.55	0.0369
10/29/01	1548									9.06	-697				
10/29/01	1556				88							12			
10/29/01	1618												6.19	2.6	
10/29/01	1622				88							12			
10/30/01	833				89							12			
10/30/01	855									9.08	-724				
10/30/01	915												6.79	6.4	
10/30/01	1055												6.4		
10/30/01	1243				89							12.5			
10/30/01	1334				88							12.5			
10/30/01	1407					44.2	0.818							11.2	0.0119
10/30/01	1416									8.95	-491				
10/30/01	1425									9.06					
10/30/01	1443												6.52	6.4	
10/30/01	1447				89							12.5			
10/31/01	1119				90							11.9			
10/31/01	1132									9.21	-451				
10/31/01	1140												5.41	2.8	
10/31/01	1152				87							16.6			
10/31/01	1205									9.05	-404				
10/31/01	1225				80							18.6			
10/31/01	1233												6.69		
10/31/01	1352									8.81	-659				
10/31/01	1353				80							18.6			
10/31/01	1405									9.07					
10/31/01	1410												6.7	3	
10/31/01	1416					36.6	0.889							3.27	0.0864
10/31/01	1438												6.52		
10/31/01	1443				81							18.6			
11/1/01	1020				82							18.5			
11/1/01	1042									9.13	-362				
11/1/01	1051												7.26	5.8	
11/1/01	1120												6.16		
11/1/01	1212				82							18.5			
11/1/01	1346				82							18.5			
11/1/01	1403					35.3	1.47							3.26	0.0178
11/1/01	1408									9.24	-636				
11/1/01	1419												6.08	3	
11/1/01	1423				82							18.5			
11/5/01	1006									7.89	-283				
11/5/01	1021												3.34	7.1	
11/5/01	1041					37.7	1.17							38.8	0.491
11/5/01	1100												6.09		
11/5/01	957				82							18			
11/5/01	1055				81							18			
11/8/01	1213				85							18.5			
11/8/01	1324				85							18.6			
11/8/01	1421				85							18.6			
11/8/01	1440					24.8	0.591							8.22	0.0446
11/8/01	1503				86							18.6			
11/12/01	1005				75							16.1			
11/12/01	1308				73							15.9			
11/12/01	1411					39.5	1.77							2.21	0.0561
11/12/01	1424				77							16.4			
11/12/01	1512				76							16.4			
11/13/01	824				76							16.8			
11/13/01	1054				74							14.9			
11/13/01	1305				71							14.7			
11/13/01	1355					40.1	1.7							2.99	0.125
11/13/01	1435											14.8			
11/14/01	816											14.5			
11/14/01	1024											12.8			
11/14/01	1328											15.5			
11/14/01	1345													1.79	0.119
11/14/01	1408											15.4			
11/15/01	1128											15.5			
11/15/01	1318											15.4			
11/15/01	1452											15.3			
11/15/01	1455													3.8	0.188
11/15/01	1529											15.3			
11/16/01	820											15.5			
11/16/01	1024											15.5			
11/16/01	1307											15.5			
11/16/01	1330													5.14	0.271
11/16/01	1436											15.4			
11/19/01	1125											13			
11/19/01	1225											13			
11/19/01	1328											13			
			avg	0.6							avg	9.5			

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
1/29/01	1000	System startup. Packed col 3 & 4 with gravel layer at bottom and rest with ZVI.	0		0	0	0								
1/29/01	1615	lab analysis	0		0	0	0								
1/30/01	1010	pump shut off - restarted at 1018	1		1	1	1								
1/30/01	1300		0		1	1	1					1075	1799		
1/30/01	1417		0		1	1	1					1675	2259		
1/30/01	1615		0		1	1	1								
1/30/01	2010	Flow meters not working correctly.	0		1	1	1					3735	4209		
1/30/01	2045		0		1	1	1								
1/30/01	2310		0		1	1	1					4815	5039		
1/30/01	2313		0		1	1	1								
1/31/01	520		0		2	2	2								
1/31/01	524		0		2	2	2					6885	6969		
1/31/01	930		0		2	2	2					8195	8429		
1/31/01	1030		0		2	2	2					8335	8559		
1/31/01	1100		0		2	2	2								
1/31/01	1445		0		2	2	2				520	8885	8959		
1/31/01	1530		0		2	2	2								
1/31/01	1615		0		2	2	2								
1/31/01	1705		0		2	2	2				980	10445	10589		
1/31/01	2130		0		2	2	2								
1/31/01	2149		0		2	2	2				1880	11945	12089		
2/1/01	35		0		3	3	3				2480	13025	13169		
2/1/01	350		0		3	3	3								
2/1/01	355		0		3	3	3				3000	13945	14079		
2/1/01	735		0		3	3	3				3680	15135	15279		
2/1/01	910		0		3	3	3				3980	15885	16029		
2/1/01	925		0		3	3	3								
2/1/01	1140		0		3	3	3				4450	16505	16649		
2/1/01	1150		0		3	3	3								
2/1/01	1202		0		3	3	3								
2/1/01	1215		0		3	3	3								
2/1/01	1243	lab analysis	0		3	3	3								
2/1/01	1540	Packed col 1 with 2" gravel layer	0	0	3	3	3								
2/1/01	1548	at top and bottom. Started at	0	0	3	3	3			0	5180	17855	17959		
2/1/01	1555	1540. Pressured to 40 psi. Stopped	0	0	3	3	3								
2/1/01	1559	test.	0	0	3	3	3								
2/1/01	1602		0		3	3	3								
2/1/01	1608		0		3	3	3								
2/2/01	1030		0		4	4	4				8430	24855	23829		
2/2/01	1040		0		4	4	4								
2/2/01	1050		0		4	4	4								
2/2/01	1053		0		4	4	4								
2/2/01	1120	Reduced flows to cols 2, 3 and 4.	0		4	4	4								
2/2/01	1130	Switched to north settling tank at 1120.	0		4	4	4				8670	25185	24149		
2/2/01	1142		0		4	4	4								
2/2/01	1310		0		4	4	4				8730	25455	24409		
2/2/01	1315		0		4	4	4								
2/2/01	1325		0		4	4	4								
2/2/01	1330		0		4	4	4								
2/2/01	1340		0		4	4	4								
2/2/01	1500	Pump shut off at 1500. Sensor too low.	1		4	4	4				8800	25585	24529		
2/2/01	1515	Raised sensor. Pump on again at 1515.	0		4	4	4				8810	25646	24539		
2/2/01	1630	North tank full at approximately 1615.	0		4	4	4				8830	26775	24709		
2/2/01	1641		0		4	4	4								
2/2/01	1645	lab analysis	0		4	4	4								
2/2/01	1650		0		4	4	4								
2/3/01	1200		0		5	5	5				10840	28885	27589		
2/3/01	1215		0		5	5	5								
2/3/01	1220		0		5	5	5								
2/3/01	1223		0		5	5	5								
2/3/01	1235		0		5	5	5								
2/3/01	1245	lab analysis	0		5	5	5								
2/4/01	912	Noticed well 219 washed out.	0		6	6	6				12870	32235	30689		
2/4/01	930		0		6	6	6								
2/4/01	950		0		6	6	6								
2/4/01	954		0		6	6	6								
2/4/01	1000		0		6	6	6								
2/4/01	1437		0		6	6	6				13380	33085	31479		
2/4/01	1505		0		6	6	6								
2/4/01	1514		0		6	6	6								
2/4/01	1530		0		6	6	6								
2/4/01	1539	lab analysis	0		6	6	6								
2/4/01	1657	Pump off at 1630. On at 1635.	1		6	6	6				13640	33335	31709		
2/4/01	1715		0		6	6	6								
2/5/01	935	Shut down C-2	0		7	7	7				15175	35955	34119		
2/5/01	953		0			7									
2/5/01	958		0			7									
2/5/01	1002		0			7									
2/5/01	1012		0			7									
2/5/01	1015	Shut pump off approximately 1015 to modify col 3 & 4. Vanadium results appear high. Loaded	1			7									
2/5/01	1432	cols 3 & 4 with 2" gravel layers at bottom, 1/3, 2/3 and top. Col 3 packed with same used ZVI.	0			7	0								
2/5/01	1436	Col 4 packed with new ZVI. Col 3 packed tight by compacting with water. Col 4 loaded without	0			7	0								
2/5/01	1437	water. Restarted with new packs at 1432.	0			7	0								
2/5/01	1438		0			7	0					36103	0		
2/5/01	1439		0			7	0								
2/5/01	1440		0			7	0								
2/5/01	1442		0			7	0								
2/5/01	1445		0			7	0								
2/5/01	1450		0			7	0								
2/5/01	1453		0			7	0								
2/5/01	1457		0			7	0								
2/5/01	1500		0			7	0								
2/5/01	1515	lab analysis. Note decrease in vanadium results for col 3 & 4 with gravel packs added.	0			7	0								
2/5/01	1530		0			7	0								
2/5/01	1540		0			7	0								
2/5/01	1545		0			7	0								
2/5/01	1611		0			7	0								
2/5/01	1615		0			7	0								
2/6/01	910		0			8	1					38355	2448		
2/6/01	943		0			8	1					38495	2608		
2/6/01	954		0			8	1								
2/6/01	1008		0			8	1								
2/6/01	1012		0			8	1								
2/6/01	1032		0			8	1					38675	3008		
2/6/01	1058		0			8	1								
2/6/01	1410		0			8	1								

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
2/6/01	1412	lab analysis	0			8	1								
2/6/01	1438		0			8	1								
2/6/01	1441		0			8	1								
2/6/01	1545	reduced flow rates - inj well 219 problem	0			8	1					41088	4386		
2/6/01	1640	reduced flow rates - inj well 219 problem	0			8	1					41388	4828		
2/7/01	755	shut down - injection wells overflowing	1			9	2					42885	5838		
2/7/01	840	system not running	1			9	2								
2/7/01	1425	added air relieve valve - started up low flow rates	0			9	2								
2/7/01	1520	lab analysis	0			9	2								
2/7/01	1555	increased flow rates - using inj well 218 only	0			9	2					43175	8088		
2/8/01	1020		0			10	3					46725	11348		
2/8/01	1207	lab analysis	0			10	3								
2/8/01	1230		0			10	3					48325	11948		
2/8/01	1235	Shut down - inj well 218 overflowing. Let tanks settle over weekend to prepare for pumping.	1			10	3								
2/12/01	1050	Pumped 21-in. (~600 gls) sludge from 3 tanks. Started pump. Noted pressure surge in Col-4.	0			10	7								
2/12/01	1130	Tapped columns with rubber mallet to compact before starting up	0			10	7					49886	12308		
2/12/01	1534	lab analysis	0			10	7								
2/12/01	1610		0			10	7					50868	13588		
2/12/01	1630	Shut down - injection well 218 overflowing.	1			10	7					50946	13668		
2/21/01	1140	Readings prior to startup	1			10	16					50946	13668		
2/21/01	1145	Note: Dole valve added to column 4 on low pressure side of "No. 4 pressure-in gage". Therefore	0			10	16								
2/21/01	1155	pressure readings for column 4 represent high pressure side of Dole valve and not the pressure	0			10	16								
2/21/01	1200	into column 4. Another pressure valve will be added to the other side of the Dole valve as soon	0			10	16								
2/21/01	1205	as possible. Reconfigured injection wells with drop pipes and reduced pH in 100 gl effluent tank	0			10	16								
2/21/01	1210	to 6. Started the system back up using well 219.	0			10	16								
2/21/01	1230		0			10	16								
2/21/01	1240		0			10	16								
2/21/01	1615	lab analysis. Note lower vanadium results in col 3 & 4 after restart.	0			10	16								
2/21/01	1641		0			10	16					52495	15128		
2/22/01	1005		0			11	17					58345	20558		
2/22/01	1035		0			11	17								
2/22/01	1059		0			11	17								
2/22/01	1120		0			11	17								
2/22/01	1135		0			11	17								
2/22/01	1415		0			11	17					59665	21758		
2/22/01	1425	lab analysis	0			11	17						22118		
2/22/01	1435		0			11									
2/22/01	1450		0			11									
2/22/01	1452		0			11									
2/22/01	1455		0			11									
2/22/01	1525	Shut down column 4. Operating only column 3 over the weekend.	0			11									
2/22/01	1532		0			11						60105			
2/22/01	1600		0			11									
2/24/01	747		0			13						75485			
2/24/01	804		0			13									
2/24/01	808		0			13									
2/24/01	817		0			13									
2/24/01	820		0			13									
2/24/01	822		0			13									
2/24/01	831		0			13									
2/24/01	858	lab analysis	0			13									
2/24/01	956		0			13						78295			
2/26/01	845		0			15						94025			
2/26/01	930		0			15									
2/26/01	936	lab analysis. Samples collected just before shutting down col 3.	0			15									
2/26/01	938	Shut down column 3.	0			15									
2/26/01	943		0												
2/26/01	945		0												
2/26/01	950		0												
2/26/01	953		0												
2/26/01	1535	Repacked col 4 with 550 lbs new ZVI. Gravel packs/retainers/c.ZVI 4:1. at bottom, 1/3, 2/3, and	0				0						0		
2/26/01	1542	top. Retainers not added to top, only fine cloth. Fitted "No. 4 pressure gauge-in" with pressure	0				0								
2/26/01	1545	gage on low pressure side of Dole valve. Pressure readings reported from this time forward	0				0								
2/26/01	1609	represent "pressure-in" the column. Started flow into column 4 slowly and let build. Notice	0				0								
2/26/01	1612	pressure surge up to 40 psi at 1545 then dropped to 10 psi before pressuring back up. Also	0				0								
2/26/01	1617	noticed about 3 psi in column out ("No. 4 pressure gauge-out")	0				0								
2/26/01	1707	lab analysis. Samples collected after column 4 online.	0				0								
2/26/01	1709		0				0								
2/27/01	830	Noticed flow rates decreased and pressures increased overnight and high iron 2/26/01 from col	0				1						3380		
2/27/01	855	4 suggests blown filter at top of column. Well 219 at capacity. Have to keep flows low.	0				1								
2/27/01	858		0				1								
2/27/01	901		0				1								
2/27/01	903		0				1								
2/27/01	914		0				1								
2/27/01	947		0				1								
2/27/01	1345		0				1						4620		
2/27/01	1529	lab analysis. Note iron levels from col 4 back down. Vanadium lower than at startup.	0				1								
2/27/01	1533		0				1								
2/27/01	1610		0				1								
2/27/01	1612		0				1								
2/27/01	1630		0				1								
2/27/01	1710		0				1								
2/28/01	1050		0				2						7380		
2/28/01	1100		0				2								
2/28/01	1127		0				2								
2/28/01	1129		0				2								
2/28/01	1200		0				2								
2/28/01	1330		0				2								
2/28/01	1455		0				2						8220		
2/28/01	1603	lab analysis	0				2								
2/28/01	1605		0				2								
2/28/01	1608		0				2								
2/28/01	1618		0				2								
2/28/01	1625		0				2								
3/1/01	1410	System off when arrived. Pressure decreased and flow increased overnight. System shut off	1				3						8720		
3/1/01	1425	several times until the problem was identified as a bad foot valve in the acid tank. Replaced	0				3								
3/1/01	1430	valve.	0				3								
3/1/01	1440		0				3								
3/1/01	1450		0				3								
3/1/01	1520		0				3								
3/1/01	1530		0				3						9140		
3/1/01	1600		0				3						9210		
3/1/01	1655		0				3								
3/1/01	1645	Well 219 overflowing. Shut system down for well maintenance or approval for gallery. Did not	1				3								
3/1/01	1700	collect samples as system was off most of the night and day.	1				3						9640		
3/6/01	1000	Removed top from Column 4. Noticed flow paths at edge of ZVI/column and torn filter; probably accounts for changes in pressures & flows on 3/1/01. Added retainer to top.	1				3								

