

DOCKETED

Docket Number:	12-AFC-03
Project Title:	Redondo Beach Energy Project
TN #:	206038
Document Title:	Peer review of AES noise analysis with exhibit
Description:	N/A
Filer:	Jon Welner
Organization:	Jeffer Mangels Butler & Mitchell LLP
Submitter Role:	Intervenor Representative
Submission Date:	9/9/2015 6:38:27 PM
Docketed Date:	9/10/2015

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9 September 2015

Karen Douglas, Presiding Member
Janea A. Scott, Associate Member
**Redondo Beach Energy Project
AFC Committee, California Energy Commission**
1516 Ninth Street
Sacramento, CA 95814

Subject: **Redondo Beach Energy Project (12-AFC-03, RBEP)
Review of AES Noise Modeling Data and Ambient Noise Measurements**

Dear Commissioners Douglas and Scott:

As you know, the City of Redondo Beach requested that AES provide the acoustical data and calculations that are the basis of the AES Application for Certification (AFC, November 2012) and the Preliminary Staff Assessment (PSA, July 2014). We understand that the Commission also requested additional information from AES and their noise consultant (email dated 11 August 2015, TN#205701). In response, the following two documents were provided:

- Letter from Ellison Schneider & Harris LLP to Jeffer Mangels Butler & Mitchell LLP on 23 July 2015 with AES noise data summary tables.
- Letter from CH2M HILL to the California Energy Commission on 27 August 2015 with additional noise modelling layout information and data (e.g., wall/building dimensions, etc.)

In addition to these documents, we reviewed the 22 May 2014 letter from CH2M HILL summarizing the ambient noise measurement results at Locations M3 and M4 (i.e., the two additional locations requested by the Commission). Based on our review, we comment as follows.

SUMMARY

1. Based on the AES noise modeling data, we calculated significantly higher noise levels from the exhaust stack exits than the RBEP noise levels published in the PSA.
2. The ambient noise levels surrounding the RBEP site have been overestimated by measuring noise primarily while the existing power plant is in operation. This condition does not properly represent the typical ambient noise environment that should be used as the basis of CEQA noise impact analysis.

NOISE MODELING DATA

Using the information in the aforementioned documents, we performed a peer review calculation for one of the noise sources associated with the proposed RBEP power plant. The main "exhaust stack exit" was identified in the AES data as having the greatest sound power levels. These three main exhaust stacks were modeled as noise sources located 40 meters high. In addition, they were associated with "directivity" factors that account for the direction of the exhaust discharge.

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Using the AES sound power levels for the exhaust stack exit and the associated directivity factors, we calculated the expected noise levels at three locations near the project site (as indicated in Figure 1¹). The results of our calculations are summarized in the following table and are compared to the noise contour levels published in the RBEP PSA.

Location	Description	RBEP Published Noise Contour Level (dB)	Exhaust Stack Exit Noise Level Calculated (by Salter, dB)	Difference (dB)
1	Monitor Location M3a, north of the site (nearest residential property in Hermosa Beach)	50	53	+3
2	Nearest Residential Property to the east at the corner of N Catalina Ave. and N Francisca Ave.	50	56	+6
3	Monitor Location M1, south of the site (nearby hotel)	43	50	+7

Using the AES sound power level and directivity factors, we calculated significantly louder noise levels at these locations. In addition, our calculation is for just one source type, the three main exhaust stack exits. There are several other source types that should also be peer reviewed.

AMBIENT NOISE MEASUREMENTS

In our comments on the noise section of the RBEP PSA (see letter dated 4 June 2015), we found that ambient noise measurements at locations M1 and M2 were overestimated by up to 5 dB. In our review of the ambient noise measurement results for locations M3 and M4 (see RBEP Data Request, Set 1R, dated 22 May 2014), we suspect the same problem with these data.

Ambient noise measurements at Locations M1 and M2 were performed for approximately 15 days. The data set indicates that the existing power plant was operating for all but 1.5 of those days.

Ambient noise measurements at Locations M3 and M4 might also have been conducted when the existing power plant was operating. The 22 May 2014 measurement results letter from CH2M Hill does not state whether the power plant was operating during the day of measurements. However, the Commission Status Report #5 indicates that *"the Applicant has voluntarily stationed the noise monitoring equipment at M3 and M4 to be ready to collect baseline ambient noise levels when the existing power plant is dispatched to operate. The Applicant has decided the additional noise measurements will include the existing power plant operating. The Applicant has not determined when the existing power plant will be dispatched to operate and, according to the Applicant, it may not operate until the summer of this year."*

¹ In the enclosed Figure 1, our calculated noise levels at three locations are overlaid on the AES-calculated noise contours published in the PSA.

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For the purposes of determining the proposed project noise impact, we would expect project noise levels to be compared to *typical* existing noise levels per CEQA guidelines. Since the existing power plant does not regularly operate, it is not reasonable to consider the existing power plant noise to be the *typical* ambient noise environment. Conducting "ambient" noise measurements primarily when the existing power plant was operating has overestimated the ambient noise levels surrounding the site.

