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SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF LOS ANGELES

Coordination Proceeding
 Special Title (Rule 1550(b))

**ANTELOPE VALLEY
 GROUNDWATER CASES**

Included Actions:

Los Angeles County Waterworks District
 No. 40 v. Diamond Farming Co.
 Superior Court of California
 County of Los Angeles, Case No. BC
 325201

Los Angeles County Waterworks District
 No. 40 v. Diamond Farming Co.
 Superior Court of California, County of
 Kern, Case No. S-1500-CV 254348

Wm. Bolthouse Farms, Inc. v. City of
 Lancaster Diamond Farming Co. v. City of
 Lancaster Diamond Farming Co. v. Palmdale
 Water Dist. Superior Court of California,
 County of Riverside, consolidated actions,
 Case Nos. RIC 353840, RIC 344436, RIC
 344668

Judicial Council Coordination Proceeding
 No. 4408

SC Case No. 105CV 049053
 Assigned to Hon. Jack Komar

BUSINESS RECORDS AFFIDAVIT OF
 FREDERICK J. KOCH, III, SOUTHERN
 CALIFORNIA EDISON, ON BEHALF OF
 GARY VAN DAM (HIGH DESERT DAIRY)
 PURSUANT TO EVIDENCE CODE
 SECTIONS 1560-1562

BUSINESS RECORDS AFFIDAVIT OF FREDERICK JOHN KOCH, III, SOUTHERN CALIFORNIA EDISON
 ON BEHALF OF GARY VAN DAM (HIGH DESERT DAIRY)
 PURSUANT TO EVIDENCE CODE SECTIONS 1560-1562

1 I, FREDERICK JOHN KOCH, III, declare as follows:

2 1. I am a Technical Specialist 3 in the Hydraulic Services Department of Southern
3 California Edison.

4 2. I graduated high school from South Broward High School in Hollywood,
5 California in 1984. I graduated from the University of California, Los Angeles in 1991 with a
6 bachelor of science in applied mathematics. I graduated from the College of the Canyons in
7 Santa Clarita, California in 2001 with an associate's degree in engineering.

8 3. I hold a Grade 4 Certificate from the Department of Health Services in water
9 treatment and a separate Grade 4 Certificate from the Department of Health Services for water
10 distribution. These certificates allow me to work in a treatment facility treating groundwater
11 and surface water and to provide management services to water companies.

12 4. My job duties at Southern California Edison currently include performing
13 energy audits and hydraulic tests on wells and pumps for our energy customers. I evaluate
14 pumping systems to determine their efficiency and advise customers on how they can increase
15 the efficiency of their pumps.

16 5. I have worked for Southern California Edison for ten years and have held my
17 current position as a Technical Specialist 3 for five years. Previously, I was a Technical
18 Specialist 2 for five years. Technical Specialist 2s job duties include training regarding the
19 Southern California Edison's procedure for performing a hydraulic test and the actual
20 performance of the hydraulic tests whereas Technical Specialists 3s are more concerned with
21 customer interaction, services and advice. Overall, I have been involved in performing
22 hydraulic pump test services and evaluating their efficiencies of a customer's consumption of
23 electrical energy with regard to well pumps for ten years.

24 6. True and correct copies of the following business records of Southern California
25 Edison are attached as exhibits to this Affidavit:

- 26 a. Hydraulic Test Results letter for Nick Van Dam (High Desert Dairy) –
27 Exhibit "A":
28

1 b. Billing History Records for Van Dam (High Desert Dairy) – Exhibit “B”:

2 c. Multiple Point Test Summary for Van Dam (High Desert Dairy) – Exhibit
3 “C.”

4 7. All of the records attached as exhibits to this Affidavit were prepared in the
5 ordinary course of business by personnel of Southern California Edison. The records are true
6 and correct copies of original business records maintained by Southern California Edison. I
7 either prepared these records myself or another employee prepared the records following the
8 same procedure I would have followed. Edison created the attached records at the request of its
9 business customers in the ordinary course of Edison’s business, and not for the purpose of this
10 litigation.

11 8. I am the proper person to authenticate the attached Hydraulic Test Results
12 Letters, Billing History Records, and Multiple Point Test Summaries. I am qualified to certify
13 that the records provided are authentic and to explain their manner or mode of preparation and
14 substance.

15 9. As part of its services to its customers, Southern California Edison will provide
16 hydraulic tests. A hydraulic test determines the efficiency of the pump that is being used to
17 extract water from a well or an above-ground body of water. Measurements are taken in the
18 field, calculations are made and then the customer is provided with a letter detailing the results
19 (referred to herein as a “Hydraulic Test Result Letter”).