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
3/7/01	1330	Repacked column 3 using used ZVI supplemented with about 50 lbs of new ZVI. Column 3	0			15	4					94665	9540		
3/7/01	1345	packed same as column 4, e.g. gravel packs/retainers/c.ZVI 4:1. at bottom, 1/3, 2/3, and top.	0			15	4					94675	9570		
3/7/01	1400	Retainer added to top. PRV added to top of columns. Restarted columns 3 and 4 very slowly up	0			15	4					94686	9580		
3/7/01	1430	to 10 psi. Noted air release from col 4 until 1345. Operating at 1 gpm.	0			15	4					94625	9600		
3/7/01	1708		0			15	4					94785	9740		
3/7/01	1715		0			15	4								
3/7/01	1720		0			15	4								
3/7/01	1723		0			15	4								
3/7/01	1803		0			15	4								
3/8/01	1045		0			16	5					95615	10720		
3/8/01	1410	Infiltration gallery approved. Started discharge to gallery at 1410. Began to ramp up flow rates	0			16	5					95785	10910		
3/8/01	1418	into columns 3 and 4.	0			16	5								
3/8/01	1448		0			16	5					95855	10980		
3/8/01	1510		0			16	5					95915	11080		
3/8/01	1515	lab analysis	0			16	5								
3/8/01	1525		0			16	5								
3/8/01	1530		0			16	5								
3/8/01	1535		0			16	5								
3/8/01	1730	ZVI in col 4 sample port. Col 3 sample port clean. Water sample collected (after purging) from	0			16	5								
3/8/01	1738	col 3 appears slightly green. Water sample from col 4 is clear.	0			16	5								
3/8/01	1740		0			16	5					96295	11700		
3/9/01	1326		0			17	6					99415	17630		
3/9/01	1335		0			17	6								
3/9/01	1345	lab analysis	0			17	6								
3/9/01	1400		0			17	6								
3/9/01	1410		0			17	6								
3/9/01	1515		0			17	6					99885	18140		
3/10/01	1030		0			18	7					102625	23480		
3/10/01	1045		0			18	7								
3/10/01	1050		0			18	7								
3/10/01	1055		0			18	7								
3/10/01	1103		0			18	7								
3/10/01	1113	lab analysis	0			18	7								
3/10/01	1225		0			18	7								
3/10/01	1228		0			18	7					102925	24020		
3/12/01	1013		0			20	9								
3/12/01	1016		0			20	9								
3/12/01	1023		0			20	9								
3/12/01	1038		0			20	9								
3/12/01	1049	lab analysis just before col 4 shut down. Removed top to check for problems (looked ok).	0			20	9					108725	35498		
3/12/01	1210	restarted col 4 slowly. Full operating flows & pressures reached at 1225. Reduced flow 2.5.	0			20	9						35698		
3/12/01	1222		0			20	9								
3/12/01	1225		0			20	9								
3/12/01	1300		0			20	9					110225	35998		
3/12/01	1425		0			20	9								
3/12/01	1510	lab analysis col 4 only after restarting at lower operating flows (2.5 gpm vs 5.5 gpm).	0			20	9								
3/12/01	1715		0			20	9								
3/12/01	1720		0			20	9					110865	36808		
3/12/01	1723		0			20	9								
3/12/01	1730		0			20	9								
3/13/01	920		0			21	10					113175	38976		
3/13/01	945		0			21	10								
3/13/01	948		0			21	10								
3/13/01	957		0			21	10								
3/13/01	1003		0			21	10								
3/13/01	1005		0			21	10								
3/13/01	1245	Packed C-1 & -2 with gravel at bottom. No retainer or other gravel pack. 625 lbs ZVI ea.	0			21	10								
3/13/01	1347	Restarted at 1245	0	0	0	21	10			0	0	113815	38626		
3/13/01	1445		0	0	0	21	10								
3/13/01	1447	lab analysis	0	0	0	21	10								
3/13/01	1527		0	0	0	21	10			30	110	114055	38866		
3/13/01	1602		0	0	0	21	10								
3/13/01	1605		0	0	0	21	10								
3/13/01	1610		0	0	0	21	10								
3/13/01	1720		0	0	0	21	10			120	220	114325	40146		
3/13/01	1735		0	0	0	21	10								
3/14/01	830		0	1	1	22	11			843	1186	116425	42418		
3/14/01	1005	Pumped 4,000 gallons from settling tanks. Sludge amount same as previous.	0	1	1	22	11			920	1280	116645	42956		
3/14/01	1015		0	1	1	22	11								
3/14/01	1050		0	1	1	22	11			1050	1490	116735	42776		
3/14/01	1315		0	1	1	22	11								
3/14/01	1330		0	1	1	22	11								
3/14/01	1403	lab analysis	0	1	1	22	11								
3/14/01	1500		0	1	1	22	11			1850	2850	117345	43398		
3/15/01	1000	System shut down overnight. Plug found in the out pipe on the north tank. Cleared plug.	1	2	2	23	12			3430	6070	118905	45138		
3/15/01	1015		0	2	2	23	12			3430	6070	118905	45138		
3/15/01	1020		0	2	2	23	12			3800	6380	118955	45308		
3/15/01	1030		0	2	2	23	12								
3/15/01	1037		0	2	2	23	12								
3/15/01	1105		0	2	2	23	12								
3/15/01	1145		0	2	2	23	12			3850	6480	119115	45356		
3/15/01	1150		0	2	2	23	12			3850	6480	119115	45356		
3/15/01	1220		0	2	2	23	12								
3/15/01	1230		0	2	2	23	12								
3/15/01	1234		0	2	2	23	12								
3/15/01	1235		0	2	2	23	12								
3/15/01	1320		0	2	2	23	12								
3/15/01	1340		0	2	2	23	12			3820	6990	119375	45616		
3/15/01	1452	lab analysis	0	2	2	23	12								
3/15/01	1504		0	2	2	23	12								
3/15/01	1520		0	2	2	23	12								
3/15/01	1522		0	2	2	23	12								
3/15/01	1525		0	2	2	23	12								
3/15/01	1612		0	2	2	23	12								
3/15/01	1625		0	2	2	23	12			4330	7720	119785	46016		
3/16/01	820	System shut down overnight. Filter screen plugged at out tank. Cleaned and started up.	1	2	2	23	13			5450	8780	120915	47116		
3/16/01	840		0	2	2	23	13			5450	8780	120915	47116		
3/16/01	905		0	2	2	23	13								
3/16/01	910		0	2	2	23	13								
3/16/01	920		0	2	2	23	13								
3/16/01	1008		0	2	2	23	13			5600	10070	121085	47296		
3/16/01	1050		0	2	2	23	13								
3/16/01	1100		0	2	2	23	13								
3/16/01	1115		0	2	2	23	13			6770	10300	121215	47416		
3/16/01	1303	Shut off n. tank. Filled s. tank. Then diverted flow equally to both tanks.	0	2	2	23	13			9830	10870	121375	47586		
3/16/01	1315		0	2	2	23	13								
3/16/01	1317		0	2	2	23	13								

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
3/16/01	1513	lab analysis	0	2	2	23	13								
3/16/01	1525		0	2	2	23	13								
3/16/01	1530		0	2	2	23	13			8280	11210	121705	47918		
3/16/01	1545		0	2	2	23	13								
3/16/01	1547		0	2	2	23	13								
3/16/01	1549		0	2	2	23	13								
3/16/01	1615		0	2	2	23	13								
3/16/01	1617		0	2	2	23	13								
3/16/01	1619		0	2	2	23	13								
3/16/01	1620		0	2	2	23	13								
3/16/01	1635		0	2	2	23	13								
3/16/01	1645		0	2	2	23	13			6480	11820	121885			
3/19/01	830	System off when arrived at site. Apparently, shut down on 3/16/01.	1	2	2	26	16			7880	14180	123195	48386		
3/19/01	915	Started up. Pressures increased to 60 psi. Moved valve to n. tank to free blockage.	0	2	2	26	16			7800	14270	123235	48426		
3/19/01	1645	Removed top and 2 gravel packs from col 4. Flow paths observed in ZVI at tops of packs.	0	2	2	26	16			8840	16820	124175	48776		
3/20/01	830	Not operating when arrived at site. Restarted.	1	3	3	27				11190	22220	126045			
3/20/01	1045	Found flow to n. tank is being reduced by blockage. Opened valve to s. tank. Flows resumed.	0	3	3	27				11470	22840	126285			
3/20/01	1110	Noted increased pressured in out gages - from 8 psi at 830 to 60 psi at 1045.	0	3	3	27				11480	22880	126295			
3/20/01	1112		0	3	3	27									
3/20/01	1115		0	3	3	27									
3/20/01	1118		0	3	3	27									
3/20/01	1119		0	3	3	27									
3/20/01	1145		0	3	3	27				11520	22980	126335			
3/20/01	1200		0	3	3	27									
3/20/01	1205		0	3	3	27									
3/20/01	1207		0	3	3	27									
3/20/01	1210		0	3	3	27									
3/20/01	1212	lab analysis	0	3	3	27									
3/20/01	1220		1	3	3	27				11600	23170	126415			
3/21/01	1430	Removed clog from manifold. Added filter to manifold. Started up at 1430.	0	4	4	28				11630	23250	126435			
3/21/01	1434		0	4	4	28				11630	23260	126435			
3/21/01	1604		0	4	4	28									
3/21/01	1606		0	4	4	28									
3/21/01	1608		0	4	4	28									
3/21/01	1612		0	4	4	28									
3/21/01	1645		0	4	4	28									
3/21/01	1650		0	4	4	28				11980	23910	126725			
3/22/01	955		0	5	5	29				14620	29510	129125			
3/22/01	1008		0	5	5	29									
3/22/01	1016		0	5	5	29									
3/22/01	1018		0	5	5	29									
3/22/01	1022		0	5	5	29									
3/22/01	1024		0	5	5	29									
3/22/01	1030		0	5	5	29									
3/22/01	1034		0	5	5	29									
3/22/01	1135		0	5	5	29				14780	30040	129345			
3/22/01	1150		0	5	5	29									
3/22/01	1420		0	5	5	29				15170	30830	129745			
3/22/01	1423		0	5	5	29									
3/22/01	1425		0	5	5	29									
3/22/01	1449		0	5	5	29									
3/22/01	1450		0	5	5	29									
3/22/01	1453		0	5	5	29									
3/22/01	1507	lab analysis	0	5	5	29									
3/22/01	1535		0	5	5	29									
3/22/01	1615		0	5	5	29									
3/22/01	1620		0	5	5	29									
3/22/01	1625		0	5	5	29				15480	31600	130045			
3/22/01	1629		0	5	5	29									
3/22/01	1631		0	5	5	29									
3/24/01	815	Flow to n. tank stopped. All flow to s. tank.	0	7	7	31				21330	44280	135905			
3/24/01	820		0	7	7	31									
3/24/01	822		0	7	7	31									
3/24/01	834	lab analysis	0	7	7	31									
3/24/01	840		0	7	7	31									
3/24/01	846		0	7	7	31									
3/24/01	925	Shut system down (C-1, C-2, C-3) for rest of weekend.	1	7	7	31				21490	44630	136065			
3/27/01	1200	Pumped 3200 gls from settling tanks. Cleaned drop pipes & flushed system.	1												
3/28/01	1535	Repacked colum 3 &4 with 625 lbs new ZVI. Gravel packs & retainers at top & bottom only.	1												
3/28/01	1600	Started up columns 3 & 4 slowly to 1 gpm.	0			0	0					0	0		
3/28/01	1630	Reversed flow to column 4 (i.e. flow into top and out the bottom).	0			0	0					30	40		
3/28/01	1715		0			0	0					60	70		
3/28/01	1720		0			0	0								
3/28/01	1721		0			0	0								
3/29/01	1130		0			1	1					880	1150		
3/29/01	1140		0			1	1								
3/29/01	1142		0			1	1								
3/29/01	1201	Increased flow to 3 gpm at 1145.	0			1	1					980	1240		
3/29/01	1240		0			1	1								
3/29/01	1242		0			1	1								
3/29/01	1246		0			1	1								
3/29/01	1430		0			1	1					1380	1670		
3/29/01	1517	lab analysis	0			1	1								
3/29/01	1530		0			1	1								
3/29/01	1607		0			1	1								
3/29/01	1609		0			1	1								
3/29/01	1615		0			1	1								
3/29/01	1615	Noted 2 psi in out gage for columns 3 & 4.	0			1	1					1650	1980		
3/30/01	1030	Performed tracer tests in column 1 at 0.5 gpm to 2.0 gpm. Cleaned filter in out line.	0			2	2					4700	5170		
3/30/01	1032		0			2	2								
3/30/01	1037		0			2	2								
3/30/01	1050		0			2	2								
3/30/01	1445	lab analysis	0			2	2								
3/30/01	1500		0			2	2								
3/30/01	1520		0			2	2								
3/30/01	1535		0			2	2					5570	6050		
3/31/01	1030	Shut system down due to high v in out tank on 3/29/01 & to await for 3/30/01 results.	1			3	3					8700	9440		
4/2/01	1230	Started up at 1230. Shut down at 1435 to change filter in ZVI shed. Restarted at 1440.	0			5	5					8700	9450		
4/2/01	1250		0			5	5								
4/2/01	1330		0			5	5								
4/2/01	1332		0			5	5								
4/2/01	1343		0			5	5								
4/2/01	1345		0			5	5								
4/2/01	1440		0			5	5					9050	9820		
4/2/01	1446	lab analysis	0			5	5								
4/2/01	1545		0			5	5					9220	10000		
4/2/01	1655		0			5	5					9410	10200		

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
4/2/01	1700		0			5	5								
4/2/01	1705		0			5	5								
4/2/01	1708		0			5	5								
4/2/01	1710		0			5	5								
4/3/01	900	Performed tracer tests in columns 1, 2, 3, & 4 during the afternoon.	0			6	5					12070	13050		
4/3/01	920		0			6	6								
4/3/01	935		0			6	6								
4/3/01	946		0			6	6								
4/3/01	953		0			6	6								
4/3/01	956		0			6	6								
4/3/01	1140		0			6	6								
4/3/01	1215		0			6	6					12800	13820		
4/3/01	1220		0			6	6								
4/3/01	1224		0			6	6								
4/3/01	1400		0			6	6					12880	13830		
4/3/01	1431	lab analysis	0			6	6								
4/3/01	1440		0			6	6								
4/3/01	1510		0			6	6					13080	14120		
4/3/01	1600		0			6	6					13180	14270		
4/3/01	1612		0			6	6								
4/3/01	1614		0			6	6								
4/3/01	1620		0			6	6								
4/3/01	1622		0			6	6								
4/3/01	1630		0			6	6					13220	14350		
4/3/01	1732		0			6	6								
4/3/01	1735		0			6	6					13340	14480		
4/4/01	835		0			7	7					16010	17080		
4/4/01	900		0			7	7								
4/4/01	910		0			7	7								
4/4/01	914		0			7	7								
4/4/01	935		0			7	7								
4/4/01	937		0			7	7								
4/4/01	1010		0			7	7								
4/4/01	1640		0			7	7					17380	18460		
4/4/01	1645	lab analysis	0			7	7								
4/4/01	1647		0			7	7								
4/4/01	1658		0			7	7								
4/4/01	1700		0			7	7								
4/4/01	1715		0			7	7								
4/4/01	1730		0			7	7					17900	18580		
4/5/01	1120	Packed columns 1 & 2 with 587 lbs new ZVI ea and gravel/retainers at top & bottom only.	0			8	8					20380	21630		
4/5/01	1145		0			8	8								
4/5/01	1153		0			8	8								
4/5/01	1156		0			8	8								
4/5/01	1200		0			8	8								
4/5/01	1204		0			8	8								
4/5/01	1400		0			8	8								
4/5/01	1400		0			8	8					20970	22560		
4/5/01	1507	lab analysis	0			8	8								
4/5/01	1540	Started columns 1 & 2 at 1 gpm.	0	0	0	8	8			0	0	21080	22350		
4/5/01	1600		0	0	0	8	8								
4/5/01	1604		0	0	0	8	8								
4/5/01	1608		0	0	0	8	8								
4/5/01	1611		0	0	0	8	8								
4/5/01	1620	Changed flow direction to column 2 at 1620 (i.e. flow in at top and out at bottom)	0	0	0	8	8			40	40	21180	22480		
4/5/01	1645		0	0	0	8	8								
4/5/01	1645		0	0	0	8	8			80	80	21230	22530		
4/6/01	840		0	1	1	9	9			980	870	23770	25150		
4/6/01	905		0	1	1	9	9								
4/6/01	908		0	1	1	9	9								
4/6/01	912		0	1	1	9	9								
4/6/01	920		0	1	1	9	9								
4/6/01	940	Increased flow in columns 1 & 2 to 3 gpm.	0	1	1	9	9			1040	940	23830	25320		
4/6/01	1035		0	1	1	9	9			1160	1080	24080	25450		
4/6/01	1050		0	1	1	9	9								
4/6/01	1053		0	1	1	9	9								
4/6/01	1130		0	1	1	9	9								
4/6/01	1150		0	1	1	9	9								
4/6/01	1402	lab analysis	0	1	1	9	9								
4/6/01	1415		0	1	1	9	9								
4/6/01	1430		0	1	1	9	9								
4/6/01	1433		0	1	1	9	9								
4/6/01	1436		0	1	1	9	9								
4/6/01	1438		0	1	1	9	9								
4/6/01	1446		0	1	1	9	9								
4/6/01	1455		0	1	1	9	9			1800	1860	24780	26180		
4/9/01	950		0	2	2	12	12			5400	6330	28780	30230		
4/9/01	1020		0	2	2	12	12			5400	6330	28780	30230		
4/9/01	1040		0	2	2	12	12								
4/9/01	1043		0	2	2	12	12			5440	6380	28820	30270		
4/9/01	1100		0	2	2	12	12								
4/9/01	1125		0	2	2	12	12								
4/9/01	1127		0	2	2	12	12								
4/9/01	1131		0	2	2	12	12								
4/9/01	1150		0	2	2	12	12								
4/9/01	1230		0	2	2	12	12			6710	6700	29100	30560		
4/9/01	1233		0	2	2	12	12								
4/9/01	1250		0	2	2	12	12								
4/9/01	1308		0	2	2	12	12								
4/9/01	1415		0	2	2	12	12			6960	7000	29370	30830		
4/9/01	1415	lab analysis	0	2	2	12	12								
4/9/01	1550		0	2	2	12	12			5960	7040	29400	30880		
4/9/01	1605		0	2	2	12	12								
4/9/01	1607		0	2	2	12	12								
4/9/01	1610		0	2	2	12	12								
4/9/01	1620		0	2	2	12	12								
4/9/01	1630		0	2	2	12	12								
4/9/01	1710		0	2	2	12	12			6180	7250	29600	31050		
4/9/01	1720	Shut system down at 1720 due to clogging in piping. Out pressures up to 20 psi.	1	3	3	12	12								
4/11/01	1330	Completed replubing piping overhead to settling tanks. Restarted at 1330.	0	5	5	14	14			6210	7270	29630	31080		
4/11/01	1445		0	5	5	14	14								
4/11/01	1615		0	5	5	14	14			6640	7740	30060	31440		
4/11/01	1640	lab analysis	0	5	5	14	14								
4/11/01	1720		0	5	5	14	14								
4/11/01	1723		0	5	5	14	14								
4/11/01	1735		0	5	5	14	14			6830	7960	30270	31850		
4/11/01	1745		0	5	5	14	14								

