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Parametric Analysis of Direct-Contact (Pistonless) Work Exchanger for Reverse Osmosis Applications

Hittman Associates, Inc.
Columbia, MD

Prepared for

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Michael Miller

HITTMAN ASSOCIATES, INC.
COLUMBIA, MARYLAND

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FOREWORD

(By OSW)

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ABSTRACT

A direct-contact (pistonless) work exchanger concept is analyzed parametrically to determine its economic potential as an alternative to the hydraulic turbine for recovery of flow work from high pressure brine streams discharged by reverse osmosis (RO) plants. The break-even unit electric energy cost at which the work exchanger begins to give a net reduction in unit water cost ranges from about 0.4 ¢/Kw-hr for a 1.3 MGD RO seawater plant with 1500 psig module inlet pressure, concentration ratio of 2, and brine flow rate of 1000 gpm to about 5.8 ¢/Kw-hr for a 0.05 MGD RO brackish water plant with 500 psig inlet pressure, concentration ratio of 5, and brine flow rate of 10 gpm. The results indicate that the direct-contact work exchangers would have their best application in large seawater RO plants operating at high pressure and low concentration ratio. Because of the pressure drops in the RO module and in the work exchanger, a booster pump is required as part of the work exchanger system. An approximate installed capital cost comparison between work exchanger systems and hydraulic turbine systems indicates that for brine flows below about 100 gpm the costs are likely to be approximately equivalent, and for brine flows above 100 gpm the work exchanger systems are likely to be more expensive than hydraulic turbine systems. Even allowing for the approximate nature of this comparison, further R&D efforts on direct-contact work exchangers for the RO application do not appear to be warranted.

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LIST OF SYMBOLS

SYMBOL	DESCRIPTION	UNITS
A	Inside cross section area of tube	ft^2
a	Constant in Equation 22	
b	Constant in Equation 23	
C	Cost	As noted in text
$\bar{C}$	Unit cost	As noted in text
c	Constant of proportionality	
d	Inside diameter (actual)	inches
E	Specific energy requirement without work exchanger	Kw-hr/Kgal
E'	Specific energy requirement using work exchanger	Kw-hr/Kgal
F	Fixed charge rate	%
f	Friction factor	
g	Gravitational acceleration (32.2)	ft/sec^2
K	Constant in Equation 16	$\frac{lb\text{-}in^3\text{-}min^2}{ft\text{-}gal^2}$
L_c	Length of connecting piping	feet
L_e	Equivalent length	feet
L_s	Slug length	feet
L_t	Tube length	feet
N	Normalized brine salinity at inlet to work exchanger	
n	Number of valves, fittings	
P	Pressure (see list of subscripts)	psig
Q	Volumetric flow rate	gpm
R(z)	Mixing zone interface function	
r	Normalized radius	

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SYMBOL	DESCRIPTION	UNITS
s	Normalized salinity (see list of subscripts)	
T	Torque	lb-ft
V	Normalized volume	
v	Mean velocity of flow	ft/sec
W_{bp}	Energy transferred to feed-water by booster pump	ft-lb/min
W_d	Flow work in brine stream	ft-lb/min
W_l	Flow work loss during low pressure part of cycle	ft-lb/min
W_h	Flow work loss during high pressure part of cycle	ft-lb/min
W_{hp}	Energy transferred to feed-water by high pressure pump, no work exchanger	ft-lb/min
W'_{hp}	Energy transferred to feed-water by high pressure pump, with work exchanger	ft-lb/min
W_r	Reduction in energy input rate due to use of work exchanger	ft-lb/min
y	Valve timing length relative to mixing zone length	
z	Normalized length	
$\Delta\overline{C}_w$	Unit water cost differential due to work exchanger	¢/Kgal
ΔP	Pressure drop	psi
Δt	Valve timing interval	seconds
$\Delta t'$	Valve operating time	seconds
η	Efficiency	
ϕ	Angle of valve rotation	radians
ρ	Specific weight	lb/ft^3

SUBSCRIPTS FOR PRESSURES AND NORMALIZED SALINITIES

b	Low pressure brine discharge from exchanger
d	Brine discharge from RO module
f	Feedwater to RO module (salinity and supply line pressure)
p	Product water from RO module (pressure only)
r	Feedwater to RO module (pressure only)
s	High pressure feedwater discharge from exchanger

I. SUMMARY

The recovery of energy from the waste brine stream of a reverse osmosis (RO) desalination plant can be used to reduce the plant specific energy requirement. Energy recovery may be accomplished by use of a hydraulic turbine or by use of a work exchanger in which the brine stream energy is directly transferred to a portion of the feedwater stream. The brine stream from RO plants operating at concentration ratios below 2 may contain up to 50 percent of the energy imparted to the feed stream by the high pressure pump, whereas for plants operating at high concentration ratios the brine stream may contain as little as 5 percent of the input energy. Whatever the relation between the brine stream energy content and the input energy, most of the brine stream energy content can be recovered by the use of a work exchanger or a hydraulic turbine.

This study provides a parametric analysis of direct contact work exchangers. In this type of exchanger a tube with valves at each end is cyclically filled with brine and feedwater, the high pressure brine being used in one part of the cycle to push a charge of feedwater from the tube into an intermediate pressure RO intake line. In the next part of the cycle the waste brine in the tube is pushed out into the discharge line by incoming low-pressure feedwater. Two tubes operating out-of-phase provide for almost continuous flows of brine and feedwater. Because of pressure drops in the RO module and in the work exchanger a booster pump is needed to provide a differential head between the exchanger feedwater output and the RO module input.

The physical system analysis begins with consideration of the fluid mixing effect. The direct contact of the brine and the feedwater results in some mixing at the interface between the two fluids. Because of the short contact time mixing by diffusion is minimal, the primary basis for mixing being the turbulent flow velocity gradient. Parameters which significantly affect the effect of mixing on the exchanger output of feedwater are the concentration ratio and the valve cut-off ratio, the latter being a parameter which relates the valve timing to the mixing zone length. The analysis indicates that the velocity gradient mixing effect is independent of tube diameter and tube length.

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In the physical system analysis equations are also developed for the efficiency of flow work transfer and the RO product water specific energy requirement, with and without the use of a work exchanger. The efficiency is defined as the specific energy content of the feedwater delivered by the exchanger divided by the specific energy content of the brine entering the exchanger.

In the economic analysis equations are developed for installed capital cost, annualized capital cost, operating and maintenance cost, and the cost differential for the RO product water resulting from the use of a work exchanger. The installed capital cost includes the cost of the exchanger equipment and the revised pumping equipment.

In the parametric analysis a computer program was written to solve the sets of physical system and economic equations. Parameter ranges used included

Brine flow rate	10 to 1000 gpm
RO module inlet pressure	500 to 1500 psig
Concentration ratio	2 to 10
Fixed charge rate	7 to 15 percent
Valve timing interval	20 to 60 seconds

Using the net reduction in unit cost of product water as a criterion the best results were obtained with high brine flow rate, high RO module inlet pressure, low concentration ratio, low fixed charge rate, and valve timing interval on the order of 40 seconds.

The break-even unit cost of electric energy, that is, the energy cost above which the exchanger yields a net reduction in unit water cost, was found to decrease with increasing brine flow rate, increasing RO module inlet pressure, and decreasing concentration ratio. Break even unit cost for a valve timing interval of 40 seconds and a fixed charge rate of 11 percent ranged from 0.4 ¢/Kw-hr for a 1.3 MGD seawater RO plant with 1500 psig module inlet pressure, a concentration ratio of 2 and a 1000 gpm brine flow rate to 5.8 ¢/Kw-hr for a 0.05 MGD brackish water RO plant with 500 psig module inlet pressure, a concentration ratio of 5 and a 10 gpm brine flow rate.

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Installed capital costs for the work exchanger and revised pumping depend on the RO module inlet pressure, the concentration ratio, the brine flow rate, the tube diameter and the valve timing interval. Typical values range from about $7900 for a 10 gpm system applied to a 0.12 MGD plant with concentration ratio of 10 and 500 psig module pressure to about $176,000 for a 1000 gpm system applied to a 1.30 MGD plant with concentration ratio of 2 and 1500 psig pressure. These costs are based on stainless steel valves and carbon steel pipes. If stainless steel or lined pipe were used the cost would be on the order of 20 to 50 percent higher. An approximate comparison of installed capital costs for work exchanger systems (including booster pumps) versus hydraulic turbines indicates that for brine flow rates below 100 gpm the costs are likely to be approximately equivalent, whereas for brine flow rates greater than 100 gpm the work exchanger systems are likely to be more expensive than the turbines.

The conclusion is that energy recovery by the use of direct-contact work exchangers is at best equivalent in cost effectiveness to energy recovery by the use of hydraulic turbines for brine flow rates below 100 gpm, and is less cost effective for flow rates above 100 gpm. The present relationship between the cost of energy (electric or other) for industrial use and the capital cost of equipment probably precludes investments for energy recovery equipment of any type in RO plants with brine flows below 100 gpm, with the possible exception of high-pressure, low-concentration ratio, seawater plants.

Even allowing for the approximate nature of the capital cost computations further R&D efforts on direct-contact work exchangers for the RO application do not appear to be warranted.

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2. INTRODUCTION

The specific energy requirement of a reverse osmosis desalination plant can be reduced by the recovery of energy from the high pressure brine discharge system. Energy recovery is economically justified if the cost of recovered energy is less than the cost of externally available energy. Energy recovery may also be desirable in order to minimize the waste heat discharged from power plants to the environment and in order to conserve fuel resources.

Possible energy recovery concepts include (1) using the high pressure waste brine system to drive a hydraulic turbine which in turn provides shaft power directly, or by means of an electric generator, to the high pressure feedwater pump, and (2) using the high pressure waste brine stream to directly pressurize part of the feedwater stream. In the latter case pressure drops in the reverse osmosis modules and in the energy recovery equipment would require the use of a booster pump in conjunction with the energy recovery equipment. This would be offset by a smaller capacity requirement for the main high pressure feedwater pump.

Feed pressurization may be accomplished by the use of hydraulic turbines or by the use of pressure transfer units, which are usually designated as work exchangers. An analysis of the use of hydraulic turbines is contained in Reference 1. One of the conclusions reached in that study is that hydraulic turbines are not economically justified for reverse osmosis plants of less than 1 MGD capacity. Studies of work exchangers have been carried out at Kansas State University (Refs. 2,3) and Dynatech R&D Co. (Refs. 4,5,6). Those studies considered only piston-type work exchangers, whereas this present report deals with pistonless, or direct-contact, work exchangers.

In a piston-type work exchanger the energy of an initially high pressure fluid is transferred to an initially low pressure fluid in a cylinder, the two fluids being separated by a free piston. Assuming that the high pressure fluid is the waste brine from a reverse osmosis module, and that the low pressure fluid is part of the feedwater for the module, a typical cycle starts with the cylinder

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filled with feedwater at low pressure and the piston at the brine end. The brine inlet valve is opened allowing high pressure brine to force the piston to the feedwater end of the cylinder, thereby driving the feedwater charge into the high pressure supply line to the reverse osmosis module. The valves are then reversed so that low pressure feedwater forces the piston to the brine end of the cylinder, thereby driving the brine charge out into a low pressure discharge line. The use of two or more cylinders operating out-of-phase provides for practically continuous flow of feed into the reverse osmosis module.

The primary function of the pistons in a piston-type work exchanger is to separate physically the brine and the feedwater. However, in the application of a work exchanger to a reverse osmosis desalination system, such physical separation of the brine and the feedwater is not strictly necessary, provided that they are brought into contact in such a way that mixing is minimal. This leads to the concept of a pistonless or direct-contact, work exchanger, in which the energy exchange takes place in a tube or pipe, instead of in a machined cylinder.

Figure 1 illustrates successive states of a direct contact work exchanger. Each end of the tube, which need not be straight, is equipped with a three-port valve or an equivalent valve arrangement. Figure 1(a) shows the feedwater forcing the brine out to a low pressure discharge line. Figure 1(b) shows the valves in position for the high pressure brine to force the feed charge into the high pressure feed line of the reverse osmosis system, and Figure 1(c) shows this process partially completed. Figure 1(d) shows the valves in position for the low pressure feed to again force the depressurized brine into the discharge line. A mixing zone occupying a fraction of the tube length is indicated schematically in the figure. This mixing zone would result in a slight increase in the average salinity of the feed entering the reverse osmosis module.

The feasibility of using a direct contact work exchanger in a reverse osmosis plant is dependent, basically, on the cost per unit of product water from an optimized plant with energy recovery, in comparison with the cost for water from an optimized plant without energy recovery. In general, the characteristics of an optimized plant with

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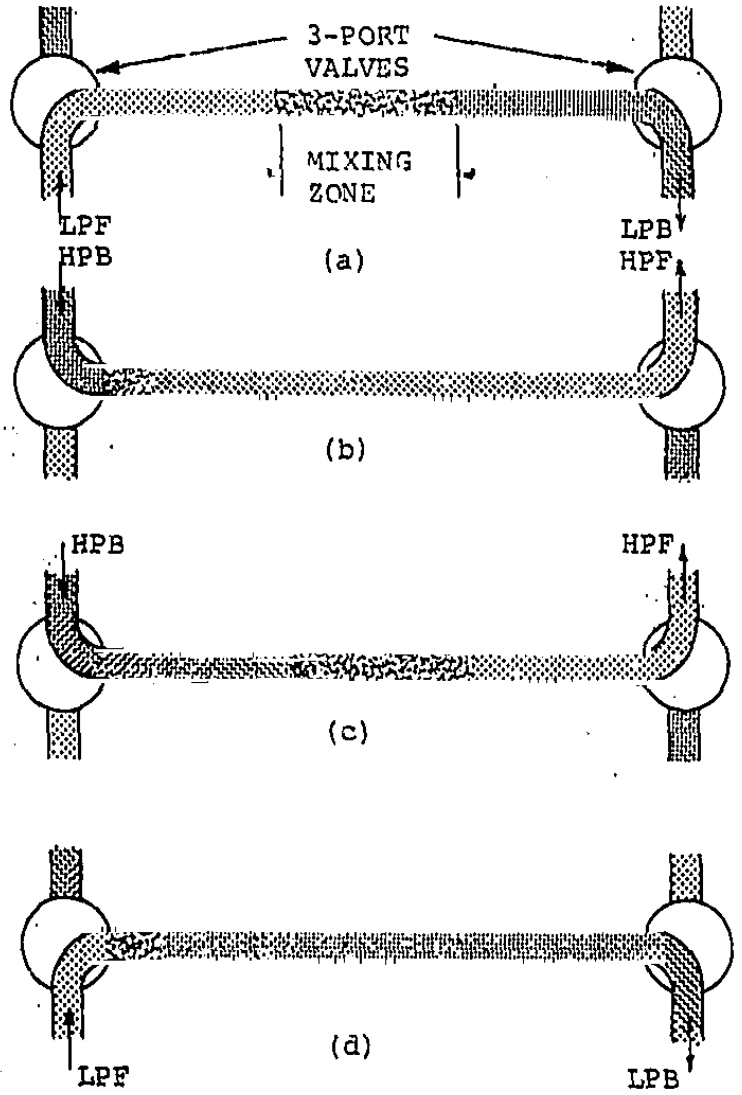

HPB-HIGH PRESSURE BRINE HPF-HIGH PRESSURE FEED
LPB-LOW PRESSURE BRINE LPF-LOW PRESSURE FEED

Figure 1. Successive States of Direct-Contact Work Exchanger Tube

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energy recovery would be somewhat different from those for a plant without energy recovery. This implies that the addition of an optimized work exchanger to an optimized reverse osmosis plant would not necessarily result in an optimum overall system, so that optimization of the overall system would be preferable from an initial design standpoint. Optimization analyses of this type are reported in References 7 and 8. This type of analysis is beyond the scope of the study reported here.

In this study the basis of the analysis is the unit cost of the recovered energy, rather than the unit cost of the water produced by the reverse osmosis plant. The unit cost of the recovered energy is dependent on the amortization and operating costs of the work exchanger. While this approach does not result in an optimized overall system, it does indicate the conditions under which the inclusion of a direct-contact work exchanger in a reverse osmosis plant would be economically feasible.

In Chapter 3 the system configuration is defined and a mathematical model for the physical system is developed. Chapter 4 contains a cost analysis and Chapter 5 presents the results of a parametric analysis based on the physical system and cost equations.

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3. PHYSICAL SYSTEM ANALYSIS

3.1 Introduction

The physical system analysis for a direct-contact work exchanger consists essentially of establishing the dimensional and operational characteristics on a parametric basis. The primary parameters are the pressure and volumetric flow rate of the waste brine stream from which energy is to be recovered. The pressure establishes the tube wall thickness and the volumetric flow rate determines the flow velocity as a function of tube diameter. The flow velocity, in turn, determines the pressure drop per unit length of tube. The length of the tube then determines the tube pressure drop and the valve cycling rate. An energy recovery efficiency may be defined on the basis of the pressure drop through the exchanger, the auxiliary energy required to operate the exchanger, and losses associated with mixing of the fluids. A volumetric efficiency may be defined on the basis of the amount of brine which mixes with the feedwater in the exchanger.

3.2 System Configuration

Figure 2 shows a schematic diagram of system configuration in which a work exchanger is connected to a reverse osmosis (RO) module in order to recover energy from the high pressure waste brine stream. Two accumulators are included in the system for the purpose of smoothing out pressure fluctuations resulting from cycling of the work exchanger valves. A booster pump is included to compensate for the pressure drops through the RO module and the work exchanger.

Although one tube with the necessary valving could constitute a work exchanger, this would not be practical for recovery of energy from a continuously flowing high pressure stream. In order to maintain continuity of flow the minimum practical number of exchanger tubes is two. These would operate out-of-phase so that while one is operating in the high pressure energy exchange mode, the other is operating in the low pressure discharge mode.

Figure 3 illustrates two feasible valve arrangements for two-tube work exchangers. Figure 3(a) shows an arrangement in which operator-driven 2-port valves are used,

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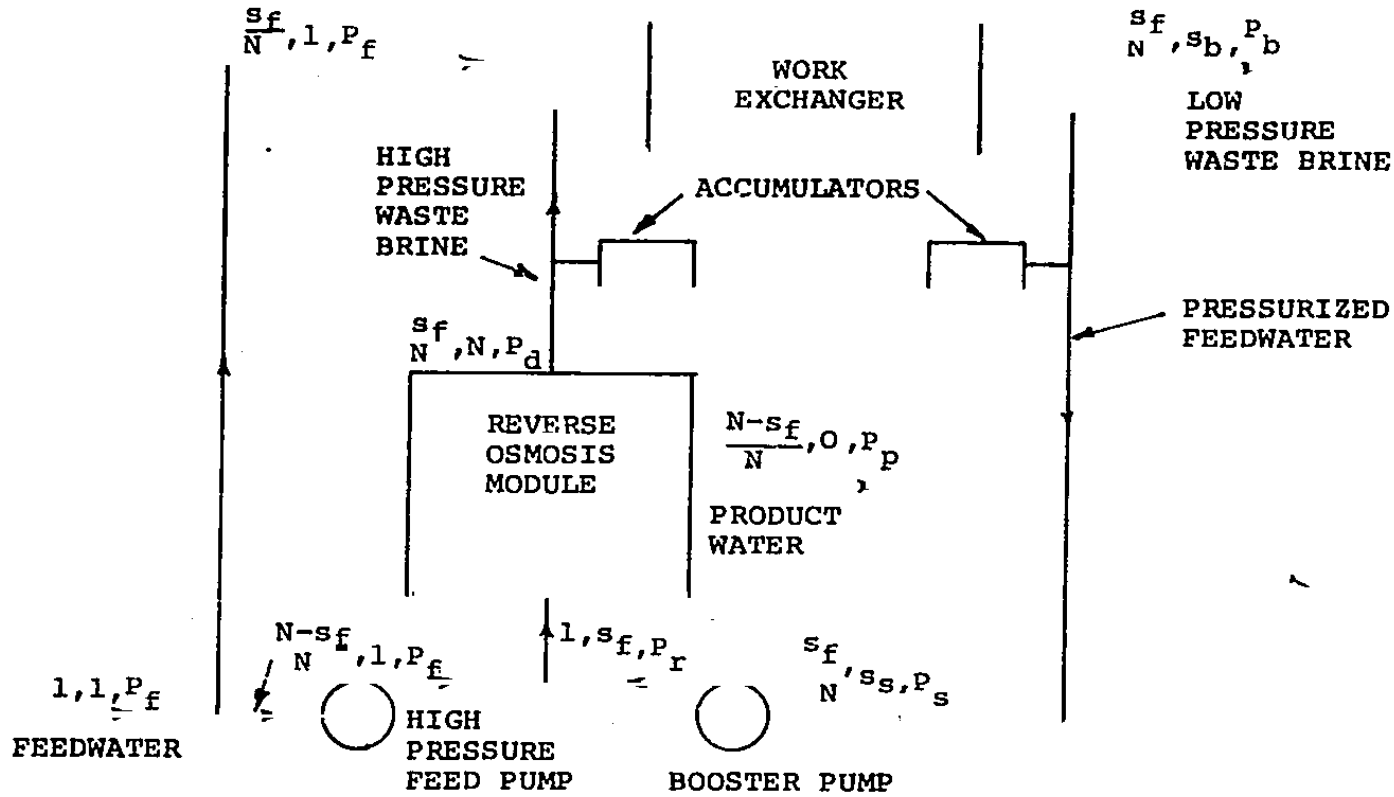
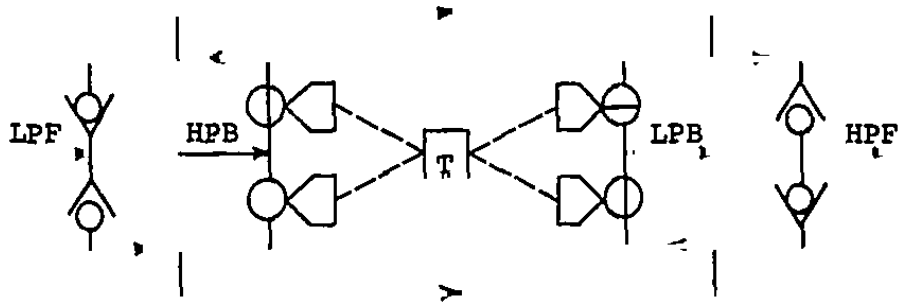
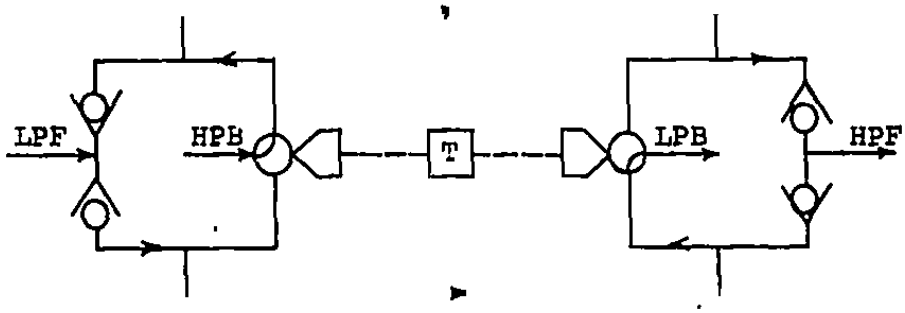


NOTE: SYMBOL GROUPS INDICATE: NORMALIZED VOLUMETRIC RATE, NORMALIZED SALINITY, PRESSURE

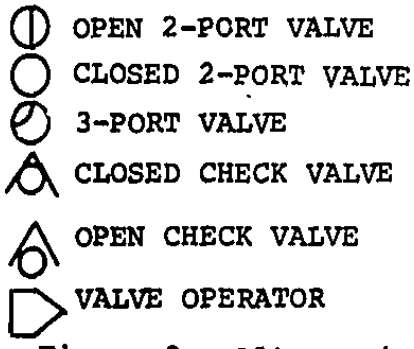
Figure 2. System Configuration for Work Exchanger Connected to Reverse Osmosis Module



(a) 2-PORT VALVE ARRANGEMENT



(b) 3-PORT VALVE ARRANGEMENT



HPB-HIGH PRESSURE BRINE
LPB-LOW PRESSURE BRINE
HPF-HIGH PRESSURE FEED
LPF-LOW PRESSURE FEED
T - TIMER

Figure 3. Alternative Valve Arrangements for Direct Contact Work Exchanger

and Figure 3(b) shows an arrangement in which operator-driven 3-port valves are used. In both cases the valves are shown in positions corresponding to high pressure energy exchange in the upper tube and low pressure discharge of waste brine from the lower tube.

Although the exchange tubes are indicated by straight lines in Figure 3 there is no physical necessity for the exchanger tubes to be straight. Generally, in order to obtain a compact arrangement, the tubes would be made up of a number of straight sections connected by U-bends.

3.3 Assumptions and Parametric Ranges

In this analysis the fluids entering the work exchanger are assumed to be as follows:

Low pressure fluid:	Part of the saline feedwater for an RO desalter
High pressure fluid:	Waste brine discharge from an RO desalter

The low pressure at which the feedwater enters the work exchanger is assumed to be such that the pressure drop through the exchanger during the brine discharge part of the cycle is at least equal to the pressure drop during the energy exchange part of the cycle. This is necessary in order to ensure that the volume of feedwater entering an exchanger tube during the brine discharge part of the cycle is at least equal to the volume of brine entering the tube during the energy exchange part of the cycle.

Since pressure drops are relatively insensitive to salinity, a salinity equal to that of seawater is assumed for all pressure drop computations in the parametric analysis. A temperature of 75°F is assumed.

For purposes of analyzing the effects of mixing, the feedwater salinity is assumed to be normalized to a value of unity, and the corresponding normalized brine salinity is designated by the symbol N. N is varied parametrically over the range 1.5 to 10. If there were no mixing of the two fluids in the work exchanger the value of N would be equal to the concentration ratio of the RO module. Because of mixing, the value of N is slightly greater than the RO concentration ratio.

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The following parametric ranges are used with respect to the brine stream entering the work exchanger:

Pressure, psig:	500 to 1500
Flow rate, gpm:	10, 50, 100 500, 1000

3.4 Tube Characteristics

In a two-tube work exchanger each tube carries the entire volumetric flow rate of the waste brine, at high pressure for one-half of the cycle, and at low pressure for the other half. This establishes a basic design criterion for the tubes, i.e., the product of the tube cross-sectional area and the flow velocity. As the tube diameter is increased the flow velocity decreases. The optimum values of these two parameters are dependent on pressure drop and cost considerations.

The pressure drop for flow in the tubes is given by the Darcy formula:

$$\Delta P = \frac{\rho f L v^2}{12d\ 2g}$$

$$= 0.001294 \frac{\rho f L v^2}{d} \qquad (1)$$

In this analysis turbulent flow is assumed, for which the friction factor, f, is a function of Reynolds number and the character of the tube wall. For purposes of this parametric analysis, the diameter, d, is restricted to actual inside diameters of commercially available pipe sizes.

Examination of pressure ratings for pipes indicates that Schedule 40 steel pipe in nominal sizes up to 6 in. is adequate for pressures up to 1500 psi, which is the upper limit for this analysis. This applies to both seamless carbon steel and stainless steel pipe.

Table 1 presents data for Schedule 40 steel pipe in the size ranges applicable to the volumetric flow rates under consideration. Pressure drops for water based on Equation 1, were obtained from Reference 9 and revised for a specific weight of 63.9 lb/ft^3, corresponding to seawater

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TABLE 1. DATA FOR SCHEDULE 40 STEEL PIPE

Nominal Flow Rate gpm	Nominal Size in.	Pressure Rating[1] psig	Flow Velocity ft/sec.	Pressure Drop[2] psi/100 ft.
10	1/2	4974	10.56	43.4
	3/4	4079	6.02	10.2
	1	3794	3.71	3.06
	1-1/4	3124	2.15	.793
	1-1/2	2825	1.58	.370
50	1-1/4	3124	10.74	16.0
	1-1/2	2825	7.88	7.33
	2	2381	4.78	2.08
	2-1/2	2605	3.35	.860
	3	2258	2.17	.295
100	1-1/2	2825	15.78	27.6
	2	2381	9.56	7.78
	2-1/2	2605	6.70	3.17
	3	2258	4.34	1.08
	3-1/2	2062	3.25	.521
	4	1910	2.52	.279
500	3	2258	21.67	22.22
	3-1/2	2062	16.21	10.42
	4	1910	12.60	5.79
	5	1679	8.02	1.85
	6	1524	5.55	.738
	8	1343	3.21	.186
1000	4	1910	25.17	22.18
	5	1679	16.04	7.01
	6	1524	11.10	2.75
	8	1343	6.41	.692

1. Based on pressure ratings for Petroleum Refinery Piping, ASA B31.3-1962, for ASTM Carbon Steel A-53-B or A-106-B pipe.
2. Based on seawater at 75°F.

at 75°F. The sensitivity of pressure drop to salinity is small, since the effect of salinity is to change the specific weight, ρ, in Equation 1 by a small amount.

The flow rates upon which Table 1 is based are, in fact, nominal values. Actual values would be somewhat less because of velocity variations resulting from the cyclic operation.

3.5 The Mixing Zone

Some mixing of the feedwater and the waste brine inevitably occurs as a result of bringing them into contact in a turbulent flow situation. Since the exchanger is expected to cycle several times per minute the contact time is not sufficient for any significant amount of mixing to occur by diffusion. Thus, if there were no velocity gradient, i.e., if the velocity were the same at all points in the tube cross-section, there would be minimal mixing at the interface between the two fluids for the short contact periods resulting from rapid cycling. However, the actual existence of a turbulent flow velocity gradient causes the formation of a mixing zone along which the salinity ranges from that of the feedwater to that of the waste brine.

Figure 4 illustrates the velocity gradient for incompressible turbulent flow in a cylindrical tube. As indicated by the gradient, fluid particles near the tube wall travel much more slowly than particles near the center line of the tube. In other words, particles near the center of the tube move farther in a given time interval than do particles near the tube wall.

Figure 5 illustrates the mixing zone created by the velocity gradient. The curves represent the successive positions of particles as fluid flows through the tube with a velocity gradient such as that shown in Figure 4. (The curves in Figure 5 are not velocity gradients.) These particle position curves may be conceptualized for a single fluid in the tube or for two fluids in contact. In particular for two fluids in contact the curves may be considered as successive positions of radial sections of an advancing interface surface between the two fluids. Because of the turbulent flow an interface in the form of a smooth surface does not exist, of course, but the concept provides a means of estimating the characteristics of the mixing zone.

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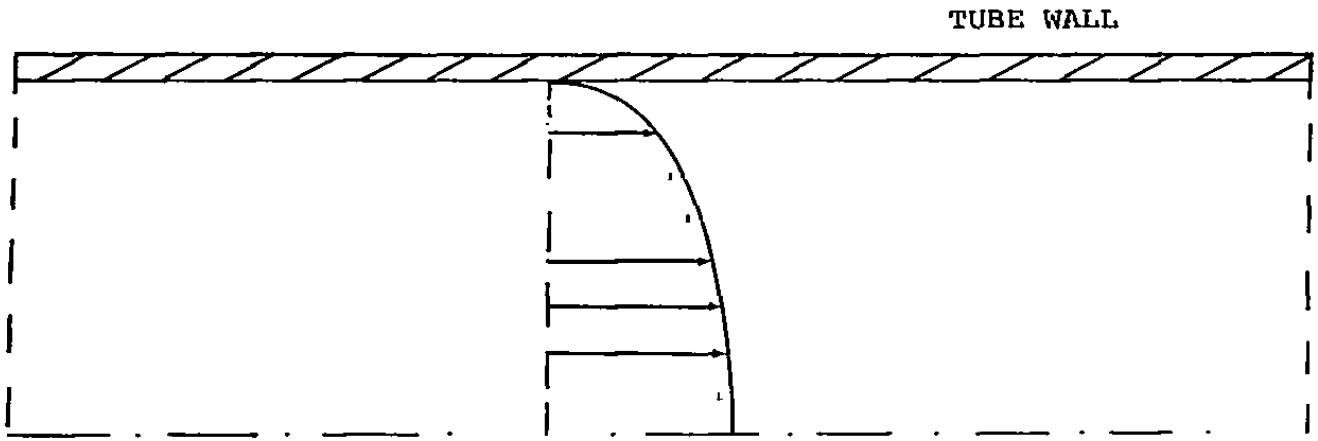

Figure 4. Incompressible Turbulent Flow Velocity Gradient

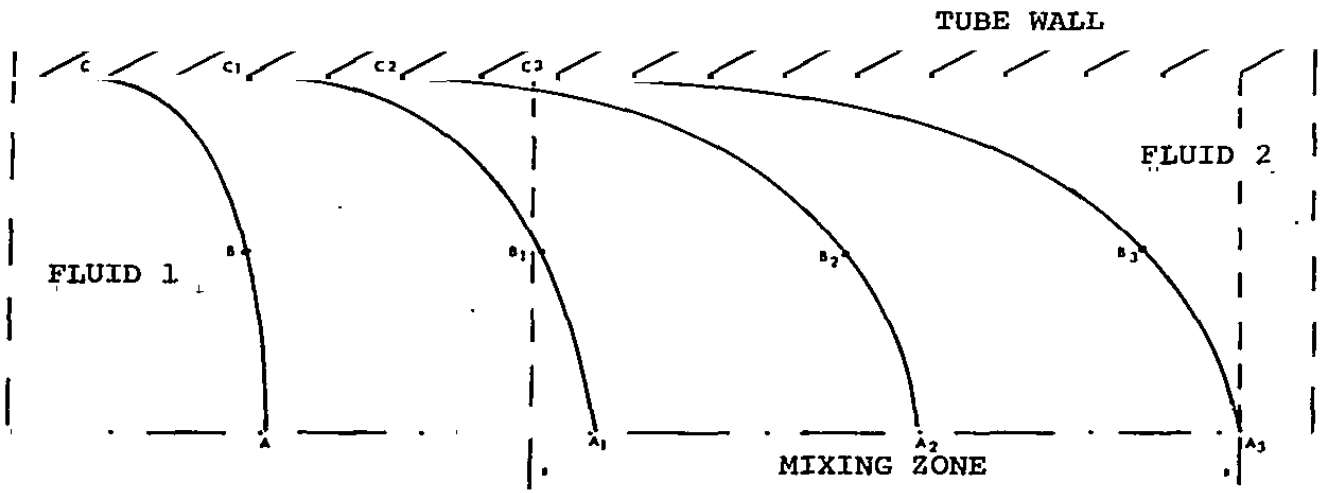

Figure 5. Relative Motion of Particles Under Influence of Velocity Gradient

Considering the conceptual interface surface the length of the mixing zone may be taken as equal to the axial length of the surface, or of its cross section, as indicated in Figure 5. Evidently, this length increases as the flow progresses. The amount of mixing in the mixing zone, or in any axial fraction of it depends on the relative volumes of the two fluids within the total volume under consideration. Although the conceptual surface increases in length with time, the relative volumes of the two fluids in the mixing zone remains fixed. This is due to the fact that on a normalized basis the conceptual interface cross-section is the same as the velocity gradient. This is illustrated in Figure 6. The volumes of Fluids 1 and 2 at length z are given by the integrals

$$V_1(z) = \pi \int_0^z [R(z)]^2 \, dz \qquad (2)$$

$$V_2(z) = \pi \int_0^z 1-[R(z)]^2 \, dz \qquad (3)$$

where R(z) is the functional form of the interface cross-section. Figure 7 shows the results of a computer solution of Equations (2) and (3), in which R(z) is approximated by linearized segments (see Appendix). Also shown are the volume functions

$$V_1'(z) = \pi \int_z^1 [R(z)]^2 \, dz = V_1(1) - V_1(z) \qquad (4)$$

$$V_2'(z) = \pi \int_z^1 1-[R(z)]^2 \, dz = V_2(1) - V_2(z) \qquad (5)$$

Assuming that the two fluids are mixed in the proportions indicated by Figure 7 the normalized salinity for the cumulative mixture volume may be computed as a function of normalized length by using the relative salinities of the unmixed fluids. Two cases are of interest:

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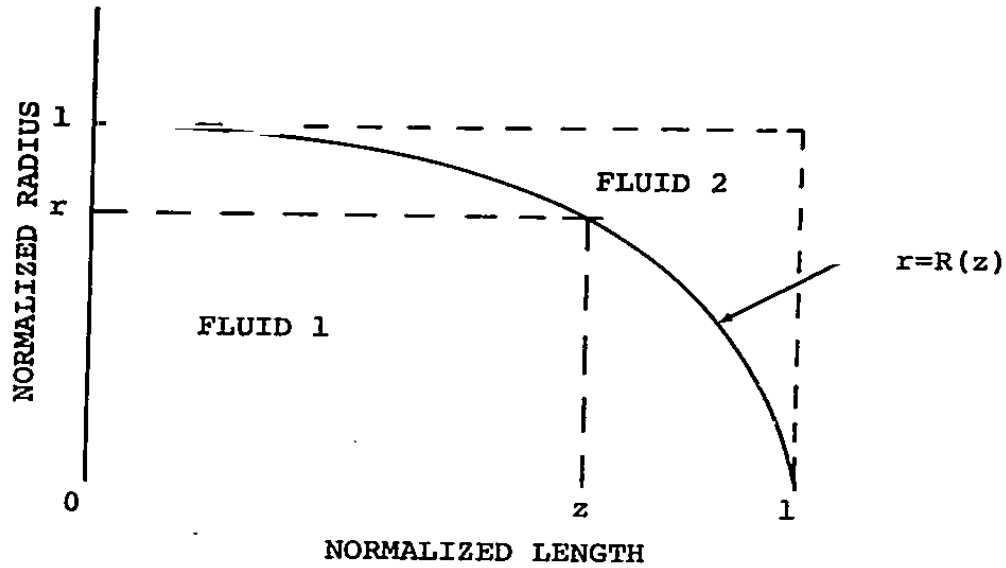

Figure 6. Normalized Cross-Section of Conceptual Interface Surface

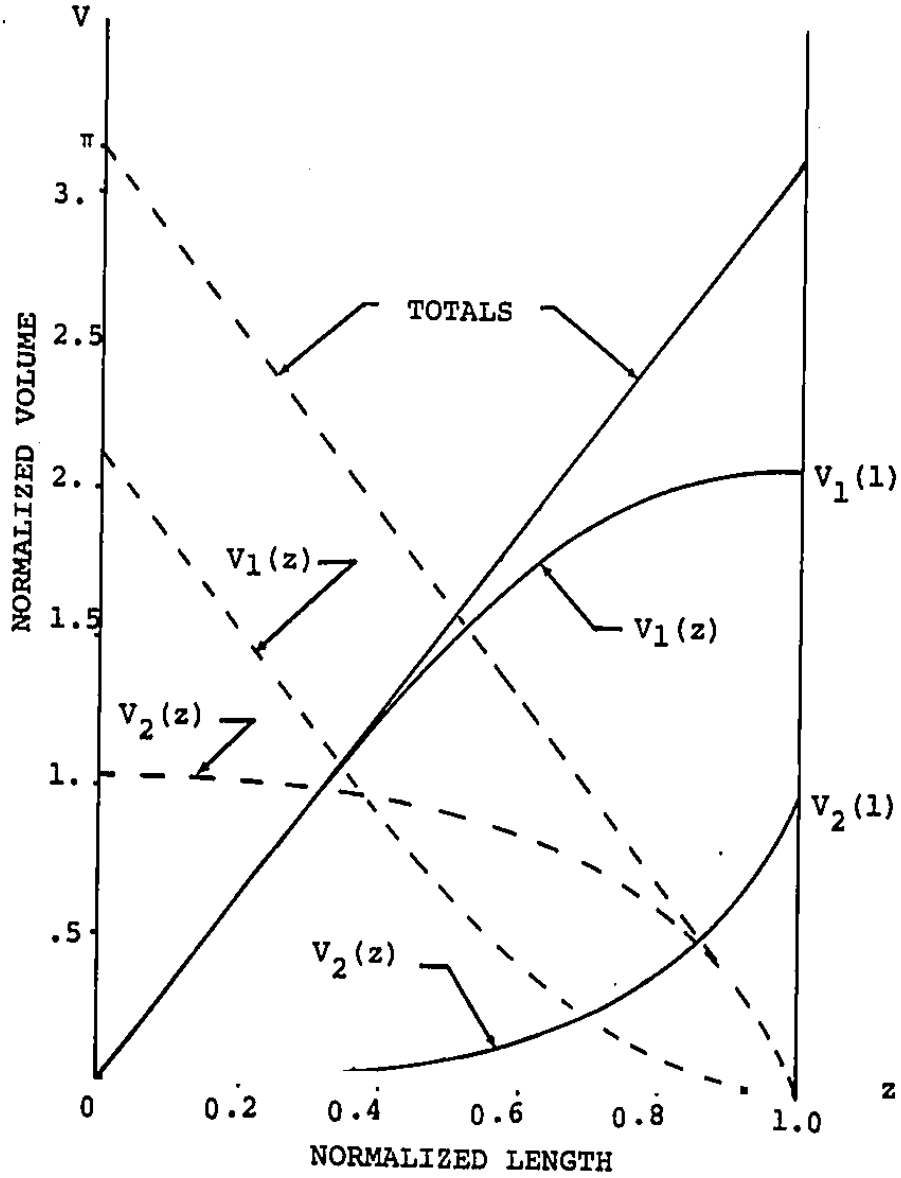

Figure 7. Normalized Volumes of Two Fluids in Mixing Zone Vs. Normalized Mixing Zone Length

Case 1: Salinity of Fluid 1 = 1
Salinity of Fluid 2 = N
Volumes from 0 to z

$$s_1(z) = \frac{(1)V_1(z) + NV_2(z)}{\pi z} \qquad (6)$$

Case 2: Salinity of Fluid 1 = N
Salinity of Fluid 2 = 1
Volumes from z to 1

$$s_2(z) = \frac{NV_1'(z) + (1)V_2'(z)}{\pi z} \qquad (7)$$

Figure 8 shows computer solutions of Equations (6) and (7), again using a linearized segmental approximation of R(z).

In the application to an RO module the work exchanger would be expected to deliver feedwater with a minimum admixture of waste brine. The amount of brine which is delivered to the module with the feedwater is dependent on the mixing zone, the valve timing and the pressure drops during the two parts of the cycle.

For purposes of analysis consider a long tube in which slugs of two fluids flow in succession. Assume that the slugs are of equal volume (corresponding to equal pressure drops during the two parts of the work exchanger cycle), so that the slugs are of equal length. This situation is illustrated in Figure 9, where the two fluids are designated by their salinities, 1 and N, and the length is designated as L_s. The mixing zone, which has a length of $0.55L_s$, is indicated by the cross-section of the conceptual interface surface.

Assume now that the long tube has two valves which are L_s units of length apart. If these two valves were closed simultaneously the volume of fluid captured between them would be equal to the volume of an exchanger tube and the average salinity would be dependent on the relative volumes of the two fluids between the valves. This is analagous to the operation of the work exchanger in which a volume of feedwater mixed with some brine is captured between valves at the ends of an exchanger tube.

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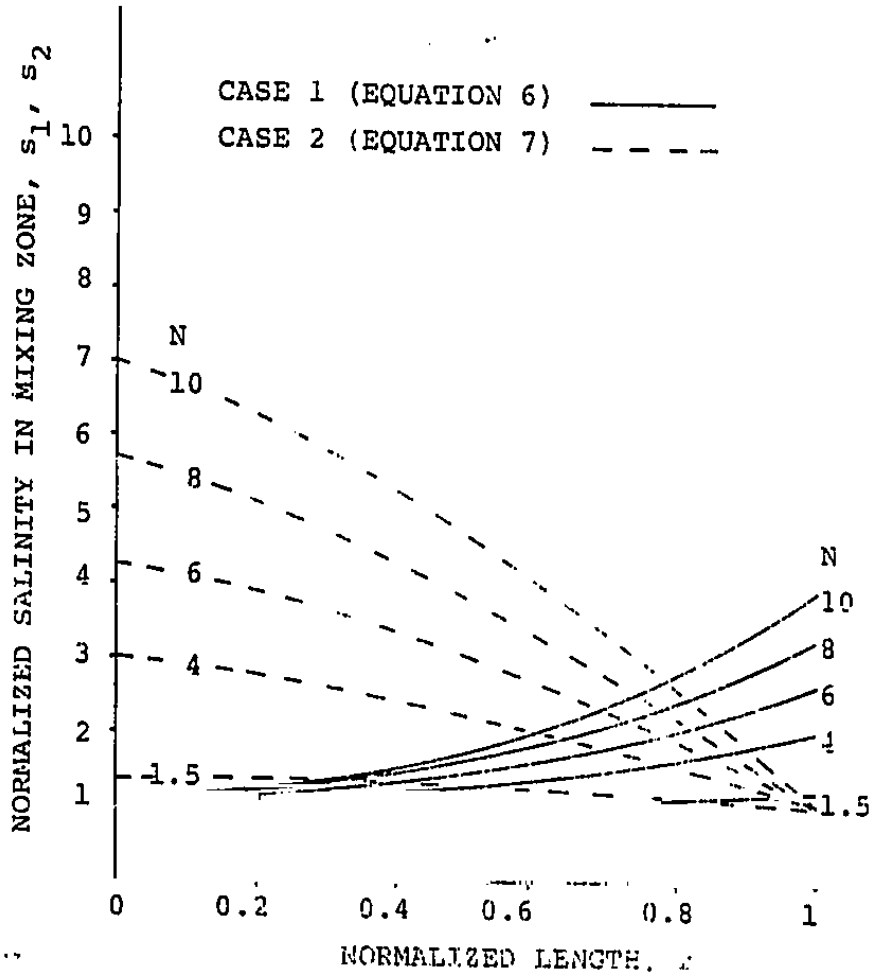

Figure 8. Normalized Salinity of Cumulative Volume Vs. Normalized Length of Mixing Zone

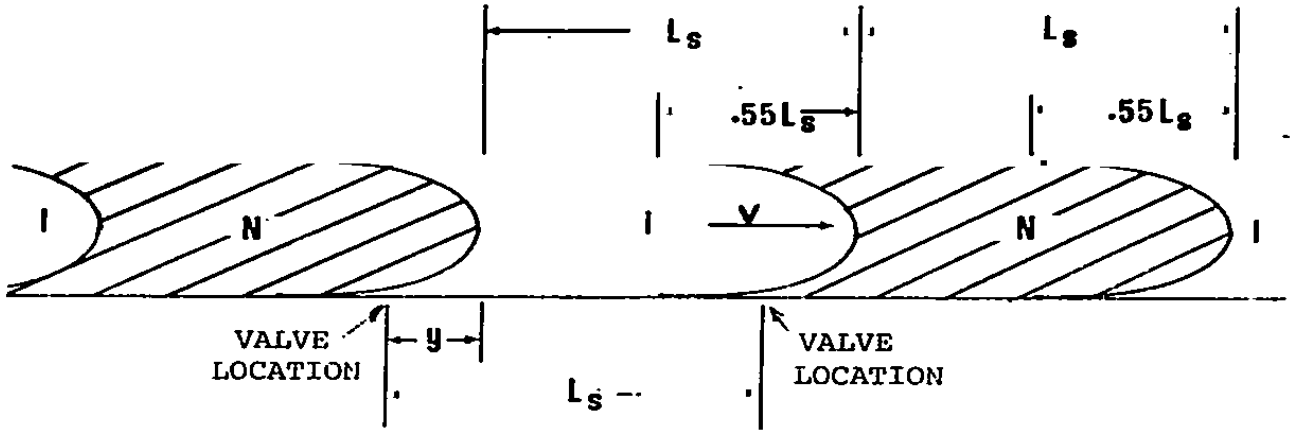

Figure 9. Generalized Flow of Equal Volume Slugs of Two Fluids of Salinities I and N in Long Tube

Evidently, the relative volumes of feedwater and brine captured by the valve operation depend on the valve timing relative to the positions of the slugs of fluids. In Figure 9 this relative position is designated by the parameter y. When y is equal to zero a complete mixing zone at the forward end of each slug is captured. When y is greater than zero, parts of two mixing zones are captured. As indicated in Figure 9 these mixing zone parts are of different types, the part at the forward end of a feedwater slug requiring the use of Equation 6 for salinity determination, and the part at the trailing end requiring the use of Equation 7.

In converting from the normalized basis of Equations 6 and 7 to actual lengths the value of z is related to the parameter y by

$$z = 1 - \frac{y}{0.55L_s} \tag{8}$$

Using the functions $s_1(z)$ and $s_2(z)$ as defined in Equations 6 and 7 the average normalized salinity of a feedwater slug of length L_s is then given by

$$s_s = \frac{A\left\{(0.45L_s)\ (1) + (0.55L_s - y)\ s_1 + ys_2\right\}}{AL}$$

$$= 0.45 + 0.55\ s_1 + \frac{y}{L_s}\ (s_2 - s_1) \tag{9}$$

Figure 10 is a computer solution of Equation 9 in which the average normalized salinity of a feedwater slug is shown as a function of the cut-off ratio, y/L_s, and the normalized brine salinity, N. As would be expected the average normalized salinity of the feedwater slug increases as the normalized brine salinity, N, increases. As the cut-off ratio, y/L_s, increases, the feedwater slug salinity, s_s, decreases to a minimum for each value of N, then increases. This effect is due to the fact that as y/L_s increases from zero the total volume of the component of salinity N in the feedwater slug first decreases to a minimum, then increases, as indicated, for example, by addition of the ordinates for curves $V_2(z)$ and $V_1(1)-V_1(z)$ in Figure 7. The minimum occurs at the value of z for which

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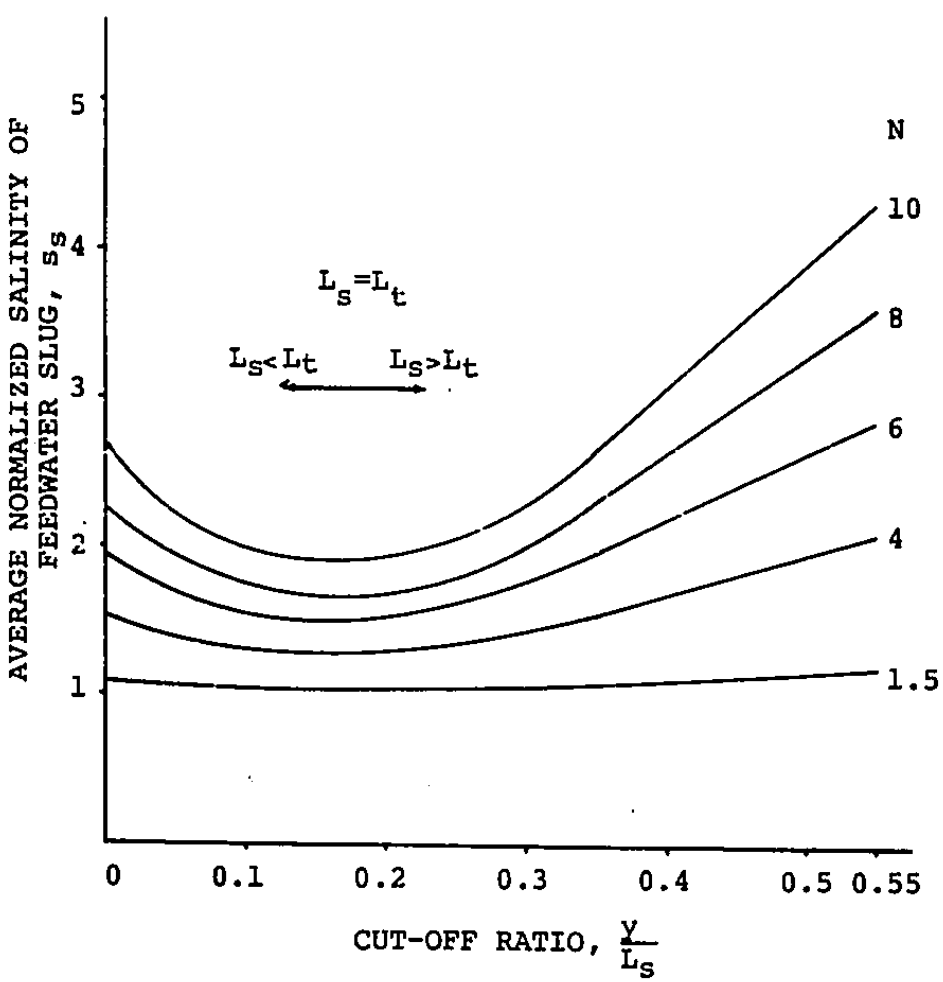

Figure 10. Average Normalized Salinity of Feedwater Slug as Function of Cut-Off Ratio and Normalized Brine Salinity

$$V_2(z) = V_1(1) - V_1(z) \qquad (10)$$

Solution of Equation 10 gives z=0.68, which corresponds to $y/L_s=0.18$.

The value of the cut-off ratio, y/L_s, at which a work exchanger would operate is dependent on the relationship between the slug length, L_s, and the tube length, L_t. The slug length is equal to the product of the average flow velocity and the valve timing interval,

$$L_s = v\Delta t \qquad (11)$$

Figure 11 illustrates the three possible relationships between L_s and L_t and the corresponding types of feedwater slugs delivered by the work exchanger. (Interchange of the two fluids would correspond to the brine slugs discharged by the exchanger). Figure 11(a) shows the situation for $L_s=L_t$. Continuity of volume requires that the volume of feedwater, V_f, left in the tube at valve closure, be equal to the volume of brine, V_b, which is delivered at the trailing end of the slug. This is the condition expressed by Equation 10, and therefore corresponds to minimum contamination of the feedwater by the brine, i.e., s_s is minimized, and $y/L_s=0.18$.

Figure 11(b) shows the situation for $L_s > L_t$, which corresponds to $y/L_s > 0.18$, and Figure 11(c) shows the situation for $L_s < L_t$, which corresponds to $y/L_s < 0.18$. See Figure 10.

Evidently, the design objective would be to make L_s as nearly equal to L_t as possible since this minimizes the contamination of the feedwater. Under operating conditions, small variations in pressures, temperatures, salinities, valve timing, etc., could cause some drift from the optimum condition of $L_s = L_t$. Experimental testing with an actual work exchanger would be necessary to determine whether or not such drift should be minimized by feedback adjustment of the valve timing interval on the basis of signals from flow sensors.

The feedwater delivered by the work exchanger to the RO module is mixed with feedwater delivered directly from the high pressure pump as indicated in Figure 2, the relative volumetric rates being approximately s_f/N from the exchanger and $(N-s_f)/N$ from the high pressure pump. These relative

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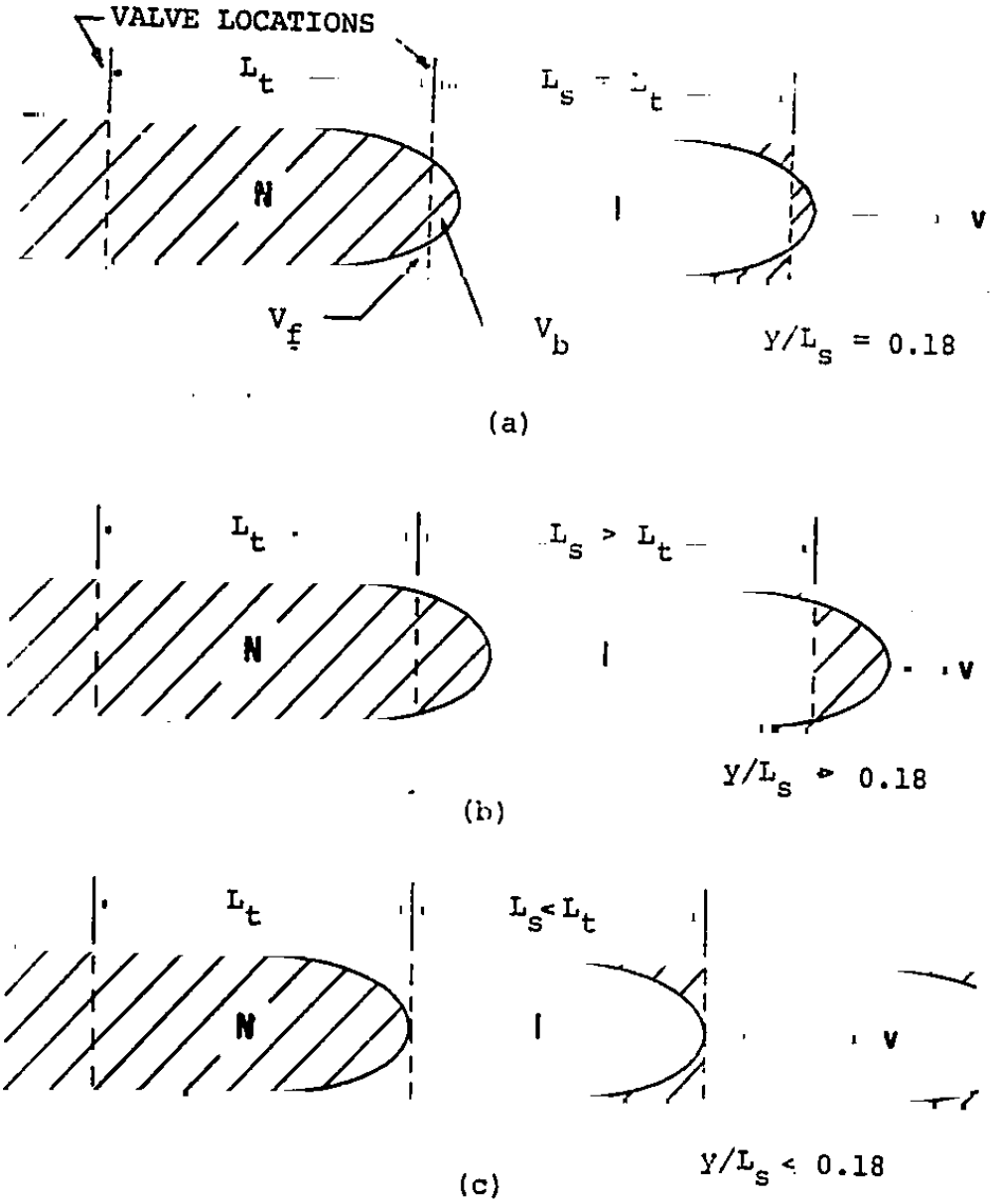

Figure 11. Effect of Relationship Between Tube Length and Slug Length on Feedwater Slugs Delivered by Work Exchanger

volumetric rates are based on equal brine and feedwater flows in the exchanger and on the brine fraction from the RO unit being approximately inversely proportional to the concentration ratio, N/s_f.

A salt balance on the mixed feedwater flows at the RO module inlet gives the average normalized salinity of the feedwater entering the RO module as

$$s_f = \frac{N}{N+1-s_s} \tag{12}$$

Figure 12 shows a plot of Equation 12 based on values of s_s from Figure 10.

Because of the dilution of the waste brine by feedwater the normalized salinity of the waste brine discharged from the work exchanger is less than N, and is equal to the concentration ratio. That is,

$$s_b = \frac{N}{s_f} = N+1-s_s \tag{13}$$

The loss of feedwater with the waste brine discharge is, on a normalized basis,

$$V_L = \frac{s_f-1}{N} \tag{14}$$

The energy required to pump this lost feedwater through the work exchanger pressure drop must be taken as a debit against the energy recovered by the work exchanger.

* As shown in Figure 2, the product salinity is assumed to be zero for purposes of this analysis.

