



November 9, 2012

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

HYDRAULIC TEST RESULTS, Plant: WELL #5
 Location: 43151 50TH ST WEST HP: 75
 Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
 Meter: 349M-1080 Pump Ref. #: 2689

In accordance with your request, an energy efficiency test was performed on your turbine well pump on November 7, 2012. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

Equipment

Pump: N/A No: NO PLATE
 Motor: US No: 1114110

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	7.0	39.6	59.1
Standing Water Level, Feet	251.2	251.2	251.2
Drawdown, Feet	55.0	45.2	36.0
Discharge Head, Feet	16.2	91.5	136.5
Pumping Water Level, Feet	306.2	296.4	287.2
Total Head, Feet	322.4	387.9	423.7
Capacity, GPM	533	425	340
GPM per Foot Drawdown	9.7	9.4	9.4
Acre Feet Pumped in 24 Hours	2.356	1.879	1.503
kW Input to Motor	60.1	57.8	54.1
HP Input to Motor	80.6	77.5	72.5
Motor Load (%)	98.6	94.9	88.8
Measured Speed of Pump, RPM	1,790		
Customer Meter, GPM	556		
kWh per Acre Foot	612	739	864
Overall Plant Efficiency (%)	53.8	53.7	50.1

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.

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 #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

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 7, 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 53.8% to 69.0%.
2. This can save you up to 46,931 kWh and \$4,214.39 annually.
3. These kWh savings translate to a 20-ton decrease in CO₂ emissions.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	213,636	166,705	46,931
kW Input	60.1	46.9	13.2
kWh per Acre Foot	612	478	135
Acre Feet per Year	348.9		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$54.99	\$42.91	\$12.08
Overall Plant Efficiency (%)	53.8	69.0	
Total Annual Cost	\$19,184.51	\$14,970.13	\$4,214.39

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 #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref.#: 2689

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 7, 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	213,636	166,705	46,931	\$4,223.77
kW Input	60.1	46.9	13.2	
kW on-peak activity factor *			8.6	\$858.17
Acre Feet per Year	348.9			
kWh per Acre Foot	612	478	135	
Average Cost per Acre Foot	\$54.99	\$42.91	\$12.08	
Overall Plant Efficiency (%)	53.8	69.0		
Annual Total	\$19,184.51	\$14,970.13	\$4,214.39	\$5,081.94

(*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 13.2 kW, and the savings used for incentive calculations is 65% of 13.2, or 8.6 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 53.8% to 69.0%.
- **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 46,931 kWh annually (which translates to a 20-ton decrease in CO₂ emissions). This may result in **energy cost savings of \$4,214.39.**
- **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 \$5,081.94**, 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



SOUTHERN CALIFORNIA
EDISON[®]

EDISON INTERNATIONAL[®] Company

Confidential/Proprietary Information

October 22, 2010

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

HYDRAULIC TEST RESULTS, Plant: WELL #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

In accordance with your request, an energy efficiency test was performed on your turbine well pump on October 20, 2010. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

Equipment

Pump: N/A No: NO PLATE
Motor: US No: 1114110

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	7.6	37.6	55.5
Standing Water Level, Feet	253.6	253.6	253.6
Drawdown, Feet	55.3	52.6	46.0
Discharge Head, Feet	17.6	86.9	128.2
Pumping Water Level, Feet	308.9	306.2	299.6
Total Head, Feet	326.5	393.1	427.8
Capacity, GPM	547	443	363
GPM per Foot Drawdown	9.9	8.4	7.9
Acre Feet Pumped in 24 Hours	2.418	1.958	1.604
kW Input to Motor	60.9	58.9	55.1
HP Input to Motor	81.7	79.0	73.9
Motor Load (%)	100.0	96.7	90.4
Measured Speed of Pump, RPM	1,789		
Customer Meter, GPM	570		
kWh per Acre Foot	605	722	824
Overall Plant Efficiency (%)	55.2	55.7	53.1

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.

