

**DOCKETED**

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STATE OF CALIFORNIA

Energy Resources  
Conservation and Development Commission

In the Matter of:

Application For Small Power Plant  
Exemption for the  
**McLAREN BACKUP GENERATING  
FACILITY**

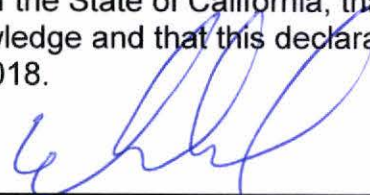
**DOCKET NO. 17-SPPE-01**

**DECLARATION OF MICHAEL  
STONER**

I, Michael Stoner, declare as follows:

1. I am presently employed as a Principal with Lake Street Consulting.
2. I have been engaged by Vantage Data Centers to be the Project Manager for the development of the McLaren Backup Generating Facility and the McLaren Data Center.
3. A copy of my professional qualifications and experience is included with this Opening Testimony and is incorporated by reference in this Declaration.
4. I prepared the attached testimony relating to all subjects for the Application for Small Power Plant Exemption for the McLaren Backup Generating Facility (California Energy Commission Docket Number 17-SPPE-01).
5. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
6. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed at Santa Clara, California on August 9, 2018.



\_\_\_\_\_  
Michael Stoner

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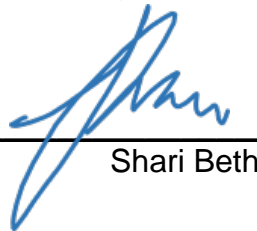
**DECLARATION OF SHARI BETH  
LIBICKI**

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I, Shari Beth Libicki, declare as follows:

1. I am presently employed as Ramboll's Global Air Quality Service Line Leader.
2. A copy of my professional qualifications and experience is included with this Opening Testimony and is incorporated by reference in this Declaration.
3. I prepared the attached testimony relating to all subjects for the Application for Small Power Plant Exemption for the McLaren Backup Generating Facility (California Energy Commission Docket Number 17-SPPE-01).
4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed at San Francisco on August 9, 2018.



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Shari Beth Libicki

**VANTAGE DATA CENTERS  
McLAREN BACKUP GENERATING FACILITY  
ALL SUBJECTS  
OPENING TESTIMONY**

I. Name: Michael Stoner  
Shari Beth Libicki

II. Purpose:

Our testimony addresses all technical subjects associated with the construction and operation of the McLaren Backup Generating Facility (MBGF) as described in the Application For Small Power Plant Exemption (CEC Docket 17-SPPE-1).

III. Qualifications:

**Michael Stoner:** I am presently employed as a Principal at Lake Street Consulting and have been for the past 18 years. I have a Bachelor of Science Degree in Civil Engineering from University of Washington and I have 29 years of experience in development within California.

I am engaged by Vantage Data Centers to be the Project Manager for development of the McLaren Backup Generating Facility and the McLaren Data Center. I caused to be prepared and reviewed the Application For Small Power Plant Exemption, as well as the post-filing information, data responses, and supplemental filings.

**Shari Beth Libicki:** I am presently employed as Ramboll's Air Quality Service Line Leader and have been for the past 15 years in that position and at Ramboll for 29 years. I have a Doctorate Degree in Chemical Engineering from Stanford University and I have 29 years of experience in conducting air quality and public health analyses within California and other western states.

I have been engaged by Vantage Data Centers to prepare the Bay Area Air Quality Management District Authority to Construct applications and the air quality and public health analyses for development of the McLaren Backup Generating Facility. I prepared the Air Quality section of the Application For Small Power Plant Exemption and Air Quality Technical Reports, as well as the post-filing information, data responses, and supplemental filings.

Detailed descriptions of our qualifications are presented in the resume which is included in Attachment A to this Opening Testimony package.

To the best of our knowledge all referenced documents and all of the facts contained in this testimony are true and correct. To the extent this testimony contains opinions, such opinions are our own. We make these statements and provide these opinions freely and under oath for the purpose of constituting sworn testimony in this proceeding.

IV. Exhibits

In addition to this written testimony, we will be sponsoring the exhibits listed on Vantage Data Centers' Proposed Exhibit List which will be attached to its PreHearing Conference Statement.

V. Opinion and Conclusions

We have reviewed the Initial Study/Mitigated Negative Declaration published by CEC Staff on June 22, 2018 and we agree with its findings, analysis and conclusions including the new and modified mitigation measures.