FURTHER DISCUSSION

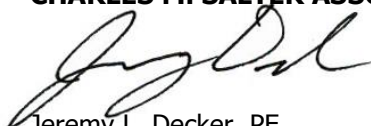
Our findings are significant, because higher project noise levels and lower ambient noise levels would have an effect on the CEQA noise impact analysis conclusions drawn from Noise Table 8 of the PSA. In addition, it appears that noise from the proposed power plant would exceed the noise ordinance requirements of the City of Redondo Beach and the City of Hermosa Beach in some residential areas. We can be available to discuss our findings and, if requested, meet with AES and Commission staff and representatives (e.g., as a public workshop, as necessary).

* * *

This concludes our current comments on the AES Response Letter. Should you have any questions, please call.

Sincerely,

CHARLES M. SALTER ASSOCIATES



Jeremy L. Decker, PE
Principal Consultant



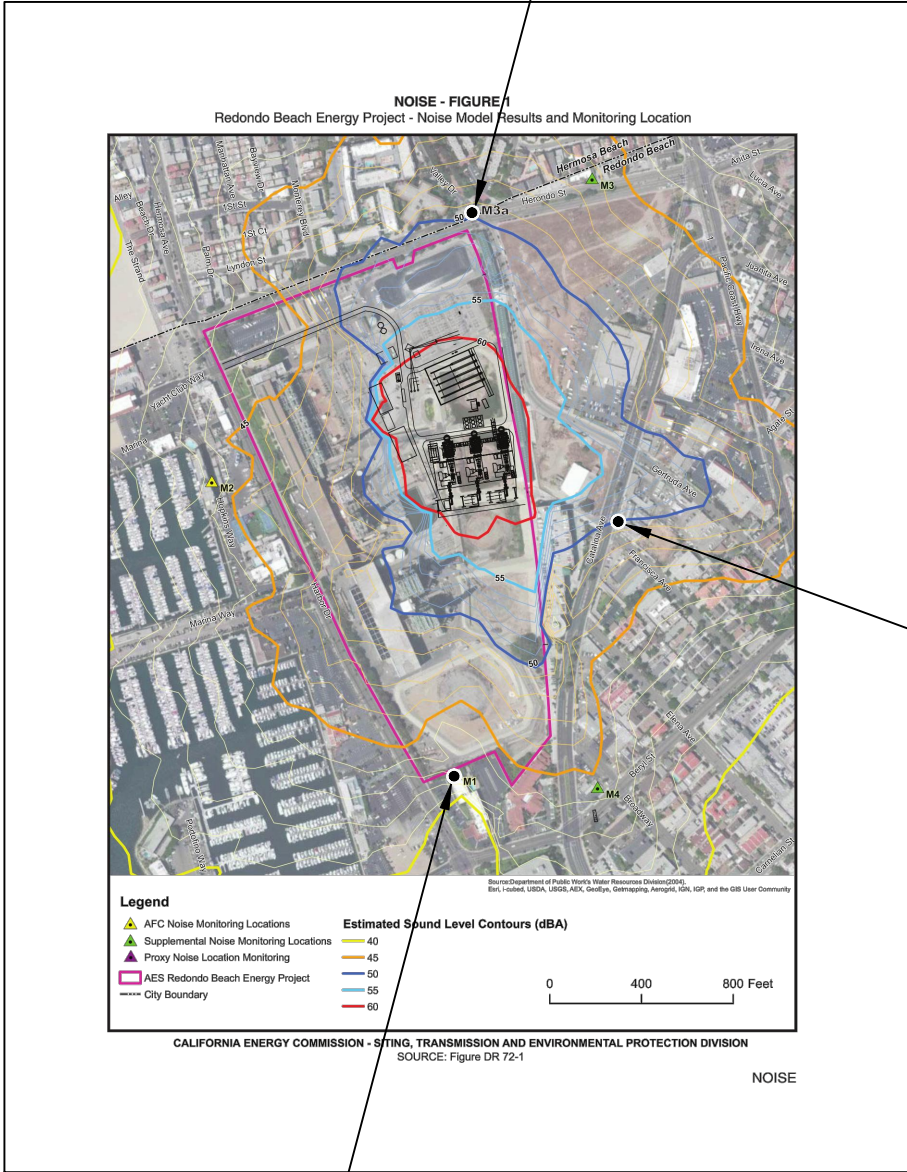
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Location 1: 53 dBA
(CSA Calculated)



Location 2: 56 dBA
(CSA Calculated)

Location 3: 50 dBA
(CSA Calculated)

NOTE: NOISE CONTOUR MAP EXCERPTED FROM PRELIMINARY STAFF REPORT NOISE AND VIBRATION SECTION

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CSA CALCULATED EXHAUST STACK EXIT NOISE LEVELS

FIGURE 1

CSA # 15-0334

JLD 09.08.15