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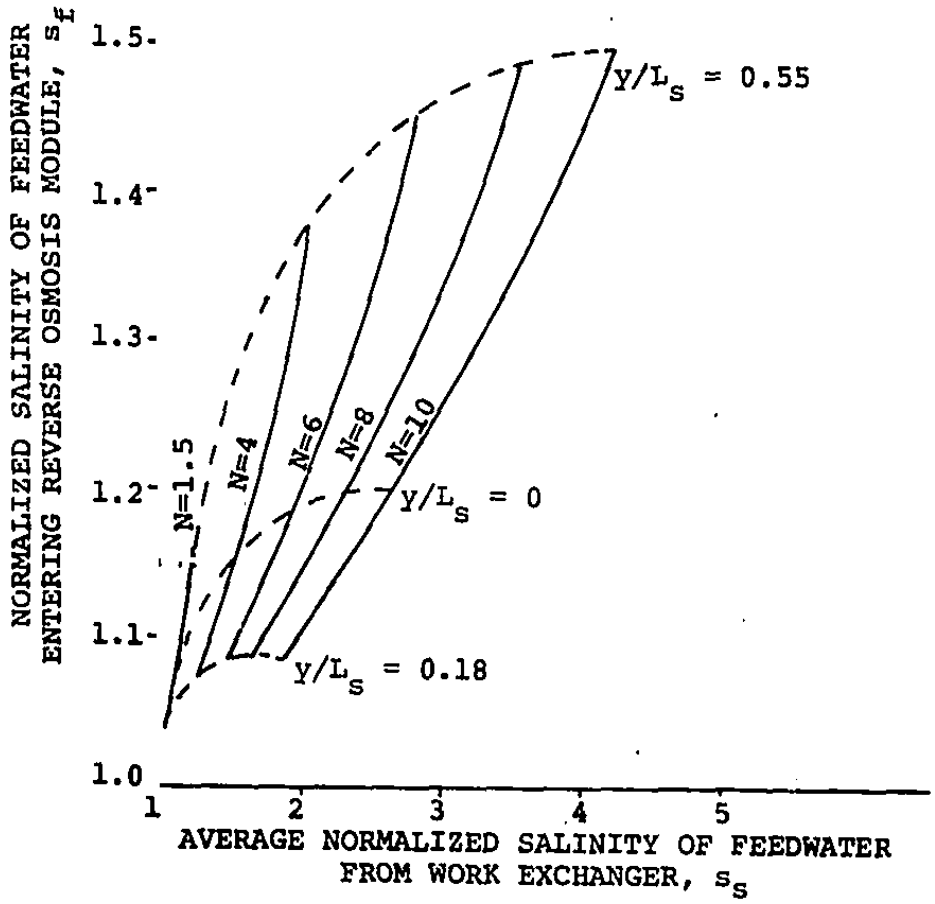

Figure 12. Normalized Salinity of Feedwater Entering RO Module Vs. Normalized Salinity of Feedwater from Work Exchanger

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Equation 14 also gives the loss of product water resulting from the increase in normalized feedwater salinity from 1 to s_f. This loss has the effect of increasing the unit cost of the product water, and this increase in cost must be taken as a debit against the work exchanger.

Figure 13 shows a plot of Equation 14 for ranges of s_f shown in Figures 10 and 12, and for values of N from 1.5 to 10. The largest losses are seen to occur at low values of N and high values of y/L_s, whereas the lowest losses occur at high values of N and the value of $y/L_s = 0.18$, corresponding to minimum s_s, and to $L_s = L_t$.

3.6 Pressure Drop Through Work Exchanger

The pressure drop through the work exchanger is the sum of the pressure drops through the exchanger tubes, the valves, and the piping required to connect the exchanger to the RO module. These pressure drops can be computed by the use of Equation 1, using the actual lengths of the exchanger tubes and connecting piping and using equivalent lengths for valves and fittings. In general, these equivalent lengths are approximately proportional to the diameter. The constants of proportionality used in this study are listed in Table 2. These are representative values only, particularly for valves, and some variation could be expected depending on valve make and design.

In order to consider the overall pressure drop associated with a work exchanger in a generalized sense, rather than with respect to a particular application, the number of fittings and the length of connecting piping must be arbitrarily defined. Table 3 lists quantities per flow circuit used in this study. One U-bend per exchanger tube is included, on the basis of all of the valves and connections being located at one end of the exchanger. The valve arrangement in Figure 3(a), which uses 2-port valves, is assumed, since suitable 3-port valves are not available over the full range of sizes under consideration.

For a given diameter the length used in Equation 1 for computation of pressure drop is

$$L = L_e + L_t \text{ ft} \qquad (15)$$

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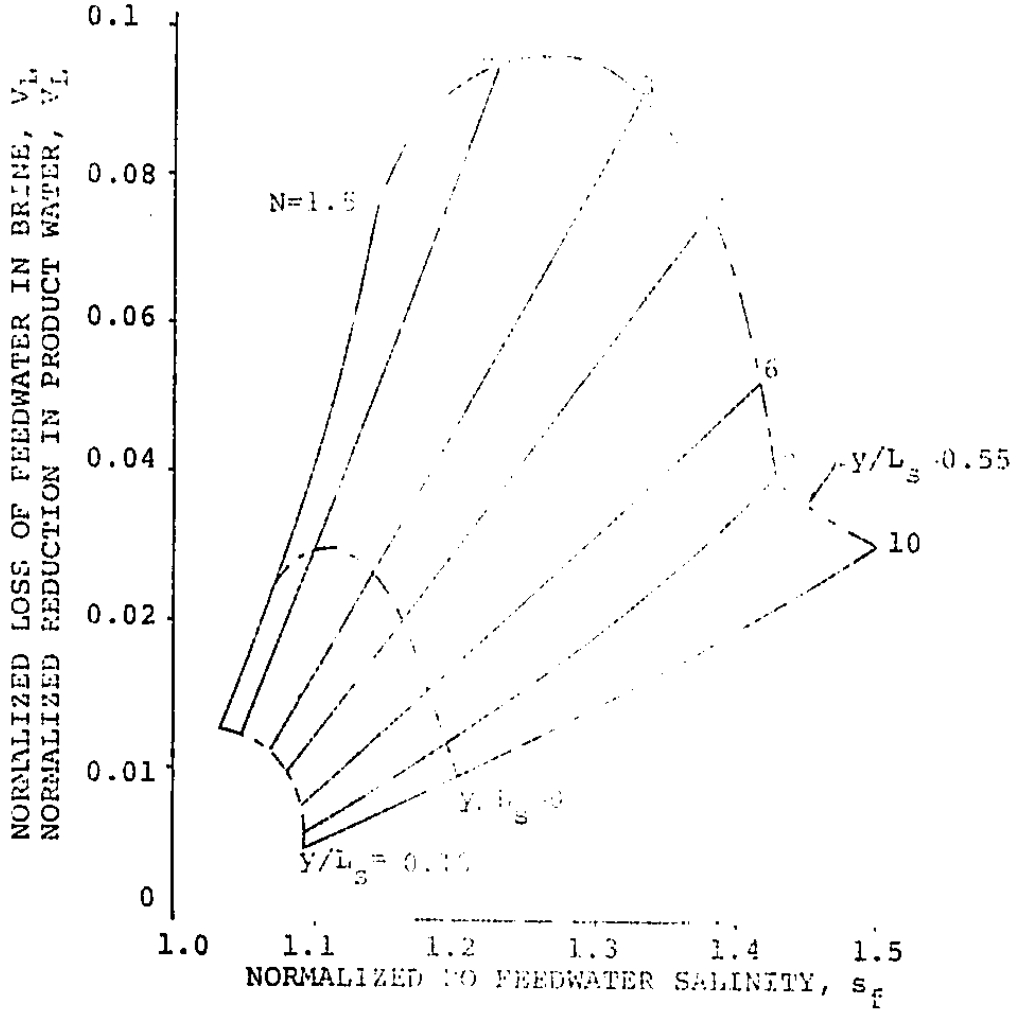

Figure 13. Normalized Loss of Feedwater in Brine and Normalized Reduction in Product Water Vs. Normalized RO Feedwater Salinity

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TABLE 2. CONSTANTS OF PROPORTIONALITY USED FOR RELATING EQUIVALENT LENGTHS TO DIAMETERS FOR VALVES AND FITTINGS

Item	Constant [1]
Operated valve (2-port)	2.75
Check valve	2 to 10 [2]
U-Bend	3.96 [3]
Elbow	2.75
Tee	2.75

[1] Equivalent length in ft = constant x diameter in inches

[2] Value used in analysis: 5

[3] Gives difference between actual and equivalent lengths

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TABLE 3. QUANTITIES[1] OF VALVES, FITTINGS, AND CONNECTING PIPING PER FLOW CIRCUIT FOR PRESSURE DROP COMPUTATIONS FOR 2-TUBE WORK EXCHANGER

Item	Per Flow Circuit
Connecting piping, ft.	20
Operated valves	1
Check valves	1
U-Bends	1
Elbows	8
Tees	6

1. Note that these quantities are for pressure drop computations. Actual quantities in the system are greater, since closed valves and associated piping are not included in pressure drop computations.

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where L_e is the equivalent length of all fittings, valves and associated piping exclusive of the exchanger tubes. Also included in L_e is the difference between the equivalent and actual lengths of the U-bends. This permits inclusion of the actual U-bend length in L_t, the exchanger tube length.

The value of L_e is computed as

$$L_e = L_c + d \sum nc \quad \text{ft} \tag{16}$$

where L_c is the length of connecting piping, c is the constant for a valve or fitting, and n is the number of valves or fittings. For the values given in Tables 2 and 3 the value of L_e is

$$L_e = 20 + 50d \quad \text{ft} \tag{17}$$

Noting that the average velocity, v, in Equation 1 is equal to the volumetric flow rate divided by the cross-sectional area, Equation 1 may be written in the form

$$\Delta P = K \frac{Q^2}{d^5} (L_e + L_t) \quad \text{psi} \tag{18}$$

where K is a constant for specified values of f, ρ, g. As indicated by Equation 16, L_e is a linear function of d. Thus, Equation 18 indicates that, for a given value of Q, ΔP decreases as d increases, and increases as L_t increases.

3.7 Valve Timing

The valve timing has been discussed in section 3.5 with respect to the cut-off ratio. As indicated there the valve timing interval should be selected so that the feedwater slug length, L_s, is equal to the exchanger tube length, L_t, in order to minimize the effects of mixing. For this condition, the relationship between L_t and the valve timing interval, Δt, is

$$L_t = v\Delta t = 0.408 \frac{Q}{d^2} \Delta t \quad \text{ft} \tag{19}$$

The valve timing interval, Δt, includes three sub-intervals:

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(1) Acceleration interval as valve is opened
(2) Steady state flow interval
(3) Deceleration interval as valve is closed

Figure 14 illustrates schematically the volumetric flow rates as functions of time for the two tubes of a 2-tube work exchanger. Assuming that the acceleration and deceleration rates are approximately equal and constant during opening and closing of the valves, the steady state flow rate, Q', and the average flow rate, Q, are related by the equation

$$Q\Delta t = Q'(\Delta t - 2\Delta t') + 2\,\frac{Q'}{2}\,\Delta t' \qquad (20)$$

Simplification of Equation 20 gives

$$Q' = Q\,\frac{\Delta t}{\Delta t - \Delta t'} \text{ gpm} \qquad (21)$$

The valve operating time, $\Delta t'$, depends on valve size and type of operator, typically ranging from about 1 second for small valves to about 5 seconds for 6-inch valves.

In general, the valve timing interval, Δt, should be large relative to the valve operating time, $\Delta t'$, in order to minimize the effects of acceleration and deceleration energy losses and flow interruptions. The timing interval should also be large to minimize valve wear and energy required to operate the valves.

3.8 Power Requirement for Valve Operation

The 2-port valves assumed for this study are of the trunnion ball valve type. The energy required to effect closing or opening of a ball valve is the product of the average torque and the angle of rotation in radians. The torque is dependent on the diameter and may be expressed as

$$T = ad^b \text{ lb-ft} \qquad (22)$$

where a and b depend on the make and design of the valve. Assuming a pneumatic valve operator, the input work rate

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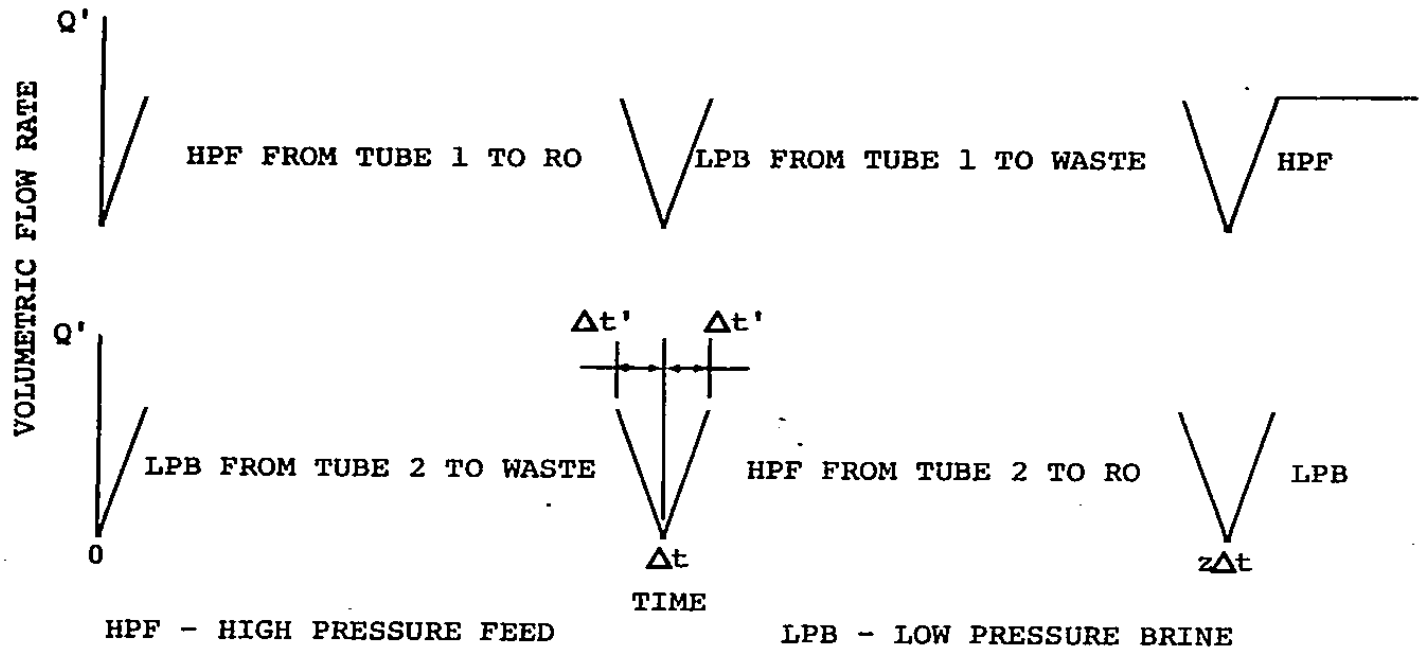

Figure 14. Effect of Valve Timing on Flow in Tubes of 2-Tube Work Exchanger

at the air compressor may be approximated as

$$W_v = \frac{\phi a d^b}{\eta_o \eta_c} \left(\frac{60}{\Delta t}\right) \quad \text{ft-lb/min} \qquad (23)$$

where ϕ is the angle of rotation in radians, η_o is the operator efficiency, and η_c is the compressor efficiency. For even the largest valves under consideration W_v is of the order of only a few hundred ft-lb/min, i.e. a small fraction of one horsepower and therefore negligibly small relative to the flow work content of the brine stream.

3.9 Efficiency of Flow Work Transfer

The flow work available in a brine stream leaving an RO module is

$$W_d = 19.25Q(P_d - P_b) \quad \text{ft-lb/min} \qquad (24)$$

where P_d is the pressure of brine discharged from the RO module and P_b is the pressure of brine discharged from the work exchanger (See Figure 2).

The flow work recovered is W_d minus the flow work losses due to pressure drop in the work exchanger, and minus the energy required to operate the valves. Two equal pressure drop losses must be considered. The first is the loss due to the pressure drop during the part of the cycle in which feedwater is discharged from the exchanger to the RO module at high pressure. The second is the loss due to the pressure drop during the part of the cycle in which brine is discharged from the exchanger to waste disposal. Thus

$$\Delta P = P_d - P_s = P_f - P_b \quad \text{psi} \qquad (25)$$

where ΔP is as given by Equation 18, P_s is the pressure of the feedwater slugs discharged from the exchanger to the RO module, and P_f is the pressure of the feedwater supplied to the work exchanger.

The pressure drop losses are then

$$W_1 = W_h = 19.25\ Q\Delta P \quad \text{ft-lb/min} \qquad (26)$$

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where W_l is the loss during the low-pressure part of the cycle and W_h is the loss during the high pressure part of the cycle.

The work exchanger efficiency is then

$$\eta_e = \frac{W_d - W_l - W_h - W_v}{W_d} \qquad (27)$$

This may be simplified for the present analysis by noting that W_v, the work rate for valve operation is extremely small relative to W_d and may be dropped with negligible error. The result is

$$\eta_e = \frac{W_d - W_l - W_h}{W_d}$$

$$= \frac{P_d - P_b - 2\Delta P}{P_d - P_b}$$

$$= \frac{P_s - P_f}{P_d - P_b} \qquad (28)$$

3.10 Pump Power

Using the brine flow rate, Q, as a basis, and assuming no work exchanger, the rate of energy transfer from the high pressure pump to the feedwater would be

$$W_{hp} = 19.25QN(P_r - P_f) \quad \text{ft-lb/min} \qquad (29)$$

where P_r is the inlet pressure for the RO module.

The addition of a work exchanger results in a reduction in the required high pressure pump power, but requires the addition of a booster pump (See Figure 2). The energy transfer rates to the feedwater for these two pumps are

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$$W'_{hp} = 19.25Q \frac{N-s_f}{s_f} (P_r-P_f) \text{ ft-lb/min} \qquad (30)$$

$$W_{bp} = 19.25Q(P_r-P_s) \text{ ft-lb/min} \qquad (31)$$

where W'_{hp} is the energy transfer rate for the high pressure pump, using a work exchanger, W_{bp} is the energy transfer rate for the booster pump, and N and s_f are normalized salinities, as previously defined.

The sum $W'_{hp} + W_{bp}$ is the total rate of energy input to the feedwater in the case of using a work exchanger.

The reduction in energy input rate is

$$W_r = W_{hp} - (W'_{hp} + W_{bp})$$

$$= 19.25Q\left[N(1-\frac{1}{s_f})(P_r - P_f) + (P_s-P_f)\right] \text{ ft-lb/min} \qquad (32)$$

The energy recovery rate for the work exchanger is

$$W_e = W_d - W_1 - W_h = 19.25Q(P_s-P_f) \text{ ft-lb/min} \qquad (33)$$

The difference between W_r and W_e is

$$W_r-W_e = 19.25QN(1-\frac{1}{s_f})(P_r-P_f) \text{ ft-lb/min} \qquad (34)$$

The reason for this difference is the effect of mixing in the work exchanger on the relative flows through the high pressure pump and the booster pump. If there were no mixing, s_f would be unity and the difference would be zero.

3.11 Specific Energy Requirement for Product Water

Without the use of energy recovery the specific energy requirement for the product water may be expressed as

$$E = \frac{0.000378}{\eta_p} \quad \frac{W_{hp}}{(N-1)Q}$$

$$= \frac{0.00727}{\eta_p} \quad \frac{N}{N-1} \quad (P_r - P_f) \text{ Kwhr/Kgal} \qquad (35)$$

where η_p is the overall efficiency of the pump and driver.

Using the work exchanger in conjunction with the RO module reduces both the energy input rate and the product water rate. The specific energy with the use of the work exchanger is

$$E' = \frac{0.000378}{\eta_p} \quad \frac{W'_{hp} + W_{bp}}{\frac{N-s_f}{s_f} Q}$$

$$= \frac{0.00727}{\eta_p} \left[(P_r - P_f) + \frac{s_f}{N-s_f} (P_r - P_s) \right] \text{ Kwhr/Kgal} \qquad (36)$$

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4. ECONOMIC ANALYSIS

4.1 Introduction

The objective of the economic analysis for the work exchanger is to determine the effect of adding a work exchanger to an RO plant on the unit cost of water. Basically, this requires determination of the capital and operating costs for the exchanger and the revised pumping equipment. The desirability of using a work exchanger is determined by whether or not its use decreases the unit cost of the product water from the RO plant.

4.2 Assumptions

For purposes of this analysis the following assumptions are made:

Fixed charge rate	7 to 15 percent
Load factor	0.90
Operating and maintenance cost	10 percent of capital cost per million cycles
Assembly cost	20 percent of material cost

4.3 Capital Cost Centers

The capital cost centers for a work exchanger applied to an RO module are

- Cost of exchanger equipment
- Cost differential for pumps
- Cost of assembling equipment

The second cost center applies when the work exchanger is used in conjunction with an RO module, and reflects the cost adjustment for the addition of a booster pump and a reduction in the high pressure pump capacity.

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Table 4 gives the list of equipment for a 2-tube work exchanger using 2-port valves.

4.3.1 Diameter Dependent Costs

The costs for most of the equipment items shown in Table 4 are dependent on the diamter of piping, valves, fittings. Table 5 shows capital costs for these items. These are representative costs and some variation could be expected if other makes or quotation sources were used. Carbon steel piping and stainless steel valves are assumed. The piping cost would be increased by a factor of about 10 to 15 if stainless piping were used.

4.3.2 Capacity Dependent Costs

The accumulator capacity is dependent on a number of factors, including volumetric flow rate. For a first approximation for parametric analysis the accumulator capacities have been selected approximately equal to the volumetric flow during a period of one-half second. The selected capacities and costs are shown in Table 6.

4.3.3 Timer Cost

The timer for cyclic operation of the exchanger valves is a relatively low-cost item. A cost of $100 has been assumed, based on catalog data.

4.3.4 Pump Cost Differential

The total flow capacity of the booster pump and the high pressure pump when a work exchanger is used is the same as the capacity of the high pressure pump alone when a work exchanger is not used. However, the total power input is less because the booster pump is a low-head pump. In general, increasing the number of pumps for the same total capacity tends to increase the cost.

The function $870[0.001(\text{gpm})(\text{psi})]^{0.9}$, based on data from Reference 10, approximately correlates pumping equipment costs in 1974 dollars, including valves and electrical equipment. This function is used to compute the approximate cost increase resulting from the addition of a booster pump having capacity equal to the RO brine

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TABLE 4. LIST OF EQUIPMENT FOR 2-TUBE WORK EXCHANGER USING 2-PORT VALVES

Item	Quantity	Units
Exchanger tubes	$2L_t$	ft
Connecting piping	50	ft
Operated valves	4	ea
Valve operators	4	ea
Timer	1	ea
Check valves	4	ea
Accumulators	2	ea
U-bends	2	ea
Elbows	16	ea
Tees	12	ea

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TABLE 5. DIAMETER DEPENDENT COSTS

Nominal Diameter in.	Schedule 40 Pipe[1] $/100 ft	Elbow[1] $	Tee[1] $	U-Bend[1] $	2-Port Valve[2] $	Actuator[2] $	Check Valve $
1/2	62	2	7	8	465	300	300[4]
3/4	67	2	7	8	500	300	300[4]
1-1/4	113	4	12	14	896	300	400[4]
1-1/2	131	4	12	14	1186	300	500[4]
2	102	5	14	22	1541	300	624[4]
3	194	10	22	32	2676	300	1092[3]
4	265	15	26	42	5819	500	1690
6	457	22	30	67	10910	1000	2860[4]

1 Based on ASTM Carbon Steel A-53-B for sizes 2 in. to 6 in., A-106-B for sizes less than 2 in., A-234 for fittings. Prices quoted by Industrial Supply Corp., Baltimore, MD, on April 25, 1974.

2 Based on estimates provided by EBV System, Inc., Warwick, RI for stainless steel trunnion valves, June 1974.

3 Based on escalation of values given in Reference 4 for Circle Seal stainless steel check valves.

4 Estimated

TABLE 6. ACCUMULATOR CAPACITY AND COST

Nominal Flow Rate gpm	Nominal Accumulator[1] Capacity Gal.	Cost $
10	1/4	165
50	1	235
100	2-1/2	300
500	5	440
1000	10	613

1 Greer Standard Bladder Type for Water Service (Stainless Steel Port and Phenolic Coated I.D.). Quotations by Airline Hydraulics Corp., Cockeysville, Md. on May 5, 1974.

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flow, and a corresponding reduction in the capacity of the high pressure pump. Because of the approximations involved in these computations the secondary effect of mixing in the work exchanger has not been included. Thus, the computations are based on a nominal concentration ratio of N, rather than the adjusted ratio, N/s_f. Table 7 gives the cost increase as a function of N and the RO inlet pressure, P_r.

4.4 Total Capital Cost

The total capital cost is

$$C_c = C_e + C_p + C_a$$
$$= 1.20(C_e + C_p) \quad \$ \qquad (37)$$

where C_e is the exchanger cost, C_p is the cost increase for pumping equipment, and C_a is the assembly cost, which is estimated as 20 percent of the equipment cost.

The exchanger equipment cost is dependent on the length of the exchanger tubes, L_t, the nominal diameter, d, and the volumetric flow rate, Q. It is computed as the sum of the products of quantities given in Table 4 and units costs given in Tables 5 and 6. The pump cost increase is as given in Table 7.

4.5 Annual Cost

The annualized capital cost is

$$C_{ca} = 0.01\ F\ C_c \quad \$/\text{year} \qquad (38)$$

where F is the fixed charge rate in percent.

The annual operating and maintenance cost, at 90 percent load factor, is defined as

$$C_{om} = (0.1C_c)(\text{Cycles/year})(10^{-6})$$
$$= C_c \left[\frac{(365)(24)(3600)(0.9)}{2\Delta t}\right](10^{-7})$$
$$= 1.42\ \frac{C_c}{\Delta t} \quad \$/\text{year} \qquad (39)$$

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TABLE 7. COST INCREASE FOR PUMPING EQUIPMENT

BRINE FLOW Q gpm	NOMINAL CONCENTRATION RATIO N	NOMINAL PLANT CAPACITY 0.00144(N-1)Q MGD	COST INCREASE P_r=500 psig $1000	P_r=1000 psig $1000	P_r=1500 psig $1000
10	2	0.014	0.5	0.9	1.4
	5	0.058	0.8	1.6	2.3
	10	0.130	1.1	1.9	2.8
50	2	0.072	2.2	3.9	5.7
	5	0.288	3.6	6.6	9.5
	10	0.648	4.5	8.2	11.9
100	2	0.144	3.9	7.4	10.7
	5	0.576	6.6	12.3	17.8
	10	1.296	8.2	15.5	22.2
500	2	0.720	16.7	31.4	45.1
	5	2.88	28.2	52.8	75.9
	10	6.48	35.3	65.8	94.7
1000	2	1.44	31.4	58.3	84.2
	5	5.76	52.8	98.3	141.6
	10	12.96	65.8	122.5	176.7

since this cost is assumed to be equal to 10 percent of the capital cost per million cycles, and one cycle period is equal to $2\Delta t$, Δt being the valve timing interval in seconds.

4.6 Cost Differential for Product Water

From Equations 35 and 36 the reduction in specific energy for an RO plant as a result of a work exchanger is

$$\Delta E = E - E' = \frac{0.00727}{\eta_p}\left[\frac{P_r - P_f}{N-1} - \frac{s_f(P_r - P_q)}{N - s_f}\right] \text{Kw-hr/Kgal} \quad (40)$$

This represents a reduction in the unit cost of water, $\bar{C}_w$, in the amount of

$$\Delta\bar{C}_{wd} = \Delta E\ \bar{C}_k \quad ¢/\text{Kgal} \quad (41)$$

where $\bar{C}_k$ is the cost of electric energy in ¢/Kw-hr.

Offsetting this cost reduction is a cost increase due to the capital and operating costs of the work exchanger and revised pumping equipment. This cost increase is

$$\Delta\bar{C}_{wi} = \frac{C_c(0.01F + 1.42/\Delta t)(100)(1000)}{\frac{N-s_f}{s_f}\ Q\ (60)(24)(365)(0.9)}$$

$$= 0.211\ \frac{C_c(0.01F + 1.42/\Delta t)s_f}{(N-s_f)Q} \quad ¢/\text{Kgal} \quad (42)$$

The water cost differential as a result of using the work exchanger is then

$$\Delta\bar{C}_w = \Delta\bar{C}_{wi} - \Delta\bar{C}_{wd} \quad ¢/\text{Kgal} \quad (43)$$

A negative value of $\Delta\bar{C}_w$ indicates that use of the work exchanger is economically justifiable, whereas a positive value indicates that it is not economically justifiable.

5. PARAMETRIC ANALYSIS

5.1 Input Parameter Values

The physical system analysis in Chapter 3 and the economic analysis in Chapter 4 have indicated numerous controlling parameters. In order to obtain a tractable parametric analysis specific values were selected for certain parameters and ranges were selected for others. Table 8 lists the parameter values and ranges used in the analysis. As noted in the table a basic assumption was that the tube length and the fluid slug length were equal, corresponding to a cut-off ratio of $y/L_s = 0.18$.

5.2 Computer Program

A computer program was written to solve the sets of equations developed in Chapter 3 and 4. Using the input data from Tables 4 through 7, 3402 solutions were generated for various combinations of the parameter values given in Table 8. The program and the computer printout are given in the Appendix. The last column of the printout gives the net change in the cost of product water from an RO plant using a work exchanger. A positive value indicates an increase in water cost and negative value indicates a decrease in water cost.

As indicated by the printout,certain combinations of parameters proved to be impractical due to excessive pressure drop in the work exchanger. Others resulted in net increases in water cost and would therefore be undesirable. Of the combinations which resulted in a net decrease in water cost, many would be improbable in an RO context, but were included for computational convenience.

The following sections provide discussions of the results of the parametric analysis. Many of the results obtained are, of course, dependent on assumptions made in the development of the physical system and economic equations, and are therefore not absolute. Although the printout includes results for nine different combinations of RO inlet pressure, P_r, and normalized

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TABLE 8. INPUT PARAMETER VALUES

Basic Assumption: Tube Length = Fluid Slug Length ($L_t = L_s$, $y/L_s = 0.18$)

Parameter	Symbol	Values Used	Units
Brine Flow Rate	Q	10,50,100,500,1000	gpm
Tube Inside Diameter (Actual)	d	0.622,0.824,1.380, 2.067,3.068,4.026, 6.065	in.
RO Inlet Pressure	P_r	500,1000,1500	psig
RO Brine Discharge Pressure	P_d	450,900,1350	psig
Normalized Salinity Ratio	N	2,5,10	
Valve Timing Interval	Δt	20,40,60	sec
Fixed Charge Rate	F	7,11,15	%
Electric Energy Cost	$\overline{C}_k$	2,4,6	¢/Kw-hr
Overall Pump Efficiency	η_p	0.60	
Exchanger Brine Discharge Pressure	P_b	20	psig

concentration ratio, N, some of these are improbable, and only five are used in the following discussions. These are:

P_r, psig	N
500	5,10
1000	2,5
1500	2

5.3 RO Product Water Capacity

For an RO module coupled to a work exchanger the product water rate is $Q(N-s_f)/s_f$ gpm. Table 9 gives the computed capacities, converted to MGD, for the values of Q and N which were used in the analysis. For these values the plant capacity ranges from 0.01 to 11.66 MGD. The values are somewhat lower than the nominal values given in Table 7 because the mixing effect in the exchanger results in a normalized salinity greater than 1 at the RO module inlet.

5.4 Normalized Salinities

The computed normalized salinities resulting from the use of a work exchanger are given in Table 10. These are based on the condition that the tube length and the fluid slug length are equal, and on the normalized feed salinity at the plant boundary being equal to 1. For these conditions the table indicates that the effect of adding the work exchanger is to increase the normalized salinity at the RO module inlet and to decrease the concentration ratio, which is equal to the normalized waste brine salinity for a feed salinity of 1 at the plant boundary. These effects increase with increasing N, ranging from 5 percent at N=2, to about 10 percent at N=10.

TABLE 9. PRODUCT WATER CAPACITIES FOR RO PLANTS USING WORK EXCHANGERS

Q	N = 2	N = 5	N = 10
gpm	MGD	MGD	MGD
10	0.01	0.05	0.12
50	0.06	0.26	0.58
100	0.13	0.52	1.17
500	0.65	2.59	5.83
1000	1.30	5.18	11.66

TABLE 10. NORMALIZED SALINITIES*

Concentration Ratio (=Normalized Waste Brine Salinity)			
Without Exchanger, N	2.00	5.00	10.00
With Exchanger, s_b	1.90	4.60	9.10
Salinity at RO Module Inlet			
Without Exchanger	1.00	1.00	1.00
With Exchanger, s_f	1.05	1.09	1.10

* Based on condition that tube length = fluid slug length, and on normalized feed salinity at plant boundary = 1.

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TABLE 11. LENGTH PER EXCHANGER TUBE

Q gpm	Nominal Diameter in.	Δt, sec 20	40	60
		ft	ft	ft
10	3/4	120	240	361
50	2	95	191	286
100	2	191	382	573
500	6	111	222	333
1000	6	222	444	666

TABLE 12. WORK EXCHANGER EFFICIENCY

Q gpm	Nominal Diameter in.	Δt = 40 sec P_r, psig 500	1000	1500
10	3/4	η_e	η_e	η_e
10	3/4	0.87	0.94	0.96
50	2	0.98	0.98	0.99
100	2	0.79	0.90	0.93
500	6	0.97	0.99	0.99
1000	6	0.85	0.93	0.95

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5.5 Work Exchanger Efficiency

The work exchanger efficiency is a measure of the fraction of the brine steam energy content which is transferred to the feed stream, and as defined by Equation 28, is primarily determined by the pressure drop losses. This neglects minor energy losses for valve operation and acceleration/deceleration of fluids. The pressure drop losses increase with increasing exchanger tube lengths, which in turn, increase as the valve timing interval increases.

Table 11 gives lengths per exchanger tube for selected tube diameters and the values of Q and Δt used in the analysis. Table 12 gives corresponding efficiency values for Δt = 40 seconds, and for the three RO module inlet pressures used in the analysis. A smaller Δt would give higher efficiencies, but as will be shown later, a value of at least 40 seconds is desirable for economic reasons.

5.6 Reduction in Specific Energy

The reduction in specific energy required for RO water production as a result of using a work exchanger is primarily dependent on the RO module inlet pressure, P_r, the normalized salinity ratio, N, and the efficiency. There is also a slight dependency on the valve timing interval. Figure 15 shows these effects for the case of a 100 gpm exchanger using 2 in. tubes. Reductions on the order of 15 Kw-hr/Kgal are indicated for P_r = 1500 psig and N = 2, whereas at P_r = 500 psig and N = 10, the reduction is on the order of 0.5 Kw-hr/Kgal. The results shown in Figure 15 apply approximately to other flow rate and pipe diameter combinations with efficiency values similar to those for the 100 gpm/2 in. combination.

As indicated in the economic analysis the product of the reduction in specific energy and the unit cost of electric energy gives a reduction in the unit cost of water. Offsetting this is an increase in the unit cost of water due to the capital and operating costs of the work exchanger and the revised pumping equipment. The difference between these two effects determines the net change in the unit cost of water.

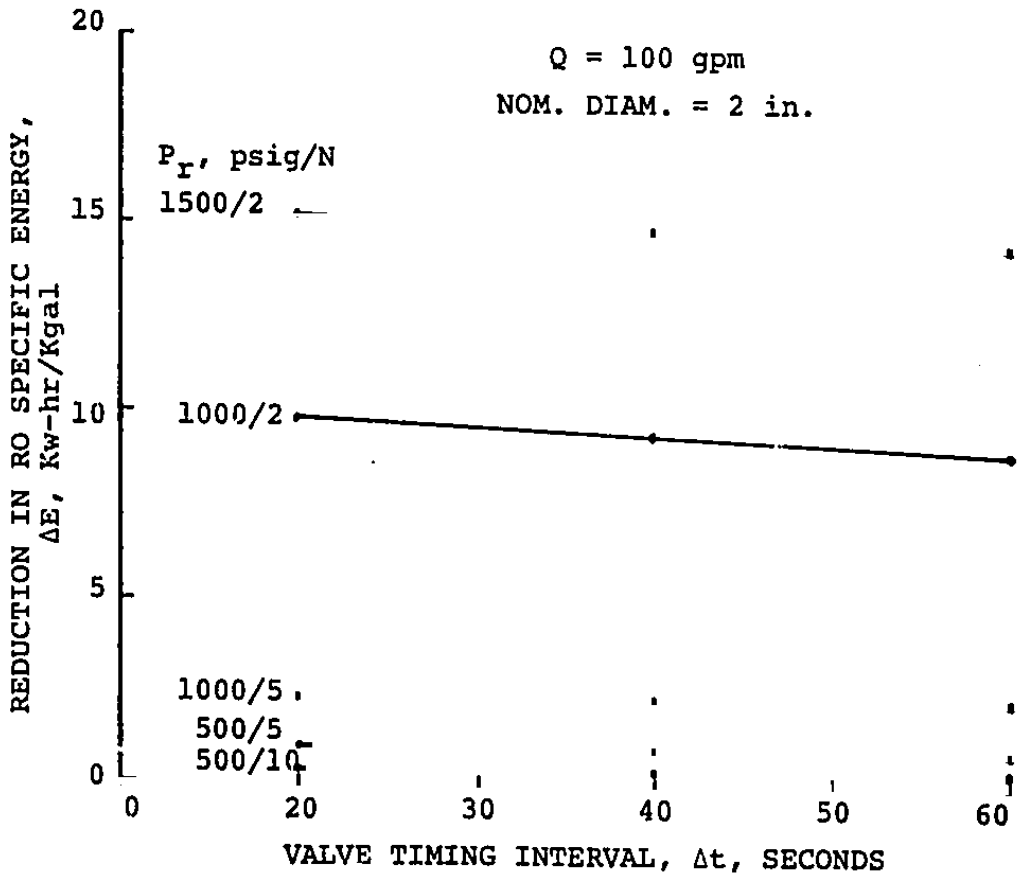

Figure 15. Reduction in Specific Energy for RO Plant as a Result of Using Work Exchanger

5.7 Effect of Tube Diameter on Net Reduction in Water Cost

In the analysis various combinations of brine flow rate, Q, and tube diameter were considered. For a given flow rate, increasing the tube diameter decreases the pressure drop losses while increasing the capital cost. As a result, there is an optimum tube diameter for each selected flow rate,* in the sense of maximizing the net reduction in the unit cost of product water. For a given flow rate the optimum diameter is slightly sensitive to the unit cost of electric energy and the valve timing interval in addition to pressure drop and capital cost effects.

Figure 16 shows the effect of tube diameter on net reduction in the unit cost of water for an electric energy cost, $\bar{C}_k$, of 2¢/Kw-hr, N=2, Δt=40 sec, and fixed charge rate F=11 percent. Values are shown for RO module inlet pressures of 1500 and 1000 psig. For indicated parameter values the optimum diameters are

Q, gpm	10	50	100	500	1000
Nominal Diameter, in.	3/4	2	2	6	6

As indicated by the figure the difference between 2 and 3 in. diameters for 100 gpm, and between 4 and 6 in. for 500 gpm are fairly small. Increasing the cost of electric energy tends to move the optimum from 2 in. to 3 in. for 100 gpm. Decreasing Δt tends to move the optimum from 6 in. to 4 in. for 500 gpm.

5.8 Effect of Valve Timing Interval on Net Reduction in Water Cost

The effect of the valve timing interval is strongly dependent on the assumption made in Section 4.2 that the operating and maintenance cost is dependent on the number of cycles. This makes the annual operating and maintenance cost inversely proportional to the valve timing

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* A more precise, but also more complex, approach would be to determine the optimum flow rate for each tube diameter.

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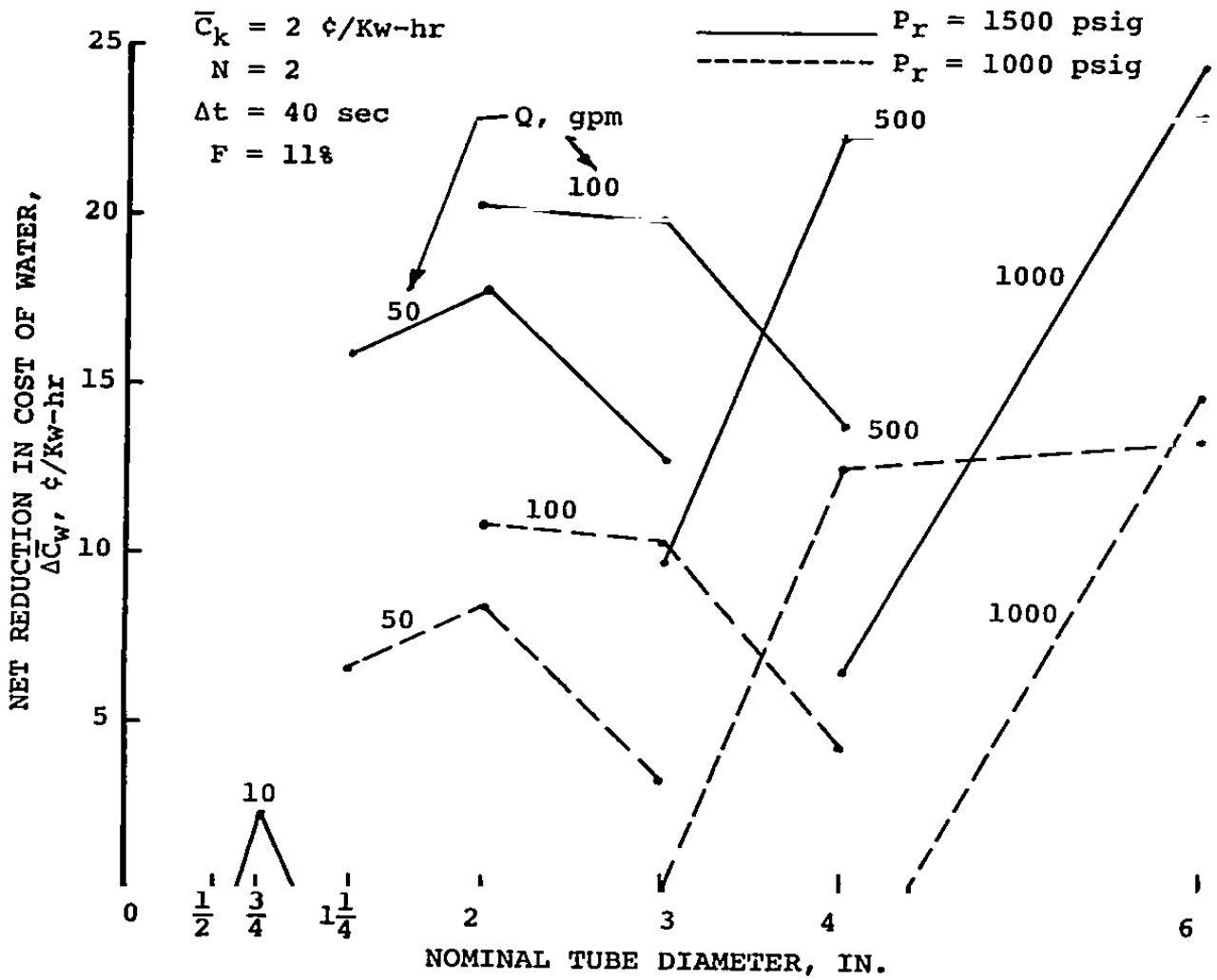

Figure 16. Effect of Tube Diameter on Net Reduction in Unit Cost of Water for Indicated Parameter Values

interval, Δt (see Equation 39). Thus increasing Δt decreases the O&M cost associated with the work exchanger. Offsetting this are the increase in capital cost and the decrease in efficiency as Δt increases. The optimum Δt, in the sense of maximizing the net reduction in unit water cost, depends not only on the factors just mentioned, but also on the unit cost of electric energy.

Figure 17 shows the effect of the valve timing interval on the net reduction in the unit cost of water for an electric energy cost of 2¢/Kw-hr, N=2, and F=11 percent. The optimum is seen to fall in the 40 to 60 second range, with 40 seconds being a satisfactory choice for most of the cases illustrated.

5.9 Effect of Unit Cost of Electric Energy on Net Reduction in Water Cost

Increasing the unit cost of electric energy increases the net reduction in the unit cost of product water. This is illustrated in Figures 18, 19, and 20 for Q values of 10, 100, and 1000 gpm, respectively. Extrapolation of the lines to the 0 value for net reduction in unit water cost gives the break-even values. These are plotted in Figure 21. Figure 21, as well as Figures 18 through 20, show that the cost-effectiveness increases with increasing exchanger capacity, increasing RO module inlet pressure, and decreasing concentration ratio.

5.10 Effect of Volumetric Flow Rate on Net Reduction in Water Cost

Figure 22 shows the effect of volumetric flow rate on the net reduction in unit water cost for the case of electric energy at 2 ¢/Kw-hr, Δt=40 sec, F=11 percent. This figure illustrates, in another way, that the results improve with increasing volumetric flow rate,.increasing RO module inlet pressure, and decreasing concentration ratio. For the high pressure cases there is a steep rise in the Q=10 to 50 gpm range, and a more gradual rise beyond Q=50 gpm. Thus the larger work exchangers are again seen to be more cost-effective than the smaller ones.

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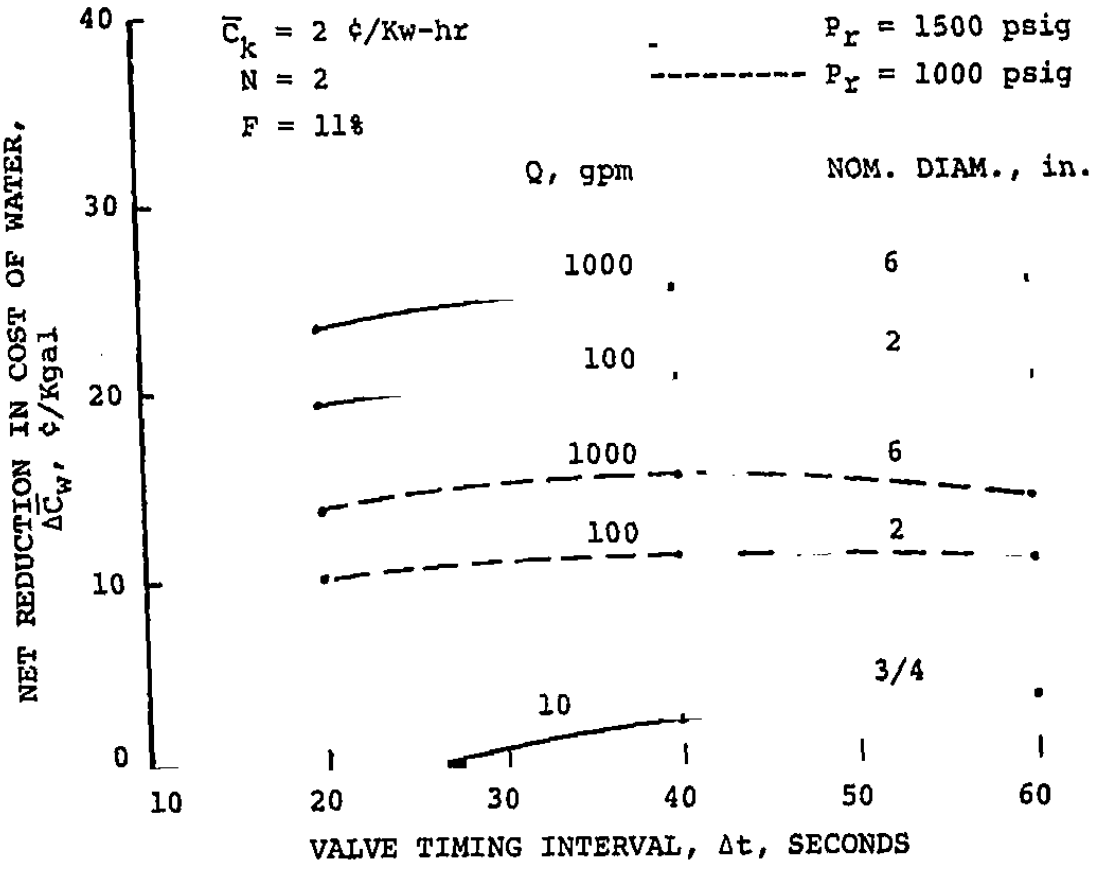

Figure 17. Effect of Valve Timing Interval on Net Reduction in Cost of Water, for Indicated Parameter Values

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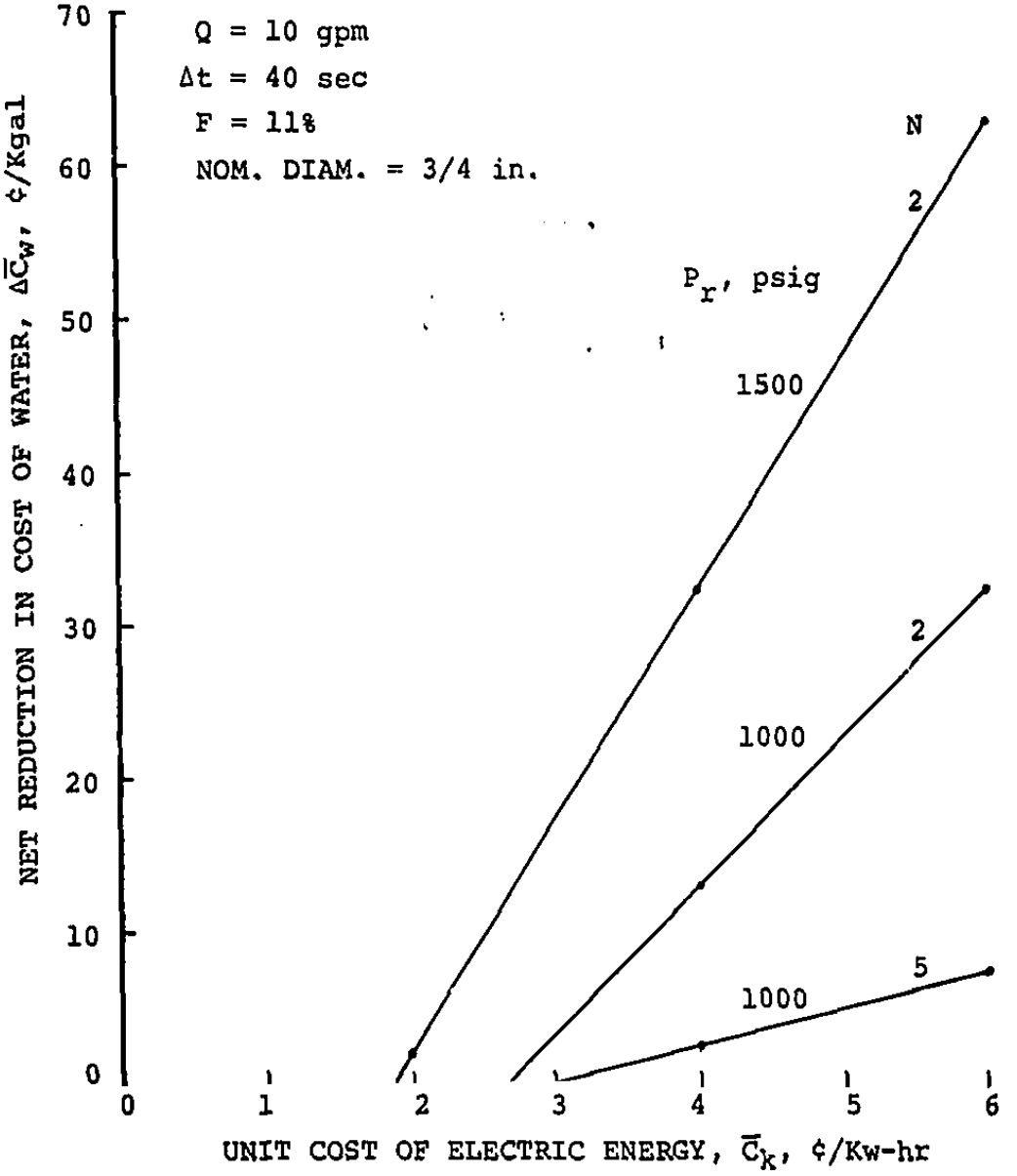

Figure 18. Effect of Unit Cost of Electric Energy on Net Reduction in Water Cost for Indicated Parameter Values

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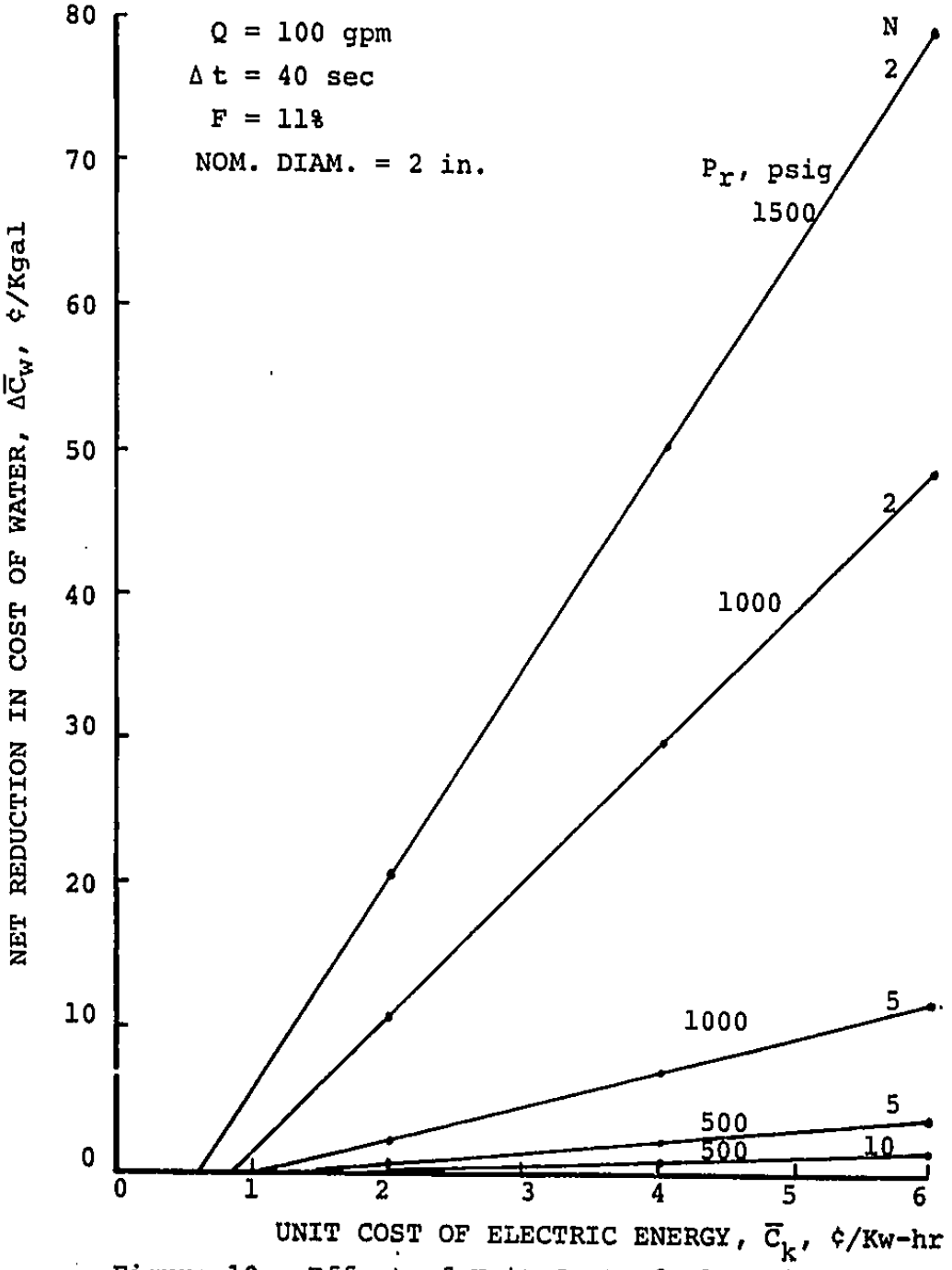

Figure 19. Effect of Unit Cost of Electric Energy on Net Reduction in Water Cost for Indicated Parameter Values

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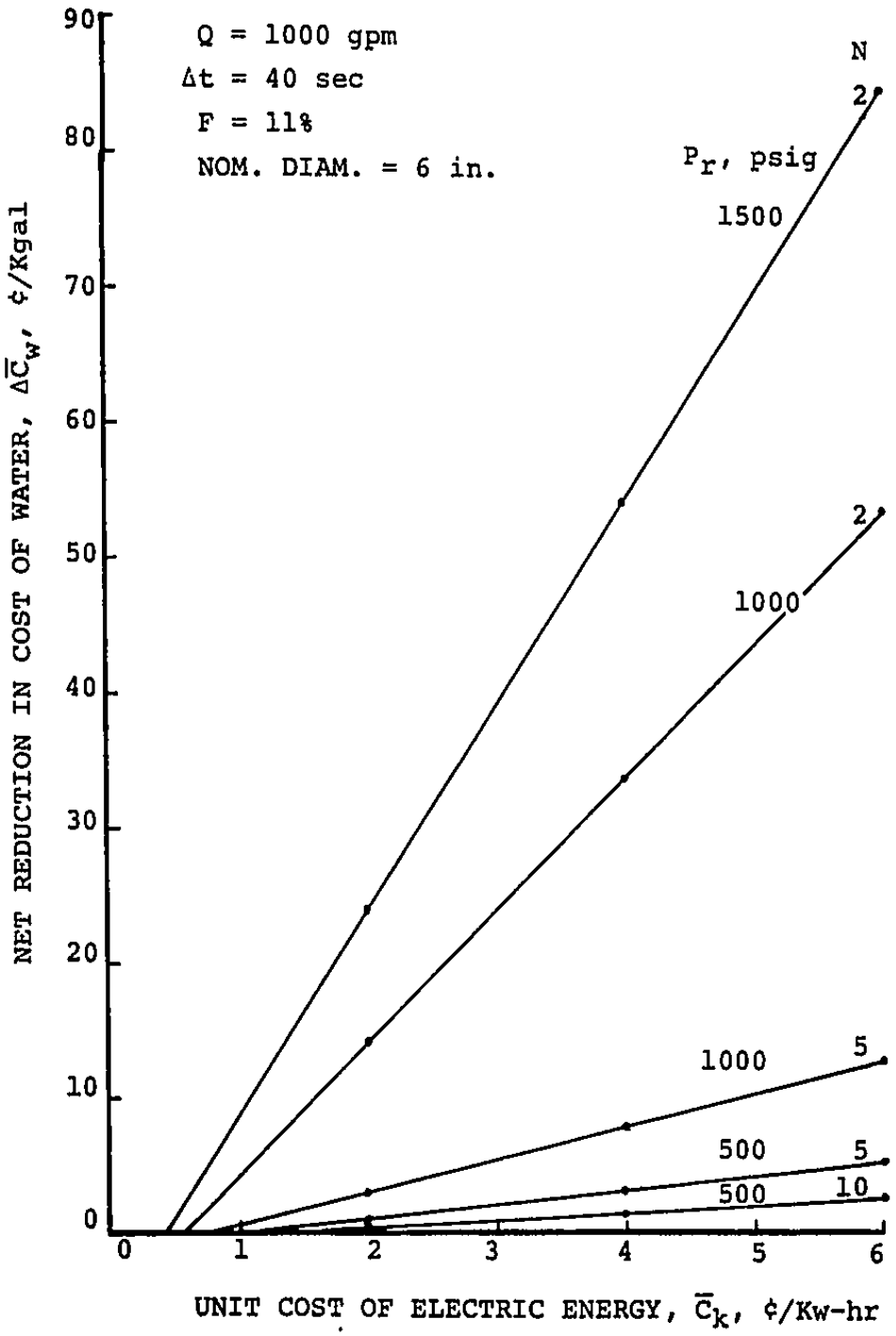

Figure 20. Effect of Unit Cost of Electric Energy on Net Reduction in Water Cost for Indicated Parameter Values

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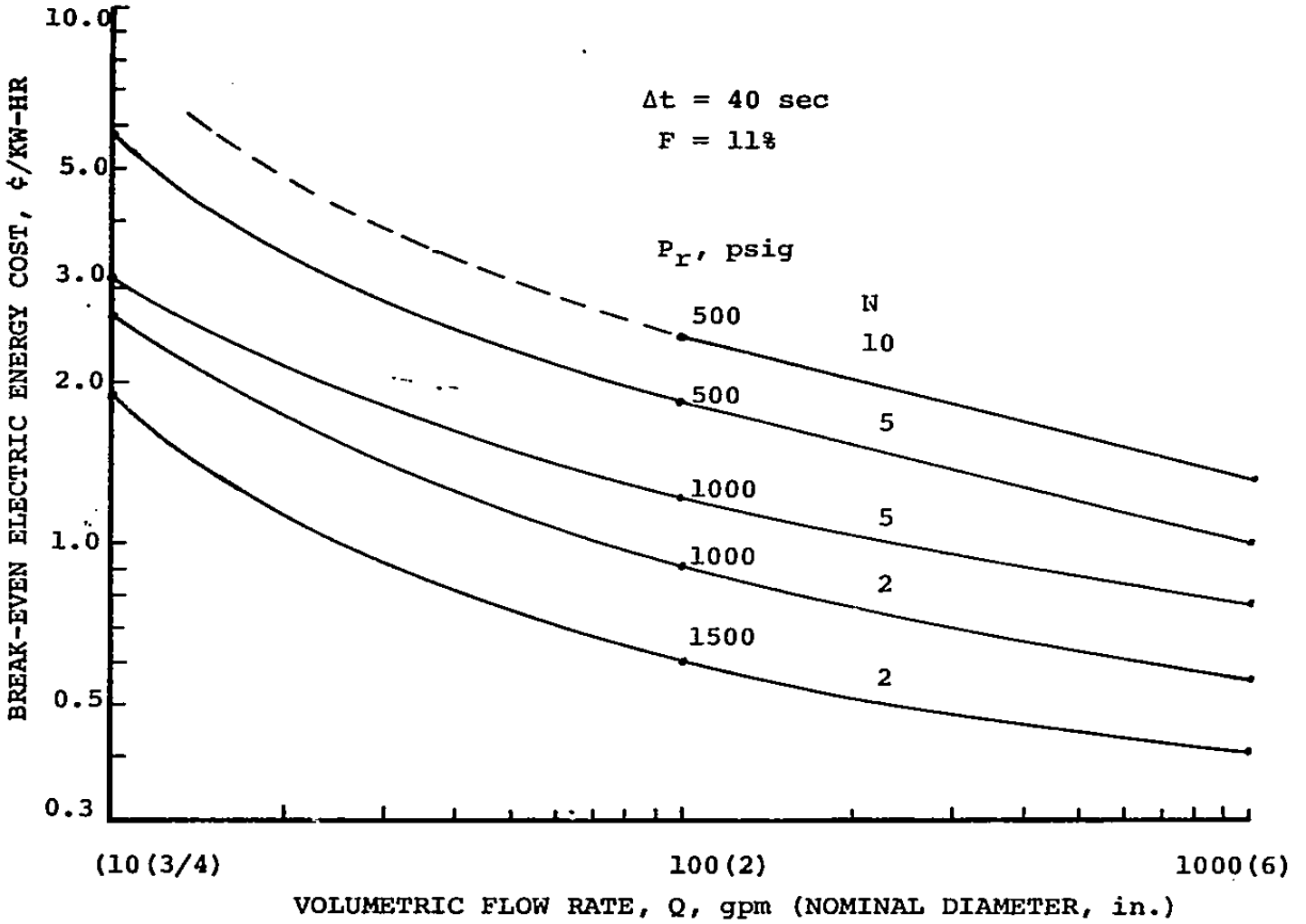

Figure 21. Break-Even Electric Energy Cost for Indicated Parameter Values

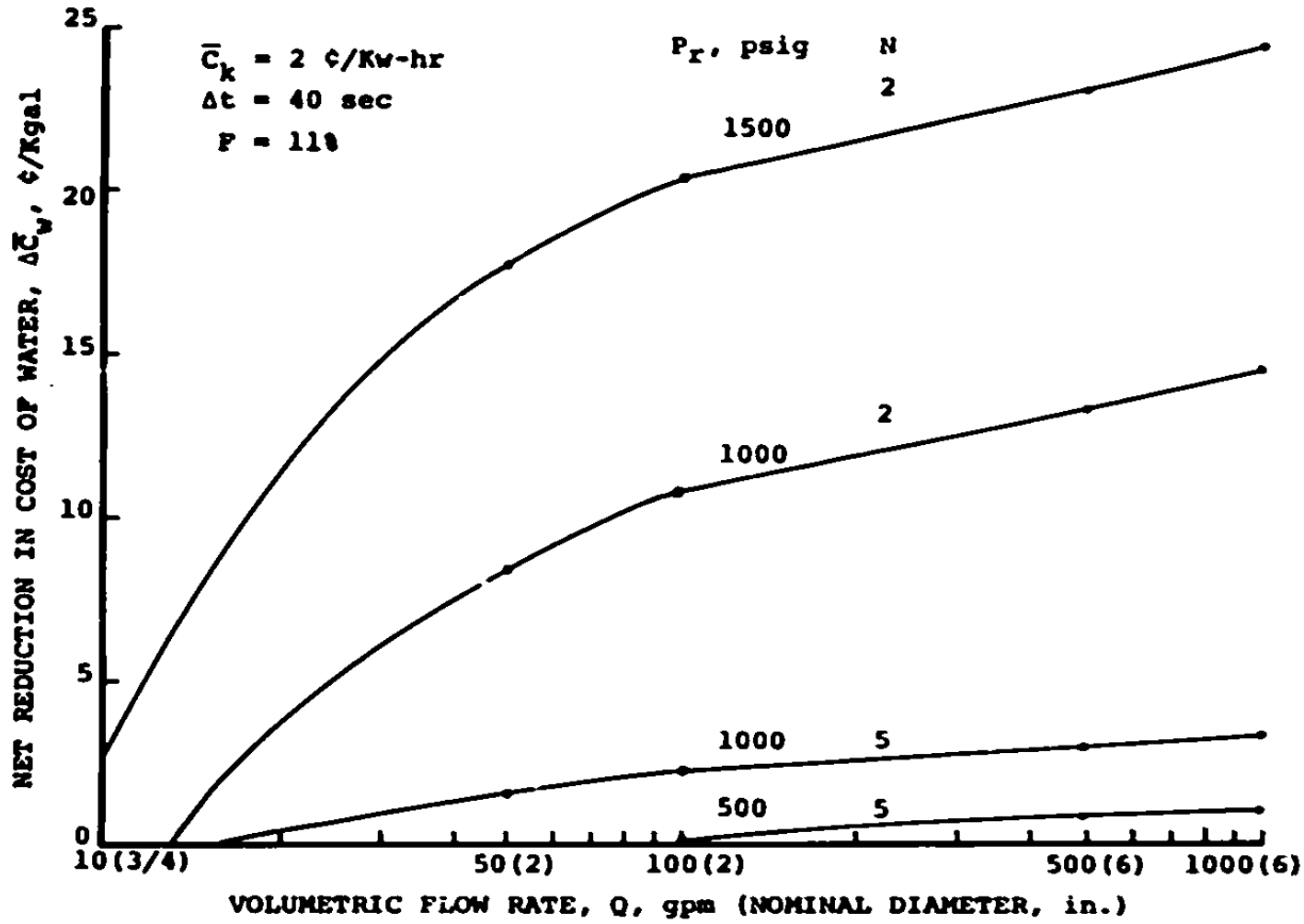

Figure 22. Effect of Volumetric Flow Rate on Net Reduction in Water Cost for Indicated Parameter Values

5.11 Effect of Fixed Charge Rate on Net Reduction in Water Cost

The annualized capital cost increases as the fixed charge rate increases, thereby decreasing the net reduction in unit water cost. This is illustrated in Figure 23 for cases in which Q=100 gpm, Δt=40 sec, $\bar{C}_k$ = 2 ¢/Kw-hr, and the nominal diameter is 2 in.

