

DOCKET

11-AFC-3

DATE MAY 04 2012

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May 4, 2012

Mr. Eric Solorio California Energy Commission Docket No. 11-AFC-3 1516 9th St. Sacramento, CA 95814

Cogentrix Quail Brush Generation Project - Docket Number 11-AFC-3, Data Request Responses to Set 3: Data Requests 65 through 70

Docket Clerk:

Pursuant to the provisions of Title 20, California Code of Regulation, Quail Brush Genco, LLC, a wholly owned subsidiary of Cogentrix Energy, LLC, hereby submits the *Data Request Responses to Set 3 for the Quail Brush Generation Project.* The Quail Brush generation Project is a 100 megawatt natural gas fired electric generation peaking facility to be located in the City of San Diego, California.

These six responses were compiled in response to the Energy Commission's QUAIL BRUSH GENERATION PROJECT (11-AFC-3), Staff's Data Requests, 65 through 70, dated April 5, 2012 and posted on April 17, 2012. This document provides additional information necessary to fulfill the Application for Certification data requests for the following technical areas:

- Noise and Vibration
- Health Risk Assessment

Constance C. Farmer

Visual Resources

If you have any questions regarding this submittal, please contact Rick Neff at (704) 525-3800 or me at (303) 980.3653.

Sincerely,

Constance E. Farmer

Project Manager/Tetra Tech

cc: Lori Ziebart, Cogentrix John Collins, Cogentrix Rick Neff, Cogentrix Proof of Service List

TETRA TECH EC, INC.

Noise and Vibration

65. Please conduct a continuous ambient noise survey at locations ST-1 and ST-2 from 10 p.m. to 7 a.m. and submit the results of this survey to staff, in terms of L_{eq} , L_{10} , L_{50} , and L_{90} .

Response:

Tetra Tech completed the requested noise analysis for the Cogentrix Quail Brush Project (Project). The original analysis was included in the Application for Certification (AFC) docketed on August 25, 2011 and included short-term 30 minute sound monitoring samples to be representative of the daytime and nighttime ambient noise conditions. To respond to data request 65, additional noise monitoring was conducted from 10:00 PM, April 17th, 2012 to 6:00 AM April 18th, 2012. Ambient noise levels were monitored at two short-term 30-minute monitoring locations included in the analysis presented in the AFC docketed on August 25, 2011 as ST-1 and ST-2, located at 8555 Rumson Drive and 8301 Rumson Drive in Santee, California, respectively.

Atmospheric conditions during the survey period were conducive for the collection of accurate sound measurements. Ambient temperatures ranged from 43°F to 71°F and the average relative humidity was approximately 50 percent. The wind conditions were calm with almost no wind at ground level. There was no precipitation during the monitoring period. Existing noise sources contributing to the ambient acoustic environment were documented during the short-term sound measurements. Main contributors to ambient levels consisted of motor vehicle traffic on local roadways, periodic overhead noise from airplane and helicopter flyovers and natural sounds such as birds and insects.

Measurements were taken with a Larson Davis 831 real-time sound level analyzer equipped with a PCB model 377B02 1/2" precision condenser microphone. This instrument has an operating range of 5 dB to 140 dB, and an overall frequency range of 8 to 20,000 Hz, and meets or exceeds all requirements set forth in the American National Standards Institute (ANSI) standards for Type 1 sound level meters for quality and accuracy (precision). All instrumentation was laboratory calibrated within the previous 12 month period with calibration documentation provided in Appendix D of the AFC. In all cases, the microphone and windscreen were tripod-mounted at an approximate height of 1.5 to 1.7 meters (4.9 to 5.6 feet) above grade away from effects of ground level noise and reflective surfaces. In addition, the sound level analyzer microphones were protected from wind-induced self-noise effects by a 180-millimeter (mm) (7 inch) diameter foam windscreen made of specially prepared open-pored polyurethane.

