



SOUTHERN CALIFORNIA
EDISON[®]

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Confidential/Proprietary Information

November 9, 2012

PETER TUCULET
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

HYDRAULIC TEST RESULTS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

In accordance with your request, an energy efficiency test was performed on your turbine well pump on November 5, 2012. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

Equipment		
Pump:	PEERL	No: 1359093
Motor:	US	No: 854609

Results

Discharge Pressure, PSI	18.1
Standing Water Level, Feet	233.8
Drawdown, Feet	33.0
Discharge Head, Feet	41.8
Pumping Water Level, Feet	266.8
Total Head, Feet	308.6
Capacity, GPM	920
GPM per Foot Drawdown	27.9
Acre Feet Pumped in 24 Hours	4.066
kW Input to Motor	77.6
HP Input to Motor	104.1
Motor Load (%)	95.9
Measured Speed of Pump, RPM	1,788
Customer Meter, GPM	864
kWh per Acre Foot	458
Overall Plant Efficiency (%)	68.9

At the time of the test, it was noted that the discharge valve's stem had been sheared off. Therefore, we were unable to do throttle points.

RUSS JOHNSON
Manager
Hydraulic Services



November 9, 2012

PETER TUCULET
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

PUMPING COST ANALYSIS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref.#: 2684

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on November 5, 2012, billing history for the past 12 months, and your current rate of TOU-PA-SOP-2.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall plant efficiency can be improved from 68.9% to 71.0%.
2. This can save you up to 8,369 kWh and \$696.09 annually.
3. These kWh savings translate to a 3.6-ton decrease in CO₂ emissions.

	Plant Efficiency		
	<u>Existing</u>	<u>Improved</u>	<u>Savings</u>
Total kWh	282,516	274,147	8,369
kW Input	77.6	75.3	2.3
kWh per Acre Foot	458	445	14
Acre Feet per Year	616.7		
Average Cost per kWh	\$0.08		
Average Cost per Acre Foot	\$38.10	\$36.97	\$1.13
Overall Plant Efficiency (%)	68.9	71.0	
Total Annual Cost	\$23,496.86	\$22,800.77	\$696.09

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact RICK KOCH at (805)654-7312.

RUSS JOHNSON
Manager
Hydraulic Services



**Save Energy,
Save Money. . .
Your test results show that you can!**

November 9, 2012

PETER TUCULET
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

PUMPING COST ANALYSIS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our Technical Specialist performed a free energy efficiency test on one or more pumps at your facility on November 5, 2012. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash incentive.

	Projected Incentive, Energy, and Cost Savings			
	<u>Existing</u>	<u>Improved</u>	<u>Savings</u>	<u>Cash Incentive</u>
Total kWh	282,516	274,147	8,369	\$753.25
kW Input	77.6	75.3	2.3	
kW on-peak activity factor *			1.5	\$149.43
Acre Feet per Year	616.7			
kWh per Acre Foot	458	445	14	
Average Cost per Acre Foot	\$38.10	\$36.97	\$1.13	
Overall Plant Efficiency (%)	68.9	71.0		
Annual Total	\$23,496.86	\$22,800.77	\$696.09	\$902.68

(*The kW on-peak activity factor represents how the kW impacts the SCE system during on-peak periods as determined by SCE's agricultural and water pumping customers' average load profiles. By improving efficiency, your expected kW savings is 2.3 kW, and the savings used for incentive calculations is 65% of 2.3, or 1.5 kW.)

Case studies have shown that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from 68.9% to 71.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-SOP-2, we estimate that you may save up to 8,369 kWh annually (which translates to a 3.6-ton decrease in CO₂ emissions). This may result in energy cost savings of \$696.09.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you have the potential to receive an incentive of \$0.09 per kWh and \$100 per on-peak activity factored kW reduced, courtesy of SCE's Customized Efficiency Program. Based on your estimated kWh and kW, you would be eligible for a Potential Cash Incentive of \$902.68, capped at 50% of your project cost. (See contract for details.)

