

DOCKETED

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Project Title:	Huntington Beach Energy Project - Compliance
TN #:	214181
Document Title:	Declaration of Mark Bastasch in Support of Project Owner's Opening Testimony
Description:	Declaration of Mark Bastasch in Support of Project Owner's Opening Testimony (Noise and Vibration)
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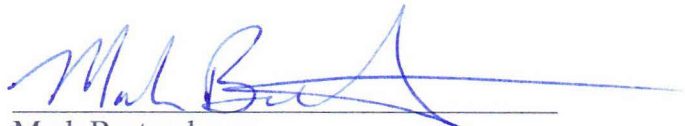
**Declaration of
MARK BASTASCH
Huntington Beach Energy Project
(12-AFC-02C)**

I, **Mark Bastasch**, declare as follows:

1. I am presently employed by CH2M Hill, Inc., under contract with AES Huntington Beach Energy, LLC to provide environmental consulting services for the Huntington Beach Energy Project (“HBEP”).
2. A copy of my professional qualifications and experience is attached hereto as **Attachment A** and incorporated by reference herein.
3. I prepared or caused to be prepared information related to **Noise and Vibration** and other general topics, as identified below, in support of the Petition to Amend for HBEP. Such information was either provided by me to consultants for incorporation of such data into documents or was based on my independent analysis of data from reliable documents and sources, as well as my professional experience and knowledge. Specifically, I prepared or caused to be prepared the following:
 - a. Petition to Amend, Section 5.7 (Noise and Vibration) (TN# 206087), docketed September 9, 2015
4. It is my professional opinion that the information provided to the California Energy Commission related to the HBEP’s Petition to Amend proceeding is valid and accurate with respect to the issues addressed herein.
5. I am personally familiar with the facts and conclusions related in the testimony presented by me and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 10/21/2016



Mark Bastasch



Mark Bastasch, P.E., INCE

Environmental Engineer, Noise Assessment

Education

M.S., Environmental Engineering
B.S. (cum laude), Environmental Engineering

Professional Registrations

Professional Acoustical Engineer: Oregon
Professional Environmental Engineer: Oregon (No. 58990EN)
Professional Civil Engineer: Oregon, 1999 (No. 58990PE)
Certified Water Rights Examiner (CWR): Oregon, 2000 (No. 58990CWRE)

Organizations / Affiliations

Member, Institute of Noise Control Engineering
Member, Acoustical Society of America

Relevant Experience

Mr. Bastasch is a registered acoustical engineer with 16 years of experience conducting acoustical evaluations, environmental audits, contamination assessments, and multimedia environmental permitting. For the past decade, Mr. Bastasch has provided technical insight, forethought and leadership on acoustical matters to the renewable power industry and its partners and has been an invited speaker to organizations such as Harvard Law School/Consensus Building Institute, USDOE's Wind Powering America, International Energy Agency/USDOE's National Renewable Energy Laboratory, the National Wind Coordinating Council, Law Seminars International, American Wind Energy Association, USDOE's New England Wind Energy Education Project and with officials in Japan. His power permitting and design experience spans the United States and he has supported multiple EPC efforts both domestic and internationally which have fully complied with applicable regulatory limits.

Relevant Experience

Lead Acoustical Engineer; Edison Mission Energy's GE LMS100 Peaking Facilities; Southern California. Led acoustical tasks on two simple cycle power facilities each utilizing 5 GE LMS100 combustion turbines in simple cycle. Tasks included evaluating and measuring background noise levels to determine and evaluate risk associated with potential CEC permit limits; extensive coordination with GE given limited available data resulting from short operating history of the LMS100 (these were the first LMS100 evaluated in California); preparing Application for Certification to the CEC. Additional tasks included development and review of acoustical bid and guarantee specifications for cooling towers, SCR, stack, transformers, and other balance of plant equipment. Developed a phased mitigation program to minimize cost and mitigate acoustical risk given limited operating history similarly packaged LMS100s

Acoustical Engineer; Los Esteros Critical Energy Facility, San Joaquin Valley Energy Center, East Altamont Energy Center, Delta Energy Center; Calpine Corporation; California. Conducted detailed environmental noise survey to demonstrate that this simple cycle LM6000 facility complied with its conditions of certification. Report was accepted by the California Energy Commission without comment.