The sound level meter at each of the monitoring locations was field calibrated and programmed to log data continuously. Calibration was achieved with two ANSI Type 1 calibrators which have accuracy traceable to the National Institute of Standards and Technology (NIST). Each sound analyzer was programmed to measure and log broadband A-weighted sound pressure levels in 10-minute and 1-hour time intervals, including a number of statistical parameters such as the L_{eq} , L_{max} , L_{min} and statistical sound levels (L_{10} , L_{50} , L_{90}). Data were also collected for 1/1 and 1/3 octave bands spanning the frequency range of 8 Hz to 20 kHz. Following the completion of the measurement period, all measured data were downloaded to a computer for the purposes of storage and further analysis. Table 1 lists the 1-hour interval sound monitoring data at ST-1 and ST-2 from 10:00 P.M. April 17th, 2012 through 6:00 A.M. April 18th, 2012. For comparison purposes, Table 2 summarizes the results of the short-term measurements on July 20th, 2011 and the overnight measurements conducted the evening of April 17th through the morning of April 18th, 2012. Below is a

summary from the AFC docketed on August 25, 2011 describing the short-term monitoring on July 20th, 2011 for comparison purposes.

- ST-1: This monitoring location is situated near 8555 Rumson Drive, Santee. It is representative of a residential neighborhood immediately south of the West Hills High School, where long-term monitoring was performed. Daytime measurements were taken from approximately 11:00 a.m. to 11:30 a.m. on July 20 and nighttime measurements were taken from approximately 10:00 p.m. to 10:30 p.m. that same day.
- ST-2: This monitoring location is located at the western end of Rumson Drive in a cul-desac. The closest residence is 8301 Rumson Drive, Santee. This monitoring location represents the closest residential area to the plant site. Daytime measurements were taken from approximately 11:40 a.m. to 12:10 p.m. on July 20 and nighttime measurements were taken from approximately 10:45 p.m. to 11:15 p.m. that same day.

Table 1 April 17th & April 18th, 2012 Hourly Sound Levels

| | Start Time (PST) | | ST-1 | | ST-2 | | | |
|-------------------|---------------------|-----------------|-----------------|-----------------|-----------------|------|-----------------|--|
| Date | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | | L ₉₀ | |
| | | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] | |
| 4/17/2012 | 10:00:00 PM | 47 | 49 | 42 | 48 | 50 | 44 | |
| 4/17/2012 | 11:00:00 PM | 53 | 47 | 40 | 52 | 49 | 42 | |
| 4/18/2012 | 12:00:00 AM | 41 | 43 | 38 | 45 | 47 | 40 | |
| 4/18/2012 | 1:00:00 AM | 43 | 46 | 38 | 44 | 47 | 38 | |
| 4/18/2012 | 2:00:00 AM | 42 | 45 | 37 | 42 | 45 | 37 | |
| 4/18/2012 | 3:00:00 AM | 40 | 42 | 37 | 47 | 49 | 40 | |
| 4/18/2012 | 4:00:00 AM | 48 | 50 | 42 | 55 | 52 | 44 | |
| 4/18/2012 | 5:00:00 AM | 52 | 53 | 50 | 53 | 55 | 49 | |
| 4/18/2012 | 6:00:00 AM | 54 | 55 | 50 | 55 | 57 | 53 | |
| Nighttime Average | | 49 | 50 | 45 | 51 | 52 | 46 | |

Table 2 Short-Term Measured Sound Level Summary

| Receptor | Daytime Period | | | | Nighttime Period | | | |
|-------------------------------|-------------------|----------|----------|----------|-------------------|----------|----------|----------|
| | \mathbf{L}_{eq} | L_{10} | L_{50} | L_{90} | \mathbf{L}_{eq} | L_{10} | L_{50} | L_{90} |
| July 20th, 2011 | | | | | | | | |
| ST-1 | 54 | 56 | 50 | 48 | 53 | 56 | 49 | 44 |
| ST-2 | 55 | 57 | 54 | 52 | 47 | 49 | 47 | 45 |
| April 17th - April 18th, 2012 | | | | | | | | |
| ST-1 | NA | NA | NA | NA | 49 | 50 | 47 | 45 |
| ST-2 | NA | NA | NA | NA | 51 | 52 | 49 | 46 |

