Exhibit 49:
Received 04-16-19

JACOBS

Mark Bastasch, P.E., INCE

PRINCIPAL ACOUSTICAL ENGINEER

Mr. Bastasch has more than 18 years of experience conducting acoustical evaluations, environmental audits, and working with multimedia environmental permitting and design teams. His acoustical permitting and design experience spans the United States and he has supported multiple design, and EPC efforts both domestic and internationally which have fully complied with applicable regulatory limits. He recognized for his technical experience and public engagement support which spans multiple sectors, including analysis and public outreach on multiple industrial and transportation projects.

EDUCATION/QUALIFICATIONS

M.S., Environmental Engineering, William Marsh Rice University, Houston, Texas, 1997

B.S. (cum laude), Environmental Engineering, Cal Poly San Luis Obispo, California, 1994

MEMBERSHIPS AND AFFILIATIONS

Member, Institute of Noise Control Engineering

Member, Acoustical Society of America

Organizer, INCE-E Wind Turbine Noise Conference Series

PROFESSIONAL REGISTRATIONS

Professional Acoustical Engineer: Oregon (No. 58990AC)

Professional Environmental Engineer: Oregon (No. 58990EN)

Professional Civil Engineer: Oregon, 1999 (No. 58990PE)

Areas of Expertise

- Specializes in industrial noise measurements, modeling and control for power, industrial and transportation clients.
- Has prepared acoustical analysis or expert testimony for more than 15,000 megawatts (MW) from gas-fired power facilities and more than 5,000 MW from wind generation facilities.
- Lead technical consultant for Renewable Northwest Project's successful effort to modify the Oregon Noise Rule for wind turbines and routinely consulted by the American Wind Energy Association on acoustical matters.
- Experience includes evaluating and measuring existing noise levels; analyzing noise levels for no-build and build alternatives; supporting feasibility, design, and siting analysis of industrial, high-tech and data center facilities and preparing noise and vibration impact assessment reports.
- Has prepared comprehensive and cost-effective compliance reports for multiple gas-fired power and wind generation facilities demonstrating that permit conditions were satisfied.
- Served as an acoustical technical lead for numerous transportation projects in Alaska, California, Colorado, Oregon, Washington, and Idaho; tasks included monitoring, modeling, and mitigation recommendations in accordance with all applicable state laws.
- Has conducted numerous noise studies in conjunction with National Environmental Policy Act (NEPA) documents and numerous state's energy facility siting requirements.
- Appointed by Oregon State Board of Examiners for Engineering and Land Surveyors to develop and grade the P.E. exam in Acoustics. Oregon was the only state to issue a P.E. in acoustics.

Relevant Project Experience

Industrial Facilities

Lead Acoustical Engineer; Application for Certification; Alamitos Energy Center; AES Southland Development LLC; California. Authored acoustical analysis for a 1,040-MW repower of the existing Alamitos Beach Generating Station located within the coastal zone of

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Long Beach, CA. Tasks included ambient monitoring, acoustical modeling of operational and construction noise, regulatory evaluation and participation in California Energy Commission (CEC) workshops. The CEC issued the final decision for the project in May 2017.

Lead Acoustical Engineer; Application for Certification; Redondo Beach Energy Project; AES Southland Development LLC; California. Authored acoustical analysis for a 546-MW combined cycle repower of the existing Redondo Beach Generating Station. Tasks included operational monitoring, acoustical modeling of operational and construction noise, regulatory evaluation and participation in CEC workshops. The project was actively opposed by several public groups and the City of Redondo Beach. Project permitting was suspended until a Power Purchase Agreement can be secured from the electric utility through the Request for Offer process.

Lead Acoustical Engineer; Application for Certification; Huntington Beach Energy Project; AES Southland Development LLC; California. Authored acoustical analysis for a 840-MW repower of the existing Huntington Beach Generating Station located within the coastal zone of Huntington Beach, CA. Tasks included operational monitoring, acoustical modeling of operational and construction noise, regulatory evaluation and participation in CEC workshops. Mobilized team to provide expert testimony on potential impacts of sound levels on sensitive species. The CEC issued the final decision for the project in May 2017.

Acoustical Engineer; Empire Generating Project; Rensselaer, New York. Comprehensive acoustical analysis, design, specification and compliance assessment of the new 535 MW combined cycle Empire Generating Plant) engineered and constructed by CH2M HILL. The project, formerly known as BESI Corp, was named the Best Gas-Fired Project by Power Engineering in 2013. The project underwent extensive permitting under New York's Article X which required detailed analysis during the bid, design, construction and compliance phases.