If you are interested in an incentive for this pump, please contact **Caroline Lee** at (760)951-3210 to complete a project application. All applicants must receive a **written approval authorization before** implementing any project; failure to comply will result in forfeiture of incentive funding.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and Incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison



October 29, 2010

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

HYDRAULIC TEST RESULTS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

In accordance with your request, an energy efficiency test was performed on your turbine well pump on October 25, 2010. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

Results	Equipment	
	Pump:	No:
	PEERL	1359093
	Motor: US	No: 854609
	Test 1	Test 2
Discharge Pressure, PSI	17.3	34.7
Standing Water Level, Feet	237.0	237.0
Drawdown, Feet	34.0	29.1
Discharge Head, Feet	40.0	80.2
Pumping Water Level, Feet	271.0	266.1
Total Head, Feet	311.0	346.3
Capacity, GPM	955	794
GPM per Foot Drawdown	28.1	27.3
Acre Feet Pumped in 24 Hours	4.221	3.509
kW Input to Motor	78.2	73.5
HP Input to Motor	104.9	98.6
Motor Load (%)	96.7	90.9
Measured Speed of Pump, RPM	1,788	
kWh per Acre Foot	445	503
Overall Plant Efficiency (%)	71.5	70.4

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge. At the time of the test, the customer flowmeter was not operating.

RUSS JOHNSON
Manager
Hydraulic Services



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October 29, 2010

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

PUMPING COST ANALYSIS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on October 25, 2010, billing history for the past 12 months, and your current rate of TOU-PA-SOP-2.

	<u>Existing</u>
Total kWh	299,028
kW Input	78.2
kWh per Acre Foot	445
Acre Feet per Year	672.4
Average Cost per kWh	\$0.09
Average Cost per Acre Foot	\$40.58
Overall Plant Efficiency (%)	71.5
<hr/>	
Total Annual Cost	\$27,289.30

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact RICK KOCH at (805)654-7312.

RUSS JOHNSON
Manager
Hydraulic Services



November 21, 2008

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

HYDRAULIC TEST RESULTS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

In accordance with your request, a test was made on your turbine well pump on November 18, 2008. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

	Equipment	
Pump:	PEERL	No: 1359093
Motor:	US	No: 854609

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	16.3	33.7	52.5
Standing Water Level, Feet	246.9	246.9	246.9
Drawdown, Feet	32.5	28.1	19.2
Discharge Head, Feet	37.7	77.8	121.3
Pumping Water Level, Feet	279.4	275.0	266.1
Total Head, Feet	317.1	352.8	387.4
Capacity, GPM	839	704	457
GPM per Foot Drawdown	25.8	25.1	23.8
Acre Feet Pumped in 24 Hours	3.708	3.112	2.020
kW Input to Motor	78.5	73.6	60.9
HP Input to Motor	105.3	98.7	81.7
Motor Load (%)	97.1	91.0	75.3
Measured Speed of Pump, RPM	1,789		
kWh per Acre Foot	508	568	724
Overall Plant Efficiency (%)	63.8	63.5	54.7
Customer Meter, GPM	890		

The test location does not meet industry standards. We recommend 8-10 diameters of uninterrupted pipe lengths for the ideal test location. Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services

November 21, 2008

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

PUMPING COST ANALYSIS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

The following analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on November 18, 2008, billing history for the past 12 months, and your current rate of TOU-PA-SOP-1.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall plant efficiency can be improved from 63.8% to 69.0%.
2. This can save you up to 19,856 kWh and \$1,758.86 annually.

	<u>Existing</u>	Plant Efficiency <u>Improved</u>	<u>Savings</u>
Total kWh	264,552	244,696	19,856
kW Input	78.5	72.6	5.9
kWh per Acre Foot	508	470	38
Acre Feet per Year	520.6		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$45.01	\$41.63	\$3.38
Overall Plant Efficiency (%)	63.8	69.0	
Total Annual Cost	\$23,434.02	\$21,675.16	\$1,758.86

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact RICK KOCH at (805)654-7312.

DAN L. JOHNSON
Manager
Hydraulic Services



**Save Energy,
Save Money. . .
Your test results show that you can!**

November 21, 2008

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
4871 W. COLUMBIA WAY
QUARTZ HILL, CA 93536

PUMPING COST ANALYSIS, Plant: WELL #4
Location: 5130 W AVE K-8 HP: 100
Cust #: 0-003-0391 Serv. Acct. #: 003-0019-82
Meter: 3412M-6169 Pump Ref. #: 2684

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our technical specialists performed a free pump-efficiency test on one or more pumps at your facility on November 18, 2008. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for Improved Overall Plant Efficiency (OPE), lower energy costs, and a cash rebate.