20 10. A hydraulic test begins with the customer contacting Southern California
21 Edison. A Technical Specialist then goes out to the site where the pump is located and starts the
22 pumping system. The pumping system is allowed to run and stabilize before measurements are
23 taken. Measurement readings and calculations are taken while the pump is running.

24 11. In many instances, the pump is tested under different operating conditions
25 during the hydraulic test so that its efficiency can be judged on multiple points during the
26 pumping curve. If multiple tests were performed under distinct operating conditions, the
27 Hydraulic Test Results Letters that are issued to the customer will show the results for the
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multiple tests that were performed.

12. The procedure for conducting hydraulic tests was developed by Southern California Edison and is memorialized in a resource manual that is used within the hydraulic services department.

13. The information gathered during the hydraulic test is recorded on worksheets at the inspection site and is later entered into a computer system, which compiles the various readings and produces the Hydraulic Test Results Letters

14. that are sent to our customers. The information from the test is generally entered into the computer and results are generated within ten days of performing the hydraulic test. The hand-written field records which are inputted into Southern California Edison computer records are accurately recorded and reported.

15. Hydraulic Test Result letters include information that provides reference to a particular well and location. This information includes:

- a. Location: this is the address of the electrical meter.
- b. Customer Number: this is a specific customer number that has been assigned to that customer for Southern California Edison's bookkeeping.
- c. Service Account Number: this is a number that indicates the meter and location of the meter for a specific bill or account.
- d. Meter: this is the serial number for an electrical meter.
- e. Pump Reference Number: this is a number assigned by the Hydraulic Services Department to a particular well so that it can be easily looked up within the computer database.

16. The Hydraulic Test Results Letters are generated by the computer after data from the field inspection is entered into the computer records. The letters are then printed, collected, signed and sent to the customer.

17. The measurements that are taken during a hydraulic test include electrical readings such as volts, amps, and kilowatts that the pump is using; pressure readings; well

1 depth soundings; and flow readings. All of these measurements are performed by personnel in
2 the Hydraulic Services Department consistent with the standard practices and procedures
3 developed by Southern California Edison.

4 18. The following information is standard and typically would be included in a
5 Hydraulic Test Results Letter:

- 6 a. Discharge Pressure: This is the pressure created by the pump against the
7 system that it is pumping into. It is measured in pounds per square inch.
- 8 b. Standing Water Level: This is the level of the water table when the pump is
9 not running. Standing Water Level is measured using a sounding tool that is
10 lowered into the well casing and that measures the water table.
- 11 c. Drawdown: Drawdown is the difference between the Standing Water Level
12 and the Pumping Water Level, which is where the water table falls to while
13 the pump is on.
- 14 d. Discharge Head in Feet: This is the Discharge Pressure converted to Head
15 Feet. One Head Feet is the equivalent of the pressure that a column of water
16 one foot tall would create.
- 17 e. Pumping Water Level: This is the water level in the aquifer when the pump
18 is pumping. This is also measured using a sounding tool.
- 19 f. Total Head: This is the sum of the Pumping Water Level and the Discharge
20 Head. It measures how far the pump has to lift water out of the well.
- 21 g. Capacity: This is the flow that the pump is producing at the Total Head. It is
22 measured in gallons per minute.
- 23 h. Gallon per Minute per Foot of Drawdown: This is a measure of efficiency
24 that shows how much water the well is yielding. It measures how many
25 gallons the well produced per minute per foot of Drawdown.
- 26
- 27
- 28

- i. Acre-feet Pumped in 24 Hours: This is the amount of acre-feet a well would produce under the operating conditions present during the test if the well were left on for 24 hours.
- j. Kilowatt Input to Motor: This is how many Kilowatts are going into the pump motor. It is the power that the motor requires to run the pump while it is producing the gallons per minute at the particular Foot Head or Total Head where it is being measured.
- k. Horsepower Input to Motor: This is the Kilowatt Input to Motor converted into Horsepower.
- l. Motor Load: This is how much work the motor is doing to produce that result. It is measured as a percentage.
- m. Measured Speed of the Pump in Revolutions per Minute: This is how fast the shaft is turning on the motor.
- n. Kilowatt Hour per Acre-foot: This is how many kilowatt hours it takes to generate 1 acre-foot of water under testing conditions.
- o. Overall Plant Efficiency: This is a measurement of the pump's efficiency. 100% would be perfect, but is impossible to reach.

19. After a hydraulic test is performed and a Hydraulic Test Results Letter is generated, the letter is signed by a Southern California Edison manager of the Hydraulic Services Department and sent to the customer.

20. Based on my years of experience with Southern California Edison the information contained in the Hydraulic Test Results letter is an accurate, reliable and trustworthy record of the pump tests and results performed by Southern California Edison for the customer.