**ATTACHMENT A**  
**RESUMES**



# Michael Stoner

Michael Stoner heads the entitlement, design and construction for Lake Street. For more than 29 years, he has effectively managed the people and resources required for complex projects.

He has completed a variety of projects including master planned communities, mixed use, multifamily, retail centers, hospitality, design build projects and office campuses. His has extensive experience with entitlements, CEQA and the ever changing challenges with project approvals in California.

Prior to starting Lake Street in 2000, Michael was a Project Executive for a General Contractor, which consistently ranked in the top 100 of Engineering News Record magazine's Top 400 general building contractors.

## Education

### University of Washington

Bachelor of Science  
Structural Engineering

### Golden Gate University

Master of Business  
Administration  
Finance Concentration

## Certification

LEED Accredited  
Professional

## References

### Innisfree Companies

David C. Irmer  
(415) 332-6250

### Menlo Equities

Richard J. Holmstrom  
(650) 326-9300

### SummerHill Apartment Communities

Bracken Richardson  
(650) 842-2332

### Napa Junction Phase I & II American Canyon

Role: Developer  
\$146 Million

Mixed-use project with 216 unit apartment complex, 100 room hotel, 215,000 sf of retail, retail services and 3 acre Main Street Park.

### The Nueva School, Bay Meadows

Role: Lead Entitlement thru Construction  
\$55 million

LEED Gold 125,000 sf urban high school over one level of parking with innovative design meeting 21<sup>st</sup> century needs.

### The Village, San Leandro

Role: Developer  
\$10 Million

23,000 sf specialty shopping center located in downtown San Leandro. Tenants include CVS, Peet's and AT&T.

### Pacific Hacienda, San Carlos

Role: Lead Design & Construction  
\$71 Million

4 story 89 condominiums over two level underground parking garage with historically renovated offices.

### Napa Gateway Commerce Center Napa

Role: Developer  
\$8.4 Million

Two industrial R&D buildings each totaling 20,640 sf located in the Napa Gateway Business Park.

### Venue, San Francisco

Role: Construction Manager  
\$49 Million

Mixed use project with 148 unit apartment complex and ground floor retail located over two level parking garage. Project includes extensive podium amenities and community spaces.

### The Nueva School, Hillsborough

Role: Lead Design & Construction  
\$22 Million

LEED Gold & Top 10 Sustainable Projects in the U.S. New library, two-story classroom building and student center.

### On Broadway, Redwood City

Role: Lead Design & Construction  
\$91 Million

Revitalized of Redwood City's downtown with 20 screen cinema, 95,000 sf of retail over a two level underground parking garage.

### Villas on the Blvd., Santa Clara

Role: Lead Design & Construction  
\$41.5 Million

4 story 186 unit apartment complex over one level of parking garage with extensive podium amenities and community spaces.

### Napa Junction Phase III American Canyon

Role: Developer  
\$60 Million

Full approved mixed use development including 180 apartment complex, 25,000 sf of retail/commercial space and 100 room hotel.

tel | 650.327.2120 cell | 650.776.8553

800 Oak Grove Avenue, Suite 210 Menlo Park, CA 94025

web | lakestreetventures.com email | michael@lakestreetventures.com

# SHARI BETH LIBICKI, PHD

## Principal Air Quality Service Line Leader

Dr. Shari Beth Libicki, Ramboll Environ's global Air Quality Service Line Leader, has over 25 years of chemical fate and transport experience, as applied to managing greenhouse gas (GHG) emissions and estimating air emissions and dispersion from chemical processes, landfills and new developments. Her experience includes providing technical expertise to entitlement and litigation teams, negotiating complex technical agreements and permits with agencies and assisting facilities with compliance programs. She is an expert on GHG evaluations for California Environmental Quality Act (CEQA) documents, and is at the forefront of developing regulations in California, having served on the Regional Targets Advisory Council. She has conducted extensive air quality regulatory assessments for New Source Review/Prevention of Significant Deterioration (NSR/PRD) permitting and compliance auditing. Shari has lectured widely on evaluating climate change impacts for new developments and estimating chemical exposure for risk assessments. She currently serves as a Lecturer in the Department of Chemical Engineering at Stanford University.



