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7 **Attorneys for Cross-defendants,**  
8 LITTLE ROCK SAND AND GRAVEL, INC.,  
9 a California Corporation;  
10 THE GEORGE AND CHARLENE LANE FAMILY TRUST;  
11 THE FRANK AND YVONNE LANE 1993 FAMILY  
12 TRUST, DATED MARCH 5, 1993, AS RESTATED  
13 JULY 20, 2000; MONTE VISTA BUILDING SITES, INC.,  
14 a California Corporation; A.V. MATERIALS, INC.,  
15 a California Corporation; A.C. WARNACK,  
16 as Trustee of the A.C. WARNACK TRUST;  
17 HOLLIDAY ROCK CO., INC.,  
18 successor in interest to  
19 LITTLEROCK AGGREGATE CO., INC. dba  
20 ANTELOPE VALLEY AGGREGATE, INC.;  
21 LITTLEROCK AGGREGATE CO., INC. dba  
22 ANTELOPE VALLEY AGGREGATE, INC.

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24  
25 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**

26 **FOR THE COUNTY OF LOS ANGELES**

27 ANTELOPE VALLEY GROUNDWATER CASES )	Judicial Council Coordination No.
28 )	4408
29 Included Actions: )	
30 )	For filing purposes only:
31 Los Angeles County Waterworks )	Santa Clara County Case No.
32 District No. 40 v. Diamond )	1-05-CV-049053
33 Farming Co. Superior Court of )	
34 California County of Los Angeles, )	[Assigned to the Honorable Jack
35 Case No. BC 325 201 )	Komar]
36 )	
37 Los Angeles County Waterworks 2 )	DECLARATION OF PETER H. POWWELS
38 District No. 40 v. Diamong )	IN LIEU OF DEPOSITION TESTIMONY
39 Farming Co. Superior court of )	FOR PHASE 4 TRIAL
40 Califronia, County of Kern, Case )	
41 No. S-1500-CV-254-348 )	
42 )	
43 )	
44 )	

1 Wm. Bolthouse Farms, Inc. V. City )  
of Lancaster Diamong Farming Co. )  
2 V. City of Lancaster Diamond )  
Farming Co. V. Palmdale Water )  
3 Dist. Superior Court of )  
California, County of Riverside, )  
4 consolidated actions, Case No. )  
RIC 353 840, RIC 344 436, RIC 344 )  
5 668 )

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8 **DECLARATION**

9 I, PETER H. POUWELS, declare:

10 1. I am a representative of Holliday Rock Co., Inc., a party to this action. In lieu of  
11 deposition testimony for the Phase 4 trial, I am providing this declaration. I was previously an  
12 area manager for Holliday Rock Co., Inc., which included overseeing its High Desert area  
13 aggregate plants. I have over thirty years of experience in the aggregate processing and ready  
14 mix concrete industries. I am familiar with the manner of operation of Holliday Rock Co., Inc.'s  
15 plants that are operated on the properties Holiday Rock Co., Inc. leases from Littlerock  
16 Aggregate Co., Inc. dba Antelope Valley Aggregate, Inc. and Littlerock Sand and Gravel, Inc. in  
17 the Littlerock area of the Antelope Valley. This declaration applies only to the categories I have  
18 filled in. The items left blank or crossed out do not apply to me. I have personal knowledge of  
each fact herein and would testify competently thereto under oath.

19 **Property Ownership and Parcel Size**

20 2. \_\_\_\_\_ owns property that overlies the Antelope Valley Area of  
21 Adjudication as decided by this Court. The land is in \_\_\_\_\_ County and is  
22 identified by the following APN/APNs:  
23 \_\_\_\_\_  
24 \_\_\_\_\_

[If additional room is needed, please identify the APN/APNs in Exhibit A.] A true and correct

1 copy of Exhibit A is attached hereto and incorporated herein.

2 3. \_\_\_\_\_ claims groundwater rights only as to the properties listed in  
3 Paragraph 2 and Exhibit A.

4 4. For each APN/APNs identified above, the total acreage by parcel is as follows:

5 \_\_\_\_\_  
6 \_\_\_\_\_

7 [If additional room is needed, please identify the APN/APNs and parcel size in Exhibit B.] A  
8 true and correct copy of Exhibit B is attached hereto and incorporated herein.

9 5. For each APN/APNs identified above \_\_\_\_\_ owned the property during  
10 the following timer period:

11 \_\_\_\_\_

12 6. The following are all individuals/entities appearing on the title for the above identified  
13 APN/APNS from Jan 1, 2000 to the present:

14 \_\_\_\_\_

15 7. For each individual/entity identified in paragraph 6 that individual/entity appeared on the  
16 title during the following time :

17 \_\_\_\_\_

18 8. \_\_\_\_\_ (declarant or party affiliated with declarant) leases property that  
19 \_\_\_\_\_ own and that overlies the Antelope Valley Area of Adjudication as  
20 decided by this court and identified by the following APNS:

21 \_\_\_\_\_

22 9. The total acreage by parcel is:

23 \_\_\_\_\_

24 10. The property is currently leased to:

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11. The property was leased on the following dates:

\_\_\_\_\_

12. The lease provides that \_\_\_\_\_ may claim groundwater rights from the use of water on the leased property. Attached to this declaration is a true and correct copy of the lease. [If additional room is needed, please list APN/APNs, acreage by APN, Lessee by APN and dates for each Lessee by APN for each parcel in Exhibit C.] A true and correct copy of Exhibit C is attached hereto and incorporated herein.

13. \_\_\_\_\_ leases property from \_\_\_\_\_ which overlies the Antelope Valley Area of Adjudication as decided by this court and is identified by the following APNS:

\_\_\_\_\_

14. The total acreage by parcel is:

\_\_\_\_\_

15. The Lease provides that \_\_\_\_\_ may claim groundwater rights from use of water on leased property. Attached to this declaration is a true and correct copy of the lease. [If additional room is needed, please attach APN/APNs, Name of the Lessor and acreage by APN for each parcel list in Exhibit D to this declaration.] A true and correct copy of Exhibit D is attached hereto and incorporated herein.