5.12 Capital Cost

The total capital cost associated with the incorporation of a work exchanger into an RO plant is the cost of the exchanger equipment plus the differential cost for pumping equipment plus the cost of installation. Table 13 gives selected computed values for the exchanger equipment cost, the pumping equipment cost, and the total installed cost. As computed, the exchanger cost is independent of RO module inlet pressure and normalized salinity N, whereas the pumping equipment cost is dependent on both of these (see Table 7). As noted in Chapter 4 the exchanger tubing is assumed to be carbon steel. Use of stainless steel would increase the total capital cost by 20 to 50 percent.

The computed installed capital costs range from $7900 for the 10 gpm, 500 psig, N=10 case to $193,000 for the 1000 gpm, 1000 psig, N=5,case. The corresponding RO product range, from Table 9, would be 0.12 MGD to 5.18 MGD.

5.13 Comparison with Energy Recovery by Hydraulic Turbine

Energy may be recovered from an RO brine stream by the use of a hydraulic turbine driving either a pump or an electric generator. Reference 1 indicates that the use of a turbine-driven pump is economically preferable to the use of a turbine-driven generator.

The hydraulic turbine has an advantage over the work exchanger in that the output from the turbine is shaft power which can be applied directly to the RO high pressure pump, so that there is no need for a booster pump. Thus on a capital cost basis the installed cost of a work exchanger and revised pumping equipment may be compared with the installed cost of a hydraulic turbine plus governor.

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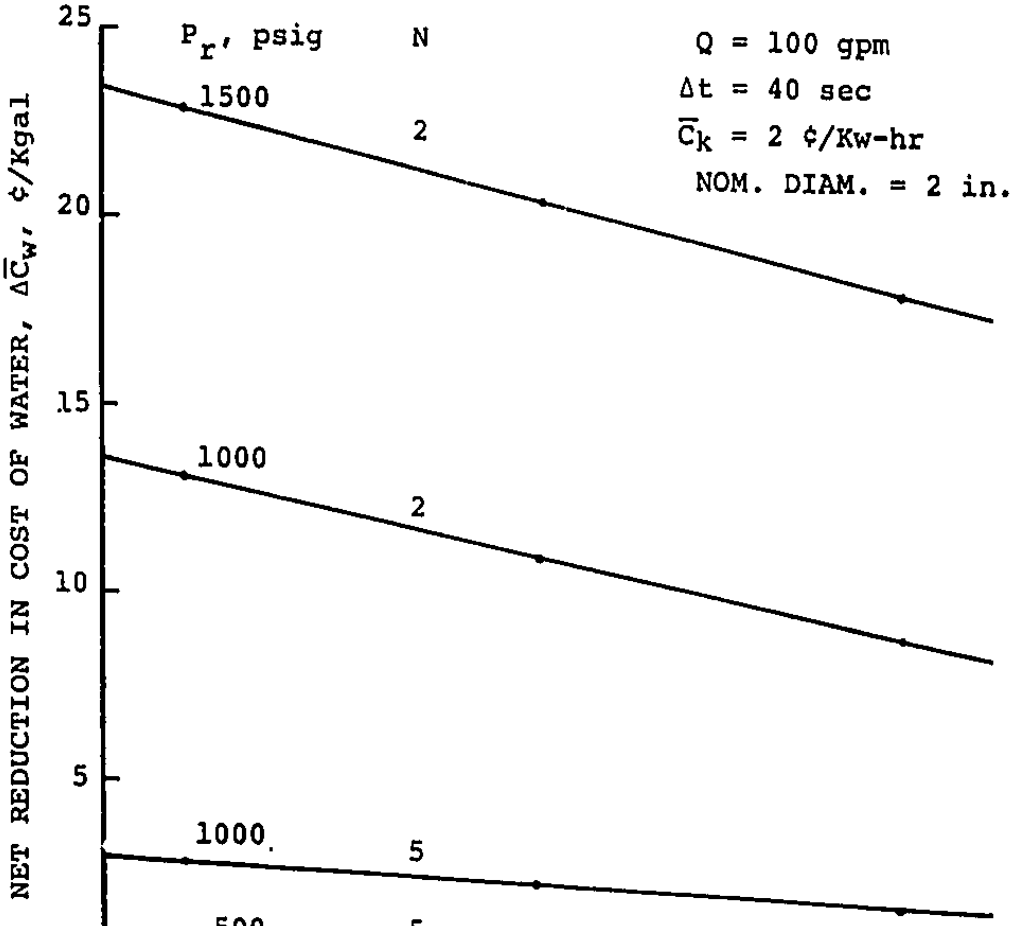

Figure 23. Effect of Fixed Charge Rate on Net Reduction in Water Cost for Indicated Parameter Values

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TABLE 13. CAPITAL COST VALUES

Δt = 40 sec

Q gpm	Nominal Diameter in.	C_e 1000$	P_r=500 psig, N=10 C_p 1000$	P_r=500 psig, N=10 C_c 1000$	P_r=1000 psig, N=5 C_p 1000$	P_r=1000 psig, N=5 C_c 1000$	P_r=1500 psig, N=2 C_p 1000$	P_r=1500 psig, N=2 C_c 1000$
10	3/4	5.5	1.1	7.9	1.6	8.5	1.4	8.3
100	2	11.7	8.2	23.9	12.3	28.8	10.7	26.9
1000	6	62.9	65.8	154.4	98.3	193.4	84.2	176.5

C_e = Exchanger Equipment Cost

C_p = Differential Cost for Pumping Equipment

$C_c = 1.2(C_e + C_p)$ = Total Installed Capital Cost

Reference 1 gives the following correlation for Pelton turbines without governors:

$$\$ = 10{,}300 \left(\frac{BHP}{\sqrt{H}}\right)^{0.398} \qquad (44)$$

where BHP is the brake horsepower and H is the head in feet. Converting this correlation to parameters used in this study gives

$$C_t = 415(Q\sqrt{P_d - P_b})^{0.398}$$

$$= 415(Q\sqrt{0.9\ P_r - 20})^{0.398} \quad \$ \qquad (45)$$

where C_t is the 1969 capital cost for the turbine alone.

Using values given in Reference 1 the cost of a governor may be estimated at about 20 percent of the turbine cost. Allowing for escalation since 1969 would increase the capital cost by about 50 percent. The installed cost is estimated to be about 120 percent of the equipment cost. These changes give

$$C_{tg} = (1.2)(1.5)(1.2)(415)(Q\sqrt{0.9\ P_r - 20})^{0.398}$$

$$= 896(Q\sqrt{0.9\ P_r - 20})^{0.398} \qquad (46)$$

where C_{tg} is the 1974 installed cost of the turbine and governor.

Using data from Table 13 and Equation 46 the installed capital costs for work exchangers and hydraulic turbines are plotted in Figure 24 versus RO brine flow rate. This comparison shows that work exchangers and hydraulic turbines have approximately equivalent installed capital costs for brine flow rates below 100 gpm. Above 100 gpm the work exchangers are seen to be more expensive than the hydraulic turbines. Because of uncertainties in both the costs for the additional pumping equipment in the exchanger systems and the costs for hydraulic turbines, these results are very approximate, of course, and the relative positions of the curves in Figure 24 could vary by ±20 percent if a more accurate cost analysis were made.

HITTMAN

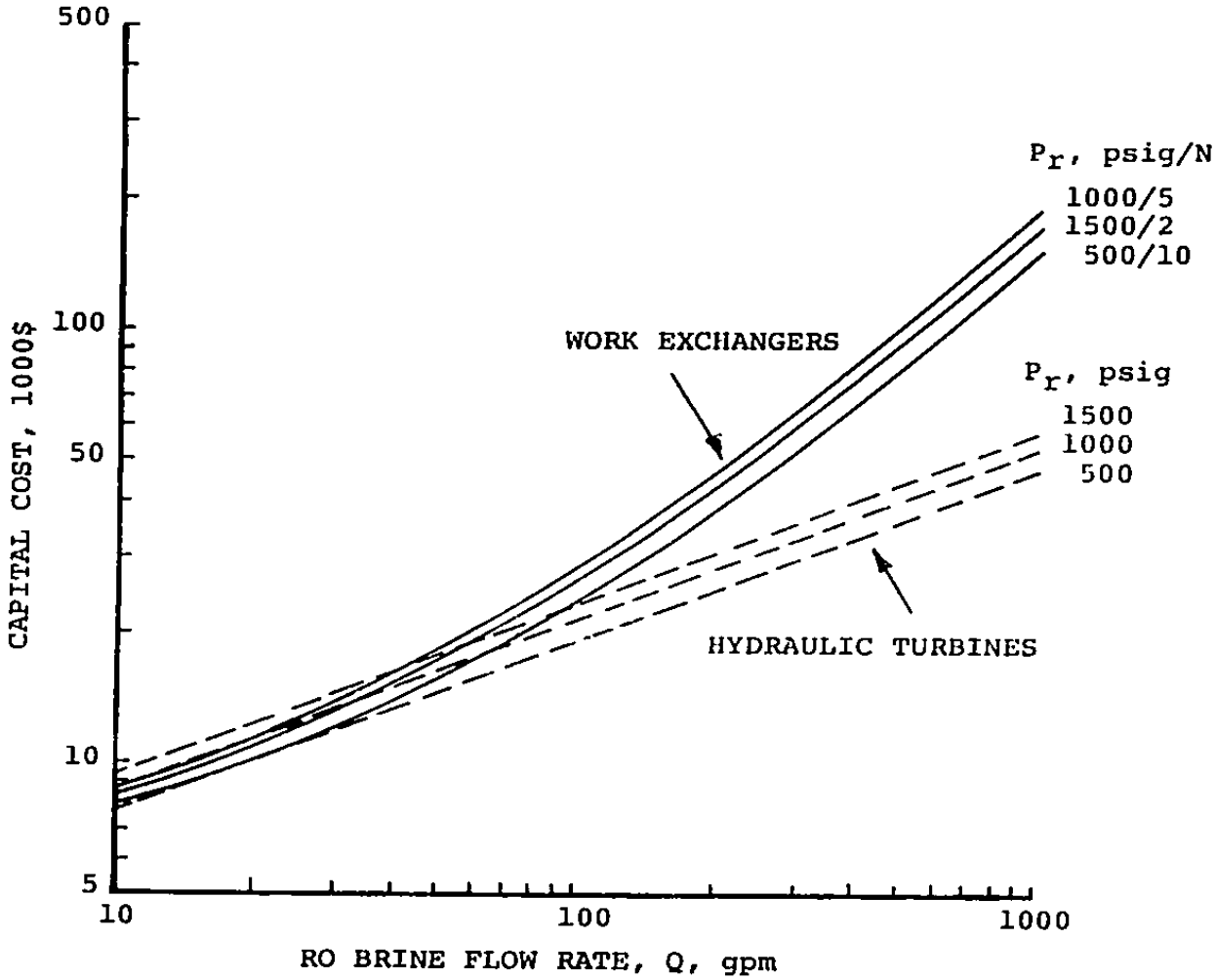

Figure 24. Comparison of Installed Capital Cost for Work Exchangers Vs. Hydraulic Turbines

6. CONCLUSIONS

The results of the parametric analysis show that for the use of work exchangers to recover energy from RO brine discharges the break-even unit cost of electric energy increases as the brine volumetric flow rate decreases, so that the most cost-effective applications are those with high brine flow rates.

An approximate comparison of installed capital costs for work exchangers versus hydraulic turbines shows that hydraulic turbines are economically preferable for high brine flow rates and that the installed capital costs are likely to be approximately equivalent for low brine flow rates.

The work exchanger results were obtained on the assumption that the effect of mixing of brine and feedwater in the exchanger tubes would be held at the optimum value by a suitable feedback control of the valve timing interval. Operation at this condition would probably be difficult to attain in practice. This would not significantly affect the installed capital cost. but would tend to raise the break-even unit cost of electric energy. Also the work exchanger costs are based on the use of carbon steel tubing. The of stainless steel tubing would increase the capital cost by 20 to 50 percent.

The evident conclusion is that direct-contact energy recovery by the use of work exchangers is at best equivalent in cost effectiveness to energy recovery by use of hydraulic turbines for brine flow rates below 100 gpm, and is less cost-effective for flow rates above 100 gpm. The present relationship between the cost of energy (electric or other) for industrial use and the capital cost of equipment probably precludes investments for energy recovery equipment of any type in RO plants with brine flows below 100 gpm, with the possible exception of high-pressure, low-concentration ratio, seawater plants.

Even allowing for the approximate nature of the capital cost computations, further R&D efforts on direct-contact work exchangers for the RO application do not appear to be warranted.

HIDDIMAN

7. REFERENCES

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4. "Development of Flow Work Exchangers for Energy Recovery in Reverse Osmosis Plants," Dynatech R/D Co., OSW R&D Report No. 672, (Interim Report), April 1971.

5. "Development of Flow Work Exchangers for Energy Recovery in Reverse Osmosis Plants," Dynatech R/D Co., OSW R&D Report No. 680 (Final Report), April 1971.

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9. "Flow of Fluids Through Valves, Fittings and Pipe," Crane Technical Paper No. 410, 1972.

10. "Reverse Osmosis Desalination Plant Nomograph Booklet," Report No. HIT-427, prepared by Hittman Associates for OSW, August 1970. (Unpublished)

APPENDIX

COMPUTER PROGRAM AND PRINTOUT FOR PARAMETRIC ANALYSIS

HOOMAN

```
0001          DIMENSION PP(5),BVP(5),CVP(5),UBP(5),ELP(5),TEP(5)
0002          DIMENSION AN(3),CP(5,5,5),ACP(5),CE(5,5), SS(5)
0003          IP=0
0004          IPP=1
0005          KD=1
0006          KP=1
0007          KQ=1
0008          ITAG=2
0009          KK=0
0010          AK=.000343
0011          EFFP=.60
0012          PB=20.
0013          AN(1)=2.
0014          AN(2)=5.
0015          AN(3)=10.
0016          F=7.
0017          DT=20.
0018          CK=6.
0019          PR=500.
0020          DO 50 I=1,5
0021          DO 50 J=1,3
0022          READ(5,21)(CP(I,J,K), K=1,3)
0023     50   CONTINUE
0024          READ(5,23)(SS(I), I=1,3)
0025          WRITE(6,2)
0026          WRITE(6,1)
0027          WRITE(6,3)
0028          WRITE(6,1)
0029          WRITE(6,4)
0030          WRITE(6,1)
0031          WRITE(6,13)
0032          WRITE(6,1)
0033          WRITE(6,5)
0034          WRITE(6,1)
0035          WRITE(6,6)
0036          WRITE(6,1)
0037          WRITE(6,7)
0038          WRITE(6,1)
0039          WRITE(6,8)
0040          WRITE(6,1)
0041          WRITE(6,9)
0042          WRITE(6,14)
0043          WRITE(6,15)
0044          WRITE(6,16)
0045          WRITE(6,17)
0046    600   READ(5,29)Q,ACP(KQ)
0047    500   READ(5,20)D,PP(KD),BVP(KD),CVP(KD),UBP(KD),ELP(KD),TEP(KD)
0048    400   PD=.9*PR
0049          IF(IP .EQ. 0) GO TO 300
0050          IF(IP .EQ. IPP) GO TO 300
0051          GO TO 301
0052    300   WRITE(6,10)Q,D,PR,PD
0053          WRITE(6,70)
0054          WRITE(6,60)
0055          WRITE(6,61)
0056          GO TO 298
0057    301   WRITE(6,11)Q,D,PR,PD
0058          WRITE(6,70)
```

```
0059      298  IP=IP+1
0060           DO 53 I=1,3
0061           SF=AN(I)/(AN(I)-SS(I)+1.)
0062           AMGD=.00144*Q*(AN(I)-SF)/SF
0063           SB=AN(I)+1.-SS(I)
0064           ALE=20.+D*50.2
0065      100  ALT=.408*Q*DT/(D**2.)
0066           DP=AK*(ALE+ALT)*(Q**2.)/(D**5.)
0067           PS=PD-DP
0068           PF=PB+DP
0069           EFF=(PS-PF)/(PD-PB)
0070           IF(EFF .LE. 0.0) GO TO 201
0071           LE(KQ,KD)=((50.+2.*ALT)*PP(KD)+4.*(BVP(KD)+CVP(KD))
              *+2.*ACP(KQ)+2.*UBP(KD)+16.
              **ELP(KD)+12.*TEP(KD)+100.)/1000.
0072           CC=1.2*(CE(KQ,KD)+CP(KQ,I,KP))
0073           COM=1.42*CC/DT
0074           DE=.00727*((PR-PF)/(AN(I)-1.)-SF*(PR-PS)/(AN(I)-SF))/EFFP
0075           DCWD=DE*CK
0076      200  IF(EFF .LE. 0.0) GO TO 201
0077           DCWI=(.211*CC*( .01*F+1.42 /DT)*SF/((AN(I)-SF)*Q))*1000.
0078           DCW=DCWI-DCWD
0079           CCA=.01*F*CC
0080           WRITE(6,30)CK,AN(I),DT,F,AMGD,ALE,ALT,DP,PS,PF,EFF,SS(I),
              *SF,SB,CE(KQ,KD),CP(KQ,I,KP),CC,CCA,COM,DE,DCWD,DCWI,DCW
0081           GO TO 202
0082      201  WRITE(6,12)CK,AN(I),DT,F,AMGD,ALE,ALT,DP
0083      202  F=F+4.
0084           IF(F .LT. 16.)GO TO 200
0085           F=7.
0086           DT=DT+20.
0087           IF(DT .LT. 61.)GO TO 100
0088           DT=20.
0089       53  CONTINUE
0090           CK=CK-2.
0091           II=IP/2
0092           IPP=2*II
0093           IF(CK .GT. .5)GO TO 299
0094           GO TO 297
0095      299  IF(IP .EQ. IPP) GO TO 300
0096           GO TO 298
0097      297  CK=6.
0098           IK=ITAG/2
0099           KK=2*IK
0100           PR=PR+500.
0101           KP=KP+1
0102           IF(PR .LT. 1501.) GO TO 400
0103           PR=500.
0104           ITAG=ITAG+1
0105           KP=1
0106           KD=KD+1
0107           IF(KD .LE. 3) GO TO 500
0108           KD=1
0109           KQ=KQ+1
0110           IF(KQ .LE. 5) GO TO 600
0111         1 FORMAT(48X,'*',48X,'*')
0112         2 FORMAT(1H1,///////////////,48X,'*********************************
              ****************')
```

```
*****************************************************
*                                                   *
* ASSUMED VALUES:                                   *
*                                                   *
* RO BRINE DISCHARGE PRESSURE, PD=0.90PR PSIG       *
*                                                   *
* WASTE BRINE PRESSURE,PB=20.PSIG                   *
*                                                   *
* TUBE LENGTH=SLUG LENGTH (LT=LS)                   *
*                                                   *
* VALVE CUTOFF RATIO, Y/LS=0.18                     *
*                                                   *
* OVERALL PUMP EFFICIENCY, EFFP=0.60                *
*                                                   *
* K VALUE FOR EQUATION (18), K=0.000343             *
*                                                   *
*****************************************************
CC     TOTAL CAPITAL COST, K$
CCA    ANNUALIZED CAPITAL COST, K$
CE     WORK EXCHANGER CAPITAL COST, K$
CK     UNIT COST OF ELECTRIC ENERGY, CENTS/KW-HR
CP     CAPITAL COST INCREASE FOR PUMPING EQUIPMENT, K$
DCW    NET CHANGE IN COST OF WATER, CENTS/KW-HR.
DCWD   NET REDUCTION IN COST OF WATER, CENTS/KW-HR.
DCWI   NET INCREASE IN COST OF WATER, CENTS/KW-HR.
DE     REDUCTION IN SPECIFIC ENERGY AS A RESULT OF WORK EXCHANGER, KW-HR./KGAL

DP     WORK EXCHANGER PRESSURE DROP, PSI
DT     VALVE TIMING INTERVAL, SEC.
EFF    WORK EXCHANGER IDEAL EFFICIENCY.
F      FIXED CHARGE RATE, %
LE     EQUIVALENT PIPE LENGH, FT.
LT     EXCHANGER TUBE LENGTH, FT.
N      NORMALIZED SALINITY OF BRINE FROM RO.
PF     FEED WATER PRESSURE, PSIG
PROD   RO PRODUCTION RATE, MGD

PS     EXCHANGER DISCHARGE BRINE PRESSURE TO RO, PSIG
SB     NORMALIZED SALINITY OF BRINE FROM EXCHANGER.
SF     NORMALIZED SALINITY OF FEED TO RO.
SS     NORMALIZED SALINITY OF FEED FROM EXCHANGER.
```

NOTE. COMBINATIONS OF PARAMETRIC VALUES WERE SELECTED FOR COMPUTATIONAL CONVENIENCE, AND ARE NOT ALL PHYSICALLY PRACTICAL.

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Q= 10.GPM D=0.622 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MM/G	DCWD C/KG	DCMI C/KG	DCM C/KG
6.	2.	20.	7.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	0.5	0.5	2.67	16.03	22.27	6.24
6.	2.	20.	11.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	0.7	0.5	2.67	16.03	28.59	12.56
6.	2.	20.	15.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	1.0	0.5	2.67	16.03	34.91	18.87
6.	2.	40.	7.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	0.5	0.3	0.68	4.11	17.44	13.33
6.	2.	40.	11.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	0.8	0.3	0.68	4.11	24.05	19.94
6.	2.	40.	15.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	1.1	0.3	0.68	4.11	30.67	26.56
6.	2.	60.	7.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	11.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	15.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	20.	7.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	0.5	0.5	0.67	4.01	5.87	1.86
6.	5.	20.	11.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	0.8	0.5	0.67	4.01	7.53	3.52
6.	5.	20.	15.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	1.1	0.5	0.67	4.01	9.19	5.18
6.	5.	40.	7.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	0.5	0.3	0.17	1.03	4.58	3.56
6.	5.	40.	11.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	0.8	0.3	0.17	1.03	6.32	5.29
6.	5.	40.	15.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	1.1	0.3	0.17	1.03	8.06	7.03
6.	5.	60.	7.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	11.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	15.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	20.	7.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	0.5	0.5	0.30	1.78	2.74	0.96
6.	10.	20.	11.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	0.8	0.5	0.30	1.78	3.52	1.73
6.	10.	20.	15.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	1.1	0.5	0.30	1.78	4.29	2.51
6.	10.	40.	7.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	0.5	0.3	0.08	0.46	2.14	1.68
6.	10.	40.	11.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	0.9	0.3	0.08	0.46	2.95	2.49
6.	10.	40.	15.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	1.2	0.3	0.08	0.46	3.76	3.30
6.	10.	60.	7.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	11.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	15.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	20.	7.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	0.5	0.5	2.67	10.69	22.27	11.58
4.	2.	20.	11.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	0.7	0.5	2.67	10.69	28.59	17.90
4.	2.	20.	15.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	1.0	0.5	2.67	10.69	34.91	24.22
4.	2.	40.	7.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	0.5	0.3	0.68	2.74	17.44	14.70
4.	2.	40.	11.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	0.8	0.3	0.68	2.74	24.05	21.31
4.	2.	40.	15.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	1.1	0.3	0.68	2.74	30.67	27.93
4.	2.	60.	7.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	11.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	15.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	20.	7.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	0.5	0.5	0.67	2.67	5.87	3.19
4.	5.	20.	11.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	0.8	0.5	0.67	2.67	7.53	4.86
4.	5.	20.	15.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	1.1	0.5	0.67	2.67	9.19	6.52
4.	5.	40.	7.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	0.5	0.3	0.17	0.68	4.58	3.90
4.	5.	40.	11.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	0.8	0.3	0.17	0.68	6.32	5.64
4.	5.	40.	15.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	1.1	0.3	0.17	0.68	8.06	7.37
4.	5.	60.	7.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	11.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	15.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	20.	7.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	0.5	0.5	0.30	1.19	2.74	1.55
4.	10.	20.	11.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	0.8	0.5	0.30	1.19	3.52	2.33
4.	10.	20.	15.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	1.1	0.5	0.30	1.19	4.29	3.11
4.	10.	40.	7.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	0.5	0.3	0.08	0.30	2.14	1.83
4.	10.	40.	11.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	0.9	0.3	0.08	0.30	2.95	2.64
4.	10.	40.	15.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	1.2	0.3	0.08	0.30	3.76	3.45
4.	10.	60.	7.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	11.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	15.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q= 10.GPM D=0.622 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	0.5	0.5	2.67	5.34	22.27	16.93
2.	2.	20.	11.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	0.7	0.5	2.67	5.34	28.59	23.24
2.	2.	20.	15.	0.01	51.	211.	97.	353.	117.	0.55	1.10	1.05	1.90	5.1	0.5	6.7	1.0	0.5	2.67	5.34	34.91	29.56
2.	2.	40.	7.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	0.5	0.3	0.68	1.37	17.44	16.07
2.	2.	40.	11.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	0.8	0.3	0.68	1.37	24.05	22.68
2.	2.	40.	15.	0.01	51.	422.	174.	276.	194.	0.19	1.10	1.05	1.90	5.4	0.5	7.1	1.1	0.3	0.68	1.37	30.67	29.30
2.	2.	60.	7.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	11.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	15.	0.01	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	7.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	0.5	0.5	0.67	1.34	5.87	4.53
2.	5.	20.	11.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	0.8	0.5	0.67	1.34	7.53	6.13
2.	5.	20.	15.	0.05	51.	211.	97.	353.	117.	0.55	1.40	1.09	4.60	5.1	0.8	7.1	1.1	0.5	0.67	1.34	9.19	7.85
2.	5.	40.	7.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	0.5	0.3	0.17	0.34	4.58	4.24
2.	5.	40.	11.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	0.6	0.3	0.17	0.34	6.32	5.98
2.	5.	40.	15.	0.05	51.	422.	174.	276.	194.	0.19	1.40	1.09	4.60	5.4	0.8	7.4	1.1	0.3	0.17	0.34	8.06	7.72
2.	5.	60.	7.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	11.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	15.	0.05	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	7.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	0.5	0.5	0.30	0.59	2.74	2.15
2.	10.	20.	11.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	0.8	0.5	0.30	0.59	3.52	2.92
2.	10.	20.	15.	0.12	51.	211.	97.	353.	117.	0.55	1.90	1.10	9.10	5.1	1.1	7.5	1.1	0.5	0.30	0.59	4.29	3.70
2.	10.	40.	7.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	0.5	0.3	0.08	0.15	2.14	1.99
2.	10.	40.	11.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	0.9	0.3	0.08	0.15	2.95	2.79
2.	10.	40.	15.	0.12	51.	422.	174.	276.	194.	0.19	1.90	1.10	9.10	5.4	1.1	7.8	1.2	0.3	0.08	0.15	3.76	3.60
2.	10.	60.	7.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	11.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	15.	0.12	51.	633.	252.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q= 10.GPM D=0.622 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	0.5	0.5	6.06	48.35	23.86	-24.49
6.	2.	20.	11.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	0.8	0.5	6.06	48.35	30.63	-17.72
6.	2.	20.	15.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	1.1	0.5	6.06	48.35	37.40	-10.95
6.	2.	40.	7.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	0.5	0.3	0.07	36.42	18.63	-17.79
6.	2.	40.	11.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	0.8	0.3	0.07	36.42	25.69	-10.73
6.	2.	40.	15.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	1.1	0.3	0.07	36.42	32.75	-3.67
6.	2.	60.	7.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	0.5	0.2	4.08	24.49	17.23	-7.27
6.	2.	60.	11.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	0.9	0.2	4.08	24.49	24.58	0.09
6.	2.	60.	15.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	1.2	0.2	4.08	24.49	31.94	7.45
6.	5.	20.	7.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	0.6	0.6	2.01	12.09	6.66	-5.43
6.	5.	20.	11.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	0.9	0.6	2.01	12.09	8.55	-3.54
6.	5.	20.	15.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	1.2	0.6	2.01	12.09	10.44	-1.65
6.	5.	40.	7.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	0.6	0.3	1.52	9.10	5.18	-3.93
6.	5.	40.	11.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	0.9	0.3	1.52	9.10	7.14	-1.97
6.	5.	40.	15.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	1.3	0.3	1.52	9.10	9.10	-0.00
6.	5.	60.	7.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	0.6	0.2	1.02	6.12	4.77	-1.36
6.	5.	60.	11.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	1.0	0.2	1.02	6.12	6.80	0.68
6.	5.	60.	15.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	1.3	0.2	1.02	6.12	8.84	2.72
6.	10.	20.	7.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	0.6	0.6	0.90	5.37	3.09	-2.28
6.	10.	20.	11.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	0.9	0.6	0.90	5.37	3.97	-1.40
6.	10.	20.	15.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	1.3	0.6	0.90	5.37	4.85	-0.53
6.	10.	40.	7.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	0.6	0.3	0.67	4.05	2.40	-1.65
6.	10.	40.	11.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	1.0	0.3	0.67	4.05	3.31	-0.74
6.	10.	40.	15.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	1.3	0.3	0.67	4.05	4.22	0.17
6.	10.	60.	7.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	0.6	0.2	0.45	2.72	2.21	-0.51
6.	10.	60.	11.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	1.0	0.2	0.45	2.72	3.15	0.43
6.	10.	60.	15.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	1.4	0.2	0.45	2.72	4.09	1.37

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Q= 10.GPM D=0.622 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	0.5	0.5	8.06	32.23	23.86	-8.37
4.	2.	20.	11.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	0.8	0.5	8.06	32.23	30.63	-1.60
4.	2.	20.	15.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	1.1	0.5	8.06	32.23	37.40	5.16
4.	2.	40.	7.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	0.5	0.3	6.07	24.28	18.63	-5.65
4.	2.	40.	11.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	0.8	0.3	6.07	24.28	25.69	1.41
4.	2.	40.	15.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	1.1	0.3	6.07	24.28	32.75	8.47
4.	2.	60.	7.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	0.5	0.2	4.08	16.33	17.23	0.90
4.	2.	60.	11.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	0.9	0.2	4.08	16.33	24.58	8.26
4.	2.	60.	15.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	1.2	0.2	4.08	16.33	31.94	15.61
4.	5.	20.	7.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	0.6	0.6	2.01	8.06	6.66	-1.40
4.	5.	20.	11.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	0.9	0.6	2.01	8.06	8.55	0.49
4.	5.	20.	15.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	1.2	0.6	2.01	8.06	10.44	2.38
4.	5.	40.	7.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	0.6	0.3	1.52	6.07	5.18	-0.89
4.	5.	40.	11.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	0.9	0.3	1.52	6.07	7.14	1.07
4.	5.	40.	15.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	1.3	0.3	1.52	6.07	9.10	3.03
4.	5.	60.	7.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	0.6	0.2	1.02	4.08	4.77	0.69
4.	5.	60.	11.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	1.0	0.2	1.02	4.08	6.80	2.72
4.	5.	60.	15.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	1.3	0.2	1.02	4.08	8.84	4.76
4.	10.	20.	7.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	0.6	0.6	0.90	3.58	3.09	-0.49
4.	10.	20.	11.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	0.9	0.6	0.90	3.58	3.97	0.39
4.	10.	20.	15.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	1.3	0.6	0.90	3.58	4.85	1.26
4.	10.	40.	7.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	0.6	0.3	0.67	2.70	2.40	-0.30
4.	10.	40.	11.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	1.0	0.3	0.67	2.70	3.31	0.61
4.	10.	40.	15.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	1.3	0.3	0.67	2.70	4.22	1.52
4.	10.	60.	7.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	0.6	0.2	0.45	1.81	2.21	0.39
4.	10.	60.	11.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	1.0	0.2	0.45	1.81	3.15	1.34
4.	10.	60.	15.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	1.4	0.2	0.45	1.81	4.09	2.28
2.	2.	20.	7.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	0.5	0.5	8.06	16.12	23.86	7.74
2.	2.	20.	11.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	0.8	0.5	8.06	16.12	30.63	14.51
2.	2.	20.	15.	0.01	51.	211.	97.	803.	117.	0.78	1.10	1.05	1.90	5.1	0.9	7.2	1.1	0.5	8.06	16.12	37.40	21.28
2.	2.	40.	7.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	0.5	0.3	6.07	12.14	18.63	6.49
2.	2.	40.	11.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	0.8	0.3	6.07	12.14	25.69	13.55
2.	2.	40.	15.	0.01	51.	422.	174.	726.	194.	0.60	1.10	1.05	1.90	5.4	0.9	7.5	1.1	0.3	6.07	12.14	32.75	20.61
2.	2.	60.	7.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	0.5	0.2	4.08	8.16	17.23	9.06
2.	2.	60.	11.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	0.9	0.2	4.08	8.16	24.58	16.42
2.	2.	60.	15.	0.01	51.	633.	252.	648.	272.	0.43	1.10	1.05	1.90	5.6	0.9	7.8	1.2	0.2	4.08	8.16	31.94	23.78
2.	5.	20.	7.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	0.6	0.6	2.01	4.03	6.66	2.63
2.	5.	20.	11.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	0.9	0.6	2.01	4.03	8.55	4.52
2.	5.	20.	15.	0.05	51.	211.	97.	803.	117.	0.78	1.40	1.09	4.60	5.1	1.6	8.1	1.2	0.6	2.01	4.03	10.44	6.41
2.	5.	40.	7.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	0.6	0.3	1.52	3.03	5.18	2.14
2.	5.	40.	11.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	0.9	0.3	1.52	3.03	7.14	4.10
2.	5.	40.	15.	0.05	51.	422.	174.	726.	194.	0.60	1.40	1.09	4.60	5.4	1.6	8.4	1.3	0.3	1.52	3.03	9.10	6.07
2.	5.	60.	7.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	0.6	0.2	1.02	2.04	4.77	2.73
2.	5.	60.	11.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	1.0	0.2	1.02	2.04	6.80	4.76
2.	5.	60.	15.	0.05	51.	633.	252.	648.	272.	0.43	1.40	1.09	4.60	5.6	1.6	8.7	1.3	0.2	1.02	2.04	8.84	6.80
2.	10.	20.	7.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	0.6	0.6	0.90	1.79	3.09	1.30
2.	10.	20.	11.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	0.9	0.6	0.90	1.79	3.97	2.18
2.	10.	20.	15.	0.12	51.	211.	97.	803.	117.	0.78	1.90	1.10	9.10	5.1	1.9	8.4	1.3	0.6	0.90	1.79	4.85	3.06
2.	10.	40.	7.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	0.6	0.3	0.67	1.35	2.40	1.05
2.	10.	40.	11.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	1.0	0.3	0.67	1.35	3.31	1.96
2.	10.	40.	15.	0.12	51.	422.	174.	726.	194.	0.60	1.90	1.10	9.10	5.4	1.9	8.7	1.3	0.3	0.67	1.35	4.22	2.87
2.	10.	60.	7.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	0.6	0.2	0.45	0.91	2.21	1.30
2.	10.	60.	11.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	1.0	0.2	0.45	0.91	3.15	2.24
2.	10.	60.	15.	0.12	51.	633.	252.	648.	272.	0.43	1.90	1.10	9.10	5.6	1.9	9.0	1.4	0.2	0.45	0.91	4.09	3.18

Q= 10.GPM D=0.622 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	0.5	0.6	13.44	80.66	25.84	-54.[illegible]
6.	2.	20.	11.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	0.9	0.6	13.44	80.66	33.17	-47.[illegible]
6.	2.	20.	15.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	1.2	0.6	13.44	80.66	40.50	-40.15
6.	2.	40.	7.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	0.6	0.3	11.46	68.73	20.11	-48.[illegible]
6.	2.	40.	11.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	0.9	0.3	11.46	68.73	27.74	-40.99
6.	2.	40.	15.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	1.2	0.3	11.46	68.73	35.36	-33.37
6.	2.	60.	7.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	0.6	0.2	9.47	56.80	18.55	-38.25
6.	2.	60.	11.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	0.9	0.2	9.47	56.80	26.46	-30.34
6.	2.	60.	15.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	1.3	0.2	9.47	56.80	34.38	-22.42
6.	5.	20.	7.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	0.6	0.6	3.36	20.16	7.35	-12.81
6.	5.	20.	11.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	1.0	0.6	3.36	20.16	9.44	-10.73
6.	5.	20.	15.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	1.3	0.6	3.36	20.16	11.52	-8.64
6.	5.	40.	7.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	0.6	0.3	2.86	17.18	5.70	-11.49
6.	5.	40.	11.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	1.0	0.3	2.86	17.18	7.86	-9.33
6.	5.	40.	15.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	1.4	0.3	2.86	17.18	10.01	-7.17
6.	5.	60.	7.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	0.7	0.2	2.37	14.20	5.23	-8.97
6.	5.	60.	11.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	1.0	0.2	2.37	14.20	7.46	-6.74
6.	5.	60.	15.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	1.4	0.2	2.37	14.20	9.70	-4.51
6.	10.	20.	7.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	0.7	0.7	1.49	8.96	3.49	-5.47
6.	10.	20.	11.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	1.0	0.7	1.49	8.96	4.48	-4.48
6.	10.	20.	15.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	1.4	0.7	1.49	8.96	5.47	-3.49
6.	10.	40.	7.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	0.7	0.3	1.27	7.64	2.70	-4.94
6.	10.	40.	11.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	1.1	0.3	1.27	7.64	3.72	-3.92
6.	10.	40.	15.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	1.5	0.3	1.27	7.64	4.74	-2.93
6.	10.	60.	7.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	0.7	0.2	1.05	6.31	2.47	-3.84
6.	10.	60.	11.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	1.1	0.2	1.05	6.31	3.53	-2.78
6.	10.	60.	15.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	1.5	0.2	1.05	6.31	4.58	-1.73
4.	2.	20.	7.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	0.5	0.6	13.44	53.77	25.84	-27.[illegible]
4.	2.	20.	11.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	0.9	0.6	13.44	53.77	33.17	-20.[illegible]
4.	2.	20.	15.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	1.2	0.6	13.44	53.77	40.50	-13.[illegible]
4.	2.	40.	7.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	0.6	0.3	11.46	45.82	20.11	-25.[illegible]
4.	2.	40.	11.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	0.9	0.3	11.46	45.82	27.74	-18.[illegible]
4.	2.	40.	15.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	1.2	0.3	11.46	45.82	35.36	-10.[illegible]
4.	2.	60.	7.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	0.6	0.2	9.47	37.87	18.55	-19.[illegible]
4.	2.	60.	11.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	0.9	0.2	9.47	37.87	26.46	-11.[illegible]
4.	2.	60.	15.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	1.3	0.2	9.47	37.87	34.38	-3.49
4.	5.	20.	7.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	0.6	0.6	3.36	13.44	7.35	-6.09
4.	5.	20.	11.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	1.0	0.6	3.36	13.44	9.44	-4.[illegible]
4.	5.	20.	15.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	1.3	0.6	3.36	13.44	11.52	-1.92
4.	5.	40.	7.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	0.6	0.3	2.86	11.46	5.70	-5.76
4.	5.	40.	11.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	1.0	0.3	2.86	11.46	7.86	-3.60
4.	5.	40.	15.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	1.4	0.3	2.86	11.46	10.01	-1.44
4.	5.	60.	7.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	0.7	0.2	2.37	9.47	5.23	-4.24
4.	5.	60.	11.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	1.0	0.2	2.37	9.47	7.46	-2.01
4.	5.	60.	15.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	1.4	0.2	2.37	9.47	9.70	0.23
4.	10.	20.	7.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	0.7	0.7	1.49	5.97	3.49	-2.49
4.	10.	20.	11.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	1.0	0.7	1.49	5.97	4.48	-1.50
4.	10.	20.	15.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	1.4	0.7	1.49	5.97	5.47	-0.51
4.	10.	40.	7.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	0.7	0.3	1.27	5.09	2.70	-2.39
4.	10.	40.	11.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	1.1	0.3	1.27	5.09	3.72	-1.37
4.	10.	40.	15.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	1.5	0.3	1.27	5.09	4.74	-0.35
4.	10.	60.	7.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	0.7	0.2	1.05	4.21	2.47	-1.74
4.	10.	60.	11.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	1.1	0.2	1.05	4.21	3.53	-0.68
4.	10.	60.	15.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	1.5	0.2	1.05	4.21	4.58	0.37

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Q= 10.GPM D=0.622 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	C: $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	0.5	0.6	13.44	26.89	25.84	-1.04
2.	2.	20.	11.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	0.9	0.6	13.44	26.89	33.17	6.29
2.	2.	20.	15.	0.01	51.	211.	97.	1253.	117.	0.85	1.10	1.05	1.90	5.1	1.4	7.8	1.2	0.6	13.44	26.89	40.50	13.62
2.	2.	40.	7.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	0.6	0.3	11.46	22.91	20.11	-2.80
2.	2.	40.	11.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	0.9	0.3	11.46	22.91	27.74	4.83
2.	2.	40.	15.	0.01	51.	422.	174.	1176.	194.	0.74	1.10	1.05	1.90	5.4	1.4	8.1	1.2	0.3	11.46	22.91	35.36	12.45
2.	2.	60.	7.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	0.6	0.2	9.47	18.93	18.55	-0.39
2.	2.	60.	11.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	0.9	0.2	9.47	18.93	26.46	7.53
2.	2.	60.	15.	0.01	51.	633.	252.	1098.	272.	0.62	1.10	1.05	1.90	5.6	1.4	8.4	1.3	0.2	9.47	18.93	34.38	15.45
2.	5.	20.	7.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	0.6	0.6	3.36	6.72	7.35	0.63
2.	5.	20.	11.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	1.0	0.6	3.36	6.72	9.44	2.72
2.	5.	20.	15.	0.05	51.	211.	97.	1253.	117.	0.85	1.40	1.09	4.60	5.1	2.3	8.9	1.3	0.6	3.36	6.72	11.52	4.80
2.	5.	40.	7.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	0.6	0.3	2.86	5.73	5.70	-0.03
2.	5.	40.	11.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	1.0	0.3	2.86	5.73	7.86	2.13
2.	5.	40.	15.	0.05	51.	422.	174.	1176.	194.	0.74	1.40	1.09	4.60	5.4	2.3	9.2	1.4	0.3	2.86	5.73	10.01	4.29
2.	5.	60.	7.	0.09	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	0.7	0.2	2.37	4.73	5.23	0.50
2.	5.	60.	11.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	1.0	0.2	2.37	4.73	7.46	2.73
2.	5.	60.	15.	0.05	51.	633.	252.	1098.	272.	0.62	1.40	1.09	4.60	5.6	2.3	9.5	1.4	0.2	2.37	4.73	9.70	4.96
2.	10.	20.	7.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	0.7	0.7	1.49	2.99	3.49	0.50
2.	10.	20.	11.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	1.0	0.7	1.49	2.99	4.48	1.49
2.	10.	20.	15.	0.12	51.	211.	97.	1253.	117.	0.85	1.90	1.10	9.10	5.1	2.8	9.5	1.4	0.7	1.49	2.99	5.47	2.48
2.	10.	40.	7.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	0.7	0.3	1.27	2.55	2.70	0.15
2.	10.	40.	11.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	1.1	0.3	1.27	2.55	3.72	1.17
2.	10.	40.	15.	0.12	51.	422.	174.	1176.	194.	0.74	1.90	1.10	9.10	5.4	2.8	9.8	1.5	0.3	1.27	2.55	4.74	2.20
2.	10.	60.	7.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	0.7	0.2	1.05	2.10	2.47	0.37
2.	10.	60.	11.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	1.1	0.2	1.05	2.10	3.53	1.42
2.	10.	60.	15.	0.12	51.	633.	252.	1098.	272.	0.62	1.90	1.10	9.10	5.6	2.8	10.1	1.5	0.2	1.05	2.10	4.58	2.48

Q= 10.GPM D=0.824 IN. PR= 500.PSIG PD= 450. PSIG

6.	2.	20.	7.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	0.5	0.5	4.72	28.34	23.23	-5.11
6.	2.	20.	11.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	0.8	0.5	4.72	28.34	29.82	1.48
6.	2.	20.	15.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	1.1	0.5	4.72	28.34	36.41	8.07
6.	2.	40.	7.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	0.5	0.3	4.45	26.68	17.86	-8.82
6.	2.	40.	11.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	0.8	0.3	4.45	26.68	24.63	-2.04
6.	2.	40.	15.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	1.1	0.3	4.45	26.68	31.40	4.73
6.	2.	60.	7.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	0.5	0.2	4.17	25.01	16.28	-8.73
6.	2.	60.	11.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	0.8	0.2	4.17	25.01	23.23	-1.78
6.	2.	60.	15.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	1.1	0.2	4.17	25.01	30.19	5.18
6.	5.	20.	7.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	0.5	0.5	1.18	7.09	6.11	-0.98
6.	5.	20.	11.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	0.8	0.5	1.18	7.09	7.84	0.75
6.	5.	20.	15.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	1.1	0.5	1.18	7.09	9.57	2.48
6.	5.	40.	7.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	0.5	0.3	1.11	6.67	4.69	-1.98
6.	5.	40.	11.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	0.8	0.3	1.11	6.67	6.47	-0.20
6.	5.	40.	15.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	1.1	0.3	1.11	6.67	8.24	1.57
6.	5.	60.	7.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	0.5	0.2	1.04	6.25	4.27	-1.98
6.	5.	60.	11.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	0.9	0.2	1.04	6.25	6.09	-0.16
6.	5.	60.	15.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	1.2	0.2	1.04	6.25	7.91	1.66
6.	10.	20.	7.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	0.5	0.6	0.52	3.15	2.85	-0.30
6.	10.	20.	11.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	0.9	0.6	0.52	3.15	3.65	0.50
6.	10.	20.	15.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	1.2	0.6	0.52	3.15	4.46	1.31
6.	10.	40.	7.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	0.6	0.3	0.49	2.96	2.18	-0.78
6.	10.	40.	11.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	0.9	0.3	0.49	2.96	3.01	0.05
6.	10.	40.	15.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	1.2	0.3	0.49	2.96	3.84	0.87
6.	10.	60.	7.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	0.6	0.2	0.46	2.78	1.98	-0.79
6.	10.	60.	11.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	0.9	0.2	0.46	2.78	2.83	0.05
6.	10.	60.	15.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	1.2	0.2	0.46	2.78	3.68	0.90

Q= 10.GPM D=0.824 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	0.5	0.5	4.72	18.89	23.23	4.34
4.	2.	20.	11.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	0.8	0.5	4.72	18.89	29.62	10.93
4.	2.	20.	15.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	1.1	0.5	4.72	18.89	36.41	17.52
4.	2.	40.	7.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	0.5	0.3	4.45	17.78	17.86	0.08
4.	2.	40.	11.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	0.8	0.3	4.45	17.78	24.63	6.85
4.	2.	40.	15.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	1.1	0.3	4.45	17.78	31.40	13.62
4.	2.	60.	7.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	0.5	0.2	4.17	16.67	16.28	-0.39
4.	2.	60.	11.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	0.8	0.2	4.17	16.67	23.23	6.56
4.	2.	60.	15.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	1.1	0.2	4.17	16.67	30.19	13.51
4.	5.	20.	7.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	0.5	0.5	1.18	4.72	6.11	1.38
4.	5.	20.	11.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	0.8	0.5	1.18	4.72	7.84	3.11
4.	5.	20.	15.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	1.1	0.5	1.18	4.72	9.57	4.85
4.	5.	40.	7.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	0.5	0.3	1.11	4.45	4.69	0.24
4.	5.	40.	11.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	0.8	0.3	1.11	4.45	6.47	2.02
4.	5.	40.	15.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	1.1	0.3	1.11	4.45	8.24	3.80
4.	5.	60.	7.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	0.5	0.2	1.04	4.17	4.27	0.10
4.	5.	60.	11.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	0.9	0.2	1.04	4.17	6.09	1.92
4.	5.	60.	15.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	1.2	0.2	1.04	4.17	7.91	3.74
4.	10.	20.	7.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	0.5	0.6	0.52	2.10	2.85	0.75
4.	10.	20.	11.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	0.9	0.6	0.52	2.10	3.65	1.55
4.	10.	20.	15.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	1.2	0.6	0.52	2.10	4.46	2.36
4.	10.	40.	7.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	0.6	0.3	0.49	1.98	2.18	0.21
4.	10.	40.	11.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	0.9	0.3	0.49	1.98	3.01	1.03
4.	10.	40.	15.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	1.2	0.3	0.49	1.98	3.84	1.86
4.	10.	60.	7.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	0.6	0.2	0.46	1.85	1.98	0.13
4.	10.	60.	11.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	0.9	0.2	0.46	1.85	2.83	0.98
4.	10.	60.	15.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	1.2	0.2	0.46	1.85	3.68	1.83
2.	2.	20.	7.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	0.5	0.5	4.72	9.45	23.23	13.78
2.	2.	20.	11.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	0.8	0.5	4.72	9.45	29.82	20.38
2.	2.	20.	15.	0.01	61.	120.	16.	434.	36.	0.92	1.10	1.05	1.90	5.4	0.5	7.0	1.1	0.5	4.72	9.45	36.41	26.97
2.	2.	40.	7.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	0.5	0.3	4.45	8.89	17.86	8.97
2.	2.	40.	11.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	0.8	0.3	4.45	8.89	24.63	15.74
2.	2.	40.	15.	0.01	61.	240.	27.	423.	47.	0.87	1.10	1.05	1.90	5.5	0.5	7.2	1.1	0.3	4.45	8.89	31.40	22.51
2.	2.	60.	7.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	0.5	0.2	4.17	8.34	16.28	7.94
2.	2.	60.	11.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	0.8	0.2	4.17	8.34	23.23	14.90
2.	2.	60.	15.	0.01	61.	361.	38.	412.	58.	0.82	1.10	1.05	1.90	5.7	0.5	7.4	1.1	0.2	4.17	8.34	30.19	21.85
2.	5.	20.	7.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	0.5	0.5	1.18	2.36	6.11	3.74
2.	5.	20.	11.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	0.8	0.5	1.18	2.36	7.84	5.48
2.	5.	20.	15.	0.05	61.	120.	16.	434.	36.	0.92	1.40	1.09	4.60	5.4	0.8	7.4	1.1	0.5	1.18	2.36	9.57	7.21
2.	5.	40.	7.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	0.5	0.3	1.11	2.22	4.69	2.46
2.	5.	40.	11.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	0.8	0.3	1.11	2.22	6.47	4.24
2.	5.	40.	15.	0.05	61.	240.	27.	423.	47.	0.87	1.40	1.09	4.60	5.5	0.8	7.6	1.1	0.3	1.11	2.22	8.24	6.02
2.	5.	60.	7.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	0.5	0.2	1.04	2.08	4.27	2.18
2.	5.	60.	11.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	0.9	0.2	1.04	2.08	6.09	4.01
2.	5.	60.	15.	0.05	61.	361.	38.	412.	58.	0.82	1.40	1.09	4.60	5.7	0.8	7.8	1.2	0.2	1.04	2.08	7.91	5.83
2.	10.	20.	7.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	0.5	0.6	0.52	1.05	2.85	1.80
2.	10.	20.	11.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	0.9	0.6	0.52	1.05	3.65	2.60
2.	10.	20.	15.	0.12	61.	120.	16.	434.	36.	0.92	1.90	1.10	9.10	5.4	1.1	7.7	1.2	0.6	0.52	1.05	4.46	3.41
2.	10.	40.	7.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	0.6	0.3	0.49	0.99	2.18	1.19
2.	10.	40.	11.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	0.9	0.3	0.49	0.99	3.01	2.02
2.	10.	40.	15.	0.12	61.	240.	27.	423.	47.	0.87	1.90	1.10	9.10	5.5	1.1	7.9	1.2	0.3	0.49	0.99	3.84	2.85
2.	10.	60.	7.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	0.6	0.2	0.46	0.93	1.98	1.06
2.	10.	60.	11.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	0.9	0.2	0.46	0.93	2.83	1.91
2.	10.	60.	15.	0.12	61.	361.	38.	412.	58.	0.82	1.90	1.10	9.10	5.7	1.1	8.1	1.2	0.2	0.46	0.93	3.68	2.75

Q= 10.GPM D=0.824 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	0.5	0.5	10.11	60.65	24.82	-35.83
6.	2.	20.	11.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	0.8	0.5	10.11	60.65	31.86	-28.79
6.	2.	20.	15.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	1.1	0.5	10.11	60.65	38.90	-21.75
6.	2.	40.	7.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	0.5	0.3	9.83	58.99	19.05	-39.94
6.	2.	40.	11.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	0.8	0.3	9.83	58.99	26.27	-32.72
6.	2.	40.	15.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	1.2	0.3	9.83	58.99	33.49	-25.50
6.	2.	60.	7.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	0.6	0.2	9.55	57.32	17.34	-39.99
6.	2.	60.	11.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	0.9	0.2	9.55	57.32	24.74	-32.58
6.	2.	60.	15.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	1.2	0.2	9.55	57.32	32.14	-25.18
6.	5.	20.	7.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	0.6	0.6	2.53	15.16	6.90	-8.26
6.	5.	20.	11.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	0.9	0.6	2.53	15.16	8.86	-6.31
6.	5.	20.	15.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	1.3	0.6	2.53	15.16	10.81	-4.35
6.	5.	40.	7.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	0.6	0.3	2.46	14.75	5.28	-9.47
6.	5.	40.	11.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	0.9	0.3	2.46	14.75	7.28	-7.46
6.	5.	40.	15.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	1.3	0.3	2.46	14.75	9.29	-5.46
6.	5.	60.	7.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	0.6	0.2	2.39	14.33	4.80	-9.54
6.	5.	60.	11.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	1.0	0.2	2.39	14.33	6.84	-7.49
6.	5.	60.	15.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	1.3	0.2	2.39	14.33	8.89	-5.44
6.	10.	20.	7.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	0.6	0.6	1.12	6.74	3.20	-3.54
6.	10.	20.	11.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	1.0	0.6	1.12	6.74	4.11	-2.63
6.	10.	20.	15.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	1.3	0.6	1.12	6.74	5.01	-1.73
6.	10.	40.	7.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	0.6	0.3	1.09	6.55	2.45	-4.11
6.	10.	40.	11.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	1.0	0.3	1.09	6.55	3.37	-3.18
6.	10.	40.	15.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	1.3	0.3	1.09	6.55	4.30	-2.25
6.	10.	60.	7.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	0.6	0.2	1.06	6.37	2.22	-4.15
6.	10.	60.	11.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	1.0	0.2	1.06	6.37	3.17	-3.20
6.	10.	60.	15.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	1.4	0.2	1.06	6.37	4.11	-2.25
4.	2.	20.	7.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	0.5	0.5	10.11	40.43	24.82	-15.62
4.	2.	20.	11.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	0.8	0.5	10.11	40.43	31.86	-8.58
4.	2.	20.	15.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	1.1	0.5	10.11	40.43	38.90	-1.54
4.	2.	40.	7.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	0.5	0.3	9.83	39.32	19.05	-20.28
4.	2.	40.	11.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	0.8	0.3	9.83	39.32	26.27	-13.05
4.	2.	40.	15.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	1.2	0.3	9.83	39.32	33.49	-5.83
4.	2.	60.	7.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	0.6	0.2	9.55	38.21	17.34	-20.88
4.	2.	60.	11.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	0.9	0.2	9.55	38.21	24.74	-13.48
4.	2.	60.	15.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	1.2	0.2	9.55	38.21	32.14	-6.07
4.	5.	20.	7.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	0.6	0.6	2.53	10.11	6.90	-3.21
4.	5.	20.	11.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	0.9	0.6	2.53	10.11	8.86	-1.25
4.	5.	20.	15.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	1.3	0.6	2.53	10.11	10.81	0.70
4.	5.	40.	7.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	0.6	0.3	2.46	9.83	5.28	-4.55
4.	5.	40.	11.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	0.9	0.3	2.46	9.83	7.28	-2.55
4.	5.	40.	15.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	1.3	0.3	2.46	9.83	9.29	-0.54
4.	5.	60.	7.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	0.6	0.2	2.39	9.55	4.80	-4.76
4.	5.	60.	11.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	1.0	0.2	2.39	9.55	6.84	-2.71
4.	5.	60.	15.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	1.3	0.2	2.39	9.55	8.89	-0.66
4.	10.	20.	7.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	0.6	0.6	1.12	4.49	3.20	-1.29
4.	10.	20.	11.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	1.0	0.6	1.12	4.49	4.11	-0.39
4.	10.	20.	15.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	1.3	0.6	1.12	4.49	5.01	0.52
4.	10.	40.	7.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	0.6	0.3	1.09	4.37	2.45	-1.92
4.	10.	40.	11.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	1.0	0.3	1.09	4.37	3.37	-1.00
4.	10.	40.	15.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	1.3	0.3	1.09	4.37	4.30	-0.07
4.	10.	60.	7.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	0.6	0.2	1.06	4.25	2.22	-2.03
4.	10.	60.	11.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	1.0	0.2	1.06	4.25	3.17	-1.08
4.	10.	60.	15.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	1.4	0.2	1.06	4.25	4.11	-0.13

