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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
**SEQUOIA BACKUP GENERATING
FACILITY**

DOCKET NO. 19-SPPE-03

**DECLARATION OF MARCELA
DELONG**

I, Marcela DeLong, declare as follows:

1. I am presently employed as a Project Architect, Senior Associate for Corgan.
2. I have been retained by CyrusOne, the sole owner of C1-Santa Clara, LLC to be the Project Manager for the permitting of the Sequoia Backup Generating Facility and the Sequoia 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 Sequoia Backup Generating Facility (California Energy Commission Docket Number 19-SPPE-03).
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 Dallas, Texas, on March 16, 2020.



Marcela DeLong

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

DOCKET NO. 19-SPPE-03

**DECLARATION OF BRIANNA
BOHONOK**

I, Brianna Bohonok, declare as follows:

1. I am presently employed as Associated Principal with Circlepoint.
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 Sequoia Backup Generating Facility (California Energy Commission Docket Number 19-SPPE-03).
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 the offices of Circlepoint on March 16, 2020.



Brianna Bohonok

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

DOCKET NO. 19-SPPE-03

**DECLARATION OF STEVEN
BRANOFF**

I, Steven Branoff, declare as follows:

1. I am presently employed as Principal with Ramboll.
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 Sequoia Backup Generating Facility (California Energy Commission Docket Number 19-SPPE-03).
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 Albany, California on March 15, 2020.



Steven Branoff

**C1-SANTA CLARA, LLC
SEQUOIA BACKUP GENERATING FACILITY
ALL SUBJECTS
OPENING TESTIMONY**

I. Name: Marcela DeLong
Brianna Bohonok
Steven Branoff

II. Purpose:

Our testimony addresses all technical subjects associated with the construction and operation of the Sequoia Backup Generating Facility (SBGF) as described in the Application For Small Power Plant Exemption (SPPE), CEC Docket 19-SPPE-3.

III. Qualifications:

Marcela DeLong: I am presently employed as Project Architect, Senior Associate with Corgan, the project architecture firm hired by CyrusOne, the owner of C1-Santa Clara, LLC (C1). I have been employed by Corgan for the past 8 years. I have a master's degree in Architecture from Ohio State University and I have 8 years of experience developing critical infrastructure projects such as data centers.

I am the Project Manager for the permitting of the SBGF and the Sequoia Data Center. I caused to be prepared and reviewed the Application For SPPE, as well as the post-filing information, data responses, and supplemental filings.

Brianna Bohonok: I am presently employed as an Associate Principal at Circlepoint and have been for the past year. I have a Master's Degree in Urban Planning and Policy from the University of Illinois and I have 7 years of experience in preparing and reviewing California Environmental Quality Act (CEQA) documents.

I have been engaged by C1 to prepare the Application for SPPE for the SBGF and additional documents for docketing at the CEC. I managed the preparation of the Application for SPPE and reviewed and developed several related data responses.

Steven Branoff: I am presently employed as a Principal at Ramboll and have been for the past 19 years. I have a Master of Science Degree in Environmental Engineering from the University of California at Berkeley

and I have 24 years of experience in conducting air quality and public health analyses within California and other western states.

I have been engaged by C1 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 SBF. I prepared or caused to be prepared the Air Quality section of the Application For SPPE 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 C1-Santa Clara, LLC's 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 January 23, 2020 (TN 231651) and we agree with its findings, analysis and conclusions including the new and modified mitigation measures. We also agree with Staff's Responses to Comments on the Initial Study/Mitigated Negative Declaration docketed on March 9, 2020 (TN 232338).

ATTACHMENT A
EXPERT WITNESS RESUMES

Marcela DeLong — AIA

Project Architect | Senior Associate

Marcela has eight years of experience in the architectural field and has worked on several significant data center projects across the nation. Marcela's attention to detail and her ability to communicate clearly and effectively have proven to bring great value in contributing to the overall quality of project delivery and execution. Her experience in diverse project types and industries make her a versatile member of the project team.