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
4/12/01	700		0	6	6	15	15			8880	10380	32730	34020		
4/12/01	820		0	6	6	15	15								
4/12/01	1130	Perforated pipe in west settling tank plugged. Water rose to high level in N. tank. Sys down.	1	6	6	15	15								
4/12/01	1445	Replumbed drop pipe in W. tank/90 elbow. Pumped 275 gls sludge from S. tank. Restarted.	0	6	6	15	15								
4/12/01	1615	lab analysis	0	6	6	15	15								
4/12/01	1620		0	6	6	15	15								
4/12/01	1630	All flow to N. tank.	0	6	6	15	15			9800	11480	33800	36070		
4/12/01	1635	Modified drop pipe to 90/elbow in N. tank. All flow to N. tank.	0	6	6	15	15								
4/12/01	1655		0	6	6	15	15								
4/12/01	1700		0	6	6	15	15								
4/12/01	1703		0	6	6	15	15								
4/12/01	1705		0	6	6	15	15			10000	11570	33910	36170		
4/12/01	1715		0	6	6	15	15								
4/13/01	1235		0	7	7	16	16								
4/13/01	1245		0	7	7	16	16								
4/13/01	1257		0	7	7	16	16			13020	15030	37300	38550		
4/13/01	1330	lab analysis	0	7	7	16	16								
4/13/01	1340		0	7	7	16	16								
4/16/01	915		0	9	9	19	19			23330	26820	48770	50220		
4/16/01	920		0	9	9	19	19								
4/16/01	920		0	9	9	19	19								
4/16/01	923		0	9	9	19	19								
4/16/01	935		0	9	9	19	19								
4/16/01	1000	lab analysis before pumping W. Tank to above ground sludge tank.	1	9	9	19	19								
4/16/01	1120	Changed flow to S. Tank @1000. Shut down & pumped W.Tank. Restarted @1120.	0	9	9	19	19			23480	27120	48980	50400		
4/16/01	1220		0	9	9	19	19			23630	27240	49090	50540		
4/16/01	1500	lab analysis after pumping W. Tank to above ground sludge tank.	0	9	9	19	19								
4/16/01	1512		0	9	9	19	19								
4/16/01	1530		0	9	9	19	19			24100	27820	49640	51080		
4/16/01	1535		0	9	9	19	19								
4/16/01	1538		0	9	9	19	19								
4/16/01	1605		0	9	9	19	19								
4/16/01	1638		0	9	9	19	19			24270	28010	49830	51270		
4/16/01	1645		0	9	9	19	19								
4/17/01	1155		0	10	10	20	20			27160	31400	53200	54580		
4/17/01	1205		0	10	10	20	20								
4/17/01	1208		0	10	10	20	20								
4/17/01	1212		0	10	10	20	20								
4/17/01	1215		0	10	10	20	20								
4/17/01	1230		0	10	10	20	20								
4/17/01	1505	lab analysis	0	10	10	20	20								
4/17/01	1512		0	10	10	20	20								
4/17/01	1525		0	10	10	20	20			27670	32000	53780	55170		
4/17/01	1535		0	10	10	20	20								
4/17/01	1537		0	10	10	20	20								
4/17/01	1548		0	10	10	20	20								
4/17/01	1652	Pumped sludge from N. Tank to above ground sludge tank.Changed droppipe to 4" in N. Tank.	0	10	10	20	20			27880	32240	54020	55410		
4/19/01	1100		0	12	12	22	22			34120	38580	61250	62580		
4/19/01	1107		0	12	12	22	22								
4/19/01	1109		0	12	12	22	22								
4/19/01	1115		0	12	12	22	22								
4/19/01	1118		0	12	12	22	22								
4/19/01	1205		0	12	12	22	22								
4/19/01	1205	Shut down columns 3 & 4.	0	12	12	22	22			34270	38770	61490	62770		
4/19/01	1205		0	12	12										
4/19/01	1325		0	12	12										
4/19/01	1456		0	12	12					35000	40630				
4/19/01	1505	lab analysis	0	12	12										
4/19/01	1510		0	12	12										
4/19/01	1512		0	12	12										
4/19/01	1515		0	12	12										
4/19/01	1520		0	12	12										
4/19/01	1530	Replace valve to N. Tank. Split flows to both S. and N. Tanks @1348.	0	12	12					34790	40370				
4/20/01	852		0	13	13					37480	43800				
4/20/01	920		0	13	13										
4/20/01	921		0	13	13										
4/20/01	940		0	13	13										
4/20/01	942		0	13	13										
4/20/01	1030		0	13	13										
4/20/01	1205		0	13	13					37860	44190				
4/20/01	1315		0	13	13					38130	44400				
4/20/01	1320		0	13	13										
4/20/01	1323		0	13	13										
4/20/01	1335		0	13	13										
4/20/01	1337		0	13	13										
4/20/01	1505	lab analysis	0	13	13										
4/20/01	1507		0	13	13					38420	44740				
4/20/01	1508		0	13	13										
4/20/01	1525		0	13	13										
4/20/01	1532		0	13	13										
4/20/01	1534		0	13	13										
4/20/01	1550	Flow appears evenly split between S. and N. Tank.	0	13	13					38640	44900				
4/23/01	1025	All flow to the S. Tank stopped over the weekend. Flow only to N. Tank.	0	16	16					48760	57190				
4/23/01	1050		0	16	16										
4/23/01	1055		0	16	16										
4/23/01	1120		0	16	16										
4/23/01	1130		0	16	16										
4/23/01	1150		0	16	16										
4/23/01	1330		0	16	16					49230	57750				
4/23/01	1338		0	16	16										
4/23/01	1340		0	16	16										
4/23/01	1355		0	16	16										
4/23/01	1630	lab analysis	0	16	16										
4/23/01	1710		0	16	16					49740	58350				
4/23/01	1712		0	16	16										
4/23/01	1714		0	16	16										
4/23/01	1735		0	16	16										
4/23/01	1742		0	16	16										
4/24/01	820		0	17	17					52080	61150				
4/24/01	842		0	17	17										
4/24/01	844		0	17	17										
4/24/01	850		0	17	17										
4/24/01	910		0	17	17										
4/24/01	1300		0	17	17										
4/24/01	1302		0	17	17										
4/24/01	1310		0	17	17										
4/24/01	1312		0	17	17										

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
4/24/01	1445		0	17	17					53040	62300				
4/24/01	1500	Repacked C-3 & C-4 ~625 lbs ZVI as. Mixed/water & tamped. Started up slowly to 1 gpm.	0	17	17	0	0					0	0		
4/24/01	1515	lab analysis	0	17	17	0	0								
4/24/01	1530		0	17	17	0	0								
4/24/01	1554		0	17	17	0	0			53240	62470	40	40		
4/24/01	1600		0	17	17	0	0								
4/24/01	1606		0	17	17	0	0								
4/24/01	1607		0	17	17	0	0								
4/24/01	1705		0	17	17	0	0								
4/24/01	1720		0	17	17	0	0			53310	62630	130	120		
4/25/01	1130		0	18	18	1	1								
4/25/01	1210		0	18	18	1	1								
4/25/01	1213	Started Br tests in columns. Transferred sludge out of S. Tank to sludge tank.	0	18	18	1	1			55000	64930	1380	1120		
4/25/01	1355		0	18	18	1	1								
4/25/01	1358		0	18	18	1	1								
4/25/01	1402		0	18	18	1	1								
4/25/01	1403		0	18	18	1	1								
4/25/01	1410		0	18	18	1	1								
4/25/01	1435		0	18	18	1	1			55140	65040	1800	1520		
4/25/01	1500	lab analysis	0	18	18	1	1								
4/25/01	1550		0	18	18	1	1								
4/25/01	1558		0	18	18	1	1								
4/25/01	1559		0	18	18	1	1								
4/25/01	1605		0	18	18	1	1								
4/25/01	1607		0	18	18	1	1								
4/25/01	1610		0	18	18	1	1								
4/25/01	1620		0	18	18	1	1			56240	65120	2100	1840		
4/26/01	825	Noted ~10 psi pressure in out gages. Cleaned ZVI filter. Pumped W. tank. Flow to S. tank.	0	19	19	2	2			56110	65670	4680	4680		
4/26/01	900		0	19	19	2	2			56130	65880	4710	4740		
4/26/01	923		0	19	19	2	2								
4/26/01	944		0	19	19	2	2								
4/26/01	946		0	19	19	2	2								
4/26/01	955		0	19	19	2	2								
4/26/01	1002		0	19	19	2	2								
4/26/01	1012		0	19	19	2	2			56190	65980	4820	4880		
4/26/01	1500	lab analysis	0	19	19	2	2								
4/26/01	1535		0	19	19	2	2			56200	65970	4950	5010		
4/26/01	1600		0	19	19	2	2			56220	65980	5000	5070		
4/26/01	1617		0	19	19	2	2								
4/26/01	1625		0	19	19	2	2								
4/26/01	1633		0	19	19	2	2								
4/26/01	1635		0	19	19	2	2								
4/26/01	1640		0	19	19	2	2								
4/26/01	1712		0	19	19	2	2								
4/26/01	1714		0	19	19	2	2			56290	66080	5210	5290		
4/27/01	900		0	20	20	3	3								
4/27/01	1200	lab analysis	0	20	20	3	3								
4/27/01	1215		0	20	20	3	3								
4/27/01	1220		0	20	20	3	3								
4/27/01	1250	Noted 32 psi pressure in out tank.Cleaned filter.Pumped 1400 gls settled sludge & 1050 H2O.	0	20	20	3	3			57480	67180	6780	6730		
4/27/01	1335		0	20	20	3	3								
4/30/01	1210	System down. Line to N. & S. tanks is plugged. Cleaned and restarted system.	1	21	21	6	6			61630	70980	20590	20240		
4/30/01	1230		0	21	21	6	6								
4/30/01	1233		0	21	21	6	6								
4/30/01	1242		0	21	21	6	6								
4/30/01	1335		0	21	21	6	6			61720	71080	20640	20500		
4/30/01	1345		0	21	21	6	6								
4/30/01	1450		0	21	21	6	6			61800					
4/30/01	1508	lab analysis	0	21	21	6	6								
4/30/01	1518		0	21	21	6	6								
4/30/01	1525		0	21	21	6	6								
4/30/01	1530		0	21	21	6	6								
4/30/01	1550		0	21	21	6	6								
4/30/01	1610		0	21	21	6	6								
4/30/01	1615		0	21	21	6	6			61880	71210	21320	20880		
5/1/01	1125	System down.	1	22	22	7	7			62900	72110	24200	23880		
5/1/01	1135		0	22	22	7	7								
5/1/01	1150		0	22	22	7	7								
5/1/01	1153		0	22	22	7	7								
5/1/01	1200		0	22	22	7	7								
5/1/01	1225		0	22	22	7	7								
5/1/01	1230		0	22	22	7	7			62980	72180	24370	24080		
5/1/01	1305		0	22	22	7	7								
5/1/01	1445		0	22	22	7	7			63100	72290	24770	24460		
5/1/01	1500		0	22	22	7	7								
5/1/01	1504		0	22	22	7	7								
5/1/01	1510		0	22	22	7	7								
5/1/01	1512		0	22	22	7	7								
5/1/01	1513	lab analysis	0	22	22	7	7								
5/1/01	1600		0	22	22	7	7			63170	72380	29000	24680		
5/2/01	800	System down. Line to N & S tank plugged. Cleaned and restarted.	1	23	23	8	8			64020	73110	27440	27080		
5/2/01	1130		0	23	23	8	8			64210	73270	27970	27540		
5/2/01	1148		0	23	23	8	8								
5/2/01	1150		0	23	23	8	8								
5/2/01	1155		0	23	23	8	8								
5/2/01	1207		0	23	23	8	8								
5/2/01	1215		0	23	23	8	8			64260	73320	28120	27730		
5/2/01	1220	Shut down C-1. Increased flow to C-2.	0		23	8	8				73830	28610	28210		
5/2/01	1512		0		23	8	8								
5/2/01	1513		0		23	8	8								
5/2/01	1518		0		23	8	8								
5/2/01	1520		0		23	8	8								
5/2/01	1536	lab analysis	0		23	8	8								
5/2/01	1550		0		23	8	8								
5/2/01	1640		0		23	8	8								
5/2/01	1645		0		23	8	8				73820	28880	28480		
5/3/01	840	Tried to auger and redistribute ZVI bed in C-1. SVI very hard and compacted.	0		24	9	9				75630	31660	31290		
5/3/01	852		0		24	9	9								
5/3/01	854		0		24	9	9								
5/3/01	910		0		24	9	9								
5/3/01	912		0		24	9	9								
5/3/01	1003	lab analysis C-2 just before reversing flow (bottom to top) @1045.	0		24	9	9								
5/3/01	1020		0		24	9	9								
5/3/01	1245		0		24	9	9				76070	32370	32000		
5/3/01	1424	lab analysis	0		24	9	9								
5/3/01	1455		0		24	9	9								
5/3/01	1510		0		24	9	9								

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
5/3/01	1512		0		24	9	9								
5/3/01	1600		0	-	24	9	9				78430	32920	32570		
5/4/01	1020	Added ~ 25 lbs new ZVI to C-1 and restarted. Reduced flow to C-2.	0	24	25	10	10				78410	36080	36790		
5/4/01	1025		0	24	25	10	10								
5/4/01	1030		0	24	25	10	10								
5/4/01	1115		0	24	25	10	10			64260	78600	36210	36910		
5/4/01	1445	lab analysis	0	24	25	10	10								
5/4/01	1520		0	24	25	10	10			64480	78730	36800	36620		
5/4/01	1520		0	24	25	10	10								
5/4/01	1540		0	24	25	10	10								
5/4/01	1542		0	24	25	10	10								
5/4/01	1550		0	24	25	10	10								
5/4/01	1610		0	24	25	10	10								
5/4/01	1620		0	24	25	10	10			64580	78790	37080	36780		
5/7/01	1257		0	27	26	13	13			66400	82510	48430	48470		
5/7/01	1305		0	27	26	13	13								
5/7/01	1315		0	27	26	13	13								
5/7/01	1318		0	27	26	13	13								
5/7/01	1340		0	27	26	13	13								
5/7/01	1430		0	27	26	13	13			66490	82600	48710	48750		
5/7/01	1510		0	27	26	13	13								
5/7/01	1512		0	27	26	13	13								
5/7/01	1515	lab analysis	0	27	26	13	13								
5/7/01	1535		0	27	26	13	13								
5/7/01	1548		0	27	26	13	13								
5/7/01	1600		0	27	26	13	13			66590	82680	48470	48000		
5/8/01	822		0	28	29	14	14			68610	83580	51930	51800		
5/8/01	845		0	28	29	14	14								
5/8/01	907		0	28	29	14	14								
5/8/01	910		0	28	29	14	14								
5/8/01	918		0	28	29	14	14								
5/8/01	920		0	28	29	14	14								
5/8/01	1050		0	28	29	14	14			68660	83680	52360	52210		
5/8/01	1455	lab analysis	0	28	29	14	14								
5/8/01	1515		0	28	29	14	14			68640	83940	53150	52960		
5/8/01	1520		0	28	29	14	14								
5/8/01	1522		0	28	29	14	14								
5/8/01	1540		0	28	29	14	14								
5/8/01	1545		0	28	29	14	14								
5/8/01	1625	Shut down south tank. All flow to n tank. Pumped sludge from south tank.	0	28	29	14	14			70010	84000	53340	53140		
5/9/01	1015		0	29	30	15	15			71120	84960	56450	56180		
5/9/01	1033		0	29	30	15	15								
5/9/01	1042	lab analysis	0	29	30	15	15								
5/9/01	1045		0	29	30	15	15								
5/9/01	1050	Shut down C1 & C2. Diverted all flow to n. tank. Pumped sludge from n tank.	0	29	30	15	15			71180	84990	56560	56290		
5/9/01	1051		0			15	15								
5/9/01	1102		0			15	15								
5/9/01	1106		0			15	15								
5/9/01	1420		0			15	15								
5/9/01	1430		0			15	15					57210	56920		
5/9/01	1545		0			15	15					57430	57160		
5/9/01	1550	lab analysis	0			15	15								
5/9/01	1640		0			15	15								
5/9/01	1645		0			15	15								
5/9/01	1655		0			15	15					57630	57330		
5/9/01	1700		0			15	15								
5/9/01	1700		0			15	15								
5/10/01	815		0			16	16					60420	60030		
5/10/01	835		0			16	16								
5/10/01	841		0			16	16								
5/10/01	858		0			16	16								
5/10/01	935		0			16	16								
5/10/01	1210		0			16	16					61120	60710		
5/10/01	1245		0			16	16								
5/10/01	1355	Repacked C-1 and C-2 with 612 lbs ZVI ea. Restarted at 1 gpm.	0	0	0	16	16			0	0	61420	61000		
5/10/01	1450		0	0	0	16	16								
5/10/01	1504		0	0	0	16	16								
5/10/01	1510		0	0	0	16	16								
5/10/01	1510	lab analysis	0	0	0	16	16								
5/10/01	1513		0	0	0	16	16								
5/10/01	1550		0	0	0	16	16								
5/10/01	1600		0	0	0	16	16			110	100	61720	61300		
5/11/01	1010		0	1	1	17	17								
5/11/01	1040		0	1	1	17	17								
5/11/01	1052		0	1	1	17	17			1250	1270	65010	64510		
5/11/01	1215	lab analysis	0	1	1	17	17								
5/11/01	1245		0	1	1	17	17								
5/11/01	1250		0	1	1	17	17								
5/14/01	1100		0	4	4	20	20			5580	5710	77470	76700		
5/14/01	1115		0	4	4	20	20								
5/14/01	1130		0	4	4	20	20								
5/14/01	1135		0	4	4	20	20								
5/14/01	1145		0	4	4	20	20			5630	5760	77800	76830		
5/14/01	1210		0	4	4	20	20								
5/14/01	1222		0	4	4	20	20								
5/14/01	1341		0	4	4	20	20			5930	6070	77710	76940		
5/14/01	1536		0	4	4	20	20			6230	6380	77810	77060		
5/14/01	1540	lab analysis	0	4	4	20	20								
5/14/01	1545		0	4	4	20	20								
5/14/01	1550		0	4	4	20	20								
5/14/01	1555		0	4	4	20	20								
5/14/01	1630		0	4	4	20	20			6370	6540	77940	77110		
5/15/01	825		0	5	5	21	21			8810	8140	78700	77980		
5/15/01	840		0	5	5	21	21								
5/15/01	848		0	5	5	21	21								
5/15/01	855		0	5	5	21	21								
5/15/01	943	Shut down system to replumb ZVI shed for new 24-inch column & new flow rotometers.	1	5	5	21	21			8010	9360	78770	78060		
5/21/01	1400	Completed plumbing. Loaded new C-5 with 1275 lbs ZVI. Restarted system.	0	5	5	21	21	0		8010	9360	78770	78060		
5/21/01	1500		0	5	5	21	21	0							
5/21/01	1504		0	5	5	21	21	0							
5/21/01	1506		0	5	5	21	21	0							
5/21/01	1518		0	5	5	21	21	0							
5/21/01	1528		0	5	5	21	21	0		9650	9650	79100	78370	240	
5/21/01	1540	lab analysis	0	5	5	21	21	0							
5/21/01	1620		0	5	5	21	21	0		9710	10000	79190	78460	340	
5/22/01	818		0	6	6	22	22	1		12740	12800	80680	80000	2200	
5/22/01	838		0	6	6	22	22	1							