Acoustical Engineer; Port Westward Generating Project (1 and 2); Portland General Electric; Oregon. Comprehensive acoustical permitting and compliance assessment of a new 425 MW combined-cycle facility and subsequent amendment for 200 MW additional peaking capacity. Provided owners acoustical engineering services in support of the Port Westward combined-cycle facility and peaking facility. Project experience included facility noise modeling and operational compliance assessment for submittal to Oregon EFSEC. After the successful operation of the combined-cycle facility, multiple options for peaking options were evaluated. Developed acoustical mitigation in consultation with OEMs and PGE to satisfy overall facility permitting requirements.

Acoustical Services, Multiple Confidential Projects, Various Clients, Nationwide. Provide expert acoustical services related to all phases of project development, contracting, construction as well as operational assessments for multiple clients. Tasks range from predictive modeling, review of contract documents, regulatory compliance evaluations to development of comprehensive acoustical monitoring of operating facilities.

Lead Acoustical Engineer; Confidential Client; California. Led acoustical tasks on two simple cycle power facilities each using multiple

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combustion turbines in simple cycle. Tasks included evaluating and measuring background noise levels to determine and evaluate mitigation consistent with CEC permit limits; extensive coordination with OEM; 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.

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. Reports were accepted by the California Energy Commission without comment.

Lead Acoustical Engineer; Hermiston Power Project, Calpine Corporation, Hermiston, Oregon. Conducted acoustical and vibration monitoring to determine if steam turbine generator, heat recovery steam generators, stacks and combustion turbine generators complied with warranted levels within a time critical schedule. Prepared detailed environmental noise monitoring to demonstrate that the facility complied with permit conditions and minimized the time full load operation was needed during off-peak hours. Oregon Office of Energy accepted the report without comment.

Lead Acoustical Engineer; Walnut Energy Center; Turlock Irrigation District; Turlock, California. Led acoustical tasks for a combined-cycle power plant, which 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 California Energy Commission's (CEC) noise guidelines; preparing Application for Certification and subsequent amendments submitted to the CEC.

Acoustical Engineer; Confidential Project. Provided ambient noise monitoring to determine potential project limits consistent with regulatory requirements. Develop an acoustical model to assess projects noise emissions and develop noise mitigation strategies.

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 amend¬ments submitted to the CEC; and review of Conditions of Certification, testimony at CEC evidentiary hearings.

Lead Acoustical Engineer; Humboldt Bay Repowering Project; Pacific Gas & Electric; Humboldt, California. Evaluated and measured background noise levels to determine and evaluate mitigation to comply with potential CEC permit limits; prepared application for certification to the CEC. 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. Develop and execute operational

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compliance monitoring strategy. Compliance assessment was accepted by the California Energy Commission without comment.

Transportation

Lead Acoustical Engineer; Interstate 5 Delta Park to Lombard; Oregon Department of Transportation; Portland, Oregon. Prepared noise analysis, technical report and input for the EA/EIR as well as final noise wall design for this heavily traveled section of interstate highway.

Lead Acoustical Engineer; Reconstruction of Hyampom Road; Shasta Trinity National Forest; Trinity County, California. Prepared noise analysis, technical report and input for the EA/EIR for the FHWA Central Federal Lands Highway Division. Analysis cost and timeline was reduced by performing a desktop analysis given remote project site, low traffic volumes and few residential receptors.

Lead Acoustical Engineer; Idaho 16, I-84 to SH-44 Environmental Study; Idaho Transportation Department. Led noise review on this highly visible project with a 3-year accelerated schedule studying a new 6.5-mile route connecting I-84 to SH-44. The project includes a river crossing and connections across the valley including impacts to farmlands, residential subdivisions, wetlands, and commercial areas.

Task Manager; Huffman Road Reconstruction Project Noise Studies and Mitigation Design; Alaska Department of Transportation and Public Facilities. Prepared preliminary noise analysis for noise measurements collected at seven locations in the project area. Estimated future build noise levels and developed preliminary mitigation measures in accordance with the Alaska Department of Transportation and Public Facilities.

Noise Task Leader; NE 25th Avenue, NE 72nd and St. Johns Road Reconstruction Project; Clark County Department of Public Works; Washington. Collected noise measurements at seven locations in the project area. Existing and future traffic noise levels were predicted with TNM. Conducted reasonable and feasible analysis, developed detailed design for seven barriers, prepared report of analysis, and prepared oversize posters for and presented results at public open house.