SELECT DATA CENTER PROJECT EXPERIENCE

QTS

- DFW Campus; Irving, Texas
- Project Joshua Data Center; Sterling, Virginia

CyrusOne

- Data Center and Office; Carrollton, Texas
- Data Center; Austin, Texas
- Data Center; Santa Clara, California

Equinix

- DA3-2 Data Center Expansion; Dallas, Texas

Stack

- Data Center Master Plan; San Jose, California

Confidential Technology Company

- Retrofit Data Center; Altoona, Iowa

EDUCATION

Master of Architecture, 2011:
Ohio State University

Bachelor of Architecture and
Urbanism, 2007
Universidade Federal do Para, Brazil

REGISTRATION

Architect: Texas
AIA

Years of Experience

7

Expertise

Project Management

Environmental Policy

CEQA and NEPA

Documentation

Case Law

Land Use Planning &

Entitlements

EducationMaster of Urban Planning
and Policy, University of
Illinois at ChicagoB.S. Architecture,
Philadelphia University**Registrations/
Certifications**American Institute of
Certified Planners**Affiliations**Member, Association of
Environmental
ProfessionalsMember, American
Planning Association

Member, SPUR

Work ExperienceProject Manager, Urban
Planning Partners,
Oakland (2015-2017)Associate Environmental
Planner, California
Department of
Transportation, Northern
California (2013-2015)

Brianna brings considerable experience as both a CEQA practitioner and land use planner to Circlepoint. After working in the public and private sector in the Bay Area, she is now leading Circlepoint's environmental group in Southern California. She has managed CEQA and NEPA documents for projects across the State, including highway/roadway projects, transit line extensions, mixed-use development, and data centers. Her diverse experience allows her to be particularly effective in strategizing with clients about the most efficient and defensible approach to environmental review. She offers her clients flexible and thoughtful strategies based on the latest legislation, case law, emerging trends, and best practices. She is passionate about collaborating on each project to bring forward a smooth, efficient, and successful environmental process.

Selected Project Experience**Transportation****Associate Principal, Dumbarton Rail Project, Cross Bay Transit Partners (CBTP)**

The purpose of the Dumbarton Transportation Project is to enhance mobility between residential neighborhoods in the East Bay and job centers on the San Francisco Peninsula. Through an agreement between the Plenary Group and Facebook in partnership with the San Mateo County Transit District, the proposed project is moving forward through a public-private partnership (P3) to improve transportation along this vital corridor. Together, the District and CBTP are exploring new, environmentally appropriate alternatives for a high quality, high-capacity public transit system. The project may also facilitate mixed-use transit-oriented development at key transit connections. Circlepoint has been contracted to lead the composition of the project's environmental documents and community engagement. Brianna supports the Managing Principal on project strategy, management, and key areas of technical analysis.

Associate Principal, I-880 Interchange Improvements Project (Winton Avenue and A Street), Alameda County Transportation Commission (Alameda CTC)

The I-880 Interchange Improvements Project includes interchange reconfigurations that will reduce congestion and improve traffic operations at the I-880/Winton Avenue and I-880/A Street interchanges, thereby enhancing mobility in the area, and improving accessibility to the Southland Mall. Brianna led the preliminary environmental review of the initial project designs (PEAR) and managed the CEQA and NEPA environmental process, including the preparation of project purpose and need, risk assessment, and completion of environmental documentation requirements (IS/EA).

Associate Principal, I-880 Whipple/Industrial Interchange Improvement Project, Alameda County Transportation Commission (Alameda CTC)

The I-880 Interchange Improvements Project would include interchange on- and off-ramp reconfigurations, modifications and/or replacement of bridge structures, local roadway realignments and restriping, and bicycle and pedestrian improvements in the cities of Hayward and Union City, in Alameda County. As determined by the PEAR, Circlepoint will subsequently prepare the Initial Study/ Environmental Assessment (IS/EA) and supporting technical studies to satisfy the environmental requirements for the project. The IS/EA is anticipated to be circulated for public review in the fall of 2019. Brianna led the preliminary environmental review of the initial project designs (PEAR) and is currently managing the CEQA and NEPA environmental process,

including the preparation of project purpose and need, risk assessment, and completion of environmental documentation requirements (IS/EA).