	Plant Efficiency		Savings
	Existing	Improved	
Total kWh	264,552	244,696	19,856
kW Input	78.5	72.6	5.9
kWh per Acre Foot	508	470	38
Acre Feet per Year	520.6		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$45.01	\$41.63	\$3.38
Overall Plant Efficiency (%)	63.8	69.0	
<hr/> Total Annual Cost	<hr/> \$23,434.02	<hr/> \$21,675.16	<hr/> \$1,758.86
Cash Incentive			\$1,588.49

Case studies have shown that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from 63.8% to 69.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-SOP-1, we estimate that you may save up to 19,856 kWh annually, resulting in energy cost savings of \$1,758.86.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you would receive an incentive of \$0.08 per kWh saved, courtesy of SCE's Agricultural Energy Efficiency Program. Based on your estimated kWh savings, you would be eligible for a potential cash incentive of \$1,588.49, capped at 50% of your project cost. (See contract for details.)

You may also be eligible for pump motor incentives. For more information about your test results, options, and incentive opportunities, contact **CAROLINE LEE** at (760)951-3210.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison



CONFIDENTIAL/PROPRIETARY INFORMATION

December 2, 2005

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
42116 50TH ST WEST, SUITE D
QUARTZ HILL, CA 93586SUBJECT: HYDRAULIC TEST RESULTS - [REDACTED]
5130 W AVE K-8
CUST #: 0-003-0391 - SERV ACCT #: 003-0019-82
DATE OF TEST: November 29, 2005

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

EQUIPMENT

PUMP: PEERL NO: 1359093
MOTOR: US NO: 854609 100 HP
METER: 3412M-6169
HYDRAULIC TEST REFERENCE NUMBER: 2684

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	15.5	34.5	51.5
<u>Standing Water Level, Ft.</u>	<u>219.9</u>	219.9	219.9
Drawdown, Ft.	27.0	25.3	21.4
Discharge Head, Ft.	35.8	79.7	119.0
Pumping Water Level, Ft.	246.9	245.2	241.3
Total Head, Ft.	282.7	324.9	360.3
<u>Capacity, GPM</u>	<u>873.0</u>	771.0	633.0
GPM per Ft. Drawdown	32.3	30.5	29.6
Acre Ft. Pumped in 24 Hrs.	3.859	3.408	2.798
kW Input to Motor	81.7	79.1	72.9
HP Input to Motor	109.6	106.1	97.8
Motor Load (%)	99.7	96.5	89.0
Measured Speed of Pump, RPM	1,788		
kWh per Acre Ft.	508	557	625
Overall Plant Efficiency (%)	[REDACTED]	59.6	58.9
<u>Customer Meter, GPM</u>	<u>895.0</u>		

The test location does not meet industry standards. We recommend 8-10 diameters of uninterrupted pipe lengths for the ideal test location. Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

December 2, 2005

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
42116 50TH ST WEST, SUITE D
QUARTZ HILL, CA 93586

SUBJECT: PUMPING COST ANALYSIS - HP: 100 - PLANT: WELL #4
CUST #: 0-003-0391 - SERV ACCT #: 003-0019-82
HYDRAULIC TEST REFERENCE NUMBER: 2684

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed November 29, 2005 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved from 56.9% to 70.0%. These improvements can save you up to 39,432 kWh annually.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY TOU-PA-SOP Current Rate	IMPROVED PLANT EFFICIENCY TOU-PA-SOP Current Rate	Savings
Total kWh	210,456	171,024	39,432
kW Input	81.7	66.4	15.3
kWh per Acre Ft.	508	413	95
Acre Ft. per Year	414.1	414.1	
Avg. Cost per kWh	\$0.07		
Avg. Cost per Acre Ft.	\$35.96	\$29.23	\$6.74
Overall Plant Eff. (%)	56.9	70.0	
TOTAL ANNUAL COST	\$14,891.87	\$12,101.67	\$2,790.20

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any additional questions regarding this report, please contact RICK KOCH at (805) 654-7312.