Lead Acoustical Engineer; NE 72nd Expansion Noise Analysis; Clark County, Washington. Prepared a report of noise measurements collected at six locations in the project area. Existing and future traffic noise levels were predicted with TNM. Conducted reasonable and feasible analysis. No reasonable or feasible barrier could be designed because of direct driveway access to NE 72nd. Prepared oversize posters for and presented results at public open house.

Senior Reviewer; NE 179th Expansion Noise Impacts; Clark County, Washington. Provided senior review to identify noise monitoring locations and coordinating access with the County and landowners. Reviewed TNM model development.

Acoustical Technical Lead; New Seward Highway Environmental Assessment; Alaska Department of Transportation and Public Facilities; Alaska. Led noise analysis for monitoring, modeling, and mitigation recommendations in accordance with all applicable laws.

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Acoustical Technical Lead; North Pole Noise Analysis; Alaska Department of Transportation and Public Facilities; Alaska. Led noise analysis for monitoring, modeling, and mitigation recommendations in accordance with all applicable laws.

Noise Analysis for Various Sectors

Acoustical Engineer; Water Storage Reservoir; Windsor, California. Prepared acoustical analysis of the construction and operation of the reservoir to support the supplemental environmental impact report for CEQA compliance. Also developed responses to comments received during the permitting process. Project involved comprehensive preliminary engineering and environmental services for a new water storage reservoir to provide seasonal storage needed by the Town's recycled water system.

Acoustical Task Leader; Tehachapi Transmission Line; Southern California Edison; California. Prepared acoustical analysis to support regulatory permitting requirements. This multi-million-dollar proponent's environmental assessment (PEA) included preparation of and support activities for a PEA submitted to the California Public Utilities Commission for an approximately 170-mile transmission line and substation project on federal, state, and private property.

Acoustical Task Lead; Fountaingrove Lodge Environmental Impact Report; Santa Rosa, California. Provided acoustical assistance in responding to comments for this proposed 136-unit community care facility and 12 units of employee housing on 9.85 acres. The CEQA process was completed under significant public scrutiny.

Acoustical Task Lead; Odessa Environmental Impact Statement; Eastern Washington. Prepared acoustical analysis to support regulatory permitting requirements. Tasks included modeling and preparing required environmental documentation. The EIS evaluated alternatives to deliver surface water from the Columbia Basin Project (CBP) to irrigated lands that currently rely on a declining groundwater supply from the Odessa Groundwater Management Subarea in eastern Washington.

Wind and Solar Energy Projects

Lead Acoustical Engineer; South Fork Wind Farm; Deepwater Wind; Offshore Massachusetts, Rhode Island, and New York. Subject matter expert on noise evaluations and documentation. Conducted senior technical review of noise related impact analysis focusing on in-air noise from the proposed construction and operation activities.

Lead Acoustical Engineer; Stateline Wind Project; Oregon and Washington. Led acoustical analysis for a 263-MW wind farm and prepared environmental documentation to comply with both Oregon and Washington standards. At the time of permitting, this was the largest wind project in the world.

Lead Acoustical Engineer; Biglow Canyon Wind Farm; Orion Renewable Energy and Portland General Electric; Oregon. Provided acoustical analysis and regulatory assistance to support the permitting and construction of the Biglow facilities. Efforts included monitoring, modeling, regulatory review and preparation of compliance filings.

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Lead Acoustical Engineer; Blue Creek Wind Energy Project; Iberdrola (Avangrid) Renewables; Ohio. Prepared acoustical analysis for the Ohio Power Siting Board (OPSB) application for this 350-MW wind project in Van Wert and Paulding counties. Tasks included ambient monitoring, operational modeling, regulatory review and support for various meetings.

Lead Acoustical Engineer; Massachusetts Military Reservation, United States Air Force. Prepared acoustical analysis to support NEPA EA's for three proposed projects.

Lead Acoustical Engineer; High Plains Wind Project, Seven Mile Hill Wind Project, and Glenrock Wind Project; Wyoming. Prepared technical noise analysis for submittal in support of ISA permitting process. Develop noise models and contours to assess potential acoustical compliance with multiple turbine types and layouts.

Lead Acoustical Engineer; Wind Project; Confidential Client. Provided preliminary acoustical modeling and permit assistance at the local and state levels and developed a noise monitoring protocol. Helped draft alternatives for revisions to the state noise standard as it applies to wind energy facilities.