Associate Principal, Dublin Boulevard-N. Canyons Parkway Extension EIR/EA, City of Dublin

The City of Dublin, in coordination with the City of Livermore, Alameda County, and Alameda County Transportation Commission proposes to extend Dublin Boulevard to North Canyons Parkway (1.5 mile). The improvements will complete the roadway connection along the north side of I-580 to facilitate the needs of the growing jobs and housing associated with Association of Bay Area Governments (ABAG) Priority Development Areas (PDA) in the project vicinity. Brianna serves as the Project Manager where she manages the environmental clearance process. She is responsible for managing ongoing coordination with the client, prime consultant, and subconsultant team to prepare technical reports and CEQA and NEPA environmental documentation.

Project Manager, Geary Corridor Bust Rapid Transit (BRT) Project FEIS/ROD and Addendum/Revalidation, San Francisco County Transportation Authority (SFCTA)

Since certification of the combined Environmental Impact Statement and Record of Decision (EIS/ROD) in June 2018, the design of the Geary Bus Rapid Transit (Geary BRT project) has advanced as a result of public outreach, feedback, and the detailed design for Phase I of the project. Brianna led the preparation of FEIS/ROD documents in June 2018 and a CEQA addendum in August 2018.

Technical Task Leader, Palmdale to Burbank Section EIR/EIS, California High-Speed Rail Authority (CAHSRA)

Circlepoint is conducting the environmental analysis for the Palmdale to Burbank segment of the California High-Speed Rail system. The Palmdale to Burbank segment traverses some of the most substantial physical environmental challenges of the proposed system's entire route. Brianna is leading preparation of the Noise, Section 4(f), and Parks and Recreation analysis.

Deputy Project Manager, Line 97 Improvements Project Environmental Review, Alameda-Contra Costa Transit District (AC Transit)

AC Transit is deploying Transit Signal Priority (TSP) technology at all 61 signalized intersections along their system's Line 97 corridor, including adaptive signal control technology (ASCT) on the Hesperian Boulevard segment of the route. Brianna assisted Circlepoint's project manager in processing CE documents to clear the project under CEQA and NEPA.

Land Planning

Project Manager, Baxter Creek Apartments, City of El Cerrito

Circlepoint recently led the preparation of technical studies and a CEQA Appendix G checklist for a proposed 144-unit development in the San Pablo Avenue Specific Plan area of El Cerrito. The project includes an affordable housing component. As project manager, Brianna supported the City in strategizing and scoping supplemental noise analysis to address unique site conditions related to the adjacent BART tracks.

Project Manager, Avenue Loft Apartments, City of El Cerrito

Circlepoint recently completed preparation of technical studies and a CEQA Appendix G checklist for the proposed development of 62 market-rate units in the San Pablo Avenue Specific Plan area of El Cerrito. As project manager, Brianna

was responsible for client coordination, oversight on preparation of technical studies, and the environmental checklist.

Project Manager, Lawrence Station Area Plan: 2904 Corvin Drive Residential Development, City of Santa Clara

Circlepoint worked with the City of Santa Clara and Allied Housing to provide environmental clearance for a new affordable housing development in the Lawrence Station Area Plan (LSAP) area. The LSAP environmental impact report (EIR) was prepared by Circlepoint as the lead environmental consultant in 2016 and evaluated the project site at a program level as a part of the LSAP Future Development area. Circlepoint worked on preparing an environmental compliance checklist under CEQA and an environmental assessment under NEPA. Brianna oversaw preparation of technical analysis and the environmental documents and coordinated regularly with the project applicant and City.

Project Manager, Lawrence Station Area Plan: 2961 Corvin Drive Residential Development, City of Santa Clara

Circlepoint worked with the City of Santa Clara and SummerHill Homes to provide environmental clearance for a new residential development in the Lawrence Station Area Plan (LSAP) Area. The LSAP environmental impact report (EIR) was prepared by Circlepoint as the lead environmental consultant in 2016 and evaluated the project site at a program level as a part of the LSAP Future Development area. Circlepoint prepared an environmental compliance checklist. Key topics in this analysis include land use, air quality, and noise. Brianna led the preparation of the checklist and analysis of key topics.