16. \_\_\_\_\_ claims groundwater rights only as to the leasehold interests listed in Paragraph 15 and Exhibit D.

17. \_\_\_\_\_ claims groundwater rights only as to the properties listed in Paragraph 2 and Exhibit A and as to the leasehold interests listed in Paragraph 8 and Exhibit C.

18. To the best of my knowledge, only \_\_\_\_\_ claims groundwater rights as to the leased parcel(s) identified in paragraph 15 and Exhibit D.

1                    **Water Meter Records**

2 19. On information and belief, \_\_\_\_\_ measures the  
3 groundwater production on the above referenced properties by water meters. Exhibit E contains  
4 the records for these water meters for the following years: 2008 through 2012. A true and  
5 correct copy of Exhibit E is attached hereto and incorporated herein.

6 20. Exhibit F sets forth the total yearly production amounts by metered water well on the  
7 above referenced properties for the years 2000-2004, 2011, and 2012. A true and correct copy of  
8 Exhibit F is attached hereto and incorporated herein.

9                    **State Water Project Purchases**

10 21. \_\_\_\_\_ purchases State Water Project water from a State Water  
11 Contractor for use by \_\_\_\_\_ on the properties referenced above. Exhibit G  
12 contains true and correct copies of the invoices for delivery of State Water Project Water to the  
13 properties referenced above.

14 22. Exhibit H sets forth the total yearly State Water Project water deliveries to the properties  
15 referenced above for the years 2000-2004, 2011, and 2012. A true and correct copy of Exhibit H  
16 is attached hereto and incorporated herein.

17                    **Pump Tests/ Electric Records**

18 23. In order to calculate groundwater pumped and used on the properties referenced above,  
19 \_\_\_\_\_ relied on pump tests and electric records. Exhibit I contains true and correct  
20 copies of the pump test records and electrical records for wells on the properties referenced  
21 above. The electric records attached to this declaration as Exhibit I do not include electric use on  
22 the properties referenced above for anything other than pumping groundwater.

23 24. Exhibit J sets forth the amount of total yearly groundwater that \_\_\_\_\_  
24 estimates was pumped and used on the properties referenced above for the years 2000-2004,  
2011, and 2012 based on the attached pump test records and electrical records for the wells on  
the properties referenced above. A true and correct copy of Exhibit J is attached hereto and  
incorporated herein.

1 25. Pump tests were performed on the following dates:

2 \_\_\_\_\_

3 26. \_\_\_\_\_ is not producing pump test records for the following  
4 dates \_\_\_\_\_ because:

5 \_\_\_\_\_

6 27. I am not aware of any other pump tests having been performed on the properties  
7 referenced above.

8 **Pump Tests/Diesel Records**

9 28. In order to calculate groundwater pumped and used on the properties referenced above,  
10 \_\_\_\_\_ relied on pump tests and diesel fuel records. Exhibit K contains  
11 true and correct copies of the records pertaining to pump tests and diesel fuel purchases for the  
12 properties referenced above. The diesel fuel records attached to this declaration as Exhibit K do  
13 not include diesel fuel used on the properties referenced above for anything other than pumping  
14 groundwater.

15 29. Exhibit L sets forth the amounts of total yearly groundwater pumped and used on the  
16 properties referenced above for the years 2000-2004, 2011, and 2012. A true and correct copy of  
17 Exhibit L is attached hereto and incorporated herein.

18 30. Pump tests were performed on the following dates:

19 \_\_\_\_\_

20 31. \_\_\_\_\_ is not producing pump test records for the following  
21 dates \_\_\_\_\_ because:

22 \_\_\_\_\_

23 32. I am not aware of any other pump tests having been performed on the properties  
24 referenced above.

**Crop Duties and Irrigated Acres**

33. In order to calculate water use on the properties referenced above, The George and  
Charlene Lane Family Trust relies on the amount of acres in irrigation on the properties

1 referenced above multiplied by the crop duty identified in the Summary Expert Report,  
2 Appendix D-3: Table 4, a true and correct copy of which is attached to this declaration as Exhibit  
3 M.

4 34. The total amount of irrigated acres and type of crops on the properties referenced above  
5 by APN for the years 2000-2004, 2011 and 2012 are described in Exhibit N. A true and correct  
6 copy of Exhibit N is attached hereto and incorporated herein.

7 **Other Sources of Water**

8 35. On the properties referenced above, \_\_\_\_\_ received water from sources  
9 other than groundwater pumped within the Basin or State Water Project Water. Exhibit O sets  
10 forth the source of the water and the amounts received for the years 2000-2004, 2011, and 2012.

11 **Use of Water** (Complete for each APN. If water for used for multiple purposes, identify  
12 the amount of water for each use.)

13 36. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2000.

14 The water was used for the following:

15 \_\_\_\_\_  
16 [State the crop type and number of acres of that crop. If not used for irrigation, describe the use.  
17 In lieu of answering this question, a crop map may be attached that shows the date, crop type,  
18 irrigated acreage and parcels.]

19 37. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2001.

20 The water was used for the following:

21 \_\_\_\_\_  
22 [State the crop type and number of acres of that crop. If not used for irrigation, describe the use.  
23 In lieu of answering this question, a crop map may be attached that shows the date, crop type,  
24 irrigated acreage and parcels.]

38. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2002. The  
water was used for the following:

\_\_\_\_\_

1 39. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2003. The  
2 water was used for the following:

3 \_\_\_\_\_.

4 [State the crop type and number of acres of that crop. If not used for irrigation, describe the use.  
5 In lieu of answering this question, a crop map may be attached that shows the date, crop type,  
6 irrigated acreage and parcels.]

7 40. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2004. The  
8 water was used for the following:

9 \_\_\_\_\_.