Lead Acoustical Engineer; Walnut Energy Center; Turlock Irrigation District; Turlock, California. Led acoustical tasks for a combined cycle power plant that included evaluating and measuring background noise levels; developing detailed noise model; comparing expected noise levels with the City of Turlock, County of Stanislaus, and the CEC's noise guidelines; preparing Application for Certification and subsequent amendments submitted to the CEC; regulatory negotiation; and reviewing Conditions of Certification.

Mark Bastasch, P.E., INCE

Additional tasks included development assistance with acoustical bid and guarantee specifications and independent analysis of manufacturer steam turbine generator enclosure.

Lead Acoustical Engineer; BrightSource Energy; Ivanpah Solar Electric Generating System. Authored noise section of California Energy Commission Application for Certification. Successfully worked with CEC staff to streamline noise analysis and eliminate unnecessary field studies given remote project site and lack of noise sensitive receptors.

Lead Acoustical Engineer; MEGS; Modesto Irrigation District; Ripon, California. Led acoustics for a LM6000 (Norway package) power plant. Tasks included evaluating and measuring background noise levels; coordinating measurements of operating Norway Package with General Electric; developing detailed noise model; comparing expected noise levels with the City of Ripon, County of Stanislaus, and the California Energy Commission's (CEC) noise guidelines; preparing Application for Certification and subsequent amendments submitted to the CEC; regulatory negotiation; and review of Conditions of Certification, testimony at CEC evidentiary hearings.

Lead Acoustical Engineer; Eastshore Power Project; Tierra Energy; Hayward, California. Evaluated and measured background noise levels to determine and evaluate risk associated with potential CEC permit limits and prepared application for certification to the CEC. Reviewed available vendor data and commitments. The facility is a 115.5-MW simple cycle power plant consisting of 14 Wärtsilä 20V34SG natural-gas-fired reciprocating engine generators and associated equipment.

Lead Acoustical Engineer; Humboldt Bay Repowering Project; Pacific Gas & Electric; Humboldt, California. Evaluated and measured background noise levels to determine and evaluate risk associated with potential CEC permit limits; prepared application for certification to the CEC, conducted site tour with CEC's acoustical staff and reviewed of existing EPC commitments. Facility is a load following power plant consisting of 10 natural gas-fired Wärtsilä 18V50DF 16.3 megawatt (MW) reciprocating engine-generator sets and associated equipment with a combined nominal generating capacity of 163 MW.

Project Manager/Lead Acoustical Engineer; Calpine GE LM6000 Peaker Program; Calpine Corporation; Dublin, California. Prepared California Environmental Quality Act level noise assessments for more than 10 LM6000-based peaking power plants located throughout northern California. Developed a flexible and streamlined program to accurately and quickly prepare acoustical assessment. Tasks included regulatory review and interpretation of city and county noise standards, ambient measurements and analysis, development of a standardized model that included several levels of optional mitigation and field verification at operating facilities, and regulatory negotiations.

Lead Acoustical Engineer; Cosumnes Power Plant, Sacramento Municipal Utility District, California. Led acoustical tasks on this two-phase, 1,000-MW combined-cycle power plant on buffer lands for the former Rancho Seco Nuclear Plant. Prepared AFC, worked with SMUD legal counsel and permitting team to address intervenor comments. Alternative mitigation measures were developed in consultation with CEC Staff to establish acceptable Conditions of Certification Application for Certification for combined-cycle gas fired generation facility. Prepared amendments to include a natural gas transmission line and required gas compressors. Expert witness testimony before California Energy Commission.

Lead Acoustical Engineer; Licensing and Permitting for San Francisco Electric Reliability Project (SFERP); San Francisco Public Utilities Commission. Led acoustical tasks to develop a 145-MW simple-cycle plant in southeast San Francisco, using three LM 6000 turbines. Because plant is located two blocks south of an existing plant, major issues included remediation of the power plant site (contaminated fill), air quality mitigation measures, water supply, environmental justice, and the need for in-city generation.