RUSS JOHNSON
Manager
Hydraulic Services



Confidential/Proprietary Information

October 22, 2010

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

PUMPING COST ANALYSIS, Plant: WELL #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

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 20, 2010, 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 55.2% to 69.0%.
2. This can save you up to 40,829 kWh and \$4,106.19 annually.
3. These kWh savings translate to a 18-ton decrease in CO₂ emissions.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	204,504	163,675	40,829
kW Input	60.9	48.7	12.2
kWh per Acre Foot	605	484	121
Acre Feet per Year	338.2		
Average Cost per kWh	\$0.10		
Average Cost per Acre Foot	\$60.81	\$48.67	\$12.14
Overall Plant Efficiency (%)	55.2	69.0	
Total Annual Cost	\$20,566.97	\$16,460.78	\$4,106.19

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!**

October 22, 2010

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

PUMPING COST ANALYSIS, Plant: WELL #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

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 October 20, 2010. 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	204,504	163,675	40,829	\$3,674.62
kW Input	60.9	48.7	12.2	
kW on-peak activity factor *			7.9	\$790.31
Acre Feet per Year	338.2			
kWh per Acre Foot	605	484	121	
Average Cost per Acre Foot	\$60.81	\$48.67	\$12.14	
Overall Plant Efficiency (%)	55.2	69.0		
Annual Total	\$20,566.97	\$16,460.78	\$4,106.19	\$4,464.94

(*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 12.2 kW, and the savings used for incentive calculations is 65% of 12.2, or 7.9 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 55.2% to 69.0%.
- **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 40,829 kWh annually (which translates to a 18-ton decrease in CO₂ emissions). This may result in energy cost savings of \$4,106.19.
- **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 \$4,464.94, capped at 50% of your project cost. (See contract for details.)

You may also be eligible for a **Premium Efficiency Motor Incentive.** 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



November 21, 2008

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

HYDRAULIC TEST RESULTS, Plant: WELL #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

In accordance with your request, a test was made on your turbine well pump on November 17, 2008. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

Equipment

Pump: N/A No: NO PLATE
Motor: US No: 1114110

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	7.5	25.8	40.5
Standing Water Level, Feet	278.5	278.5	278.5
Drawdown, Feet	65.9	61.7	56.1
Discharge Head, Feet	17.3	59.6	93.6
Pumping Water Level, Feet	344.4	340.2	334.6
Total Head, Feet	361.7	399.8	428.2
Capacity, GPM	528	467	420
GPM per Foot Drawdown	8.0	7.6	7.5
Acre Feet Pumped in 24 Hours	2.334	2.064	1.856
kW Input to Motor	61.6	60.2	58.1
HP Input to Motor	82.6	80.7	77.9
Motor Load (%)	101.1	98.8	95.4
Measured Speed of Pump, RPM	1,789		
kWh per Acre Foot	634	700	751
Overall Plant Efficiency (%)	58.4	58.4	58.3
Customer Meter, GPM	532		

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, it was noted that the well was discharging an excessive amount of air. This condition may be a result of the lower than normal pumping level.

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 #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

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 17, 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 58.4% to 69.0%.
2. This can save you up to 29,232 kWh and \$2,803.08 annually.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	189,960	160,728	29,232
kW Input	61.6	52.1	9.5
kWh per Acre Foot	634	536	98
Acre Feet per Year	299.8		
Average Cost per kWh	\$0.10		
Average Cost per Acre Foot	\$60.76	\$51.41	\$9.35
Overall Plant Efficiency (%)	58.4	69.0	
Total Annual Cost	\$18,215.26	\$15,412.18	\$2,803.08

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 #5
Location: 43151 50TH ST WEST HP: 75
Cust #: 0-003-0391 Serv. Acct. #: 001-6323-01
Meter: 349M-1080 Pump Ref. #: 2689