Q= 10.GPM D=0.824 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	0.5	0.5	10.11	20.22	24.82	4.60
2.	2.	20.	11.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	0.8	0.5	10.11	20.22	31.86	11.64
2.	2.	20.	15.	0.01	61.	120.	16.	884.	36.	0.96	1.10	1.05	1.90	5.4	0.9	7.5	1.1	0.5	10.11	20.22	38.90	18.68
2.	2.	40.	7.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	0.5	0.3	9.83	19.66	19.05	-0.61
2.	2.	40.	11.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	0.8	0.3	9.83	19.66	26.27	6.61
2.	2.	40.	15.	0.01	61.	240.	27.	873.	47.	0.94	1.10	1.05	1.90	5.5	0.9	7.7	1.2	0.3	9.83	19.66	33.49	13.83
2.	2.	60.	7.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	0.6	0.2	9.55	19.11	17.34	-1.77
2.	2.	60.	11.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	0.9	0.2	9.55	19.11	24.74	5.63
2.	2.	60.	15.	0.01	61.	361.	38.	862.	58.	0.91	1.10	1.05	1.90	5.7	0.9	7.9	1.2	0.2	9.55	19.11	32.14	13.03
2.	5.	20.	7.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	0.6	0.6	2.53	5.05	6.90	1.84
2.	5.	20.	11.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	0.9	0.6	2.53	5.05	8.86	3.80
2.	5.	20.	15.	0.05	61.	120.	16.	884.	36.	0.96	1.40	1.09	4.60	5.4	1.6	8.3	1.3	0.6	2.53	5.05	10.81	5.76
2.	5.	40.	7.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	0.6	0.3	2.46	4.92	5.28	0.37
2.	5.	40.	11.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	0.9	0.3	2.46	4.92	7.28	2.37
2.	5.	40.	15.	0.05	61.	240.	27.	873.	47.	0.94	1.40	1.09	4.60	5.5	1.6	8.5	1.3	0.3	2.46	4.92	9.29	4.37
2.	5.	60.	7.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	0.6	0.2	2.39	4.78	4.80	0.02
2.	5.	60.	11.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	1.0	0.2	2.39	4.78	6.84	2.07
2.	5.	60.	15.	0.05	61.	361.	38.	862.	58.	0.91	1.40	1.09	4.60	5.7	1.6	8.7	1.3	0.2	2.39	4.78	8.89	4.11
2.	10.	20.	7.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	0.6	0.6	1.12	2.25	3.20	0.95
2.	10.	20.	11.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	1.0	0.6	1.12	2.25	4.11	1.86
2.	10.	20.	15.	0.12	61.	120.	16.	884.	36.	0.96	1.90	1.10	9.10	5.4	1.9	8.7	1.3	0.6	1.12	2.25	5.01	2.77
2.	10.	40.	7.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	0.6	0.3	1.09	2.18	2.45	0.26
2.	10.	40.	11.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	1.0	0.3	1.09	2.18	3.37	1.19
2.	10.	40.	15.	0.12	61.	240.	27.	873.	47.	0.94	1.90	1.10	9.10	5.5	1.9	8.9	1.3	0.3	1.09	2.18	4.30	2.12
2.	10.	60.	7.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	0.6	0.2	1.06	2.12	2.22	0.10
2.	10.	60.	11.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	1.0	0.2	1.06	2.12	3.17	1.04
2.	10.	60.	15.	0.12	61.	361.	38.	862.	58.	0.91	1.90	1.10	9.10	5.7	1.9	9.1	1.4	0.2	1.06	2.12	4.11	1.99

Q= 10.GPM D=0.824 IN. PR=1500.PSIG PD=1350. PSIG

6.	2.	20.	7.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	0.6	0.6	15.49	92.96	26.80	-66.16
6.	2.	20.	11.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	0.9	0.6	15.49	92.96	34.41	-58.56
6.	2.	20.	15.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	1.2	0.6	15.49	92.96	42.01	-50.96
6.	2.	40.	7.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	0.6	0.3	15.22	91.30	20.53	-70.77
6.	2.	40.	11.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	0.9	0.3	15.22	91.30	28.32	-62.98
6.	2.	40.	15.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	1.2	0.3	15.22	91.30	36.10	-55.20
6.	2.	60.	7.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	0.6	0.2	14.94	89.63	18.65	-70.98
6.	2.	60.	11.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	0.9	0.2	14.94	89.63	26.62	-63.01
6.	2.	60.	15.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	1.3	0.2	14.94	89.63	34.58	-55.05
6.	5.	20.	7.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	0.6	0.7	3.87	23.24	7.59	-15.65
6.	5.	20.	11.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	1.0	0.7	3.87	23.24	9.75	-13.49
6.	5.	20.	15.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	1.4	0.7	3.87	23.24	11.90	-11.34
6.	5.	40.	7.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	0.7	0.3	3.80	22.82	5.80	-17.02
6.	5.	40.	11.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	1.0	0.3	3.80	22.82	8.00	-14.82
6.	5.	40.	15.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	1.4	0.3	3.80	22.82	10.20	-12.63
6.	5.	60.	7.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	0.7	0.2	3.73	22.41	5.26	-17.15
6.	5.	60.	11.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	1.1	0.2	3.73	22.41	7.50	-14.91
6.	5.	60.	15.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	1.4	0.2	3.73	22.41	9.75	-12.66
6.	10.	20.	7.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	0.7	0.7	1.72	10.33	3.60	-6.73
6.	10.	20.	11.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	1.1	0.7	1.72	10.33	4.61	-5.71
6.	10.	20.	15.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	1.5	0.7	1.72	10.33	5.63	-4.69
6.	10.	40.	7.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	0.7	0.4	1.69	10.14	2.74	-7.40
6.	10.	40.	11.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	1.1	0.4	1.69	10.14	3.78	-6.36
6.	10.	40.	15.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	1.5	0.4	1.69	10.14	4.82	-5.32
6.	10.	60.	7.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	0.7	0.2	1.66	9.96	2.40	-7.48
6.	10.	60.	11.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	1.1	0.2	1.66	9.96	3.54	-6.42
6.	10.	60.	15.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	1.5	0.2	1.66	9.96	4.60	-5.36

Q= 10.GPM D=0.824 IN. PI=1500.PSIG PO=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	OP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	0.6	0.6	15.49	61.98	26.80	-35.17
4.	2.	20.	11.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	0.9	0.6	15.49	61.98	34.41	-27.57
4.	2.	20.	15.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	1.2	0.6	15.49	61.98	42.01	-19.97
4.	2.	40.	7.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	0.6	0.3	15.22	60.87	20.53	-40.33
4.	2.	40.	11.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	0.9	0.3	15.22	60.87	28.32	-32.55
4.	2.	40.	15.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	1.2	0.3	15.22	60.87	36.10	-24.76
4.	2.	60.	7.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	0.6	0.2	14.94	59.75	18.65	-41.10
4.	2.	60.	11.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	0.9	0.2	14.94	59.75	26.62	-33.14
4.	2.	60.	15.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	1.3	0.2	14.94	59.75	34.58	-25.17
4.	5.	20.	7.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	0.6	0.7	3.87	15.49	7.59	-7.90
4.	5.	20.	11.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	1.0	0.7	3.87	15.49	9.75	-5.75
4.	5.	20.	15.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	1.4	0.7	3.87	15.49	11.90	-3.59
4.	5.	40.	7.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	0.7	0.3	3.80	15.22	5.80	-9.42
4.	5.	40.	11.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	1.0	0.3	3.80	15.22	8.00	-7.22
4.	5.	40.	15.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	1.4	0.3	3.80	15.22	10.20	-5.02
4.	5.	60.	7.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	0.7	0.2	3.73	14.94	5.25	-9.68
4.	5.	60.	11.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	1.1	0.2	3.73	14.94	7.50	-7.44
4.	5.	60.	15.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	1.4	0.2	3.73	14.94	9.75	-5.19
4.	10.	20.	7.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	0.7	0.7	1.72	6.89	3.60	-3.29
4.	10.	20.	11.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	1.1	0.7	1.72	6.89	4.61	-2.27
4.	10.	20.	15.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	1.5	0.7	1.72	6.89	5.63	-1.25
4.	10.	40.	7.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	0.7	0.4	1.69	6.76	2.74	-4.02
4.	10.	40.	11.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	1.1	0.4	1.69	6.76	3.78	-2.98
4.	10.	40.	15.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	1.5	0.4	1.69	6.76	4.82	-1.94
4.	10.	60.	7.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	0.7	0.2	1.66	6.64	2.48	-4.15
4.	10.	60.	11.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	1.1	0.2	1.66	6.64	3.54	-3.10
4.	10.	60.	15.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	1.5	0.2	1.66	6.64	4.60	-2.04
2.	2.	20.	7.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	0.6	0.6	15.49	30.99	26.80	-4.19
2.	2.	20.	11.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	0.9	0.6	15.49	30.99	34.41	3.42
2.	2.	20.	15.	0.01	61.	120.	16.	1334.	36.	0.98	1.10	1.05	1.90	5.4	1.4	8.1	1.2	0.6	15.49	30.99	42.01	11.02
2.	2.	40.	7.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	0.6	0.3	15.22	30.43	20.53	-9.90
2.	2.	40.	11.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	0.9	0.3	15.22	30.43	28.32	-2.12
2.	2.	40.	15.	0.01	61.	240.	27.	1323.	47.	0.96	1.10	1.05	1.90	5.5	1.4	8.3	1.2	0.3	15.22	30.43	36.10	5.67
2.	2.	60.	7.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	0.6	0.2	14.94	29.88	18.65	-11.22
2.	2.	60.	11.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	0.9	0.2	14.94	29.88	26.62	-3.26
2.	2.	60.	15.	0.01	61.	361.	38.	1312.	58.	0.94	1.10	1.05	1.90	5.7	1.4	8.5	1.3	0.2	14.94	29.88	34.58	4.71
2.	5.	20.	7.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	0.6	0.7	3.87	7.75	7.59	-0.15
2.	5.	20.	11.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	1.0	0.7	3.87	7.75	9.75	2.00
2.	5.	20.	15.	0.05	61.	120.	16.	1334.	36.	0.98	1.40	1.09	4.60	5.4	2.3	9.2	1.4	0.7	3.87	7.75	11.90	4.15
2.	5.	40.	7.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	0.7	0.3	3.80	7.61	5.80	-1.81
2.	5.	40.	11.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	1.0	0.3	3.80	7.61	8.00	0.39
2.	5.	40.	15.	0.05	61.	240.	27.	1323.	47.	0.96	1.40	1.09	4.60	5.5	2.3	9.4	1.4	0.3	3.80	7.61	10.20	2.59
2.	5.	60.	7.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	0.7	0.2	3.73	7.47	5.26	-2.21
2.	5.	60.	11.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	1.1	0.2	3.73	7.47	7.50	0.03
2.	5.	60.	15.	0.05	61.	361.	38.	1312.	58.	0.94	1.40	1.09	4.60	5.7	2.3	9.6	1.4	0.2	3.73	7.47	9.75	2.28
2.	10.	20.	7.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	0.7	0.7	1.72	3.44	3.60	0.15
2.	10.	20.	11.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	1.1	0.7	1.72	3.44	4.61	1.17
2.	10.	20.	15.	0.12	61.	120.	16.	1334.	36.	0.98	1.90	1.10	9.10	5.4	2.8	9.8	1.5	0.7	1.72	3.44	5.63	2.19
2.	10.	40.	7.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	0.7	0.4	1.69	3.38	2.74	-0.64
2.	10.	40.	11.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	1.1	0.4	1.69	3.38	3.78	0.40
2.	10.	40.	15.	0.12	61.	240.	27.	1323.	47.	0.96	1.90	1.10	9.10	5.5	2.8	10.0	1.5	0.4	1.69	3.38	4.82	1.44
2.	10.	60.	7.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	0.7	0.2	1.66	3.32	2.48	-0.84
2.	10.	60.	11.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	1.1	0.2	1.66	3.32	3.54	0.22
2.	10.	60.	15.	0.12	61.	361.	38.	1312.	58.	0.94	1.90	1.10	9.10	5.7	2.8	10.2	1.5	0.2	1.66	3.32	4.60	1.28

Q= 10.GPM D=1.380 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	0.6	0.7	5.12	30.72	30.56	-0.16
6.	2.	20.	11.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	1.0	0.7	5.12	30.72	39.23	8.51
6.	2.	20.	15.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	1.4	0.7	5.12	30.72	47.90	17.18
6.	2.	40.	7.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	0.7	0.3	5.11	30.67	23.15	-7.52
6.	2.	40.	11.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	1.0	0.3	5.11	30.67	31.93	1.26
6.	2.	40.	15.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	1.4	0.3	5.11	30.67	40.71	10.03
6.	2.	60.	7.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	0.7	0.2	5.10	30.63	20.81	-9.82
6.	2.	60.	11.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	1.0	0.2	5.10	30.63	29.70	-0.93
6.	2.	60.	15.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	1.4	0.2	5.10	30.63	38.58	7.96
6.	5.	20.	7.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	0.7	0.7	1.28	7.68	7.94	0.26
6.	5.	20.	11.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	1.1	0.7	1.28	7.68	10.19	2.51
6.	5.	20.	15.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	1.4	0.7	1.28	7.68	12.44	4.76
6.	5.	40.	7.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	0.7	0.3	1.28	7.67	6.01	-1.66
6.	5.	40.	11.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	1.1	0.3	1.28	7.67	8.29	0.62
6.	5.	40.	15.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	1.5	0.3	1.28	7.67	10.57	2.90
6.	5.	60.	7.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	0.7	0.2	1.28	7.66	5.40	-2.26
6.	5.	60.	11.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	1.1	0.2	1.28	7.66	7.71	0.05
6.	5.	60.	15.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	1.5	0.2	1.28	7.66	10.01	2.36
6.	10.	20.	7.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	0.7	0.7	0.57	3.41	3.66	0.25
6.	10.	20.	11.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	1.1	0.7	0.57	3.41	4.70	1.28
6.	10.	20.	15.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	1.5	0.7	0.57	3.41	5.74	2.32
6.	10.	40.	7.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	0.7	0.4	0.57	3.41	2.77	-0.64
6.	10.	40.	11.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	1.1	0.4	0.57	3.41	3.82	0.41
6.	10.	40.	15.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	1.5	0.4	0.57	3.41	4.87	1.46
6.	10.	60.	7.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	0.7	0.2	0.57	3.40	2.49	-0.92
6.	10.	60.	11.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	1.1	0.2	0.57	3.40	3.55	0.15
6.	10.	60.	15.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	1.5	0.2	0.57	3.40	4.61	1.21
4.	2.	20.	7.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	0.6	0.7	5.12	20.48	30.56	10.08
4.	2.	20.	11.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	1.0	0.7	5.12	20.48	39.23	18.75
4.	2.	20.	15.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	1.4	0.7	5.12	20.48	47.90	27.42
4.	2.	40.	7.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	0.7	0.3	5.11	20.45	23.15	2.70
4.	2.	40.	11.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	1.0	0.3	5.11	20.45	31.93	11.48
4.	2.	40.	15.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	1.4	0.3	5.11	20.45	40.71	20.26
4.	2.	60.	7.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	0.7	0.2	5.10	20.42	20.81	0.39
4.	2.	60.	11.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	1.0	0.2	5.10	20.42	29.70	9.28
4.	2.	60.	15.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	1.4	0.2	5.10	20.42	38.58	18.16
4.	5.	20.	7.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	0.7	0.7	1.28	5.12	7.94	2.82
4.	5.	20.	11.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	1.1	0.7	1.28	5.12	10.19	5.07
4.	5.	20.	15.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	1.4	0.7	1.28	5.12	12.44	7.32
4.	5.	40.	7.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	0.7	0.3	1.28	5.11	6.01	0.90
4.	5.	40.	11.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	1.1	0.3	1.28	5.11	8.29	3.18
4.	5.	40.	15.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	1.5	0.3	1.28	5.11	10.57	5.46
4.	5.	60.	7.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	0.7	0.2	1.28	5.10	5.40	0.30
4.	5.	60.	11.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	1.1	0.2	1.28	5.10	7.71	2.60
4.	5.	60.	15.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	1.5	0.2	1.28	5.10	10.01	4.91
4.	10.	20.	7.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	0.7	0.7	0.57	2.28	3.66	1.38
4.	10.	20.	11.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	1.1	0.7	0.57	2.28	4.70	2.42
4.	10.	20.	15.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	1.5	0.7	0.57	2.28	5.74	3.46
4.	10.	40.	7.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	0.7	0.4	0.57	2.27	2.77	0.50
4.	10.	40.	11.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	1.1	0.4	0.57	2.27	3.82	1.55
4.	10.	40.	15.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	1.5	0.4	0.57	2.27	4.87	2.60
4.	10.	60.	7.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	0.7	0.2	0.57	2.27	2.49	0.22
4.	10.	60.	11.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	1.1	0.2	0.57	2.27	3.55	1.28
4.	10.	60.	15.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	1.5	0.2	0.57	2.27	4.61	2.34

Q= 10.GPM D=1.380 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CG $1000	CCA $1000	CGM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	0.6	0.7	5.12	10.24	30.56	20.32
2.	2.	20.	11.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	1.0	0.7	5.12	10.24	39.23	28.99
2.	2.	20.	15.	0.01	89.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	7.2	0.5	9.2	1.4	0.7	5.12	10.24	47.90	37.66
2.	2.	40.	7.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	0.7	0.3	5.11	10.22	23.15	12.93
2.	2.	40.	11.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	1.0	0.3	5.11	10.22	31.93	21.70
2.	2.	40.	15.	0.01	89.	86.	1.	449.	21.	0.99	1.10	1.05	1.90	7.3	0.5	9.4	1.4	0.3	5.11	10.22	40.71	30.48
2.	2.	60.	7.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	0.7	0.2	5.10	10.21	20.81	10.60
2.	2.	60.	11.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	1.0	0.2	5.10	10.21	29.70	19.49
2.	2.	60.	15.	0.01	89.	129.	1.	449.	21.	0.99	1.10	1.05	1.90	7.4	0.5	9.5	1.4	0.2	5.10	10.21	38.58	28.37
2.	5.	20.	7.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	0.7	0.7	1.28	2.56	7.94	5.38
2.	5.	20.	11.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	1.1	0.7	1.28	2.56	10.19	7.63
2.	5.	20.	15.	0.05	89.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	7.2	0.8	9.6	1.4	0.7	1.28	2.56	12.44	9.88
2.	5.	40.	7.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	0.7	0.3	1.28	2.56	6.01	3.45
2.	5.	40.	11.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	1.1	0.3	1.28	2.56	8.29	5.73
2.	5.	40.	15.	0.05	89.	86.	1.	449.	21.	0.99	1.40	1.09	4.60	7.3	0.8	9.7	1.5	0.3	1.28	2.56	10.57	8.01
2.	5.	60.	7.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	0.7	0.2	1.28	2.55	5.40	2.85
2.	5.	60.	11.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	1.1	0.2	1.28	2.55	7.71	5.15
2.	5.	60.	15.	0.05	89.	129.	1.	449.	21.	0.99	1.40	1.09	4.60	7.4	0.8	9.8	1.5	0.2	1.28	2.55	10.01	7.46
2.	10.	20.	7.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	0.7	0.7	0.57	1.14	3.66	2.52
2.	10.	20.	11.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	1.1	0.7	0.57	1.14	4.70	3.56
2.	10.	20.	15.	0.12	89.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	7.2	1.1	10.0	1.5	0.7	0.57	1.14	5.74	4.60
2.	10.	40.	7.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	0.7	0.4	0.57	1.14	2.77	1.63
2.	10.	40.	11.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	1.1	0.4	0.57	1.14	3.82	2.68
2.	10.	40.	15.	0.12	89.	86.	1.	449.	21.	0.99	1.90	1.10	9.10	7.3	1.1	10.1	1.5	0.4	0.57	1.14	4.87	3.73
2.	10.	60.	7.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	0.7	0.2	0.57	1.13	2.49	1.35
2.	10.	60.	11.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	1.1	0.2	0.57	1.13	3.55	2.42
2.	10.	60.	15.	0.12	89.	129.	1.	449.	21.	0.99	1.90	1.10	9.10	7.4	1.1	10.2	1.5	0.2	0.57	1.13	4.61	3.48

Q= 10.GPM D=1.380 IN. PR=1000.PSIG PD= 900. PSIG

6.	2.	20.	7.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	0.7	0.7	10.50	63.03	32.14	-30.89
6.	2.	20.	11.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	1.1	0.7	10.50	63.03	41.26	-21.77
6.	2.	20.	15.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	1.5	0.7	10.50	63.03	50.38	-12.65
6.	2.	40.	7.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	0.7	0.3	10.50	62.98	24.34	-38.65
6.	2.	40.	11.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	1.1	0.3	10.50	62.98	33.57	-29.42
6.	2.	40.	15.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	1.5	0.3	10.50	62.98	42.79	-20.19
6.	2.	60.	7.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	0.7	0.2	10.49	62.94	21.86	-41.08
6.	2.	60.	11.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	1.1	0.2	10.49	62.94	31.20	-31.74
6.	2.	60.	15.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	1.5	0.2	10.49	62.94	40.54	-22.40
6.	5.	20.	7.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	0.7	0.8	2.63	15.76	8.73	-7.03
6.	5.	20.	11.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	1.2	0.8	2.63	15.76	11.21	-4.55
6.	5.	20.	15.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	1.6	0.8	2.63	15.76	13.68	-2.07
6.	5.	40.	7.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	0.7	0.4	2.62	15.75	6.60	-9.14
6.	5.	40.	11.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	1.2	0.4	2.62	15.75	9.11	-6.64
6.	5.	40.	15.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	1.6	0.4	2.62	15.75	11.61	-4.13
6.	5.	60.	7.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	0.8	0.3	2.62	15.73	5.93	-9.81
6.	5.	60.	11.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	1.2	0.3	2.62	15.73	8.46	-7.28
6.	5.	60.	15.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	1.6	0.3	2.62	15.73	10.99	-4.75
6.	10.	20.	7.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	0.8	0.8	1.17	7.00	4.01	-2.99
6.	10.	20.	11.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	1.2	0.8	1.17	7.00	5.15	-1.85
6.	10.	20.	15.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	1.6	0.8	1.17	7.00	6.29	-0.71
6.	10.	40.	7.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	0.8	0.4	1.17	7.00	3.03	-3.96
6.	10.	40.	11.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	1.2	0.4	1.17	7.00	4.18	-2.81
6.	10.	40.	15.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	1.7	0.4	1.17	7.00	5.33	-1.66
6.	10.	60.	7.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	0.8	0.3	1.17	6.99	2.72	-4.27
6.	10.	60.	11.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	1.2	0.3	1.17	6.99	3.88	-3.11
6.	10.	60.	15.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	1.7	0.3	1.17	6.99	5.05	-1.95

Q= 10.GPM D=1.380 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	0.7	0.7	10.50	42.02	32.14	-9.88
4.	2.	20.	11.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	1.1	0.7	10.50	42.02	41.26	-0.76
4.	2.	20.	15.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	1.5	0.7	10.50	42.02	50.38	8.36
4.	2.	40.	7.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	0.7	0.3	10.50	41.99	24.34	-17.65
4.	2.	40.	11.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	1.1	0.3	10.50	41.99	33.57	-8.42
4.	2.	40.	15.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	1.5	0.3	10.50	41.99	42.79	0.80
4.	2.	60.	7.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	0.7	0.2	10.49	41.96	21.86	-20.10
4.	2.	60.	11.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	1.1	0.2	10.49	41.96	31.20	-10.76
4.	2.	60.	15.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	1.5	0.2	10.49	41.96	40.54	-1.42
4.	5.	20.	7.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	0.7	0.8	2.63	10.50	8.73	-1.77
4.	5.	20.	11.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	1.2	0.8	2.63	10.50	11.21	0.70
4.	5.	20.	15.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	1.6	0.8	2.63	10.50	13.68	3.18
4.	5.	40.	7.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	0.7	0.4	2.62	10.50	6.60	-3.89
4.	5.	40.	11.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	1.2	0.4	2.62	10.50	9.11	-1.39
4.	5.	40.	15.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	1.6	0.4	2.62	10.50	11.61	1.11
4.	5.	60.	7.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	0.8	0.3	2.62	10.49	5.93	-4.56
4.	5.	60.	11.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	1.2	0.3	2.62	10.49	8.46	-2.03
4.	5.	60.	15.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	1.6	0.3	2.62	10.49	10.99	0.50
4.	10.	20.	7.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	0.8	0.8	1.17	4.67	4.01	-0.66
4.	10.	20.	11.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	1.2	0.8	1.17	4.67	5.15	0.48
4.	10.	20.	15.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	1.6	0.8	1.17	4.67	6.29	1.62
4.	10.	40.	7.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	0.8	0.4	1.17	4.67	3.03	-1.63
4.	10.	40.	11.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	1.2	0.4	1.17	4.67	4.18	-0.48
4.	10.	40.	15.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	1.7	0.4	1.17	4.67	5.33	0.67
4.	10.	60.	7.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	0.8	0.3	1.17	4.66	2.72	-1.94
4.	10.	60.	11.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	1.2	0.3	1.17	4.66	3.88	-0.78
4.	10.	60.	15.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	1.7	0.3	1.17	4.66	5.05	0.38
2.	2.	20.	7.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	0.7	0.7	10.50	21.01	32.14	11.13
2.	2.	20.	11.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	1.1	0.7	10.50	21.01	41.26	20.25
2.	2.	20.	15.	0.01	89.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	7.2	0.9	9.7	1.5	0.7	10.50	21.01	50.38	29.37
2.	2.	40.	7.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	0.7	0.3	10.50	20.99	24.34	3.34
2.	2.	40.	11.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	1.1	0.3	10.50	20.99	33.57	12.57
2.	2.	40.	15.	0.01	89.	86.	1.	899.	21.	1.00	1.10	1.05	1.90	7.3	0.9	9.8	1.5	0.3	10.50	20.99	42.79	21.80
2.	2.	60.	7.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	0.7	0.2	10.49	20.98	21.86	0.88
2.	2.	60.	11.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	1.1	0.2	10.49	20.98	31.20	10.22
2.	2.	60.	15.	0.01	89.	129.	1.	899.	21.	1.00	1.10	1.05	1.90	7.4	0.9	10.0	1.5	0.2	10.49	20.98	40.54	19.56
2.	5.	20.	7.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	0.7	0.8	2.63	5.25	8.73	3.48
2.	5.	20.	11.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	1.2	0.8	2.63	5.25	11.21	5.95
2.	5.	20.	15.	0.05	89.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	7.2	1.6	10.6	1.6	0.8	2.63	5.25	13.68	8.43
2.	5.	40.	7.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	0.7	0.4	2.62	5.25	6.60	1.36
2.	5.	40.	11.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	1.2	0.4	2.62	5.25	9.11	3.86
2.	5.	40.	15.	0.05	89.	86.	1.	899.	21.	1.00	1.40	1.09	4.60	7.3	1.6	10.7	1.6	0.4	2.62	5.25	11.61	6.36
2.	5.	60.	7.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	0.8	0.3	2.62	5.24	5.93	0.68
2.	5.	60.	11.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	1.2	0.3	2.62	5.24	8.46	3.21
2.	5.	60.	15.	0.05	89.	129.	1.	899.	21.	1.00	1.40	1.09	4.60	7.4	1.6	10.8	1.6	0.3	2.62	5.24	10.99	5.74
2.	10.	20.	7.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	0.8	0.8	1.17	2.33	4.01	1.68
2.	10.	20.	11.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	1.2	0.8	1.17	2.33	5.15	2.82
2.	10.	20.	15.	0.12	89.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	7.2	1.9	10.9	1.6	0.8	1.17	2.33	6.29	3.95
2.	10.	40.	7.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	0.8	0.4	1.17	2.33	3.03	0.70
2.	10.	40.	11.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	1.2	0.4	1.17	2.33	4.18	1.85
2.	10.	40.	15.	0.12	89.	86.	1.	899.	21.	1.00	1.90	1.10	9.10	7.3	1.9	11.0	1.7	0.4	1.17	2.33	5.33	3.00
2.	10.	60.	7.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	0.8	0.3	1.17	2.33	2.72	0.39
2.	10.	60.	11.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	1.2	0.3	1.17	2.33	3.88	1.55
2.	10.	60.	15.	0.12	89.	129.	1.	899.	21.	1.00	1.90	1.10	9.10	7.4	1.9	11.2	1.7	0.3	1.17	2.33	5.05	2.72

BLANKOOIB

Q= 10.GPM D=1.380 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CG $1000	CGA $1000	CGM $1000	DE WH/G	DCMD C/KG	DCME C/KG	DCM C/KG
6.	2.	20.	7.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	0.7	0.7	15.89	95.34	34.13	-61.21
6.	2.	20.	11.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	1.1	0.7	15.89	95.34	43.81	-51.53
6.	2.	20.	15.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	1.5	0.7	15.89	95.34	53.49	-41.85
6.	2.	40.	7.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	0.7	0.4	15.88	95.30	25.82	-69.47
6.	2.	40.	11.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	1.1	0.4	15.88	95.30	35.61	-59.68
6.	2.	40.	15.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	1.6	0.4	15.88	95.30	45.40	-49.89
6.	2.	60.	7.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	0.7	0.2	15.88	95.25	23.18	-72.07
6.	2.	60.	11.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	1.2	0.2	15.88	95.25	33.08	-62.17
6.	2.	60.	15.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	1.6	0.2	15.88	95.25	42.98	-52.27
6.	5.	20.	7.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	0.8	0.8	3.97	23.84	9.42	-14.41
6.	5.	20.	11.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	1.3	0.8	3.97	23.84	12.10	-11.74
6.	5.	20.	15.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	1.7	0.8	3.97	23.84	14.77	-9.06
6.	5.	40.	7.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	0.8	0.4	3.97	23.82	7.12	-16.70
6.	5.	40.	11.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	1.3	0.4	3.97	23.82	9.82	-14.00
6.	5.	40.	15.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	1.7	0.4	3.97	23.82	12.53	-11.30
6.	5.	60.	7.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	0.8	0.3	3.97	23.81	6.39	-17.42
6.	5.	60.	11.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	1.3	0.3	3.97	23.81	9.12	-14.70
6.	5.	60.	15.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	1.7	0.3	3.97	23.81	11.84	-11.97
6.	10.	20.	7.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	0.8	0.9	1.77	10.59	4.41	-6.18
6.	10.	20.	11.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	1.3	0.9	1.77	10.59	5.66	-4.93
6.	10.	20.	15.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	1.8	0.9	1.77	10.59	6.91	-3.68
6.	10.	40.	7.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	0.8	0.4	1.76	10.59	3.33	-7.26
6.	10.	40.	11.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	1.3	0.4	1.76	10.59	4.59	-5.99
6.	10.	40.	15.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	1.8	0.4	1.76	10.59	5.86	-4.73
6.	10.	60.	7.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	0.9	0.3	1.76	10.58	2.99	-7.60
6.	10.	60.	11.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	1.3	0.3	1.76	10.58	4.26	-6.32
6.	10.	60.	15.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	1.8	0.3	1.76	10.58	5.54	-5.05
4.	2.	20.	7.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	0.7	0.7	15.89	63.56	34.13	-29.43
4.	2.	20.	11.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	1.1	0.7	15.89	63.56	43.81	-19.75
4.	2.	20.	15.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	1.5	0.7	15.89	63.56	53.49	-10.07
4.	2.	40.	7.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	0.7	0.4	15.88	63.53	25.82	-37.71
4.	2.	40.	11.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	1.1	0.4	15.88	63.53	35.61	-27.92
4.	2.	40.	15.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	1.6	0.4	15.88	63.53	45.40	-18.13
4.	2.	60.	7.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	0.7	0.2	15.88	63.50	23.18	-40.32
4.	2.	60.	11.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	1.2	0.2	15.88	63.50	33.08	-30.42
4.	2.	60.	15.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	1.6	0.2	15.88	63.50	42.98	-20.52
4.	5.	20.	7.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	0.8	0.8	3.97	15.89	9.42	-6.47
4.	5.	20.	11.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	1.3	0.8	3.97	15.89	12.10	-3.79
4.	5.	20.	15.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	1.7	0.8	3.97	15.89	14.77	-1.12
4.	5.	40.	7.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	0.8	0.4	3.97	15.88	7.12	-8.76
4.	5.	40.	11.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	1.3	0.4	3.97	15.88	9.82	-6.06
4.	5.	40.	15.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	1.7	0.4	3.97	15.88	12.53	-3.36
4.	5.	60.	7.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	0.8	0.3	3.97	15.88	6.39	-9.49
4.	5.	60.	11.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	1.3	0.3	3.97	15.88	9.12	-6.76
4.	5.	60.	15.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	1.7	0.3	3.97	15.88	11.84	-4.03
4.	10.	20.	7.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	0.8	0.9	1.77	7.06	4.41	-2.65
4.	10.	20.	11.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	1.3	0.9	1.77	7.06	5.66	-1.40
4.	10.	20.	15.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	1.8	0.9	1.77	7.06	6.91	-0.15
4.	10.	40.	7.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	0.8	0.4	1.76	7.06	3.33	-3.73
4.	10.	40.	11.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	1.3	0.4	1.76	7.06	4.59	-2.47
4.	10.	40.	15.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	1.8	0.4	1.76	7.06	5.86	-1.20
4.	10.	60.	7.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	0.9	0.3	1.76	7.06	2.99	-4.07
4.	10.	60.	11.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	1.3	0.3	1.76	7.06	4.26	-2.79
4.	10.	60.	15.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	1.8	0.3	1.76	7.06	5.54	-1.52

Q= 10.GPM D=1.380 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MP/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	0.7	0.7	15.89	31.78	34.13	2.35
2.	2.	20.	11.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	1.1	0.7	15.89	31.78	43.81	12.03
2.	2.	20.	15.	0.01	89.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.2	1.4	10.3	1.5	0.7	15.89	31.78	53.49	21.71
2.	2.	40.	7.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	0.7	0.4	15.88	31.77	25.82	-5.94
2.	2.	40.	11.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	1.1	0.4	15.88	31.77	35.61	3.85
2.	2.	40.	15.	0.01	89.	86.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.3	1.4	10.4	1.6	0.4	15.88	31.77	45.40	13.64
2.	2.	60.	7.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	0.7	0.2	15.88	31.75	23.18	-8.57
2.	2.	60.	11.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	1.2	0.2	15.88	31.75	33.08	1.33
2.	2.	60.	15.	0.01	89.	129.	1.	1349.	21.	1.00	1.10	1.05	1.90	7.4	1.4	10.6	1.6	0.2	15.88	31.75	42.98	11.23
2.	5.	20.	7.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	0.8	0.8	3.97	7.95	9.42	1.48
2.	5.	20.	11.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	1.3	0.8	3.97	7.95	12.10	4.15
2.	5.	20.	15.	0.05	89.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.2	2.3	11.4	1.7	0.8	3.97	7.95	14.77	6.83
2.	5.	40.	7.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	0.8	0.4	3.97	7.94	7.12	-0.82
2.	5.	40.	11.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	1.3	0.4	3.97	7.94	9.82	1.88
2.	5.	40.	15.	0.05	89.	86.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.3	2.3	11.5	1.7	0.4	3.97	7.94	12.53	4.58
2.	5.	60.	7.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	0.8	0.3	3.97	7.94	6.39	-1.55
2.	5.	60.	11.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	1.3	0.3	3.97	7.94	9.12	1.18
2.	5.	60.	15.	0.05	89.	129.	1.	1349.	21.	1.00	1.40	1.09	4.60	7.4	2.3	11.6	1.7	0.3	3.97	7.94	11.84	3.91
2.	10.	20.	7.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	0.8	0.9	1.77	3.53	4.41	0.88
2.	10.	20.	11.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	1.3	0.9	1.77	3.53	5.66	2.13
2.	10.	20.	15.	0.12	89.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.2	2.8	12.0	1.8	0.9	1.77	3.53	6.91	3.38
2.	10.	40.	7.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	0.8	0.4	1.76	3.53	3.33	-0.20
2.	10.	40.	11.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	1.3	0.4	1.76	3.53	4.59	1.06
2.	10.	40.	15.	0.12	89.	86.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.3	2.8	12.1	1.8	0.4	1.76	3.53	5.86	2.33
2.	10.	60.	7.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	0.9	0.3	1.76	3.53	2.99	-0.54
2.	10.	60.	11.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	1.3	0.3	1.76	3.53	4.26	0.73
2.	10.	60.	15.	0.12	89.	129.	1.	1349.	21.	1.00	1.90	1.10	9.10	7.4	2.8	12.2	1.8	0.3	1.76	3.53	5.54	2.01

Q= 50.GPM D=1.380 IN. PR= 500.PSIG PD= 450. PSIG

6.	2.	20.	7.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	0.8	0.8	3.81	22.88	7.88	-15.00
6.	2.	20.	11.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	1.3	0.8	3.81	22.88	10.11	-12.76
6.	2.	20.	15.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	1.8	0.8	3.81	22.88	12.35	-10.53
6.	2.	40.	7.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	0.9	0.4	2.87	17.24	6.18	-11.06
6.	2.	40.	11.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	1.4	0.4	2.87	17.24	8.53	-8.72
6.	2.	40.	15.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	1.9	0.4	2.87	17.24	10.87	-6.37
6.	2.	60.	7.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	0.9	0.3	1.93	11.61	5.74	-5.86
6.	2.	60.	11.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	1.4	0.3	1.93	11.61	8.20	-3.41
6.	2.	60.	15.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	2.0	0.3	1.93	11.61	10.65	-0.96
6.	5.	20.	7.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	1.0	1.0	0.95	5.72	2.25	-3.47
6.	5.	20.	11.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	1.5	1.0	0.95	5.72	2.88	-2.83
6.	5.	20.	15.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	2.0	1.0	0.95	5.72	3.52	-2.20
6.	5.	40.	7.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	1.0	0.5	0.72	4.31	1.75	-2.56
6.	5.	40.	11.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	1.6	0.5	0.72	4.31	2.42	-1.89
6.	5.	40.	15.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	2.1	0.5	0.72	4.31	3.08	-1.23
6.	5.	60.	7.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	1.0	0.3	0.48	2.90	1.62	-1.28
6.	5.	60.	11.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	1.6	0.3	0.48	2.90	2.31	-0.59
6.	5.	60.	15.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	2.2	0.3	0.48	2.90	3.00	0.10
6.	10.	20.	7.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	1.0	1.0	0.42	2.54	1.08	-1.46
6.	10.	20.	11.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	1.6	1.0	0.42	2.54	1.38	-1.16
6.	10.	20.	15.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	2.2	1.0	0.42	2.54	1.69	-0.85
6.	10.	40.	7.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	1.1	0.5	0.32	1.92	0.84	-1.08
6.	10.	40.	11.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	1.7	0.5	0.32	1.92	1.16	-0.76
6.	10.	40.	15.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	2.3	0.5	0.32	1.92	1.47	-0.44
6.	10.	60.	7.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	1.1	0.4	0.21	1.29	0.77	-0.52
6.	10.	60.	11.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	1.7	0.4	0.21	1.29	1.10	-0.19
6.	10.	60.	15.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	2.4	0.4	0.21	1.29	1.43	0.14

Q= 50.GPM D=1.380 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	0.8	0.8	3.81	15.25	7.88	-7.37
4.	2.	20.	11.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	1.3	0.8	3.81	15.25	10.11	-5.14
4.	2.	20.	15.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	1.8	0.8	3.81	15.25	12.35	-2.90
4.	2.	40.	7.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	0.9	0.4	2.87	11.49	6.18	-5.31
4.	2.	40.	11.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	1.4	0.4	2.87	11.49	8.53	-2.97
4.	2.	40.	15.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	1.9	0.4	2.87	11.49	10.87	-0.62
4.	2.	60.	7.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	0.9	0.3	1.93	7.74	5.74	-1.99
4.	2.	60.	11.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	1.4	0.3	1.93	7.74	8.20	0.46
4.	2.	60.	15.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	2.0	0.3	1.93	7.74	10.65	2.91
4.	5.	20.	7.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	1.0	1.0	0.95	3.81	2.25	-1.57
4.	5.	20.	11.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	1.5	1.0	0.95	3.81	2.88	-0.93
4.	5.	20.	15.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	2.0	1.0	0.95	3.81	3.52	-0.29
4.	5.	40.	7.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	1.0	0.5	0.72	2.87	1.75	-1.12
4.	5.	40.	11.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	1.6	0.5	0.72	2.87	2.42	-0.46
4.	5.	40.	15.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	2.1	0.5	0.72	2.87	3.08	0.21
4.	5.	60.	7.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	1.0	0.3	0.48	1.93	1.62	-0.31
4.	5.	60.	11.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	1.6	0.3	0.48	1.93	2.31	0.38
4.	5.	60.	15.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	2.2	0.3	0.48	1.93	3.00	1.07
4.	10.	20.	7.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	1.0	1.0	0.42	1.69	1.08	-0.62
4.	10.	20.	11.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	1.6	1.0	0.42	1.69	1.38	-0.31
4.	10.	20.	15.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	2.2	1.0	0.42	1.69	1.69	-0.00
4.	10.	40.	7.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	1.1	0.5	0.32	1.28	0.84	-0.44
4.	10.	40.	11.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	1.7	0.5	0.32	1.28	1.16	-0.12
4.	10.	40.	15.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	2.3	0.5	0.32	1.28	1.47	0.20
4.	10.	60.	7.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	1.1	0.4	0.21	0.86	0.77	-0.09
4.	10.	60.	11.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	1.7	0.4	0.21	0.86	1.10	0.24
4.	10.	60.	15.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	2.4	0.4	0.21	0.86	1.43	0.57
2.	2.	20.	7.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	0.8	0.8	3.81	7.63	7.88	0.25
2.	2.	20.	11.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	1.3	0.8	3.81	7.63	10.11	2.49
2.	2.	20.	15.	0.06	89.	214.	52.	398.	72.	0.76	1.10	1.05	1.90	7.7	2.2	11.9	1.8	0.8	3.81	7.63	12.35	4.72
2.	2.	40.	7.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	0.9	0.4	2.87	5.75	6.18	0.43
2.	2.	40.	11.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	1.4	0.4	2.87	5.75	8.53	2.78
2.	2.	40.	15.	0.06	89.	428.	89.	361.	109.	0.59	1.10	1.05	1.90	8.2	2.2	12.5	1.9	0.4	2.87	5.75	10.87	5.12
2.	2.	60.	7.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	0.9	0.3	1.93	3.87	5.74	1.87
2.	2.	60.	11.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	1.4	0.3	1.93	3.87	8.20	4.33
2.	2.	60.	15.	0.06	89.	643.	125.	325.	145.	0.42	1.10	1.05	1.90	8.7	2.2	13.1	2.0	0.3	1.93	3.87	10.65	6.78
2.	5.	20.	7.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	1.0	1.0	0.95	1.91	2.25	0.34
2.	5.	20.	11.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	1.5	1.0	0.95	1.91	2.88	0.98
2.	5.	20.	15.	0.26	89.	214.	52.	398.	72.	0.76	1.40	1.09	4.60	7.7	3.6	13.6	2.0	1.0	0.95	1.91	3.52	1.62
2.	5.	40.	7.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	1.0	0.5	0.72	1.44	1.75	0.32
2.	5.	40.	11.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	1.6	0.5	0.72	1.44	2.42	0.98
2.	5.	40.	15.	0.26	89.	428.	89.	361.	109.	0.59	1.40	1.09	4.60	8.2	3.6	14.2	2.1	0.5	0.72	1.44	3.08	1.65
2.	5.	60.	7.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	1.0	0.3	0.48	0.97	1.62	0.65
2.	5.	60.	11.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	1.6	0.3	0.48	0.97	2.31	1.35
2.	5.	60.	15.	0.26	89.	643.	125.	325.	145.	0.42	1.40	1.09	4.60	8.7	3.6	14.8	2.2	0.3	0.48	0.97	3.00	2.04
2.	10.	20.	7.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	1.0	1.0	0.42	0.85	1.08	0.23
2.	10.	20.	11.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	1.6	1.0	0.42	0.85	1.38	0.54
2.	10.	20.	15.	0.58	89.	214.	52.	398.	72.	0.76	1.90	1.10	9.10	7.7	4.5	14.7	2.2	1.0	0.42	0.85	1.69	0.84
2.	10.	40.	7.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	1.1	0.5	0.32	0.64	0.84	0.20
2.	10.	40.	11.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	1.7	0.5	0.32	0.64	1.16	0.52
2.	10.	40.	15.	0.58	89.	428.	89.	361.	109.	0.59	1.90	1.10	9.10	8.2	4.5	15.3	2.3	0.5	0.32	0.64	1.47	0.84
2.	10.	60.	7.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	1.1	0.4	0.21	0.43	0.77	0.34
2.	10.	60.	11.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	1.7	0.4	0.21	0.43	1.10	0.67
2.	10.	60.	15.	0.58	89.	643.	125.	325.	145.	0.42	1.90	1.10	9.10	8.7	4.5	15.8	2.4	0.4	0.21	0.43	1.43	1.00

Q= 50.GPM D=1.380 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCN $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	1.0	1.0	9.20	55.19	9.23	-45.96
6.	2.	20.	11.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	1.5	1.0	9.20	55.19	11.84	-43.34
6.	2.	20.	15.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	2.1	1.0	9.20	55.19	14.46	-40.72
6.	2.	40.	7.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	1.0	0.5	8.26	49.55	7.19	-42.36
6.	2.	40.	11.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	1.6	0.5	8.26	49.55	9.92	-39.64
6.	2.	40.	15.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	2.2	0.5	8.26	49.55	12.64	-36.91
6.	2.	60.	7.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	1.1	0.4	7.32	43.92	6.64	-37.28
6.	2.	60.	11.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	1.7	0.4	7.32	43.92	9.48	-34.44
6.	2.	60.	15.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	2.3	0.4	7.32	43.92	12.31	-31.61
6.	5.	20.	7.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	1.2	1.2	2.30	13.80	2.84	-10.95
6.	5.	20.	11.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	1.9	1.2	2.30	13.80	3.65	-10.15
6.	5.	20.	15.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	2.6	1.2	2.30	13.80	4.46	-9.34
6.	5.	40.	7.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	1.2	0.6	2.06	12.39	2.20	-10.19
6.	5.	40.	11.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	2.0	0.6	2.06	12.39	3.03	-9.36
6.	5.	40.	15.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	2.7	0.6	2.06	12.39	3.87	-8.52
6.	5.	60.	7.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	1.3	0.4	1.83	10.93	2.02	-8.93
6.	5.	60.	11.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	2.0	0.4	1.83	10.93	2.88	-8.10
6.	5.	60.	15.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	2.8	0.4	1.83	10.93	3.74	-7.24
6.	10.	20.	7.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	1.3	1.4	1.02	6.13	1.40	-4.73
6.	10.	20.	11.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	2.1	1.4	1.02	6.13	1.80	-4.33
6.	10.	20.	15.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	2.9	1.4	1.02	6.13	2.20	-3.93
6.	10.	40.	7.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	1.4	0.7	0.92	5.51	1.08	-4.42
6.	10.	40.	11.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	2.2	0.7	0.92	5.51	1.49	-4.01
6.	10.	40.	15.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	3.0	0.7	0.92	5.51	1.90	-3.60
6.	10.	60.	7.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	1.4	0.5	0.81	4.88	0.59	-3.89
6.	10.	60.	11.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	2.2	0.5	0.81	4.88	1.41	-3.47
6.	10.	60.	15.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	3.0	0.5	0.81	4.88	1.83	-3.05
4.	2.	20.	7.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	1.0	1.0	9.20	36.79	9.23	-27.56
4.	2.	20.	11.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	1.5	1.0	9.20	36.79	11.84	-24.95
4.	2.	20.	15.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	2.1	1.0	9.20	36.79	14.46	-22.33
4.	2.	40.	7.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	1.0	0.5	3.26	33.04	7.19	-25.84
4.	2.	40.	11.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	1.6	0.5	8.26	33.04	9.92	-23.12
4.	2.	40.	15.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	2.2	0.5	8.26	33.04	12.64	-20.39
4.	2.	60.	7.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	1.1	0.4	7.32	29.28	6.64	-22.64
4.	2.	60.	11.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	1.7	0.4	7.32	29.28	9.48	-19.80
4.	2.	60.	15.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	2.3	0.4	7.32	29.28	12.31	-16.97
4.	5.	20.	7.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	1.2	1.2	2.30	9.20	2.84	-6.36
4.	5.	20.	11.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	1.9	1.2	2.30	9.20	3.65	-5.55
4.	5.	20.	15.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	2.6	1.2	2.30	9.20	4.46	-4.74
4.	5.	40.	7.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	1.2	0.6	2.06	8.26	2.20	-6.06
4.	5.	40.	11.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	2.0	0.6	2.06	8.26	3.03	-5.23
4.	5.	40.	15.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	2.7	0.6	2.06	8.26	3.87	-4.39
4.	5.	60.	7.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	1.3	0.4	1.83	7.32	2.02	-5.30
4.	5.	60.	11.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	2.0	0.4	1.83	7.32	2.88	-4.44
4.	5.	60.	15.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	2.8	0.4	1.83	7.32	3.74	-3.58
4.	10.	20.	7.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	1.3	1.4	1.02	4.09	1.40	-2.68
4.	10.	20.	11.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	2.1	1.4	1.02	4.09	1.80	-2.29
4.	10.	20.	15.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	2.9	1.4	1.02	4.09	2.20	-1.89
4.	10.	40.	7.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	1.4	0.7	0.92	3.67	1.08	-2.59
4.	10.	40.	11.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	2.2	0.7	0.92	3.67	1.49	-2.18
4.	10.	40.	15.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	3.0	0.7	0.92	3.67	1.90	-1.77
4.	10.	60.	7.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	1.4	0.5	0.81	3.25	0.99	-2.26
4.	10.	60.	11.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	2.2	0.5	0.81	3.25	1.41	-1.84
4.	10.	60.	15.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	3.0	0.5	0.81	3.25	1.83	-1.42

Q= 50.GPM D=1.380 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	UT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	1.0	1.0	9.20	18.40	9.23	-9.17
2.	2.	20.	11.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	1.	1.0	9.20	18.40	11.84	-6.55
2.	2.	20.	15.	0.06	89.	214.	52.	848.	72.	0.88	1.10	1.05	1.90	7.7	3.9	14.0	2.1	1.0	9.20	18.40	14.46	-3.93
2.	2.	40.	7.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	1.0	0.5	8.26	16.52	7.19	-9.33
2.	2.	40.	11.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	1.6	0.5	8.26	16.52	9.92	-6.60
2.	2.	40.	15.	0.06	89.	428.	89.	811.	109.	0.80	1.10	1.05	1.90	8.2	3.9	14.5	2.2	0.5	8.26	16.52	12.84	-3.67
2.	2.	60.	7.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	1.1	0.4	7.32	14.64	6.04	-8.60
2.	2.	60.	11.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	1.7	0.4	7.32	14.64	9.45	-5.19
2.	2.	60.	15.	0.06	89.	643.	125.	775.	145.	0.71	1.10	1.05	1.90	8.7	3.9	15.1	2.3	0.4	7.32	14.64	12.31	-2.33
2.	5.	20.	7.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	1.2	1.2	2.33	4.63	2.84	-1.79
2.	5.	20.	11.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	1.9	1.2	2.33	4.63	3.93	-0.95
2.	5.	20.	15.	0.26	89.	214.	52.	848.	72.	0.88	1.40	1.09	4.60	7.7	6.6	17.2	2.6	1.2	2.33	4.63	4.46	-0.19
2.	5.	40.	7.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	1.2	0.6	2.06	4.13	2.20	-1.93
2.	5.	40.	11.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	2.0	0.6	2.06	4.13	3.03	-1.10
2.	5.	40.	15.	0.26	89.	428.	89.	811.	109.	0.80	1.40	1.09	4.60	8.2	6.6	17.8	2.7	0.6	2.06	4.13	3.87	-0.26
2.	5.	60.	7.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	1.3	0.4	1.83	3.66	2.02	-1.64
2.	5.	60.	11.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	2.0	0.4	1.83	3.66	2.88	-0.78
2.	5.	60.	15.	0.26	89.	643.	125.	775.	145.	0.71	1.40	1.09	4.60	8.7	6.6	18.4	2.5	0.4	1.83	3.66	3.74	0.08
2.	10.	20.	7.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	1.3	1.4	1.02	2.04	1.40	-0.64
2.	10.	20.	11.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	2.1	1.4	1.02	2.04	1.80	-0.24
2.	10.	20.	15.	0.58	89.	214.	52.	848.	72.	0.88	1.90	1.10	9.10	7.7	8.2	19.1	2.9	1.4	1.02	2.04	2.19	0.15
2.	10.	40.	7.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	1.4	0.7	0.92	1.84	1.08	-0.75
2.	10.	40.	11.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	2.2	0.7	0.92	1.84	1.49	-0.34
2.	10.	40.	15.	0.58	89.	428.	89.	811.	109.	0.80	1.90	1.10	9.10	8.2	8.2	19.7	3.0	0.7	0.92	1.84	1.90	0.07
2.	10.	60.	7.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	1.4	0.5	0.81	1.63	0.99	-0.64
2.	10.	60.	11.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	2.2	0.5	0.81	1.63	1.41	-0.21
2.	10.	60.	15.	0.58	89.	643.	125.	775.	145.	0.71	1.90	1.10	9.10	8.7	8.2	20.3	3.0	0.5	0.81	1.63	1.83	0.21

Q= 50.GPM D=1.380 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	UT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	1.1	1.1	14.58	87.50	10.66	-76.84
6.	2.	20.	11.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	1.8	1.1	14.58	87.50	13.88	-73.62
6.	2.	20.	15.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	2.4	1.1	14.58	87.50	16.70	-70.80
6.	2.	40.	7.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	1.2	0.6	13.64	81.86	8.26	-73.60
6.	2.	40.	11.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	1.8	0.6	13.64	81.86	11.39	-70.47
6.	2.	40.	15.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	2.5	0.6	13.64	81.86	14.52	-67.34
6.	2.	60.	7.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	1.2	0.4	12.71	76.23	7.59	-68.64
6.	2.	60.	11.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	1.9	0.4	12.71	76.23	10.83	-65.40
6.	2.	60.	15.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	2.6	0.4	12.71	76.23	14.07	-62.16
6.	5.	20.	7.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	1.4	1.5	3.65	21.87	3.42	-18.46
6.	5.	20.	11.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	2.3	1.5	3.65	21.87	4.39	-17.49
6.	5.	20.	15.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	3.1	1.5	3.65	21.87	5.36	-16.52
6.	5.	40.	7.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	1.5	0.8	3.41	20.47	2.63	-17.84
6.	5.	40.	11.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	2.3	0.8	3.41	20.47	3.63	-16.84
6.	5.	40.	15.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	3.2	0.8	3.41	20.47	4.62	-15.84
6.	5.	60.	7.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	1.5	0.5	3.18	19.06	2.40	-16.66
6.	5.	60.	11.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	2.4	0.5	3.18	19.06	3.42	-15.64
6.	5.	60.	15.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	3.3	0.5	3.18	19.06	4.45	-14.61
6.	10.	20.	7.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	1.6	1.7	1.62	9.72	1.73	-7.99
6.	10.	20.	11.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	2.6	1.7	1.62	9.72	2.22	-7.50
6.	10.	20.	15.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	3.5	1.7	1.62	9.72	2.71	-7.01
6.	10.	40.	7.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	1.7	0.9	1.52	9.10	1.33	-7.77
6.	10.	40.	11.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	2.7	0.9	1.52	9.10	1.83	-7.27
6.	10.	40.	15.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	3.6	0.9	1.52	9.10	2.33	-6.76
6.	10.	60.	7.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	1.7	0.6	1.41	8.47	1.21	-7.26
6.	10.	60.	11.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	2.7	0.6	1.41	8.47	1.72	-6.75
6.	10.	60.	15.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	3.7	0.6	1.41	8.47	2.24	-6.23