10 [State the crop type and number of acres of that crop. If not used for irrigation, describe the use.  
11 In lieu of answering this question, a crop map may be attached that shows the date, crop type,  
12 irrigated acreage and parcels.]

13 41. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2011. The  
14 water was used for the following:

15 \_\_\_\_\_.

16 [State the crop type and number of acres of that crop. If not used for irrigation, describe the use.  
17 In lieu of answering this question, a crop map may be attached that shows the date, crop type,  
18 irrigated acreage and parcels.]

19 42. \_\_\_\_\_ used \_\_\_\_\_ acre feet of water on APN# \_\_\_\_\_ in 2012. The  
20 water was used for the following:

21 \_\_\_\_\_.

22 [State the crop type and number of acres of that crop. If not used for irrigation, describe the use.  
23 In lieu of answering this question, a crop map may be attached that shows the date, crop type,  
24 irrigated acreage and parcels.]

43. Other than what is declared hereinabove, \_\_\_\_\_ did not produce or use  
water within the Antelope Valley Area of Adjudication for 2000-2004, 2011, and 2012.



1 44. Attached hereto as Exhibit A are true and correct copies of Productivity – Rock Plant  
2 Summary records for the years 2008 through 2012. The designation “Antelope Valley RP” on  
3 the Productivity – Rock Plant Summary records relates to data collected and maintained for the  
4 aggregate facility that is operated by Holliday Rock, Inc. on the properties owned by Littlerock  
5 Aggregate Co., Inc. dba Antelope Valley Aggregate, Inc. that are discussed herein.

6 45. The designation “Palmdale RP” on the Productivity – Rock Plant Summary records  
7 relates to data collected and maintained for the aggregate facility that is operated by Holliday  
8 Rock, Inc. on the properties owned by Littlerock Sand and Gravel, Inc. that are discussed herein.

9 46. I used the attached Productivity – Rock Plant Summary records in calculating the amount  
10 of groundwater used at the parcels Holliday Rock Co., Inc. leases from Littlerock Aggregate Co.,  
11 Inc. dba Antelope Valley Aggregate, Inc. and the Littlerock Sand and Gravel, Inc. facility.

12 47. Attached hereto collectively as Exhibit E are true and correct copies of pump tests  
13 performed by Southern California Edison Company on January 17, 2013. One of the pump tests  
14 relates to a test on the pump in the pond at the Holliday Rock facility leased from Littlerock Sand  
15 and Gravel, Inc. The other pump test relates to the pump in the pond at the Holliday Rock  
16 facility leased from Littlerock Aggregate Co., Inc. dba Antelope Valley Aggregate, Inc. The  
17 pond pump at the Littlerock Sand and Gravel, Inc. location is referenced as the “Plmdle Sup  
18 PMP” on its pond pump test. The pond pump at the Littlerock Aggregate Co., Inc. dba Antelope  
19 Valley Aggregate, Inc. facility is referenced as the “AV Supply Pump” on its pond pump test.

20 48. The two sites are operated independently and water pumped from the two sites is not  
21 commingled. There is a freshwater pond at each facility. The pumps are turbine booster pumps  
22 that float in their respective ponds on pontoons (“pond pumps”) at each site. Groundwater is  
23 pumped from the groundwater wells at the respective sites into each site’s respective freshwater  
24 pond. The groundwater is pumped into the ponds from the groundwater wells rather than  
directly to the rock processing plants given that the rock processing plants require more water  
during operation than the capacity of the respective groundwater well pumps. Each pond pump  
is operating at all times that its correlating rock plant is in operation. The water from each pond

1 is pumped directly to its respective rock processing plant by means of its pond pump. The pond  
2 pumps do not operate at variable speed. They are either on or they are off.

3 49. Attached hereto as Exhibit G is a true and correct copy of a further explanation regarding  
4 the operation of the rock plant on the property that Holliday Rock Co., Inc. leases from  
5 Littlerock Sand and Gravel, Inc., along with calculations regarding water usage from 2000-2004  
6 and 2011-2012.

7 50. Attached hereto as Exhibit H is a true and correct copy of a further explanation regarding  
8 the operation of the rock plant on the property that Holliday Rock Co., Inc. leases from  
9 Littlerock Aggregate Co., Inc. dba Antelope Valley Aggregate, Inc., along with calculations  
10 regarding water usage from 2000-2004 and 2011-2012.

11 I declare under penalty of perjury under the laws of the State of California that the  
12 foregoing is true and correct. Executed this 31<sup>st</sup> day of January 2013, at TUJUNGA,  
California.

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15 PETER H. POWELS  
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EXHIBIT "A"

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# Productivity- Rock Plant Summary

Date Range Selected 1/1/2008 To 12/31/2008

Hours Scheduled      Hours Ran      Hours Down      Percent Up      Tons Produced      TPH

Colton RP

San Berdo RP

Antelope Valley RP

101.00      93.50      7.50      92.57%      29,950.00      320.32

Mojave RP

Mojave Wet Plant

Palmdale RP

1,909.00      1,679.50      221.50      87.98%      675,613.00      402.27

Campus RP

Dam

Portable

Foothill RP

Mountain View RP

SASG

# Productivity- Rock Plant Summary

Date Range Selected 1/1/2009 To 12/31/2009

Hours Scheduled      Hours Ran      Hours Down      Percent Up      Tons Produced      TPH

Colton RP

San Berdo RP

Antelope Valley RP

1,404.95      1,087.80      317.15      77.43%      318,017.00      292.35

Mojave RP

Mojave Wet Plant

Palmdale RP

1,932.25      1,623.00      309.25      84.00%      658,959.00      406.01

Campus RP

Foothill RP

Mountain View RP

Portable

SASG

# Productivity- Rock Plant Summary

Date Range Selected 1/1/2010 To 12/31/2010

	Hours Scheduled	Hours Ran	Hours Down	Percent Up	Tons Produced	TPH
<u>Colton RP</u>						
<u>San Berdo RP</u>						
<u>Antelope Valley RP</u>	1,367.90	1,196.05	171.85	87.44%	361,834.00	302.52
<u>Mojave RP</u>						
<u>Mojave Wet Plant</u>						
<u>Palmdale RP</u>	1,807.50	1,521.75	285.75	84.19%	620,495.00	407.75
<u>Campus RP</u>						
<u>Foothill RP</u>						
<u>Mountain View RP</u>						
<u>Portable</u>						
<u>SASG</u>						