Lead Acoustical Engineer; Kittitas Valley Wind Project; Washington. Led the successful filing of an acoustical analysis for the Washington Energy Facility Siting Evaluation Council (EFSEC) for a 121-turbine wind energy project. This was the first time Washington's EFSEC siting process had been used for a wind project. Provided expert testimony at state and local level. Project permit was upheld by State of Washington's highest court.

Lead Acoustical Engineer; Wild Horse Wind Project; Washington. Led environmental and engineering noise studies to support a 158-wind-turbine project with an installed nameplate capacity of up to 312 MW and associated transmission, substation, roads, and O&M facility.

Lead Acoustical Engineer; Wind Project; Confidential Client. Prepared acoustical analysis in support of EIS permitting efforts, which included public meeting attendance, preparing expert witness testimony, and supporting public hearing.

Lead Acoustical Engineer; Wind Project; Confidential Client. Provided technical assistance and oversight related to compliance monitoring by County's third-party noise consultant.

Lead Acoustical Engineer; Palouse Wind Project; First Wind; Washington. Prepared acoustical analysis in support of State Environmental Policy Act EIS and Conditional Use Permit application efforts for this 100-MW project in Whitman County. Task included public meeting attendance, preparing expert witness testimony, and supporting public hearing.

Lead Acoustical Engineer; Lower Snake River Wind Project; RES Americas and Puget Sound Energy; Washington. Prepared permitting analysis, expert report and testimony to support the permitting of this 1,400 MW wind farm. Tasked included supporting extensive public outreach at various open house and other forums as well as responding to multiple acoustical comments from the public and agencies

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during the permitting process. The second phase of this project was recently constructed and is now owned by Portland General Electric.

Lead Acoustical Engineer; Boardman Solar Energy Facility; Invenergy, Oregon. Prepared acoustical analysis for the 800-acre, Boardman Solar Energy Facility, which is a 75-MW, photovoltaic solar energy generation facility. Authored Exhibit X, Noise, for the facility's Application for Site Certificate (ASC) to the Oregon Energy Facility Siting Council. Responded to agency information request. The Site Certificate was issued for the facility in February 2018.

Professional Organizations/Affiliations

Member, Institute of Noise Control Engineering

Member, Acoustical Society of America

Organizer, INCE-E Wind Turbine Noise Conference Series

Publications and Presentations

Moderator, Conference Organizer and Instructor "Introduction to Acoustics" at INCE-Europe Wind Turbine Noise 2017. Rotterdam, Netherlands. May 2017.

Plenary Speaker. Acoustics 2016. "Wind Turbine Sound: Past, Present and Future" Brisbane, Australia. November, 2016.

"Glad to hear it! A Brief Update on Wind Turbine Sound", Canadian Wind Energy Association Annual Conference. Calgary, Alberta. November 2016.

"Glad to hear it! Wind Turbine Sound" American Wind Energy Association Wind Power Project Siting and Environmental Compliance Conference and Wind Power Conference. March and May 2016.

Wind Turbine Noise Topic Organizer. InterNoise 2014. Melbourne, Australia. November, 2014.

Plenary Speaker. INCE-USA Noise-Con 2013. Denver, Colorado. August 28, 2013.

Instructor: "Introduction to Acoustics" INCE-Europe Wind Turbine Noise 2013. Denver, Colorado. August 27, 2013.

"Criteria." Wind Turbine Noise. Bowdler & Leventhall, editors. Multi-Science Publishing Co. Ltd. ISBN 978-1-907132-30-8. January, 2012.

"AWEA/CanWEA Expert Sound Panel and Wind Turbine Sound Regulations", University of Tokyo, Tokyo, Japan. September 12, 2011

"Wind Turbine Sound", Consensus Building Institute Workshop of Facilitating Wind Energy Siting, Harvard Law School, Cambridge, MA, March 23-25, 2011.

"Wind Turbine Sound and Health – An Expert Panel Review", American Wind Energy Association, Windpower 2010, Dallas, TX, May 24-27, 2011.

"Wind Turbine Noise." American Wind Energy Association Wind Power Project Siting Workshop, Milwaukee, WI, February 28 – March 2, 2007.

"Wind Turbine Noise – An Overview." Bastasch, M., et al. Journal of the Canadian Acoustical Association. June 2006. Vol. 34 No. 2.

"Wind Turbine Generator Noise Prediction - Comparison of Computer Models." Tickell, C.E, Ellis, J. T., Bastasch, M. Proceedings of ACOUSTICS 2004, 3-5 November 2004, Gold Coast, Australia.

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