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
5/22/01	902		0	6	6	22	22	1							
5/22/01	906		0	6	6	22	22	1							
5/22/01	925		0	6	6	22	22	1							
5/22/01	1010		0	6	6	22	22	1							
5/22/01	1435		0	6	6	22	22	1							
5/22/01	1445		0	6	6	22	22	1							
5/22/01	1500	lab analysis	0	6	6	22	22	1							
5/22/01	1515		0	6	6	22	22	1							
5/22/01	1550		0	6	6	22	22	1							
5/23/01	855		0	6	6	22	22	1		14120	14080	81750	80180	3080	
5/23/01	905		0	7	7	23	23	2							
5/23/01	1030		0	7	7	23	23	2							
5/23/01	1320		0	7	7	23	23	2							
5/23/01	1322		0	7	7	23	23	2							
5/23/01	1327		0	7	7	23	23	2							
5/23/01	1435		0	7	7	23	23	2							
5/23/01	1445	lab analysis	0	7	7	23	23	2							
5/23/01	1515		0	7	7	23	23	2							
5/23/01	1530		0	7	7	23	23	2							
5/23/01	1628		0	7	7	23	23	2							
5/23/01	1640		0	7	7	23	23	2							
5/24/01	851		0	7	7	23	23	2		18190	17780	84280	80880	3810	
5/24/01	901		0	8	8	24	24	3							
5/24/01	1430		0	8	8	24	24	3							
5/24/01	1436		0	8	8	24	24	3							
5/24/01	1457		0	8	8	24	24	3							
5/24/01	1520	lab analysis	0	8	8	24	24	3							
5/24/01	1615		0	8	8	24	24	3							
5/24/01	1618		0	8	8	24	24	3							
5/24/01	1621		0	8	8	24	24	3		22340	21980	88820	83080	8520	
5/25/01	807		0	8	8	24	24	3							
5/25/01	824		0	9	9	25	25	4		25180	24170	86780	84610	10400	
5/25/01	830		0	9	9	25	25	4							
5/25/01	918		0	9	9	25	25	4							
5/25/01	1023		0	9	9	25	25	4		26370	24340	88880	84830	10520	
5/25/01	1030		0	9	9	25	25	4							
5/25/01	1352		0	9	9	25	25	4		26680	24640	88010	85050	10880	
5/25/01	1356		0	9	9	25	25	4							
5/25/01	1405		0	9	9	25	25	4							
5/25/01	1445		0	9	9	25	25	4		26260	25170	88210	85200	11670	
5/25/01	1450	lab analysis	0	9	9	25	25	4							
5/25/01	1503		0	9	9	25	25	4							
5/25/01	1515		0	9	9	25	25	4							
5/25/01	1527		0	9	9	25	25	4							
5/26/01	803	Totalizers for C3 and C4 not working.	0	9	9	25	25	4		28800	29400	88335	86322	11900	
5/26/01	821		1	10	10	26	26	5		29630	28310			15910	
5/26/01	828		0	10	10	26	26	5							
5/26/01	903		0	10	10	26	26	5							
5/26/01	1245		0	10	10	26	26	5		29700	28470			16140	
5/26/01	1302		0	10	10	26	26	5							
5/26/01	1305	lab analysis	0	10	10	26	26	5							
5/26/01	1308		0	10	10	26	26	5							
5/27/01	1002		0	10	10	26	26	5		30140	28880			16720	
5/27/01	1030		0	11	11	27	27	6		33880	32580			21980	
5/27/01	1035		0	11	11	27	27	6							
5/27/01	1105	lab analysis	0	11	11	27	27	6							
5/27/01	1128		0	11	11	27	27	6							
5/29/01	950	Totalizers C-3 & C4 not working. Changed internal parts from 1210 - 1445.	0	11	11	27	27	6		34230	32770			21810	
5/29/01	1115		1	13	13	29	29	8		41520	39730	103640	99850	31320	
5/29/01	1123		0	13	13	29	29	8							
5/29/01	1145		0	13	13	29	29	8							
5/29/01	1210		0	13	13	29	29	8							
5/29/01	1445		0	13	13	29	29	8		41880	40130	104055	100085	31900	
5/29/01	1530		0	13	13	29	29	8		41880	40130	104055	100085	31900	
5/29/01	1540	lab analysis	0	13	13	29	29	8							
5/29/01	1600		0	13	13	29	29	8							
5/29/01	1630		0	13	13	29	29	8							
5/29/01	1638		0	13	13	29	29	8							
5/29/01	1645		0	13	13	29	29	8							
5/29/01	1647		0	13	13	29	29	8							
5/29/01	1655		0	13	13	29	29	8							
5/29/01	1710		0	13	13	29	29	8		42310	40640	104195	100185	32470	
5/30/01	803	Shut system down several time to clean pipes.	0	13	13	29	29	8							
5/30/01	820		1	14	14	30	30	9		46220	43270			36290	
5/30/01	822		0	14	14	30	30	9							
5/30/01	914	Shut off C-3 and C-4 for ZVI change out.	0	14	14	30	30	9							
5/30/01	1005		0	14	14	30	30	9		46340	43370	104115	101045	36440	
5/30/01	1045		0	14	14			9							
5/30/01	1108		0	14	14			9							
5/30/01	1310		0	14	14			9							
5/30/01	1410	lab analysis	0	14	14			9							
5/30/01	1500		0	14	14			9							
5/30/01	1507		0	14	14			9							
5/30/01	1545		0	14	14			9							
5/30/01	1612		0	14	14			9							
5/30/01	1652		0	14	14			9		46820	44730			38590	
5/30/01	1700		0	14	14			9							
5/31/01	800		0	14	14			9		46950	44880			38780	
5/31/01	824		0	15	15			10		48880	47620			42430	
5/31/01	827		0	15	15			10							
5/31/01	858		0	15	15			10							
5/31/01	921		0	15	15			10							
5/31/01	1050	Repacked C-3 ~625 lbs ZVI. Started up C-3 and ramped slowly to 1 gpm.	0	15	15			10							
5/31/01	1200		0	15	15	0		10		50450	48150	0		43130	
5/31/01	1200		0	15	15	0		10							
5/31/01	1207		0	15	15	0		10		50880	48350	30		43500	
5/31/01	1228		0	15	15	0		10							
5/31/01	1350		0	15	15	0		10							
5/31/01	1405	lab analysis	0	15	15	0		10							
5/31/01	1430		0	15	15	0		10							
5/31/01	1615		0	15	15	0		10							
5/31/01	1618		0			0									
5/31/01	1640		0			0									
5/31/01	1732		0	15	15	0		10		51580	49220	300		46040	
6/1/01	804		0			0									
6/1/01	815		0	16	16	1		11		54510	52070	1240		50020	
6/1/01	951		0	16	16	1		11		54660	52100			50060	
			0	16	16	1		11							

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
6/1/01	956		0	16	16	1		11							
6/1/01	1035		0	16	16	1		11							
6/1/01	1040		0	16	16	1		11							
6/1/01	1200		0	16	16	1		11		56270	52800	1980		50740	
6/1/01	1410		0	16	16	1		11		56980	53200	2380		51100	
6/1/01	1515	lab analysis	0	16	16	1		11							
6/1/01	1525		0	16	16	1		11							
6/1/01	1540		0	16	16	1		11							
6/1/01	1615		0	16	16	1		11		58080	53580	2720		51440	
6/1/01	1617		0	16	16	1		11							
6/1/01	1650		0	16	16	1		11							
6/2/01	820		0	17	17	2		12		59190	56700	6970		54100	
6/2/01	835		0	17	17	2		12							
6/2/01	855		0	17	17	2		12							
6/2/01	905		0	17	17	2		12							
6/2/01	1140		0	17	17	2		12		59840	57320	6350		54690	
6/2/01	1320		0	17	17	2		12							
6/2/01	1325		0	17	17	2		12							
6/2/01	1330	lab analysis	0	17	17	2		12							
6/2/01	1343		0	17	17	2		12		60230	57700	6720		55080	
6/3/01	805		0	18	18	3		13		63790	61110	10010		58310	
6/3/01	820		0	18	18	3		13							
6/3/01	828		0	18	18	3		13							
6/3/01	920		0	18	18	3		13		64020	61340	10220		58550	
6/3/01	921	lab analysis	0	18	18	3		13							
6/3/01	945		0	18	18	3		13							
6/3/01	955		0	18	18	3		13							
6/3/01	1025		0	18	18	3		13		64240	61580	10430		58770	
6/4/01	1100		0	19	19	4		14		66790	66630	14600		63270	
6/4/01	1120		0	19	19	4		14		66860	66880	14670		63230	
6/4/01	1130		0	19	19	4		14							
6/4/01	1200		0	19	19	4		14		66880	66030	14790		63460	
6/4/01	1201	lab analysis	0	19	19	4		14							
6/4/01	1235		0	19	19	4		14							
6/4/01	1308		0	19	19	4		14							
6/4/01	1312		0	19	19	4		14		66040	66170	19000		63680	
6/4/01	1420		0	19	19	4		14							
6/4/01	1525		0	19	19	4		14		66310	66430	15390		64090	
6/4/01	1535		0	19	19	4		14							
6/4/01	1540		0	19	19	4		14							
6/4/01	1550		0	19	19	4		14							
6/4/01	1601		0	19	19	4		14							
6/4/01	1612		0	19	19	4		14		66400	66530	15530		64230	
6/5/01	810	System down when arrived at 810 am. Out pump plugged	1	20	20	5		15		71130	66210	18030		66820	
6/5/01	845	Restarted system.	0	20	20	5		15		71130	66210	18030		66820	
6/5/01	901		0	20	20	5		15							
6/5/01	910		0	20	20	5		15							
6/5/01	920		0	20	20	5		15							
6/5/01	1133		0	20	20	5		15							
6/5/01	1138		0	20	20	5		15							
6/5/01	1211		0	20	20	5		15		71580	66640	18870		67470	
6/5/01	1245	lab analysis	0	20	20	5		15							
6/5/01	1415		0	20	20	5		15		71840	66880	19030		67850	
6/5/01	1520		0	20	20	5		15							
6/5/01	1603		0	20	20	5		15							
6/5/01	1605		0	20	20	5		15							
6/5/01	1613		0	20	20	5		15							
6/5/01	1620		0	20	20	5		15		72100	69130	19390		68230	
6/6/01	827		0	21	21	6		16		74080	71020	22190		71140	
6/6/01	833		0	21	21	6		16							
6/6/01	838		0	21	21	6		16							
6/6/01	907	Shut down C-1 to change ZVI. ~625 lbs. Packed dry.	0	21	21	6		16		74198	71110	22270		71270	
6/6/01	918		0		21	6		16							
6/6/01	923		0		21	6		16							
6/6/01	927		0		21	6		16							
6/6/01	1223		0		21	6		16			71900	22860		71870	
6/6/01	1355		0		21	6		16			71880	23130		72160	
6/6/01	1400	lab analysis	0		21	6		16							
6/6/01	1535	Restarted C-1. Ramped slowly to 1 gpm.	0	0	21	6		16		0	71880	23420		72460	
6/6/01	1605		0	0	21	6		16							
6/6/01	1610		0	0	21	6		16							
6/6/01	1618		0	0	21	6		16							
6/6/01	1631		0	0	21	6		16							
6/6/01	1645		0	0	21	6		16							
6/7/01	906		0	1	22	7		17							
6/7/01	915		0	1	22	7		17		1080	74010	26460		75410	
6/7/01	918		0	1	22	7		17							
6/7/01	936		0	1	22	7		17							
6/7/01	940	Shut down C-2 to change ZVI. ~625 lbs. Packed dry.	0	1	22	7		17		1080	74440	26510		75880	
6/7/01	945		0	1		7		17							
6/7/01	954		0	1		7		17							
6/7/01	1155		0	1		7		17		1470		26790		76270	
6/7/01	1247		0	1		7		17							
6/7/01	1251		0	1		7		17							
6/7/01	1300	lab analysis	0	1		7		17							
6/7/01	1303		0	1		7		17							
6/7/01	1420		0	1		7		17		1750		27320		76580	
6/7/01	1435		0	1		7		17							
6/7/01	1540	Restarted C-2. Ramped slowly to 0.5 gpm.	0	1	0	7		17		1910	0	27550		76790	
6/7/01	1634		0	1	0	7		17							
6/7/01	1645		0	1	0	7		17		2040	30	27790		76880	
6/7/01	1702		0	1	0	7		17							
6/8/01	848		0	2	1	8		18		3800	420	30560		78850	
6/8/01	917		0	2	1	8		18							
6/8/01	922		0	2	1	8		18							
6/8/01	1000		0	2	1	8		18		4080	510	30790		79030	
6/8/01	1031		0	2	1	8		18							
6/8/01	1330	lab analysis	0	2	1	8		18							
6/8/01	1405		0	2	1	8		18		4820	1230	31800		79770	
6/8/01	1415		0	2	1	8		18							
6/8/01	1440		0	2	1	8		18							
6/8/01	1445		0	2	1	8		18		4916	1320	31890		79860	
6/9/01	1312		0	3	2	9		19							
6/9/01	1320		0	3	2	9		19		6890	5166	36690		83790	
6/9/01	1323		0	3	2	9		19							
6/9/01	1330		0	3	2	9		19							
6/9/01	1350	lab analysis	0	3	2	9		19							

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
6/9/01	1405		0	3	2	9		19							
6/9/01	1430		0	3	2	9		19		9180	5380	35600		84000	
6/10/01	803		0	4	3	10		20		12160	6240	38670		87010	
6/10/01	830		0	4	3	10		20							
6/10/01	836		0	4	3	10		20							
6/10/01	902		0	4	3	10		20							
6/10/01	920		0	4	3	10		20							
6/10/01	956		0	4	3	10		20		12900	6670	38200		87330	
6/10/01	1247		0	4	3	10		20		13000	8080	39700		87810	
6/10/01	1250		0	4	3	10		20							
6/10/01	1257		0	4	3	10		20							
6/10/01	1320	lab analysis	0	4	3	10		20							
6/10/01	1325		0	4	3	10		20		13110	9180	38610		87920	
6/11/01	1040		0	5	4	11		21		16810	12840	43640		91560	
6/11/01	1058		0	5	4	11		21							
6/11/01	1110		0	5	4	11		21							
6/11/01	1118		0	5	4	11		21							
6/11/01	1313		0	5	4	11		21		17290	13300	43880		91880	
6/11/01	1425	lab analysis	0	5	4	11		21							
6/11/01	1520		0	5	4	11		21							
6/11/01	1540		0	5	4	11		21							
6/11/01	1545		0	5	4	11		21							
6/11/01	1620		0	5	4	11		21		17780	13820	44630		92510	
6/12/01	930	Spent ZVI shipped to Cheney. Pumped N & S settling tanks to above sludge tanks.	0	6	5	12		22		20880	16730	47800		95370	
6/12/01	1015		0	6	5	12		22							
6/12/01	1020		0	6	5	12		22							
6/12/01	1025		0	6	5	12		22							
6/12/01	1117		0	6	5	12		22		20970	17020	47900		95880	
6/12/01	1413		0	6	5	12		22		21480	17510	48430		96160	
6/12/01	1420	lab analysis	0	6	5	12		22							
6/12/01	1437		0	6	5	12		22							
6/12/01	1442		0	6	5	12		22							
6/12/01	1448		0	6	5	12		22							
6/12/01	1510		0	6	5	12		22							
6/12/01	1600		0	6	5	12		22							
6/12/01	1612		0	6	5	12		22							
6/12/01	1622		0	6	5	12		22		21820	17860	48810		96510	
6/13/01	810	system down at 814. Restarted at 852	1	7	6	13		23		24410	20460	51800		99120	
6/13/01	852		0	7	6	13		23		24420	20460	51810		99130	
6/13/01	902		0	7	6	13		23							
6/13/01	904		0	7	6	13		23							
6/13/01	1100		0	7	6	13		23		24770	20800	51980		99480	
6/13/01	1226		0	7	6	13		23							
6/13/01	1240		0	7	6	13		23							
6/13/01	1308		0	7	6	13		23		25270	21300	52530		99880	
6/13/01	1400	lab analysis	0	7	6	13		23							
6/13/01	1520		0	7	6	13		23							
6/13/01	1531		0	7	6	13		23							
6/13/01	1552		0	7	6	13		23							
6/13/01	1555		0	7	6	13		23		25670	21690	52860		100270	
6/14/01	815		0	8	7	14		24		28310	24230	56720		102820	
6/14/01	835		0	8	7	14		24							
6/14/01	837		0	8	7	14		24							
6/14/01	958		0	8	7	14		24							
6/14/01	1125		0	8	7	14		24		28820	24860	58260		103430	
6/14/01	1222		0	8	7	14		24							
6/14/01	1224		0	8	7	14		24							
6/14/01	1320		0	8	7	14		24		29130	24860	58580		103740	
6/14/01	1420		0	8	7	14		24		29300	25110	58770		103910	
6/14/01	1425	lab analysis	0	8	7	14		24							
6/14/01	1610		0	8	7	14		24							
6/14/01	1616		0	8	7	14		24							
6/14/01	1628		0	8	7	14		24		29630	25420	57130		104240	
6/15/01	825		0	9	8	15		25		32280	27880	59850		106850	
6/15/01	840		0	9	8	15		25							
6/15/01	845		0	9	8	15		25							
6/15/01	855		0	9	8	15		25							
6/15/01	918		0	9	8	15		25							
6/15/01	920		0	9	8	15		25		32410	28040	60110		107000	
6/15/01	926		0	9	8	15		25							
6/15/01	957		0	9	8	15		25							
6/15/01	1145		0	9	8	15		25		32810	28410	60640		107130	
6/15/01	1210		0	9	8	15		25							
6/15/01	1214		0	9	8	15		25							
6/15/01	1245		0	9	8	15		25							
6/15/01	1303		0	9	8	15		25		33030	28820	60780		107190	
6/15/01	1455	lab analysis	0	9	8	15		25							
6/15/01	1500		0	9	8	15		25		33380	28820	61130		107290	
6/15/01	1511		0	9	8	15		25							
6/15/01	1522		0	9	8	15		25							
6/15/01	1542		0	9	8	15		25							
6/15/01	1550		0	9	8	15		25		33600	29060	61280		107340	
6/16/01	820	System down when arrived on-site at 810 am. Attempted several times to restart.	1	9	8	15		25		34770	30280	62860		107800	
6/19/01	1300	Restarted system after shutdown 6/16 due to motor minder problem and PRV maintenance.	0	10	9	15		25		34840	30420	62940			
6/19/01	1310		0	10	9	15		25							
6/19/01	1330		0	10	9	15		25							
6/19/01	1420		0	10	9	15		25		35180	30840	63130			
6/19/01	1435	lab analysis	0	10	9	15		25							
6/19/01	1600		0	10	9	15		25							
6/19/01	1608		0	10	9	15		25							
6/19/01	1621		0	10	9	15		25							
6/19/01	1645		0	10	9	15		25		35550	30890	63670			
6/19/01	1650		0	10	9	15		25							
6/20/01	830		0	11	10	16		26		37930	33240	66380		108030	
6/20/01	850		0	11	10	16		26							
6/20/01	900		0	11	10	16		26							
6/20/01	905		0	11	10	16		26							
6/20/01	1008		0	11	10	16		26							
6/20/01	1110		0	11	10	16		26		38330	33610	66850		108180	
6/20/01	1440	lab analysis	0	11	10	16		26							
6/20/01	1512		0	11	10	16		26		38930	34180	67560		108410	
6/20/01	1515		0	11	10	16		26							
6/20/01	1520		0	11	10	16		26							
6/20/01	1535		0	11	10	16		26							
6/20/01	1545		0	11	10	16		26		38010	34260	67860		108440	
6/20/01	1600		0	11	10	16		26							
6/20/01	1608		0	11	10	16		26							