# Productivity- Rock Plant Summary

Date Range Selected 1/1/2011 To 12/31/2011

Hours Scheduled      Hours Ran      Hours Down      Percent Up      Tons Produced      TPH

Mojave RP

Mojave Wet Plant

San Berdo RP

Antelope Valley RP

Mojave RP

Mojave Wet Plant

Palmdale RP

Campus RP

Foothill RP

Mountain View RP

SASG

659.25	633.50	25.75	96.09%	165,044.00	260.53
1,456.50	1,320.50	136.00	90.66%	501,836.00	380.03

# Productivity- Rock Plant Summary

Date Range Selected 1/1/2012 To 12/31/2012

Hours Scheduled      Hours Ran      Hours Down      Percent Up      Tons Produced      TPH

San Berdo RP

Antelope Valley RP

760.25      755.25      5.00      99.34%      226,775.00      300.26

Mojave RP

Mojave Wet Plant

Palmdale RP

1,651.75      1,627.75      24.00      98.55%      645,944.00      396.83

Campus RP

Foothill RP

Mountain View RP

SASG



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EXHIBIT "B"

<u>APN</u>	<u>Size in acres</u>

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EXHIBIT "C"

APN:	Leased to:	Acreage:	Dates of Lease:

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EXHIBIT "D"

APN:	Leased from:	Acreage:	Dates of Lease:

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EXHIBIT "E"



**Confidential/Proprietary Information**

January 18, 2013

DEAN BROWNING  
 HOLLIDAY ROCK COMPANY  
 1401 N. BENSON AVE.  
 UPLAND, CA 91786

**HYDRAULIC TEST RESULTS, Plant: AV SUPPLY PUMP**  
 Location: 7311 E AVENUE T                      HP: 100.0  
 Cust #: 0-000-0096                      Serv. Acct. #: 032-2974-30  
 Meter: PO726-3357                      Pump Ref. #: 25310

In accordance with your request, an energy efficiency test was performed on your turbine booster pump on January 17, 2013. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

**Equipment**

Pump:            L & B                      No: D20763  
 Motor:           FAIRB                    No: B-9009

<b>Results</b>	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	64.5	38.0	44.7
Discharge Head, Feet	149.0	87.8	103.3
Suction Head or Lift, Feet	1.4	1.4	1.4
Total Head, Feet	150.4	89.2	104.7
Capacity, GPM	155	1,063	835
Acre Feet Pumped in 24 Hours	.685	4.698	3.691
kW Input to Motor	32.6	41.4	36.5
HP Input to Motor	43.7	55.5	48.9
Motor Load (%)	40.3	51.2	45.1
Measured Speed of Pump, RPM	1,793		
<b>kWh per Acre Foot</b>	<b>1,142</b>	<b>212</b>	<b>237</b>
<b>Overall Plant Efficiency (%)</b>	<b>13.5</b>	<b>43.1</b>	<b>45.1</b>

The above test results indicate various operating conditions of this pump. Test #1 was performed with the plant off and the water truck filling. Test #2 is the normal operating point with the plant on and the water truck drawing water. Test #3 was performed with only the plant on.

RUSS JOHNSON  
 Manager  
 Hydraulic Services



**Confidential/Proprietary Information**

January 18, 2013

DEAN BROWNING  
 HOLLIDAY ROCK COMPANY  
 1401 N. BENSON AVE.  
 UPLAND, CA 91786

**PUMPING COST ANALYSIS,** Plant: AV SUPPLY PUMP  
 Location: 7311 E AVENUE T HP: 100.0  
 Cust #: 0-000-0096 Serv. Acct. #: 032-2974-30  
 Meter: PO726-3357 Pump Ref. #: 25310

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during Edison pump test number 2 performed on January 17, 2013, billing history for the past 12 months, and your current rate of GS-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 43.1% to 69.0%.
2. This can save you up to 36,952 kWh and \$6,360.21 annually.
3. These kWh savings translate to a 16-ton decrease in CO<sub>2</sub> emissions.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	98,556	61,604	36,952
kW Input	41.4	25.9	15.5
kWh per Acre Foot	212	132	79
Acre Feet per Year	466.0		
Average Cost per kWh	\$0.17		
Average Cost per Acre Foot	\$36.41	\$22.76	\$13.65
Overall Plant Efficiency (%)	43.1	69.0	
<b>Total Annual Cost</b>	<b>\$16,963.46</b>	<b>\$10,603.25</b>	<b>\$6,360.21</b>

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!**

January 18, 2013

DEAN BROWNING  
HOLLIDAY ROCK COMPANY  
1401 N. BENSON AVE.  
UPLAND, CA 91786

**PUMPING COST ANALYSIS**, Plant: AV SUPPLY PUMP  
Location: 7311 E AVENUE T HP: 100.0  
Cust #: 0-000-0096 Serv. Acct. #: 032-2974-30  
Meter: PO726-3357 Pump Ref. #: 25310

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 January 17, 2013. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of test number 2, 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	98,556	61,604	36,952	\$2,956.17
kW Input	41.4	25.9	15.5	
kW on-peak activity factor *			10.1	\$1,008.95
Acre Feet per Year	466.0			
kWh per Acre Foot	212	132	79	
Average Cost per Acre Foot	\$36.41	\$22.76	\$13.65	
Overall Plant Efficiency (%)	43.1	69.0		
<b>Annual Total</b>	<b>\$16,963.46</b>	<b>\$10,603.25</b>	<b>\$6,360.21</b>	<b>\$3,965.12</b>

(\*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 15.5 kW, and the savings used for incentive calculations is 65% of 15.5, or 10.1 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 43.1% to 69.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of GS-2, we estimate that you may save up to 36,952 kWh annually (which translates to a 16-ton decrease in CO<sub>2</sub> emissions). This may result in energy cost savings of \$6,360.21.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you have the potential to receive an incentive of \$0.08 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 \$3,965.12, capped at 50% of your project cost. (See contract for details.)