### CONTACT INFORMATION

**Shari Beth Libicki, PhD**

[slibicki@ramboll.com](mailto:slibicki@ramboll.com)

+1 (415) 796.1933

Ramboll  
201 California Street  
Suite 1200  
San Francisco, 94111  
United States of America

### EDUCATION

PhD, Chemical Engineering, Stanford University, 1985  
MS, Chemical Engineering, Stanford University, 1981  
BSE, Chemical Engineering, University of Michigan, 1979

### EXPERIENCE HIGHLIGHTS

#### Litigation Support

- Served as an expert witness for a series of mass torts where plaintiffs alleged harm resulting from emissions from a flaring event at a refinery. There was nearly a decade of information from ambient air monitors sited in and around the refinery. In addition, there was monitoring information on emissions from the flare during the flaring event. Issues centered around using discrete monitoring data and air dispersion modeling to evaluate impacts in the neighborhood.
- Served as an expert witness for several cases where plaintiffs alleged harm as a result of living near a waterway into which oil was released as a result of excessive rainfall at a refinery. Issues in the case included an evaluation of the cause of the release, emissions estimation, dispersion modeling, and an analysis of an extensive set of ambient air quality data.
- Provided technical support to attorneys on a litigation case where an accidental release of a particulate and liquid material



from a refinery was alleged to have caused harm to thousands of plaintiffs. This included an engineering evaluation of the release quantity, meteorological data analysis, and an evaluation of dispersion and deposition of aerosols in complex and intervening terrain.

- Served as an expert witness in defense of claims of property diminution from fugitive dust emissions from an adjacent coke production facility. The work was conducted using nearby monitors that recorded PM<sub>10</sub> concentrations before and after the establishment of the production facility. A meteorological analysis was also conducted that evaluated whether wind direction impacted measured PM<sub>10</sub> concentrations. The case was further complicated by the presence of rail lines that transported large amounts of coal fines.
- Served as an expert witness for evaluation of exposure to naturally occurring asbestos (NOA) from roadways potentially paved with rock containing NOA in California. Work included evaluating potential exposure pathways, reviewing relevant regulatory restrictions, evaluating activities that may result in dust emissions, and reviewing alternative methods of asbestos analysis.
- Served as an expert witness evaluating PCB airborne emissions from process emissions and soil contamination from a PCB-producing facility. This included PCB manufacturing process reconstruction since the beginning of PCB manufacturing, as well as an estimate of the amount of PCB emitted from fugitive dust from vehicles traveling over contaminated roads, and dust track-out.
- Served as an expert witness in defense of a remediated wood treatment facility where historical dust emissions were alleged to have contaminated the neighborhood. The analysis included an evaluation of the various factors that would impact dust contamination including vegetation, rainfall, vehicle count, and meteorology.
- Served as an expert witness supporting the permitting efforts of a large landfill in Texas. Permit contestants alleged that the landfill gas collection system was improperly designed and was incapable of collecting landfill gas consistent with the requirements. The case included the use of surface methane measurements, odor complaint history, and well measurements to show that the landfill gas system was operating as designed.
- Served as an expert witness for an odor issue at a landfill in Ohio. Plaintiffs alleged that odors were pervasive and persistent over a large area surrounding the landfill. A computer animation of the odor complaints showed that the odors were unidirectional, and occurred only under certain meteorological conditions.
- Served as an expert witness for a several cases where plaintiffs alleged harm as a result of living near a creosote wood treatment plant. Issues in the cases included emissions estimation, dispersion modeling, analysis of air, soil and sediment and attic dust sampling data.
- Served as an expert witness for a mass tort where plaintiffs alleged harm resulting from a wide variety of emissions sources at a pharmaceutical manufacturing facility. Primary issues centered around hexavalent chromium emissions from cooling tower drift. Ramboll Environ's analysis included historical emissions reconstruction and dispersion modeling, and evaluation of monitoring data.
- Provided expert support in a case requiring reconstruction of emissions over a 70-year period from a specialty chemical manufacturer. Emissions estimation involved reconstructing historical processes and process controls and combining them with annual production records. The emissions estimates were used to assist in case settlement.
- Provided expert assistance in estimating airborne emissions and onshore impacts from an offshore oil leak. Evaluation included reviewing monitoring data, data on emissions, meteorology, and the potential for dissolution and degradation.
- Served as an expert witness in a case where exposure to arsenic from the burning of CCA-treated wood was alleged. The case surrounding the potential for a lineman to be exposed to arsenic from CCA-treated utility poles due to utility pole fires.
- Served as an expert witness evaluating impacts from airborne emissions associated with an oil spill into a river. The oil flowed downriver, and odors from the spill were noticed along the river. Ambient air monitoring data was available from soon after the spill occurred. Issues associated

with this case included evaluating air monitoring data, and estimating volatilization, dispersion and chemical speciation of the emissions.