Project Manager, CoreSite SV8 Data Center IS/MND, City of Santa Clara

Circlepoint lead the preparation of an Initial Study with Mitigated Negative Declaration for a new data center in a rapidly developing area of Santa Clara. The project vicinity includes several other data centers which are not part of a specific or master planned development. Given the project context, Circlepoint worked closely with the client and City to develop a CEQA approach that adequately evaluates cumulative air quality and noise impacts where appropriate. Key pieces of this work included utility demand analysis, working with the project applicant to weigh the benefits of various energy conservation measures, and noise impact analysis. Brianna led the preparation of the checklist and analysis of key topics.

Project Manager, SV7 3032 Coronado Drive CoreSite Data Center Project, City of Santa Clara

Circlepoint completed an addendum to the CoreSite SV7 IS/MND, which was approved in 2014. The SV7 data center is in the vicinity of the proposed SV8 data center and other existing CoreSite data centers. Since project approval in 2014, Circlepoint has prepared three addenda for this project. The third addendum addressed the addition of ten new backup generators at the project site. Circlepoint worked closely with the City in developing an approach for the addendum, evaluating the project's relationship to current and past CoreSite projects in the area. Brianna led the preparation of the checklist and analysis of key topics.

Project Manager, CoreSite LA3 Data Center Initial Study and Addendum, City of Los Angeles

Circlepoint led the preparation of CEQA documentation for a new data center and parking structure in the historic Chinatown area of Los Angeles. The project included working closely with the client and City to scope the appropriate type of

CEQA analysis, including preliminary air quality and GHG emissions technical studies. As project manager, Brianna led the completion of an addendum to the Alameda District Specific Plan EIR, using the CEQA Guidelines Appendix G checklist. Key pieces of this work included utility demand analysis and historic resources analysis; the project site includes a structure listed in the National Register of Historic Places.

Project Manager, Nissan Autocom Remodel and Addition IS/MND, City of Walnut Creek

The project would include construction of a new showroom for the Nissan Autocom dealership at 1840 N. Main Street and remodeling the dealership service center. Circlepoint prepared an IS/MND, including assisting the City with AB 25 compliance. Brianna led preparation of the environmental document, including coordination with technical subconsultants and the client.

Experience Prior to Circlepoint**Transportation****Deputy Project Manager, BART to Livermore Extension EIR, San Francisco Bay Area Rapid Transit**

Brianna's prior firm is the lead environmental consultant for this complex BART extension project. Brianna supported the team on a day-to-day basis, focusing on construction data, Caltrans coordination, and schedule management. She also led the production of graphics and project figures.

Project Manager, Iron Horse Trail Feasibility Study Preliminary Environmental Review, City of Dublin

Through this feasibility study, The City of Dublin evaluated a range of proposed improvements to the Iron Horse Trail in Dublin, beginning at the Dublin BART Station and extending north of Dougherty Road. As Project Manager, Brianna prepared a preliminary analysis of potential environmental constraints related to Iron Horse Trail improvements. The analysis identified key environmental issues, recommended measures to reduce or avoid impacts, and evaluated the type of environmental document which would likely be most appropriate for the project. The preliminary environmental analysis included consideration of a new Dublin Boulevard overcrossing near Scarlett Drive.

Project Manager, Dublin/Pleasanton BART Garage Expansion, San Francisco Bay Area Rapid Transit (BART)

Brianna managed the preparation of an Initial Study and CEQA Addendum for expansion of BART facilities at the Dublin/Pleasanton Station. Working directly with BART, Brianna developed a strategic approach to deliver the project on an accelerated schedule, allowing the project to maintain the deferential standard of review provided by a prior EIR.

Deputy Project Manager, Seaplane Lagoon Ferry Terminal, City of Alameda

As a part of the Alameda Point Project, the City of Alameda in partnership with the San Francisco Bay Area Water Emergency Transportation Authority (WETA) proposes to create a new ferry terminal in Seaplane Lagoon to expand ferry service from Alameda to San Francisco. The proposed ferry terminal was analyzed in the Alameda Point Project EIR at a program level, and in two program level EIRs prepared by WETA. Brianna worked as deputy project manager on preparation of an addendum to all three of these EIRs which evaluated implementation of the new ferry terminal at a project level.

Land Use**Project Manager, Recology Specific Plan, San Francisco/Brisbane**

As the project manager for the lead land use planning consultant, Brianna worked with Recology staff to develop a Specific Plan to guide the upgrading and expansion of Recology's Brisbane facility.