Q= 50.GPM D=1.380 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	1.1	1.1	14.58	58.33	10.66	-47.68
4.	2.	20.	11.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	1.8	1.1	14.58	58.33	13.68	-44.65
4.	2.	20.	15.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	2.4	1.1	14.58	58.33	16.70	-41.63
4.	2.	40.	7.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	1.2	0.6	13.64	54.58	8.26	-46.32
4.	2.	40.	11.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	1.8	0.6	13.64	54.58	11.39	-43.18
4.	2.	40.	15.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	2.5	0.6	13.64	54.58	14.52	-40.05
4.	2.	60.	7.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	1.2	0.4	12.71	50.82	7.59	-43.23
4.	2.	60.	11.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	1.9	0.4	12.71	50.82	10.83	-39.99
4.	2.	60.	15.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	2.6	0.4	12.71	50.82	14.07	-36.75
4.	5.	20.	7.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	1.4	1.5	3.65	14.58	3.42	-11.17
4.	5.	20.	11.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	2.3	1.5	3.65	14.58	4.39	-10.20
4.	5.	20.	15.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	3.1	1.5	3.65	14.58	5.36	-9.23
4.	5.	40.	7.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	1.5	0.8	3.41	13.64	2.63	-11.02
4.	5.	40.	11.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	2.3	0.8	3.41	13.64	3.63	-10.02
4.	5.	40.	15.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	3.2	0.8	3.41	13.64	4.62	-9.02
4.	5.	60.	7.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	1.5	0.5	3.18	12.71	2.40	-10.31
4.	5.	60.	11.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	2.4	0.5	3.18	12.71	3.42	-9.28
4.	5.	60.	15.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	3.3	0.5	3.18	12.71	4.45	-8.26
4.	10.	20.	7.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	1.6	1.7	1.62	6.48	1.73	-4.75
4.	10.	20.	11.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	2.6	1.7	1.62	6.48	2.22	-4.26
4.	10.	20.	15.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	3.5	1.7	1.62	6.48	2.71	-3.77
4.	10.	40.	7.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	1.7	0.9	1.52	6.06	1.33	-4.74
4.	10.	40.	11.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	2.7	0.9	1.52	6.06	1.83	-4.23
4.	10.	40.	15.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	3.6	0.9	1.52	6.06	2.33	-3.73
4.	10.	60.	7.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	1.7	0.6	1.41	5.65	1.21	-4.44
4.	10.	60.	11.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	2.7	0.6	1.41	5.65	1.72	-3.93
4.	10.	60.	15.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	3.7	0.6	1.41	5.65	2.24	-3.41
2.	2.	20.	7.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	1.1	1.1	14.58	29.17	10.66	-18.51
2.	2.	20.	11.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	1.8	1.1	14.58	29.17	13.68	-15.49
2.	2.	20.	15.	0.06	89.	214.	52.	1298.	72.	0.92	1.10	1.05	1.90	7.7	5.7	16.1	2.4	1.1	14.58	29.17	16.70	-12.47
2.	2.	40.	7.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	1.2	0.6	13.64	27.29	8.26	-19.03
2.	2.	40.	11.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	1.8	0.6	13.64	27.29	11.39	-15.90
2.	2.	40.	15.	0.06	89.	428.	89.	1261.	109.	0.87	1.10	1.05	1.90	8.2	5.7	16.7	2.5	0.6	13.64	27.29	14.52	-12.76
2.	2.	60.	7.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	1.2	0.4	12.71	25.41	7.59	-17.82
2.	2.	60.	11.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	1.9	0.4	12.71	25.41	10.83	-14.58
2.	2.	60.	15.	0.06	89.	643.	125.	1225.	145.	0.81	1.10	1.05	1.90	8.7	5.7	17.3	2.6	0.4	12.71	25.41	14.07	-11.34
2.	5.	20.	7.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	1.4	1.5	3.65	7.29	3.42	-3.87
2.	5.	20.	11.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	2.3	1.5	3.65	7.29	4.39	-2.90
2.	5.	20.	15.	0.26	89.	214.	52.	1298.	72.	0.92	1.40	1.09	4.60	7.7	9.5	20.7	3.1	1.5	3.65	7.29	5.36	-1.93
2.	5.	40.	7.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	1.5	0.8	3.41	6.82	2.63	-4.19
2.	5.	40.	11.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	2.3	0.8	3.41	6.82	3.63	-3.20
2.	5.	40.	15.	0.26	89.	428.	89.	1261.	109.	0.87	1.40	1.09	4.60	8.2	9.5	21.3	3.2	0.8	3.41	6.82	4.62	-2.20
2.	5.	60.	7.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	1.5	0.5	3.18	6.35	2.40	-3.95
2.	5.	60.	11.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	2.4	0.5	3.18	6.35	3.42	-2.93
2.	5.	60.	15.	0.26	89.	643.	125.	1225.	145.	0.81	1.40	1.09	4.60	8.7	9.5	21.8	3.3	0.5	3.18	6.35	4.45	-1.91
2.	10.	20.	7.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	1.6	1.7	1.62	3.24	1.73	-1.51
2.	10.	20.	11.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	2.6	1.7	1.62	3.24	2.22	-1.02
2.	10.	20.	15.	0.58	89.	214.	52.	1298.	72.	0.92	1.90	1.10	9.10	7.7	11.9	23.6	3.5	1.7	1.62	3.24	2.71	-0.53
2.	10.	40.	7.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	1.7	0.9	1.52	3.03	1.33	-1.71
2.	10.	40.	11.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	2.7	0.9	1.52	3.03	1.83	-1.20
2.	10.	40.	15.	0.58	89.	428.	89.	1261.	109.	0.87	1.90	1.10	9.10	8.2	11.9	24.1	3.6	0.9	1.52	3.03	2.33	-0.70
2.	10.	60.	7.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	1.7	0.6	1.41	2.82	1.21	-1.62
2.	10.	60.	11.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	2.7	0.6	1.41	2.82	1.72	-1.10
2.	10.	60.	15.	0.58	89.	643.	125.	1225.	145.	0.81	1.90	1.10	9.10	8.7	11.9	24.7	3.7	0.6	1.41	2.82	2.24	-0.59

Q= 50.GPM D=2.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	1.1	1.1	5.02	30.09	10.45	-19.65
6.	2.	20.	11.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	1.7	1.1	5.02	30.09	13.41	-16.68
6.	2.	20.	15.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	2.4	1.1	5.02	30.09	16.37	-13.72
6.	2.	40.	7.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	1.1	0.6	4.96	29.76	7.93	-21.83
6.	2.	40.	11.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	1.8	0.6	4.96	29.76	10.94	-18.82
6.	2.	40.	15.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	2.4	0.6	4.96	29.76	13.95	-15.81
6.	2.	60.	7.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	1.1	0.4	4.90	29.43	7.15	-22.28
6.	2.	60.	11.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	1.8	0.4	4.90	29.43	10.20	-19.23
6.	2.	60.	15.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	2.4	0.4	4.90	29.43	13.25	-16.18
6.	5.	20.	7.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	1.2	1.2	1.25	7.52	2.89	-4.63
6.	5.	20.	11.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	1.9	1.2	1.25	7.52	3.71	-3.81
6.	5.	20.	15.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	2.6	1.2	1.25	7.52	4.53	-2.99
6.	5.	40.	7.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	1.2	0.6	1.24	7.44	2.19	-5.25
6.	5.	40.	11.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	1.9	0.6	1.24	7.44	3.02	-4.42
6.	5.	40.	15.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	2.7	0.6	1.24	7.44	3.85	-3.59
6.	5.	60.	7.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	1.3	0.4	1.23	7.36	1.97	-5.39
6.	5.	60.	11.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	2.0	0.4	1.23	7.36	2.81	-4.54
6.	5.	60.	15.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	2.7	0.4	1.23	7.36	3.65	-3.70
6.	10.	20.	7.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	1.3	1.3	0.56	3.34	1.36	-1.98
6.	10.	20.	11.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	2.0	1.3	0.56	3.34	1.75	-1.59
6.	10.	20.	15.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	2.8	1.3	0.56	3.34	2.14	-1.21
6.	10.	40.	7.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	1.3	0.7	0.55	3.31	1.03	-2.27
6.	10.	40.	11.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	2.1	0.7	0.55	3.31	1.42	-1.88
6.	10.	40.	15.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	2.8	0.7	0.55	3.31	1.82	-1.49
6.	10.	60.	7.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	1.3	0.5	0.54	3.27	0.93	-2.34
6.	10.	60.	11.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	2.1	0.5	0.54	3.27	1.33	-1.94
6.	10.	60.	15.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	2.9	0.5	0.54	3.27	1.72	-1.55
4.	2.	20.	7.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	1.1	1.1	5.02	20.06	10.45	-9.61
4.	2.	20.	11.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	1.7	1.1	5.02	20.06	13.41	-6.65
4.	2.	20.	15.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	2.4	1.1	5.02	20.06	16.37	-3.69
4.	2.	40.	7.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	1.1	0.6	4.96	19.84	7.93	-11.91
4.	2.	40.	11.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	1.8	0.6	4.96	19.84	10.94	-8.90
4.	2.	40.	15.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	2.4	0.6	4.96	19.84	13.95	-5.89
4.	2.	60.	7.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	1.1	0.4	4.90	19.62	7.15	-12.47
4.	2.	60.	11.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	1.8	0.4	4.90	19.62	10.20	-9.42
4.	2.	60.	15.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	2.4	0.4	4.90	19.62	13.25	-6.37
4.	5.	20.	7.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	1.2	1.2	1.25	5.02	2.89	-2.13
4.	5.	20.	11.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	1.9	1.2	1.25	5.02	3.71	-1.31
4.	5.	20.	15.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	2.6	1.2	1.25	5.02	4.53	-0.49
4.	5.	40.	7.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	1.2	0.6	1.24	4.96	2.19	-2.77
4.	5.	40.	11.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	1.9	0.6	1.24	4.96	3.02	-1.94
4.	5.	40.	15.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	2.7	0.6	1.24	4.96	3.85	-1.11
4.	5.	60.	7.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	1.3	0.4	1.23	4.90	1.97	-2.93
4.	5.	60.	11.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	2.0	0.4	1.23	4.90	2.81	-2.09
4.	5.	60.	15.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	2.7	0.4	1.23	4.90	3.65	-1.25
4.	10.	20.	7.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	1.3	1.3	0.56	2.23	1.36	-0.87
4.	10.	20.	11.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	2.0	1.3	0.56	2.23	1.75	-0.48
4.	10.	20.	15.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	2.8	1.3	0.56	2.23	2.14	-0.09
4.	10.	40.	7.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	1.3	0.7	0.55	2.20	1.03	-1.17
4.	10.	40.	11.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	2.1	0.7	0.55	2.20	1.42	-0.78
4.	10.	40.	15.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	2.8	0.7	0.55	2.20	1.82	-0.39
4.	10.	60.	7.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	1.3	0.5	0.54	2.18	0.93	-1.25
4.	10.	60.	11.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	2.1	0.5	0.54	2.18	1.33	-0.85
4.	10.	60.	15.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	2.9	0.5	0.54	2.18	1.72	-0.46

Q= 50.GPM D=2.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	1.1	1.1	5.02	10.03	10.45	0.42
2.	2.	20.	11.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	1.7	1.1	5.02	10.03	13.41	3.38
2.	2.	20.	15.	0.06	124.	95.	5.	445.	25.	0.98	1.10	1.05	1.90	11.0	2.2	15.8	2.4	1.1	5.02	10.03	16.37	6.34
2.	2.	40.	7.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	1.1	0.6	4.96	9.92	7.93	-1.99
2.	2.	40.	11.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	1.8	0.6	4.96	9.92	10.94	1.02
2.	2.	40.	15.	0.06	124.	191.	7.	443.	27.	0.97	1.10	1.05	1.90	11.2	2.2	16.0	2.4	0.6	4.96	9.92	13.95	4.03
2.	2.	60.	7.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	1.1	0.4	4.90	9.81	7.15	-2.66
2.	2.	60.	11.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	1.8	0.4	4.90	9.81	10.20	0.39
2.	2.	60.	15.	0.06	124.	286.	9.	441.	29.	0.96	1.10	1.05	1.90	11.4	2.2	16.3	2.4	0.4	4.90	9.81	13.25	3.44
2.	5.	20.	7.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	1.2	1.2	1.25	2.51	2.89	0.38
2.	5.	20.	11.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	1.9	1.2	1.25	2.51	3.71	1.20
2.	5.	20.	15.	0.26	124.	95.	5.	445.	25.	0.98	1.40	1.09	4.60	11.0	3.6	17.5	2.6	1.2	1.25	2.51	4.53	2.02
2.	5.	40.	7.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	1.2	0.6	1.24	2.48	2.19	-0.29
2.	5.	40.	11.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	1.9	0.6	1.24	2.48	3.02	0.54
2.	5.	40.	15.	0.26	124.	191.	7.	443.	27.	0.97	1.40	1.09	4.60	11.2	3.6	17.7	2.7	0.6	1.24	2.48	3.85	1.37
2.	5.	60.	7.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	1.3	0.4	1.23	2.45	1.97	-0.48
2.	5.	60.	11.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	2.0	0.4	1.23	2.45	2.81	0.36
2.	5.	60.	15.	0.26	124.	286.	9.	441.	29.	0.96	1.40	1.09	4.60	11.4	3.6	17.9	2.7	0.4	1.23	2.45	3.65	1.20
2.	10.	20.	7.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	1.3	1.3	0.56	1.11	1.36	0.25
2.	10.	20.	11.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	2.0	1.3	0.56	1.11	1.75	0.64
2.	10.	20.	15.	0.58	124.	95.	5.	445.	25.	0.98	1.90	1.10	9.10	11.0	4.5	18.6	2.8	1.3	0.56	1.11	2.14	1.02
2.	10.	40.	7.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	1.3	0.7	0.55	1.10	1.03	-0.07
2.	10.	40.	11.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	2.1	0.7	0.55	1.10	1.42	0.32
2.	10.	40.	15.	0.58	124.	191.	7.	443.	27.	0.97	1.90	1.10	9.10	11.2	4.5	18.8	2.8	0.7	0.55	1.10	1.82	0.71
2.	10.	60.	7.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	1.3	0.5	0.54	1.09	0.93	-0.16
2.	10.	60.	11.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	2.1	0.5	0.54	1.09	1.33	0.24
2.	10.	60.	15.	0.58	124.	286.	9.	441.	29.	0.96	1.90	1.10	9.10	11.4	4.5	19.0	2.9	0.5	0.54	1.09	1.72	0.63

Q= 50.GPM D=2.067 IN. PR=1000.PSIG PD= 900. PSIG

6.	2.	20.	7.	0.05	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	1.2	1.3	10.40	62.40	11.80	-50.61
6.	2.	20.	11.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	2.0	1.3	10.40	62.40	15.14	-47.26
6.	2.	20.	15.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	2.7	1.3	10.40	62.40	18.49	-43.92
6.	2.	40.	7.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	1.3	0.6	10.35	62.07	8.94	-53.13
6.	2.	40.	11.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	2.0	0.6	10.35	62.07	12.33	-49.74
6.	2.	40.	15.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	2.7	0.6	10.35	62.07	15.72	-46.35
6.	2.	60.	7.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	1.3	0.4	10.29	61.74	8.04	-53.70
6.	2.	60.	11.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	2.0	0.4	10.29	61.74	11.48	-50.26
6.	2.	60.	15.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	2.7	0.4	10.29	61.74	14.91	-46.83
6.	5.	20.	7.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	1.5	1.5	2.60	15.60	3.48	-12.12
6.	5.	20.	11.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	2.3	1.5	2.60	15.60	4.47	-11.13
6.	5.	20.	15.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	3.2	1.5	2.60	15.60	5.46	-10.14
6.	5.	40.	7.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	1.5	0.8	2.59	15.52	2.64	-12.88
6.	5.	40.	11.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	2.3	0.8	2.59	15.52	3.64	-11.88
6.	5.	40.	15.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	3.2	0.8	2.59	15.52	4.63	-10.88
6.	5.	60.	7.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	1.5	0.5	2.57	15.43	2.37	-13.07
6.	5.	60.	11.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	2.4	0.5	2.57	15.43	3.38	-12.06
6.	5.	60.	15.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	3.2	0.5	2.57	15.43	4.39	-11.05
6.	10.	20.	7.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	1.6	1.6	1.16	6.93	1.69	-5.24
6.	10.	20.	11.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	2.5	1.6	1.16	6.93	2.17	-4.76
6.	10.	20.	15.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	3.5	1.6	1.16	6.93	2.65	-4.29
6.	10.	40.	7.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	1.6	0.8	1.15	6.90	1.28	-5.62
6.	10.	40.	11.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	2.6	0.8	1.15	6.90	1.76	-5.14
6.	10.	40.	15.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	3.5	0.8	1.15	6.90	2.25	-4.65
6.	10.	60.	7.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	1.6	0.6	1.14	6.86	1.15	-5.71
6.	10.	60.	11.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	2.6	0.6	1.14	6.86	1.63	-5.23
6.	10.	60.	15.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	3.5	0.6	1.14	6.86	2.12	-4.74

Q= 50.GPM D=2.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	1.2	1.3	10.40	41.60	11.80	-29.81
4.	2.	20.	11.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	2.0	1.3	10.40	41.60	15.14	-26.46
4.	2.	20.	15.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	2.7	1.3	10.40	41.60	18.49	-23.11
4.	2.	40.	7.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	1.3	0.6	10.35	41.38	8.94	-32.44
4.	2.	40.	11.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	2.0	0.6	10.35	41.38	12.33	-29.05
4.	2.	40.	15.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	2.7	0.6	10.35	41.38	15.72	-25.66
4.	2.	60.	7.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	1.3	0.4	10.29	41.16	8.04	-33.12
4.	2.	60.	11.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	2.0	0.4	10.29	41.16	11.48	-29.68
4.	2.	60.	15.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	2.7	0.4	10.29	41.16	14.91	-26.25
4.	5.	20.	7.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	1.5	1.5	2.60	10.40	3.48	-6.92
4.	5.	20.	11.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	2.3	1.5	2.60	10.40	4.47	-5.93
4.	5.	20.	15.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	3.2	1.5	2.60	10.40	5.46	-4.94
4.	5.	40.	7.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	1.5	0.8	2.59	10.35	2.64	-7.71
4.	5.	40.	11.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	2.3	0.8	2.59	10.35	3.64	-6.71
4.	5.	40.	15.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	3.2	0.8	2.59	10.35	4.63	-5.71
4.	5.	60.	7.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	1.5	0.5	2.57	10.29	2.37	-7.42
4.	5.	60.	11.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	2.4	0.5	2.57	10.29	3.38	-6.91
4.	5.	60.	15.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	3.2	0.5	2.57	10.29	4.39	-5.90
4.	10.	20.	7.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	1.6	1.6	1.16	4.62	1.69	-2.33
4.	10.	20.	11.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	2.5	1.6	1.16	4.62	2.17	-2.45
4.	10.	20.	15.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	3.5	1.6	1.16	4.62	2.65	-1.97
4.	10.	40.	7.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	1.6	0.8	1.15	4.60	1.28	-3.32
4.	10.	40.	11.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	2.6	0.8	1.15	4.60	1.76	-2.84
4.	10.	40.	15.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	3.5	0.8	1.15	4.60	2.25	-2.35
4.	10.	60.	7.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	1.6	0.6	1.14	4.57	1.15	-3.43
4.	10.	60.	11.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	2.6	0.6	1.14	4.57	1.63	-2.94
4.	10.	60.	15.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	3.5	0.6	1.14	4.57	2.12	-2.45
2.	2.	20.	7.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	1.2	1.3	10.40	20.80	11.80	-9.01
2.	2.	20.	11.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	2.0	1.3	10.40	20.80	15.14	-5.66
2.	2.	20.	15.	0.06	124.	95.	5.	895.	25.	0.99	1.10	1.05	1.90	11.0	3.9	17.8	2.7	1.3	10.40	20.80	18.49	-2.31
2.	2.	40.	7.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	1.3	0.6	10.35	20.69	8.94	-11.75
2.	2.	40.	11.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	2.0	0.6	10.35	20.69	12.33	-8.36
2.	2.	40.	15.	0.06	124.	191.	7.	893.	27.	0.98	1.10	1.05	1.90	11.2	3.9	18.1	2.7	0.6	10.35	20.69	15.72	-4.97
2.	2.	60.	7.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	1.3	0.4	10.29	20.58	8.04	-12.54
2.	2.	60.	11.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	2.0	0.4	10.29	20.58	11.48	-9.10
2.	2.	60.	15.	0.06	124.	286.	9.	891.	29.	0.98	1.10	1.05	1.90	11.4	3.9	18.3	2.7	0.4	10.29	20.58	14.91	-5.67
2.	5.	20.	7.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	1.5	1.5	2.60	5.20	3.48	-1.72
2.	5.	20.	11.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	2.3	1.5	2.60	5.20	4.47	-0.73
2.	5.	20.	15.	0.26	124.	95.	5.	895.	25.	0.99	1.40	1.09	4.60	11.0	6.6	21.1	3.2	1.5	2.60	5.20	5.46	0.26
2.	5.	40.	7.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	1.5	0.8	2.59	5.17	2.64	-2.54
2.	5.	40.	11.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	2.3	0.8	2.59	5.17	3.64	-1.54
2.	5.	40.	15.	0.26	124.	191.	7.	893.	27.	0.98	1.40	1.09	4.60	11.2	6.6	21.3	3.2	0.8	2.59	5.17	4.63	-0.54
2.	5.	60.	7.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	1.5	0.5	2.57	5.14	2.37	-2.78
2.	5.	60.	11.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	2.4	0.5	2.57	5.14	3.38	-1.77
2.	5.	60.	15.	0.26	124.	286.	9.	891.	29.	0.98	1.40	1.09	4.60	11.4	6.6	21.5	3.2	0.5	2.57	5.14	4.39	-0.76
2.	10.	20.	7.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	1.6	1.6	1.16	2.31	1.69	-0.62
2.	10.	20.	11.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	2.5	1.6	1.16	2.31	2.17	-0.14
2.	10.	20.	15.	0.58	124.	95.	5.	895.	25.	0.99	1.90	1.10	9.10	11.0	8.2	23.0	3.5	1.6	1.16	2.31	2.65	0.34
2.	10.	40.	7.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	1.6	0.8	1.15	2.30	1.28	-1.02
2.	10.	40.	11.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	2.6	0.8	1.15	2.30	1.76	-0.54
2.	10.	40.	15.	0.58	124.	191.	7.	893.	27.	0.98	1.90	1.10	9.10	11.2	8.2	23.2	3.5	0.8	1.15	2.30	2.25	-0.05
2.	10.	60.	7.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	1.6	0.6	1.14	2.29	1.15	-1.14
2.	10.	60.	11.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	2.6	0.6	1.14	2.29	1.63	-0.65
2.	10.	60.	15.	0.58	124.	286.	9.	891.	29.	0.98	1.90	1.10	9.10	11.4	8.2	23.5	3.5	0.6	1.14	2.29	2.12	-0.16

Q= 50.GPM D=2.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	1.4	1.4	15.79	94.71	13.22	-81.49
6.	2.	20.	11.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	2.2	1.4	15.79	94.71	16.97	-77.74
6.	2.	20.	15.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	3.0	1.4	15.79	94.71	20.73	-73.99
6.	2.	40.	7.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	1.4	0.7	15.73	94.38	10.01	-84.37
6.	2.	40.	11.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	2.2	0.7	15.73	94.38	13.81	-80.58
6.	2.	40.	15.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	3.0	0.7	15.73	94.38	17.60	-76.78
6.	2.	60.	7.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	1.4	0.5	15.67	94.05	8.99	-85.06
6.	2.	60.	11.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	2.3	0.5	15.67	94.05	12.83	-81.22
6.	2.	60.	15.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	3.1	0.5	15.67	94.05	16.67	-77.38
6.	5.	20.	7.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	1.7	1.7	3.95	23.68	4.06	-19.62
6.	5.	20.	11.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	2.7	1.7	3.95	23.68	5.21	-18.47
6.	5.	20.	15.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	3.7	1.7	3.95	23.68	6.36	-17.32
6.	5.	40.	7.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	1.7	0.9	3.93	23.60	3.07	-20.53
6.	5.	40.	11.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	2.7	0.9	3.93	23.60	4.23	-19.37
6.	5.	40.	15.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	3.7	0.9	3.93	23.60	5.39	-18.20
6.	5.	60.	7.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	1.8	0.6	3.92	23.51	2.75	-20.76
6.	5.	60.	11.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	2.8	0.6	3.92	23.51	3.92	-19.59
6.	5.	60.	15.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	3.8	0.6	3.92	23.51	5.10	-18.42
6.	10.	20.	7.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	1.9	1.9	1.75	10.52	2.02	-8.51
6.	10.	20.	11.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	3.0	1.9	1.75	10.52	2.59	-7.94
6.	10.	20.	15.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	4.1	1.9	1.75	10.52	3.16	-7.36
6.	10.	40.	7.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	1.9	1.0	1.75	10.49	1.52	-8.97
6.	10.	40.	11.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	3.0	1.0	1.75	10.49	2.10	-8.39
6.	10.	40.	15.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	4.2	1.0	1.75	10.49	2.67	-7.81
6.	10.	60.	7.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	2.0	0.7	1.74	10.45	1.36	-9.09
6.	10.	60.	11.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	3.1	0.7	1.74	10.45	1.94	-8.51
6.	10.	60.	15.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	4.2	0.7	1.74	10.45	2.53	-7.92
4.	2.	20.	7.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	1.4	1.4	15.79	63.14	13.22	-49.92
4.	2.	20.	11.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	2.2	1.4	15.79	63.14	16.97	-46.17
4.	2.	20.	15.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	3.0	1.4	15.79	63.14	20.73	-42.42
4.	2.	40.	7.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	1.4	0.7	15.73	62.92	10.01	-52.91
4.	2.	40.	11.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	2.2	0.7	15.73	62.92	13.81	-49.12
4.	2.	40.	15.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	3.0	0.7	15.73	62.92	17.60	-45.32
4.	2.	60.	7.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	1.4	0.5	15.67	62.70	8.99	-53.71
4.	2.	60.	11.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	2.3	0.5	15.67	62.70	12.83	-49.87
4.	2.	60.	15.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	3.1	0.5	15.67	62.70	16.67	-46.03
4.	5.	20.	7.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	1.7	1.7	3.95	15.79	4.06	-11.73
4.	5.	20.	11.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	2.7	1.7	3.95	15.79	5.21	-10.57
4.	5.	20.	15.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	3.7	1.7	3.95	15.79	6.36	-9.42
4.	5.	40.	7.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	1.7	0.9	3.93	15.73	3.07	-12.66
4.	5.	40.	11.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	2.7	0.9	3.93	15.73	4.23	-11.50
4.	5.	40.	15.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	3.7	0.9	3.93	15.73	5.39	-10.34
4.	5.	60.	7.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	1.8	0.6	3.92	15.67	2.75	-12.93
4.	5.	60.	11.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	2.8	0.6	3.92	15.67	3.92	-11.75
4.	5.	60.	15.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	3.8	0.6	3.92	15.67	5.10	-10.58
4.	10.	20.	7.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	1.9	1.9	1.75	7.02	2.02	-5.00
4.	10.	20.	11.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	3.0	1.9	1.75	7.02	2.59	-4.43
4.	10.	20.	15.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	4.1	1.9	1.75	7.02	3.16	-3.86
4.	10.	40.	7.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	1.9	1.0	1.75	6.99	1.52	-5.47
4.	10.	40.	11.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	3.0	1.0	1.75	6.99	2.10	-4.89
4.	10.	40.	15.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	4.2	1.0	1.75	6.99	2.67	-4.32
4.	10.	60.	7.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	2.0	0.7	1.74	6.97	1.36	-5.60
4.	10.	60.	11.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	3.1	0.7	1.74	6.97	1.94	-5.02
4.	10.	60.	15.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	4.2	0.7	1.74	6.97	2.53	-4.44

Q= 50.GPM D=2.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	1.4	1.4	15.79	31.57	13.22	-18.35
2.	2.	20.	11.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	2.2	1.4	15.79	31.57	16.97	-14.60
2.	2.	20.	15.	0.06	124.	95.	5.	1345.	25.	0.99	1.10	1.05	1.90	11.0	5.7	20.0	3.0	1.4	15.79	31.57	20.73	-10.85
2.	2.	40.	7.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	1.4	0.7	15.73	31.46	10.01	-21.45
2.	2.	40.	11.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	2.2	0.7	15.73	31.46	13.81	-17.66
2.	2.	40.	15.	0.06	124.	191.	7.	1343.	27.	0.99	1.10	1.05	1.90	11.2	5.7	20.2	3.0	0.7	15.73	31.46	17.60	-13.86
2.	2.	60.	7.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	1.4	0.5	15.67	31.35	8.99	-22.36
2.	2.	60.	11.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	2.3	0.5	15.67	31.35	12.83	-18.52
2.	2.	60.	15.	0.06	124.	286.	9.	1341.	29.	0.99	1.10	1.05	1.90	11.4	5.7	20.5	3.1	0.5	15.67	31.35	16.67	-14.68
2.	5.	20.	7.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	1.7	1.7	3.95	7.89	4.06	-3.83
2.	5.	20.	11.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	2.7	1.7	3.95	7.89	5.21	-2.68
2.	5.	20.	15.	0.26	124.	95.	5.	1345.	25.	0.99	1.40	1.09	4.60	11.0	9.5	24.6	3.7	1.7	3.95	7.89	6.36	-1.53
2.	5.	40.	7.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	1.7	0.9	3.93	7.87	3.07	-4.80
2.	5.	40.	11.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	2.7	0.9	3.93	7.87	4.23	-3.64
2.	5.	40.	15.	0.26	124.	191.	7.	1343.	27.	0.99	1.40	1.09	4.60	11.2	9.5	24.8	3.7	0.9	3.93	7.87	5.39	-2.47
2.	5.	60.	7.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	1.8	0.6	3.92	7.84	2.75	-5.09
2.	5.	60.	11.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	2.8	0.6	3.92	7.84	3.92	-3.92
2.	5.	60.	15.	0.26	124.	286.	9.	1341.	29.	0.99	1.40	1.09	4.60	11.4	9.5	25.0	3.8	0.6	3.92	7.84	5.10	-2.74
2.	10.	20.	7.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	1.9	1.9	1.75	3.51	2.02	-1.49
2.	10.	20.	11.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	3.0	1.9	1.75	3.51	2.59	-0.92
2.	10.	20.	15.	0.58	124.	95.	5.	1345.	25.	0.99	1.90	1.10	9.10	11.0	11.9	27.4	4.1	1.9	1.75	3.51	3.16	-0.35
2.	10.	40.	7.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	1.9	1.0	1.75	3.50	1.52	-1.97
2.	10.	40.	11.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	3.0	1.0	1.75	3.50	2.10	-1.40
2.	10.	40.	15.	0.58	124.	191.	7.	1343.	27.	0.99	1.90	1.10	9.10	11.2	11.9	27.7	4.2	1.0	1.75	3.50	2.67	-0.82
2.	10.	60.	7.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	2.0	0.7	1.74	3.48	1.36	-2.12
2.	10.	60.	11.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	3.1	0.7	1.74	3.48	1.94	-1.54
2.	10.	60.	15.	0.58	124.	286.	9.	1341.	29.	0.99	1.90	1.10	9.10	11.4	11.9	27.9	4.2	0.7	1.74	3.48	2.53	-0.96

Q= 50.GPM D=3.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	1.7	1.7	5.13	30.75	15.70	-15.05
6.	2.	20.	11.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	2.6	1.7	5.13	30.75	20.16	-10.59
6.	2.	20.	15.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	3.6	1.7	5.13	30.75	24.62	-6.14
6.	2.	40.	7.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	1.7	0.9	5.12	30.73	11.85	-18.88
6.	2.	40.	11.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	2.6	0.9	5.12	30.73	16.34	-14.39
6.	2.	40.	15.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	3.6	0.9	5.12	30.73	20.84	-9.89
6.	2.	60.	7.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	1.7	0.6	5.12	30.71	10.61	-20.10
6.	2.	60.	11.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	2.7	0.6	5.12	30.71	15.14	-15.57
6.	2.	60.	15.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	3.6	0.6	5.12	30.71	19.67	-11.04
6.	5.	20.	7.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	1.8	1.8	1.28	7.69	4.20	-3.48
6.	5.	20.	11.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	2.8	1.8	1.28	7.69	5.40	-2.29
6.	5.	20.	15.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	3.8	1.8	1.28	7.69	6.59	-1.10
6.	5.	40.	7.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	1.8	0.9	1.28	7.68	3.17	-4.51
6.	5.	40.	11.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	2.8	0.9	1.28	7.68	4.37	-3.31
6.	5.	40.	15.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	3.8	0.9	1.28	7.68	5.57	-2.11
6.	5.	60.	7.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	1.8	0.6	1.28	7.68	2.84	-4.84
6.	5.	60.	11.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	2.8	0.6	1.28	7.68	4.05	-3.63
6.	5.	60.	15.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	3.9	0.6	1.28	7.68	5.26	-2.42
6.	10.	20.	7.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	1.9	1.9	0.57	3.42	1.95	-1.47
6.	10.	20.	11.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	2.9	1.9	0.57	3.42	2.50	-0.92
6.	10.	20.	15.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	4.0	1.9	0.57	3.42	3.05	-0.36
6.	10.	40.	7.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	1.9	0.9	0.57	3.41	1.47	-1.95
6.	10.	40.	11.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	2.9	0.9	0.57	3.41	2.03	-1.39
6.	10.	40.	15.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	4.0	0.9	0.57	3.41	2.58	-0.83
6.	10.	60.	7.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	1.9	0.6	0.57	3.41	1.31	-2.10
6.	10.	60.	11.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	3.0	0.6	0.57	3.41	1.87	-1.54
6.	10.	60.	15.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	4.0	0.6	0.57	3.41	2.44	-0.98

Q= 50.GPM D=3.067 IN. PP= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWO C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	1.7	1.7	5.13	20.50	15.70	-4.80
4.	2.	20.	11.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	2.6	1.7	5.13	20.50	20.16	-0.34
4.	2.	20.	15.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	3.6	1.7	5.13	20.50	24.62	4.11
4.	2.	40.	7.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	1.7	0.9	5.12	20.49	11.85	-8.64
4.	2.	40.	11.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	2.6	0.9	5.12	20.49	16.34	-4.14
4.	2.	40.	15.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	3.6	0.9	5.12	20.49	20.84	0.35
4.	2.	60.	7.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	1.7	0.6	5.12	20.47	10.61	-9.86
4.	2.	60.	11.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	2.7	0.6	5.12	20.47	15.14	-5.33
4.	2.	60.	15.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	3.6	0.6	5.12	20.47	19.67	-0.80
4.	5.	20.	7.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	1.8	1.8	1.28	5.13	4.20	-0.92
4.	5.	20.	11.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	2.8	1.8	1.28	5.13	5.40	0.27
4.	5.	20.	15.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	3.8	1.8	1.28	5.13	6.59	1.46
4.	5.	40.	7.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	1.8	0.9	1.28	5.12	3.17	-1.95
4.	5.	40.	11.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	2.8	0.9	1.28	5.12	4.37	-0.75
4.	5.	40.	15.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	3.8	0.9	1.28	5.12	5.57	0.45
4.	5.	60.	7.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	1.8	0.6	1.28	5.12	2.84	-2.28
4.	5.	60.	11.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	2.8	0.6	1.28	5.12	4.05	-1.07
4.	5.	60.	15.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	3.9	0.6	1.28	5.12	5.26	0.14
4.	10.	20.	7.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	1.9	1.9	0.57	2.28	1.95	-0.33
4.	10.	20.	11.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	2.9	1.9	0.57	2.28	2.50	0.22
4.	10.	20.	15.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	4.0	1.9	0.57	2.28	3.05	0.77
4.	10.	40.	7.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	1.9	0.9	0.57	2.28	1.47	-0.81
4.	10.	40.	11.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	2.9	0.9	0.57	2.28	2.03	-0.25
4.	10.	40.	15.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	4.0	0.9	0.57	2.28	2.58	0.31
4.	10.	60.	7.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	1.9	0.6	0.57	2.27	1.31	-0.96
4.	10.	60.	11.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	3.0	0.6	0.57	2.27	1.87	-0.40
4.	10.	60.	15.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	4.0	0.6	0.57	2.27	2.44	0.16
2.	2.	20.	7.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	1.7	1.7	5.13	10.25	15.70	5.45
2.	2.	20.	11.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	2.6	1.7	5.13	10.25	20.16	9.91
2.	2.	20.	15.	0.06	174.	43.	1.	449.	21.	1.00	1.10	1.05	1.90	17.6	2.2	23.8	3.6	1.7	5.13	10.25	24.62	14.36
2.	2.	40.	7.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	1.7	0.9	5.12	10.24	11.85	1.61
2.	2.	40.	11.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	2.6	0.9	5.12	10.24	16.34	6.10
2.	2.	40.	15.	0.06	174.	87.	1.	449.	21.	1.00	1.10	1.05	1.90	17.8	2.2	24.0	3.6	0.9	5.12	10.24	20.84	10.59
2.	2.	60.	7.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	1.7	0.6	5.12	10.24	10.61	0.37
2.	2.	60.	11.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	2.7	0.6	5.12	10.24	15.14	4.90
2.	2.	60.	15.	0.06	174.	130.	1.	449.	21.	1.00	1.10	1.05	1.90	17.9	2.2	24.2	3.6	0.6	5.12	10.24	19.67	9.44
2.	5.	20.	7.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	1.8	1.8	1.28	2.56	4.20	1.64
2.	5.	20.	11.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	2.8	1.8	1.28	2.56	5.40	2.83
2.	5.	20.	15.	0.26	174.	43.	1.	449.	21.	1.00	1.40	1.09	4.60	17.6	3.6	25.4	3.8	1.8	1.28	2.56	6.59	4.03
2.	5.	40.	7.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	1.8	0.9	1.28	2.56	3.17	0.61
2.	5.	40.	11.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	2.8	0.9	1.28	2.56	4.37	1.81
2.	5.	40.	15.	0.26	174.	87.	1.	449.	21.	1.00	1.40	1.09	4.60	17.8	3.6	25.6	3.8	0.9	1.28	2.56	5.57	3.01
2.	5.	60.	7.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	1.8	0.6	1.28	2.56	2.84	0.28
2.	5.	60.	11.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	2.8	0.6	1.28	2.56	4.05	1.49
2.	5.	60.	15.	0.26	174.	130.	1.	449.	21.	1.00	1.40	1.09	4.60	17.9	3.6	25.8	3.9	0.6	1.28	2.56	5.26	2.70
2.	10.	20.	7.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	1.9	1.9	0.57	1.14	1.95	0.81
2.	10.	20.	11.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	2.9	1.9	0.57	1.14	2.50	1.36
2.	10.	20.	15.	0.58	174.	43.	1.	449.	21.	1.00	1.90	1.10	9.10	17.6	4.5	26.5	4.0	1.9	0.57	1.14	3.05	1.91
2.	10.	40.	7.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	1.9	0.9	0.57	1.14	1.47	0.33
2.	10.	40.	11.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	2.9	0.9	0.57	1.14	2.03	0.89
2.	10.	40.	15.	0.58	174.	87.	1.	449.	21.	1.00	1.90	1.10	9.10	17.8	4.5	26.7	4.0	0.9	0.57	1.14	2.58	1.44
2.	10.	60.	7.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	1.9	0.6	0.57	1.14	1.31	0.18
2.	10.	60.	11.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	3.0	0.6	0.57	1.14	1.87	0.74
2.	10.	60.	15.	0.58	174.	130.	1.	449.	21.	1.00	1.90	1.10	9.10	17.9	4.5	26.9	4.0	0.6	0.57	1.14	2.44	1.30

Q= 50.GPM D=3.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MM/G	DCWO C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	1.8	1.8	10.51	63.06	17.05	-46.01
6.	2.	20.	11.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	2.8	1.8	10.51	63.06	21.89	-41.17
6.	2.	20.	15.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	3.9	1.8	10.51	63.06	26.73	-36.33
6.	2.	40.	7.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	1.8	0.9	10.51	63.04	12.86	-50.18
6.	2.	40.	11.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	2.9	0.9	10.51	63.04	17.74	-45.31
6.	2.	40.	15.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	3.9	0.9	10.51	63.04	22.61	-40.43
6.	2.	60.	7.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	1.8	0.6	10.50	63.02	11.51	-51.51
6.	2.	60.	11.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	2.9	0.6	10.50	63.02	16.42	-46.60
6.	2.	60.	15.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	3.9	0.6	10.50	63.02	21.33	-41.69
6.	5.	20.	7.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	2.0	2.1	2.63	15.77	4.80	-10.97
6.	5.	20.	11.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	3.2	2.1	2.63	15.77	6.16	-9.61
6.	5.	20.	15.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	4.4	2.1	2.63	15.77	7.52	-8.24
6.	5.	40.	7.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	2.0	1.0	2.63	15.76	3.62	-12.14
6.	5.	40.	11.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	3.2	1.0	2.63	15.76	4.99	-10.77
6.	5.	40.	15.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	4.4	1.0	2.63	15.76	6.36	-9.40
6.	5.	60.	7.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	2.1	0.7	2.63	15.76	3.23	-12.52
6.	5.	60.	11.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	3.2	0.7	2.63	15.76	4.61	-11.14
6.	5.	60.	15.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	4.4	0.7	2.63	15.76	5.99	-9.75
6.	10.	20.	7.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	2.2	2.2	1.17	7.01	2.27	-4.73
6.	10.	20.	11.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	3.4	2.2	1.17	7.01	2.92	-4.09
6.	10.	20.	15.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	4.6	2.2	1.17	7.01	3.56	-3.44
6.	10.	40.	7.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	2.2	1.1	1.17	7.00	1.71	-5.29
6.	10.	40.	11.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	3.4	1.1	1.17	7.00	2.36	-4.64
6.	10.	40.	15.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	4.7	1.1	1.17	7.00	3.01	-3.99
6.	10.	60.	7.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	2.2	0.7	1.17	7.00	1.53	-5.47
6.	10.	60.	11.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	3.4	0.7	1.17	7.00	2.18	-4.82
6.	10.	60.	15.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	4.7	0.7	1.17	7.00	2.84	-4.17
4.	2.	20.	7.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	1.8	1.8	10.51	42.04	17.05	-24.99
4.	2.	20.	11.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	2.8	1.8	10.51	42.04	21.89	-20.15
4.	2.	20.	15.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	3.9	1.8	10.51	42.04	26.73	-15.31
4.	2.	40.	7.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	1.8	0.9	10.51	42.03	12.86	-29.17
4.	2.	40.	11.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	2.9	0.9	10.51	42.03	17.74	-24.29
4.	2.	40.	15.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	3.9	0.9	10.51	42.03	22.61	-19.42
4.	2.	60.	7.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	1.8	0.6	10.50	42.01	11.51	-30.51
4.	2.	60.	11.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	2.9	0.6	10.50	42.01	16.42	-25.59
4.	2.	60.	15.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	3.9	0.6	10.50	42.01	21.33	-20.68
4.	5.	20.	7.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	2.0	2.1	2.63	10.51	4.80	-5.71
4.	5.	20.	11.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	3.2	2.1	2.63	10.51	6.16	-4.35
4.	5.	20.	15.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	4.4	2.1	2.63	10.51	7.52	-2.99
4.	5.	40.	7.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	2.0	1.0	2.63	10.51	3.62	-6.89
4.	5.	40.	11.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	3.2	1.0	2.63	10.51	4.99	-5.52
4.	5.	40.	15.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	4.4	1.0	2.63	10.51	6.36	-4.15
4.	5.	60.	7.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	2.1	0.7	2.63	10.50	3.23	-7.27
4.	5.	60.	11.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	3.2	0.7	2.63	10.50	4.61	-5.89
4.	5.	60.	15.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	4.4	0.7	2.63	10.50	5.99	-4.51
4.	10.	20.	7.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	2.2	2.2	1.17	4.67	2.27	-2.40
4.	10.	20.	11.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	3.4	2.2	1.17	4.67	2.92	-1.75
4.	10.	20.	15.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	4.6	2.2	1.17	4.67	3.56	-1.11
4.	10.	40.	7.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	2.2	1.1	1.17	4.67	1.71	-2.96
4.	10.	40.	11.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	3.4	1.1	1.17	4.67	2.36	-2.31
4.	10.	40.	15.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	4.7	1.1	1.17	4.67	3.01	-1.66
4.	10.	60.	7.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	2.2	0.7	1.17	4.67	1.53	-3.14
4.	10.	60.	11.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	3.4	0.7	1.17	4.67	2.18	-2.48
4.	10.	60.	15.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	4.7	0.7	1.17	4.67	2.84	-1.83

Q= 50.GPM D=3.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	1.8	1.8	10.51	21.02	17.05	-3.97
2.	2.	20.	11.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	2.8	1.8	10.51	21.02	21.89	0.87
2.	2.	20.	15.	0.06	174.	43.	1.	899.	21.	1.00	1.10	1.05	1.90	17.6	3.9	25.8	3.9	1.8	10.51	21.02	26.73	5.71
2.	2.	40.	7.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	1.8	0.9	10.51	21.01	12.86	-8.15
2.	2.	40.	11.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	2.9	0.9	10.51	21.01	17.74	-3.28
2.	2.	40.	15.	0.06	174.	87.	1.	899.	21.	1.00	1.10	1.05	1.90	17.8	3.9	26.0	3.9	0.9	10.51	21.01	22.61	1.60
2.	2.	60.	7.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	1.8	0.6	10.50	21.01	11.51	-9.50
2.	2.	60.	11.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	2.9	0.6	10.50	21.01	16.42	-4.59
2.	2.	60.	15.	0.06	174.	130.	1.	899.	21.	1.00	1.10	1.05	1.90	17.9	3.9	26.2	3.9	0.6	10.50	21.01	21.33	0.33
2.	5.	20.	7.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	2.0	2.1	2.63	5.26	4.80	-0.46
2.	5.	20.	11.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	3.2	2.1	2.63	5.26	6.16	0.91
2.	5.	20.	15.	0.26	174.	43.	1.	899.	21.	1.00	1.40	1.09	4.60	17.6	6.6	29.0	4.4	2.1	2.63	5.26	7.52	2.27
2.	5.	40.	7.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	2.0	1.0	2.63	5.25	3.62	-1.64
2.	5.	40.	11.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	3.2	1.0	2.63	5.25	4.99	-0.27
2.	5.	40.	15.	0.26	174.	87.	1.	899.	21.	1.00	1.40	1.09	4.60	17.8	6.6	29.2	4.4	1.0	2.63	5.25	6.36	1.10
2.	5.	60.	7.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	2.1	0.7	2.63	5.25	3.23	-2.02
2.	5.	60.	11.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	3.2	0.7	2.63	5.25	4.61	-0.64
2.	5.	60.	15.	0.26	174.	130.	1.	899.	21.	1.00	1.40	1.09	4.60	17.9	6.6	29.4	4.4	0.7	2.63	5.25	5.99	0.74
2.	10.	20.	7.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	2.2	2.2	1.17	2.34	2.27	-0.06
2.	10.	20.	11.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	3.4	2.2	1.17	2.34	2.92	0.58
2.	10.	20.	15.	0.58	174.	43.	1.	899.	21.	1.00	1.90	1.10	9.10	17.6	8.2	31.0	4.6	2.2	1.17	2.34	3.56	1.23
2.	10.	40.	7.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	2.2	1.1	1.17	2.33	1.71	-0.62
2.	10.	40.	11.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	3.4	1.1	1.17	2.33	2.36	0.03
2.	10.	40.	15.	0.58	174.	87.	1.	899.	21.	1.00	1.90	1.10	9.10	17.8	8.2	31.2	4.7	1.1	1.17	2.33	3.01	0.68
2.	10.	60.	7.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	2.2	0.7	1.17	2.33	1.53	-0.80
2.	10.	60.	11.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	3.4	0.7	1.17	2.33	2.18	-0.15
2.	10.	60.	15.	0.58	174.	130.	1.	899.	21.	1.00	1.90	1.10	9.10	17.9	8.2	31.4	4.7	0.7	1.17	2.33	2.84	0.50

Q= 50.GPM D=3.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	2.0	2.0	15.90	95.37	18.48	-76.89
6.	2.	20.	11.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	3.1	2.0	15.90	95.37	23.72	-71.65
6.	2.	20.	15.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	4.2	2.0	15.90	95.37	28.97	-66.41
6.	2.	40.	7.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	2.0	1.0	15.89	95.35	13.93	-81.42
6.	2.	40.	11.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	3.1	1.0	15.89	95.35	19.21	-76.14
6.	2.	40.	15.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	4.2	1.0	15.89	95.35	24.49	-70.86
6.	2.	60.	7.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	2.0	0.7	15.89	95.33	12.45	-82.88
6.	2.	60.	11.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	3.1	0.7	15.89	95.33	17.77	-77.56
6.	2.	60.	15.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	4.3	0.7	15.89	95.33	23.09	-72.24
6.	5.	20.	7.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	2.3	2.3	3.97	23.84	5.37	-18.47
6.	5.	20.	11.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	3.6	2.3	3.97	23.84	6.90	-16.94
6.	5.	20.	15.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	4.9	2.3	3.97	23.84	8.42	-15.42
6.	5.	40.	7.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	2.[illegible]	1.2	3.97	23.84	4.05	-19.79
6.	5.	40.	11.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	3.6	1.2	3.97	23.84	5.58	-18.26
6.	5.	40.	15.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	4.9	1.2	3.97	23.84	7.11	-16.72
6.	5.	60.	7.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	2.3	0.8	3.97	23.83	3.61	-20.22
6.	5.	60.	11.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	3.6	0.8	3.97	23.83	5.16	-18.68
6.	5.	60.	15.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	4.9	0.8	3.97	23.83	6.70	-17.13
6.	10.	20.	7.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	2.5	2.5	1.77	10.60	2.60	-8.00
6.	10.	20.	11.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	3.9	2.5	1.77	10.60	3.34	-7.26
6.	10.	20.	15.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	5.3	2.5	1.77	10.60	4.08	-6.52
6.	10.	40.	7.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	2.5	1.3	1.77	10.59	1.96	-8.64
6.	10.	40.	11.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	3.9	1.3	1.77	10.59	2.70	-7.90
6.	10.	40.	15.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	5.3	1.3	1.77	10.59	3.44	-7.15
6.	10.	60.	7.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	2.5	0.8	1.77	10.59	1.75	-8.85
6.	10.	60.	11.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	3.9	0.8	1.77	10.59	2.49	-8.10
6.	10.	60.	15.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	5.4	0.8	1.77	10.59	3.24	-7.35

Q= 50.GPM D=3.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	2.0	2.0	15.90	63.58	18.48	-45.10
4.	2.	20.	11.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	3.1	2.0	15.90	63.58	23.72	-39.86
4.	2.	20.	15.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	4.2	2.0	15.90	63.58	28.97	-34.62
4.	2.	40.	7.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	2.0	1.0	15.89	63.57	13.93	-49.64
4.	2.	40.	11.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	3.1	1.0	15.89	63.57	19.21	-44.36
4.	2.	40.	15.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	4.2	1.0	15.89	63.57	24.49	-39.08
4.	2.	60.	7.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	2.0	0.7	15.89	63.55	12.45	-51.10
4.	2.	60.	11.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	3.1	0.7	15.89	63.55	17.77	-45.78
4.	2.	60.	15.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	4.3	0.7	15.89	63.55	23.09	-40.46
4.	5.	20.	7.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	2.3	2.3	3.97	15.90	5.37	-10.52
4.	5.	20.	11.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	3.6	2.3	3.97	15.90	6.90	-9.00
4.	5.	20.	15.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	4.9	2.3	3.97	15.90	8.42	-7.47
4.	5.	40.	7.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	2.3	1.2	3.97	15.89	4.05	-11.85
4.	5.	40.	11.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	3.6	1.2	3.97	15.89	5.58	-10.31
4.	5.	40.	15.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	4.9	1.2	3.97	15.89	7.11	-8.78
4.	5.	60.	7.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	2.3	0.8	3.97	15.89	3.61	-12.27
4.	5.	60.	11.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	3.6	0.8	3.97	15.89	5.16	-10.73
4.	5.	60.	15.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	4.9	0.8	3.97	15.89	6.70	-9.19
4.	10.	20.	7.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	2.5	2.5	1.77	7.06	2.60	-4.46
4.	10.	20.	11.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	3.9	2.5	1.77	7.06	3.34	-3.73
4.	10.	20.	15.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	5.3	2.5	1.77	7.06	4.08	-2.99
4.	10.	40.	7.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	2.5	1.3	1.77	7.06	1.96	-5.11
4.	10.	40.	11.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	3.9	1.3	1.77	7.06	2.70	-4.36
4.	10.	40.	15.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	5.3	1.3	1.77	7.06	3.44	-3.62
4.	10.	60.	7.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	2.5	0.8	1.77	7.06	1.75	-5.31
4.	10.	60.	11.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	3.9	0.8	1.77	7.06	2.49	-4.57
4.	10.	60.	15.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	5.4	0.8	1.77	7.06	3.24	-3.82
2.	2.	20.	7.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	2.0	2.0	15.90	31.79	18.48	-13.31
2.	2.	20.	11.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	3.1	2.0	15.90	31.79	23.72	-8.07
2.	2.	20.	15.	0.06	174.	43.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.6	5.7	28.0	4.2	2.0	15.90	31.79	28.97	-2.82
2.	2.	40.	7.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	2.0	1.0	15.89	31.78	13.93	-17.86
2.	2.	40.	11.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	3.1	1.0	15.89	31.78	19.21	-12.58
2.	2.	40.	15.	0.06	174.	87.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.8	5.7	28.2	4.2	1.0	15.89	31.78	24.49	-7.29
2.	2.	60.	7.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	2.0	0.7	15.89	31.78	12.45	-19.32
2.	2.	60.	11.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	3.1	0.7	15.89	31.78	17.77	-14.00
2.	2.	60.	15.	0.06	174.	130.	1.	1349.	21.	1.00	1.10	1.05	1.90	17.9	5.7	28.4	4.3	0.7	15.89	31.78	23.09	-8.69
2.	5.	20.	7.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	2.3	2.3	3.97	7.95	5.37	-2.57
2.	5.	20.	11.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	3.6	2.3	3.97	7.95	6.90	-1.05
2.	5.	20.	15.	0.26	174.	43.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.6	9.5	32.5	4.9	2.3	3.97	7.95	8.42	0.48
2.	5.	40.	7.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	2.3	1.2	3.97	7.95	4.05	-3.90
2.	5.	40.	11.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	3.6	1.2	3.97	7.95	5.58	-2.37
2.	5.	40.	15.	0.26	174.	87.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.8	9.5	32.7	4.9	1.2	3.97	7.95	7.11	-0.83
2.	5.	60.	7.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	2.3	0.8	3.97	7.94	3.61	-4.33
2.	5.	60.	11.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	3.6	0.8	3.97	7.94	5.16	-2.79
2.	5.	60.	15.	0.26	174.	130.	1.	1349.	21.	1.00	1.40	1.09	4.60	17.9	9.5	32.9	4.9	0.8	3.97	7.94	6.70	-1.24
2.	10.	20.	7.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	2.5	2.5	1.77	3.53	2.60	-0.93
2.	10.	20.	11.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	3.9	2.5	1.77	3.53	3.34	-0.19
2.	10.	20.	15.	0.58	174.	43.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.6	11.9	35.4	5.3	2.5	1.77	3.53	4.08	0.54
2.	10.	40.	7.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	2.5	1.3	1.77	3.53	1.96	-1.58
2.	10.	40.	11.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	3.9	1.3	1.77	3.53	2.70	-0.83
2.	10.	40.	15.	0.58	174.	87.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.8	11.9	35.6	5.3	1.3	1.77	3.53	3.44	-0.09
2.	10.	60.	7.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	2.5	0.8	1.77	3.53	1.75	-1.78
2.	10.	60.	11.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	3.9	0.8	1.77	3.53	2.49	-1.04
2.	10.	60.	15.	0.58	174.	130.	1.	1349.	21.	1.00	1.90	1.10	9.10	17.9	11.9	35.8	5.4	0.8	1.77	3.53	3.24	-0.29

Q= 100.GPM D=2.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CON $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	1.3	1.3	4.41	26.47	6.03	-20.44
6.	2.	20.	11.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	2.0	1.3	4.41	26.47	7.74	-18.73
6.	2.	20.	15.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	2.7	1.3	4.41	26.47	9.45	-17.02
6.	2.	40.	7.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	1.3	0.7	3.97	23.80	4.62	-19.18
6.	2.	40.	11.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	2.1	0.7	3.97	23.80	6.38	-17.42
6.	2.	40.	15.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	2.8	0.7	3.97	23.80	8.13	-15.67
6.	2.	60.	7.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	1.3	0.5	3.52	21.14	4.21	-16.93
6.	2.	60.	11.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	2.1	0.5	3.52	21.14	6.01	-15.13
6.	2.	60.	15.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	2.9	0.5	3.52	21.14	7.80	-13.33
6.	5.	20.	7.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	1.5	1.5	1.10	6.62	1.77	-4.84
6.	5.	20.	11.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	2.4	1.5	1.10	6.62	2.28	-4.34
6.	5.	20.	15.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	3.2	1.5	1.10	6.62	2.78	-3.84
6.	5.	40.	7.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	1.5	0.8	0.99	5.95	1.36	-4.59
6.	5.	40.	11.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	2.4	0.8	0.99	5.95	1.87	-4.08
6.	5.	40.	15.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	3.3	0.8	0.99	5.95	2.39	-3.56
6.	5.	60.	7.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	1.6	0.5	0.88	5.28	1.23	-4.05
6.	5.	60.	11.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	2.5	0.5	0.88	5.28	1.76	-3.53
6.	5.	60.	15.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	3.4	0.5	0.88	5.28	2.28	-3.00
6.	10.	20.	7.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	1.6	1.7	0.49	2.94	0.86	-2.08
6.	10.	20.	11.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	2.6	1.7	0.49	2.94	1.10	-1.84
6.	10.	20.	15.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	3.5	1.7	0.49	2.94	1.35	-1.59
6.	10.	40.	7.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	1.7	0.8	0.44	2.64	0.66	-1.99
6.	10.	40.	11.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	2.6	0.8	0.44	2.64	0.90	-1.74
6.	10.	40.	15.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	3.6	0.8	0.44	2.64	1.15	-1.49
6.	10.	60.	7.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	1.7	0.6	0.39	2.35	0.59	-1.75
6.	10.	60.	11.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	2.7	0.6	0.39	2.35	0.85	-1.50
6.	10.	60.	15.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	3.6	0.6	0.39	2.35	1.10	-1.25
4.	2.	20.	7.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	1.3	1.3	4.41	17.64	6.03	-11.62
4.	2.	20.	11.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	2.0	1.3	4.41	17.64	7.74	-9.91
4.	2.	20.	15.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	2.7	1.3	4.41	17.64	9.45	-8.20
4.	2.	40.	7.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	1.3	0.7	3.97	15.87	4.62	-11.24
4.	2.	40.	11.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	2.1	0.7	3.97	15.87	6.38	-9.49
4.	2.	40.	15.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	2.8	0.7	3.97	15.87	8.13	-7.74
4.	2.	60.	7.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	1.3	0.5	3.52	14.09	4.21	-9.88
4.	2.	60.	11.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	2.1	0.5	3.52	14.09	6.01	-8.08
4.	2.	60.	15.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	2.9	0.5	3.52	14.09	7.80	-6.29
4.	5.	20.	7.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	1.5	1.5	1.10	4.41	1.77	-2.64
4.	5.	20.	11.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	2.4	1.5	1.10	4.41	2.28	-2.13
4.	5.	20.	15.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	3.2	1.5	1.10	4.41	2.78	-1.63
4.	5.	40.	7.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	1.5	0.8	0.99	3.97	1.36	-2.61
4.	5.	40.	11.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	2.4	0.8	0.99	3.97	1.87	-2.10
4.	5.	40.	15.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	3.3	0.8	0.99	3.97	2.39	-1.58
4.	5.	60.	7.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	1.6	0.5	0.88	3.52	1.23	-2.29
4.	5.	60.	11.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	2.5	0.5	0.88	3.52	1.76	-1.77
4.	5.	60.	15.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	3.4	0.5	0.88	3.52	2.28	-1.24
4.	10.	20.	7.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	1.6	1.7	0.49	1.96	0.86	-1.10
4.	10.	20.	11.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	2.6	1.7	0.49	1.96	1.10	-0.86
4.	10.	20.	15.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	3.5	1.7	0.49	1.96	1.35	-0.61
4.	10.	40.	7.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	1.7	0.8	0.44	1.76	0.66	-1.11
4.	10.	40.	11.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	2.6	0.8	0.44	1.76	0.90	-0.86
4.	10.	40.	15.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	3.6	0.8	0.44	1.76	1.15	-0.61
4.	10.	60.	7.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	1.7	0.6	0.39	1.57	0.59	-0.97
4.	10.	60.	11.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	2.7	0.6	0.39	1.57	0.85	-0.72
4.	10.	60.	15.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	3.6	0.6	0.39	1.57	1.10	-0.47

Q= 100.GPM D=2.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	UT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	1.3	1.3	4.41	8.82	6.03	-2.80
2.	2.	20.	11.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	2.0	1.3	4.41	8.82	7.74	-1.09
2.	2.	20.	15.	0.13	124.	191.	29.	421.	49.	0.87	1.10	1.05	1.90	11.3	3.9	18.2	2.7	1.3	4.41	8.82	9.45	0.62
2.	2.	40.	7.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	1.3	0.7	3.97	7.93	4.62	-3.31
2.	2.	40.	11.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	2.1	0.7	3.97	7.93	6.38	-1.56
2.	2.	40.	15.	0.13	124.	382.	46.	404.	66.	0.79	1.10	1.05	1.90	11.7	3.9	18.7	2.8	0.7	3.97	7.93	8.13	0.20
2.	2.	60.	7.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	1.3	0.5	3.52	7.05	4.21	-2.84
2.	2.	60.	11.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	2.1	0.5	3.52	7.05	6.01	-1.04
2.	2.	60.	15.	0.13	124.	573.	63.	387.	83.	0.71	1.10	1.05	1.90	12.1	3.9	19.2	2.9	0.5	3.52	7.05	7.80	0.76
2.	5.	20.	7.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	1.5	1.5	1.10	2.21	1.77	-0.43
2.	5.	20.	11.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	2.4	1.5	1.10	2.21	2.28	0.07
2.	5.	20.	15.	0.52	124.	191.	29.	421.	49.	0.87	1.40	1.09	4.60	11.3	6.6	21.5	3.2	1.5	1.10	2.21	2.78	0.58
2.	5.	40.	7.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	1.5	0.8	0.99	1.98	1.36	-0.63
2.	5.	40.	11.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	2.4	0.8	0.99	1.98	1.87	-0.11
2.	5.	40.	15.	0.52	124.	382.	46.	404.	66.	0.79	1.40	1.09	4.60	11.7	6.6	21.9	3.3	0.8	0.99	1.98	2.39	0.40
2.	5.	60.	7.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	1.6	0.5	0.88	1.76	1.23	-0.53
2.	5.	60.	11.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	2.5	0.5	0.88	1.76	1.76	-0.01
2.	5.	60.	15.	0.52	124.	573.	63.	387.	83.	0.71	1.40	1.09	4.60	12.1	6.6	22.4	3.4	0.5	0.88	1.76	2.28	0.52
2.	10.	20.	7.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	1.6	1.7	0.49	0.98	0.86	-0.12
2.	10.	20.	11.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	2.6	1.7	0.49	0.98	1.10	0.12
2.	10.	20.	15.	1.17	124.	191.	29.	421.	49.	0.87	1.90	1.10	9.10	11.3	8.2	23.4	3.5	1.7	0.49	0.98	1.35	0.37
2.	10.	40.	7.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	1.7	0.8	0.44	0.88	0.66	-0.23
2.	10.	40.	11.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	2.6	0.8	0.44	0.88	0.90	0.02
2.	10.	40.	15.	1.17	124.	382.	46.	404.	66.	0.79	1.90	1.10	9.10	11.7	8.2	23.9	3.6	0.8	0.44	0.88	1.15	0.27
2.	10.	60.	7.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	1.7	0.6	0.39	0.78	0.59	-0.19
2.	10.	60.	11.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	2.7	0.6	0.39	0.78	0.85	0.06
2.	10.	60.	15.	1.17	124.	573.	63.	387.	83.	0.71	1.90	1.10	9.10	12.1	8.2	24.3	3.6	0.6	0.39	0.78	1.10	0.32