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 17, 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	189,960	160,728	29,232
kW Input	61.6	52.1	9.5
kWh per Acre Foot	634	536	98
Acre Feet per Year	299.8		
Average Cost per kWh	\$0.10		
Average Cost per Acre Foot	\$60.76	\$51.41	\$9.35
Overall Plant Efficiency (%)	58.4	69.0	
<hr/> Total Annual Cost	<hr/> \$18,215.26	<hr/> \$15,412.18	<hr/> \$2,803.08
Cash Incentive			\$2,338.58

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 58.4% 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 29,232 kWh annually, resulting in energy cost savings of \$2,803.08.
- **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 \$2,338.58, 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 93586

SUBJECT: HYDRAULIC TEST RESULTS - [REDACTED]
43151 50TH ST WEST
CUST #: 0-003-0391 - SERV ACCT #: 001-6323-01
DATE OF TEST: November 30, 2005

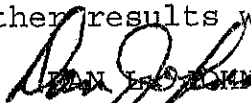
In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

EQUIPMENT

PUMP: NO: NO PLATE
MOTOR: US NO: 1114110 75 HP
METER: 349M-1080
HYDRAULIC TEST REFERENCE NUMBER: 2689

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	6.4	36.0	55.0
Standing Water Level, Ft.	225.9	225.9	225.9
Drawdown, Ft.	69.5	61.7	56.3
Discharge Head, Ft.	14.8	83.2	127.1
Pumping Water Level, Ft.	295.4	287.6	282.2
Total Head, Ft.	310.2	370.8	409.3
Capacity, GPM	594.0	517.0	462.0
GPM per Ft. Drawdown	8.5	8.4	8.2
Acre Ft. Pumped in 24 Hrs.	2.625	2.285	2.042
kW Input to Motor	61.5	61.1	59.6
HP Input to Motor	82.5	81.9	79.9
Motor Load (%)	99.0	98.3	95.9
Measured Speed of Pump, RPM	1,790		
kWh per Acre Ft.	562	642	701
Overall Plant Efficiency (%)	[REDACTED]	59.1	59.7
Customer Meter, GPM	609.0		

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.


PHIL SHOTT
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: 75 - PLANT: WELL #5
 CUST #: 0-003-0391 - SERV ACCT #: 001-6323-01
 HYDRAULIC TEST REFERENCE NUMBER: 2689

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 30, 2005 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved from 56.4% to 68.0%. These improvements can save you up to 24,401 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	Savings
	TOU-PA-SOP Current Rate	TOU-PA-SOP Current Rate	
Total kWh	143,280	118,879	24,401
kW Input	61.5	51.0	10.5
kWh per Acre Ft.	562	467	96
Acre Ft. per Year	254.8	254.8	
Avg. Cost per kWh	\$0.08		
Avg. Cost per Acre Ft.	\$44.36	\$36.81	\$7.56
Overall Plant Eff. (%)	56.4	68.0	
TOTAL ANNUAL COST	\$11,304.79	\$9,379.57	\$1,925.22

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 Johnson
 DAN JOHNSON
 Manager
 Hydraulic Services



An EDISON INTERNATIONAL® Company

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 #5
43151 50TH ST WEST
CUST #: 0-003-0391 - SERV ACCT #: 001-6323-01
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: NO: NO PLATE
MOTOR: US NO: 1114110 75 HP
METER: PO726K-1811
HYDRAULIC TEST REFERENCE NUMBER: 2689

Table with 5 columns: TEST RESULTS, TEST 1, TEST 2, TEST 3. Rows include Discharge Pressure, Standing Water Level, Drawdown, Discharge Head, Pumping Water Level, Total Head, Capacity, 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 (%), and 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: 75 - PLANT: WELL #5
 CUST #: 0-003-0391 - SERV ACCT #: 001-6323-01
 HYDRAULIC TEST REFERENCE NUMBER: 2689