Project Manager, Downtown Oakland Specific Plan and EIR, City of Oakland

As the project manager for the lead environmental consultant, Brianna worked closely with the larger consultant team to scope an EIR which would provide the City with a flexible, project-level analysis including both LOS and VMT evaluations.

Project Manager, 1708 Wood Street Residential Development, City of Oakland

Brianna managed the preparation of an Initial Study and CEQA Addendum for development of 110 new condominiums and 18 live-work units in the West Oakland Specific Plan area. In addition to using CEQA streamlining provisions for program EIRs, Brianna also identified CEQA exemptions that applied to the project. For robust coverage under CEQA, both infill exemption and addendum provisions of CEQA were used for this project.

Project Manager, 532 Union Street Mixed Use Development, City of Oakland

Brianna managed the preparation of an Initial Study and CEQA Addendum for development of 110 new residential units and new commercial space in the West Oakland Specific Plan area. This project site is on a remnant parcel adjacent to Interstate 880 and has on-site contamination. Brianna worked closely with the City to identify required environmental cleanup and develop an appropriate CEQA approach given the site constraints.

Project Manager, 2201 Filbert Street Development, City of Oakland

Brianna managed the preparation of an Initial Study and CEQA Addendum for development of 126 new residential townhome units in the West Oakland Specific Plan area. In addition to using CEQA streamlining provisions for program EIRs, Brianna also identified CEQA exemptions that applied to the project. For robust coverage under CEQA, both infill exemption and addendum provisions of CEQA were used for this project.

Project Manager, CEQA Tiering/Streamlining – Mixed-Use Projects, City of Oakland

Working with a variety of developer clients, Brianna scoped and led the preparation of several streamlined CEQA addendums for infill development projects throughout Oakland, tiering from prior program EIRs. She is well-versed in the unique role an environmental consultant has in project development and approval and was able to successfully navigate and facilitate an efficient process for both the applicant and CEQA lead agency.

Project Manager, Lagoon Dredging IS/MND, City of Foster City

Brianna led a team of technical specialists to thoroughly analyze five full project alternatives for this unique infrastructure project. Building from a prior EIR, this project evaluated disposal of dredge spoils at several locations around the Bay Area. Key topics requiring special attention and innovative problem-solving included air quality, greenhouse gas emissions, and aesthetics.

Entitlements**Project Manager, Strategic Entitlements and Planning, ReThink**

Development, Santa Clara

As the lead project manager for predevelopment planning assistance and entitlements assistance, Brianna conducted due diligence, precedent research, prepared planning submittals, and provided strategic direction for a potential development site in the City of Santa Clara. Brianna worked closely with the developer and City staff to strategize about both the individual property and the larger, ongoing specific planning effort for the area. Brianna attended public meetings and hearings on behalf of the developer, including outreach on the vision for the site as well as policy-related hearings including Santa Clara's affordable housing development fee planning.

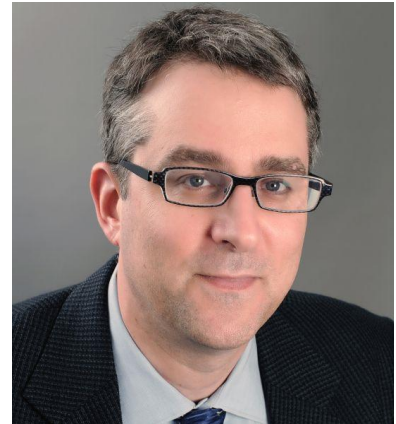
Project Manager, Strategic Entitlements and Planning, Ensemble Development, Santa Cruz

As the lead project manager for development planning assistance and entitlements assistance, Brianna conducted due diligence, precedent research, and provided strategic direction for a potential development site in the City of Santa Cruz. Brianna worked closely with the City and developer to facilitate the creation of a forward-thinking plan for expansion of an existing hotel onto an adjacent site, including the introduction of new residential and commercial uses in an area with complex development restrictions and overlay districts.