The short-term monitoring effort on July 20th, 2011 and the overnight monitoring conducted the evening of April 17th, 2012 through the early morning hours of April 18th, 2012 are comparable. Typically differences in sound levels of 3 dBA or less are barely perceptible to

the human ear, while differences of 5 dBA are recognizable to the human ear. Short-term monitoring at ST-1 showed the greatest difference from the overnight monitoring for the L_{eq} and L_{10} metrics, with differences of 4 and 6 dBA respectively between the averaged overnight sound level and the short-term sound level. Short-term monitoring at ST-2 showed the greatest difference from the overnight monitoring for the L_{eq} metric, with a difference of 4 dBA between the averaged overnight sound level and the short-term sound level. Differences can be attributed to differences in human induced noise sources such as traffic volumes on nearby roadways and aircraft flyovers. The L_{50} and L_{90} sound levels demonstrate very close agreement between the two monitoring efforts with both ST-1 and ST-2 showing differences of no more than 2 dBA, which is not perceptible to the human ear. Therefore, because the sound levels listed in Table 1 and Table 2 are comparable, it can be assumed that sound sources influencing the acoustic environment have remained consistent since the original July 20^{th} , 2011 monitoring effort. Table 3 is a summary table of noise monitoring efforts conducted for the Project to date. Additional information regarding receptor locations can be found in Section 4.3 of the AFC docketed on August 25, 2011.

Table 3 Summary of Noise Monitoring Efforts for the Quail Brush Project

| Receptor | Daytime Period | | | | Nighttime Period | | | |
|-------------------------------|----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|
| | L_{eq} | L ₁₀ | L ₅₀ | L ₉₀ | L _{eq} | L ₁₀ | L ₅₀ | L ₉₀ |
| July 20th, 2011 | | | | | | | | |
| ST-1 | 54 | 56 | 50 | 48 | 53 | 56 | 49 | 44 |
| ST-2 | 55 | 57 | 54 | 52 | 47 | 49 | 47 | 45 |
| ST-3 | 46 | 49 | 41 | 38 | 44 | 45 | 43 | 42 |
| ST-4 | 55 | 58 | 51 | 46 | 36 | 39 | 35 | 34 |
| ST-5 | 53 | 54 | 52 | 51 | N/A | N/A | N/A | N/A |
| April 17th - April 18th, 2012 | | | | | | | | |
| ST-1 | NA | NA | NA | NA | 49 | 50 | 47 | 45 |
| ST-2 | NA | NA | NA | NA | 51 | 52 | 49 | 46 |

Public Health

66. Please provide all files of input data for HARP, including (but not limited to) the Source Receptor file (*.SRC), the Dilution Factors file (*.XOQ), the Emissions File (*.EMS), the Map file (*.MAP), the refined maximum ground level concentration (GLC) files (*.CSV), and all other related files which can help staff review and replicate the health risk assessment.

Response:

The requested HRA input files were provided on the CD that contains the air quality modeling results in the "HRA" directory submitted with the AFC on August 25, 2011. These files are also included on the enclosed CD. Please note that *.map files were not generated or used by the Applicant for the health risk assessment.

67. Please also provide all the output files generated from HARP, including (but not limited to) results for acute and chronic inhalation and chronic non-inhalation exposures, cancer burden and individual cancer risk (workplace and residential) for the combustion sources. Please also provide separate calculations for each type of exposure and risk, and the results of the calculations.

Response:

The requested HRA output files were provided on the CD that contains the air quality modeling results in the "HRA" directory, submitted with the AFC on August 25, 2011. These files also included on the enclosed CD. The HARP output files contain detailed listings of exposure types, routes of exposure, and risk by pollutant. The HARP calculations are internal to the program and are generally shown in the HARP User's Manual as well as in the OEHHA "Air Toxics Hot Spots Program Risk Assessment Guidelines-OEHHA, 2003". The applicant did not deviate from the HARP program calculation procedures.

Visual Resources

68. Please provide an electronic file that contains key observation point 1 (KOP 1) showing the existing condition without the proposed project capable of color print out on 11"x 17" sized paper.

Response:

Figure 4.5-10, Photographic Simulation Key Observation Point 1 (KOP 1)/Viewpoint 5, Mission Gorge Road, shows the existing condition without the proposed project capable of color print out on 11"x 17" sized paper scaled to view 18 inches from your eye for real life scaling.

69. Please provide an electronic file that contains KOP 1 showing the existing condition that includes the photographic simulation of the proposed project capable of color print out on 11" X 17" sized paper.