If you are interested in an incentive for this pump, please contact EDWARD AREVALO at (626)633-7157 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](http://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**<sup>®</sup>

An EDISON INTERNATIONAL<sup>®</sup> Company

**Confidential/Proprietary Information**

January 18, 2013

DEAN BROWNING  
HOLLIDAY ROCK COMPANY  
1401 N. BENSON AVE.  
UPLAND, CA 91786

**HYDRAULIC TEST RESULTS**, Plant: PLMDLE SUP PMP  
Location: 7747 E AVENUE T HP: 100.0  
Cust #: 0-000-0096 Serv. Acct. #: 011-4080-74  
Meter: V349R-147 Pump Ref. #: 25311

In accordance with your request, an energy efficiency test was performed on your turbine booster pump on January 17, 2013. If you have any questions regarding the results which follow, please contact RICK KOCH at (805)654-7312.

<b>Equipment</b>		
Pump:	L & B	No: D23049
Motor:	GE	No: HNJ803118

**Results**

Discharge Pressure, PSI	
Discharge Head, Feet	
Suction Head or Lift, Feet	<b>4.5</b>
Total Head, Feet	
Capacity, GPM	<b>1,235</b>
Acre Feet Pumped In 24 Hours	<b>5.459</b>
kW Input to Motor	<b>92.0</b>
HP Input to Motor	<b>123.4</b>
Motor Load (%)	<b>113.7</b>
Measured Speed of Pump, RPM	<b>1,782</b>
<b>kWh per Acre Foot</b>	<b>405</b>
<b>Overall Plant Efficiency (%)</b>	

The pump could not be shutdown at the time of the test. Therefore, An overall pump efficiency was not determined because the total head was undetermined.

RUSS JOHNSON  
Manager  
Hydraulic Services





**Confidential/Proprietary Information**

January 18, 2013

DEAN BROWNING  
HOLLIDAY ROCK COMPANY  
1401 N. BENSON AVE.  
UPLAND, CA 91786

**PUMPING COST ANALYSIS,** Plant: PLMDLE SUP PMP  
Location: 7747 E AVENUE T HP: 100.0  
Cust #: 0-000-0096 Serv. Acct. #: 011-4080-74  
Meter: V349R-147 Pump Ref. #: 25311

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 January 17, 2013, billing history for the past 12 months, and your current rate of TGS3-CPP.

	<u>Existing</u>
Total kWh	<b>263,124</b>
kW Input	<b>92.0</b>
kWh per Acre Foot	<b>405</b>
Acre Feet per Year	<b>650.4</b>
Average Cost per kWh	<b>\$0.18</b>
Average Cost per Acre Foot	<b>\$71.38</b>
<hr/>	
Total Annual Cost	<b>\$46,422.97</b>

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

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EXHIBIT "F"

<u>Year</u>	<u>Well</u>	<u>Yearly Production</u>

EXHIBIT "G"

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**Antelope Valley Groundwater Cases**  
**Case No. BC 325 301, et. al.**  
**Palmdale Site**

Holliday Rock Co., Inc. provides the following regarding Assessor's Parcel Numbers 3051-008-007, 3051-008-005, 3051-008-010, 3051-008-011, 3051-007-008, 3051-007-015, 3051-005-029, 3051-006-015, 3042-023-002, and 3051-004-006, all of which are located in the County of Los Angeles, State of California. Holliday leases these properties from Little Rock Sand and Gravel, Inc. under a long term lease which is subject to Conditional Use Permit CUP 96-4.

The process involved in the manufacture of aggregates and concrete require substantial amounts of water. The following is a description of the aggregate manufacturing process. Raw rock, sand and gravel are extracted from the site below grade and brought to the processing plant via land conveyors. The aggregate processing plant uses water to wash the fines and deleterious materials out of the raw minerals to achieve cleanliness measures per the specifications for construction materials. The plant is subject to a number of governmental authorities and permits. The Antelope Valley Air Quality Management District requires the use of water for dust suppression both in the plant as well as in and around the entire site (over 300 acres). Holliday controls two industrial wells on site and uses them in tandem to fill a fresh water pond capable of supplying all the water needs for its industrial processes. The fresh water pond has a pond pump which pumps the water to the rock plant. The rock plant water consumption is 1235 gallons per minute, based on hydraulic test results on the pond pump performed on January 17, 2013. The throughput capacity of the aggregate plant (tons per hour) is shown for Years 2011 and 2012 based on belt scale readings, and production reports. Belt scale readings were not available for the Water Years 2000 through 2004. Thus an average plant production rate was derived from data (belt scale readings) for the Water Years 2008 through 2010 and applied to the 2000 – 2004 years, as detailed below.

The on-site ready mixed concrete plant uses the aggregate supplied by the rock plant and mixes them with cement and water to produce concrete. Each yard of concrete produced requires at least 30 gallons of water per the mix design. Additionally, each truck has a 100 gallon water tank which is filled with each 10 yard load. Thus the total water used per cubic yard of concrete is 40 gallons.

Below is Holliday Rock Co., Inc.'s annual water usage for the year 2011 and 2012, and for the years 2000 through 2004. The assumptions to the calculations were based on actual production numbers (tons of rock and sand produced and sold) for the aggregate plant and yards of concrete shipped and sold for the ready mix plant, in tandem with the factors listed above. Additionally, water used for dust suppression in and around the 300 acre site has been shown separately.