Q= 100.GPM D=2.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	UT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	1.6	1.6	9.80	58.78	7.41	-51.36
6.	2.	20.	11.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	2.5	1.6	9.80	58.78	9.52	-49.26
6.	2.	20.	15.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	3.4	1.6	9.80	58.78	11.62	-47.15
6.	2.	40.	7.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	1.6	0.8	9.35	56.11	5.66	-50.45
6.	2.	40.	11.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	2.5	0.8	9.35	56.11	7.81	-48.30
6.	2.	40.	15.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	3.4	0.8	9.35	56.11	9.96	-46.15
6.	2.	60.	7.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	1.6	0.6	8.91	53.45	5.13	-48.32
6.	2.	60.	11.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	2.6	0.6	8.91	53.45	7.32	-46.13
6.	2.	60.	15.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	3.5	0.6	8.91	53.45	9.51	-43.93
6.	5.	20.	7.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	2.0	2.0	2.45	14.69	2.34	-12.35
6.	5.	20.	11.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	3.1	2.0	2.45	14.69	3.00	-11.69
6.	5.	20.	15.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	4.2	2.0	2.45	14.69	3.67	-11.03
6.	5.	40.	7.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	2.0	1.0	2.34	14.03	1.78	-12.25
6.	5.	40.	11.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	3.2	1.0	2.34	14.03	2.45	-11.57
6.	5.	40.	15.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	4.3	1.0	2.34	14.03	3.13	-10.90
6.	5.	60.	7.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	2.0	0.7	2.23	13.36	1.61	-11.76
6.	5.	60.	11.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	3.2	0.7	2.23	13.36	2.29	-11.07
6.	5.	60.	15.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	4.4	0.7	2.23	13.36	2.98	-10.38
6.	10.	20.	7.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	2.3	2.3	1.09	6.53	1.18	-5.35
6.	10.	20.	11.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	3.5	2.3	1.09	6.53	1.52	-5.01
6.	10.	20.	15.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	4.8	2.3	1.09	6.53	1.85	-4.68
6.	10.	40.	7.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	2.3	1.2	1.04	6.23	0.90	-5.34
6.	10.	40.	11.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	3.6	1.2	1.04	6.23	1.24	-5.00
6.	10.	40.	15.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	4.9	1.2	1.04	6.23	1.58	-4.66
6.	10.	60.	7.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	2.3	0.8	0.99	5.94	0.81	-5.13
6.	10.	60.	11.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	3.6	0.8	0.99	5.94	1.15	-4.79
6.	10.	60.	15.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	5.0	0.8	0.99	5.94	1.50	-4.44

Q= 100.GPM D=2.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	1.6	1.6	9.80	39.18	7.41	-31.77
4.	2.	20.	11.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	2.5	1.6	9.80	39.18	9.52	-29.67
4.	2.	20.	15.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	3.4	1.6	9.80	39.18	11.62	-27.56
4.	2.	40.	7.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	1.6	0.8	9.35	37.41	5.66	-31.74
4.	2.	40.	11.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	2.5	0.8	9.35	37.41	7.81	-29.60
4.	2.	40.	15.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	3.4	0.8	9.35	37.41	9.96	-27.45
4.	2.	60.	7.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	1.6	0.6	8.91	35.63	5.13	-30.50
4.	2.	60.	11.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	2.6	0.6	8.91	35.63	7.32	-28.31
4.	2.	60.	15.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	3.5	0.6	8.91	35.63	9.51	-26.12
4.	5.	20.	7.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	2.0	2.0	2.45	9.80	2.34	-7.46
4.	5.	20.	11.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	3.1	2.0	2.45	9.80	3.00	-6.79
4.	5.	20.	15.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	4.2	2.0	2.45	9.80	3.67	-6.13
4.	5.	40.	7.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	2.0	1.0	2.34	9.35	1.78	-7.57
4.	5.	40.	11.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	3.2	1.0	2.34	9.35	2.45	-6.90
4.	5.	40.	15.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	4.3	1.0	2.34	9.35	3.13	-6.22
4.	5.	60.	7.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	2.0	0.7	2.23	8.91	1.61	-7.30
4.	5.	60.	11.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	3.2	0.7	2.23	8.91	2.29	-6.62
4.	5.	60.	15.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	4.4	0.7	2.23	8.91	2.98	-5.93
4.	10.	20.	7.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	2.3	2.3	1.09	4.35	1.18	-3.17
4.	10.	20.	11.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	3.5	2.3	1.09	4.35	1.52	-2.84
4.	10.	20.	15.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	4.8	2.3	1.09	4.35	1.85	-2.50
4.	10.	40.	7.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	2.3	1.2	1.04	4.16	0.90	-3.26
4.	10.	40.	11.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	3.6	1.2	1.04	4.16	1.24	-2.92
4.	10.	40.	15.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	4.9	1.2	1.04	4.16	1.58	-2.58
4.	10.	60.	7.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	2.3	0.8	0.99	3.96	0.81	-3.15
4.	10.	60.	11.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	3.6	0.8	0.99	3.96	1.15	-2.81
4.	10.	60.	15.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	5.0	0.8	0.99	3.96	1.50	-2.46
2.	2.	20.	7.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	1.6	1.6	9.80	19.59	7.41	-12.18
2.	2.	20.	11.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	2.5	1.6	9.80	19.59	9.52	-10.07
2.	2.	20.	15.	0.13	124.	191.	29.	871.	49.	0.93	1.10	1.05	1.90	11.3	7.4	22.4	3.4	1.6	9.80	19.59	11.62	-7.97
2.	2.	40.	7.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	1.6	0.8	9.35	18.70	5.66	-13.04
2.	2.	40.	11.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	2.5	0.8	9.35	18.70	7.81	-10.89
2.	2.	40.	15.	0.13	124.	382.	46.	854.	66.	0.90	1.10	1.05	1.90	11.7	7.4	22.9	3.4	0.8	9.35	18.70	9.96	-8.75
2.	2.	60.	7.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	1.6	0.6	8.91	17.82	5.13	-12.68
2.	2.	60.	11.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	2.6	0.6	8.91	17.82	7.32	-10.49
2.	2.	60.	15.	0.13	124.	573.	63.	837.	83.	0.86	1.10	1.05	1.90	12.1	7.4	23.4	3.5	0.6	8.91	17.82	9.51	-8.30
2.	5.	20.	7.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	2.0	2.0	2.45	4.90	2.34	-2.56
2.	5.	20.	11.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	3.1	2.0	2.45	4.90	3.00	-1.69
2.	5.	20.	15.	0.52	124.	191.	29.	871.	49.	0.93	1.40	1.09	4.60	11.3	12.3	28.3	4.2	2.0	2.45	4.90	3.67	-1.23
2.	5.	40.	7.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	2.0	1.0	2.34	4.68	1.78	-2.90
2.	5.	40.	11.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	3.2	1.0	2.34	4.68	2.45	-2.22
2.	5.	40.	15.	0.52	124.	382.	46.	854.	66.	0.90	1.40	1.09	4.60	11.7	12.3	28.8	4.3	1.0	2.34	4.68	3.13	-1.55
2.	5.	60.	7.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	2.0	0.7	2.23	4.45	1.61	-2.85
2.	5.	60.	11.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	3.2	0.7	2.23	4.45	2.29	-2.16
2.	5.	60.	15.	0.52	124.	573.	63.	837.	83.	0.86	1.40	1.09	4.60	12.1	12.3	29.2	4.4	0.7	2.23	4.45	2.98	-1.48
2.	10.	20.	7.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	2.3	2.3	1.09	2.18	1.18	-1.00
2.	10.	20.	11.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	3.5	2.3	1.09	2.18	1.52	-0.66
2.	10.	20.	15.	1.17	124.	191.	29.	871.	49.	0.93	1.90	1.10	9.10	11.3	15.5	32.2	4.8	2.3	1.09	2.18	1.85	-0.33
2.	10.	40.	7.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	2.3	1.2	1.04	2.08	0.90	-1.18
2.	10.	40.	11.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	3.6	1.2	1.04	2.08	1.24	-0.84
2.	10.	40.	15.	1.17	124.	382.	46.	854.	66.	0.90	1.90	1.10	9.10	11.7	15.5	32.6	4.9	1.2	1.04	2.08	1.58	-0.50
2.	10.	60.	7.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	2.3	0.8	0.99	1.98	0.81	-1.17
2.	10.	60.	11.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	3.6	0.8	0.99	1.98	1.15	-0.83
2.	10.	60.	15.	1.17	124.	573.	63.	837.	83.	0.86	1.90	1.10	9.10	12.1	15.5	33.1	5.0	0.8	0.99	1.98	1.50	-0.48

Q= 100.GPM D=2.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCMD C/KG	DCMI C/KG	DCM C/KG
6.	2.	20.	7.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	1.8	1.9	15.18	91.09	8.72	-82.36
6.	2.	20.	11.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	2.9	1.9	15.18	91.09	11.20	-79.89
6.	2.	20.	15.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	4.0	1.9	15.18	91.09	13.67	-77.41
6.	2.	40.	7.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	1.9	1.0	14.74	88.42	6.64	-81.78
6.	2.	40.	11.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	3.0	1.0	14.74	88.42	9.16	-79.26
6.	2.	40.	15.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	4.0	1.0	14.74	88.42	11.68	-76.74
6.	2.	60.	7.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	1.9	0.6	14.29	85.76	6.00	-79.76
6.	2.	60.	11.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	3.0	0.6	14.29	85.76	8.56	-77.20
6.	2.	60.	15.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	4.1	0.6	14.29	85.76	11.13	-74.63
6.	5.	20.	7.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	2.4	2.5	3.80	22.77	2.89	-19.89
6.	5.	20.	11.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	3.8	2.5	3.80	22.77	3.70	-19.07
6.	5.	20.	15.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	5.2	2.5	3.80	22.77	4.52	-18.25
6.	5.	40.	7.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	2.5	1.3	3.68	22.11	2.19	-19.92
6.	5.	40.	11.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	3.9	1.3	3.68	22.11	3.02	-19.09
6.	5.	40.	15.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	5.3	1.3	3.68	22.11	3.85	-18.26
6.	5.	60.	7.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	2.5	0.8	3.57	21.44	1.97	-19.47
6.	5.	60.	11.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	3.9	0.8	3.57	21.44	2.81	-18.63
6.	5.	60.	15.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	5.4	0.8	3.57	21.44	3.65	-17.79
6.	10.	20.	7.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	2.8	2.9	1.69	10.12	1.48	-8.64
6.	10.	20.	11.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	4.4	2.9	1.69	10.12	1.89	-8.23
6.	10.	20.	15.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	6.0	2.9	1.69	10.12	2.31	-7.81
6.	10.	40.	7.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	2.8	1.4	1.64	9.82	1.12	-8.71
6.	10.	40.	11.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	4.5	1.4	1.64	9.82	1.54	-8.28
6.	10.	40.	15.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	6.1	1.4	1.64	9.82	1.96	-7.86
6.	10.	60.	7.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	2.9	1.0	1.59	9.53	1.00	-8.53
6.	10.	60.	11.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	4.5	1.0	1.59	9.53	1.43	-8.10
6.	10.	60.	15.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	6.2	1.0	1.59	9.53	1.86	-7.67
4.	2.	20.	7.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	1.8	1.9	15.18	60.73	8.72	-52.00
4.	2.	20.	11.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	2.9	1.9	15.18	60.73	11.20	-49.53
4.	2.	20.	15.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	4.0	1.9	15.18	60.73	13.67	-47.05
4.	2.	40.	7.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	1.9	1.0	14.74	58.95	6.64	-52.31
4.	2.	40.	11.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	3.0	1.0	14.74	58.95	9.16	-49.79
4.	2.	40.	15.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	4.0	1.0	14.74	58.95	11.68	-47.27
4.	2.	60.	7.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	1.9	0.6	14.29	57.17	6.00	-51.17
4.	2.	60.	11.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	3.0	0.6	14.29	57.17	8.56	-48.61
4.	2.	60.	15.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	4.1	0.6	14.29	57.17	11.13	-46.05
4.	5.	20.	7.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	2.4	2.5	3.80	15.18	2.89	-12.30
4.	5.	20.	11.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	3.8	2.5	3.80	15.18	3.70	-11.48
4.	5.	20.	15.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	5.2	2.5	3.80	15.18	4.52	-10.66
4.	5.	40.	7.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	2.5	1.3	3.68	14.74	2.19	-12.55
4.	5.	40.	11.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	3.9	1.3	3.68	14.74	3.02	-11.72
4.	5.	40.	15.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	5.3	1.3	3.68	14.74	3.85	-10.89
4.	5.	60.	7.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	2.5	0.8	3.57	14.29	1.97	-12.33
4.	5.	60.	11.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	3.9	0.8	3.57	14.29	2.81	-11.48
4.	5.	60.	15.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	5.4	0.8	3.57	14.29	3.65	-10.64
4.	10.	20.	7.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	2.8	2.9	1.69	6.75	1.48	-5.27
4.	10.	20.	11.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	4.4	2.9	1.69	6.75	1.89	-4.85
4.	10.	20.	15.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	6.0	2.9	1.69	6.75	2.31	-4.43
4.	10.	40.	7.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	2.8	1.4	1.64	6.55	1.12	-5.43
4.	10.	40.	11.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	4.5	1.4	1.64	6.55	1.54	-5.01
4.	10.	40.	15.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	6.1	1.4	1.64	6.55	1.96	-4.59
4.	10.	60.	7.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	2.9	1.0	1.59	6.35	1.00	-5.35
4.	10.	60.	11.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	4.5	1.0	1.59	6.35	1.43	-4.92
4.	10.	60.	15.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	6.2	1.0	1.59	6.35	1.86	-4.49

Q= 100.GPM D=2.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CG $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	1.8	1.9	15.18	30.36	8.72	-21.64
2.	2.	20.	11.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	2.9	1.9	15.18	30.36	11.20	-19.16
2.	2.	20.	15.	0.13	124.	191.	29.	1321.	49.	0.96	1.10	1.05	1.90	11.3	10.7	26.4	4.0	1.9	15.18	30.36	13.67	-16.69
2.	2.	40.	7.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	1.9	1.0	14.74	29.47	6.64	-22.83
2.	2.	40.	11.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	3.0	1.0	14.74	29.47	9.16	-20.31
2.	2.	40.	15.	0.13	124.	382.	46.	1304.	66.	0.93	1.10	1.05	1.90	11.7	10.7	26.9	4.0	1.0	14.74	29.47	11.68	-17.79
2.	2.	60.	7.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	1.9	0.6	14.29	28.59	6.00	-22.59
2.	2.	60.	11.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	3.0	0.6	14.29	28.59	8.56	-20.02
2.	2.	60.	15.	0.13	124.	573.	63.	1287.	83.	0.90	1.10	1.05	1.90	12.1	10.7	27.3	4.1	0.6	14.29	28.59	11.13	-17.46
2.	5.	20.	7.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	2.4	2.5	3.80	7.59	2.89	-4.71
2.	5.	20.	11.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	3.8	2.5	3.80	7.59	3.70	-3.89
2.	5.	20.	15.	0.52	124.	191.	29.	1321.	49.	0.96	1.40	1.09	4.60	11.3	17.8	34.9	5.2	2.5	3.80	7.59	4.52	-3.07
2.	5.	40.	7.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	2.5	1.3	3.68	7.37	2.19	-5.18
2.	5.	40.	11.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	3.9	1.3	3.68	7.37	3.02	-4.35
2.	5.	40.	15.	0.52	124.	382.	46.	1304.	66.	0.93	1.40	1.09	4.60	11.7	17.8	35.4	5.3	1.3	3.68	7.37	3.85	-3.52
2.	5.	60.	7.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	2.5	0.8	3.57	7.15	1.97	-5.18
2.	5.	60.	11.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	3.9	0.8	3.57	7.15	2.81	-4.34
2.	5.	60.	15.	0.52	124.	573.	63.	1287.	83.	0.90	1.40	1.09	4.60	12.1	17.8	35.8	5.4	0.8	3.57	7.15	3.65	-3.53
2.	10.	20.	7.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	2.8	2.9	1.69	3.37	1.48	-1.90
2.	10.	20.	11.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	4.4	2.9	1.69	3.37	1.89	-1.48
2.	10.	20.	15.	1.17	124.	191.	29.	1321.	49.	0.96	1.90	1.10	9.10	11.3	22.2	40.2	6.0	2.9	1.69	3.37	2.31	-1.06
2.	10.	40.	7.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	2.8	1.4	1.64	3.27	1.12	-2.16
2.	10.	40.	11.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	4.5	1.4	1.64	3.27	1.54	-1.73
2.	10.	40.	15.	1.17	124.	382.	46.	1304.	66.	0.93	1.90	1.10	9.10	11.7	22.2	40.7	6.1	1.4	1.64	3.27	1.96	-1.31
2.	10.	60.	7.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	2.9	1.0	1.59	3.18	1.00	-2.17
2.	10.	60.	11.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	4.5	1.0	1.59	3.18	1.43	-1.74
2.	10.	60.	15.	1.17	124.	573.	63.	1287.	83.	0.90	1.90	1.10	9.10	12.1	22.2	41.1	6.2	1.0	1.59	3.18	1.86	-1.32

Q= 100.GPM D=3.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CG $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	1.8	1.9	5.06	30.35	8.65	-21.71
6.	2.	20.	11.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	2.5	1.9	5.06	30.35	11.10	-19.25
6.	2.	20.	15.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	3.9	1.9	5.06	30.35	13.55	-16.80
6.	2.	40.	7.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	1.5	0.9	5.03	30.18	6.57	-23.61
6.	2.	40.	11.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	2.9	0.9	5.03	30.18	9.06	-21.12
6.	2.	40.	15.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	4.6	0.9	5.03	30.18	11.55	-18.63
6.	2.	60.	7.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	1.9	0.6	5.00	30.01	5.92	-24.09
6.	2.	60.	11.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	3.0	0.6	5.00	30.01	8.45	-21.57
6.	2.	60.	15.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	4.0	0.6	5.00	30.01	10.98	-19.04
6.	5.	20.	7.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	2.1	2.1	1.26	7.59	2.43	-5.16
6.	5.	20.	11.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	3.2	2.1	1.26	7.59	3.12	-4.47
6.	5.	20.	15.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	4.4	2.1	1.26	7.59	3.81	-3.78
6.	5.	40.	7.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	2.1	1.1	1.26	7.55	1.84	-5.70
6.	5.	40.	11.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	3.3	1.1	1.26	7.55	2.54	-5.00
6.	5.	40.	15.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	4.5	1.1	1.26	7.55	3.24	-4.31
6.	5.	60.	7.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	2.1	0.7	1.25	7.50	1.66	-5.85
6.	5.	60.	11.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	3.3	0.7	1.25	7.50	2.37	-5.14
6.	5.	60.	15.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	4.5	0.7	1.25	7.50	3.07	-4.43
6.	10.	20.	7.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	2.2	2.2	0.56	3.37	1.15	-2.22
6.	10.	20.	11.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	3.4	2.2	0.56	3.37	1.48	-1.90
6.	10.	20.	15.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	4.7	2.2	0.56	3.37	1.80	-1.57
6.	10.	40.	7.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	2.2	1.1	0.56	3.35	0.87	-2.48
6.	10.	40.	11.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	3.5	1.1	0.56	3.35	1.20	-2.15
6.	10.	40.	15.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	4.8	1.1	0.56	3.35	1.53	-1.82
6.	10.	60.	7.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	2.2	0.8	0.56	3.33	0.78	-2.55
6.	10.	60.	11.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	3.5	0.8	0.56	3.33	1.12	-2.22
6.	10.	60.	15.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	4.8	0.8	0.56	3.33	1.45	-1.88

Q= 100.GPH D=3.067 IN. PR= 500.PSIG PU= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	1.8	1.9	5.06	20.23	8.65	-11.59
4.	2.	20.	11.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	2.9	1.9	5.06	20.23	11.10	-9.14
4.	2.	20.	15.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	3.9	1.9	5.06	20.23	13.55	-6.68
4.	2.	40.	7.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	1.9	0.9	5.03	20.12	6.57	-13.55
4.	2.	40.	11.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	2.9	0.9	5.03	20.12	9.06	-11.06
4.	2.	40.	15.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	4.0	0.9	5.03	20.12	11.55	-8.57
4.	2.	60.	7.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	1.9	0.6	5.00	20.01	5.92	-14.09
4.	2.	60.	11.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	3.0	0.6	5.00	20.01	8.45	-11.56
4.	2.	60.	15.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	4.0	0.6	5.00	20.01	10.98	-9.03
4.	5.	20.	7.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	2.1	2.1	1.26	5.06	2.43	-2.63
4.	5.	20.	11.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	3.2	2.1	1.26	5.06	3.12	-1.94
4.	5.	20.	15.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	4.4	2.1	1.26	5.06	3.81	-1.25
4.	5.	40.	7.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	2.1	1.1	1.26	5.03	1.84	-3.19
4.	5.	40.	11.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	3.3	1.1	1.26	5.03	2.54	-2.49
4.	5.	40.	15.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	4.5	1.1	1.26	5.03	3.24	-1.79
4.	5.	60.	7.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	2.1	0.7	1.25	5.00	1.66	-3.34
4.	5.	60.	11.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	3.3	0.7	1.25	5.00	2.37	-2.64
4.	5.	60.	15.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	4.5	0.7	1.25	5.00	3.07	-1.93
4.	10.	20.	7.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	2.2	2.2	0.56	2.25	1.15	-1.10
4.	10.	20.	11.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	3.4	2.2	0.56	2.25	1.48	-0.77
4.	10.	20.	15.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	4.7	2.2	0.56	2.25	1.80	-0.45
4.	10.	40.	7.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	2.2	1.1	0.56	2.24	0.87	-1.36
4.	10.	40.	11.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	3.5	1.1	0.56	2.24	1.20	-1.03
4.	10.	40.	15.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	4.8	1.1	0.56	2.24	1.53	-0.70
4.	10.	60.	7.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	2.2	0.8	0.56	2.22	0.78	-1.44
4.	10.	60.	11.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	3.5	0.8	0.56	2.22	1.12	-1.10
4.	10.	60.	15.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	4.8	0.8	0.56	2.22	1.45	-0.77
2.	2.	20.	7.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	1.8	1.9	5.06	10.12	8.65	-1.47
2.	2.	20.	11.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	2.9	1.9	5.06	10.12	11.10	0.98
2.	2.	20.	15.	0.13	174.	87.	3.	447.	23.	0.98	1.10	1.05	1.90	17.9	3.9	26.2	3.9	1.9	5.06	10.12	13.55	3.43
2.	2.	40.	7.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	1.9	0.9	5.03	10.06	6.57	-3.49
2.	2.	40.	11.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	2.9	0.9	5.03	10.06	9.06	-1.00
2.	2.	40.	15.	0.13	174.	173.	4.	446.	24.	0.98	1.10	1.05	1.90	18.2	3.9	26.6	4.0	0.9	5.03	10.06	11.55	1.49
2.	2.	60.	7.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	1.9	0.6	5.00	10.00	5.92	-4.08
2.	2.	60.	11.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	3.0	0.6	5.00	10.00	8.45	-1.56
2.	2.	60.	15.	0.13	174.	260.	5.	445.	25.	0.97	1.10	1.05	1.90	18.6	3.9	27.0	4.0	0.6	5.00	10.00	10.98	0.97
2.	5.	20.	7.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	2.1	2.1	1.26	2.53	2.43	-0.10
2.	5.	20.	11.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	3.2	2.1	1.26	2.53	3.12	0.59
2.	5.	20.	15.	0.52	174.	87.	3.	447.	23.	0.98	1.40	1.09	4.60	17.9	6.6	29.4	4.4	2.1	1.26	2.53	3.81	1.28
2.	5.	40.	7.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	2.1	1.1	1.26	2.52	1.84	-0.67
2.	5.	40.	11.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	3.3	1.1	1.26	2.52	2.54	0.03
2.	5.	40.	15.	0.52	174.	173.	4.	446.	24.	0.98	1.40	1.09	4.60	18.2	6.6	29.8	4.5	1.1	1.26	2.52	3.24	0.72
2.	5.	60.	7.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	2.1	0.7	1.25	2.50	1.66	-0.84
2.	5.	60.	11.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	3.3	0.7	1.25	2.50	2.37	-0.14
2.	5.	60.	15.	0.52	174.	260.	5.	445.	25.	0.97	1.40	1.09	4.60	18.6	6.6	30.2	4.5	0.7	1.25	2.50	3.07	0.57
2.	10.	20.	7.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	2.2	2.2	0.56	1.12	1.15	0.03
2.	10.	20.	11.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	3.4	2.2	0.56	1.12	1.48	0.35
2.	10.	20.	15.	1.17	174.	87.	3.	447.	23.	0.98	1.90	1.10	9.10	17.9	8.2	31.3	4.7	2.2	0.56	1.12	1.80	0.68
2.	10.	40.	7.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	2.2	1.1	0.56	1.12	0.67	-0.25
2.	10.	40.	11.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	3.5	1.1	0.56	1.12	1.20	0.08
2.	10.	40.	15.	1.17	174.	173.	4.	446.	24.	0.98	1.90	1.10	9.10	18.2	8.2	31.7	4.8	1.1	0.56	1.12	1.53	0.41
2.	10.	60.	7.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	2.2	0.8	0.56	1.11	0.78	-0.33
2.	10.	60.	11.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	3.5	0.8	0.56	1.11	1.12	0.01
2.	10.	60.	15.	1.17	174.	260.	5.	445.	25.	0.97	1.90	1.10	9.10	18.6	8.2	32.1	4.8	0.8	0.56	1.11	1.45	0.34

Q= 100.GPM D=3.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	2.1	2.2	10.44	62.66	10.03	-52.63
6.	2.	20.	11.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	3.3	2.2	10.44	62.66	12.88	-49.78
6.	2.	20.	15.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	4.6	2.2	10.44	62.66	15.73	[illegible]
6.	2.	40.	7.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	2.2	1.1	10.42	62.49	7.61	-54.89
6.	2.	40.	11.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	3.4	1.1	10.42	62.49	10.49	-52.00
6.	2.	40.	15.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	4.6	1.1	10.42	62.49	13.38	-49.12
6.	2.	60.	7.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	2.2	0.7	10.39	62.33	6.84	-55.48
6.	2.	60.	11.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	3.4	0.7	10.39	62.33	9.76	-52.56
6.	2.	60.	15.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	4.7	0.7	10.39	62.33	12.69	-49.64
6.	5.	20.	7.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	2.5	2.6	2.61	15.67	2.99	-12.67
6.	5.	20.	11.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	4.0	2.6	2.61	15.67	3.84	-11.82
6.	5.	20.	15.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	5.4	2.6	2.61	15.67	4.69	-10.97
6.	5.	40.	7.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	2.6	1.3	2.60	15.62	2.27	-13.36
6.	5.	40.	11.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	4.0	1.3	2.60	15.62	3.12	-12.50
6.	5.	40.	15.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	5.5	1.3	2.60	15.62	3.98	-11.64
6.	5.	60.	7.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	2.6	0.9	2.60	15.58	2.03	-13.55
6.	5.	60.	11.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	4.1	0.9	2.60	15.58	2.90	-12.68
6.	5.	60.	15.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	5.6	0.9	2.60	15.58	3.77	-11.81
6.	10.	20.	7.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	2.8	2.8	1.16	6.96	1.47	-5.49
6.	10.	20.	11.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	4.4	2.8	1.16	6.96	1.89	-5.07
6.	10.	20.	15.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	6.0	2.8	1.16	6.96	2.31	-4.66
6.	10.	40.	7.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	2.8	1.4	1.16	6.94	1.11	-5.83
6.	10.	40.	11.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	4.5	1.4	1.16	6.94	1.53	-5.41
6.	10.	40.	15.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	6.1	1.4	1.16	6.94	1.96	-4.99
6.	10.	60.	7.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	2.9	1.0	1.15	6.93	1.00	-5.93
6.	10.	60.	11.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	4.5	1.0	1.15	6.93	1.42	-5.50
6.	10.	60.	15.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	6.1	1.0	1.15	6.93	1.85	-5.08
4.	2.	20.	7.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	2.1	2.2	10.44	41.77	10.03	-31.74
4.	2.	20.	11.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	3.3	2.2	10.44	41.77	12.88	-28.90
4.	2.	20.	15.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	4.6	2.2	10.44	41.77	15.73	-26.05
4.	2.	40.	7.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	2.2	1.1	10.42	41.66	7.61	-34.06
4.	2.	40.	11.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	3.4	1.1	10.42	41.66	10.49	-31.17
4.	2.	40.	15.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	4.6	1.1	10.42	41.66	13.38	-28.29
4.	2.	60.	7.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	2.2	0.7	10.39	41.55	6.84	-34.71
4.	2.	60.	11.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	3.4	0.7	10.39	41.55	9.76	-31.79
4.	2.	60.	15.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	4.7	0.7	10.39	41.55	12.69	-28.86
4.	5.	20.	7.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	2.5	2.6	2.61	10.44	2.99	-7.45
4.	5.	20.	11.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	4.0	2.6	2.61	10.44	3.84	-6.60
4.	5.	20.	15.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	5.4	2.6	2.61	10.44	4.69	-5.75
4.	5.	40.	7.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	2.6	1.3	2.60	10.42	2.27	-8.15
4.	5.	40.	11.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	4.0	1.3	2.60	10.42	3.12	-7.29
4.	5.	40.	15.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	5.5	1.3	2.60	10.42	3.98	-6.43
4.	5.	60.	7.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	2.6	0.9	2.60	10.39	2.03	-8.35
4.	5.	60.	11.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	4.1	0.9	2.60	10.39	2.90	-7.49
4.	5.	60.	15.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	5.6	0.9	2.60	10.39	3.77	-6.62
4.	10.	20.	7.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	2.8	2.8	1.16	4.64	1.47	-3.17
4.	10.	20.	11.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	4.4	2.8	1.16	4.64	1.89	-2.75
4.	10.	20.	15.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	6.0	2.8	1.16	4.64	2.31	-2.33
4.	10.	40.	7.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	2.8	1.4	1.16	4.63	1.11	-3.52
4.	10.	40.	11.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	4.5	1.4	1.16	4.63	1.53	-3.10
4.	10.	40.	15.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	6.1	1.4	1.16	4.63	1.96	-2.67
4.	10.	60.	7.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	2.9	1.0	1.15	4.62	1.00	-3.62
4.	10.	60.	11.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	4.5	1.0	1.15	4.62	1.42	-3.19
4.	10.	60.	15.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	6.1	1.0	1.15	4.62	1.85	-2.77

Q= 100.GPM D=3.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	2.1	2.2	10.44	20.89	10.03	-10.85
2.	2.	20.	11.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	3.3	2.2	10.44	20.89	12.88	-8.01
2.	2.	20.	15.	0.13	174.	87.	3.	897.	23.	0.99	1.10	1.05	1.90	17.9	7.4	30.4	4.6	2.2	10.44	20.89	15.73	-5.16
2.	2.	40.	7.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	2.2	1.1	10.42	20.83	7.61	-13.22
2.	2.	40.	11.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	3.4	1.1	10.42	20.83	10.49	-10.34
2.	2.	40.	15.	0.13	174.	173.	4.	896.	24.	0.99	1.10	1.05	1.90	18.2	7.4	30.8	4.6	1.1	10.42	20.83	13.38	-7.46
2.	2.	60.	7.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	2.2	0.7	10.39	20.78	6.84	-13.93
2.	2.	60.	11.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	3.4	0.7	10.39	20.78	9.76	-11.01
2.	2.	60.	15.	0.13	174.	260.	5.	895.	25.	0.99	1.10	1.05	1.90	18.6	7.4	31.2	4.7	0.7	10.39	20.78	12.69	-8.09
2.	5.	20.	7.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	2.5	2.6	2.61	5.22	2.99	-2.23
2.	5.	20.	11.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	4.0	2.6	2.61	5.22	3.84	-1.38
2.	5.	20.	15.	0.52	174.	87.	3.	897.	23.	0.99	1.40	1.09	4.60	17.9	12.3	36.2	5.4	2.6	2.61	5.22	4.69	-0.53
2.	5.	40.	7.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	2.6	1.3	2.60	5.21	2.27	-2.94
2.	5.	40.	11.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	4.0	1.3	2.60	5.21	3.12	-2.08
2.	5.	40.	15.	0.52	174.	173.	4.	896.	24.	0.99	1.40	1.09	4.60	18.2	12.3	36.6	5.5	1.3	2.60	5.21	3.98	-1.22
2.	5.	60.	7.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	2.6	0.9	2.60	5.19	2.03	-3.16
2.	5.	60.	11.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	4.1	0.9	2.60	5.19	2.90	-2.29
2.	5.	60.	15.	0.52	174.	260.	5.	895.	25.	0.99	1.40	1.09	4.60	18.6	12.3	37.0	5.6	0.9	2.60	5.19	3.77	-1.42
2.	10.	20.	7.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	2.8	2.8	1.16	2.32	1.47	-0.85
2.	10.	20.	11.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	4.4	2.8	1.16	2.32	1.89	-0.43
2.	10.	20.	15.	1.17	174.	87.	3.	897.	23.	0.99	1.90	1.10	9.10	17.9	15.5	40.1	6.0	2.8	1.16	2.32	2.31	-0.01
2.	10.	40.	7.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	2.8	1.4	1.16	2.31	1.11	-1.20
2.	10.	40.	11.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	4.5	1.4	1.16	2.31	1.53	-0.78
2.	10.	40.	15.	1.17	174.	173.	4.	896.	24.	0.99	1.90	1.10	9.10	18.2	15.5	40.5	6.1	1.4	1.16	2.31	1.96	-0.36
2.	10.	60.	7.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	2.9	1.0	1.15	2.31	1.00	-1.31
2.	10.	60.	11.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	4.5	1.0	1.15	2.31	1.42	-0.88
2.	10.	60.	15.	1.17	174.	260.	5.	895.	25.	0.99	1.90	1.10	9.10	18.6	15.5	40.9	6.1	1.0	1.15	2.31	1.85	-0.46

Q= 100.GPM D=3.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	2.4	2.4	15.83	94.97	11.34	-83.63
6.	2.	20.	11.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	3.8	2.4	15.83	94.97	14.56	-80.41
6.	2.	20.	15.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	5.1	2.4	15.83	94.97	17.78	-77.20
6.	2.	40.	7.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	2.4	1.2	15.80	94.81	8.59	-86.22
6.	2.	40.	11.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	3.8	1.2	15.80	94.81	11.84	-82.96
6.	2.	40.	15.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	5.2	1.2	15.80	94.81	15.10	-79.71
6.	2.	60.	7.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	2.5	0.8	15.77	94.64	7.71	-86.92
6.	2.	60.	11.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	3.9	0.8	15.77	94.64	11.01	-83.63
6.	2.	60.	15.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	5.3	0.8	15.77	94.64	14.30	-80.34
6.	5.	20.	7.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	3.0	3.0	3.96	23.74	3.54	-20.20
6.	5.	20.	11.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	4.7	3.0	3.96	23.74	4.54	-19.20
6.	5.	20.	15.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	6.4	3.0	3.96	23.74	5.55	-18.20
6.	5.	40.	7.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	3.0	1.5	3.95	23.70	2.67	-21.03
6.	5.	40.	11.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	4.8	1.5	3.95	23.70	3.69	-20.01
6.	5.	40.	15.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	6.5	1.5	3.95	23.70	4.70	-19.00
6.	5.	60.	7.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	3.1	1.0	3.94	23.66	2.40	-21.26
6.	5.	60.	11.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	4.8	1.0	3.94	23.66	3.42	-20.24
6.	5.	60.	15.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	6.5	1.0	3.94	23.66	4.44	-19.22
6.	10.	20.	7.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	3.4	3.4	1.76	10.55	1.77	-8.79
6.	10.	20.	11.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	5.3	3.4	1.76	10.55	2.27	-8.28
6.	10.	20.	15.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	7.2	3.4	1.76	10.55	2.77	-7.78
6.	10.	40.	7.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	3.4	1.7	1.76	10.53	1.33	-9.20
6.	10.	40.	11.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	5.3	1.7	1.76	10.53	1.84	-8.70
6.	10.	40.	15.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	7.3	1.7	1.76	10.53	2.34	-8.19
6.	10.	60.	7.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	3.4	1.2	1.75	10.52	1.19	-9.32
6.	10.	60.	11.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	5.4	1.2	1.75	10.52	1.70	-8.81
6.	10.	60.	15.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	7.3	1.2	1.75	10.52	2.21	-8.30

Q= 100.GPM D=3.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	2.4	2.4	15.83	63.32	11.34	-51.97
4.	2.	20.	11.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	3.8	2.4	15.83	63.32	14.56	-48.76
4.	2.	20.	15.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	5.1	2.4	15.83	63.32	17.78	-45.54
4.	2.	40.	7.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	2.4	1.2	15.80	63.20	8.59	-54.62
4.	2.	40.	11.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	3.8	1.2	15.80	63.20	11.84	-51.36
4.	2.	40.	15.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	5.2	1.2	15.80	63.20	15.10	-48.11
4.	2.	60.	7.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	2.5	0.8	15.77	63.09	7.71	-55.38
4.	2.	60.	11.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	3.9	0.8	15.77	63.09	11.01	-52.09
4.	2.	60.	15.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	5.3	0.8	15.77	63.09	14.30	-48.79
4.	5.	20.	7.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	3.0	3.0	3.96	15.83	3.54	-12.29
4.	5.	20.	11.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	4.7	3.0	3.96	15.83	4.54	-11.28
4.	5.	20.	15.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	6.4	3.0	3.96	15.83	5.55	-10.28
4.	5.	40.	7.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	3.0	1.5	3.95	15.80	2.67	-13.13
4.	5.	40.	11.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	4.8	1.5	3.95	15.80	3.69	-12.11
4.	5.	40.	15.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	6.5	1.5	3.95	15.80	4.70	-11.10
4.	5.	60.	7.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	3.1	1.0	3.94	15.77	2.40	-13.38
4.	5.	60.	11.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	4.8	1.0	3.94	15.77	3.42	-12.35
4.	5.	60.	15.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	6.5	1.0	3.94	15.77	4.44	-11.33
4.	10.	20.	7.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	3.4	3.4	1.76	7.04	1.77	-5.27
4.	10.	20.	11.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	5.3	3.4	1.76	7.04	2.27	-4.77
4.	10.	20.	15.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	7.2	3.4	1.76	7.04	2.77	-4.27
4.	10.	40.	7.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	3.4	1.7	1.76	7.02	1.33	-5.69
4.	10.	40.	11.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	5.3	1.7	1.76	7.02	1.84	-5.18
4.	10.	40.	15.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	7.3	1.7	1.76	7.02	2.34	-4.68
4.	10.	60.	7.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	3.4	1.2	1.75	7.01	1.19	-5.82
4.	10.	60.	11.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	5.4	1.2	1.75	7.01	1.70	-5.31
4.	10.	60.	15.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	7.3	1.2	1.75	7.01	2.21	-4.80
2.	2.	20.	7.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	2.4	2.4	15.83	31.66	11.34	-20.32
2.	2.	20.	11.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	3.8	2.4	15.83	31.66	14.56	-17.10
2.	2.	20.	15.	0.13	174.	87.	3.	1347.	23.	1.00	1.10	1.05	1.90	17.9	10.7	34.3	5.1	2.4	15.83	31.66	17.78	-13.88
2.	2.	40.	7.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	2.4	1.2	15.80	31.60	8.59	-23.02
2.	2.	40.	11.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	3.8	1.2	15.80	31.60	11.84	-19.76
2.	2.	40.	15.	0.13	174.	173.	4.	1346.	24.	0.99	1.10	1.05	1.90	18.2	10.7	34.7	5.2	1.2	15.80	31.60	15.10	-16.50
2.	2.	60.	7.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	2.5	0.8	15.77	31.55	7.71	-23.83
2.	2.	60.	11.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	3.9	0.8	15.77	31.55	11.01	-20.54
2.	2.	60.	15.	0.13	174.	260.	5.	1345.	25.	0.99	1.10	1.05	1.90	18.6	10.7	35.1	5.3	0.8	15.77	31.55	14.30	-17.25
2.	5.	20.	7.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	3.0	3.0	3.96	7.91	3.54	-4.37
2.	5.	20.	11.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	4.7	3.0	3.96	7.91	4.54	-3.37
2.	5.	20.	15.	0.52	174.	87.	3.	1347.	23.	1.00	1.40	1.09	4.60	17.9	17.8	42.8	6.4	3.0	3.96	7.91	5.55	-2.37
2.	5.	40.	7.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	3.0	1.5	3.95	7.90	2.67	-5.23
2.	5.	40.	11.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	4.8	1.5	3.95	7.90	3.69	-4.21
2.	5.	40.	15.	0.52	174.	173.	4.	1346.	24.	0.99	1.40	1.09	4.60	18.2	17.8	43.2	6.5	1.5	3.95	7.90	4.70	-3.20
2.	5.	60.	7.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	3.1	1.0	3.94	7.89	2.40	-5.49
2.	5.	60.	11.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	4.8	1.0	3.94	7.89	3.42	-4.47
2.	5.	60.	15.	0.52	174.	260.	5.	1345.	25.	0.99	1.40	1.09	4.60	18.6	17.8	43.6	6.5	1.0	3.94	7.89	4.44	-3.44
2.	10.	20.	7.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	3.4	3.4	1.76	3.52	1.77	-1.75
2.	10.	20.	11.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	5.3	3.4	1.76	3.52	2.27	-1.25
2.	10.	20.	15.	1.17	174.	87.	3.	1347.	23.	1.00	1.90	1.10	9.10	17.9	22.2	48.1	7.2	3.4	1.76	3.52	2.77	-0.75
2.	10.	40.	7.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	3.4	1.7	1.76	3.51	1.33	-2.18
2.	10.	40.	11.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	5.3	1.7	1.76	3.51	1.84	-1.67
2.	10.	40.	15.	1.17	174.	173.	4.	1346.	24.	0.99	1.90	1.10	9.10	18.2	22.2	48.5	7.3	1.7	1.76	3.51	2.34	-1.17
2.	10.	60.	7.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	3.4	1.2	1.75	3.51	1.19	-2.31
2.	10.	60.	11.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	5.4	1.2	1.75	3.51	1.70	-1.80
2.	10.	60.	15.	1.17	174.	260.	5.	1345.	25.	0.99	1.90	1.10	9.10	18.6	22.2	48.9	7.3	1.2	1.75	3.51	2.21	-1.29

Q= 100.GPM D=4.026 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	3.1	3.2	5.12	30.72	14.83	-15.89
6.	2.	20.	11.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	4.9	3.2	5.12	30.72	19.04	-11.68
6.	2.	20.	15.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	6.7	3.2	5.12	30.72	23.25	-7.48
6.	2.	40.	7.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	3.2	1.6	5.12	30.70	11.18	-19.52
6.	2.	40.	11.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	5.0	1.6	5.12	30.70	15.41	-15.28
6.	2.	40.	15.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	6.8	1.6	5.12	30.70	19.65	-11.05
6.	2.	60.	7.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	3.2	1.1	5.11	30.67	9.99	-20.68
6.	2.	60.	11.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	5.0	1.1	5.11	30.67	14.26	-16.41
6.	2.	60.	15.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	6.8	1.1	5.11	30.67	18.53	-12.14
6.	5.	20.	7.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	3.4	3.4	1.28	7.68	3.98	-3.70
6.	5.	20.	11.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	5.3	3.4	1.28	7.68	5.10	-2.58
6.	5.	20.	15.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	7.2	3.4	1.28	7.68	6.23	-1.45
6.	5.	40.	7.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	3.4	1.7	1.28	7.67	2.99	-4.68
6.	5.	40.	11.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	5.3	1.7	1.28	7.67	4.13	-3.54
6.	5.	40.	15.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	7.3	1.7	1.28	7.67	5.26	-2.41
6.	5.	60.	7.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	3.4	1.2	1.28	7.67	2.68	-4.99
6.	5.	60.	11.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	5.4	1.2	1.28	7.67	3.82	-3.85
6.	5.	60.	15.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	7.3	1.2	1.28	7.67	4.96	-2.71
6.	10.	20.	7.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	3.5	3.6	0.57	3.41	1.84	-1.58
6.	10.	20.	11.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	5.5	3.6	0.57	3.41	2.36	-1.05
6.	10.	20.	15.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	7.5	3.6	0.57	3.41	2.88	-0.53
6.	10.	40.	7.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	3.5	1.8	0.57	3.41	1.38	-2.03
6.	10.	40.	11.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	5.5	1.8	0.57	3.41	1.91	-1.50
6.	10.	40.	15.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	7.6	1.8	0.57	3.41	2.43	-0.98
6.	10.	60.	7.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	3.5	1.2	0.57	3.41	1.24	-2.17
6.	10.	60.	11.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	5.6	1.2	0.57	3.41	1.76	-1.64
6.	10.	60.	15.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	7.6	1.2	0.57	3.41	2.29	-1.12
4.	2.	20.	7.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	3.1	3.2	5.12	20.48	14.83	-5.65
4.	2.	20.	11.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	4.9	3.2	5.12	20.48	19.04	-1.44
4.	2.	20.	15.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	6.7	3.2	5.12	20.48	23.25	2.76
4.	2.	40.	7.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	3.2	1.6	5.12	20.46	11.18	-9.29
4.	2.	40.	11.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	5.0	1.6	5.12	20.46	15.41	-5.05
4.	2.	40.	15.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	6.8	1.6	5.12	20.46	19.65	-0.81
4.	2.	60.	7.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	3.2	1.1	5.11	20.45	9.99	-10.45
4.	2.	60.	11.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	5.0	1.1	5.11	20.45	14.26	-6.19
4.	2.	60.	15.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	6.8	1.1	5.11	20.45	18.53	-1.92
4.	5.	20.	7.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	3.4	3.4	1.28	5.12	3.98	-1.14
4.	5.	20.	11.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	5.3	3.4	1.28	5.12	5.10	-0.02
4.	5.	20.	15.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	7.2	3.4	1.28	5.12	6.23	1.11
4.	5.	40.	7.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	3.4	1.7	1.28	5.12	2.99	-2.12
4.	5.	40.	11.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	5.3	1.7	1.28	5.12	4.13	-0.99
4.	5.	40.	15.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	7.3	1.7	1.28	5.12	5.26	0.15
4.	5.	60.	7.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	3.4	1.2	1.28	5.11	2.68	-2.44
4.	5.	60.	11.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	5.4	1.2	1.28	5.11	3.82	-1.29
4.	5.	60.	15.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	7.3	1.2	1.28	5.11	4.96	-0.15
4.	10.	20.	7.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	3.5	3.6	0.57	2.28	1.84	-0.44
4.	10.	20.	11.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	5.5	3.6	0.57	2.28	2.36	0.08
4.	10.	20.	15.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	7.5	3.6	0.57	2.28	2.88	0.60
4.	10.	40.	7.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	3.5	1.8	0.57	2.27	1.38	-0.89
4.	10.	40.	11.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	5.5	1.8	0.57	2.27	1.91	-0.37
4.	10.	40.	15.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	7.6	1.8	0.57	2.27	2.43	0.16
4.	10.	60.	7.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	3.5	1.2	0.57	2.27	1.24	-1.04
4.	10.	60.	11.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	5.6	1.2	0.57	2.27	1.76	-0.51
4.	10.	60.	15.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	7.6	1.2	0.57	2.27	2.29	0.02

Q= 100.GPM D=4.026 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	3.1	3.2	5.12	10.24	14.83	4.59
2.	2.	20.	11.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	4.9	3.2	5.12	10.24	19.04	8.80
2.	2.	20.	15.	0.13	222.	50.	1.	449.	21.	1.00	1.10	1.05	1.90	33.5	3.9	44.9	6.7	3.2	5.12	10.24	23.25	13.00
2.	2.	40.	7.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	3.2	1.6	5.12	10.23	11.18	0.94
2.	2.	40.	11.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	5.0	1.6	5.12	10.23	15.41	5.18
2.	2.	40.	15.	0.13	222.	101.	1.	449.	21.	1.00	1.10	1.05	1.90	33.8	3.9	45.2	6.8	1.6	5.12	10.23	19.65	9.42
2.	2.	60.	7.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	3.2	1.1	5.11	10.22	9.99	-0.23
2.	2.	60.	11.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	5.0	1.1	5.11	10.22	14.26	4.04
2.	2.	60.	15.	0.13	222.	151.	1.	449.	21.	0.99	1.10	1.05	1.90	34.0	3.9	45.5	6.8	1.1	5.11	10.22	18.53	8.30
2.	5.	20.	7.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	3.4	3.4	1.28	2.56	3.98	1.42
2.	5.	20.	11.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	5.3	3.4	1.28	2.56	5.10	2.54
2.	5.	20.	15.	0.52	222.	50.	1.	449.	21.	1.00	1.40	1.09	4.60	33.5	6.6	48.1	7.2	3.4	1.28	2.56	6.23	3.67
2.	5.	40.	7.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	3.4	1.7	1.28	2.56	2.99	0.44
2.	5.	40.	11.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	5.3	1.7	1.28	2.56	4.13	1.57
2.	5.	40.	15.	0.52	222.	101.	1.	449.	21.	1.00	1.40	1.09	4.60	33.8	6.6	48.4	7.3	1.7	1.28	2.56	5.26	2.71
2.	5.	60.	7.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	3.4	1.2	1.28	2.56	2.68	0.12
2.	5.	60.	11.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	5.4	1.2	1.28	2.56	3.82	1.26
2.	5.	60.	15.	0.52	222.	151.	1.	449.	21.	0.99	1.40	1.09	4.60	34.0	6.6	48.7	7.3	1.2	1.28	2.56	4.96	2.41
2.	10.	20.	7.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	3.5	3.6	0.57	1.14	1.84	0.70
2.	10.	20.	11.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	5.5	3.6	0.57	1.14	2.36	1.22
2.	10.	20.	15.	1.17	222.	50.	1.	449.	21.	1.00	1.90	1.10	9.10	33.5	8.2	50.0	7.5	3.6	0.57	1.14	2.88	1.74
2.	10.	40.	7.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	[illegible]	1.8	0.57	1.14	1.38	0.25
2.	10.	40.	11.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	5.5	1.8	0.57	1.14	1.91	0.77
2.	10.	40.	15.	1.17	222.	101.	1.	449.	21.	1.00	1.90	1.10	9.10	33.8	8.2	50.3	7.6	1.8	0.57	1.14	2.43	1.30
2.	10.	60.	7.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	3.5	1.2	0.57	1.14	1.24	0.10
2.	10.	60.	11.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	5.6	1.2	0.57	1.14	1.76	0.63
2.	10.	60.	15.	1.17	222.	151.	1.	449.	21.	0.99	1.90	1.10	9.10	34.0	8.2	50.7	7.6	1.2	0.57	1.14	2.29	1.16

Q= 100.GPM D=4.026 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	3.4	3.5	10.51	63.03	16.22	-46.81
6.	2.	20.	11.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	5.4	3.5	10.51	63.03	20.82	-42.21
6.	2.	20.	15.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	7.4	3.5	10.51	63.03	25.42	-37.61
6.	2.	40.	7.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	3.5	1.8	10.50	63.01	12.21	-50.79
6.	2.	40.	11.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	5.4	1.8	10.50	63.01	16.85	-46.16
6.	2.	40.	15.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	7.4	1.8	10.50	63.01	21.48	-41.53
6.	2.	60.	7.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	3.5	1.2	10.50	62.98	10.92	-52.07
6.	2.	60.	11.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	5.5	1.2	10.50	62.98	15.58	-47.41
6.	2.	60.	15.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	7.5	1.2	10.50	62.98	20.24	-42.75
6.	5.	20.	7.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	3.8	3.9	2.63	15.76	4.54	-11.22
6.	5.	20.	11.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	6.0	3.9	2.63	15.76	5.83	-9.93
6.	5.	20.	15.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	8.2	3.9	2.63	15.76	7.12	-8.64
6.	5.	40.	7.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	3.9	2.0	2.63	15.75	3.42	-12.33
6.	5.	40.	11.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	6.1	2.0	2.63	15.75	4.71	-11.04
6.	5.	40.	15.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	8.3	2.0	2.63	15.75	6.01	-9.74
6.	5.	60.	7.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	3.9	1.3	2.62	15.75	3.05	-12.69
6.	5.	60.	11.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	6.1	1.3	2.62	15.75	4.35	-11.39
6.	5.	60.	15.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	8.3	1.3	2.62	15.75	5.66	-10.09
6.	10.	20.	7.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	4.1	4.2	1.17	7.00	2.16	-4.84
6.	10.	20.	11.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	6.5	4.2	1.17	7.00	2.77	-4.23
6.	10.	20.	15.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	8.8	4.2	1.17	7.00	3.38	-3.62
6.	10.	40.	7.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	4.1	2.1	1.17	7.00	1.62	-5.38
6.	10.	40.	11.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	6.5	2.1	1.17	7.00	2.24	-4.76
6.	10.	40.	15.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	8.9	2.1	1.17	7.00	2.86	-4.14
6.	10.	60.	7.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	4.2	1.4	1.17	7.00	1.45	-5.55
6.	10.	60.	11.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	6.5	1.4	1.17	7.00	2.07	-4.93
6.	10.	60.	15.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	8.9	1.4	1.17	7.00	2.69	-4.31

Q= 100.GPM D=4.026 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	3.4	3.5	10.51	42.02	16.22	-25.80
4.	2.	20.	11.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	5.4	3.5	10.51	42.02	20.82	-21.20
4.	2.	20.	15.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	7.4	3.5	10.51	42.02	25.42	-16.60
4.	2.	40.	7.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	3.5	1.8	10.50	42.01	12.21	-29.79
4.	2.	40.	11.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	5.4	1.8	10.50	42.01	16.85	-25.16
4.	2.	40.	15.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	7.4	1.8	10.50	42.01	21.48	-20.53
4.	2.	60.	7.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	3.5	1.2	10.50	41.99	10.92	-31.07
4.	2.	60.	11.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	5.5	1.2	10.50	41.99	15.58	-26.41
4.	2.	60.	15.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	7.5	1.2	10.50	41.99	20.24	-21.75
4.	5.	20.	7.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	3.8	3.9	2.63	10.51	4.54	-5.96
4.	5.	20.	11.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	6.0	3.9	2.63	10.51	5.83	-4.68
4.	5.	20.	15.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	8.2	3.9	2.63	10.51	7.12	-3.39
4.	5.	40.	7.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	3.9	2.0	2.63	10.50	3.42	-7.08
4.	5.	40.	11.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	6.1	2.0	2.63	10.50	4.71	-5.79
4.	5.	40.	15.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	8.3	2.0	2.63	10.50	6.01	-4.49
4.	5.	60.	7.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	3.9	1.3	2.62	10.50	3.05	-7.45
4.	5.	60.	11.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	6.1	1.3	2.62	10.50	4.35	-6.14
4.	5.	60.	15.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	8.3	1.3	2.62	10.50	5.66	-4.84
4.	10.	20.	7.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	4.1	4.2	1.17	4.67	2.16	-2.51
4.	10.	20.	11.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	6.5	4.2	1.17	4.67	2.77	-1.90
4.	10.	20.	15.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	8.8	4.2	1.17	4.67	3.38	-1.28
4.	10.	40.	7.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	4.1	2.1	1.17	4.67	1.62	-3.04
4.	10.	40.	11.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	6.5	2.1	1.17	4.67	2.24	-2.43
4.	10.	40.	15.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	8.9	2.1	1.17	4.67	2.86	-1.81
4.	10.	60.	7.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	4.2	1.4	1.17	4.67	1.45	-3.22
4.	10.	60.	11.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	6.5	1.4	1.17	4.67	2.07	-2.60
4.	10.	60.	15.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	8.9	1.4	1.17	4.67	2.69	-1.98
2.	2.	20.	7.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	3.4	3.5	10.51	21.01	16.22	-4.79
2.	2.	20.	11.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	5.4	3.5	10.51	21.01	20.82	-0.19
2.	2.	20.	15.	0.13	222.	50.	1.	899.	21.	1.00	1.10	1.05	1.90	33.5	7.4	49.1	7.4	3.5	10.51	21.01	25.42	4.41
2.	2.	40.	7.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	3.5	1.8	10.50	21.00	12.21	-8.79
2.	2.	40.	11.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	5.4	1.8	10.50	21.00	16.85	-4.16
2.	2.	40.	15.	0.13	222.	101.	1.	899.	21.	1.00	1.10	1.05	1.90	33.8	7.4	49.4	7.4	1.8	10.50	21.00	21.48	0.47
2.	2.	60.	7.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	3.5	1.2	10.50	20.99	10.92	-10.08
2.	2.	60.	11.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	5.5	1.2	10.50	20.99	15.58	-5.42
2.	2.	60.	15.	0.13	222.	151.	1.	899.	21.	1.00	1.10	1.05	1.90	34.0	7.4	49.7	7.5	1.2	10.50	20.99	20.24	-0.76
2.	5.	20.	7.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	3.8	3.9	2.63	5.25	4.54	-0.71
2.	5.	20.	11.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	6.0	3.9	2.63	5.25	5.83	0.58
2.	5.	20.	15.	0.52	222.	50.	1.	899.	21.	1.00	1.40	1.09	4.60	33.5	12.3	54.9	8.2	3.9	2.63	5.25	7.12	1.86
2.	5.	40.	7.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	3.9	2.0	2.63	5.25	3.42	-1.83
2.	5.	40.	11.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	6.1	2.0	2.63	5.25	4.71	-0.54
2.	5.	40.	15.	0.52	222.	101.	1.	899.	21.	1.00	1.40	1.09	4.60	33.8	12.3	55.3	8.3	2.0	2.63	5.25	6.01	0.76
2.	5.	60.	7.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	3.9	1.3	2.62	5.25	3.05	-2.20
2.	5.	60.	11.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	6.1	1.3	2.62	5.25	4.35	-0.89
2.	5.	60.	15.	0.52	222.	151.	1.	899.	21.	1.00	1.40	1.09	4.60	34.0	12.3	55.6	8.3	1.3	2.62	5.25	5.66	0.41
2.	10.	20.	7.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	4.1	4.2	1.17	2.33	2.16	-0.18
2.	10.	20.	11.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	6.5	4.2	1.17	2.33	2.77	0.44
2.	10.	20.	15.	1.17	222.	50.	1.	899.	21.	1.00	1.90	1.10	9.10	33.5	15.5	58.8	8.8	4.2	1.17	2.33	3.38	1.05
2.	10.	40.	7.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	4.1	2.1	1.17	2.33	1.62	-0.71
2.	10.	40.	11.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	6.5	2.1	1.17	2.33	2.24	-0.09
2.	10.	40.	15.	1.17	222.	101.	1.	899.	21.	1.00	1.90	1.10	9.10	33.8	15.5	59.1	8.9	2.1	1.17	2.33	2.86	0.52
2.	10.	60.	7.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	4.2	1.4	1.17	2.33	1.45	-0.88
2.	10.	60.	11.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	6.5	1.4	1.17	2.33	2.07	-0.26
2.	10.	60.	15.	1.17	222.	151.	1.	899.	21.	1.00	1.90	1.10	9.10	34.0	15.5	59.4	8.9	1.4	1.17	2.33	2.69	0.36