Response:

Figure 4.5-10, Photographic Simulation Key Observation Point 1 (KOP 1)/Viewpoint 5, Mission Gorge Road, shows the photographic simulation of the proposed project capable of color print out on 11"x 17" sized paper scaled to view 18 inches from your eye for real life scaling.

70. Please provide electronic files of the photographs used for Viewpoints 1 through 7 in the AFC visual resources section capable of color print out on 11" X 17" sized paper.

Response:

Photographs used for Viewpoints 1 through 7 in the AFC visual resources section capable of color print out on 11" X 17" sized paper scaled to view 18 inches from your eye for real life scaling are provided.

Figures

Figure 4.5-10, Photographic Simulation Key Observation Point 1 (KOP 1)/Viewpoint 5, Mission Gorge Road

Viewpoint 1: SR 52 - Existing Conditions (eastbound, looking northeast)

Viewpoint 2: MTRP, Grasslands Section Existing Conditions (looking northeast)

Viewpoint 3: MTRP, Old Mission Dam Existing Conditions (looking northeast)

Viewpoint 4: MTRP, Kumeyaay Campground Existing Conditions (looking north)

Viewpoint 5: Mission Gorge Road Existing Conditions (intersection with Father Junipero Serra Trail looking north)

Viewpoint 6: Highlands Mobile Home Park Existing Conditions (looking north)

Viewpoint 7: MTRP, Fortuna Mountain Existing Conditions (looking east)

Attachments

HRA Input Files

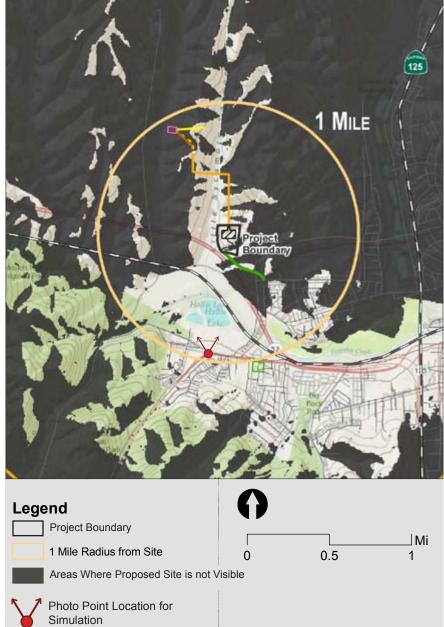
FIGURES



Above photograph is intended to be viewed 18 inches from viewer's eyes when printed on 11x17 paper. Photograph below has been enlarged to show project area.



Figure 4.5-10 Photographic Simulation, **KOP 1/Viewpoint 5, Mission Gorge Road.**



Photograph Information

- Viewpoint Number: 5
- Date of Photograph:
 Time of Photograph:
 Weather Condition:
 5/10/2011
 1:27 PM
 Partly Cloudy

- Viewing Direction: North
- Distance to Nearest Proposed Structure in View: 0.91 Mile
- Latitude: -117.03 N
- Longitude: 32.837 W
 Photo Location: 0.65 miles west of State Highway 52.

QUAIL BRUSH GENERATION PROJECT







Above photograph is intended to be viewed 18 inches from viewer's eyes when printed on 11x17 paper. Photograph below has been enlarged to show project area.



Figure 4.5-10 Photographic Simulation, **KOP 1/Viewpoint 5, Mission Gorge Road.**



Photograph Information

- Viewpoint Number: 5
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 Time of Photograph:
 Weather Condition:
 5/10/2011
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 Photo Location: 0.65 miles west of State Highway 52.

QUAIL BRUSH GENERATION PROJECT





Viewpoint 1: SR 52 - Existing Conditions (eastbound, looking norheast)



Viewpoint 2: MTRP, Grasslands Section Existing Conditions (looking northeast)



Viewpoint 3: MTRP, Old Mission Dam Existing Conditions (looking northeast)



Viewpoint 4: MTRP, Kumeyaay Campground Existing Conditions (looking north)



Viewpoint 5: Mission Gorge Road Existing Conditions (intersection with Father Junipero Serra Trail looking north)



Viewpoint 6: Highlands Mobile Home Park Existing Conditions (looking north)



Viewpoint 7: MTRP, Fortuna Mountain Existing Conditions (looking east)