- Served as an expert witness in a litigation case where a release of mercaptans from a refinery was alleged to cause harm to students in a nearby school. The work involved analysis of samples to evaluate the composition of the released materials, an analysis of the release quantities, and the dispersion of those emissions.
- Served as an expert witness in a litigation case where vinyl chloride was released from a co-disposal landfill. The work involved deploying an extensive monitoring network to analyze the neighborhood ambient air, and was able to characterize the locations with elevated vinyl chloride ambient air concentrations based on modeling and the monitoring data.
- Provided impartial technical assistance to both the plaintiffs and defense in a toxic tort case involving aerosolized air emissions from a large acid manufacturing facility in Arkansas. Particular issues in the case surrounded the potential for particulate formation under certain meteorological conditions; evaluation of control technology, and overall evaluation of emissions from the facility.
- Provided expert assistance on a litigation case where subsurface methane gas from a rogue landfill was alleged to damage property values in a housing development. Developed methods to evaluate trace chemicals and extent of gas migration.
- Provided independent technical assistance to the court's mediator on landfill gas migration and control issues for a landfill toxic tort litigation involving a very large landfill (several square miles) in the Eastern United States.
- Served as an expert witness in a litigation case where ammonia was released from a refrigeration system. This included an analysis of the opposing expert's work, creation of a model to describe the release from the system, and evaluating alternative scenarios.
- Served as an expert witness in a litigation case evaluating the potential for cross-contamination via process exhausts, within an industrial facility. The potential for the airborne particulate contaminant to contribute to trace concentrations in the product was analytically evaluated.
- Provided technical support to attorneys in a litigation involving the impacts from a chlorine tank spill. The spill was modeled and the impact of meteorological conditions and varying spill scenarios was evaluated.
- Provided litigation support for an evaluation of pesticide contamination to determine whether pesticide at site was a result of spills and leaks or airborne deposition as a result of pesticide milling at the site.
- Provided expert assistance in cases where the impacts of facility emissions were compared to Proposition 65 thresholds. Several of the cases were in active litigation.

### **Permitting and Enforcement**

- Provided nationwide compliance assistance to six iron and steel mini-mills. Work conducted includes: preparation of Title V permit applications and supporting emissions estimates; preparation of PSD permits and associated emissions and dispersion modeling; evaluation of RACT controls for mini-mills.
- Managed PSD permit applications for two aluminum smelting facilities. This work included preparation of the emissions inventories, managing the Class I and Class II modeling effort, conducting the best available control technology (BACT) analysis, and preparing the technical document. She also negotiated permit conditions with the agencies, and assisted with cross-border discussions with other impacted agencies.
- Assisted a large landfill in Southern California respond to a series of Notices of Violation surrounding odor issues. Ramboll Environ conducted computational fluid dynamic (CFD) modeling study to evaluate the sources of odors at the landfill, as well as to predict where odors might occur in the neighborhood and under what conditions. Ramboll Environ also conducted a surrogate sampling study where it was found that ethanol was a surrogate for odors. Finally, Ramboll Environ assisted in the negotiations which allowed the landfill to continue operations.

- Managed the preparation of an application for an Authority to Construct for a state-of-the-art hazardous waste treatment storage and disposal facility, which included a risk assessment for the project, and successfully negotiated permit conditions with state and local agencies. Currently working with facility and regulators to implement permit conditions.
- Worked as a technical advisor to the Imperial County Air Pollution Control District (ICAPCD) for the permitting of a rail-haul landfill. This landfill is proposed to be the largest landfill in the United States, and had monitoring, modeling, and enforceability issues associated with the permit. Of particular interest was a phased permitting approach that allowed the landfill operator to take advantage of newer technologies that could reduce emissions of criteria pollutants over time.
- Prepared and submitted several Federal Operating Permit Applications under Title V of the Clean Air Act for industrial facilities. Currently working on ongoing negotiation for permits.