**YEAR****2011****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	501,836
b) Plant Production (tons/hour)	380
c) Hours of Production (a/b)	1321
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual Water Used (c x d) gallons	97,886,100
f) Acre Feet (e/325,800)	<b>300.45</b>

**Ready Mix Plant Water Usage**

a) Annual Production (yards)	23,825
b) Water Usage (40 gal./yd)	953,000
c) Acre Feet (b/325,800)	<b>2.93</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 6 trips/day	18,000
b) Operating Days : 250	
c) Water Usage (18,000 gals/day x 250)	4,500,000
d) Acre Feet (c/325,800)	<b>13.81</b>

**2011 TOTAL****317.19 ACRE-FEET****YEAR****2012****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	645,944
b) Plant Production (tons/hr)	397
c) Hours of Production (a/b)	1628
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual Water Used (c x d) gallons	120,634,800
f) Acre Feet (e/325,800)	<b>370.27</b>

**Ready Mix Plant Water Usage**

a) Annual Production (yards)	39,248
b) Water Usage (40 gal./yd)	1,569,920
c) Acre Feet (b/325,800)	<b>4.82</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 6 trips/day	18,000
b) Operating Days : 250	
c) Water Usage (18,000 gals/day x 250)	4,500,000
d) Acre Feet (c/325,800)	<b>13.81</b>

**2012 TOTAL****388.90 ACRE-FEET**

<u>YEAR</u>	<u>2008*</u>
<b>Aggregate Plant Water Usage</b>	
a) Annual Aggregate Production (tons)	675,613
b) <i>Plant Production (tons/hour)</i>	<b>402</b>
c) Hours of Production (a/b)	1680
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	124,488,000
f) Acre Feet (e/325,800)	<b>382.10</b>
<u>YEAR</u>	<u>2009*</u>
<b>Aggregate Plant Water Usage</b>	
a) Annual Aggregate Production (tons)	658,959
b) <i>Plant Production (tons/hour)</i>	<b>406</b>
c) Hours of Production (a/b)	1623
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	120,264,300
f) Acre Feet (e/325,800)	<b>369.14</b>
<u>YEAR</u>	<u>2010*</u>
<b>Aggregate Plant Water Usage</b>	
a) Annual Aggregate Production (tons)	620,495
b) <i>Plant Production (tons/hour)</i>	<b>408</b>
c) Hours of Production (a/b)	1522
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	112,780,200
f) Acre Feet (e/325,800)	<b>346.16</b>
*Establish Average Plant Production Number (tons/hour)	
<b>402 + 406 + 408 = 1216 / 3 = 405 TPH</b>	
<p>This <u>405 TPH</u> Average will be used in the calculations for the Water Years 2000 – 2004 to determine the Plant's Hours of Production (given the annual Aggregate Production in tons). The hours of production will then be multiplied against the hourly water usage to determine total water used in the plant for that year.</p>	

**YEAR****2000****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	124,697
b) Plant Production (tons/hour)	405
c) Hours of Production (a/b)	308
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	22,822,800
f) Acre Feet (e/325,800)	<b>70.05</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	84,800
b) Convert to cubic yards (a/1.6)	53,000
c) Water Usage (40 gal./yd x b)	2,120,000
d) Acre Feet (c/325,800)	<b>6.50</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.41</b>

**TOTAL: 94.96****YEAR****2001****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	291,844
b) Plant Production (tons/hour)	405
c) Hours of Production (a/b)	721
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	53,426,100
f) Acre Feet (e/325,800)	<b>163.98</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	87,370
b) Convert to cubic yards (a/1.6)	54,606
c) Water Usage (40 gal./yd x b)	2,184,240
d) Acre Feet (c/325,800)	<b>6.70</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.41</b>

**TOTAL: 189.09**

**YEAR**

**2002**

**Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	352,192
b) Plant Production (tons/hour)	405
c) Hours of Production (a/b)	870
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	64,467,000
f) Acre Feet (e/325,800)	<b>197.87</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	95,722
b) Convert to cubic yards (a/1.6)	59,826
c) Water Usage (40 gal./yd x b)	2,393,040
d) Acre Feet (c/325,800)	<b>7.35</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.41</b>

**TOTAL: 223.63**

**YEAR**

**2003**

**Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	449,527
b) Plant Production (tons/hour)	405
c) Hours of Production (a/b)	1,110
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	82,251,000
f) Acre Feet (e/325,800)	<b>252.46</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	140,310
b) Convert to cubic yards (a/1.6)	87,694
c) Water Usage (40 gal./yd x b)	3,507,760
d) Acre Feet (c/325,800)	<b>10.77</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.41</b>

**TOTAL: 281.64**



**YEAR**

**2004**

**Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	550,101
b) Plant Production (tons/hour)	405
c) Hours of Production (a/b)	1358
d) Water Usage per hour (1235gpm x 60)	74,100
e) Annual water used – gallons	100,627,800
f) Acre Feet (e/325,800)	<b>308.86</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	194,874
b) Convert to cubic yards (a/1.6)	121,796
c) Water Usage (40 gal./yd x b)	4,871,840
d) Acre Feet (c/325,800)	<b>14.95</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 280	
c) Water Usage (3000 x 8 x 280)	6,720,000
d) Acre Feet (c/325,800)	<b>20.63</b>

**TOTAL: 344.44**

AVERAGE USAGE 2000 THROUGH 2004:

**226.43** ACRE FEET PER YEAR

EXHIBIT "H"

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**Antelope Valley Groundwater Cases**

**Case No. BC 325 301,**

**S-1500-CV-254-348**

**RIC 353 840**

**RIC 344 436**

**RIC 344 668**

**Antelope Valley Aggregate Site**

Holliday Rock Co., Inc., successor in interest to Littlerock Aggregate Co., Inc. dba Antelope Valley Aggregate, Inc. provides the following information to substantiate its water rights' claims relating to Assessor's Parcel Numbers 3051-008-001, 3051-008-003, 3051-008-012 and 3051-008-013, in the County of Los Angeles, State of California.