ATTACHMENTS

| Data Request Responses to Set 3 | |
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| HRA Input Files are provided electronically within the enclosed CD. | |
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| Cogentrix Quail Brush Generation Project | May 2012 |
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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

1516 NINTH STREET, SACRAMENTO, CA 95814 1-800-822-6228 – www.energy.ca.gov

APPLICATION FOR CERTIFICATION FOR THE QUAIL BRUSH GENERATION PROJECT

DOCKET NO. 11-AFC-03 PROOF OF SERVICE (Revised 4/12/2012)

APPLICANT

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INTERESTED AGENCIES

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mkush@ci.santee.ca.us

*Morris E. Dye Development Services Dept. City of San Diego 1222 First Avenue, MS 501 San Diego, CA 92101 mdye@sandiego.gov

<u>ENERGY COMMISSION – DECISIONMAKERS</u>

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Public Adviser's Office
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DECLARATION OF SERVICE

| Data | onstance Farmer, declare that on May 4, 2012, I served and filed a copy of the a Request Responses to Set 3 for the Quail Brush Generation Project. This document is empanied by the most recent Proof of Service list, located on the web page for this project at: https://www.energy.ca.gov/sitingcases/quailbrush/index.html]. |
|------|---|
| | document has been sent to the other parties in this proceeding (as shown on the Proof of vice list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following oner: |
| - | eck all that Apply) service to all other parties: |
| | Served electronically to all e-mail addresses on the Proof of Service list; |
| | Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first- class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "e-mail preferred." |
| ANI | |
| For | filing with the Docket Unit at the Energy Commission: |
| | by sending an electronic copy to the e-mail address below (preferred method); OR |
| | by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows: |
| | CALIFORNIA ENERGY COMMISSION – DOCKET UNIT Attn: Docket No. 11-AFC-3 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512 docket@energy.state.ca.us |
| OR, | if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720: |
| | Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid: |
| | California Energy Commission Michael J. Levy, Chief Counsel 1516 Ninth Street MS-14 Sacramento, CA 95814 mlevy@energy.state.ca.us |

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET SACRAMENTO, CA 95814-5512 www.energy.ca.gov



TO: All Parties Date: April 13, 2012

RE: QUAIL BRUSH GENERATION PROJECT

Proof of Service List Docket No. 11-AFC-03

Attached is the *newly revised* Proof of Service List for the above-mentioned project, current as of April 12, 2012.

Energy Commission regulations (Cal. Code Regs., tit. 20, § 1210) require, in addition to any electronic service, that a paper copy be served in person or by first class mail except where a party requests to receive an electronic copy when one is available. Individuals and groups on the Proof of Service list who prefer to receive filings by e-mail and do not require a paper copy shall inform the Hearing Adviser assigned to the proceeding.

The Proof of Service list for this matter will delineate those individuals and groups and it is sufficient to serve those individuals with an e-mailed copy only. Those not so delineated must be served with a paper copy in addition to any e-mailed copy that the filing party chooses to provide. Signatures may be indicated on the electronic copy by "Original Signed By" or similar words.

Unless otherwise specified in a regulation, all materials filed with the Commission must also be filed with the Docket Unit. (Cal. Code Regs., tit. 20, § 1209(d).) Some regulations require filing with the Commission's Chief Counsel instead of the Docket Unit. For example, Section 1720 requires a petition for reconsideration to be filed with the Chief Counsel and served on the parties. Service on the attorney representing Commission staff does not satisfy this requirement. This Proof of Service form is not appropriate for use when filing a document with the Chief Counsel under Title 20, sections 1231 (Complaint and Request for Investigation) or 2506 (Petition for Inspection or Copying of Confidential Records). The Public Advisor can answer any questions related to filing under these sections.

New addition(s) to the Proof of Service are indicated in **bold font** and marked with an asterisk (*). Additionally, if two or more persons are listed on a Proof of Service List

with a single address, <u>only one physical copy</u> of a document need be mailed to the address.

Use this newly revised list for all future filings and submittals. This Proof of Service List will also be available on the Commission's Project Web Site at:

http://www.energy.ca.gov/sitingcases/quailbrush/index.html

Please review the information and contact me at rmavalos@energy.ca.gov or (916) 654-3893, if you would like to be removed from the Proof of Service or if there are any changes to your contact information.

RoseMary Avalos Hearing Adviser's Office