### Monitoring

- For a leading environmental non-governmental organization, prepared a white paper on the different types of inexpensive monitors that may be used to monitor emissions around oil and gas operations. We evaluated the scientific literature for monitor accuracy, stability and the potential for cross sensitivity to pollutants, and provided information on commercially available monitors, and also evaluated pre-commercialized monitoring options to determine what may be on the market in the short to medium term.
- Assisted in the design of a refinery monitoring plan in California. The monitoring was required as the result of a settlement with the host city as a result of a fire several years earlier. The refinery monitoring plan was intended to allow the community, on a real-time basis, to evaluate whether there were releases from the refinery, and included Fourier Transform Infra-Red (FTIR) monitors on the fence line, along with fixed monitors for a variety of criteria pollutants and toxic air contaminants. Our input was primarily designed to make the data more useful to the community and refiner.
- Directed a yearlong ambient air-monitoring program to measure particulate matter and diesel particulate matter (DPM) at the boundary of a large landfill in Los Angeles and a nearby school. The results of the monitoring program were analyzed temporally and as a function of meteorology. The results of the program showed that nearby freeways provided an overwhelming fraction of the measured DPM.
- Designed a complex fourteen-station ambient air monitoring network around a co-disposal landfill to measure the concentrations of 19 toxic chemicals in both gaseous and particulate phase for risk assessment purposes and negotiated approval with local, state and federal regulators.
- Analyzed the results of a complex multi-year total suspended particulate monitoring program to understand the sources of arsenic in the ambient air, and to evaluate the health risks of the arsenic levels that could be related to nearby facility emissions.
- Designed and conducted the compliance ambient air monitoring program for a large hazardous waste facility. The ongoing program collects whole air and total suspended particulate samples at five stationary sites. Prepared risk assessment based on the program, and quarterly reports for review by the local air district and the California Environmental Protection Agency's (EPA)'s Department of Toxic Substances and Control (DTSC).
- Designed, negotiated and managed a novel cost-effective ambient air monitoring program that yielded real-time information on the health impacts of a site remediation. This study is the basis of a well-received paper.

### Land Use Entitlement

- Project director for the Chevron Renewal Project Revised Environmental Impact Report. The Revised EIR fulfilled the requirements of a court decision with specific focus on the Climate Change and Air Quality sections of the EIR. The revision of the Climate Change section described mitigation measures and quantification of the efficacy of those mitigation measures. The Air Quality section included a comprehensive estimate of emissions from the refinery under a range of operating scenarios and addressed a range of process alternatives in the refinery.

- Prepared comprehensive air quality analysis for two large municipal solid waste landfills in Southern California. Evaluation included impact of exhaust from non-road heavy equipment, dust from waste operations, and emissions from landfill gas escaping the collection system, and flares and turbines used to destroy the landfill gas. Projects included public testimony on results of analysis.
- Analyzed the impacts of potential accident scenarios prior to the construction of several new industrial facilities. The results of the analyses were used to make recommendations as to how to improve the safety and minimize the risks to the surrounding community.
- Project director for the development of the California Air Pollution Control Officer's Association (CAPCOA) manual on quantifying mitigation for a wide variety of carbon reduction measures that can be used for residential and commercial development.
- Project director for CalEEMod®, a new software package to estimate GHG, air toxics and criteria pollutant emissions from new development projects in California.
- Evaluated climate change impacts of dozens of new projects under CEQA and National Environmental Policy Act (NEPA). Specific types of projects include large, multi-use developments, landfill expansions, and transportation hubs.
- Provided innovative air quality services for entitlement activities, including evaluating the impacts of freeways on air quality, the estimation of emissions from complex industrial facilities, and the impact on public health of those emissions. Provided testimony at public hearings in support of technical analyses.