Q= 100.GPM D=4.026 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	3.7	3.8	15.89	95.34	17.53	-77.82
6.	2.	20.	11.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	5.8	3.8	15.89	95.34	22.50	-72.84
6.	2.	20.	15.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	8.0	3.8	15.89	95.34	27.47	-67.87
6.	2.	40.	7.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	3.7	1.9	15.89	95.32	13.19	-82.12
6.	2.	40.	11.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	5.9	1.9	15.89	95.32	18.20	-77.12
6.	2.	40.	15.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	8.0	1.9	15.89	95.32	23.20	-72.12
6.	2.	60.	7.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	3.8	1.3	15.88	95.29	11.78	-83.51
6.	2.	60.	11.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	5.9	1.3	15.88	95.29	16.82	-78.48
6.	2.	60.	15.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	8.0	1.3	15.88	95.29	21.85	-73.44
6.	5.	20.	7.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	4.3	4.4	3.97	23.84	5.09	-18.75
6.	5.	20.	11.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	6.8	4.4	3.97	23.84	6.53	-17.31
6.	5.	20.	15.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	9.2	4.4	3.97	23.84	7.97	-15.86
6.	5.	40.	7.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	4.3	2.2	3.97	23.83	3.83	-20.00
6.	5.	40.	11.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	6.8	2.2	3.97	23.83	5.28	-18.55
6.	5.	40.	15.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	9.3	2.2	3.97	23.83	6.73	-17.10
6.	5.	60.	7.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	4.4	1.5	3.97	23.82	3.41	-20.41
6.	5.	60.	11.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	6.8	1.5	3.97	23.82	4.87	-18.95
6.	5.	60.	15.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	9.3	1.5	3.97	23.82	6.33	-17.49
6.	10.	20.	7.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	4.7	4.7	1.77	10.59	2.45	-8.14
6.	10.	20.	11.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	7.4	4.7	1.77	10.59	3.15	-7.44
6.	10.	20.	15.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	10.0	4.7	1.77	10.59	3.85	-6.75
6.	10.	40.	7.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	4.7	2.4	1.77	10.59	1.85	-8.75
6.	10.	40.	11.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	7.4	2.4	1.77	10.59	2.54	-8.05
6.	10.	40.	15.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	10.1	2.4	1.77	10.59	3.24	-7.35
6.	10.	60.	7.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	4.7	1.6	1.76	10.59	1.65	-8.94
6.	10.	60.	11.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	7.4	1.6	1.76	10.59	2.35	-8.24
6.	10.	60.	15.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	10.1	1.6	1.76	10.59	3.05	-7.54
4.	2.	20.	7.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	3.7	3.8	15.89	63.56	17.53	-46.03
4.	2.	20.	11.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	5.8	3.8	15.89	63.56	22.50	-41.06
4.	2.	20.	15.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	8.0	3.8	15.89	63.56	27.47	-36.09
4.	2.	40.	7.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	3.7	1.9	15.89	63.55	13.19	-50.35
4.	2.	40.	11.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	5.9	1.9	15.89	63.55	18.20	-45.35
4.	2.	40.	15.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	8.0	1.9	15.89	63.55	23.20	-40.35
4.	2.	60.	7.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	3.8	1.3	15.88	63.53	11.78	-51.74
4.	2.	60.	11.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	5.9	1.3	15.88	63.53	16.82	-46.71
4.	2.	60.	15.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	8.0	1.3	15.88	63.53	21.85	-41.68
4.	5.	20.	7.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	4.3	4.4	3.97	15.89	5.09	-10.80
4.	5.	20.	11.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	6.8	4.4	3.97	15.89	6.53	-9.36
4.	5.	20.	15.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	9.2	4.4	3.97	15.89	7.97	-7.92
4.	5.	40.	7.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	4.3	2.2	3.97	15.89	3.83	-12.06
4.	5.	40.	11.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	6.8	2.2	3.97	15.89	5.28	-10.61
4.	5.	40.	15.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	9.3	2.2	3.97	15.89	6.73	-9.16
4.	5.	60.	7.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	4.4	1.5	3.97	15.88	3.41	-12.47
4.	5.	60.	11.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	6.8	1.5	3.97	15.88	4.87	-11.01
4.	5.	60.	15.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	9.3	1.5	3.97	15.88	6.33	-9.55
4.	10.	20.	7.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	4.7	4.7	1.77	7.06	2.45	-4.61
4.	10.	20.	11.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	7.4	4.7	1.77	7.06	3.15	-3.91
4.	10.	20.	15.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	10.0	4.7	1.77	7.06	3.85	-3.22
4.	10.	40.	7.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	4.7	2.4	1.77	7.06	1.85	-5.22
4.	10.	40.	11.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	7.4	2.4	1.77	7.06	2.54	-4.52
4.	10.	40.	15.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	10.1	2.4	1.77	7.06	3.24	-3.82
4.	10.	60.	7.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	4.7	1.6	1.76	7.06	1.65	-5.41
4.	10.	60.	11.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	7.4	1.6	1.76	7.06	2.35	-4.71
4.	10.	60.	15.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	10.1	1.6	1.76	7.06	3.05	-4.01

APPENDIX A

Q= 100.GPM D=4.026 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCMD C/KG	DCMI C/KG	DCW C/KG
2.	2.	20.	7.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	3.7	3.8	15.89	31.78	17.53	-14.25
2.	2.	20.	11.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	5.8	3.8	15.89	31.78	22.50	-9.28
2.	2.	20.	15.	0.13	222.	50.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.5	10.7	53.0	8.0	3.8	15.89	31.78	27.47	-4.31
2.	2.	40.	7.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	3.7	1.9	15.89	31.77	13.19	-18.58
2.	2.	40.	11.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	5.9	1.9	15.89	31.77	18.20	-13.58
2.	2.	40.	15.	0.13	222.	101.	1.	1349.	21.	1.00	1.10	1.05	1.90	33.8	10.7	53.3	8.0	1.9	15.89	31.77	23.20	-8.57
2.	2.	60.	7.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	3.8	1.3	15.88	31.76	11.78	-19.98
2.	2.	60.	11.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	5.9	1.3	15.88	31.76	16.82	-14.95
2.	2.	60.	15.	0.13	222.	151.	1.	1349.	21.	1.00	1.10	1.05	1.90	34.0	10.7	53.7	8.0	1.3	15.88	31.76	21.85	-9.91
2.	5.	20.	7.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	4.3	4.4	3.97	7.95	5.09	-2.86
2.	5.	20.	11.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	6.8	4.4	3.97	7.95	6.53	-1.42
2.	5.	20.	15.	0.52	222.	50.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.5	17.8	61.5	9.2	4.4	3.97	7.95	7.97	0.03
2.	5.	40.	7.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	4.3	2.2	3.97	7.94	3.83	-4.12
2.	5.	40.	11.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	6.8	2.2	3.97	7.94	5.28	-2.67
2.	5.	40.	15.	0.52	222.	101.	1.	1349.	21.	1.00	1.40	1.09	4.60	33.8	17.8	61.9	9.3	2.2	3.97	7.94	6.73	-1.22
2.	5.	60.	7.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	4.4	1.5	3.97	7.94	3.41	-4.53
2.	5.	60.	11.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	6.8	1.5	3.97	7.94	4.87	-3.07
2.	5.	60.	15.	0.52	222.	151.	1.	1349.	21.	1.00	1.40	1.09	4.60	34.0	17.8	62.2	9.3	1.5	3.97	7.94	6.33	-1.61
2.	10.	20.	7.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	4.7	4.7	1.77	3.53	2.45	-1.08
2.	10.	20.	11.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	7.4	4.7	1.77	3.53	3.15	-0.38
2.	10.	20.	15.	1.17	222.	50.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.5	22.2	66.8	10.0	4.7	1.77	3.53	3.85	0.32
2.	10.	40.	7.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	4.7	2.4	1.77	3.53	1.85	-1.69
2.	10.	40.	11.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	7.4	2.4	1.77	3.53	2.54	-0.99
2.	10.	40.	15.	1.17	222.	101.	1.	1349.	21.	1.00	1.90	1.10	9.10	33.8	22.2	67.1	10.1	2.4	1.77	3.53	3.24	-0.29
2.	10.	60.	7.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	4.7	1.6	1.76	3.53	1.65	-1.88
2.	10.	60.	11.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	7.4	1.6	1.76	3.53	2.35	-1.18
2.	10.	60.	15.	1.17	222.	151.	1.	1349.	21.	1.00	1.90	1.10	9.10	34.0	22.2	67.5	10.1	1.6	1.76	3.53	3.05	-0.48

Q= 500.GPM D=3.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCMD C/KG	DCMI C/KG	DCW C/KG
6.	2.	20.	7.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	3.0	3.1	0.23	1.39	2.87	1.49
6.	2.	20.	11.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	4.8	3.1	0.23	1.39	3.69	2.30
6.	2.	20.	15.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	6.5	3.1	0.23	1.39	4.50	3.12
6.	2.	40.	7.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	40.	11.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	40.	15.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	7.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	11.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	15.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	20.	7.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	4.0	4.1	0.06	0.35	0.95	0.60
6.	5.	20.	11.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	6.3	4.1	0.06	0.35	1.21	0.87
6.	5.	20.	15.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	8.6	4.1	0.06	0.35	1.48	1.14
6.	5.	40.	7.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	40.	11.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	40.	15.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	7.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	11.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	15.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	20.	7.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	4.6	4.7	0.03	0.15	0.48	0.33
6.	10.	20.	11.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	7.2	4.7	0.03	0.15	0.62	0.47
6.	10.	20.	15.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	9.9	4.7	0.03	0.15	0.76	0.60
6.	10.	40.	7.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	40.	11.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	40.	15.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	7.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	11.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	15.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q= 500.GPM D=3.067 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	3.0	3.1	0.23	0.92	2.87	1.95
4.	2.	20.	11.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	4.8	3.1	0.23	0.92	3.69	2.77
4.	2.	20.	15.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	6.5	3.1	0.23	0.92	4.50	3.58
4.	2.	40.	7.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	40.	11.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	40.	15.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	7.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	11.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	15.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	20.	7.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	4.0	4.1	0.06	0.23	0.95	0.72
4.	5.	20.	11.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	6.3	4.1	0.06	0.23	1.21	0.98
4.	5.	20.	15.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	8.6	4.1	0.06	0.23	1.48	1.25
4.	5.	40.	7.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	40.	11.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	40.	15.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	7.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	11.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	15.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	20.	7.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	4.6	4.7	0.03	0.10	0.48	0.38
4.	10.	20.	11.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	7.2	4.7	0.03	0.10	0.62	0.52
4.	10.	20.	15.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	9.9	4.7	0.03	0.10	0.76	0.65
4.	10.	40.	7.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	40.	11.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	40.	15.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	7.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	11.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	15.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	20.	7.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	3.6	3.1	0.23	0.46	2.87	2.41
2.	2.	20.	11.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	4.8	3.1	0.23	0.46	3.69	3.23
2.	2.	20.	15.	0.65	174.	434.	192.	258.	212.	0.11	1.10	1.05	1.90	19.5	16.7	43.5	6.5	3.1	0.23	0.46	4.50	4.04
2.	2.	40.	7.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	40.	11.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	40.	15.	0.65	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	7.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	11.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	15.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	7.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	4.0	4.1	0.06	0.12	0.95	0.83
2.	5.	20.	11.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	6.3	4.1	0.06	0.12	1.21	1.10
2.	5.	20.	15.	2.59	174.	434.	192.	258.	212.	0.11	1.40	1.09	4.60	19.5	28.2	57.3	8.6	4.1	0.06	0.12	1.46	1.37
2.	5.	40.	7.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	40.	11.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	40.	15.	2.59	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	7.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	11.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	15.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	7.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	4.6	4.7	0.03	0.05	0.48	0.43
2.	10.	20.	11.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	7.2	4.7	0.03	0.05	0.62	0.57
2.	10.	20.	15.	5.83	174.	434.	192.	258.	212.	0.11	1.90	1.10	9.10	19.5	35.3	65.8	9.9	4.7	0.03	0.05	0.76	0.71
2.	10.	40.	7.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	40.	11.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	40.	15.	5.83	174.	867.	329.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	7.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	11.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	15.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q= 500.GPM D=3.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	4.3	4.3	5.62	33.70	4.04	-29.66
6.	2.	20.	11.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	6.7	4.3	5.62	33.70	5.19	-28.51
6.	2.	20.	15.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	9.2	4.3	5.62	33.70	6.33	-27.36
6.	2.	40.	7.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	4.4	2.2	2.11	12.66	3.12	-9.54
6.	2.	40.	11.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	6.9	2.2	2.11	12.66	4.31	-8.35
6.	2.	40.	15.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	9.5	2.2	2.11	12.66	5.49	-7.17
6.	2.	60.	7.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	11.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	15.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	20.	7.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	6.1	6.2	1.40	8.42	1.43	-6.99
6.	5.	20.	11.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	9.5	6.2	1.40	8.42	1.84	-6.58
6.	5.	20.	15.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	13.0	6.2	1.40	8.42	2.25	-6.18
6.	5.	40.	7.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	6.2	3.2	0.53	3.17	1.10	-2.07
6.	5.	40.	11.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	9.8	3.2	0.53	3.17	1.51	-1.65
6.	5.	40.	15.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	13.3	3.2	0.53	3.17	1.93	-1.23
6.	5.	60.	7.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	11.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	15.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	20.	7.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	7.2	7.3	0.62	3.74	0.75	-2.99
6.	10.	20.	11.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	11.3	7.3	0.62	3.74	0.97	-2.78
6.	10.	20.	15.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	15.4	7.3	0.62	3.74	1.18	-2.57
6.	10.	40.	7.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	7.3	3.7	0.23	1.41	0.57	-0.83
6.	10.	40.	11.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	11.5	3.7	0.23	1.41	0.79	-0.62
6.	10.	40.	15.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	15.7	3.7	0.23	1.41	1.01	-0.40
6.	10.	60.	7.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	11.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	15.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	20.	7.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	4.3	4.3	5.62	22.46	4.04	-18.42
4.	2.	20.	11.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	6.7	4.3	5.62	22.46	5.19	-17.28
4.	2.	20.	15.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	9.2	4.3	5.62	22.46	6.33	-16.13
4.	2.	40.	7.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	4.4	2.2	2.11	8.44	3.12	-5.32
4.	2.	40.	11.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	6.9	2.2	2.11	8.44	4.31	-4.13
4.	2.	40.	15.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	9.5	2.2	2.11	8.44	5.49	-2.95
4.	2.	60.	7.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	11.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	15.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	20.	7.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	6.1	6.2	1.40	5.62	1.43	-4.18
4.	5.	20.	11.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	9.5	6.2	1.40	5.62	1.84	-3.77
4.	5.	20.	15.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	13.0	6.2	1.40	5.62	2.25	-3.37
4.	5.	40.	7.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	6.2	3.2	0.53	2.11	1.10	-1.01
4.	5.	40.	11.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	9.8	3.2	0.53	2.11	1.51	-0.60
4.	5.	40.	15.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	13.3	3.2	0.53	2.11	1.93	-0.18
4.	5.	60.	7.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	11.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	15.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	20.	7.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	7.2	7.3	0.62	2.50	0.75	-1.74
4.	10.	20.	11.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	11.3	7.3	0.62	2.50	0.97	-1.53
4.	10.	20.	15.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	15.4	7.3	0.62	2.50	1.18	-1.32
4.	10.	40.	7.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	7.3	3.7	0.23	0.94	0.57	-0.36
4.	10.	40.	11.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	11.5	3.7	0.23	0.94	0.79	-0.15
4.	10.	40.	15.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	15.7	3.7	0.23	0.94	1.01	0.07
4.	10.	60.	7.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	11.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	15.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q= 500.GPM D=3.067 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	4.3	4.3	5.62	11.23	4.04	-7.19
2.	2.	20.	11.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	6.7	4.3	5.62	11.23	5.19	-6.05
2.	2.	20.	15.	0.65	174.	434.	192.	708.	212.	0.56	1.10	1.05	1.90	19.5	31.4	61.1	9.2	4.3	5.62	11.23	6.33	-4.90
2.	2.	40.	7.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	4.4	2.2	2.11	4.22	3.12	-1.10
2.	2.	40.	11.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	6.9	2.2	2.11	4.22	4.31	0.09
2.	2.	40.	15.	0.65	174.	867.	329.	571.	349.	0.25	1.10	1.05	1.90	21.2	31.4	63.1	9.5	2.2	2.11	4.22	5.49	1.27
2.	2.	60.	7.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	11.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	15.	0.65	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	7.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	6.1	6.2	1.40	2.81	1.43	-1.37
2.	5.	20.	11.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	9.5	6.2	1.40	2.81	1.84	-0.97
2.	5.	20.	15.	2.59	174.	434.	192.	708.	212.	0.56	1.40	1.09	4.60	19.5	52.8	86.8	13.0	6.2	1.40	2.81	2.25	-0.56
2.	5.	40.	7.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	6.[illegible]	3.2	0.53	1.06	1.10	0.04
2.	5.	40.	11.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	9.8	3.2	0.53	1.06	1.51	0.46
2.	5.	40.	15.	2.59	174.	867.	329.	571.	349.	0.25	1.40	1.09	4.60	21.2	52.8	88.8	13.3	3.2	0.53	1.06	1.93	0.88
2.	5.	60.	7.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	11.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	15.	2.59	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	7.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	7.2	7.3	0.62	1.25	0.75	-0.50
2.	10.	20.	11.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	11.3	7.3	0.62	1.25	0.97	-0.28
2.	10.	20.	15.	5.83	174.	434.	192.	708.	212.	0.56	1.90	1.10	9.10	19.5	65.8	102.4	15.4	7.3	0.62	1.25	1.18	-0.07
2.	10.	40.	7.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	7.3	3.7	0.23	0.47	0.57	0.10
2.	10.	40.	11.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	11.5	3.7	0.23	0.47	0.79	0.32
2.	10.	40.	15.	5.83	174.	867.	329.	571.	349.	0.25	1.90	1.10	9.10	21.2	65.8	104.4	15.7	3.7	0.23	0.47	1.01	0.54
2.	10.	60.	7.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	11.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	15.	5.83	174.	1301.	466.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q= 500.GPM D=3.067 IN. PR=1500.PSIG PD=1350. PSIG

6.	2.	20.	7.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	5.4	5.5	11.00	66.01	5.13	-60.88
6.	2.	20.	11.	0.65	174.	434.	192.	1158.	212.	0.71	1.18	1.05	1.90	19.5	45.1	77.5	8.5	5.5	11.00	66.01	6.58	-59.43
6.	2.	20.	15.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	11.6	5.5	11.00	66.01	8.04	-57.97
6.	2.	40.	7.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	5.6	2.8	7.50	44.97	3.94	-41.04
6.	2.	40.	11.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	8.8	2.8	7.50	44.97	5.43	-39.54
6.	2.	40.	15.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	11.9	2.8	7.50	44.97	6.92	-38.05
6.	2.	60.	7.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	5.7	1.9	3.99	23.94	3.58	-20.35
6.	2.	60.	11.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	9.0	1.9	3.99	23.94	5.11	-18.82
6.	2.	60.	15.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	12.2	1.9	3.99	23.94	6.64	-17.29
6.	5.	20.	7.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	8.0	8.1	2.75	16.50	1.89	-14.61
6.	5.	20.	11.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	12.6	8.1	2.75	16.50	2.43	-14.07
6.	5.	20.	15.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	17.2	8.1	2.75	16.50	2.97	-13.54
6.	5.	40.	7.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	8.2	4.1	1.87	11.24	1.44	-9.80
6.	5.	40.	11.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	12.8	4.1	1.87	11.24	1.99	-9.26
6.	5.	40.	15.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	17.5	4.1	1.87	11.24	2.53	-8.71
6.	5.	60.	7.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	8.3	2.8	1.00	5.98	1.30	-4.68
6.	5.	60.	11.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	13.0	2.8	1.00	5.98	1.86	-4.13
6.	5.	60.	15.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	17.8	2.8	1.00	5.98	2.41	-3.57
6.	10.	20.	7.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	9.6	9.7	1.22	7.33	1.01	-6.33
6.	10.	20.	11.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	15.1	9.7	1.22	7.33	1.29	-6.04
6.	10.	20.	15.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	20.6	9.7	1.22	7.33	1.58	-5.76
6.	10.	40.	7.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	9.7	4.9	0.83	5.00	0.76	-4.23
6.	10.	40.	11.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	15.3	4.9	0.83	5.00	1.05	-3.94
6.	10.	40.	15.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	20.9	4.9	0.83	5.00	1.34	-3.65
6.	10.	60.	7.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	9.9	3.3	0.44	2.66	0.69	-1.97
6.	10.	60.	11.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	15.5	3.3	0.44	2.66	0.98	-1.68
6.	10.	60.	15.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	21.2	3.3	0.44	2.66	1.28	-1.38

Q= 500.GPM D=3.067 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	5.4	5.5	11.00	44.01	5.13	-38.88
4.	2.	20.	11.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	8.5	5.5	11.00	44.01	6.58	-37.42
4.	2.	20.	15.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	11.6	5.5	11.00	44.01	8.04	-35.97
4.	2.	40.	7.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	5.6	2.8	7.50	29.98	3.94	-26.05
4.	2.	40.	11.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	8.8	2.8	7.50	29.98	5.43	-24.55
4.	2.	40.	15.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	11.9	2.8	7.50	29.98	6.92	-23.06
4.	2.	60.	7.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	5.7	1.9	3.99	15.96	3.58	-12.38
4.	2.	60.	11.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	9.0	1.9	3.99	15.96	5.1[illegible]	-10.85
4.	2.	60.	15.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	12.2	1.9	3.99	15.96	6.6[illegible]	-9.31
4.	5.	20.	7.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	8.0	8.1	2.75	11.00	1.89	-9.11
4.	5.	20.	11.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	12.6	8.1	2.75	11.00	2.43	-8.57
4.	5.	20.	15.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	17.2	8.1	2.75	11.00	2.97	-8.03
4.	5.	40.	7.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	8.2	4.1	1.87	7.50	1.44	-6.05
4.	5.	40.	11.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	12.8	4.1	1.87	7.50	1.99	-5.51
4.	5.	40.	15.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	17.5	4.1	1.87	7.50	2.53	-4.96
4.	5.	60.	7.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	8.3	2.8	1.00	3.99	1.30	-2.69
4.	5.	60.	11.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	13.0	2.8	1.00	3.99	1.86	-2.13
4.	5.	60.	15.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	17.8	2.8	1.00	3.99	2.41	-1.58
4.	10.	20.	7.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	9.6	9.7	1.22	4.89	1.01	-3.88
4.	10.	20.	11.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	15.1	9.7	1.22	4.89	1.29	-3.60
4.	10.	20.	15.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	20.6	9.7	1.22	4.89	1.58	-3.31
4.	10.	40.	7.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	9.7	4.9	0.83	3.33	0.76	-2.57
4.	10.	40.	11.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	15.3	4.9	0.83	3.33	1.05	-2.28
4.	10.	40.	15.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	20.9	4.9	0.83	3.33	1.34	-1.99
4.	10.	60.	7.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	9.9	3.3	0.44	1.77	0.69	-1.08
4.	10.	60.	11.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	15.5	3.3	0.44	1.77	0.98	-0.79
4.	10.	60.	15.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	21.2	3.3	0.44	1.77	1.28	-0.50
2.	2.	20.	7.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	5.4	5.5	11.00	22.00	5.13	-16.88
2.	2.	20.	11.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	8.5	5.5	11.00	22.00	6.58	-15.42
2.	2.	20.	15.	0.65	174.	434.	192.	1158.	212.	0.71	1.10	1.05	1.90	19.5	45.1	77.5	11.6	5.5	11.00	22.00	8.04	-13.97
2.	2.	40.	7.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	5.6	2.8	7.50	14.99	3.94	-11.06
2.	2.	40.	11.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	8.8	2.8	7.50	14.99	5.43	-9.56
2.	2.	40.	15.	0.65	174.	867.	329.	1021.	349.	0.51	1.10	1.05	1.90	21.2	45.1	79.6	11.9	2.8	7.50	14.99	6.92	-8.07
2.	2.	60.	7.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	5.7	1.9	3.99	7.98	3.58	-4.40
2.	2.	60.	11.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	9.0	1.9	3.99	7.98	5.11	-2.87
2.	2.	60.	15.	0.65	174.	1301.	466.	884.	486.	0.30	1.10	1.05	1.90	22.9	45.1	81.6	12.2	1.9	3.99	7.98	6.64	-1.34
2.	5.	20.	7.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	8.0	8.1	2.75	5.50	1.89	-3.61
2.	5.	20.	11.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	12.6	8.1	2.75	5.50	2.43	-3.07
2.	5.	20.	15.	2.59	174.	434.	192.	1158.	212.	0.71	1.40	1.09	4.60	19.5	75.9	114.5	17.2	8.1	2.75	5.50	2.97	-2.53
2.	5.	40.	7.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	8.2	4.1	1.87	3.75	1.44	-2.31
2.	5.	40.	11.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	12.8	4.1	1.87	3.75	1.99	-1.76
2.	5.	40.	15.	2.59	174.	867.	329.	1021.	349.	0.51	1.40	1.09	4.60	21.2	75.9	116.5	17.5	4.1	1.87	3.75	2.53	-1.21
2.	5.	60.	7.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	8.3	2.8	1.00	1.99	1.30	-0.69
2.	5.	60.	11.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	13.0	2.8	1.00	1.99	1.86	-0.14
2.	5.	60.	15.	2.59	174.	1301.	466.	884.	486.	0.30	1.40	1.09	4.60	22.9	75.9	118.5	17.8	2.8	1.00	1.99	2.41	0.42
2.	10.	20.	7.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	9.6	9.7	1.22	2.44	1.01	-1.44
2.	10.	20.	11.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	15.1	9.7	1.22	2.44	1.29	-1.15
2.	10.	20.	15.	5.83	174.	434.	192.	1158.	212.	0.71	1.90	1.10	9.10	19.5	94.7	137.1	20.6	9.7	1.22	2.44	1.58	-0.87
2.	10.	40.	7.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	9.7	4.9	0.83	1.67	0.76	-0.90
2.	10.	40.	11.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	15.3	4.9	0.83	1.67	1.05	-0.61
2.	10.	40.	15.	5.83	174.	867.	329.	1021.	349.	0.51	1.90	1.10	9.10	21.2	94.7	139.1	20.9	4.9	0.83	1.67	1.34	-0.32
2.	10.	60.	7.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	9.9	3.3	0.44	0.89	0.69	-0.20
2.	10.	60.	11.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	15.5	3.3	0.44	0.89	0.98	0.10
2.	10.	60.	15.	5.83	174.	1301.	466.	884.	486.	0.30	1.90	1.10	9.10	22.9	94.7	141.1	21.2	3.3	0.44	0.89	1.28	0.39

Q= 500.GPM D=4.026 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	4.3	4.4	4.16	24.96	4.09	-20.87
6.	2.	20.	11.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	6.8	4.4	4.16	24.96	5.25	-19.71
6.	2.	20.	15.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	9.3	4.4	4.16	24.96	6.41	-18.55
6.	2.	40.	7.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	4.4	2.3	3.64	21.83	3.14	-18.69
6.	2.	40.	11.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	7.0	2.3	3.64	21.83	4.33	-17.50
6.	2.	40.	15.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	9.5	2.3	3.64	21.83	5.52	-16.31
6.	2.	60.	7.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	4.6	1.5	3.12	18.70	2.86	-15.84
6.	2.	60.	11.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	7.2	1.5	3.12	18.70	4.00	-14.62
6.	2.	60.	15.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	9.8	1.5	3.12	18.70	5.30	-13.40
6.	5.	20.	7.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	5.3	5.4	1.04	6.24	1.25	-4.99
6.	5.	20.	11.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	8.3	5.4	1.04	6.24	1.60	-4.64
6.	5.	20.	15.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	11.3	5.4	1.04	6.24	1.96	-4.28
6.	5.	40.	7.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	5.4	2.7	0.91	5.46	0.96	-4.50
6.	5.	40.	11.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	8.5	2.7	0.91	5.46	1.32	-4.14
6.	5.	40.	15.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	11.6	2.7	0.91	5.46	1.68	-3.78
6.	5.	60.	7.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	5.5	1.9	0.78	4.67	0.87	-3.81
6.	5.	60.	11.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	8.7	1.9	0.78	4.67	1.24	-3.44
6.	5.	60.	15.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	11.8	1.9	0.78	4.67	1.61	-3.07
6.	10.	20.	7.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	5.9	6.0	0.46	2.77	0.62	-2.16
6.	10.	20.	11.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	9.3	6.0	0.46	2.77	0.79	-1.98
6.	10.	20.	15.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	12.6	6.0	0.46	2.77	0.97	-1.80
6.	10.	40.	7.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	6.0	3.0	0.40	2.43	0.47	-1.95
6.	10.	40.	11.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	9.4	3.0	0.40	2.43	0.65	-1.78
6.	10.	40.	15.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	12.9	3.0	0.40	2.43	0.83	-1.60
6.	10.	60.	7.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	6.1	2.1	0.35	2.08	0.43	-1.65
6.	10.	60.	11.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	9.6	2.1	0.35	2.08	0.61	-1.47
6.	10.	60.	15.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	13.1	2.1	0.35	2.08	0.79	-1.29
4.	2.	20.	7.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	4.3	4.4	4.16	16.64	4.09	-12.55
4.	2.	20.	11.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	6.8	4.4	4.16	16.64	5.25	-11.39
4.	2.	20.	15.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	9.3	4.4	4.16	16.64	6.41	-10.23
4.	2.	40.	7.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	4.4	2.3	3.64	14.55	3.14	-11.41
4.	2.	40.	11.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	7.0	2.3	3.64	14.55	4.33	-10.22
4.	2.	40.	15.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	9.5	2.3	3.64	14.55	5.52	-9.03
4.	2.	60.	7.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	4.6	1.5	3.12	12.46	2.86	-9.61
4.	2.	60.	11.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	7.2	1.5	3.12	12.46	4.08	-8.39
4.	2.	60.	15.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	9.8	1.5	3.12	12.46	5.30	-7.17
4.	5.	20.	7.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	5.3	5.4	1.04	4.16	1.25	-2.91
4.	5.	20.	11.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	8.3	5.4	1.04	4.16	1.60	-2.56
4.	5.	20.	15.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	11.3	5.4	1.04	4.16	1.96	-2.20
4.	5.	40.	7.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	5.4	2.7	0.91	3.64	0.96	-2.68
4.	5.	40.	11.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	8.5	2.7	0.91	3.64	1.32	-2.32
4.	5.	40.	15.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	11.6	2.7	0.91	3.64	1.68	-1.96
4.	5.	60.	7.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	5.5	1.9	0.78	3.12	0.87	-2.25
4.	5.	60.	11.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	8.7	1.9	0.78	3.12	1.24	-1.88
4.	5.	60.	15.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	11.8	1.9	0.78	3.12	1.61	-1.51
4.	10.	20.	7.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	5.9	6.0	0.46	1.85	0.62	-1.23
4.	10.	20.	11.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	9.3	6.0	0.46	1.85	0.79	-1.06
4.	10.	20.	15.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	12.6	6.0	0.46	1.85	0.97	-0.88
4.	10.	40.	7.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	6.0	3.0	0.40	1.62	0.47	-1.15
4.	10.	40.	11.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	9.4	3.0	0.40	1.62	0.65	-0.97
4.	10.	40.	15.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	12.9	3.0	0.40	1.62	0.83	-0.79
4.	10.	60.	7.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	6.1	2.1	0.35	1.38	0.43	-0.96
4.	10.	60.	11.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	9.6	2.1	0.35	1.38	0.61	-0.78
4.	10.	60.	15.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	13.1	2.1	0.35	1.38	0.79	-0.59

Q= 500.GPM D=4.026 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N.	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CUM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	4.3	4.4	4.16	8.32	4.09	-4.23
2.	2.	20.	11.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	6.8	4.4	4.16	8.32	5.25	-3.07
2.	2.	20.	15.	0.65	222.	252.	38.	412.	58.	0.82	1.10	1.05	1.90	34.8	16.7	61.8	9.3	4.4	4.16	8.32	6.41	-1.91
2.	2.	40.	7.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	4.4	2.3	3.64	7.28	3.14	-4.14
2.	2.	40.	11.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	7.0	2.3	3.64	7.28	4.33	-2.95
2.	2.	40.	15.	0.65	222.	503.	59.	391.	79.	0.73	1.10	1.05	1.90	36.2	16.7	63.4	9.5	2.3	3.64	7.28	5.52	-1.76
2.	2.	60.	7.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	4.6	1.5	3.12	6.23	2.86	-3.38
2.	2.	60.	11.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	7.2	1.5	3.12	6.23	4.08	-2.16
2.	2.	60.	15.	0.65	222.	755.	79.	371.	99.	0.63	1.10	1.05	1.90	37.5	16.7	65.0	9.8	1.5	3.12	6.23	5.30	-0.94
2.	5.	20.	7.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	5.3	5.4	1.04	2.08	1.25	-0.83
2.	5.	20.	11.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	8.3	5.4	1.04	2.08	1.60	-0.48
2.	5.	20.	15.	2.59	222.	252.	38.	412.	58.	0.82	1.40	1.09	4.60	34.8	28.2	75.6	11.3	5.4	1.04	2.08	1.96	-0.12
2.	5.	40.	7.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	5.4	2.7	0.91	1.82	0.96	-0.86
2.	5.	40.	11.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	8.5	2.7	0.91	1.82	1.32	-0.50
2.	5.	40.	15.	2.59	222.	503.	59.	391.	79.	0.73	1.40	1.09	4.60	36.2	28.2	77.2	11.6	2.7	0.91	1.82	1.68	-0.14
2.	5.	60.	7.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	5.5	1.9	0.78	1.56	0.87	-0.69
2.	5.	60.	11.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	8.7	1.9	0.78	1.56	1.24	-0.32
2.	5.	60.	15.	2.59	222.	755.	79.	371.	99.	0.63	1.40	1.09	4.60	37.5	28.2	78.8	11.8	1.9	0.78	1.56	1.61	0.05
2.	10.	20.	7.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	5.9	6.0	0.46	0.92	0.62	-0.31
2.	10.	20.	11.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	9.3	6.0	0.46	0.92	0.79	-0.13
2.	10.	20.	15.	5.83	222.	252.	38.	412.	58.	0.82	1.90	1.10	9.10	34.8	35.3	84.2	12.6	6.0	0.46	0.92	0.97	0.04
2.	10.	40.	7.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	6.0	3.0	0.40	0.81	0.47	-0.34
2.	10.	40.	11.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	9.4	3.0	0.40	0.81	0.65	-0.16
2.	10.	40.	15.	5.83	222.	503.	59.	391.	79.	0.73	1.90	1.10	9.10	36.2	35.3	85.8	12.9	3.0	0.40	0.81	0.83	0.02
2.	10.	60.	7.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	6.1	2.1	0.35	0.69	0.43	-0.27
2.	10.	60.	11.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	9.6	2.1	0.35	0.69	0.61	-0.08
2.	10.	60.	15.	5.83	222.	755.	79.	371.	99.	0.63	1.90	1.10	9.10	37.5	35.3	87.4	13.1	2.1	0.35	0.69	0.79	0.10

Q= 500.GPM D=4.026 IN. PR=1000.PSIG PD= 900. PSIG

6.	2.	20.	7.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	5.6	5.6	9.55	57.27	5.25	-52.02
6.	2.	20.	11.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	8.7	5.6	9.55	57.27	6.75	-50.53
6.	2.	20.	15.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	11.9	5.6	9.55	57.27	8.24	-49.04
6.	2.	40.	7.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	5.7	2.9	9.02	54.14	4.01	-50.13
6.	2.	40.	11.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	8.9	2.9	9.02	54.14	5.53	-48.61
6.	2.	40.	15.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	12.2	2.9	9.02	54.14	7.05	-47.09
6.	2.	60.	7.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	5.8	2.0	8.50	51.01	3.63	-47.38
6.	2.	60.	11.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	9.1	2.0	8.50	51.01	5.18	-45.83
6.	2.	60.	15.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	12.4	2.0	8.50	51.01	6.73	-44.28
6.	5.	20.	7.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	7.4	7.5	2.39	14.32	1.74	-12.58
6.	5.	20.	11.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	11.6	7.5	2.39	14.32	2.23	-12.09
6.	5.	20.	15.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	15.8	7.5	2.39	14.32	2.72	-11.59
6.	5.	40.	7.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	7.5	3.8	2.26	13.54	1.32	-12.21
6.	5.	40.	11.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	11.7	3.8	2.26	13.54	1.82	-11.71
6.	5.	40.	15.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	16.0	3.8	2.26	13.54	2.32	-11.21
6.	5.	60.	7.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	7.6	2.6	2.13	12.75	1.19	-11.56
6.	5.	60.	11.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	11.9	2.6	2.13	12.75	1.70	-11.05
6.	5.	60.	15.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	16.3	2.6	2.13	12.75	2.21	-10.55
6.	10.	20.	7.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	8.5	8.6	1.06	6.36	0.89	-5.48
6.	10.	20.	11.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	13.3	8.6	1.06	6.36	1.14	-5.22
6.	10.	20.	15.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	18.1	8.6	1.06	6.36	1.39	-4.97
6.	10.	40.	7.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	8.6	4.3	1.00	6.02	0.67	-5.34
6.	10.	40.	11.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	13.5	4.3	1.00	6.02	0.93	-5.09
6.	10.	40.	15.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	16.4	4.3	1.00	6.02	1.18	-4.83
6.	10.	60.	7.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	8.7	2.9	0.94	5.67	0.60	-5.06
6.	10.	60.	11.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	13.6	2.9	0.94	5.67	0.86	-4.80
6.	10.	60.	15.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	18.6	2.9	0.94	5.67	1.12	-4.55

Q= 500.GPM D=4.026 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	5.6	5.6	9.55	38.18	5.25	-32.93
4.	2.	20.	11.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	8.7	5.6	9.55	38.18	6.75	-31.44
4.	2.	20.	15.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	11.9	5.6	9.55	38.18	8.24	-29.95
4.	2.	40.	7.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	5.7	2.9	9.02	36.09	4.01	-32.08
4.	2.	40.	11.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	8.9	2.9	9.02	36.09	5.53	-30.56
4.	2.	40.	15.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	12.2	2.9	9.02	36.09	7.05	-29.04
4.	2.	60.	7.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	5.8	2.0	8.50	34.01	3.63	-30.37
4.	2.	60.	11.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	9.1	2.0	8.50	34.01	5.18	-28.82
4.	2.	60.	15.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	12.4	2.0	8.50	34.01	6.73	-27.27
4.	5.	20.	7.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	7.4	7.5	2.39	9.55	1.74	-7.81
4.	5.	20.	11.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	11.6	7.5	2.39	9.55	2.23	-7.31
4.	5.	20.	15.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	15.8	7.5	2.39	9.55	2.72	-6.82
4.	5.	40.	7.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	7.5	3.8	2.26	9.02	1.32	-7.70
4.	5.	40.	11.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	11.7	3.8	2.26	9.02	1.82	-7.20
4.	5.	40.	15.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	16.0	3.8	2.26	9.02	2.32	-6.70
4.	5.	60.	7.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	7.6	2.6	2.13	8.50	1.19	-7.31
4.	5.	60.	11.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	11.9	2.6	2.13	8.50	1.70	-6.80
4.	5.	60.	15.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	16.3	2.6	2.13	8.50	2.21	-6.30
4.	10.	20.	7.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	8.5	8.6	1.06	4.24	0.89	-3.36
4.	10.	20.	11.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	13.3	8.6	1.06	4.24	1.14	-3.10
4.	10.	20.	15.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	18.1	8.6	1.06	4.24	1.39	-2.85
4.	10.	40.	7.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	8.6	4.3	1.00	4.01	0.67	-3.34
4.	10.	40.	11.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	13.5	4.3	1.00	4.01	0.93	-3.08
4.	10.	40.	15.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	18.4	4.3	1.00	4.01	1.18	-2.83
4.	10.	60.	7.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	8.7	2.9	0.94	3.78	0.60	-3.17
4.	10.	60.	11.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	13.6	2.9	0.94	3.78	0.86	-2.92
4.	10.	60.	15.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	18.6	2.9	0.94	3.78	1.12	-2.66
2.	2.	20.	7.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	5.6	5.6	9.55	19.09	5.25	-13.84
2.	2.	20.	11.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	8.7	5.6	9.55	19.09	6.75	-12.35
2.	2.	20.	15.	0.65	222.	252.	38.	862.	58.	0.91	1.10	1.05	1.90	34.8	31.4	79.5	11.9	5.6	9.55	19.09	8.24	-10.85
2.	2.	40.	7.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	5.7	2.9	9.02	18.05	4.01	-14.04
2.	2.	40.	11.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	8.9	2.9	9.02	18.05	5.53	-12.52
2.	2.	40.	15.	0.65	222.	503.	59.	841.	79.	0.87	1.10	1.05	1.90	36.2	31.4	81.1	12.2	2.9	9.02	18.05	7.05	-10.99
2.	2.	60.	7.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	5.8	2.0	8.50	17.00	3.63	-13.37
2.	2.	60.	11.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	9.1	2.0	8.50	17.00	5.18	-11.82
2.	2.	60.	15.	0.65	222.	755.	79.	821.	99.	0.82	1.10	1.05	1.90	37.5	31.4	82.7	12.4	2.0	8.50	17.00	6.73	-10.27
2.	5.	20.	7.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	7.4	7.5	2.39	4.77	1.74	-3.03
2.	5.	20.	11.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	11.6	7.5	2.39	4.77	2.23	-2.54
2.	5.	20.	15.	2.59	222.	252.	38.	862.	58.	0.91	1.40	1.09	4.60	34.8	52.8	105.2	15.8	7.5	2.39	4.77	2.72	-2.05
2.	5.	40.	7.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	7.5	3.8	2.26	4.51	1.32	-3.19
2.	5.	40.	11.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	11.7	3.8	2.26	4.51	1.82	-2.69
2.	5.	40.	15.	2.59	222.	503.	59.	841.	79.	0.87	1.40	1.09	4.60	36.2	52.8	106.8	16.0	3.8	2.26	4.51	2.32	-2.19
2.	5.	60.	7.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	7.6	2.6	2.13	4.25	1.19	-3.06
2.	5.	60.	11.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	11.9	2.6	2.13	4.25	1.70	-2.55
2.	5.	60.	15.	2.59	222.	755.	79.	821.	99.	0.82	1.40	1.09	4.60	37.5	52.8	108.4	16.3	2.6	2.13	4.25	2.21	-2.04
2.	10.	20.	7.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	8.5	8.6	1.06	2.12	0.89	-1.23
2.	10.	20.	11.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	13.3	8.6	1.06	2.12	1.14	-0.98
2.	10.	20.	15.	5.83	222.	252.	38.	862.	58.	0.91	1.90	1.10	9.10	34.8	65.8	120.8	18.1	8.6	1.06	2.12	1.39	-0.73
2.	10.	40.	7.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	8.6	4.3	1.00	2.01	0.67	-1.33
2.	10.	40.	11.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	13.5	4.3	1.00	2.01	0.93	-1.08
2.	10.	40.	15.	5.83	222.	503.	59.	841.	79.	0.87	1.90	1.10	9.10	36.2	65.8	122.4	18.4	4.3	1.00	2.01	1.18	-0.82
2.	10.	60.	7.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	8.7	2.9	0.94	1.89	0.60	-1.28
2.	10.	60.	11.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	13.6	2.9	0.94	1.89	0.86	-1.03
2.	10.	60.	15.	5.83	222.	755.	79.	821.	99.	0.82	1.90	1.10	9.10	37.5	65.8	124.0	18.6	2.9	0.94	1.89	1.12	-0.77

Q= 500.GPM D=4.026 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	6.7	6.8	14.93	89.58	6.34	-83.24
6.	2.	20.	11.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	10.6	6.8	14.93	89.58	8.14	-81.44
6.	2.	20.	15.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	14.4	6.8	14.93	89.58	9.94	-79.64
6.	2.	40.	7.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	6.8	3.5	14.41	86.45	4.82	-81.63
6.	2.	40.	11.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	10.7	3.5	14.41	86.45	6.65	-79.80
6.	2.	40.	15.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	14.6	3.5	14.41	86.45	8.48	-77.97
6.	2.	60.	7.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	6.9	2.3	13.89	83.32	4.35	-78.97
6.	2.	60.	11.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	10.9	2.3	13.89	83.32	6.21	-77.11
6.	2.	60.	15.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	14.9	2.3	13.89	83.32	8.07	-75.25
6.	5.	20.	7.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	9.3	9.4	3.73	22.40	2.20	-20.20
6.	5.	20.	11.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	14.6	9.4	3.73	22.40	2.82	-19.58
6.	5.	20.	15.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	19.9	9.4	3.73	22.40	3.44	-18.95
6.	5.	40.	7.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	9.4	4.8	3.60	21.61	1.66	-19.95
6.	5.	40.	11.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	14.8	4.8	3.60	21.61	2.29	-19.32
6.	5.	40.	15.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	20.2	4.8	3.60	21.61	2.92	-18.69
6.	5.	60.	7.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	9.5	3.2	3.47	20.83	1.49	-19.34
6.	5.	60.	11.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	15.0	3.2	3.47	20.83	2.13	-18.70
6.	5.	60.	15.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	20.4	3.2	3.47	20.83	2.77	-18.06
6.	10.	20.	7.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	10.9	11.0	1.66	9.95	1.14	-8.81
6.	10.	20.	11.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	17.1	11.0	1.66	9.95	1.47	-8.49
6.	10.	20.	15.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	23.3	11.0	1.66	9.95	1.79	-8.16
6.	10.	40.	7.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	11.0	5.6	1.60	9.61	0.86	-8.74
6.	10.	40.	11.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	17.3	5.6	1.60	9.61	1.19	-8.42
6.	10.	40.	15.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	23.6	5.6	1.60	9.61	1.52	-8.09
6.	10.	60.	7.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	11.1	3.8	1.54	9.26	0.77	-8.48
6.	10.	60.	11.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	17.5	3.8	1.54	9.26	1.10	-8.15
6.	10.	60.	15.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	23.8	3.8	1.54	9.26	1.44	-7.82
4.	2.	20.	7.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	6.7	6.8	14.93	59.72	6.34	-53.38
4.	2.	20.	11.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	10.6	6.8	14.93	59.72	8.14	-51.58
4.	2.	20.	15.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	14.4	6.8	14.93	59.72	9.94	-49.78
4.	2.	40.	7.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	6.8	3.5	14.41	57.63	4.82	-52.81
4.	2.	40.	11.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	10.7	3.5	14.41	57.63	6.65	-50.98
4.	2.	40.	15.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	14.6	3.5	14.41	57.63	8.48	-49.15
4.	2.	60.	7.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	6.9	2.3	13.89	55.55	4.35	-51.19
4.	2.	60.	11.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	10.9	2.3	13.89	55.55	6.21	-49.33
4.	2.	60.	15.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	14.9	2.3	13.89	55.55	8.07	-47.47
4.	5.	20.	7.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	9.3	9.4	3.73	14.93	2.20	-12.73
4.	5.	20.	11.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	14.6	9.4	3.73	14.93	2.82	-12.11
4.	5.	20.	15.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	19.9	9.4	3.73	14.93	3.44	-11.49
4.	5.	40.	7.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	9.4	4.8	3.60	14.41	1.66	-12.75
4.	5.	40.	11.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	14.8	4.8	3.60	14.41	2.29	-12.11
4.	5.	40.	15.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	20.2	4.8	3.60	14.41	2.92	-11.48
4.	5.	60.	7.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	9.5	3.2	3.47	13.89	1.49	-12.39
4.	5.	60.	11.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	15.0	3.2	3.47	13.89	2.13	-11.75
4.	5.	60.	15.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	20.4	3.2	3.47	13.89	2.77	-11.12
4.	10.	20.	7.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	10.9	11.0	1.66	6.64	1.14	-5.49
4.	10.	20.	11.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	17.1	11.0	1.66	6.64	1.47	-5.17
4.	10.	20.	15.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	23.3	11.0	1.66	6.64	1.79	-4.85
4.	10.	40.	7.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	11.0	5.6	1.60	6.40	0.86	-5.54
4.	10.	40.	11.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	17.3	5.6	1.60	6.40	1.19	-5.21
4.	10.	40.	15.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	23.6	5.6	1.60	6.40	1.52	-4.89
4.	10.	60.	7.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	11.1	3.8	1.54	6.17	0.77	-5.40
4.	10.	60.	11.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	17.5	3.8	1.54	6.17	1.10	-5.07
4.	10.	60.	15.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	23.8	3.8	1.54	6.17	1.44	-4.74

Q= 500.GPM D=4.026 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCN $1000	DE WH/G	DCWO C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	6.7	6.8	14.93	29.86	6.34	-23.52
2.	2.	20.	11.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	10.6	6.8	14.93	29.86	8.14	-21.72
2.	2.	20.	15.	0.65	222.	252.	38.	1312.	58.	0.94	1.10	1.05	1.90	34.8	45.1	95.9	14.4	6.8	14.93	29.86	9.94	-19.92
2.	2.	40.	7.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	6.8	3.5	14.41	28.82	4.82	-23.99
2.	2.	40.	11.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	10.7	3.5	14.41	28.82	6.65	-22.16
2.	2.	40.	15.	0.65	222.	503.	59.	1291.	79.	0.91	1.10	1.05	1.90	36.2	45.1	97.5	14.6	3.5	14.41	28.82	8.48	-20.34
2.	2.	60.	7.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	6.9	2.3	13.89	27.77	4.35	-23.42
2.	2.	60.	11.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	10.9	2.3	13.89	27.77	6.21	-21.56
2.	2.	60.	15.	0.65	222.	755.	79.	1271.	99.	0.88	1.10	1.05	1.90	37.5	45.1	99.1	14.9	2.3	13.89	27.77	8.07	-19.70
2.	5.	20.	7.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	9.3	9.4	3.73	7.47	2.20	-5.27
2.	5.	20.	11.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	14.6	9.4	3.73	7.47	2.82	-4.65
2.	5.	20.	15.	2.59	222.	252.	38.	1312.	58.	0.94	1.40	1.09	4.60	34.8	75.9	132.9	19.9	9.4	3.73	7.47	3.44	-4.02
2.	5.	40.	7.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	9.4	4.8	3.60	7.20	1.66	-5.54
2.	5.	40.	11.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	14.8	4.8	3.60	7.20	2.29	-4.91
2.	5.	40.	15.	2.59	222.	503.	59.	1291.	79.	0.91	1.40	1.09	4.60	36.2	75.9	134.5	20.2	4.8	3.60	7.20	2.92	-4.28
2.	5.	60.	7.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	9.5	3.2	3.47	6.94	1.49	-5.45
2.	5.	60.	11.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	15.0	3.2	3.47	6.94	2.13	-4.81
2.	5.	60.	15.	2.59	222.	755.	79.	1271.	99.	0.88	1.40	1.09	4.60	37.5	75.9	136.1	20.4	3.2	3.47	6.94	2.77	-4.17
2.	10.	20.	7.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	10.9	11.0	1.66	3.32	1.14	-2.18
2.	10.	20.	11.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	17.1	11.0	1.66	3.32	1.47	-1.85
2.	10.	20.	15.	5.83	222.	252.	38.	1312.	58.	0.94	1.90	1.10	9.10	34.8	94.7	155.4	23.3	11.0	1.66	3.32	1.79	-1.53
2.	10.	40.	7.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	11.0	5.6	1.60	3.20	0.86	-2.34
2.	10.	40.	11.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	17.3	5.6	1.60	3.20	1.19	-2.01
2.	10.	40.	15.	5.83	222.	503.	59.	1291.	79.	0.91	1.90	1.10	9.10	36.2	94.7	157.0	23.6	5.6	1.60	3.20	1.52	-1.68
2.	10.	60.	7.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	11.1	3.8	1.54	3.09	0.77	-2.31
2.	10.	60.	11.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	17.5	3.8	1.54	3.09	1.10	-1.98
2.	10.	60.	15.	5.83	222.	755.	79.	1271.	99.	0.88	1.90	1.10	9.10	37.5	94.7	158.6	23.8	3.8	1.54	3.09	1.44	-1.65

Q= 500.GPM D=6.065 IN. PR= 500.PSIG PD= 450. PSIG

6.	2.	20.	7.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	6.4	6.5	5.03	30.16	6.05	-24.11
6.	2.	20.	11.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	10.1	6.5	5.03	30.16	7.76	-22.40
6.	2.	20.	15.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	13.7	6.5	5.03	30.16	9.48	-20.68
6.	2.	40.	7.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	6.5	3.3	5.00	29.98	4.58	-25.40
6.	2.	40.	11.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	10.2	3.3	5.00	29.98	6.32	-23.66
6.	2.	40.	15.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	13.9	3.3	5.00	29.98	8.06	-21.92
6.	2.	60.	7.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	6.6	2.2	4.97	29.80	4.12	-25.68
6.	2.	60.	11.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	10.3	2.2	4.97	29.80	5.88	-23.92
6.	2.	60.	15.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	14.1	2.2	4.97	29.80	7.64	-22.16
6.	5.	20.	7.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	7.4	7.5	1.26	7.54	1.74	-5.80
6.	5.	20.	11.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	11.6	7.5	1.26	7.54	2.23	-5.31
6.	5.	20.	15.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	15.8	7.5	1.26	7.54	2.73	-4.81
6.	5.	40.	7.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	7.5	3.8	1.25	7.50	1.32	-6.18
6.	5.	40.	11.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	11.7	3.8	1.25	7.50	1.82	-5.68
6.	5.	40.	15.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	16.0	3.8	1.25	7.50	2.32	-5.18
6.	5.	60.	7.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	7.5	2.5	1.24	7.45	1.18	-6.27
6.	5.	60.	11.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	11.8	2.5	1.24	7.45	1.69	-5.76
6.	5.	60.	15.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	16.2	2.5	1.24	7.45	2.19	-5.26
6.	10.	20.	7.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	8.0	8.1	0.56	3.35	0.84	-2.52
6.	10.	20.	11.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	12.5	8.1	0.56	3.35	1.07	-2.28
6.	10.	20.	15.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	17.1	8.1	0.56	3.35	1.31	-2.04
6.	10.	40.	7.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	8.0	4.1	0.56	3.33	0.63	-2.70
6.	10.	40.	11.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	12.6	4.1	0.56	3.33	0.87	-2.46
6.	10.	40.	15.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	17.2	4.1	0.56	3.33	1.11	-2.22
6.	10.	60.	7.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	8.1	2.8	0.55	3.31	0.57	-2.74
6.	10.	60.	11.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	12.8	2.8	0.55	3.31	0.81	-2.50
6.	10.	60.	15.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	17.4	2.8	0.55	3.31	1.05	-2.26

Q= 500.GPM D=6.065 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	6.4	6.5	5.03	20.11	6.05	-14.06
4.	2.	20.	11.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	10.1	6.5	5.03	20.11	7.76	-12.34
4.	2.	20.	15.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	13.7	6.5	5.03	20.11	9.48	-10.63
4.	2.	40.	7.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	5.5	3.3	5.00	19.99	4.58	-15.40
4.	2.	40.	11.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	10.2	3.3	5.00	19.99	6.32	-13.67
4.	2.	40.	15.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	13.9	3.3	5.00	19.99	8.06	-11.93
4.	2.	60.	7.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	6.6	2.2	4.97	19.87	4.12	-15.75
4.	2.	60.	11.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	10.3	2.2	4.97	19.87	5.88	-13.98
4.	2.	60.	15.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	14.1	2.2	4.97	19.87	7.64	-12.22
4.	5.	20.	7.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	7.4	7.5	1.26	5.03	1.74	-3.29
4.	5.	20.	11.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	11.6	7.5	1.26	5.03	2.23	-2.79
4.	5.	20.	15.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	15.8	7.5	1.26	5.03	2.73	-2.30
4.	5.	40.	7.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	7.5	3.8	1.25	5.00	1.32	-3.68
4.	5.	40.	11.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	11.7	3.8	1.25	5.00	1.82	-3.18
4.	5.	40.	15.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	16.0	3.8	1.25	5.00	2.32	-2.68
4.	5.	60.	7.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	7.5	2.5	1.24	4.97	1.18	-3.78
4.	5.	60.	11.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	11.8	2.5	1.24	4.97	1.69	-3.28
4.	5.	60.	15.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	16.2	2.5	1.24	4.97	2.19	-2.78
4.	10.	20.	7.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	8.0	8.1	0.56	2.23	0.84	-1.40
4.	10.	20.	11.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	12.5	8.1	0.56	2.23	1.07	-1.16
4.	10.	20.	15.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	17.1	8.1	0.56	2.23	1.31	-0.92
4.	10.	40.	7.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	8.0	4.1	0.56	2.22	0.63	-1.59
4.	10.	40.	11.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	12.6	4.1	0.56	2.22	0.87	-1.35
4.	10.	40.	15.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	17.2	4.1	0.56	2.22	1.11	-1.11
4.	10.	60.	7.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	8.1	2.8	0.55	2.21	0.57	-1.64
4.	10.	60.	11.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	12.8	2.8	0.55	2.21	0.81	-1.40
4.	10.	60.	15.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	17.4	2.8	0.55	2.21	1.05	-1.16
2.	2.	20.	7.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	6.4	6.5	5.03	10.05	6.05	-4.01
2.	2.	20.	11.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	10.1	6.5	5.03	10.05	7.76	-2.29
2.	2.	20.	15.	0.65	324.	111.	5.	445.	25.	0.98	1.10	1.05	1.90	59.5	16.7	91.4	13.7	6.5	5.03	10.05	9.48	-0.58
2.	2.	40.	7.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	6.5	3.3	5.00	9.99	4.58	-5.41
2.	2.	40.	11.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	10.2	3.3	5.00	9.99	6.32	-3.67
2.	2.	40.	15.	0.65	324.	222.	6.	444.	26.	0.97	1.10	1.05	1.90	60.5	16.7	92.7	13.9	3.3	5.00	9.99	8.06	-1.93
2.	2.	60.	7.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	6.6	2.2	4.97	9.93	4.12	-5.81
2.	2.	60.	11.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	10.3	2.2	4.97	9.93	5.88	-4.05
2.	2.	60.	15.	0.65	324.	333.	7.	443.	27.	0.97	1.10	1.05	1.90	61.5	16.7	93.9	14.1	2.2	4.97	9.93	7.64	-2.29
2.	5.	20.	7.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	7.4	7.5	1.26	2.51	1.74	-0.77
2.	5.	20.	11.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	11.6	7.5	1.26	2.51	2.23	-0.28
2.	5.	20.	15.	2.59	324.	111.	5.	445.	25.	0.98	1.40	1.09	4.60	59.5	28.2	105.2	15.8	7.5	1.26	2.51	2.73	0.21
2.	5.	40.	7.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	7.5	3.8	1.25	2.50	1.32	-1.18
2.	5.	40.	11.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	11.7	3.8	1.25	2.50	1.82	-0.68
2.	5.	40.	15.	2.59	324.	222.	6.	444.	26.	0.97	1.40	1.09	4.60	60.5	28.2	106.5	16.0	3.8	1.25	2.50	2.32	-0.18
2.	5.	60.	7.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	7.5	2.5	1.24	2.48	1.18	-1.30
2.	5.	60.	11.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	11.8	2.5	1.24	2.48	1.69	-0.80
2.	5.	60.	15.	2.59	324.	333.	7.	443.	27.	0.97	1.40	1.09	4.60	61.5	28.2	107.7	16.2	2.5	1.24	2.48	2.19	-0.29
2.	10.	20.	7.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	8.0	8.1	0.56	1.12	0.84	-0.28
2.	10.	20.	11.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	12.5	8.1	0.56	1.12	1.07	-0.04
2.	10.	20.	15.	5.83	324.	111.	5.	445.	25.	0.98	1.90	1.10	9.10	59.5	35.3	113.8	17.1	8.1	0.56	1.12	1.31	0.19
2.	10.	40.	7.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	8.0	4.1	0.56	1.11	0.63	-0.48
2.	10.	40.	11.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	12.6	4.1	0.56	1.11	0.87	-0.24
2.	10.	40.	15.	5.83	324.	222.	6.	444.	26.	0.97	1.90	1.10	9.10	60.5	35.3	115.0	17.2	4.1	0.56	1.11	1.11	0.00
2.	10.	60.	7.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	8.1	2.8	0.55	1.10	0.57	-0.54
2.	10.	60.	11.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	12.8	2.8	0.55	1.10	0.81	-0.29
2.	10.	60.	15.	5.83	324.	333.	7.	443.	27.	0.97	1.90	1.10	9.10	61.5	35.3	116.2	17.4	2.8	0.55	1.10	1.05	-0.05