21. Upon request from a customer, the Hydraulic Services Department of Southern California Edison will provide customers with their Billing History Record. A Billing History Record is a record of the electrical usage for a particular electrical meter or electrical site

1 during the time period that the record covers. Time periods may be for one year, for the life of
2 the meter with Southern California Edison or for some other measure of time, depending on the
3 customer's request. Southern California Edison compiles these histories from cumulative
4 records of electricity usage and billing that it keeps in its files.

5 22. A Billing History Record will include information that designates the customer
6 including the customer's name and service account number for the site.

7 23. The Billing History Records prepared by the Hydraulic Services Department are
8 organized in columns and typically include the following information:


- 9 a. Current Rate: This is the tariff rate that the customer is getting charged.
- 10 b. Meter Number: This is the electrical meter number assigned to the service
11 account.
- 12 c. Service Street Address: This is the address for the service account. It is not
13 the billing address but is the actual site address where the electricity is used.
- 14 d. Meter Read Date: This is the date that the meter was read by personnel at
15 Southern California Edison.
- 16 e. Rate: This is the rate that is being charged at the time period listed.
- 17 f. Billed Amount: This is the amount of money that was actually billed to the
18 customer for energy usage during the time period listed.
- 19 g. KWH Usage: This is the kilowatt hours that were using during the time
20 period listed.
- 21 h. Maximum Kilowatt: This is the maximum power usage that was reported for
22 the time period listed which is generally a monthly basis.
- 23 i. Billing Days: This is the amount of days in a billing period.
- 24 j. Annual Kilowatt or Total kWh/year: This is the amount of kilowatt hours
25 that were used in a particular year.
- 26 k. Acre-foot Production: This is the amount of kilowatt hours it took to produce
27 one acre-foot of water for a given well. This number is the result from a
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specific hydraulic test of how many kilowatt hours it took to pump 1 acre-foot of water from the well under testing conditions.

1. Acre-feet Produced Per Year: This is an estimate of the amount of acre-feet a particular well produced in a specified year. To estimate the total acre-feet of water produced by a well in a given year, the customer's total annual kW usage for that particular year is divided by the number described in (k) above (i.e., divided by the number of kilowatt-hours required to pump one acre-foot of water during a hydraulic test, under testing conditions).

24. Where a hydraulic test has been performed during the year in question, the calculations provide a fairly accurate number with regard to acre-foot production for the entirety of that year. When a hydraulic test has not been performed during that specific year, results from a hydraulic test performed in a previous or later year may be used to perform the calculations. The conditions that existed during the year of the hydraulic test could differ from the conditions of the untested year(s), but are the best representation that can be given without knowing the conditions of that particular year. The Billing History Record will indicate which hydraulic pump test was used to determine how many acre-feet were produced in the referenced year in a footnote or a column heading. For example, in Exhibit B the total annual production of groundwater for the year 2011 with regard to the specific well referred to in the Southern California Edison records as "End Well" was determined to be 1,636.7 acre-feet (Bates Page HDD 211) based on the acre-feet production results from the 2012 hydraulic pump test (Bates Page HDD 212).

25. Southern California Edison will also provide customers with a Multiple Point Test Summary. This is a summary of the testing that has been performed throughout the years on particular sites. A Multiple Point Test Summary summarizes the information that is listed in the Hydraulic Test Results Letters and inserts that information into an Excel spreadsheet.


Frederick J. Koch, III
Southern California Edison,
Department of Hydraulic Services,
Technical Specialist 3

ANTELOPE VALLEY GROUNDWATER CASES
 Judicial Council Coordination, Proceeding No. 4408
 Santa Clara Case No. 1-05-CV 049053
 Los Angeles County Superior Court, Central, Dept. 1

PROOF OF SERVICE

STATE OF CALIFORNIA, COUNTY OF KERN

I, ERIN L. LINDSEY, declare: I am and was at all times of the service hereunder mentioned, over the age of eighteen (18) years. My business address is: 1800 30th Street, Fourth Floor, Bakersfield, CA 93301.

On May 10, 2013, I caused to be served the below listed document(s) entitled as: **BUSINESS RECORDS AFFIDAVIT OF FREDERICK J. KOCH, III, SOUTHERN CALIFORNIA EDISON, ON BEHALF OF GARY VAN DAM (HIGH DESERT DAIRY) PURSUANT TO EVIDENCE CODE SECTIONS 1560-1562**, on the interested parties in this action:

 X (BY POSTING) I posted the document listed above to the Santa Clara Superior Court website regarding the Antelope Valley Groundwater matter pursuant to the Court's Clarification Order. Electronic service posting completed through www.scefilng.org.

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

Executed on May 10, 2013, at Bakersfield, California.


 ERIN L. LINDSEY