#### Other

- Evaluated the transport of perfluorooctanoic acid (PFOA) in the air and in the ocean as a part of a large multiphase study being carried out by DuPont. The study resulted in a poster presentation at the American Geophysical Union and centered on how the chemical properties of PFOA impact its transport.
- Evaluated the potential contribution of airborne dioxin releases from a refinery to deposit within a defined boundary and contribute to measured dioxin concentrations in wastewater. Analysis included estimation of dioxin releases from a variety of units, including flares; selection of units most likely to contribute to dioxin deposition; selection of deposition modeling technique; and analysis of results.
- Managed the consequence analysis for several Risk Management and Prevention Programs (RMPP). Projects included scenarios with acids, toxic gases, and chemical reactions. Analysis involved using standard analytical tools as well as some state of the art tools.
- Prepared carbon footprints for facilities in a variety of industries, including landfills, large and small manufacturing operations, commercial developments, and municipal services; assisted in development of GHG minimization programs.
- Provided support to a large shipping company in evaluating the effectiveness of its emissions reduction programs; oversaw design of an automated database system to track fuel use and emissions reductions from a variety of innovative programs to improve reporting and streamline the program.
- Evaluated the potential of deposited arsenic-based pesticide to contaminate adjacent property. Transport pathways examined included wind-blown dust, surface water transport, and vehicle trackout.
- Conducted preliminary evaluation of whether patterns of measured lead in soil supported contention that lead resulted from airborne emissions from a lead emitting stack located at the site. Concluded that insufficient data was available for analysis.
- Designed a protocol for estimating the quantities of specific hazardous chemicals disposed of in California by region and waste type, and worked with the Department of Health Services to verify protocol.

- Gave lecture series on the harmonization of the State and Federal Risk Management Programs in California, and how to best implement the unified program.
- Prepared and negotiated a settlement proposal with regulators for a large facility which included new methods for calculation of organic emissions, additional controls on processes, and monitoring requirements.
- Gave an invited lecture series to senior environmental professionals in Mexico on the technical basis of the estimation of the impacts of sudden releases of toxic and flammable materials, in the wake of the Guadalajara explosions. Managed technical support team for large toxic tort litigation that involved estimating current and historical emissions from several large facilities, comparing and choosing appropriate meteorological data for the analysis dispersion modeling, mapping of impacts with respect to plaintiffs, and comparison with air quality guidelines and toxicological end points.
- Analyzed the particulate emissions from a basic chemicals processing plant containing over 90 separate sources, conducting a dispersion and culpability analysis, and evaluating the effectiveness of proposed and implemented source controls.
- Estimated emission from contaminated ground water under residential neighborhood and resulting indoor air concentration, using regulatory models and alternative models.
- Participated in the design of a hazardous waste treatment storage and disposal facility.
- Estimated emissions due to volatilization and erosion from hazardous waste sites to support health risk assessments, cleanup levels, and Proposition 65 warning radius.
- Managed AB 2588 emission inventory plans, emissions inventories, and health risk assessments; negotiated reduced emission inventory for a major manufacturer with South Coast Air Quality Management District (SCAQMD); conducted AB 2588 screening assessments.
- Modeled dispersion of air emissions from multi-source industrial facilities and estimated increases in ambient air concentration of specific emissions to determine scope of potentially impacted area.

Prior to joining Ramboll Environ, Shari held the following positions:

- Physical Sciences Officer, Bureau of Oceans and Environmental and Scientific Affairs, US Department of State
  - Developed and implemented a successful negotiation strategy for cooperative scientific projects with Japan and the Soviet Union.
  - Worked with Japan's Science and Technology Agency to initiate a Japanese funding organization for innovative international biotechnological studies.
- Staff Scientist, Alza Corporation
  - Led teams that created, designed, tested, and patented controlled release transdermal and osmotic pump drug delivery systems.
  - Studied the correlation between drug physical chemical data and dermal transport and absorption.
  - Designed and implemented systems to provide effective membrane thickness control in the manufacture of miniature osmotic pumps.
- Lecturer, Department of Chemical Engineering, Stanford University
  - Taught courses in Chemical Engineering Laboratory and Technical Speaking and Writing.

## CREENTIALS

### Awards and Honors

American Association for the Advancement of Sciences Diplomacy Fellow, 1987-1988

United States Department of State Meritorious Honor Award, March 1989

**PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

Member, American Institute of Chemical Engineers

Member, Air & Waste Management Association

**PATENTS**

H.F. Sanders, Y.L. Cheng, D.J. Ensore, S.B. Libicki. Transdermal Drug Composition with Dual Permeation Enhancers. Patent Number: 4,820,720. April 11, 1989.

R.M. Gale, D.J. Ensore, D.E. Nedberge, M. Nelson, Y.L. Cheng, S.B. Libicki. Transdermal Administration of Progesterone, Estradiol Esters, and Mixtures Thereof. Patent Number: 4,788,062. November 29, 1988.