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 56.4% to 68.0%. These improvements can save you up to 17,311 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	101,112		83,801		17,311
kW Input	62.3		51.6		10.7
kWh per Acre Ft.	587		487		101
Acre Ft. per Year	172.1		172.1		
Avg. Cost per kWh	\$0.09				
Avg. Cost per Acre Ft.	\$53.67		\$44.48		\$9.19
Overall Plant Eff. (%)	56.4		68.0		
TOTAL ANNUAL COST	\$9,238.60		\$7,656.86		\$1,581.75

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 Johnson
 DAN E. 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: 75 - PLANT: WELL #5
 CUST #: 0-003-0391 - SERV ACCT #: 001-6323-01
 HYDRAULIC TEST REFERENCE NUMBER: 2689

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 56.4% to 68.0%. These improvements can save you up to 17,311 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	Savings
	TOU-PA-SOP Current Rate	TOU-PA-SOP Current Rate	
Total kWh	101,112	83,801	17,311
kW Input	62.3	51.6	10.7
kWh per Acre Ft.	587	487	101
Acre Ft. per Year	172.1	172.1	
Avg. Cost per kWh	\$0.09		
Avg. Cost per Acre Ft.	\$53.67	\$44.48	\$9.19
Overall Plant Eff. (%)	56.4	68.0	
TOTAL ANNUAL COST	\$9,238.60	\$7,656.86	\$1,581.75

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

March 16, 2003

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

SUBJECT: PUMPING COST ANALYSIS
HP: 75 - PLANT: WELL #5
CUST #: 0-003-0391 SERV ACCT #: 001-6323-01
HYDRAULIC TEST REFERENCE NUMBER: 2689

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 11, 2003 and billing history for the past 12 months.

It is recommended and assumed that:

- 1. Overall plant efficiency can be improved to 68.0%.
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.

Table comparing Existing Plant Efficiency (TOU-PA-SOP Current Rate) and Improved Plant Efficiency (TOU-PA-SOP Current Rate) with Savings. Rows include Total kWh, kW Input, kWh per Acre Ft., Acre Ft. per Year, Avg. Cost per kWh, Avg. Cost per Acre Ft., Overall Plant Eff. (%), and TOTAL ANNUAL COST.

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 PARDUE at (561)726-5662.

Handwritten signature of Dan L. Johnson
DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

March 16, 2003

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

SUBJECT: PUMPING COST ANALYSIS
HP: 75 - PLANT: WELL #5
CUST #: 0-003-0391 SERV ACCT #: 001-6323-01
HYDRAULIC TEST REFERENCE NUMBER: 2689

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 11, 2003 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-SOP
Current Rate

Total kWh	290,280
kW Input	63.2
kWh per Acre Ft.	568
Acre Ft. per Year	510.8
Avg. Cost per kWh	\$0.09
Avg. Cost per Acre Ft.	\$49.00
Overall Plant Eff. (%)	59.3

TOTAL ANNUAL COST	\$25,029.39

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.

A handwritten signature in cursive script, appearing to read "Dan Johnson".

DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

March 16, 2003

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

SUBJECT: HYDRAULIC TEST RESULTS - WELL #5
43151 50TH ST WEST
CUST #: 0-003-0391 SERV ACCT #: 001-6323-01
DATE OF TEST: March 11, 2003

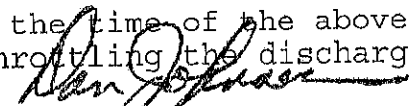
In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact GARY PARDUE at (661)726-5662.