Holliday owns and operates an aggregate processing plant on the above-referenced parcels. The parcels are owned by lessor Littlerock Aggregate Co., Inc. dba Antelope Valley Aggregate, Inc. There is also a ready mixed concrete production plant on site. The process involved in the manufacture of aggregates and concrete require substantial amounts of water. Following is a description of the aggregate manufacturing process. Raw rock, sand and gravel are extracted from the site below grade and brought to the plant via conveyors. The aggregate processing plant uses water to wash the fines and deleterious materials out of the raw minerals to achieve cleanliness measures per the specifications for construction materials. The plant is subject to a number of governmental authorities and permits. The Antelope Valley Air Quality Management District requires the use of water for dust suppression both in the plant as well as in and around the site. Holliday owns two industrial wells on site and uses them in tandem to fill a fresh water pond capable of supplying all the water needs for its industrial processes. The fresh water pond has a pond pump which then conveys the water to the rock plant and to the ready mixed concrete plant (water storage tank).

The on-site ready mixed concrete plant uses the aggregate supplied by Holliday and mixes it with cement and water to produce concrete. Each yard of concrete produced requires at least 30 gallons. Each truck also has a 100 gallon water tank which is filled with each 10 yard load. Thus total water involved with each yard of concrete produced is 40 gallons.

Below, Holliday has itemized its annual water usage for the years 2011 and 2012, and for the years 2000 through 2004. The assumptions to the calculations were based on actual production numbers (tons of rock and sand produced and sold) for the aggregate plant and yards of concrete sold and shipped for the ready mix portion. Additionally, water used for dust suppression in and around the 200+ acre site has been shown separately. The rock plant water consumption is 1060 gallons per minute as determined by a hydraulic test performed on January 17, 2013 by Southern California Edison Company. The throughput productive capacity of the aggregate plant (tons per hour) for Water Years 2011 and 2012 is based on belt scale readings and production reports. The tons per hour rating for Water Years 2000 – 2004 are based on averages derived from belt scale readings from Water Years 2008 – 2010, as detailed below.

**YEAR****2011****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	165,044
b) Plant Production (tons/hour)	261
c) Hours of Production (a/b)	634
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	40,322,400
f) Acre Feet (e/325,800)	<b>123.76</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	42,685
b) Convert to cubic yards (a/1.6)	26,678
c) Water Usage (40 gal./yd x b)	1,067,120
d) Acre Feet (c/325,800)	<b>3.28</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.42</b>

**TOTAL: 145.46****YEAR****2012****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	226,775
b) Plant Production (tons/hour)	300
c) Hours of Production (a/b)	755
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	48,018,000
f) Acre Feet (e/325,800)	<b>147.38</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	800
b) Convert to cubic yards (a/1.6)	500
c) Water Usage (40 gal./yd x b)	20,000
d) Acre Feet (c/325,800)	<b>0.06</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.42</b>

**TOTAL: 165.86**

<u>YEAR</u>	<u>2008*</u>
<b>Aggregate Plant Water Usage</b>	
a) Annual Aggregate Production (tons)	29,950
b) <i>Plant Production (tons/hour)</i>	<b>320</b>
c) Hours of Production (a/b)	93.5
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	5,946,600
f) Acre Feet (e/325,800)	<b>18.25</b>

<u>YEAR</u>	<u>2009*</u>
<b>Aggregate Plant Water Usage</b>	
a) Annual Aggregate Production (tons)	318,017
b) <i>Plant Production (tons/hour)</i>	<b>292</b>
c) Hours of Production (a/b)	1,088
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	69,196,800
f) Acre Feet (e/325,800)	<b>212.39</b>

<u>YEAR</u>	<u>2010*</u>
<b>Aggregate Plant Water Usage</b>	
a) Annual Aggregate Production (tons)	361,834
b) <i>Plant Production (tons/hour)</i>	<b>303</b>
c) Hours of Production (a/b)	1,196
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	76,065,600
f) Acre Feet (e/325,800)	<b>233.47</b>

\*Establish Average Plant Production Number (tons/hour)

$$320 + 292 + 303 = 915 / 3 = 305 \text{ TPH}$$

This 305 TPH Average will be used in the calculations for the Water Years 2000 – 2004 to determine the Plant's Hours of Production (given the annual Aggregate Production in tons). The hours of production will then be multiplied against the hourly water usage to determine total water used in the plant for that year.

**YEAR****2000****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	505,017
b) Plant Production (tons/hour)	305
c) Hours of Production (a/b)	1,656
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	105,321,600
f) Acre Feet (e/325,800)	<b>323.27</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	108,391
b) Convert to cubic yards (a/1.6)	67,745
c) Water Usage (40 gal./yd x b)	2,709,800
d) Acre Feet (c/325,800)	<b>8.32</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.42</b>

**TOTAL: 350.01****YEAR****2001****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	610,048
b) Plant Production (tons/hour)	305
c) Hours of Production (a/b)	2,000
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	127,200,000
f) Acre Feet (g/325,800)	<b>390.42</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	115,051
b) Convert to cubic yards (a/1.6)	71,907
c) Water Usage (40 gal./yd x b)	2,876,280
d) Acre Feet (c/325,800)	<b>8.83</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.42</b>

**TOTAL: 417.67**

**YEAR****2002****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	668,525
b) Plant Production (tons/hour)	305
c) Hours of Production (a/b)	2,192
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	139,411,200
f) Acre Feet (g/325,800)	<b>427.90</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	104,313
b) Convert to cubic yards (a/1.6)	65,196
c) Water Usage (40 gal./yd x b)	2,607,840
d) Acre Feet (c/325,800)	<b>8.00</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 250	
c) Water Usage (3000 x 8 x 250)	6,000,000
d) Acre Feet (c/325,800)	<b>18.42</b>