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
6/20/01	1620		0	11	10	16		26							
6/20/01	1630		0	11	10	16		26							
6/20/01	1638		0	11	10	16		26		38170	34410	67830		109480	
6/21/01	1004	Pumped 3200 gls sludge & shipped to Cheney 6/18 when system was down.	0	12	11	17		27		42270	37530	71280		110440	
6/21/01	1020		0	12	11	17		27							
6/21/01	1210		0	12	11	17		27							
6/21/01	1445	Packed new 17-in steel column (C-4) with 725 lbs ZVI and started at 1445.	0	12	11	17	0	27		43100			0	110700	
6/21/01	1450	lab analysis	0	12	11	17	0	27							
6/21/01	1545		0	12	11	17	0	27							
6/21/01	1607		0	12	11	17	0	27							
6/21/01	1615		0	12	11	17	0	27							
6/21/01	1620		0	12	11	17	0	27							
6/21/01	1650		0	12	11	17	0	27							
6/21/01	1702		0	12	11	17	0	27		43480	38790	72570	110	110820	
6/22/01	1105		0	13	12	18	1	28		46620	41820	75880	990	111770	
6/22/01	1142		0	13	12	18	1	28							
6/22/01	1150		0	13	12	18	1	28							
6/22/01	1345	lab analysis	0	13	12	18	1	28							
6/22/01	1350		0	13	12	18	1	28		47080	42380	76370	1120	111910	
6/22/01	1415		0	13	12	18	1	28							
6/22/01	1422		0	13	12	18	1	28							
6/22/01	1435		0	13	12	18	1	28		47220	42520	76500	1190	111960	
6/23/01	1040		0	14	13	19	2	29		50530	45980	80080	2130	113000	
6/23/01	1109		0	14	13	19	2	29		50680	46030	80110	2160	113010	
6/23/01	1111		0	14	13	19	2	29							
6/23/01	1117		0	14	13	19	2	29							
6/23/01	1300		0	14	13	19	2	29		50980	46270	80410	2230	113100	
6/23/01	1347		0	14	13	19	2	29		51080	46410	80510	2290	113130	
6/23/01	1420		0	14	13	19	2	29							
6/23/01	1600		0	14	13	19	2	29		51430	46760	80800	2380	113240	
6/23/01	1605	lab analysis	0	14	13	19	2	29							
6/23/01	1608		0	14	13	19	2	29							
6/23/01	1636		0	14	13	19	2	29							
6/24/01	940		0	15	14	20	3	30		54420	49810	83960	3150	114140	
6/24/01	1000		0	15	14	20	3	30							
6/24/01	1010		0	15	14	20	3	30							
6/24/01	1123		0	15	14	20	3	30		54700	49880	84250	3230	114220	
6/24/01	1244		0	15	14	20	3	30		54830	50110	84480	3290	114290	
6/24/01	1427		0	15	14	20	3	30							
6/24/01	1435		0	15	14	20	3	30							
6/24/01	1439	lab analysis	0	15	14	20	3	30							
6/24/01	1440		0	15	14	20	3	30		55250	50430	84880	3380	114380	
6/25/01	1140		0	16	15	21	4	31		58760	53800	88570	4310	115440	
6/25/01	1150		0	16	15	21	4	31							
6/25/01	1205		0	16	15	21	4	31							
6/25/01	1208		0	16	15	21	4	31							
6/25/01	1235		0	16	15	21	4	31							
6/25/01	1310		0	16	15	21	4	31		58990	54130	88820	4370	115510	
6/25/01	1435	lab analysis	0	16	15	21	4	31							
6/25/01	1540	Shut down C-3.	0	16	15	21	4	31		59400	54530	89290	4480	115630	
6/25/01	1545		0	16	15		4	31		59420	54550		4490	115640	
6/25/01	1600		0	16	15		4	31							
6/25/01	1625		0	16	15		4	31							
6/25/01	1637		0	16	15		4	31							
6/25/01	1650		0	16	15		4	31							
6/25/01	1717		0	16	15		4	31							
6/25/01	1723		0	16	15		4	31		59980	54820		4780	115730	
6/26/01	825		0	17	16		5	32		62230	57360		7540	116480	
6/26/01	847		0	17	16		5	32							
6/26/01	852		0	17	16		5	32							
6/26/01	902		0	17	16		5	32							
6/26/01	1035		0	17	16		5	32							
6/26/01	1137		0	17	16		5	32		62780	57980		8120	116950	
6/26/01	1450	lab analysis	0	17	16		5	32							
6/26/01	1650		0	17	16		5	32							
6/26/01	1701		0	17	16		5	32							
6/26/01	1710		0	17	16		5	32							
6/26/01	1725		0	17	16		5	32							
6/26/01	1734		0	17	16		5	32		63600	58910		9180	116950	
6/27/01	820		0	18	17		6	33		66330	61400		11770	117980	
6/27/01	830		0	18	17		6	33							
6/27/01	837		0	18	17		6	33							
6/27/01	1050		0	18	17		6	33		66790	61820		12200	117610	
6/27/01	1112		0	18	17		6	33							
6/27/01	1135		0	18	17		6	33							
6/27/01	1315		0	18	17		6	33		67170	62230		12630	117930	
6/27/01	1321		0	18	17		6	33							
6/27/01	1325		0	18	17		6	33							
6/27/01	1425		0	18	17		6	33		67370	62430		12830	117980	
6/27/01	1430	lab analysis	0	18	17		6	33							
6/28/01	805		0	19	18		7	34		70410	65410		15850	118850	
6/28/01	823		0	19	18		7	34							
6/28/01	834		0	19	18		7	34							
6/28/01	900		0	19	18		7	34		70580	65560		15990	118890	
6/28/01	1232		0	19	18		7	34							
6/28/01	1236		0	19	18		7	34							
6/28/01	1237		0	19	18		7	34		71180	66160		16800	119070	
6/28/01	1400		0	19	18		7	34		71420	66400		16830	119140	
6/28/01	1520		0	19	18		7	34							
6/28/01	1521		0	19	18	0	7	34							
6/28/01	1522	lab analysis	0	19	18	0	7	34							
6/28/01	1523	Repacked C-3 with 625 lbs ZVI. Restarted 1515.	0	19	18	0	7	34		71890	66660	0	17090	119220	
6/29/01	820		0	20	19	1	8	35		74540	69470	800	19870	120050	
6/29/01	843		0	20	19	1	8	35							
6/29/01	846		0	20	19	1	8	35							
6/29/01	930		0	20	19	1	8	35		74740	69670	870	20080	120110	
6/29/01	1211		0	20	19	1	8	35		75090	69970	1420	20500	120240	
6/29/01	1214		0	20	19	1	8	35							
6/29/01	1217		0	20	19	1	8	35							
6/29/01	1400		0	20	19	1	8	35		75300	70160	1720	20790	120330	
6/29/01	1437		0	20	19	1	8	35							
6/29/01	1440		0	20	19	1	8	35							
6/29/01	1450	lab analysis	0	20	19	1	8	35							
6/29/01	1455		0	20	19	1	8	35		75420	70270	1880	20950	120380	
6/30/01	943		0	21	20	2	9	36		77980	72380	8010	24000	121300	
6/30/01	1010		0	21	20	2	9	36							
6/30/01	1013		0	21	20	2	9	36							

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
6/30/01	1318		0	21	20	2	9	36		77880	72570	5300	24220	121460	
6/30/01	1422		0	21	20	2	9	36		78010	72880	5460	24400	121500	
6/30/01	1425	lab analysis	0	21	20	2	9	36							
6/30/01	1500		0	21	20	2	9	36							
6/30/01	1503		0	21	20	2	9	36							
7/1/01	1000		0	22	21	3	10	37		80420	74880	5080	27640	122480	
7/1/01	1016		0	22	21	3	10	37							
7/1/01	1027		0	22	21	3	10	37							
7/1/01	1055		0	22	21	3	10	37		80530	74980	5200	27790	122510	
7/1/01	1106		0	22	21	3	10	37							
7/1/01	1111		0	22	21	3	10	37							
7/1/01	1120	lab analysis	0	22	21	3	10	37							
7/1/01	1135		0	22	21	3	10	37		80810	75030	5280	27900		
7/2/01	810		0	23	22	4	11	36		83130	77320	10560	31280	123560	
7/2/01	835		0	23	22	4	11	36							
7/2/01	842		0	23	22	4	11	36							
7/2/01	855		0	23	22	4	11	36							
7/2/01	1000		0	23	22	4	11	36		83380	77520	10740	31580	123640	
7/2/01	1213		0	23	22	4	11	36		83630	77760	10870	31910	123740	
7/2/01	1223		0	23	22	4	11	36							
7/2/01	1230		0	23	22	4	11	36							
7/2/01	1239		0	23	22	4	11	36							
7/2/01	1450		0	23	22	4	11	36		83860	78050	11290	32330	123870	
7/2/01	1505	lab analysis	0	23	22	4	11	36							
7/2/01	1610	Suspect upper seal blown in C-3. Reversed flow at 1555.	0	23	22	4	11	36		84120	78200	11380	32560	123940	
7/2/01	1614		0	23	22	4	11	36							
7/2/01	1620		0	23	22	4	11	36							
7/2/01	1630		0	23	22	4	11	36		84180	78240	11480	32610	123960	
7/2/01	1634		0	23	22	4	11	36							
7/3/01	830		0	24	23	5	12	39		86080	79970	14330	35140	124720	
7/3/01	845		0	24	23	5	12	39							
7/3/01	851		0	24	23	5	12	39							
7/3/01	900		0	24	23	5	12	39							
7/3/01	1030	lab analysis	0	24	23	5	12	39							
7/3/01	1040		0	24	23	5	12	39		86320	80200	14710	35480	124820	
7/3/01	1130	Shut down C-3 to inspect upper seal. Found ZVI throughout gravel. Loose fabric at edges.	0	24	23	5	12	39		86420	80280	14880	35610	124880	
7/3/01	1300	Replaced top and restarted C-3 at 1250.	0	24	23	5	12	39		86580	80450	14870	35850	124930	
7/3/01	1430	lab analysis	0	24	23	5	12	39							
7/3/01	1445		0	24	23	5	12	39		86800	80640	15190	36120	125020	
7/3/01	1455		0	24	23	5	12	39							
7/3/01	1504		0	24	23	5	12	39							
7/3/01	1508		0	24	23	5	12	39							
7/3/01	1610		0	24	23	5	12	39		86970	80790	15450	36360	125080	
7/4/01	1138		0	25	24	6	13	40		88250	82980	18680	38370	126010	
7/4/01	1203		0	25	24	6	13	40							
7/4/01	1205		0	25	24	6	13	40							
7/4/01	1215	lab analysis	0	25	24	6	13	40							
7/4/01	1225		0	25	24	6	13	40		88340	82980	19020	38500	126050	
7/5/01	830	System shut down when arrived at site.	1	26	25	7	14	41		90890	84480	21480	41880	126720	
7/5/01	840		0	26	25	7	14	41		91000	84480	21510	41880	126730	
7/5/01	905		0	26	25	7	14	41							
7/5/01	911		0	26	25	7	14	41							
7/5/01	916		0	26	25	7	14	41							
7/5/01	1015	lab analysis	0	26	25	7	14	41							
7/5/01	1112		0	26	25	7	14	41							
7/5/01	1115		0	26	25	7	14	41							
7/5/01	1218	Reversed flow again to normal direction. Sampled before and after reversing.	0	26	25	7	14	41		91420	84870	22000	42230	126900	
7/5/01	1448		0	26	25	7	14	41		91720	85140	22270	42630	127020	
7/5/01	1500	lab analysis	0	26	25	7	14	41							
7/5/01	1610		0	26	25	7	14	41		91880	85290	22410	42830	127080	
7/5/01	1715		0	26	25	7	14	41							
7/5/01	1717		0	26	25	7	14	41							
7/5/01	1722		0	26	25	7	14	41		92320	85420	22530	43020	127140	
7/6/01	758		1	27	26	8	15	42		93740	87020	24000	45260	127840	
7/6/01	814		0	27	26	8	15	42							
7/6/01	820		0	27	26	8	15	42							
7/6/01	841		0	27	26	8	15	42		93830	87070	24080	45380	127880	
7/6/01	855		0	27	26	8	15	42							
7/6/01	1030		0	27	26	8	15	42							
7/6/01	1048		0	27	26	8	15	42		94080	87300	24360	45730	127960	
7/6/01	1108		0	27	26	8	15	42							
7/6/01	1327		0	27	26	8	15	42							
7/6/01	1330		0	27	26	8	15	42							
7/6/01	1350		0	27	26	8	15	42		94440	87680	24760	46260	128150	
7/6/01	1405	lab analysis	0	27	26	8	15	42							
7/7/01	855		0	28	27	9	16	43		96860	89780	27180	48380	129110	
7/7/01	907		0	28	27	9	16	43							
7/7/01	913		0	28	27	9	16	43							
7/7/01	916		0	28	27	9	16	43							
7/7/01	1134		0	28	27	9	16	43		96970	90050	27470	48630	129240	
7/7/01	1140		0	28	27	9	16	43							
7/7/01	1144		0	28	27	9	16	43							
7/7/01	1155		0	28	27	9	16	43		97010	90090	27510	48690	129260	
7/7/01	1200	lab analysis	0	28	27	9	16	43							
7/8/01	1015	Pumped W. Tank to above ground sludge tank.	0	29	28	10	17	44		99610	92550	30160	53610	130380	
7/8/01	1029		0	29	28	10	17	44							
7/8/01	1036		0	29	28	10	17	44							
7/8/01	1050		0	29	28	10	17	44		99880	92810	30220	53700	130410	
7/8/01	1115	lab analysis	0	29	28	10	17	44							
7/8/01	1311		0	29	28	10	17	44		99840	92840	30470	54040	130510	
7/8/01	1348		0	29	28	10	17	44							
7/8/01	1352		0	29	28	10	17	44							
7/8/01	1358		0	29	28	10	17	44		100000	92920	30560	54180	130560	
7/8/01	1410	lab analysis	0	29	28	10	17	44							
7/8/01	1420		0	29	28	10	17	44							
7/9/01	1055		0	30	29	11	18	45		102450	95230	32930	57600	131590	
7/9/01	1110		0	30	29	11	18	45							
7/9/01	1120		0	30	29	11	18	45							
7/9/01	1129		0	30	29	11	18	45							
7/9/01	1350		0	30	29	11	18	45		102790	95550	33250	58080	131740	
7/9/01	1450	lab analysis	0	30	29	11	18	45							
7/9/01	1500		0	30	29	11	18	45							
7/9/01	1505		0	30	29	11	18	45							
7/9/01	1510		0	30	29	11	18	45							
7/9/01	1515		0	30	29	11	18	45		102980	95700	33410	58310	131790	
7/10/01	951		0	31	30	12	19	46		105120	97740	35430	61330	132730	
7/10/01	1002		0	31	30	12	19	46							

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
7/10/01	1030		0	31	30	12	19	46							
7/10/01	1035		0	31	30	12	19	46							
7/10/01	1115		0	31	30	12	19	46		105280	97980	36580	61580	132800	
7/10/01	1321		0	31	30	12	19	46	0	105820	96120	36410	61900	132910	10
7/10/01	1406		0	31	30	12	19	46	0	105870	96170	36460	61970	132930	40
7/10/01	1425	lab analysis	0	31	30	12	19	46	0						
7/10/01	1505		0	31	30	12	19	46	0						
7/10/01	1510		0	31	30	12	19	46	0						
7/10/01	1517		0	31	30	12	19	46	0						
7/10/01	1550		0	31	30	12	19	46	0	105780	96380	36050	62280	133030	
7/11/01	1000		0	32	31	13	20	47	0	106060	100560	37970	65490	134000	40
7/11/01	1030		0	32	31	13	20	47	0						
7/11/01	1030	lab analysis	0	32	31	13	20	47	0						
7/11/01	1033		0	32	31	13	20	47	0						
7/11/01	1100	Reversed flow C-3 @ 1050 to reduce pressure. Removed C-1 to change. Started C-6(a)	0	32	31	13	20	47	0						
7/11/01	1445	lab analysis	0	32	31	13	20	47	0						
7/11/01	1609		0	32	31	13	20	47	0						
7/11/01	1620		0	32	31	13	20	47	0						
7/11/01	1645	Broke PVC C-1 while tapping side to dislodge spent ZVI.	0	32	31	13	20	47	0	106170	101360	38080	66880	134770	380
7/12/01	930		1		32	14	21	48	1		102410	40860	68280	135670	900
7/12/01	945		0		32	14	21	48	1		102710	40860	68280	135670	900
7/12/01	1000		0		32	14	21	48	1						
7/12/01	1006		0		32	14	21	48	1						
7/12/01	1045		0		32	14	21	48	1		102540	40840	68450	135860	850
7/12/01	1058		0		32	14	21	48	1						
7/12/01	1400		0		32	14	21	48	1		102920	41420	69030	136380	1110
7/12/01	1412		0		32	14	21	48	1						
7/12/01	1420		0		32	14	21	48	1						
7/12/01	1442	lab analysis	0		32	14	21	48	1						
7/12/01	1535		0		32	14	21	48	1						
7/12/01	1546		0		32	14	21	48	1						
7/12/01	1601		0		32	14	21	48	1		103180	41780	69380	136810	1230
7/13/01	1000		1		32	14	21	48	1		104480	43780	71360	137940	1950
7/13/01	1008		0		32	14	21	48	1		104480	43780	71360	137940	1950
7/13/01	1025		0		32	14	21	48	1						
7/13/01	1037		0		32	14	21	48	1						
7/13/01	1105		0		32	14	21	48	1						
7/13/01	1200		0		32	14	21	48	1		104710	44120	71970	138170	2050
7/13/01	1210		0		32	14	21	48	1						
7/13/01	1213		0		32	14	21	48	1						
7/13/01	1217		0		32	14	21	48	1						
7/13/01	1230		0		32	14	21	48	1						
7/13/01	1500	Added 2nd column (b) in series to C-6.	0		32	14	21	48	1		104890	44480	72210	138510	2270
7/13/01	1505	lab analysis	0		32	14	21	48	1						
7/13/01	1525		0		32	14	21	48	1						
7/13/01	1535		0		32	14	21	48	1						
7/13/01	1600		0		32	14	21	48	1		104840	44610	72360	138630	2320
7/16/01	940	System shut down when arrived at site. Installed sensor shields in settling tanks.	1		36	17	24	51	4		107230	49550	79640	143340	4440
7/16/01	1000		0		36	17	24	51	4		107230	49550	79640	143340	4440
7/16/01	1040		0		36	17	24	51	4						
7/16/01	1044		0		36	17	24	51	4						
7/16/01	1051		0		36	17	24	51	4						
7/16/01	1145		0		36	17	24	51	4						
7/16/01	1145		0		36	17	24	51	4		107330	49780	79960	143540	4510
7/16/01	1200		0		36	17	24	51	4						
7/16/01	1322		0		36	17	24	51	4		107420	49960	80250	143730	4690
7/16/01	1325		0		36	17	24	51	4						
7/16/01	1340		0		36	17	24	51	4						
7/16/01	1354		0		36	17	24	51	4		107440	50040	80340	143790	4820
7/16/01	1442	lab analysis	0		36	17	24	51	4						
7/17/01	835		0		36	18	25	52	5		108480	52360	83730	145960	5520
7/17/01	900		0		36	18	25	52	5						
7/17/01	918		0		36	18	25	52	5						
7/17/01	918	Shut down C-3 to change ZVI.	0		36	18	25	52	5		108620	52440	83960	146040	5550
7/17/01	940		0		36	18	25	52	5						
7/17/01	947		0		36	18	25	52	5						
7/17/01	1000		0		36	18	25	52	5						
7/17/01	1143		0		36	18	25	52	5		108650		84300	146330	5660
7/17/01	1405	Restarted C-3. Packed with 600 lbs new ZVI	0		36	0	25	52	5		108790	0	84740	146810	5770
7/17/01	1435		0		36	0	25	52	5		108810	20	84830	146870	5790
7/17/01	1445	lab analysis	0		36	0	25	52	5						
7/17/01	1517		0		36	0	25	52	5						
7/17/01	1545		0		36	0	25	52	5						
7/17/01	1620		0		36	0	25	52	5						
7/17/01	1630		0		36	0	25	52	5		108820	110	85180	146890	5880
7/18/01	825		0		37	1	26	53	6		109800	1110	86060	148740	6560
7/18/01	839		0		37	1	26	53	6						
7/18/01	848		0		37	1	26	53	6						
7/18/01	855	lab analysis	0		37	1	26	53	6						
7/18/01	912	Shut down C-2 to change ZVI.	0		37	1	26	53	6		109940	1170	86200	148840	6600
7/18/01	1001		0			1	26	53	6						
7/18/01	1011		0			1	26	53	6						
7/18/01	1150		0			1	26	53	6			1810	86830	148140	6710
7/18/01	1445	Restarted C-2. Packed with 575 lbs new ZVI	0		0	1	26	53	6		0	2110	86210	148460	6830
7/18/01	1545	lab analysis	0		0	1	26	53	6						
7/18/01	1600		0		0	1	26	53	6		20	2320	86430	149520	6860
7/18/01	1605		0		0	1	26	53	6						
7/18/01	1615		0		0	1	26	53	6						
7/18/01	1630		0		0	1	26	53	6		50	2410	86520	149680	6900
7/19/01	813		0		1	2	27	54	7		880	4980	87320	151440	7520
7/19/01	832		0		1	2	27	54	7						
7/19/01	837		0		1	2	27	54	7						
7/19/01	857		0		1	2	27	54	7						
7/19/01	900	Shut down C-4 to change ZVI.	0		1	2	27	54	7		920	5110	87440	151530	7550
7/19/01	910	lab analysis	0		1	2	0	54	7						
7/19/01	937		0		1	2	0	54	7						
7/19/01	956		0		1	2	0	54	7						
7/19/01	1335		0		1	2	0	54	7		1720	5850		152050	7740
7/19/01	1335	lab analysis	0		1	2	0	54	7						
7/19/01	1448	Restarted C-4. Packed with 750 lbs new ZVI.	0		1	2	0	54	7		1940	6050	0	152190	7790
7/19/01	1625		0		1	2	0	54	7						
7/19/01	1640		0		1	2	0	54	7						
7/19/01	1655		0		1	2	0	54	7		2300	6360	60	152420	7880
7/20/01	756		0		2	3	1	55	8		4980	8730	830	154090	8480
7/20/01	815		0		2	3	1	55	8						
7/20/01	818		0		2	3	1	55	8						
7/20/01	1027		0		2	3	1	55	8						