Q= 500.GPM D=6.065 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE MW/G	DCWO C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	7.6	7.7	10.41	62.47	7.21	-55.26
6.	2.	20.	11.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	12.0	7.7	10.41	62.47	9.26	-53.21
6.	2.	20.	15.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	16.4	7.7	10.41	62.47	11.30	-51.17
6.	2.	40.	7.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	7.7	3.9	10.38	62.29	5.46	-56.84
6.	2.	40.	11.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	12.1	3.9	10.38	62.29	7.53	-54.77
6.	2.	40.	15.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	16.5	3.9	10.38	62.29	9.59	-52.70
6.	2.	60.	7.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	7.8	2.6	10.35	62.11	4.90	-57.22
6.	2.	60.	11.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	12.3	2.6	10.35	62.11	6.99	-55.12
6.	2.	60.	15.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	16.7	2.6	10.35	62.11	9.08	-53.03
6.	5.	20.	7.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	9.4	9.6	2.60	15.62	2.23	-13.39
6.	5.	20.	11.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	14.8	9.6	2.60	15.62	2.86	-12.76
6.	5.	20.	15.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	20.2	9.6	2.60	15.62	3.49	-12.13
6.	5.	40.	7.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	9.5	4.8	2.60	15.57	1.68	-13.89
6.	5.	40.	11.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	15.0	4.8	2.60	15.57	2.32	-13.25
6.	5.	40.	15.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	20.4	4.8	2.60	15.57	2.96	-12.62
6.	5.	60.	7.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	9.6	3.2	2.59	15.53	1.51	-14.02
6.	5.	60.	11.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	15.1	3.2	2.59	15.53	2.15	-13.38
6.	5.	60.	15.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	20.6	3.2	2.59	15.53	2.79	-12.74
6.	10.	20.	7.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	10.5	10.7	1.16	6.94	1.10	-5.84
6.	10.	20.	11.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	16.5	10.7	1.16	6.94	1.42	-5.52
6.	10.	20.	15.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	22.6	10.7	1.16	6.94	1.73	-5.21
6.	10.	40.	7.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	10.6	5.4	1.15	6.92	0.83	-6.09
6.	10.	40.	11.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	16.7	5.4	1.15	6.92	1.15	-5.77
6.	10.	40.	15.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	22.7	5.4	1.15	6.92	1.46	-5.46
6.	10.	60.	7.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	10.7	3.6	1.15	6.90	0.75	-6.16
6.	10.	60.	11.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	16.8	3.6	1.15	6.90	1.06	-5.84
6.	10.	60.	15.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	22.9	3.6	1.15	6.90	1.38	-5.52
4.	2.	20.	7.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	7.6	7.7	10.41	41.65	7.21	-34.43
4.	2.	20.	11.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	12.0	7.7	10.41	41.65	9.26	-32.39
4.	2.	20.	15.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	16.4	7.7	10.41	41.65	11.30	-30.34
4.	2.	40.	7.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	7.7	3.9	10.38	41.53	5.46	-36.07
4.	2.	40.	11.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	12.1	3.9	10.38	41.53	7.53	-34.00
4.	2.	40.	15.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	16.5	3.9	10.38	41.53	9.59	-31.93
4.	2.	60.	7.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	7.8	2.6	10.35	41.41	4.90	-36.51
4.	2.	60.	11.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	12.3	2.6	10.35	41.41	6.99	-34.42
4.	2.	60.	15.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	16.7	2.6	10.35	41.41	9.08	-32.33
4.	5.	20.	7.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	9.4	9.6	2.60	10.41	2.23	-8.18
4.	5.	20.	11.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	14.8	9.6	2.60	10.41	2.86	-7.55
4.	5.	20.	15.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	20.2	9.6	2.60	10.41	3.49	-6.92
4.	5.	40.	7.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	9.5	4.8	2.60	10.38	1.68	-8.70
4.	5.	40.	11.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	15.0	4.8	2.60	10.38	2.32	-8.06
4.	5.	40.	15.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	20.4	4.8	2.60	10.38	2.96	-7.43
4.	5.	60.	7.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	9.6	3.2	2.59	10.35	1.51	-8.85
4.	5.	60.	11.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	15.1	3.2	2.59	10.35	2.15	-8.20
4.	5.	60.	15.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	20.6	3.2	2.59	10.35	2.79	-7.56
4.	10.	20.	7.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	10.5	10.7	1.16	4.63	1.10	-3.52
4.	10.	20.	11.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	16.5	10.7	1.16	4.63	1.42	-3.21
4.	10.	20.	15.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	22.6	10.7	1.16	4.63	1.73	-2.90
4.	10.	40.	7.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	10.6	5.4	1.15	4.61	0.83	-3.78
4.	10.	40.	11.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	16.7	5.4	1.15	4.61	1.15	-3.47
4.	10.	40.	15.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	22.7	5.4	1.15	4.61	1.46	-3.15
4.	10.	60.	7.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	10.7	3.6	1.15	4.60	0.75	-3.86
4.	10.	60.	11.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	16.8	3.6	1.15	4.60	1.06	-3.54
4.	10.	60.	15.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	22.9	3.6	1.15	4.60	1.38	-3.22

Q= 500.GPM D=6.065 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	7.6	7.7	10.41	20.82	7.21	-13.61
2.	2.	20.	11.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	12.0	7.7	10.41	20.82	9.26	-11.56
2.	2.	20.	15.	0.65	324.	111.	5.	895.	25.	0.99	1.10	1.05	1.90	59.5	31.4	109.1	16.4	7.7	10.41	20.82	11.30	-9.52
2.	2.	40.	7.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	7.7	3.9	10.38	20.76	5.46	-15.31
2.	2.	40.	11.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	12.1	3.9	10.38	20.76	7.53	-13.24
2.	2.	40.	15.	0.65	324.	222.	6.	894.	26.	0.99	1.10	1.05	1.90	60.5	31.4	110.3	16.5	3.9	10.38	20.76	9.59	-11.17
2.	2.	60.	7.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	7.8	2.6	10.35	20.70	4.90	-15.81
2.	2.	60.	11.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	12.3	2.6	10.35	20.70	6.99	-13.72
2.	2.	60.	15.	0.65	324.	333.	7.	893.	27.	0.98	1.10	1.05	1.90	61.5	31.4	111.5	16.7	2.6	10.35	20.70	9.08	-11.62
2.	5.	20.	7.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	9.4	9.6	2.60	5.21	2.23	-2.98
2.	5.	20.	11.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	14.8	9.6	2.60	5.21	2.86	-2.35
2.	5.	20.	15.	2.59	324.	111.	5.	895.	25.	0.99	1.40	1.09	4.60	59.5	52.8	134.8	20.2	9.6	2.60	5.21	3.49	-1.71
2.	5.	40.	7.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	9.5	4.8	2.60	5.19	1.68	-3.51
2.	5.	40.	11.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	15.0	4.8	2.60	5.19	2.32	-2.87
2.	5.	40.	15.	2.59	324.	222.	6.	894.	26.	0.99	1.40	1.09	4.60	60.5	52.8	136.0	20.4	4.8	2.60	5.19	2.96	-2.23
2.	5.	60.	7.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	9.6	3.2	2.59	5.18	1.51	-3.67
2.	5.	60.	11.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	15.1	3.2	2.59	5.18	2.15	-3.03
2.	5.	60.	15.	2.59	324.	333.	7.	893.	27.	0.98	1.40	1.09	4.60	61.5	52.8	137.2	20.6	3.2	2.59	5.18	2.79	-2.38
2.	10.	20.	7.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	10.5	10.7	1.16	2.31	1.10	-1.21
2.	10.	20.	11.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	16.5	10.7	1.16	2.31	1.42	-0.90
2.	10.	20.	15.	5.83	324.	111.	5.	895.	25.	0.99	1.90	1.10	9.10	59.5	65.8	150.4	22.6	10.7	1.16	2.31	1.73	-0.58
2.	10.	40.	7.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	10.6	5.4	1.15	2.31	0.83	-1.47
2.	10.	40.	11.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	16.7	5.4	1.15	2.31	1.15	-1.16
2.	10.	40.	15.	5.83	324.	222.	6.	894.	26.	0.99	1.90	1.10	9.10	60.5	65.8	151.6	22.7	5.4	1.15	2.31	1.46	-0.84
2.	10.	60.	7.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	10.7	3.6	1.15	2.30	0.75	-1.55
2.	10.	60.	11.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	16.8	3.6	1.15	2.30	1.06	-1.24
2.	10.	60.	15.	5.83	324.	333.	7.	893.	27.	0.98	1.90	1.10	9.10	61.5	65.8	152.8	22.9	3.6	1.15	2.30	1.38	-0.92

Q= 500.GPM D=6.065 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	8.8	8.9	15.80	94.78	8.30	-86.48
6.	2.	20.	11.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	13.8	8.9	15.80	94.78	10.65	-84.13
6.	2.	20.	15.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	18.8	8.9	15.80	94.78	13.01	-81.77
6.	2.	40.	7.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	8.9	4.5	15.77	94.60	6.27	-88.33
6.	2.	40.	11.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	13.9	4.5	15.77	94.60	8.65	-85.96
6.	2.	40.	15.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	19.0	4.5	15.77	94.60	11.02	-83.58
6.	2.	60.	7.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	9.0	3.0	15.74	94.43	5.62	-88.81
6.	2.	60.	11.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	14.1	3.0	15.74	94.43	8.02	-86.41
6.	2.	60.	15.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	19.2	3.0	15.74	94.43	10.42	-84.01
6.	5.	20.	7.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	11.4	11.5	3.95	23.70	2.69	-21.01
6.	5.	20.	11.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	17.9	11.5	3.95	23.70	3.45	-20.25
6.	5.	20.	15.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	24.4	11.5	3.95	23.70	4.21	-19.49
6.	5.	40.	7.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	11.5	5.8	3.94	23.65	2.02	-21.63
6.	5.	40.	11.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	18.0	5.8	3.94	23.65	2.79	-20.86
6.	5.	40.	15.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	24.6	5.8	3.94	23.65	3.56	-20.09
6.	5.	60.	7.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	11.5	3.9	3.93	23.61	1.81	-21.80
6.	5.	60.	11.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	18.1	3.9	3.93	23.61	2.58	-21.02
6.	5.	60.	15.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	24.7	3.9	3.93	23.61	3.36	-20.25
6.	10.	20.	7.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	13.0	13.1	1.76	10.53	1.36	-9.17
6.	10.	20.	11.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	20.4	13.1	1.76	10.53	1.74	-8.79
6.	10.	20.	15.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	27.8	13.1	1.76	10.53	2.13	-8.40
6.	10.	40.	7.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	13.0	6.6	1.75	10.51	1.02	-9.49
6.	10.	40.	11.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	20.5	6.6	1.75	10.51	1.41	-9.10
6.	10.	40.	15.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	27.9	6.6	1.75	10.51	1.80	-8.71
6.	10.	60.	7.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	13.1	4.4	1.75	10.49	0.91	-9.58
6.	10.	60.	11.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	20.6	4.4	1.75	10.49	1.31	-9.19
6.	10.	60.	15.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	28.1	4.4	1.75	10.49	1.70	-8.80

Q= 500.GPM D=6.065 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE MM/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	8.8	8.9	15.80	63.19	8.30	-54.69
4.	2.	20.	11.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	13.8	8.9	15.80	63.19	10.65	-52.53
4.	2.	20.	15.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	18.8	8.9	15.80	63.19	13.01	-50.18
4.	2.	40.	7.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	8.9	4.5	15.77	63.07	6.27	-56.80
4.	2.	40.	11.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	13.9	4.5	15.77	63.07	8.65	-54.42
4.	2.	40.	15.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	19.0	4.5	15.77	63.07	11.02	-52.04
4.	2.	60.	7.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	9.0	3.0	15.74	62.95	5.62	-57.33
4.	2.	60.	11.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	14.1	3.0	15.74	62.95	8.02	-54.93
4.	2.	60.	15.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	19.2	3.0	15.74	62.95	10.42	-52.53
4.	5.	20.	7.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	11.4	11.5	3.95	15.80	2.69	-13.11
4.	5.	20.	11.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	17.9	11.5	3.95	15.80	3.45	-12.35
4.	5.	20.	15.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	24.4	11.5	3.95	15.80	4.21	-11.59
4.	5.	40.	7.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	11.5	5.8	3.94	15.77	2.02	-13.74
4.	5.	40.	11.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	18.0	5.8	3.94	15.77	2.79	-12.98
4.	5.	40.	15.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	24.6	5.8	3.94	15.77	3.56	-12.21
4.	5.	60.	7.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	11.5	3.9	3.93	15.74	1.81	-13.93
4.	5.	60.	11.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	18.1	3.9	3.93	15.74	2.58	-13.15
4.	5.	60.	15.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	24.7	3.9	3.93	15.74	3.36	-12.38
4.	10.	20.	7.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	13.0	13.1	1.76	7.02	1.36	-5.66
4.	10.	20.	11.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	20.4	13.1	1.76	7.02	1.74	-5.28
4.	10.	20.	15.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	27.8	13.1	1.76	7.02	2.13	-4.89
4.	10.	40.	7.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	13.0	6.6	1.75	7.01	1.02	-5.98
4.	10.	40.	11.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	20.5	6.6	1.75	7.01	1.41	-5.60
4.	10.	40.	15.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	27.9	6.6	1.75	7.01	1.80	-5.21
4.	10.	60.	7.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	13.1	4.4	1.75	6.99	0.91	-6.08
4.	10.	60.	11.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	20.6	4.4	1.75	6.99	1.31	-5.69
4.	10.	60.	15.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	28.1	4.4	1.75	6.99	1.70	-5.30
2.	2.	20.	7.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	8.8	8.9	15.80	31.59	8.30	-23.29
2.	2.	20.	11.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	13.8	8.9	15.80	31.59	10.65	-20.94
2.	2.	20.	15.	0.65	324.	111.	5.	1345.	25.	0.99	1.10	1.05	1.90	59.5	45.1	125.5	18.8	8.9	15.80	31.59	13.01	-18.59
2.	2.	40.	7.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	8.9	4.5	15.77	31.53	6.27	-25.26
2.	2.	40.	11.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	13.9	4.5	15.77	31.53	8.65	-22.89
2.	2.	40.	15.	0.65	324.	222.	6.	1344.	26.	0.99	1.10	1.05	1.90	60.5	45.1	126.7	19.0	4.5	15.77	31.53	11.02	-20.51
2.	2.	60.	7.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	9.0	3.0	15.74	31.48	5.62	-25.86
2.	2.	60.	11.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	14.1	3.0	15.74	31.48	8.02	-23.46
2.	2.	60.	15.	0.65	324.	333.	7.	1343.	27.	0.99	1.10	1.05	1.90	61.5	45.1	128.0	19.2	3.0	15.74	31.48	10.42	-21.06
2.	5.	20.	7.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	11.4	11.5	3.95	7.90	2.69	-5.21
2.	5.	20.	11.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	17.9	11.5	3.95	7.90	3.45	-4.45
2.	5.	20.	15.	2.59	324.	111.	5.	1345.	25.	0.99	1.40	1.09	4.60	59.5	75.9	162.5	24.4	11.5	3.95	7.90	4.21	-3.69
2.	5.	40.	7.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	11.5	5.8	3.94	7.88	2.02	-5.86
2.	5.	40.	11.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	18.0	5.8	3.94	7.88	2.79	-5.09
2.	5.	40.	15.	2.59	324.	222.	6.	1344.	26.	0.99	1.40	1.09	4.60	60.5	75.9	163.7	24.6	5.8	3.94	7.88	3.56	-4.32
2.	5.	60.	7.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	11.5	3.9	3.93	7.87	1.81	-6.06
2.	5.	60.	11.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	18.1	3.9	3.93	7.87	2.58	-5.28
2.	5.	60.	15.	2.59	324.	333.	7.	1343.	27.	0.99	1.40	1.09	4.60	61.5	75.9	164.9	24.7	3.9	3.93	7.87	3.36	-4.51
2.	10.	20.	7.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	13.0	13.1	1.76	3.51	1.36	-2.15
2.	10.	20.	11.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	20.4	13.1	1.76	3.51	1.74	-1.77
2.	10.	20.	15.	5.83	324.	111.	5.	1345.	25.	0.99	1.90	1.10	9.10	59.5	94.7	185.0	27.8	13.1	1.76	3.51	2.13	-1.38
2.	10.	40.	7.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	13.0	6.6	1.75	3.50	1.02	-2.48
2.	10.	40.	11.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	20.5	6.6	1.75	3.50	1.41	-2.09
2.	10.	40.	15.	5.83	324.	222.	6.	1344.	26.	0.99	1.90	1.10	9.10	60.5	94.7	186.3	27.9	6.6	1.75	3.50	1.80	-1.70
2.	10.	60.	7.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	13.1	4.4	1.75	3.50	0.91	-2.58
2.	10.	60.	11.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	20.6	4.4	1.75	3.50	1.31	-2.19
2.	10.	60.	15.	5.83	324.	333.	7.	1343.	27.	0.99	1.90	1.10	9.10	61.5	94.7	187.5	28.1	4.4	1.75	3.50	1.70	-1.80

Q=1000.GPM D=4.026 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCK $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	1.30	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	20.	11.	1.30	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	20.	15.	1.30	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	40.	7.	1.30	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	40.	11.	1.30	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	40.	15.	1.30	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	60.	7.	1.30	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	60.	11.	1.30	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	2.	60.	15.	1.30	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	20.	7.	5.18	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	20.	11.	5.18	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	20.	15.	5.18	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	40.	7.	5.18	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	40.	11.	5.18	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	40.	15.	5.18	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	60.	7.	5.18	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	60.	11.	5.18	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	5.	60.	15.	5.18	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	20.	7.	11.66	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	20.	11.	11.66	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	20.	15.	11.66	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	40.	7.	11.66	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	40.	11.	11.66	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	40.	15.	11.66	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	60.	7.	11.66	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	60.	11.	11.66	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
6.	10.	60.	15.	11.66	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	20.	7.	1.30	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	20.	11.	1.30	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	20.	15.	1.30	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	40.	7.	1.30	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	40.	11.	1.30	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	40.	15.	1.30	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	60.	7.	1.30	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	60.	11.	1.30	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	2.	60.	15.	1.30	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	20.	7.	5.18	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	20.	11.	5.18	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	20.	15.	5.18	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	40.	7.	5.18	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	40.	11.	5.18	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	40.	15.	5.18	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	60.	7.	5.18	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	60.	11.	5.18	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	5.	60.	15.	5.18	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	20.	7.	11.66	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	20.	11.	11.66	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	20.	15.	11.66	222.	503.	235.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	40.	7.	11.66	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	40.	11.	11.66	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	40.	15.	11.66	222.	1007.	399.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	60.	7.	11.66	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	60.	11.	11.66	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													
4.	10.	60.	15.	11.66	222.	1510.	562.		*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***													

Q=1000.GPM D=4.026 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	UT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	1.30	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	20.	11.	1.30	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	20.	15.	1.30	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	40.	7.	1.30	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	40.	11.	1.30	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	40.	15.	1.30	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	7.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	11.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	15.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	7.	5.18	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	11.	5.18	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	15.	5.18	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	40.	7.	5.18	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	40.	11.	5.18	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	40.	15.	5.18	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	7.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	11.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	15.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	7.	11.66	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	11.	11.66	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	15.	11.66	222.	503.	235.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	40.	7.	11.66	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	40.	11.	11.66	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	40.	15.	11.66	222.	1007.	399.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	7.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	11.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	15.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q=1000.GPM D=4.026 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	UT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	8.0	8.1	4.51	27.06	3.76	-23.30
6.	2.	20.	11.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	12.5	8.1	4.51	27.06	4.83	-22.23
6.	2.	20.	15.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	17.1	8.1	4.51	27.06	5.90	-21.16
6.	2.	40.	7.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	8.2	4.2	0.33	2.00	2.89	0.89
6.	2.	40.	11.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	12.9	4.2	0.33	2.00	3.99	1.99
6.	2.	40.	15.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	17.5	4.2	0.33	2.00	5.09	3.09
6.	2.	60.	7.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	11.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	2.	60.	15.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	20.	7.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	11.3	11.5	1.13	6.76	1.34	-5.43
6.	5.	20.	11.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	17.8	11.5	1.13	6.76	1.72	-5.05
6.	5.	20.	15.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	24.3	11.5	1.13	6.76	2.10	-4.67
6.	5.	40.	7.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	11.5	5.9	0.08	0.50	1.02	0.52
6.	5.	40.	11.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	18.1	5.9	0.08	0.50	1.41	0.91
6.	5.	40.	15.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	24.7	5.9	0.08	0.50	1.79	1.29
6.	5.	60.	7.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	11.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	5.	60.	15.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	20.	7.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	13.4	13.5	0.50	3.01	0.70	-2.31
6.	10.	20.	11.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	21.0	13.5	0.50	3.01	0.90	-2.11
6.	10.	20.	15.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	28.6	13.5	0.50	3.01	1.10	-1.91
6.	10.	40.	7.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	13.6	6.9	0.04	0.22	0.53	0.31
6.	10.	40.	11.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	21.3	6.9	0.04	0.22	0.74	0.51
6.	10.	40.	15.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	29.1	6.9	0.04	0.22	0.94	0.72
6.	10.	60.	7.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	11.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
6.	10.	60.	15.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q=1000.GPM D=4.026 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	COM $1000	DE MH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	8.0	8.1	4.51	18.04	3.76	-14.28
4.	2.	20.	11.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	12.5	8.1	4.51	18.04	4.83	-13.21
4.	2.	20.	15.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	17.1	8.1	4.51	18.04	5.90	-12.14
4.	2.	40.	7.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	8.2	4.2	0.33	1.33	2.89	1.56
4.	2.	40.	11.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	12.9	4.2	0.33	1.33	3.99	2.66
4.	2.	40.	15.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	17.5	4.2	0.33	1.33	5.09	3.75
4.	2.	60.	7.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	11.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	2.	60.	15.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	20.	7.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	11.3	11.5	1.13	4.51	1.34	-3.17
4.	5.	20.	11.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	17.8	11.5	1.13	4.51	1.72	-2.79
4.	5.	20.	15.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	24.3	11.5	1.13	4.51	2.10	-2.41
4.	5.	40.	7.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	11.5	5.9	0.08	0.33	1.02	0.69
4.	5.	40.	11.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	18.1	5.9	0.08	0.33	1.41	1.07
4.	5.	40.	15.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	24.7	5.9	0.08	0.33	1.79	1.46
4.	5.	60.	7.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	11.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	5.	60.	15.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	20.	7.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	13.4	13.5	0.50	2.00	0.70	-1.30
4.	10.	20.	11.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	21.0	13.5	0.50	2.00	0.90	-1.10
4.	10.	20.	15.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	28.6	13.5	0.50	2.00	1.10	-0.91
4.	10.	40.	7.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	13.6	6.9	0.04	0.15	0.53	0.38
4.	10.	40.	11.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	21.3	6.9	0.04	0.15	0.74	0.59
4.	10.	40.	15.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	29.1	6.9	0.04	0.15	0.94	0.79
4.	10.	60.	7.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	11.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
4.	10.	60.	15.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	20.	7.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	8.0	8.1	4.51	9.02	3.76	-5.26
2.	2.	20.	11.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	12.5	8.1	4.51	9.02	4.83	-4.19
2.	2.	20.	15.	1.30	222.	503.	235.	665.	255.	0.47	1.10	1.05	1.90	36.5	58.3	113.8	17.1	8.1	4.51	9.02	5.90	-3.12
2.	2.	40.	7.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	8.2	4.2	0.33	0.67	2.89	2.23
2.	2.	40.	11.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	12.9	4.2	0.33	0.67	3.99	3.32
2.	2.	40.	15.	1.30	222.	1007.	399.	501.	419.	0.09	1.10	1.05	1.90	39.2	58.3	117.0	17.5	4.2	0.33	0.67	5.09	4.42
2.	2.	60.	7.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	11.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	2.	60.	15.	1.30	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	20.	7.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	11.3	11.5	1.13	2.25	1.34	-0.92
2.	5.	20.	11.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	17.8	11.5	1.13	2.25	1.72	-0.54
2.	5.	20.	15.	5.18	222.	503.	235.	665.	255.	0.47	1.40	1.09	4.60	36.5	98.3	161.8	24.3	11.5	1.13	2.25	2.10	-0.16
2.	5.	40.	7.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	11.5	5.9	0.08	0.17	1.02	0.85
2.	5.	40.	11.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	18.1	5.9	0.08	0.17	1.41	1.24
2.	5.	40.	15.	5.18	222.	1007.	399.	501.	419.	0.09	1.40	1.09	4.60	39.2	98.3	165.0	24.7	5.9	0.08	0.17	1.79	1.63
2.	5.	60.	7.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	11.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	5.	60.	15.	5.18	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	20.	7.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	13.4	13.5	0.50	1.00	0.70	-0.30
2.	10.	20.	11.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	21.0	13.5	0.50	1.00	0.90	-0.10
2.	10.	20.	15.	11.66	222.	503.	235.	665.	255.	0.47	1.90	1.10	9.10	36.5	122.5	190.8	28.6	13.5	0.50	1.00	1.10	0.10
2.	10.	40.	7.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	13.6	6.9	0.04	0.07	0.53	0.46
2.	10.	40.	11.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	21.3	6.9	0.04	0.07	0.74	0.66
2.	10.	40.	15.	11.66	222.	1007.	399.	501.	419.	0.09	1.90	1.10	9.10	39.2	122.5	194.0	29.1	6.9	0.04	0.07	0.94	0.86
2.	10.	60.	7.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	11.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														
2.	10.	60.	15.	11.66	222.	1510.	562.	*** IMPRACTICAL DUE TO EXCESSIVE PRESSURE DROP ***														

Q=1000.GPM D=4.026 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	10.1	10.3	9.89	59.37	4.79	-54.58
6.	2.	20.	11.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	15.9	10.3	9.89	59.37	6.15	-53.22
6.	2.	20.	15.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	21.7	10.3	9.89	59.37	7.51	-51.86
6.	2.	40.	7.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	10.4	5.3	5.72	34.31	3.66	-30.65
6.	2.	40.	11.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	16.3	5.3	5.72	34.31	5.05	-29.26
6.	2.	40.	15.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	22.2	5.3	5.72	34.31	6.44	-27.87
6.	2.	60.	7.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	10.6	3.6	1.54	9.26	3.32	-5.93
6.	2.	60.	11.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	16.6	3.6	1.54	9.26	4.74	-4.52
6.	2.	60.	15.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	22.7	3.6	1.54	9.26	6.16	-3.10
6.	5.	20.	7.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	15.0	15.2	2.47	14.84	1.77	-13.08
6.	5.	20.	11.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	23.5	15.2	2.47	14.84	2.27	-12.57
6.	5.	20.	15.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	32.1	15.2	2.47	14.84	2.77	-12.07
6.	5.	40.	7.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	15.2	7.7	1.43	8.58	1.34	-7.24
6.	5.	40.	11.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	23.9	7.7	1.43	8.58	1.85	-6.73
6.	5.	40.	15.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	32.5	7.7	1.43	8.58	2.36	-6.22
6.	5.	60.	7.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	15.4	5.2	0.39	2.31	1.21	-1.11
6.	5.	60.	11.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	24.2	5.2	0.39	2.31	1.72	-0.59
6.	5.	60.	15.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	33.0	5.2	0.39	2.31	2.24	-0.07
6.	10.	20.	7.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	17.9	18.2	1.10	6.60	0.94	-5.66
6.	10.	20.	11.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	28.1	18.2	1.10	6.60	1.21	-5.39
6.	10.	20.	15.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	38.4	18.2	1.10	6.60	1.47	-5.12
6.	10.	40.	7.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	18.1	9.2	0.64	3.81	0.71	-3.10
6.	10.	40.	11.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	28.5	9.2	0.64	3.81	0.98	-2.83
6.	10.	40.	15.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	38.9	9.2	0.64	3.81	1.25	-2.56
6.	10.	60.	7.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	18.4	6.2	0.17	1.03	0.64	-0.39
6.	10.	60.	11.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	28.8	6.2	0.17	1.03	0.91	-0.12
6.	10.	60.	15.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	39.3	6.2	0.17	1.03	1.19	0.15
4.	2.	20.	7.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	10.1	10.3	9.89	39.58	4.79	-34.79
4.	2.	20.	11.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	15.9	10.3	9.89	39.58	6.15	-33.43
4.	2.	20.	15.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	21.7	10.3	9.89	39.58	7.51	-32.07
4.	2.	40.	7.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	10.4	5.3	5.72	22.88	3.66	-19.21
4.	2.	40.	11.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	16.3	5.3	5.72	22.88	5.05	-17.82
4.	2.	40.	15.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	22.2	5.3	5.72	22.88	6.44	-16.44
4.	2.	60.	7.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	10.6	3.6	1.54	6.17	3.32	-2.85
4.	2.	60.	11.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	16.6	3.6	1.54	6.17	4.74	-1.43
4.	2.	60.	15.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	22.7	3.6	1.54	6.17	6.16	-0.01
4.	5.	20.	7.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	15.0	15.2	2.47	9.89	1.77	-8.13
4.	5.	20.	11.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	23.5	15.2	2.47	9.89	2.27	-7.63
4.	5.	20.	15.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	32.1	15.2	2.47	9.89	2.77	-7.13
4.	5.	40.	7.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	15.2	7.7	1.43	5.72	1.34	-4.38
4.	5.	40.	11.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	23.9	7.7	1.43	5.72	1.85	-3.87
4.	5.	40.	15.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	32.5	7.7	1.43	5.72	2.36	-3.36
4.	5.	60.	7.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	15.4	5.2	0.39	1.54	1.21	-0.33
4.	5.	60.	11.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	24.2	5.2	0.39	1.54	1.72	0.18
4.	5.	60.	15.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	33.0	5.2	0.39	1.54	2.24	0.70
4.	10.	20.	7.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	17.9	18.2	1.10	4.40	0.94	-3.46
4.	10.	20.	11.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	28.1	18.2	1.10	4.40	1.21	-3.19
4.	10.	20.	15.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	38.4	18.2	1.10	4.40	1.47	-2.92
4.	10.	40.	7.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	18.1	9.2	0.64	2.54	0.71	-1.83
4.	10.	40.	11.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	28.5	9.2	0.64	2.54	0.98	-1.56
4.	10.	40.	15.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	38.9	9.2	0.64	2.54	1.25	-1.29
4.	10.	60.	7.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	18.4	6.2	0.17	0.69	0.64	-0.05
4.	10.	60.	11.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	28.8	6.2	0.17	0.69	0.91	0.23
4.	10.	60.	15.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	39.3	6.2	0.17	0.69	1.19	0.50

Q=1000.GPM D=4.026 IN. PR=1500.PSIG PD=1350. PSIG

CK C/KWh	N	DT SEC	F %	PROD MGD	LS FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CGM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	10.1	10.3	9.89	19.79	6.79	-15.00
2.	2.	20.	11.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	15.9	10.3	9.89	19.79	6.15	-13.64
2.	2.	20.	15.	1.30	222.	503.	235.	1115.	255.	0.65	1.10	1.05	1.90	36.5	84.2	144.9	21.7	10.3	9.89	19.79	7.51	-12.29
2.	2.	40.	7.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	10.4	5.3	5.72	11.44	3.66	-7.78
2.	2.	40.	11.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	16.3	5.3	5.72	11.44	5.05	-6.39
2.	2.	40.	15.	1.30	222.	1007.	399.	951.	419.	0.40	1.10	1.05	1.90	39.2	84.2	148.1	22.2	5.3	5.72	11.44	6.44	-5.00
2.	2.	60.	7.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	10.6	3.6	1.54	3.09	3.32	0.24
2.	2.	60.	11.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	16.6	3.6	1.54	3.09	4.74	1.65
2.	2.	60.	15.	1.30	222.	1510.	562.	788.	582.	0.16	1.10	1.05	1.90	41.9	84.2	151.3	22.7	3.6	1.54	3.09	6.16	3.07
2.	5.	20.	7.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	15.0	15.2	2.47	4.95	1.77	-3.18
2.	5.	20.	11.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	23.5	15.2	2.47	4.95	2.27	-2.68
2.	5.	20.	15.	5.18	222.	503.	235.	1115.	255.	0.65	1.40	1.09	4.60	36.5	141.6	213.7	32.1	15.2	2.47	4.95	2.77	-2.18
2.	5.	40.	7.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	15.2	7.7	1.43	2.86	1.34	-1.52
2.	5.	40.	11.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	23.9	7.7	1.43	2.86	1.85	-1.01
2.	5.	40.	15.	5.18	222.	1007.	399.	951.	419.	0.40	1.40	1.09	4.60	39.2	141.6	216.9	32.5	7.7	1.43	2.86	2.36	-0.50
2.	5.	60.	7.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	15.4	5.2	0.39	0.77	1.21	0.44
2.	5.	60.	11.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	24.2	5.2	0.39	0.77	1.72	0.95
2.	5.	60.	15.	5.18	222.	1510.	562.	788.	582.	0.16	1.40	1.09	4.60	41.9	141.6	220.1	33.0	5.2	0.39	0.77	2.24	1.47
2.	10.	20.	7.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	17.9	18.2	1.10	2.20	0.94	-1.25
2.	10.	20.	11.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	28.1	18.2	1.10	2.20	1.21	-0.99
2.	10.	20.	15.	11.66	222.	503.	235.	1115.	255.	0.65	1.90	1.10	9.10	36.5	176.7	255.9	38.4	18.2	1.10	2.20	1.47	-0.73
2.	10.	40.	7.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	18.1	9.2	0.64	1.27	0.71	-0.56
2.	10.	40.	11.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	28.5	9.2	0.64	1.27	0.98	-0.29
2.	10.	40.	15.	11.66	222.	1007.	399.	951.	419.	0.40	1.90	1.10	9.10	39.2	176.7	259.1	38.9	9.2	0.64	1.27	1.25	-0.02
2.	10.	60.	7.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	18.4	6.2	0.17	0.34	0.64	0.30
2.	10.	60.	11.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	28.8	6.2	0.17	0.34	0.91	0.57
2.	10.	60.	15.	11.66	222.	1510.	562.	788.	582.	0.16	1.90	1.10	9.10	41.9	176.7	262.3	39.3	6.2	0.17	0.34	1.19	0.84

Q=1000.GPM D=6.065 IN. PR= 500.PSIG PD= 450. PSIG

6.	2.	20.	7.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	7.8	7.9	4.56	27.35	3.56	-23.69
6.	2.	20.	11.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	12.2	7.9	4.56	27.35	4.70	-22.65
6.	2.	20.	15.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	16.6	7.9	4.56	27.35	5.74	-21.62
6.	2.	40.	7.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	7.9	4.0	4.32	25.93	2.80	-23.13
6.	2.	40.	11.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	12.4	4.0	4.32	25.93	3.86	-22.07
6.	2.	40.	15.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	17.0	4.0	4.32	25.93	4.92	-21.01
6.	2.	60.	7.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	8.1	2.7	4.08	24.51	2.54	-21.97
6.	2.	60.	11.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	12.7	2.7	4.08	24.51	3.62	-20.88
6.	2.	60.	15.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	17.3	2.7	4.08	24.51	4.71	-19.80
6.	5.	20.	7.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	9.5	9.7	1.14	6.84	1.13	-5.71
6.	5.	20.	11.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	15.0	9.7	1.14	6.84	1.45	-5.39
6.	5.	20.	15.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	20.5	9.7	1.14	6.84	1.77	-5.07
6.	5.	40.	7.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	9.7	4.9	1.08	6.48	0.86	-5.62
6.	5.	40.	11.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	15.3	4.9	1.08	6.48	1.18	-5.30
6.	5.	40.	15.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	20.8	4.9	1.08	6.48	1.51	-4.97
6.	5.	60.	7.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	9.9	3.3	1.02	6.13	0.78	-5.35
6.	5.	60.	11.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	15.5	3.3	1.02	6.13	1.11	-5.02
6.	5.	60.	15.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	21.2	3.3	1.02	6.13	1.44	-4.69
6.	10.	20.	7.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	10.6	10.8	0.51	3.04	0.56	-2.48
6.	10.	20.	11.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	16.7	10.8	0.51	3.04	0.72	-2.32
6.	10.	20.	15.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	22.8	10.8	0.51	3.04	0.88	-2.16
6.	10.	40.	7.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	10.8	5.5	0.48	2.88	0.42	-2.46
6.	10.	40.	11.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	17.0	5.5	0.48	2.88	0.59	-2.30
6.	10.	40.	15.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	23.2	5.5	0.48	2.88	0.75	-2.13
6.	10.	60.	7.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	11.0	3.7	0.45	2.72	0.38	-2.34
6.	10.	60.	11.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	17.3	3.7	0.45	2.72	0.55	-2.18
6.	10.	60.	15.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	23.5	3.7	0.45	2.72	0.71	-2.02

Q=1000.GPM D=6.065 IN. PR= 500.PSIG PD= 450. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MM/G	DCWD C/KG	DCWI C/KG	DCM C/KG
4.	2.	20.	7.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	7.8	7.9	4.56	18.24	3.66	-14.58
4.	2.	20.	11.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	12.2	7.9	4.56	18.24	4.70	-13.54
4.	2.	20.	15.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	16.6	7.9	4.56	18.24	5.74	-12.50
4.	2.	40.	7.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	7.9	4.0	4.32	17.29	2.80	-14.49
4.	2.	40.	11.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	12.4	4.0	4.32	17.29	3.86	-13.43
4.	2.	40.	15.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	17.0	4.0	4.32	17.29	4.92	-12.37
4.	2.	60.	7.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	8.1	2.7	4.08	16.34	2.54	-13.80
4.	2.	60.	11.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	12.7	2.7	4.08	16.34	3.62	-12.72
4.	2.	60.	15.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	17.3	2.7	4.08	16.34	4.71	-11.63
4.	5.	20.	7.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	9.5	9.7	1.14	4.56	1.13	-3.43
4.	5.	20.	11.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	15.0	9.7	1.14	4.56	1.45	-3.11
4.	5.	20.	15.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	20.5	9.7	1.14	4.56	1.77	-2.79
4.	5.	40.	7.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	9.7	4.9	1.08	4.32	0.86	-3.46
4.	5.	40.	11.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	15.3	4.9	1.08	4.32	1.18	-3.14
4.	5.	40.	15.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	20.8	4.9	1.08	4.32	1.51	-2.81
4.	5.	60.	7.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	9.9	3.3	1.02	4.08	0.78	-3.31
4.	5.	60.	11.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	15.5	3.3	1.02	4.08	1.11	-2.98
4.	5.	60.	15.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	21.2	3.3	1.02	4.08	1.44	-2.65
4.	10.	20.	7.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	10.6	10.8	0.51	2.03	0.56	-1.47
4.	10.	20.	11.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	16.7	10.8	0.51	2.03	0.72	-1.31
4.	10.	20.	15.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	22.8	10.8	0.51	2.03	0.88	-1.15
4.	10.	40.	7.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	10.8	5.5	0.48	1.92	0.42	-1.50
4.	10.	40.	11.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	17.0	5.5	0.48	1.92	0.59	-1.34
4.	10.	40.	15.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	23.2	5.5	0.48	1.92	0.75	-1.17
4.	10.	60.	7.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	11.0	3.7	0.45	1.82	0.38	-1.43
4.	10.	60.	11.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	17.3	3.7	0.45	1.82	0.55	-1.27
4.	10.	60.	15.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	23.5	3.7	0.45	1.82	0.71	-1.11
2.	2.	20.	7.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	7.8	7.9	4.56	9.12	3.66	-5.46
2.	2.	20.	11.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	12.2	7.9	4.56	9.12	4.70	-4.42
2.	2.	20.	15.	1.30	324.	222.	23.	427.	43.	0.89	1.10	1.05	1.90	60.9	31.4	110.7	16.6	7.9	4.56	9.12	5.74	-3.38
2.	2.	40.	7.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	7.9	4.0	4.32	8.64	2.80	-5.67
2.	2.	40.	11.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	12.4	4.0	4.32	8.64	3.86	-4.78
2.	2.	40.	15.	1.30	324.	444.	32.	418.	52.	0.85	1.10	1.05	1.90	62.9	31.4	113.2	17.0	4.0	4.32	8.64	4.92	-3.72
2.	2.	60.	7.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	8.1	2.7	4.08	8.17	2.54	-5.63
2.	2.	60.	11.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	12.7	2.7	4.08	8.17	3.62	-4.55
2.	2.	60.	15.	1.30	324.	666.	41.	409.	61.	0.81	1.10	1.05	1.90	64.9	31.4	115.6	17.3	2.7	4.08	8.17	4.71	-3.46
2.	5.	20.	7.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	9.5	9.7	1.14	2.28	1.13	-1.15
2.	5.	20.	11.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	15.0	9.7	1.14	2.28	1.45	-0.83
2.	5.	20.	15.	5.18	324.	222.	23.	427.	43.	0.89	1.40	1.09	4.60	60.9	52.8	136.4	20.5	9.7	1.14	2.28	1.77	-0.51
2.	5.	40.	7.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	9.7	4.9	1.08	2.16	0.86	-1.30
2.	5.	40.	11.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	15.3	4.9	1.08	2.16	1.18	-0.98
2.	5.	40.	15.	5.18	324.	444.	32.	418.	52.	0.85	1.40	1.09	4.60	62.9	52.8	138.8	20.8	4.9	1.08	2.16	1.51	-0.65
2.	5.	60.	7.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	9.9	3.3	1.02	2.04	0.78	-1.27
2.	5.	60.	11.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	15.5	3.3	1.02	2.04	1.11	-0.94
2.	5.	60.	15.	5.18	324.	666.	41.	409.	61.	0.81	1.40	1.09	4.60	64.9	52.8	141.3	21.2	3.3	1.02	2.04	1.44	-0.60
2.	10.	20.	7.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	10.6	10.8	0.51	1.01	0.56	-0.45
2.	10.	20.	11.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	16.7	10.8	0.51	1.01	0.72	-0.30
2.	10.	20.	15.	11.66	324.	222.	23.	427.	43.	0.89	1.90	1.10	9.10	60.9	65.8	152.0	22.8	10.8	0.51	1.01	0.88	-0.14
2.	10.	40.	7.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	10.8	5.5	0.48	0.96	0.42	-0.54
2.	10.	40.	11.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	17.0	5.5	0.48	0.96	0.59	-0.38
2.	10.	40.	15.	11.66	324.	444.	32.	418.	52.	0.85	1.90	1.10	9.10	62.9	65.8	154.4	23.2	5.5	0.48	0.96	0.75	-0.21
2.	10.	60.	7.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	11.0	3.7	0.45	0.91	0.38	-0.52
2.	10.	60.	11.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	17.3	3.7	0.45	0.91	0.55	-0.36
2.	10.	60.	15.	11.66	324.	666.	41.	409.	61.	0.81	1.90	1.10	9.10	64.9	65.8	156.9	23.5	3.7	0.45	0.91	0.71	-0.20

Q=1000.GPM D=6.065 IN. PR=1000.PSIG PD= 900. PSIG

CR C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SU	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE MW/G	DCWD C/KG	DCWI C/KG	DCW C/KG
6.	2.	20.	7.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	10.0	10.2	9.94	59.66	4.73	-54.94
6.	2.	20.	11.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	15.7	10.2	9.94	59.66	6.07	-53.60
6.	2.	20.	15.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	21.5	10.2	9.94	59.66	7.41	-52.25
6.	2.	40.	7.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	10.2	5.2	9.71	58.24	3.60	-54.64
6.	2.	40.	11.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	16.0	5.2	9.71	58.24	4.96	-53.28
6.	2.	40.	15.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	21.8	5.2	9.71	58.24	6.32	-51.92
6.	2.	60.	7.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	10.4	3.5	9.47	56.82	3.25	-53.57
6.	2.	60.	11.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	16.3	3.5	9.47	56.82	4.63	-52.18
6.	2.	60.	15.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	22.2	3.5	9.47	56.82	6.02	-50.80
6.	5.	20.	7.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	13.4	13.6	2.49	14.92	1.58	-13.34
6.	5.	20.	11.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	21.0	13.6	2.49	14.92	2.03	-12.89
6.	5.	20.	15.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	28.7	13.6	2.49	14.92	2.47	-12.44
6.	5.	40.	7.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	13.5	6.9	2.43	14.56	1.20	-13.36
6.	5.	40.	11.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	21.3	6.9	2.43	14.56	1.65	-12.74
6.	5.	40.	15.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	29.0	6.9	2.43	14.56	2.10	-12.40
6.	5.	60.	7.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	13.7	4.6	2.37	14.20	1.06	-13.14
6.	5.	60.	11.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	21.5	4.6	2.37	14.20	1.53	-12.67
6.	5.	60.	15.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	29.4	4.6	2.37	14.20	1.99	-12.21
6.	10.	20.	7.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	15.4	15.6	1.10	6.63	0.81	-5.82
6.	10.	20.	11.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	24.2	15.6	1.10	6.63	1.04	-5.59
6.	10.	20.	15.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	33.0	15.6	1.10	6.63	1.27	-5.36
6.	10.	40.	7.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	15.6	7.9	1.08	6.47	0.61	-5.86
6.	10.	40.	11.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	24.5	7.9	1.08	6.47	0.84	-5.63
6.	10.	40.	15.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	33.4	7.9	1.08	6.47	1.08	-5.40
6.	10.	60.	7.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	15.7	5.3	1.05	6.31	0.55	-5.76
6.	10.	60.	11.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	24.7	5.3	1.05	6.31	0.78	-5.53
6.	10.	60.	15.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	33.7	5.3	1.05	6.31	1.02	-5.30
4.	2.	20.	7.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	10.0	10.2	9.94	39.78	4.73	-35.05
4.	2.	20.	11.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	15.7	10.2	9.94	39.78	6.07	-33.71
4.	2.	20.	15.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	21.5	10.2	9.94	39.78	7.41	-32.37
4.	2.	40.	7.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	10.2	5.2	9.71	38.83	3.60	-35.23
4.	2.	40.	11.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	16.0	5.2	9.71	38.83	4.96	-33.87
4.	2.	40.	15.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	21.8	5.2	9.71	38.83	6.32	-32.50
4.	2.	60.	7.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	10.4	3.5	9.47	37.88	3.25	-34.63
4.	2.	60.	11.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	16.3	3.5	9.47	37.88	4.63	-33.24
4.	2.	60.	15.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	22.2	3.5	9.47	37.88	6.02	-31.86
4.	5.	20.	7.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	13.4	13.6	2.49	9.94	1.58	-8.37
4.	5.	20.	11.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	21.0	13.6	2.49	9.94	2.03	-7.92
4.	5.	20.	15.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	28.7	13.6	2.49	9.94	2.47	-7.47
4.	5.	40.	7.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	13.5	6.9	2.43	9.71	1.20	-8.51
4.	5.	40.	11.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	21.3	6.9	2.43	9.71	1.65	-8.06
4.	5.	40.	15.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	29.0	6.9	2.43	9.71	2.10	-7.60
4.	5.	60.	7.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	13.7	4.6	2.37	9.47	1.08	-8.39
4.	5.	60.	11.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	21.5	4.6	2.37	9.47	1.53	-7.94
4.	5.	60.	15.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	29.4	4.6	2.37	9.47	1.99	-7.48
4.	10.	20.	7.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	15.4	15.6	1.10	4.42	0.81	-3.61
4.	10.	20.	11.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	24.2	15.6	1.10	4.42	1.04	-3.38
4.	10.	20.	15.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	33.0	15.6	1.10	4.42	1.27	-3.15
4.	10.	40.	7.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	15.6	7.9	1.08	4.31	0.61	-3.70
4.	10.	40.	11.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	24.5	7.9	1.08	4.31	0.84	-3.47
4.	10.	40.	15.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	33.4	7.9	1.08	4.31	1.08	-3.24
4.	10.	60.	7.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	15.7	5.3	1.05	4.21	0.55	-3.66
4.	10.	60.	11.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	24.7	5.3	1.05	4.21	0.78	-3.43
4.	10.	60.	15.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	33.7	5.3	1.05	4.21	1.02	-3.19

Q=1000.GPM D=6.065 IN. PR=1000.PSIG PD= 900. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
2.	2.	20.	7.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	10.0	10.2	9.94	19.89	4.73	-15.16
2.	2.	20.	11.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	15.7	10.2	9.94	19.89	6.07	-13.82
2.	2.	20.	15.	1.30	324.	222.	23.	877.	43.	0.95	1.10	1.05	1.90	60.9	58.3	143.0	21.5	10.2	9.94	19.89	7.41	-12.48
2.	2.	40.	7.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	10.2	5.2	9.71	19.41	3.60	-15.82
2.	2.	40.	11.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	16.0	5.2	9.71	19.41	4.96	-14.45
2.	2.	40.	15.	1.30	324.	444.	32.	868.	52.	0.93	1.10	1.05	1.90	62.9	58.3	145.4	21.8	5.2	9.71	19.41	6.32	-13.09
2.	2.	60.	7.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	10.4	3.5	9.47	18.94	3.25	-15.69
2.	2.	60.	11.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	16.3	3.5	9.47	18.94	4.63	-14.31
2.	2.	60.	15.	1.30	324.	666.	41.	859.	61.	0.91	1.10	1.05	1.90	64.9	58.3	147.9	22.2	3.5	9.47	18.94	6.02	-12.92
2.	5.	20.	7.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	13.4	13.6	2.49	4.97	1.58	-3.39
2.	5.	20.	11.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	21.0	13.6	2.49	4.97	2.03	-2.95
2.	5.	20.	15.	5.18	324.	222.	23.	877.	43.	0.95	1.40	1.09	4.60	60.9	98.3	191.0	28.7	13.6	2.49	4.97	2.47	-2.50
2.	5.	40.	7.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	13.5	6.9	2.43	4.85	1.20	-3.66
2.	5.	40.	11.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	21.3	6.9	2.43	4.85	1.65	-3.20
2.	5.	40.	15.	5.18	324.	444.	32.	868.	52.	0.93	1.40	1.09	4.60	62.9	98.3	193.4	29.0	6.9	2.43	4.85	2.10	-2.75
2.	5.	60.	7.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	13.7	4.6	2.37	4.73	1.08	-3.66
2.	5.	60.	11.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	21.5	4.6	2.37	4.73	1.53	-3.20
2.	5.	60.	15.	5.18	324.	666.	41.	859.	61.	0.91	1.40	1.09	4.60	64.9	98.3	195.9	29.4	4.6	2.37	4.73	1.99	-2.74
2.	10.	20.	7.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	15.4	15.6	1.10	2.21	0.81	-1.40
2.	10.	20.	11.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	24.2	15.6	1.10	2.21	1.04	-1.17
2.	10.	20.	15.	11.66	324.	222.	23.	877.	43.	0.95	1.90	1.10	9.10	60.9	122.5	220.0	33.0	15.6	1.10	2.21	1.27	-0.94
2.	10.	40.	7.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	15.6	7.9	1.08	2.16	0.61	-1.55
2.	10.	40.	11.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	24.5	7.9	1.08	2.16	0.84	-1.31
2.	10.	40.	15.	11.66	324.	444.	32.	868.	52.	0.93	1.90	1.10	9.10	62.9	122.5	222.5	33.4	7.9	1.08	2.16	1.08	-1.08
2.	10.	60.	7.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	15.7	5.3	1.05	2.10	0.55	-1.56
2.	10.	60.	11.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	24.7	5.3	1.05	2.10	0.78	-1.32
2.	10.	60.	15.	11.66	324.	666.	41.	859.	61.	0.91	1.90	1.10	9.10	64.9	122.5	224.9	33.7	5.3	1.05	2.10	1.02	-1.09

Q=1000.GPM D=6.065 IN. PR=1500.PSIG PD=1350. PSIG

6.	2.	20.	7.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	12.2	12.4	15.33	91.97	5.75	-86.22
6.	2.	20.	11.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	19.1	12.4	15.33	91.97	7.39	-84.59
6.	2.	20.	15.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	26.1	12.4	15.33	91.97	9.02	-82.96
6.	2.	40.	7.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	12.4	6.3	15.09	90.55	4.37	-86.19
6.	2.	40.	11.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	19.4	6.3	15.09	90.55	6.02	-84.53
6.	2.	40.	15.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	26.5	6.3	15.09	90.55	7.68	-82.88
6.	2.	60.	7.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	12.5	4.2	14.85	89.13	3.93	-85.20
6.	2.	60.	11.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	19.7	4.2	14.85	89.13	5.61	-83.52
6.	2.	60.	15.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	26.8	4.2	14.85	89.13	7.29	-81.84
6.	5.	20.	7.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	17.0	17.3	3.83	22.99	2.01	-20.99
6.	5.	20.	11.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	26.7	17.3	3.83	22.99	2.58	-20.42
6.	5.	20.	15.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	36.4	17.3	3.83	22.99	3.15	-19.85
6.	5.	40.	7.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	17.2	8.7	3.77	22.64	1.52	-21.12
6.	5.	40.	11.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	27.0	8.7	3.77	22.64	2.09	-20.55
6.	5.	40.	15.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	36.8	8.7	3.77	22.64	2.67	-19.97
6.	5.	60.	7.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	17.3	5.9	3.71	22.28	1.36	-20.92
6.	5.	60.	11.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	27.3	5.9	3.71	22.28	1.94	-20.34
6.	5.	60.	15.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	37.2	5.9	3.71	22.28	2.52	-19.76
5.	10.	20.	7.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	20.0	20.2	1.70	10.22	1.05	-9.17
6.	10.	20.	11.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	31.4	20.2	1.70	10.22	1.34	-8.88
6.	10.	20.	15.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	42.8	20.2	1.70	10.22	1.64	-8.58
6.	10.	40.	7.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	20.1	10.2	1.68	10.06	0.79	-9.27
6.	10.	40.	11.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	31.6	10.2	1.68	10.06	1.09	-8.97
6.	10.	40.	15.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	43.1	10.2	1.68	10.06	1.39	-8.67
6.	10.	60.	7.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	20.3	6.9	1.65	9.90	0.71	-9.20
6.	10.	60.	11.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	31.9	6.9	1.65	9.90	1.01	-8.89
6.	10.	60.	15.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	43.5	6.9	1.65	9.90	1.31	-8.59

Q=1000.GPM D=6.065 IN. PR=1500.PSIG PU=1350. PSIG

CK C/KWH	N	DT SEC	F %	PROD MGD	LE FT	LT FT	DP PSI	PS PSIG	PF PSIG	EFF	SS	SF	SB	CE $1000	CP $1000	CC $1000	CCA $1000	CCM $1000	DE WH/G	DCWD C/KG	DCWI C/KG	DCW C/KG
4.	2.	20.	7.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	12.2	12.4	15.33	61.32	5.75	-55.56
4.	2.	20.	11.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	19.1	12.4	15.33	61.32	7.39	-53.93
4.	2.	20.	15.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	26.1	12.4	15.33	61.32	9.02	-52.30
4.	2.	40.	7.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	12.4	6.3	15.09	60.37	4.37	-56.00
4.	2.	40.	11.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	19.4	6.3	15.09	60.37	6.02	-54.35
4.	2.	40.	15.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	26.5	6.3	15.09	60.37	7.66	-52.69
4.	2.	60.	7.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	12.5	4.2	14.85	59.42	3.93	-55.49
4.	2.	60.	11.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	19.7	4.2	14.85	59.42	5.61	-53.81
4.	2.	60.	15.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	26.8	4.2	14.85	59.42	7.29	-52.13
4.	5.	20.	7.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	17.0	17.3	3.83	15.33	2.01	-13.32
4.	5.	20.	11.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	26.7	17.3	3.83	15.33	2.59	-12.75
4.	5.	20.	15.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	36.4	17.3	3.83	15.33	3.15	-12.18
4.	5.	40.	7.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	17.2	8.7	3.77	15.09	1.52	-13.57
4.	5.	40.	11.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	27.0	8.7	3.77	15.09	2.09	-13.00
4.	5.	40.	15.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	36.8	8.7	3.77	15.09	2.67	-12.42
4.	5.	60.	7.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	17.3	5.9	3.71	14.85	1.36	-13.49
4.	5.	60.	11.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	27.3	5.9	3.71	14.85	1.94	-12.91
4.	5.	60.	15.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	37.2	5.9	3.71	14.85	2.52	-12.33
4.	10.	20.	7.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	20.0	20.2	1.70	6.81	1.05	-5.77
4.	10.	20.	11.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	31.4	20.2	1.70	6.81	1.34	-5.47
4.	10.	20.	15.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	42.8	20.2	1.70	6.81	1.64	-5.17
4.	10.	40.	7.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	20.1	10.2	1.68	6.71	0.79	-5.94
4.	10.	40.	11.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	31.6	10.2	1.68	6.71	1.09	-5.62
4.	10.	40.	15.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	43.1	10.2	1.68	6.71	1.39	-5.32
4.	10.	60.	7.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	20.3	6.9	1.65	6.60	0.71	-5.89
4.	10.	60.	11.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	31.9	6.9	1.65	6.60	1.01	-5.59
4.	10.	60.	15.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	43.5	6.9	1.65	6.60	1.31	-5.29
2.	2.	20.	7.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	12.2	12.4	15.33	30.66	5.75	-24.90
2.	2.	20.	11.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	19.1	12.4	15.33	30.66	7.39	-23.27
2.	2.	20.	15.	1.30	324.	222.	23.	1327.	43.	0.97	1.10	1.05	1.90	60.9	84.2	174.1	26.1	12.4	15.33	30.66	9.02	-21.64
2.	2.	40.	7.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	12.4	6.3	15.09	30.18	4.37	-25.82
2.	2.	40.	11.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	19.4	6.3	15.09	30.18	6.02	-24.16
2.	2.	40.	15.	1.30	324.	444.	32.	1318.	52.	0.95	1.10	1.05	1.90	62.9	84.2	176.5	26.5	6.3	15.09	30.18	7.68	-22.51
2.	2.	60.	7.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	12.5	4.2	14.85	29.71	3.93	-25.78
2.	2.	60.	11.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	19.7	4.2	14.85	29.71	5.61	-24.10
2.	2.	60.	15.	1.30	324.	666.	41.	1309.	61.	0.94	1.10	1.05	1.90	64.9	84.2	178.9	26.8	4.2	14.85	29.71	7.29	-22.42
2.	5.	20.	7.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	17.0	17.3	3.83	7.66	2.01	-5.66
2.	5.	20.	11.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	26.7	17.3	3.83	7.66	2.58	-5.09
2.	5.	20.	15.	5.18	324.	222.	23.	1327.	43.	0.97	1.40	1.09	4.60	60.9	141.6	243.0	36.4	17.3	3.83	7.66	3.15	-4.52
2.	5.	40.	7.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	17.2	8.7	3.77	7.55	1.52	-6.03
2.	5.	40.	11.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	27.0	8.7	3.77	7.55	2.09	-5.45
2.	5.	40.	15.	5.18	324.	444.	32.	1318.	52.	0.95	1.40	1.09	4.60	62.9	141.6	245.4	36.8	8.7	3.77	7.55	2.67	-4.88
2.	5.	60.	7.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	17.3	5.9	3.71	7.43	1.36	-6.07
2.	5.	60.	11.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	27.3	5.9	3.71	7.43	1.94	-5.49
2.	5.	60.	15.	5.18	324.	666.	41.	1309.	61.	0.94	1.40	1.09	4.60	64.9	141.6	247.8	37.2	5.9	3.71	7.43	2.52	-4.90
2.	10.	20.	7.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	20.0	20.2	1.70	3.41	1.05	-2.36
2.	10.	20.	11.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	31.4	20.2	1.70	3.41	1.34	-2.06
2.	10.	20.	15.	11.66	324.	222.	23.	1327.	43.	0.97	1.90	1.10	9.10	60.9	176.7	285.1	42.8	20.2	1.70	3.41	1.64	-1.77
2.	10.	40.	7.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	20.1	10.2	1.68	3.35	0.79	-2.56
2.	10.	40.	11.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	31.6	10.2	1.68	3.35	1.09	-2.26
2.	10.	40.	15.	11.66	324.	444.	32.	1318.	52.	0.95	1.90	1.10	9.10	62.9	176.7	287.5	43.1	10.2	1.68	3.35	1.39	-1.96
2.	10.	60.	7.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	20.3	6.9	1.65	3.30	0.71	-2.59
2.	10.	60.	11.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	31.9	6.9	1.65	3.30	1.01	-2.29
2.	10.	60.	15.	11.66	324.	666.	41.	1309.	61.	0.94	1.90	1.10	9.10	64.9	176.7	289.9	43.5	6.9	1.65	3.30	1.31	-1.99

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