Dan L. Johnson
DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

November 19, 2004

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
42116 50TH ST WEST, SUITE D
QUARTZ HILL, CA 93586

SUBJECT: HYDRAULIC TEST RESULTS - WELL #4
5130 W AVE K-8
CUST #: 0-003-0391 - SERV ACCT #: 003-0019-82
DATE OF TEST: November 16, 2004

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

EQUIPMENT

PUMP: PEERL NO: 1359093
MOTOR: US NO: 854609 100 HP
METER: 3412M-6169
HYDRAULIC TEST REFERENCE NUMBER: 2684

Table with 4 columns: TEST RESULTS, TEST 1, TEST 2, TEST 3. Rows include Discharge Pressure, PSI; Standing Water Level, Ft.; Drawdown, Ft.; Discharge Head, Ft.; Pumping Water Level, Ft.; Total Head, Ft.; Capacity, GPM; GPM per Ft. Drawdown; Acre Ft. Pumped in 24 Hrs.; kW Input to Motor; HP Input to Motor; Motor Load (%); Measured Speed of Pump, RPM; kWh per Acre Ft.; Overall Plant Efficiency (%); Customer Meter, GPM.

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

November 19, 2004

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
42116 50TH ST WEST, SUITE D
QUARTZ HILL, CA 93586

SUBJECT: PUMPING COST ANALYSIS - HP: 100 - PLANT: WELL #4
CUST #: 0-003-0391 - SERV ACCT #: 003-0019-82
HYDRAULIC TEST REFERENCE NUMBER: 2684

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed November 16, 2004 and billing history for the past 12 months.

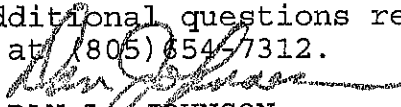
It is recommended and assumed that:

1. Overall plant efficiency can be improved from 52.8% to 72.0%. These improvements can save you up to 47,175 kWh annually.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY		IMPROVED PLANT EFFICIENCY	
	TOU-PA-SOP		TOU-PA-SOP	
	Current Rate	Current Rate	Savings	
	-----	-----	-----	-----
Total kWh	176,712	129,537	47,175	
kW Input	82.4	60.4	22.0	
kWh per Acre Ft.	565	414	151	
Acre Ft. per Year	312.7	312.7		
Avg. Cost per kWh	\$0.08			
Avg. Cost per Acre Ft.	\$44.32	\$32.48	\$11.83	
Overall Plant Eff. (%)	52.8	72.0		
	-----	-----	-----	
TOTAL ANNUAL COST	\$13,859.52	\$10,159.62	\$3,699.91	

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any additional questions regarding this report, please contact RICK KOCH at (805) 654-7312.


DAN L. JOHNSON
Manager
Hydraulic Services



SOUTHERN CALIFORNIA
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CONFIDENTIAL/PROPRIETARY INFORMATION

March 20, 2003

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
P. O. BOX 3396
QUARTZ HILL, CA 93586-0396

SUBJECT: HYDRAULIC TEST RESULTS - WELL #4
5130 W AVE K-8
CUST #: 0-003-0391 SERV ACCT #: 003-0019-82
DATE OF TEST: March 17, 2003

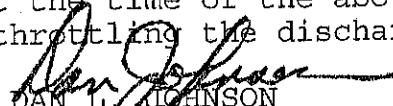
In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact GARY PARDUE at (661)726-5662.

EQUIPMENT

PUMP: PEERL NO: 1359093
MOTOR: HS NO: 854609 100 HP
METER: 3412-6055
HYDRAULIC TEST REFERENCE NUMBER: 2684

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	18.1	30.5	40.5
Standing Water Level, Ft.	230.8	230.8	230.8
Drawdown, Ft.	30.0	28.0	25.0
Discharge Head, Ft.	41.8	70.5	93.6
Pumping Water Level, Ft.	260.8	258.8	255.8
Total Head, Ft.	302.6	329.3	349.4
Capacity, GPM	865.0	787.0	714.0
GPM per Ft. Drawdown	28.8	28.1	28.6
Acre Ft. Pumped in 24 Hrs.	3.823	3.479	3.156
kW Input to Motor	82.4	80.8	77.6
HP Input to Motor	110.5	108.4	104.1
Motor Load (%)	100.6	98.6	94.7
Measured Speed of Pump, RPM	1,788		
kWh per Acre Ft.	517	558	590
Overall Plant Efficiency (%)	59.8	60.4	60.5
Customer Meter, GPM	940.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.


DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

March 20, 2003

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
P. O. BOX 3396
QUARTZ HILL, CA 93586-0396

SUBJECT: PUMPING COST ANALYSIS
HP: 100 - PLANT: WELL #4
CUST #: 0-003-0391 SERV ACCT #: 003-0019-82
HYDRAULIC TEST REFERENCE NUMBER: 2684

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed March 17, 2003 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 72.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY		IMPROVED PLANT EFFICIENCY	
	TOU-PA-SOP		TOU-PA-SOP	
	Current Rate	Current Rate	Savings	
Total kWh	299,100	248,495	50,605	
kW Input	82.4	68.5	13.9	
kWh per Acre Ft.	517	430	88	
Acre Ft. per Year	578.1	578.1		
Avg. Cost per kWh	\$0.09			
Avg. Cost per Acre Ft.	\$44.07	\$36.62	\$7.46	
Overall Plant Eff. (%)	59.8	72.0		
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TOTAL ANNUAL COST	\$25,479.94	\$21,168.97	\$4,310.97	

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact GARY FARDUE at (661) 726-5662.

DAN E. JOHNSON
Manager
Hydraulic Services



SOUTHERN CALIFORNIA
EDISON

An EDISON INTERNATIONALSM Company

CONFIDENTIAL/PROPRIETARY INFORMATION

October 25, 2001

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
P. O. BOX 3396
QUARTZ HILL, CA 93586-0396

SUBJECT: HYDRAULIC TEST RESULTS - WELL #4
5130 W AVE K-8
CUST #: 0-003-0391 SERV ACCT #: 003-0019-82
DATE OF TEST: October 23, 2001

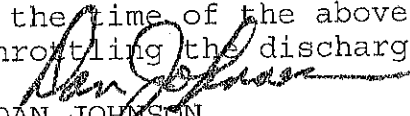
In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact GARY PARDUE at (661)726-5662.

EQUIPMENT

PUMP: PEERL NO: 1359093
MOTOR: US NO: 854609 100 HP
METER: 732K-2571
HYDRAULIC TEST REFERENCE NUMBER: 2684

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	18.6	29.6	41.5
Standing Water Level, Ft.	247.0	247.0	247.0
Drawdown, Ft.	42.3	40.1	33.8
Discharge Head, Ft.	43.0	68.4	95.9
Pumping Water Level, Ft.	289.3	287.1	280.8
Total Head, Ft.	332.3	355.5	376.7
Capacity, GPM	955.0	858.0	725.0
GPM per Ft. Drawdown	22.6	21.4	21.4
Acre Ft. Pumped in 24 Hrs.	4.221	3.792	3.205
kW Input to Motor	82.5	79.2	74.2
HP Input to Motor	110.6	106.2	99.5
Motor Load (%)	100.7	96.6	90.5
Measured Speed of Pump, RPM	1786		
kWh per Acre Ft.	469	501	556
Overall Plant Efficiency (%)	72.4	72.5	69.3
Customer Meter, GPM	917.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.


DAN JOHNSON
Manager
Hydraulic Services



SOUTHERN CALIFORNIA
EDISON

an EDISON INTERNATIONALSM Company

CONFIDENTIAL/PROPRIETARY INFORMATION

October 25, 2001

ATTN: PHIL SHOTT
PALM RANCH IRRIGATION DISTRICT
P. O. BOX 3396
QUARTZ HILL, CA 93586-0396

SUBJECT: PUMPING COST ANALYSIS
HP: 100 - PLANT: WELL #4
CUST #: 0-003-0391 SERV ACCT #: 003-0019-82
HYDRAULIC TEST REFERENCE NUMBER: 2684

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed October 23, 2001 and billing history for the past 12 months.

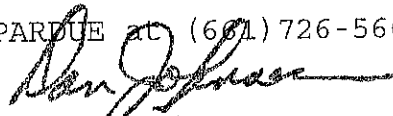
EXISTING PLANT EFFICIENCY
TOU-PA-SOP
Current Rate

Total kWh	215424
kW Input	82.5
kWh per Acre Ft.	469
Acre Ft. per Year	459.2
Avg. Cost per kWh	\$0.07
Avg. Cost per Acre Ft.	\$32.85
Overall Plant Eff. (%)	72.4
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TOTAL ANNUAL COST	\$15,085.93

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pump efficiency will be continued.

If you have any questions, please contact GARY PARQUE at (661) 726-5662.


DAN JOHNSON
Manager
Hydraulic Services