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
7/20/01	1033		0		2	3	1	66	6						
7/20/01	1035		0		2	3	1	66	6		6300	8130	960	154380	8690
7/20/01	1045	lab analysis	0		2	3	1	66	6						
7/21/01	1023		0		3	4	2	66	9		9220	12600	2110	157030	9620
7/21/01	1035		0		3	4	2	66	9						
7/21/01	1040		0		3	4	2	66	9						
7/21/01	1158		0		3	4	2	66	9						
7/21/01	1204		0		3	4	2	66	9						
7/21/01	1211		0		3	4	2	66	9		9610	12960	2200	157230	9690
7/21/01	1217	lab analysis	0		3	4	2	66	9						
7/22/01	932		0		4	5	3	67	10		12940	15700	3220	159600	10410
7/22/01	945		0		4	5	3	67	10						
7/22/01	949		0		4	5	3	67	10						
7/22/01	1115		0		4	5	3	67	10		13100	16820	3300	159790	10460
7/22/01	1126		0		4	5	3	67	10						
7/22/01	1150	lab analysis	0		4	5	3	67	10						
7/22/01	1152		0		4	5	3	67	10		13190	16980	3330	159860	10500
7/22/01	1157		0		4	5	3	67	10						
7/23/01	1207		0		5	6	4	68	11		16720	18970	4680	162560	11420
7/23/01	1226		0		5	6	4	68	11						
7/23/01	1232		0		5	6	4	68	11						
7/23/01	1249		0		5	6	4	68	11		16820	19050	4690	162630	11450
7/23/01	1345		0		5	6	4	68	11						
7/23/01	1411		0		5	6	4	68	11		17010	19210	4620	162870	11500
7/23/01	1420	lab analysis	0		5	6	4	68	11						
7/23/01	1440		0		5	6	4	68	11						
7/23/01	1452		0		5	6	4	68	11						
7/24/01	930		0		6	7	5	69	12		19560	27380	8010	165660	12200
7/24/01	1012		0		6	7	5	69	12						
7/24/01	1116		0		6	7	5	69	12		19760	21960	8270	166210	12260
7/24/01	1139		0		6	7	5	69	12						
7/24/01	1300		0		6	7	5	69	12		19960	21750	8560	166460	12320
7/24/01	1310		0		6	7	5	69	12						
7/24/01	1355		0		6	7	5	69	12						
7/24/01	1430		0		6	7	5	69	12						
7/24/01	1430	lab analysis	0		6	7	5	69	12						
7/24/01	1545		0		6	7	5	69	12		20330	22040	8890	166820	12410
7/25/01	830		0		7	8	6	60	13		22360	23770	11630	169640	13000
7/25/01	858		0		7	8	6	60	13						
7/25/01	904		0		7	8	6	60	13						
7/25/01	1035		0		7	8	6	60	13		22620	23990	11980	169900	13090
7/25/01	1055		0		7	8	6	60	13						
7/25/01	1100		0		7	8	6	60	13						
7/25/01	1250		0		7	8	6	60	13		22970	24210	12360	170270	13180
7/25/01	1424		0		7	8	6	60	13						
7/25/01	1427		0		7	8	6	60	13						
7/25/01	1529	lab analysis	0		7	8	6	60	13						
7/25/01	1530		0		7	8	6	60	13		23200	24480	12810	170730	13250
7/25/01	1533		0		7	8	6	60	13						
7/26/01	808		0		8	9	7	61	14		25110	26100	15540	173460	13620
7/26/01	820		0		8	9	7	61	14						
7/26/01	827		0		8	9	7	61	14						
7/26/01	858		0		8	9	7	61	14						
7/26/01	1007		0		8	9	7	61	14		25330	26290	15670	173840	13680
7/26/01	1030		0		8	9	7	61	14						
7/26/01	1040		1		8	9	7	61	14						
7/26/01	1147		0		8	9	7	61	14						
7/26/01	1152		0		8	9	7	61	14						
7/26/01	1223	Replaced 775 lb of new ZVI in C-1. New steel column. Restarted at 1223.	0	0	8	9	7	61	14	0	25820	26530	16270	174220	13860
7/26/01	1340		0	0	8	9	7	61	14			26980	16510	174460	14030
7/26/01	1355		0	0	8	9	7	61	14						
7/26/01	1400	lab analysis	0	0	8	9	7	61	14						
7/26/01	1405		0	0	8	9	7	61	14						
7/26/01	1415		0	0	8	9	7	61	14						
7/26/01	1423		0	0	8	9	7	61	14						
7/26/01	1430		0	0	8	9	7	61	14						
7/26/01	1440		0	0	8	9	7	61	14						
7/26/01	1445		0	0	8	9	7	61	14						
7/26/01	1602		0	0	8	9	7	61	14						
7/26/01	1607		0	0	8	9	7	61	14	180	28100	29840	18938	175150	14130
7/27/01	806		0	1	9	10	8	62	15	1080	28100	28820	19740	179650	14760
7/27/01	847		0	1	9	10	8	62	15						
7/27/01	850		0	1	9	10	8	62	15						
7/27/01	915		0	1	9	10	8	62	15						
7/27/01	917		0	1	9	10	8	62	15	1180	28230	28740	19930	179950	14800
7/27/01	1110		0	1	9	10	8	62	15						
7/27/01	1117		0	1	9	10	8	62	15	1330	28480	28940	20270	180510	14880
7/27/01	1128		0	1	9	10	8	62	15						
7/27/01	1325	lab analysis	0	1	9	10	8	62	15						
7/27/01	1330		0	1	9	10	8	62	15		28730	29170	20980	181300	14970
7/27/01	1515		0	1	9	10	8	62	15						
7/27/01	1518		0	1	9	10	8	62	15						
7/27/01	1535		0	1	9	10	8	62	15			29380	21020	181980	15050
7/28/01	1524	System shut down when arrived at site. C-3 leaking so shut down.	1	2	10	11	9	63	16		31150	31230	24210	187840	15750
7/28/01	1540		0	2	10	11	9	63	16						
7/28/01	1557		0	2	10	11	9	63	16						
7/28/01	1625	lab analysis	0	2	10	11	9	63	16						
7/28/01	1627		0	2	10	11	9	63	16		31280	31240	24380	188200	15790
7/28/01	1638		0	2	10	11	9	63	16						
7/28/01	1645		0	2	10	11	9	63	16						
7/29/01	1108		0	3	11	12	10	64	17		33690		27670	194450	16530
7/29/01	1120		0	3	11	12	10	64	17						
7/29/01	1129		0	3	11	12	10	64	17						
7/29/01	1148	Tightened bolts and restarted C-3.	0	3	11	12	10	64	17		33670	31240	27790	194670	16560
7/29/01	1217		0	3	11	12	10	64	17		33730	31270	27880	194830	16580
7/29/01	1220	lab analysis	0	3	11	12	10	64	17						
7/29/01	1237		0	3	11	12	10	64	17						
7/29/01	1240		0	3	11	12	10	64	17						
7/30/01	1005		0	4	12	13	11	65	18	1330	36280	32370	31650	201860	17410
7/30/01	1025		0	4	12	13	11	65	18						
7/30/01	1036		0	4	12	13	11	65	18						
7/30/01	1110	Tightened bolts and restarted C-1.	0	4	12	13	11	65	18	1340	36410	32440	31860	202210	17450
7/30/01	1352		0	4	12	13	11	65	18						
7/30/01	1403		0	4	12	13	11	65	18						
7/30/01	1412		0	4	12	13	11	65	18	1550	36740	32640	32360	203220	17580
7/30/01	1420	lab analysis	0	4	12	13	11	65	18						
7/30/01	1448		0	4	12	13	11	65	18	1580	36800	32700	32460	203430	17590

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
7/31/01	831		0	5	13	14	12	66	19	2600	36730	34360	36440	208330	18210
7/31/01	850		0	5	13	14	12	66	19						
7/31/01	900		0	5	13	14	12	66	19						
7/31/01	1110		0	5	13	14	12	66	19						
7/31/01	1118		0	5	13	14	12	66	19	2760	36030	34620	36910	210230	18310
7/31/01	1126		0	5	13	14	12	66	19						
7/31/01	1343		0	5	13	14	12	66	19	2900	36290	34640	36310	211020	18380
7/31/01	1410	lab analysis	0	5	13	14	12	66	19						
7/31/01	1428		0	5	13	14	12	66	19						
7/31/01	1510		0	5	13	14	12	66	19						
7/31/01	1650		0	5	13	14	12	66	19	3070	36820	35120	36840	212030	18600
8/1/01	800	System shut down when arrived at site.	1	6	14	15	13	67	20	3630	40420	35610	38146	214480	18770
8/1/01	811		0	6	14	15	13	67	20	3630	40420	35620	38190	214610	18770
8/1/01	833		0	6	14	15	13	67	20						
8/1/01	841		0	6	14	15	13	67	20						
8/1/01	852		0	6	14	15	13	67	20						
8/1/01	923		0	6	14	15	13	67	20						
8/1/01	1124		0	6	14	15	13	67	20						
8/1/01	1125		0	6	14	15	13	67	20	3720	40770	36110	38700	215600	18840
8/1/01	1130		0	6	14	15	13	67	20						
8/1/01	1340		0	6	14	15	13	67	20	3880	41000	36310	38080	216180	18860
8/1/01	1340	lab analysis	0	6	14	15	13	67	20						
8/1/01	1535		0	6	14	15	13	67	20						
8/1/01	1538		0	6	14	15	13	67	20						
8/1/01	1545		0	6	14	15	13	67	20	3960	41230	36600		216760	18030
8/2/01	806	System shut down when arrived at site.	1	6	14	15	13	67	20	4660	42210	37340	41060	219630	19360
8/2/01	927		0	6	14	15	13	67	20						
8/2/01	929		0	6	14	15	13	67	20						
8/2/01	938		0	6	14	15	13	67	20	4640	42380	37460	41290	220100	19400
8/2/01	1126		0	6	14	15	13	67	20						
8/2/01	1132		0	6	14	15	13	67	20						
8/2/01	1153		0	6	14	15	13	67	20	4770	42600	37660	41670	220800	19480
8/2/01	1419	lab analysis	0	6	14	15	13	67	20						
8/2/01	1420		0	6	14	15	13	67	20	4820	42840	37880	42060	221540	19540
8/2/01	1433		0	6	14	15	13	67	20						
8/2/01	1436		0	6	14	15	13	67	20						
8/2/01	1440		0	6	14	15	13	67	20	4860	42880	37910	42180	221670	19580
8/3/01	807		0	7	15	16	14	68	21	6000	44640			226820	
8/3/01	912		0	7	15	16	14	68	21						
8/3/01	915		0	7	15	16	14	68	21						
8/3/01	1120		0	7	15	16	14	68	21	6200	44830	38850	45520	227750	20250
8/3/01	1125		0	7	15	16	14	68	21						
8/3/01	1130		0	7	15	16	14	68	21						
8/3/01	1408		0	7	15	16	14	68	21	6360	45210	38880	45880	228620	20340
8/3/01	1415	lab analysis	0	7	15	16	14	68	21						
8/3/01	1520		0	7	15	16	14	68	21	6476	45340	40000	46210	229030	20380
8/3/01	1520		0	7	15	16	14	68	21						
8/3/01	1524		0	7	15	16	14	68	21						
8/4/01	1004		0	8	16	17	15	69	22						
8/4/01	1008		0	8	16	17	15	69	22						
8/4/01	1101		0	8	16	17	15	69	22	7730	47290	41610	49430	234850	21030
8/4/01	1105	lab analysis	0	8	16	17	15	69	22						
8/4/01	1120		0	8	16	17	15	69	22						
8/4/01	1122		0	8	16	17	15	69	22						
8/4/01	1129		0	8	16	17	15	69	22	7780	47290	41650	49600	235000	21040
8/4/01	1134		0	8	16	17	15	69	22						
8/5/01	1028	System shut down when arrived at site.	1	9	17	18	16	70	23	8060	49210	43260	52800	241140	21710
8/5/01	1113		0	9	17	18	16	70	23						
8/5/01	1116		0	9	17	18	16	70	23						
8/5/01	1140		0	9	17	18	16	70	23	8120	49330	43356	52960	241530	21780
8/5/01	1203		0	9	17	18	16	70	23						
8/5/01	1207		0	9	17	18	16	70	23						
8/5/01	1215		0	9	17	18	16	70	23						
8/5/01	1235		0	9	17	18	16	70	23	8310	49420	43430	53150	241710	21780
8/5/01	1240	lab analysis	0	9	17	18	16	70	23						
8/5/01	1254		0	9	17	18	16	70	23	8360	49460	43460	53190	241780	21780
8/7/01	935	System shut down when arrived at site.	1	10	18	19	17	71	24	12470	51880	46310	57100	246030	22580
8/7/01	1015		0	10	18	19	17	71	24						
8/7/01	1040		0	10	18	19	17	71	24						
8/7/01	1052		0	10	18	19	17	71	24						
8/7/01	1120		0	10	18	19	17	71	24						
8/7/01	1145		0	10	18	19	17	71	24	12630	51880	46480	54450	246450	22650
8/7/01	1350		0	10	18	19	17	71	24	12770	52060	46650	57600	246810	22720
8/7/01	1410	lab analysis	0	10	18	19	17	71	24						
8/7/01	1430		0	10	18	19	17	71	24						
8/7/01	1440		0	10	18	19	17	71	24						
8/7/01	1523		0	10	18	19	17	71	24						
8/7/01	1530		0	10	18	19	17	71	24	12880	52240	46780	58080	247110	22770
8/8/01	838		0	11	19	20	18	72	25						
8/8/01	845		0	11	19	20	18	72	25						
8/8/01	903		0	11	19	20	18	72	25						
8/8/01	1108		0	11	19	20	18	72	25	14160	54060	47320	61330	250870	23360
8/8/01	1342		0	11	19	20	18	72	25	14320	54280	47510	61730	251110	23460
8/8/01	1450	lab analysis	0	11	19	20	18	72	25						
8/8/01	1501		0	11	19	20	18	72	25						
8/8/01	1510		0	11	19	20	18	72	25						
8/8/01	1525		0	11	19	20	18	72	25	14430	54440	47640	62020	251420	23620
8/9/01	834		0	12	20	21	19	73	26	15520	55860	48830	64660	254500	24080
8/9/01	945		0	12	20	21	19	73	26						
8/9/01	1001		0	12	20	21	19	73	26						
8/9/01	1020		0	12	20	21	19	73	26						
8/9/01	1127		0	12	20	21	19	73	26	15700	56230	49140	65320	255000	24150
8/9/01	1303		0	12	20	21	19	73	26	15790	56370	49260	65560	255260	24190
8/9/01	1415	lab analysis	0	12	20	21	19	73	26						
8/9/01	1427		0	12	20	21	19	73	26						
8/9/01	1430		0	12	20	21	19	73	26	15880	56480	49350	65790	255510	24240
8/9/01	1443		0	12	20	21	19	73	26						
8/9/01	1536		0	12	20	21	19	73	26	15940	56560	49430	65960	255700	24270
8/10/01	806		0	13	21	22	20	74	27	16970	58040	50840	68700	258650	24790
8/10/01	822		0	13	21	22	20	74	27						
8/10/01	831		0	13	21	22	20	74	27						
8/10/01	907		0	13	21	22	20	74	27						
8/10/01	948		0	13	21	22	20	74	27	17080	58190	50770	68860	258950	24840
8/10/01	1121		0	13	21	22	20	74	27	17170	58330	50880	69240	259220	24890
8/10/01	1124		0	13	21	22	20	74	27						
8/10/01	1133		0	13	21	22	20	74	27						
8/10/01	1412		0	13	21	22	20	74	27	17360	58570	51080	69710	259720	24980