**PUBLICATIONS & PRESENTATIONS**

Vijayaraghavan, K., S.B. Libicki, R. Beardsley, J. Jung, S. Ojha. 2018. "Modelling of Atmospheric Mercury Deposition in India." Published in "Urban Air Quality Monitoring, Modelling and Human Exposure Assessment." Springer Publishing.

Nambiar, M. and S.B. Libicki. 2018. "Residential Indoor Particulate Matter Monitoring: A Comparative Study of Two Low-Cost Sensor Technologies". Presented at Air & Waste Management Association Annual Conference. Hartford. CT. June.

Klug, S.E., K.L. Krieger, D.W. Weaver, M.T. Keinath, S.B. Libicki. 2012. "Quantifying Filtration Impacts on Indoor Exposure to Particulates." Presented at Air & Waste Management Association Conference and Exposition. June 19, 2012.

Bowie, T.; S.B. Libicki, K.L. Davis, C. Emery. 2011. "Strategies for Designing an Odor Monitoring Program for Municipal Solid Waste Landfills." Presented at Air & Waste Management Association Conference and Exposition. June 22, 2011.

Keinath, M.T. and S.B. Libicki. 2010. "Preventing GHG Leakage: Benchmarking Emissions to Design a Fair Cap and Trade System under AB32." Presented at the 2010 California Construction and Industrial Materials Association (CalCIMA) Education Conference. San Diego, CA. September.

Van de Griend, R., R.W. Andersen, S.B. Libicki, J. Ilisco, U. Senturk. 2009. Arsenic In Glass Highway Marking Beads. A&WMA's 102nd Annual Conference & Exhibition, Detroit, MI. June.

Hou, M., M.T. Keinath, C. Helvestine, S.B. Libicki. 2008. Predicting Human Exposure near Freeways: A Comparison of AERMOD and CAL3QHCR. AWMA Annual Conference, Portland, Oregon. June.

Weaver D.W., S.B. Libicki, K.L. Davis. 2008. VMT, GHG Reduction, and Planning: Looking Under the Hood. Presented at American Planning Association California Chapter (APACA) Conference. September 21-24.

Keinath, M.T. and S.B. Libicki. 2008. Local Sourcing for Green Building: How Homegrown Materials Can Reduce Your Carbon Footprint. California Construction & Industrial Materials Association (CalCIMA) Annual Conference. September.

DiBiase, M. and S.B. Libicki. 2008. Emissions and the Shipping Industry: Emission Reductions for Ocean-Going Vessels in California Air & Waste Management Association Conference. June.

Libicki, S.B., D. Weaver, and D. Kim. 2007. A Technical Approach to Addressing Climate Change in Environmental Impact Reports. 2007 Environmental Law Conference at Yosemite. Environmental Law Section of the State Bar of California. October.

Kemball-Cook, S.R. and S.B. Libicki. 2006. "Using surface drifter buoys to estimate oceanic transport of surfactants". Presented at the American Geophysical Union Ocean Sciences Meeting.

Libicki, S.B. 1999. When Good Data Goes Bad: What the Numbers Really Mean. American Bar Association Section of Environment, Energy and Resources 7th Section Fall Meeting, San Diego, California. October.

- Libicki, S.B. and R. Van de Griend. 1996. RMPs, RMPPs and SB 1889: Consolidation of State and Federal Risk Management Programs. Presented as a Minimum Continuing Legal Education course at various law firms. San Francisco, California. November-December.
- Stuart, A.L., S. Jain and S.B. Libicki. 1996. The Use of Long-Term Meteorological Information to Predict Impact Probabilities Resulting from Toxic Chemical Releases. PSA 96-International Topical Meeting on Probabilistic Safety Assessment. American Nuclear Society, Park City, Utah. October.
- Libicki, S.B. 1995. The Use of Simplified Quantitative Risk Analysis in Risk Management Decisions at Small and Medium-Sized Process Plants. 88th Annual Air & Waste Management Association Annual Meeting, San Antonio. June.
- Jain, S. and Libicki, S.B. 1995. Estimating the Additional Airborne Release Due to Heat of Reaction and Aerosolization When Strong Acids React With Water during a Release. Air & Waste Management Association Annual Meeting, San Antonio. June.
- Libicki, S.B. 1994. Emergency Release Modeling: Software options and usage strategies. Southwest Safety Congress and Exposition. May.
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