EQUIPMENT

PUMP: NO: NO PLATE
MOTOR: US NO: 1114110 75 HP
METER: PO726K-1811
HYDRAULIC TEST REFERENCE NUMBER: 2689

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	9.8	34.5	56.7
Standing Water Level, Ft.	239.8	239.8	239.8
Drawdown, Ft.	66.9	61.9	53.0
Discharge Head, Ft.	22.6	79.7	131.0
Pumping Water Level, Ft.	306.7	301.7	292.8
Total Head, Ft.	329.3	381.4	423.8
Capacity, GPM	604.0	552.0	500.0
GPM per Ft. Drawdown	9.0	8.9	9.4
Acre Ft. Pumped in 24 Hrs.	2.670	2.440	2.210
kW Input to Motor	63.2	62.2	60.3
HP Input to Motor	84.8	83.4	80.9
Motor Load (%)	101.7	100.1	97.0
Measured Speed of Pump, RPM	1,791		
kWh per Acre Ft.	568	612	655
Overall Plant Efficiency (%)	59.3	63.7	66.2
Customer Meter, GPM	626.0		

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



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: 75 - PLANT: WELL #5
CUST #: 0-003-0391 SERV ACCT #: 001-6323-01
HYDRAULIC TEST REFERENCE NUMBER: 2689

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.

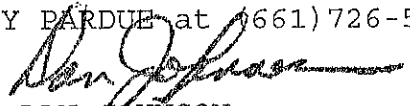
It is recommended and assumed that:

1. Overall plant efficiency can be improved to 68.0%.
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	302604	266898	35706	
kW Input	63.3	55.8	7.5	
kWh per Acre Ft.	593	523	70	
Acre Ft. per Year	510.5	510.5		
Avg. Cost per kWh	\$0.07			
Avg. Cost per Acre Ft.	\$42.34	\$37.34	\$5.00	
Overall Plant Eff. (%)	60.0	68.0		
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TOTAL ANNUAL COST	\$21,616.52	\$19,065.88	\$2,550.64	

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 PARDUE at (661)726-5662.


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: HYDRAULIC TEST RESULTS - WELL #5
43151 50TH ST WEST
CUST #: 0-003-0391 SERV ACCT #: 001-6323-01
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: NO: NO PLATE
MOTOR: US NO: 1114110 75 HP
METER: PO726K-1811
HYDRAULIC TEST REFERENCE NUMBER: 2689

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	7.2	38.7	57.0
Standing Water Level, Ft.	256.4	256.4	256.4
Drawdown, Ft.	74.6	64.2	55.9
Discharge Head, Ft.	16.6	89.4	131.7
Pumping Water Level, Ft.	331.0	320.6	312.3
Total Head, Ft.	347.6	410.0	444.0
Capacity, GPM	580.0	462.0	373.0
GPM per Ft. Drawdown	7.8	7.2	6.7
Acre Ft. Pumped in 24 Hrs.	2.564	2.042	1.649
kW Input to Motor	63.3	61.4	58.6
HP Input to Motor	84.9	82.3	78.6
Motor Load (%)	101.9	98.8	94.3
Measured Speed of Pump, RPM	1789		
kWh per Acre Ft.	593	722	853
Overall Plant Efficiency (%)	60.0	58.1	53.2
Customer Meter, GPM	609.0		

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



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: 75 - PLANT: WELL #5
CUST #: 0-003-0391 SERV ACCT #: 001-6323-01
HYDRAULIC TEST REFERENCE NUMBER: 2689

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.

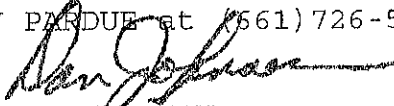
EXISTING PLANT EFFICIENCY
TOU-PA-SOP
Current Rate

Total kWh	302604
kW Input	63.3
kWh per Acre Ft.	593
Acre Ft. per Year	510.5
Avg. Cost per kWh	\$0.07
Avg. Cost per Acre Ft.	\$42.34
Overall Plant Eff. (%)	60.0
-----	-----
TOTAL ANNUAL COST	\$21,616.52

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 PARDUE at (561)726-5662.


DAN JOHNSON
Manager
Hydraulic Services