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
8/10/01	1415	lab analysis	0	13	21	22	20	74	27						
8/10/01	1426		0	13	21	22	20	74	27						
8/10/01	1435		0	13	21	22	20	74	27						
8/10/01	1530		0	13	21	22	20	74	27	17420	58870	51170	69900	259830	25020
8/13/01	1115	Electricity apparently shut-off during run.	1	14	22	23	21	75	28	18980	60280	52510	72980	263250	25690
8/13/01	1145		0	14	22	23	21	75	28						
8/13/01	1153		0	14	22	23	21	75	28						
8/13/01	1202		0	14	22	23	21	75	28						
8/13/01	1212		0	14	22	23	21	75	28	[illegible]	60380	52670	73120	263380	25610
8/13/01	1216		0	14	22	23	21	75	28						
8/13/01	1241		0	14	22	23	21	75	28						
8/13/01	1551		0	14	22	23	21	75	28	[illegible]	60870	52840	74000		25720
8/13/01	1619		0	14	22	23	21	75	28						
8/13/01	1620	lab analysis	0	14	22	23	21	75	28						
8/13/01	1631		0	14	22	23	21	75	28						
8/13/01	1705		0	14	22	23	21	75	28	19380	60770	52930	74290		25790
8/14/01	835	System shut down when arrived at site. Bottom of C-1 blown-out.	1	15	23	24	22	76	29	21080	61670	53660	76630	263380	26060
8/14/01	948		0	15	23	24	22		29		61660	53710	76670		26080
8/14/01	1030		0	15	23	24	22		29		61730	53740	76660		26080
8/14/01	1033		0	15	23	24	22		29						
8/14/01	1038		0	15	23	24	22		29						
8/14/01	1048		0	15	23	24	22		29						
8/14/01	1115		0	15	23	24	22		29						
8/14/01	1225	Replaced 1,250 lb of new ZVI in C-5. Large steel column. Restarted at 1225.	1	15	23	24	22	0	29		61780	53800	77310	0	26130
8/14/01	1415		0	15	23	24	22	0	29		61830	53860	77630	80	26190
8/14/01	1526		0	15	23	24	22	0	29						
8/14/01	1540		0	15	23	24	22	0	29						
8/14/01	1620		0	15	23	24	22	0	29						
8/14/01	1620	lab analysis	0	15	23	24	22	0	29						
8/14/01	1632		0	15	23	24	22	0	29		61890	53930	78020	180	26260
8/15/01	900		0	16	24	25	23	1	30		62310	54440	80640	1130	26740
8/15/01	916		0	16	24	25	23	1	30						
8/15/01	929		0	16	24	25	23	1	30						
8/15/01	930	lab analysis	0	16	24	25	23	1	30						
8/15/01	1210		0	16	24	25	23	1	30		62400	54640	81380	1320	26790
8/15/01	1605	Replaced 500 lb of new ZVI in C-6. SS columns a & b. Restarted at 1605.	1	16	24	25	23	1	0		62500	54670	82060	1540	10
8/15/01	1615	lab analysis	0	16	24	25	23	1	0						
8/15/01	1645		0	16	24	25	23	1	0						
8/15/01	1657		0	16	24	25	23	1	0						
8/15/01	1710		0	16	24	25	23	1	0		62520	54700	82240	1600	40
8/16/01	835		0	17	25	26	24	2	1		62920	56170	84660	2460	470
8/16/01	858		0	17	25	26	24	2	1						
8/16/01	906		0	17	25	26	24	2	1						
8/16/01	910		0	17	25	26	24	2	1		62930	56190	84660	2520	480
8/16/01	921		0	17	25	26	24	2	1						
8/16/01	931		0	17	25	26	24	2	1						
8/16/01	945		0	17	25	26	24	2	1						
8/16/01	1050		0	17	25	26	24	2	1						
8/16/01	1102		0	17	25	26	24	2	1		62960	56250	85260	2900	540
8/16/01	1403		0	17	25	26	24	2	1		63050	56330	85770	3500	640
8/16/01	1416	lab analysis	0	17	25	26	24	2	1						
8/16/01	1429		0	17	25	26	24	2	1						
8/16/01	1441		0	17	25	26	24	2	1						
8/16/01	1506		0	17	25	26	24	2	1						
8/16/01	1535		0	17	25	26	24	2	1		63080	56370	86000	3760	690
8/20/01	1058		1	21	29	30	28	6	5		65210	57960	100950	21140	3290
8/20/01	1130		0	21	29	30	28	6	5						
8/20/01	1143		0	21	29	30	28	6	5						
8/20/01	1229		0	21	29	30	28	6	5		65240	58020	101080	21460	3360
8/20/01	1410		0	21	29	30	28	6	5		65280	58070	101370	21800	3400
8/20/01	1421	lab analysis	0	21	29	30	28	6	5						
8/20/01	1432		0	21	29	30	28	6	5						
8/20/01	1440		0	21	29	30	28	6	5						
8/20/01	1452		0	21	29	30	28	6	5		65300	58080	101490	21950	3430
8/21/01	815		0	22	30	31	29	7	6		65690	58560	104360	25630	4000
8/21/01	833		0	22	30	31	29	7	6						
8/21/01	841		0	22	30	31	29	7	6						
8/21/01	1015		0	22	30	31	29	7	6		65740	58640	104870	25930	4070
8/21/01	1229		0	22	30	31	29	7	6		65790	58700	105040	26360	4140
8/21/01	1436		0	22	30	31	29	7	6		65840	58760	105360	26630	4210
8/21/01	1445	lab analysis	0	22	30	31	29	7	6						
8/21/01	1501		0	22	30	31	29	7	6						
8/21/01	1511		0	22	30	31	29	7	6						
8/21/01	1523		0	22	30	31	29	7	6		65860	58780	105620	26960	4240
8/22/01	848		0	23	31	32	30	8	7		66310	59270	108370	30630	4800
8/22/01	910		0	23	31	32	30	8	7						
8/22/01	924		0	23	31	32	30	8	7						
8/22/01	1001		0	23	31	32	30	8	7						
8/22/01	1226		0	23	31	32	30	8	7		66400	59370	109860	31290	4920
8/22/01	1319		0	23	31	32	30	8	7		66420	59380	109130	31460	4950
8/22/01	1325	lab analysis	0	23	31	32	30	8	7						
8/22/01	1340		0	23	31	32	30	8	7						
8/22/01	1351		0	23	31	32	30	8	7						
8/22/01	1402		0	23	31	32	30	8	7		66440	59410	109250	31560	4970
8/23/01	809		0	24	32	33	31	9	8		66960	59910	112260	35260	5560
8/23/01	824		0	24	32	33	31	9	8						
8/23/01	835		0	24	32	33	31	9	8						
8/23/01	1034		0	24	32	33	31	9	8		66950	59960	112660	35750	5630
8/23/01	1211		0	24	32	33	31	9	8		66990	60030	112930	36070	5690
8/23/01	1300	lab analysis	0	24	32	33	31	9	8						
8/23/01	1351		0	24	32	33	31	9	8		67030	60070	113210	36410	5740
8/23/01	1418		0	24	32	33	31	9	8						
8/23/01	1424		0	24	32	33	31	9	8						
8/23/01	1442		0	24	32	33	31	9	8						
8/23/01	1449		0	24	32	33	31	9	8		67080	60100	113360	36800	5770
8/24/01	854		0	25	33	34	32	10	9		67500	60600	116350	40270	6340
8/24/01	916		0	25	33	34	32	10	9						
8/24/01	922		0	25	33	34	32	10	9						
8/24/01	1031		0	25	33	34	32	10	9		67540	60640	116620	40600	6400
8/24/01	1315	lab analysis	0	25	33	34	32	10	9						
8/24/01	1329		0	25	33	34	32	10	9		67610	60720	117110	41210	6460
8/24/01	1331		0	25	33	34	32	10	9						
8/24/01	1336		0	25	33	34	32	10	9						
8/24/01	1412		0	25	33	34	32	10	9		67630	60740	117220	41360	6510
8/27/01	1153		0	28	36	37	35	13	12		68290	62950	122600	55260	8880
8/27/01	1210		0	28	36	37	35	13	12						
8/27/01	1221		0	28	36	37	35	13	12						

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
8/27/01	1243		0	28	36	37	35	13	12						
8/27/01	1423		0	28	36	37	35	13	12		66360	62720	129000	56750	6760
8/27/01	1435	lab analysis	0	28	36	37	35	13	12						
8/27/01	1447		0	28	36	37	35	13	12						
8/27/01	1455		0	28	36	37	35	13	12						
8/27/01	1508		0	28	36	37	35	13	12		66370	62740	129120	56860	6790
8/27/01	1510		0	28	36	37	35	13	12						
8/28/01	828		0	29	37	38	36	14	13		66610	66250	132180	58620	9370
8/28/01	1030		0	29	37	38	36	14	13						
8/28/01	1041		0	29	37	38	36	14	13						
8/28/01	1048		0	29	37	38	36	14	13						
8/28/01	1234		0	29	37	38	36	14	13		66670	63320	132620	60140	9460
8/28/01	1417		0	29	37	38	36	14	13		66810	63370	132800	60480	9600
8/28/01	1430	lab analysis	0	29	37	38	36	14	13						
8/28/01	1604		0	29	37	38	36	14	13		66840	63410	133180	60780	9660
8/28/01	1800		0	29	37	38	36	14	13						
8/29/01	1043		0	30	38	39	37	15	14		70370	63820	136190	64440	10120
8/29/01	1100		0	30	38	39	37	15	14						
8/29/01	1126		0	30	38	39	37	15	14						
8/29/01	1212		0	30	38	39	37	15	14						
8/29/01	1436		0	30	38	39	37	15	14		70470	64030	136630	65210	10150
8/29/01	1512		0	30	38	39	37	15	14		70480	64060	136930	65330	10160
8/29/01	1521	lab analysis	0	30	38	39	37	15	14						
8/29/01	1524		0	30	38	39	37	15	14						
8/30/01	1207		0	31	39	40	38	16	15						
8/30/01	1218		0	31	39	40	38	16	15						
8/30/01	1230		0	31	39	40	38	16	15						
8/30/01	1257		0	31	39	40	38	16	15						
8/30/01	1308		0	31	39	40	38	16	15						
8/30/01	1415	lab analysis	0	31	39	40	38	16	15						
8/30/01	1430		0	31	39	40	38	16	15						
8/30/01	1437		0	31	39	40	38	16	15						
9/4/01	1039		0	36	44	46	43	21	20		74060	67740	153350	83870	14580
9/4/01	1110		0	36	44	46	43	21	20						
9/4/01	1130		0	36	44	46	43	21	20						
9/4/01	1409		0	36	44	46	43	21	20		74180	67830	153730	84690	14700
9/4/01	1555	lab analysis	0	36	44	46	43	21	20						
9/4/01	1625		0	36	44	46	43	21	20						
9/4/01	1631		0	36	44	46	43	21	20						
9/4/01	1642		0	36	44	46	43	21	20	21130	74210	67890	153860	85060	14770
9/5/01	845		0	37	45	46	44	22	21	21710	74610	66290	155660	96200	15260
9/5/01	905		0	37	45	46	44	22	21	21720	74620	66300	155700	96270	15270
9/5/01	914		0	37	45	46	44	22	21						
9/5/01	921		0	37	45	46	44	22	21						
9/5/01	1204		0	37	45	46	44	22	21	21820	74690	66380	156020	96810	15360
9/5/01	1334		0	37	45	46	44	22	21	21870	74730	66420	156190	96230	15400
9/5/01	1350	lab analysis	0	37	45	46	44	22	21						
9/5/01	1403		0	37	45	46	44	22	21						
9/5/01	1412		0	37	45	46	44	22	21						
9/5/01	1420		0	37	45	46	44	22	21	21900	74750	66440	156270	96390	15430
9/6/01	815		0	38	46	47	45	23	22	22530	75200	66900	158180	103180	15860
9/6/01	842		0	38	46	47	45	23	22						
9/6/01	853		0	38	46	47	45	23	22						
9/6/01	1147		0	38	46	47	45	23	22	22680	75290	66990	158560	103900	16100
9/6/01	1307		0	38	46	47	45	23	22	22710	75320	66030	158700	104170	16140
9/6/01	1320	lab analysis	0	38	46	47	45	23	22						
9/6/01	1337		0	38	46	47	45	23	22						
9/6/01	1345		0	38	46	47	45	23	22						
9/6/01	1353		0	38	46	47	45	23	22	22730	75340	66050	158780	104330	16160
9/7/01	900		0	39	47	48	46	24	23	23440	75820	69530	160610	106300	16750
9/7/01	922		0	39	47	48	46	24	23						
9/7/01	931		0	39	47	48	46	24	23						
9/7/01	955	lab analysis	0	39	47	48	46	24	23						
9/7/01	1003		0	39	47	48	46	24	23	23460	75840	70190	160820	106520	16780
9/10/01	1029		0	42	50	51	49	27	26						
9/10/01	1029		1	42	50	51	49	27	26	26180	77620	71310	168490	123330	18860
9/10/01	1029	lab analysis	0	42	50	51	49	27	26						
9/10/01	1100		0	42	50	51	49	27	26						
9/10/01	1350		0	42	50	51	49	27	26	26310	77700	71400	169830	124070	19100
9/10/01	1403		0	42	50	51		27	26						
9/10/01	1523		0	42	50	51		27	26						
9/10/01	1531		0	42	50	51		27	26						
9/10/01	1550	lab analysis	0	42	50	51		27	26						
9/10/01	1623		0	42	50	51		27	26	26400	77760	71460		124560	19170
9/11/01	827		0	43	51	52		28	27	26860	78180	71860		127870	19660
9/11/01	845		0	43	51	52		28	27						
9/11/01	1010		0	43	51	52		28	27						
9/11/01	1010	lab analysis	0	43	51	52		28	27						
9/11/01	1133		0	43	51	52		28	27	27070	78230	71920		128430	19740
9/11/01	1415		0	43	51	52		28	27	27170	78300	71980		129000	19830
9/12/01	1000		0	44	52	53		29	28	27920	78870	72480		133020	20420
9/12/01	1033		0	44	52	53		29	28						
9/12/01	1040		0	44	52	53		29	28						
9/12/01	1122		0	44	52	53		29	28						
9/12/01	1130	Shut down system to clean piping.	1	44	52	53		29	28	27970	78910	72510		133189	20460
9/13/01	1230	Replaced 1,250 lb of new ZVI in C-5. Restarted at 1230.	0	45	53	54			29	27970	78910	72510		0	20460
9/13/01	1343	Replaced 700 lb of new ZVI in C-4. Restarted at 1343.	0	45	53	54			29	28020	78950	72540	0	30	20500
9/13/01	1405	Started system back up.	0	45	53	54			29						
9/13/01	1427		0	45	53	54			29						
9/13/01	1434		1	45	53	54			29	28050	78970	72560	20	50	20530
9/17/01	828		0	45	53	54	0	0	29	28050	78970	72560	20	50	20530
9/17/01	937		0	45	53	54	0	0	29	28080	79010	72580	40	80	20560
9/17/01	940		0	45	53	54	0	0	29						
9/17/01	1045		0	45	53	54	0	0	29						
9/17/01	1233		0	45	53	54	0	0	29	28180	79100	72630	90	150	20650
9/17/01	1255		0	45	53	54	0	0	29						
9/17/01	1302		0	45	53	54	0	0	29						
9/17/01	1340		0	45	53	54	0	0	29						
9/17/01	1350		0	45	53	54	0	0	29						
9/17/01	1418		0	45	53	54	0	0	29	28230	79150	72660	120	180	20700
9/17/01	1437	lab analysis	0	45	53	54	0	0	29						
9/17/01	1508		0	45	53	54	0	0	29	28280	79170	72670	140	210	20730
9/18/01	1017		1	46	54	55	1	1	30	28640	79750	73010	480	630	21310
9/18/01	1035		0	46	54	55	1	1	30						
9/18/01	1047		0	46	54	55	1	1	30						
9/18/01	1115		0	46	54	55	1	1	30						
9/18/01	1126		0	46	54	55	1	1	30	28680	79780	73030	500	650	21340