**TOTAL: 454.32****YEAR****2003****Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	801,403
b) Plant Production (tons/hour)	305
c) Hours of Production (a/b)	2628
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	167,140,800
f) Acre Feet (e/325,800)	<b>513.02</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	145,714
b) Convert to cubic yards (a/1.6)	91,071
c) Water Usage (40 gal./yd x b)	3,642,840
d) Acre Feet (c/325,800)	<b>11.81</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 280	
c) Water Usage (3000 x 8 x 280**)	6,720,000
d) Acre Feet (c/325,800)	<b>20.63</b>

**TOTAL: 545.46**

\*\* It was necessary to run additional production days in order to achieve the listed annual aggregate production for 2003/2004

**YEAR**

**2004**

**Aggregate Plant Water Usage**

a) Annual Aggregate Production (tons)	757,202
b) Plant Production (tons/hour)	305
c) Hours of Production (a/b)	2,483
d) Water Usage per hour (1060gpm x 60)	63,600
e) Annual water used – gallons	157,918,800
f) Acre Feet (e/325,800)	<b>484.71</b>

**Ready Mix Plant Usage**

a) Annual Aggregate Purchased (tons)	167,500
b) Convert to cubic yards (a/1.6)	104,688
c) Water Usage (40 gal./yd x b)	4,187,520
d) Acre Feet (c/325,800)	<b>12.85</b>

**Site Dust Suppression**

a) 3000 gallon water truck – 8 trips/day	
b) Operating Days: 280	
c) Water Usage (3000 x 8 x 280)	6,720,000
d) Acre Feet (c/325,800)	<b>20.63</b>

**TOTAL: 518.19**

AVERAGE USAGE 2000 THROUGH 2004:

**457.13** ACRE FEET PER YEAR



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EXHIBIT "M"

**Appendix D-3: Table 4**  
**Applied Crop Water Duties and Irrigation Efficiency Values**  
(DU = 80%)  
**Antelope Valley Area of Adjudication**

Crop	ET <sub>c</sub> <sup>1</sup> (in)	P <sub>e</sub> <sup>2</sup> (in)	ET <sub>AW</sub> <sup>3</sup> (in)	DU <sup>4</sup> (%)	AW <sub>cr</sub> <sup>5</sup> (in)	AW <sub>er</sub> <sup>6</sup> (in)	AW <sub>pp</sub> <sup>7</sup> (in)	AW <sub>r</sub> <sup>8</sup> (in)	AW <sub>r</sub> <sup>8</sup> (ft)	E <sub>ir</sub> <sup>9</sup> (%)
Alfalfa	62.10	1.77	60.33	80	75.42	0	2.0	77.42	6.5	81
Carrots	27.47	0.00	27.47	80	34.33	0	6.5	46.83	3.9	85
Grain	22.94	1.42	21.52	80	26.90	0	4.0	30.90	2.6	83
Melons/Squash	23.91	0.00	23.91	80	29.88	0	4.0	33.88	2.8	82
Onions	37.67	0.00	37.67	80	46.96	3	4.0	53.96	4.5	83
Orchard (Deciduous)	47.38	0.00	47.38	80	59.22	0	0.0	59.22	4.9	80
Pasture	66.19	1.77	64.42	80	80.53	0	0.0	80.53	6.7	80
Potatoes	24.02	0.00	24.02	80	30.03	0	4.0	34.03	2.8	82
Silage	27.31	0.00	27.31	80	34.14	0	4.0	38.14	3.2	82
Sugar Beets	40.55	0.00	40.55	80	50.68	0	4.0	54.68	4.6	81
Vineyard (Grapes)	35.33	0.00	35.33	80	44.16	0	0.0	44.16	3.7	80

<sup>1</sup> ET<sub>c</sub> = K<sub>c</sub> \* ET<sub>o</sub>, where ET<sub>o</sub> = average ET<sub>o</sub> for specified periods, based on data from Victorville CIMIS Station, 1994-2003; K<sub>c</sub> values from Univ. California Cooperative Extension  
<sup>2</sup> P<sub>e</sub> = effective precipitation offsetting ET<sub>c</sub>, up to 1/2 of the average precipitation, in Dec. - Feb., inclusive.  
<sup>3</sup> ET<sub>AW</sub> = evapotranspiration of applied water = ET<sub>c</sub> - P<sub>e</sub>  
<sup>4</sup> DU = irrigation distribution uniformity  
<sup>5</sup> AW<sub>cr</sub> = applied water for crop requirement = ET<sub>AW</sub> \* DU  
<sup>6</sup> AW<sub>er</sub> = applied water for erosion control  
<sup>7</sup> AW<sub>pp</sub> = applied water for field preparation and pre-irrigation  
<sup>8</sup> AW<sub>r</sub> = applied crop water duty = AW<sub>cr</sub> + AW<sub>er</sub> + AW<sub>pp</sub>  
<sup>9</sup> E<sub>ir</sub> = overall irrigation efficiency for beneficial uses = (ET<sub>AW</sub> + AW<sub>er</sub> + AW<sub>pp</sub>) / AW<sub>r</sub>

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PROOF OF SERVICE  
(C.C.P. 1013A, 2015.5)

**STATE OF CALIFORNIA**

I am employed in the County of Los Angeles, State of California. I am over the age of eighteen years and not a party to the within action; my business address is 10900 Wilshire Boulevard, Suite 920, Los Angeles, California 90024.

On January 31, 2013, I served the foregoing document, described as:

**DECLARATION OF PETER H. POWELS IN LIEU OF DEPOSITION TESTIMONY FOR PHASE 4 TRIAL**

on the interested parties in this action in the following manner:

X **BY ELECTRONIC SERVICE AS FOLLOWS** by posting the document(s) listed above to the Santa Clara website in the action of the *Antelope Valley Groundwater Litigation*, Judicial Council Coordination Proceeding No. 4408, Santa Clara Case No. 1-05-CV-049053.

Executed on January 31, 2013 at Los Angeles, California.

XX **(State)** I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

James W. Lewis \_\_\_\_\_

  
\_\_\_\_\_