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
9/18/01	1140		0	46	54	55	1	1	30	29660	78790	73040	820	700	21380
9/18/01	1150		0	46	54	55	1	1	30						
9/18/01	1241		0	46	54	55	1	1	30						
9/18/01	1248		0	46	54	55	1	1	30						
9/18/01	1348		0	46	54	55	1	1	30	29640	78800	73130	870	1380	21460
9/18/01	1419		0	46	54	55	1	1	30						
9/18/01	1425		0	46	54	55	1	1	30						
9/18/01	1435		0	46	54	55	1	1	30	29670	78840	73170	1010	1840	21500
9/18/01	1445	lab analysis	0	46	54	55	1	1	30						
9/18/01	1520		0	46	54	55	1	1	30						
9/18/01	1530		0	46	54	55	1	1	30	29000	78860	73200	1170	1950	21550
9/19/01	850		1	47	55	56	2	2	31	29540	80910	73940	4300	6180	22460
9/19/01	905		0	47	55	56	2	2	31						
9/19/01	912		0	47	55	56	2	2	31						
9/19/01	1015		0	47	55	56	2	2	31	29580	80960	73980	4530	6660	22540
9/19/01	1143		0	47	55	56	2	2	31	29620	81060	74050	4790	6200	22640
9/19/01	1420		0	47	55	56	2	2	31						
9/19/01	1431		0	47	55	56	2	2	31						
9/19/01	1437		0	47	55	56	2	2	31	29710	81200	74160	5300	10240	22800
9/19/01	1440	lab analysis	0	47	55	56	2	2	31						
9/19/01	1520		0	47	55	56	2	2	31						
9/19/01	1525		0	47	55	56	2	2	31	29740	81240	74200	5440	10530	22850
9/20/01	846		0	48	56	57	3	3	32	30260	82150	74880	8600	16660	23780
9/20/01	908		0	48	56	57	3	3	32						
9/20/01	922		0	48	56	57	3	3	32						
9/20/01	931		0	48	56	57	3	3	32						
9/20/01	1005		0	48	56	57	3	3	32						
9/20/01	1018		0	48	56	57	3	3	32	30310	82230	74940	8770	17220	23860
9/20/01	1150		0	48	56	57	3	3	32	30350	82300	75000	9030	17750	23840
9/20/01	1317		0	48	56	57	3	3	32	30400	82380	75050	8290	18270	24020
9/20/01	1330	lab analysis	0	48	56	57	3	3	32						
9/20/01	1340		0	48	56	57	3	3	32						
9/20/01	1345		0	48	56	57	3	3	32						
9/20/01	1353		0	48	56	57	3	3	32	30410	82410		8390	18470	
9/24/01	1151		0	52	60	61	7	7	36	32660	87180	78630	25020	50180	28860
9/24/01	1200		0	52	60	61	7	7	36						
9/24/01	1225		0	52	60	61	7	7	36						
9/24/01	1350	lab analysis	0	52	60	61	7	7	36						
9/24/01	1408		0	52	60	61	7	7	36						
9/24/01	1420		0	52	60	61	7	7	36						
9/24/01	1434		0	52	60	61	7	7	36	33080	87320	78660	25460	51080	29100
9/25/01	1237		0	53	61	62	8	8	37	33620	88470	78630	28600	58340	30240
9/25/01	1240		0	53	61	62	8	8	37						
9/25/01	1249		0	53	61	62	8	8	37						
9/25/01	1315		0	53	61	62	8	8	37						
9/25/01	1327		0	53	61	62	8	8	37	33640	88600	78660	29030	58610	30290
9/25/01	1335	lab analysis	0	53	61	62	8	8	37						
9/25/01	1458		0	53	61	62	8	8	37						
9/25/01	1507		1	53	61	62	8	8	37	33660	88600	78630	29280	59160	30380
9/25/01	1510		0	53	61	62	8	8	37						
9/26/01	831		0	54	62	63	9	9	38	34110	88660	80300	31960	64660	31280
9/26/01	840		0	54	62	63	9	9	38						
9/26/01	845		0	54	62	63	9	9	38						
9/26/01	923		0	54	62	63	9	9	38						
9/26/01	1007		0	54	62	63	9	9	38	34150	88630	80380	32200	65380	31380
9/26/01	1131		0	54	62	63	9	9	38	34180	88710	80410	32410	65630	31430
9/26/01	1307		0	54	62	63	9	9	38	34220	88780	80470	32650	66360	31520
9/26/01	1310		0	54	62	63	9	9	38						
9/26/01	1318		0	54	62	63	9	9	38						
9/26/01	1341	lab analysis	0	54	62	63	9	9	38						
9/26/01	1402		0	54	62	63	9	9	38						
9/26/01	1427		0	54	62	63	9	9	38	34290	88860	80520	32850	66800	31560
9/27/01	825		0	55	63	64	10	10	39	34670	90820	81200	35550	72660	32530
9/27/01	843		0	55	63	64	10	10	39						
9/27/01	850		0	55	63	64	10	10	39						
9/27/01	930		0	55	63	64	10	10	39						
9/27/01	1003		0	55	63	64	10	10	39	34710	90910	81260	35790	73180	32610
9/27/01	1202		0	55	63	64	10	10	39	34760	91010	81330	36060	73430	32710
9/27/01	1355		0	55	63	64	10	10	39	34800	91110	81400	36360	74440	32810
9/27/01	1405	lab analysis	0	55	63	64	10	10	39						
9/27/01	1418		0	55	63	64	10	10	39						
9/27/01	1423		0	55	63	64	10	10	39						
9/27/01	1445		0	55	63	64	10	10	39						
9/27/01	1450		0	55	63	64	10	10	39	34820	91160	81430	36490	74730	32860
10/1/01	1320		0	59	67	68	14	14	43	36840	97020	84800	46690	105200	37730
10/1/01	1337		0	59	67	68	14	14	43						
10/1/01	1345	lab analysis	0	59	67	68	14	14	43						
10/1/01	1348		0	59	67	68	14	14	43						
10/1/01	1404	Shut down C-2 and C-3 to change ZVI and replace base.	0	59	67	68	14	14	43	36850	97060	84820	50090	105430	37770
10/1/01	1534		0	59			14	14	43						
10/1/01	1544		0	59			14	14	43						
10/1/01	1605		0	59			14	14	43	36890			50380	106110	37890
10/1/01	1615		0	59			14	14	43						
10/2/01	942		0	60			15	15	44	37250			52870	111940	38600
10/2/01	955		0	60			15	15	44						
10/2/01	959		0	60			15	15	44						
10/2/01	1008		0	60			15	15	44						
10/2/01	1048		0	60			15	15	44	37270			53030	112310	38660
10/2/01	1350		0	60			15	15	44	37330			53460	113320	38920
10/2/01	1410	lab analysis	0	60			15	15	44						
10/2/01	1417		0	60			15	15	44						
10/2/01	1421		0	60			15	15	44						
10/2/01	1430		0	60			15	15	44	37360			53550	113520	38950
10/3/01	852		0	61			16	16	45	37700			57110	118410	40010
10/3/01	912		0	61			16	16	45						
10/3/01	924		0	61			16	16	45						
10/3/01	1035		0	61			16	16	45						
10/3/01	1235		0	61			16	16	45	37770			57620	119380	40210
10/3/01	1343		0	61			16	16	45	37790			58040	119680	40270
10/3/01	1346		0	61			16	16	45						
10/3/01	1355		0	61			16	16	45						
10/3/01	1410	lab analysis	0	61			16	16	45						
10/3/01	1418		0	61			16	16	45						
10/3/01	1421		0	61			16	16	45	37810			58170	119640	40300
10/4/01	911		0	62			17	17	46	38190			61760	124730	41260
10/4/01	935		0	62			17	17	46						
10/4/01	947		0	62			17	17	46						

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
10/4/01	1103		0	62			17	17	46	38180			82130	125210	41370
10/4/01	1314		0	62			17	17	46	38220			82580	125770	41490
10/4/01	1338		0	62			17	17	46						
10/4/01	1340	lab analysis	0	62			17	17	46						
10/4/01	1343		0	62			17	17	46						
10/4/01	1400		0	62			17	17	46	38240			82700	125970	41530
10/10/01	1107	Flow meter and totalizer for C-1 has a problem	0	68			23	23	52	40070			88300	160480	48440
10/10/01	1140		0	68			23	23	52						
10/10/01	1152		0	68			23	23	52						
10/10/01	1233		0	68			23	23	52						
10/10/01	1240		0	68			23	23	52	40080			88570	160850	48510
10/10/01	1418		0	68			23	23	52						
10/10/01	1421		0	68			23	23	52				88870	161280	48600
10/10/01	1430		0	68			23	23	52				88900	161310	48600
10/10/01	1431	lab analysis	0	68			23	23	52						
10/10/01	1443		0	68			23	23	52						
10/10/01	1453		0	68			23	23	52						
10/10/01	1510		0	68			23	23	52						
10/10/01	1518		0	68			23	23	52				89050	161350	48640
10/11/01	1120		0	69			24	24	53				92880	162420	49630
10/11/01	1138		0	69			24	24	53						
10/11/01	1150		0	69			24	24	53						
10/11/01	1344		0	69			24	24	53				93290	162560	49750
10/11/01	1348		0	69			24	24	53						
10/11/01	1350	lab analysis	0	69			24	24	53						
10/11/01	1354		0	69			24	24	53						
10/11/01	1408		0	69			24	24	53						
10/11/01	1458		0	69			24	24	53				93520	162630	49810
10/15/01	1145		0	73			28	28	57				110800	167880	54030
10/15/01	1207		0	73			28	28	57						
10/15/01	1214		0	73			28	28	57						
10/15/01	1233		0	73			28	28	57						
10/15/01	1456		0	73			28	28	57				111170	168170	54160
10/15/01	1500	lab analysis	0	73			28	28	57						
10/15/01	1513		0	73			28	28	57						
10/15/01	1521		0	73			28	28	57						
10/15/01	1535		0	73			28	28	57						
10/15/01	1540		0	73			28	28	57				111300	168210	54200
10/16/01	833		0	74			29	29	58				114340	169180	54880
10/16/01	904		0	74			29	29	58						
10/16/01	915		0	74			29	29	58						
10/16/01	1108		0	74			29	29	58				114770	169310	54980
10/16/01	1415	Replaced 700 lbs ZVI in C-2 and C-3.	0	74			29	29	58				115330	169480	55100
10/16/01	1440	lab analysis	0	74			29	29	58						
10/16/01	1457		0	74			29	29	58						
10/16/01	1510		0	74			29	29	58						
10/16/01	1517		0	74			29	29	58				115520	169540	55140
10/17/01	1008	Shut down C-1 and replaced 700 lbs ZVI.	0	76			30	30	59				119800	170570	55840
10/17/01	1021		0				30	30	59						
10/17/01	1029		1				30	30	59						
10/17/01	1037		0				30	30	59				119880	170600	55850
10/17/01	1115		0				30	30	59						
10/17/01	1133		0				30	30	59						
10/17/01	1138		0				30	30	59						
10/17/01	1205		0				30	30	59						
10/17/01	1213		0				30	30	59				119280	170680	55910
10/17/01	1425	lab analysis	0				30	30	59						
10/17/01	1508		0				30	30	59						
10/17/01	1537		0				30	30	59						
10/17/01	1611		0				30	30	59				119970	170800	56060
10/18/01	808		0				31	31	60				122790	171770	56600
10/18/01	1510	lab analysis	0				31	31	60						
10/18/01	1524		0				31	31	60				124080	172180	56830
10/19/01	851		0				32	32	61				127110	173110	57380
10/19/01	917		0				32	32	61						
10/19/01	920		0				32	32	61						
10/19/01	933		0				32	32	61						
10/19/01	950	lab analysis	0				32	32	61						
10/19/01	1024		0				32	32	61				127380	173190	57410
10/19/01	1040		0				32	32	61						
10/19/01	1045		0				32	32	61				127440	173210	57420
10/22/01	923		0				35	35	64				136600	177010	59000
10/22/01	942		0				35	35	64						
10/22/01	950		0				35	35	64						
10/22/01	958		0				35	35	64						
10/22/01	1323	Started up C-2 and C-3 at 0.5 gpm. Pumped S sludge tank.	0		0	0	35	35	64		0	0	140170	177220	59070
10/22/01	1427		0		0	0	35	35	64		30	30	140350	177280	59080
10/22/01	1500	lab analysis	0		0	0	35	35	64						
10/22/01	1507		0		0	0	35	35	64						
10/22/01	1514		0		0	0	35	35	64						
10/22/01	1521		0		0	0	35	35	64		50	50	140500	177330	59100
10/23/01	830		0		1	1	36	36	65		500	490	143330	178230	59350
10/23/01	857		0		1	1	36	36	65						
10/23/01	912		0		1	1	36	36	65						
10/23/01	926	Increased flow to C-2 and C-3. Pumped N sludge tank.	0		1	1	36	36	65		560	540	143470	178280	59370
10/23/01	953		0		1	1	36	36	65		570	550	143600	178290	59370
10/23/01	1057		0		1	1	36	36	65						
10/23/01	1254		0		1	1	36	36	65		730	740	143800	178450	59420
10/23/01	1442		0		1	1	36	36	65		850	850	144290	178540	59450
10/23/01	1446	lab analysis	0		1	1	36	36	65						
10/23/01	1502		0		1	1	36	36	65						
10/23/01	1506		0		1	1	36	36	65						
10/23/01	1517		0		1	1	36	36	65		880	880	144380	178570	59460
10/24/01	911		0		2	2	37	37	66		1880	1950	147310	179500	59720
10/24/01	932		0		2	2	37	37	66						
10/24/01	941		0		2	2	37	37	66						
10/24/01	1010		0		2	2	37	37	66						
10/24/01	1156		0		2	2	37	37	66		2050	2110	147750	179640	59750
10/24/01	1405	Replaced 700 lbs ZVI in C-1.	0		2	2	37	37	66		2170	2240	148100	179780	59780
10/24/01	1415		0		2	2	37	37	66						
10/24/01	1432	lab analysis	0		2	2	37	37	66						
10/24/01	1440		0		2	2	37	37	66						
10/24/01	1447		0		2	2	37	37	66		2210	2280	148210	179790	59790
10/24/01	1448		0		2	2	37	37	66						
10/25/01	1014	C-6 flow meter and totalizer not working.	0		3	3	38	38	67		3290	3420	151330	180790	
10/25/01	1027		0		3	3	38	38	67						
10/25/01	1040		0		3	3	38	38	67						

Date	Time	Notes	On = 0 Off = 1	Days operating since last ZVI change out						Gallons treated since last change out					
				C-1	C-2	C-3	C-4	C-5	C-6	C-1	C-2	C-3	C-4	C-5	C-6
10/25/01	1125		0		3	3	36	36	67						
10/25/01	1127	Started C-1 at 0.5 gpm.	0	0	3	3	36	36	67	0	3380	3480	151520	180980	
10/25/01	1335		0	0	3	3	36	36	67	80	3480	3620	151680	180970	
10/25/01	1351		0	0	3	3	36	36	67						
10/25/01	1403	lab analysis	0	0	3	3	36	36	67						
10/25/01	1406		0	0	3	3	36	36	67						
10/25/01	1418		0	0	3	3	36	36	67						
10/25/01	1419		0	0	3	3	36	36	67	70	3620	3680	151970	181000	
10/29/01	1052		0	4	7	7	42	42	71	2320	8800	8860	166080	185680	
10/29/01	1113		0	4	7	7	42	42	71						
10/29/01	1123		0	4	7	7	42	42	71						
10/29/01	1219		0	4	7	7	42	42	71	2380	8880	9030	166280	185780	
10/29/01	1327		0	4	7	7	42	42	71	2380	8740	8980	166410	185810	
10/29/01	1339	Shut down C-4 to change ZVI.	0	4	7	7	42	42	71	2430	8780	9120	166430	185820	
10/29/01	1440		0	4	7	7		42	71						
10/29/01	1545	lab analysis	0	4	7	7		42	71						
10/29/01	1548		0	4	7	7		42	71						
10/29/01	1556		0	4	7	7		42	71	2920	9250	9480		185820	
10/29/01	1618		0	4	7	7		42	71						
10/29/01	1622		0	4	7	7		42	71	3030	9360	9650		185840	
10/30/01	833	Replaced 700 lbs ZVI in C-4.	0	5	8	8		43	72	6880	13040	12280		186710	
10/30/01	855		0	5	8	8		43	72						
10/30/01	915		0	5	8	8		43	72						
10/30/01	1055		0	5	8	8		43	72						
10/30/01	1243	Started C-4 at 0.5 gpm.	0	5	8	8	0	43	72	7820	13970	12530	0	186800	
10/30/01	1334		0	5	8	8	0	43	72	8020	14150	13070	20	186840	
10/30/01	1407	lab analysis	0	5	8	8	0	43	72						
10/30/01	1416		0	5	8	8	0	43	72						
10/30/01	1425		0	5	8	8	0	43	72						
10/30/01	1443		0	5	8	8	0	43	72						
10/30/01	1447		0	5	8	8	0	43	72	8300	14420	13270	80	187000	
10/31/01	1119		0	6	9	9	1	44	73	12610	18410	16160	420	187860	
10/31/01	1132		0	6	9	9	1	44	73						
10/31/01	1140		0	6	9	9	1	44	73						
10/31/01	1152		0	6	9	9	1	44	73	12710	18480	16220	440	187880	
10/31/01	1205		0	6	9	9	1	44	73						
10/31/01	1225		0	6	9	9	1	44	73	12800	18580	16280	540	187930	
10/31/01	1233		0	6	9	9	1	44	73						
10/31/01	1352		0	6	9	9	1	44	73						
10/31/01	1353		0	6	9	9	1	44	73	13190	18840	16480	880	188230	
10/31/01	1405		0	6	9	9	1	44	73						
10/31/01	1410		0	6	9	9	1	44	73						
10/31/01	1416	lab analysis	0	6	9	9	1	44	73						
10/31/01	1438		0	6	9	9	1	44	73						
10/31/01	1443		0	6	9	9	1	44	73	13380	18910	16600	1080	188380	
11/1/01	1020		0	7	10	10	2	45	74	17980	23000	19420	5420	191820	
11/1/01	1042		0	7	10	10	2	45	74						
11/1/01	1051		0	7	10	10	2	45	74						
11/1/01	1120		0	7	10	10	2	45	74						
11/1/01	1212		0	7	10	10	2	45	74	18380	23350	19870	5820	192220	
11/1/01	1346		0	7	10	10	2	45	74	18780	23680	19980	6170	192500	
11/1/01	1403	lab analysis	0	7	10	10	2	45	74						
11/1/01	1408		0	7	10	10	2	45	74						
11/1/01	1419		0	7	10	10	2	45	74						
11/1/01	1423		0	7	10	10	2	45	74	18900	23780	19980	6320	192610	
11/5/01	1006		0	11	14	14	6	49	78						
11/5/01	1021		0	11	14	14	6	49	78						
11/5/01	1041	lab analysis	0	11	14	14	6	49	78						
11/5/01	1100		0	11	14	14	6	49	78						
11/5/01	957		0	11	14	14	6	49	78	38860	41710	31910	25620	204480	
11/5/01	1055	Ran out of sodium hydroxide. Collect samples then shut down.	1	11	14	14	6	49	78	38180	41900	32040	25630	204560	
11/8/01	1213		0	14	17	17	9	52	81	38200	41920	31990	25650	204690	
11/8/01	1324		0	14	17	17	9	52	81	38480	42180	32190	26110	204730	
11/8/01	1421		0	14	17	17	9	52	81	38710	42330	32300	26310	204840	
11/8/01	1440	lab analysis	0	14	17	17	9	52	81						
11/8/01	1503		0	14	17	17	9	52	81	38870	42460	32380	26470	204820	
11/12/01	1005		1	18	21	21	13	56	85	58780	58030	42460	44790	213180	
11/12/01	1308		0	18	21	21	13	56	85	59420	58520	42770	45350	213430	
11/12/01	1411	lab analysis	0	18	21	21	13	56	85						
11/12/01	1424		0	18	21	21	13	56	85	59880	58720	42880	45580	213540	
11/12/01	1512		0	18	21	21	13	56	85	59870	58860	42970	45730	213610	
11/13/01	824		1	19	22	22	14	57	86	62900	61960	44180	48130	214660	
11/13/01	1054		0	19	22	22	14	57	86	63190	62350	44430	48630	214850	
11/13/01	1305		0	19	22	22	14	57	86	63610	62680	44640	49040	215020	
11/13/01	1355	lab analysis	0	19	22	22	14	57	86						
11/13/01	1435	Shut down C-6 and disassembled.	0	19	22	22	14	57	86	63840	62930	44780	49320	215140	
11/14/01	816		1	20	23	23	15	58		66880	66200	46170	52000	216220	
11/14/01	1024		0	20	23	23	15	58		67430	65620	46380	52380	216370	
11/14/01	1328		0	20	23	23	15	58		68080	65980	46640	52940	216570	
11/14/01	1345	lab analysis	0	20	23	23	15	58							
11/14/01	1408		0	20	23	23	15	58		68210	66100	46720	53080	216640	
11/15/01	1128		0	21	24	24	16	59		72840	70080	48140	57470	218620	
11/15/01	1318		0	21	24	24	16	59		73220	70420	48350	57840	218680	
11/15/01	1452		0	21	24	24	16	59		73540	70710	48520	58160	218820	
11/15/01	1455	lab analysis	0	21	24	24	16	59							
11/15/01	1529		0	21	24	24	16	59		73670	70830	48580	58280	218880	
11/16/01	820		0	22	25	25	17	60		77080	73970	51480	61840	220240	
11/16/01	1024		0	22	25	25	17	60		77900	74380	51720	62080	220410	
11/16/01	1307		0	22	25	25	17	60		78000	74670	52010	62580	220610	
11/16/01	1330	lab analysis	0	22	25	25	17	60							
11/16/01	1436	Shut down system for weekend. <2 in NaOH left.	1	22	25	25	17	60		78290	75140	52170	62870	220740	
11/19/01	1125		0	23	26	26	18			78300	75150	52170	62880		
11/19/01	1225		0	23	26	26	18			78600	75300	52250	63060		
11/19/01	1328	Ran out of NaOH. Shut system down and started decommissioning plant.	1	23	26	26	18			78780	75490	52370	63300		

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