STEVEN B BRANOFF

Principal

Steve Branoff has 20 years of experience in the field of air quality, with special emphasis on air permitting, air compliance and human health risk assessments. He specializes in work related to air quality permitting and compliance at the local, state and federal levels. He frequently manages projects involving emissions estimation, dispersion modeling analysis, control technology feasibility and cost, as well as GIS-based methods of displaying and interpreting data. This includes work with criteria pollutants, air toxics and greenhouse gases (GHGs) for a variety of source categories, including Fortune 500 companies with facilities located throughout the US. Steve has extensive experience in regulatory interpretation and negotiations, including litigation. He is certified by SJVAPCD as a Certified Air Permit Professional (CAPP) and by CARB as a GHG Emissions Inventory Lead Verifier. Prior to joining Ramboll, Steve worked for five years in the Air Permits Office at USEPA Region 9.



EDUCATION

1995-1997

MS, Environmental Engineering
University of California at Berkeley, Berkeley, CA

1986-1990

BA, English
Williams College, Williamstown, MA

COURSES/CERTIFICATIONS

Greenhouse Gas Verifier by California Air Resources Board,
2011-Present

Certified Air Permit Professional by San Joaquin Valley Air Pollution
Control District, 2005-Present

PROJECT EXPERIENCE

Served as expert on behalf of a wine trade association in a matter before a California Air District Hearing Board. The case involved the appeal of a BACT determination for VOC emissions from wine fermentation tanks.

Served as expert witness regarding air permitting and air quality regulatory compliance on behalf of a geothermal power plant located in California. The case involved the interaction of State and Federal air quality regulations, including interpretation and enforceability of SIP provisions.

CONTACT INFORMATION

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

Served as expert witness regarding air permitting and air quality regulatory compliance on behalf of a proposed metallurgical coke manufacturing facility in Ohio during the appeal of a PSD/Nonattainment NSR permit issued by Ohio EPA. Determinations of BACT and LAER were a particular focus, as well as related compliance demonstration monitoring.

Served as expert witness during appeal of an air permit issued by Bay Area AQMD for a landfill gas-to-energy project; successfully obtained remand and reissuance of permit. For the same client, assisted in NSR permitting, preparation of a health risk assessment, and prepared EIR for CEQA approval.

Served as expert witness during class action litigation regarding exposure to hydrogen sulfide released from a geothermal power plant during an emergency event.

Provided ongoing support for an electric vehicle manufacturer located in the SF Bay Area. Project work has included NSR and Title V permitting, NSPS and MACT compliance assistance, and environmental compliance auditing.

Provided ongoing support regarding NSR and Title V permitting for the engine maintenance facility operated by an international airline, located in the SF Bay Area.

Provided ongoing air quality assistance to an international automotive manufacturer in Texas. This work included performance of a comprehensive air compliance audit, assistance with NSPS and MACT compliance, and NSR and Title V permitting.

Obtained PSD approval for a cyanide manufacturing facility located in Nevada, including preparation of a BACT analysis, compliance assistance with State and Federal HAP requirements, and dispersion modeling.

Assisted multiple semiconductor fabrication facilities and electronics manufacturers located in California with air quality compliance, including air permitting, health risk assessments, and evaluation of GHG control options for compliance with State and Federal climate change regulations.

On behalf of a major oil and gas provider, prepared NSR and Title V permit applications and addressed technical issues related to 30 natural gas compressor stations located throughout the West.

On behalf of a major solid oxide fuel cell manufacturer based on the SF Bay Area, performed air permit and CEQA applicability evaluations and obtained air permits for installations located in BAAQMD and around the U.S.

Assisted with NSR permitting for research and development facility operated by a leading aerospace manufacturing firm located in the SF Bay Area.

Provided air permitting and compliance assistance to three international pharmaceutical manufacturers with production facilities located in the SF Bay Area. This work included evaluation of PM and VOC air pollution control technologies, as well as air quality compliance for Local, State and Federal regulations.

Prepared the air permit application and negotiated air permit conditions for a hydrogen production plant located at a major oil refinery in the SF Bay Area. This project involved high-level negotiations with multiple stakeholders and presentations at a series of public hearings.

Obtained the first BACT determination in the US, issued by BAAQMD, for a commercial digital inkjet printer on behalf of a leading international digital printing company.

Assisted in preparing Flare Minimization Plans (FMPs) for refineries located in California under Local Air District regulations, as well as one of the first FMPs to be submitted to EPA after adoption of new NSPS Subpart Ja regulations for oil refineries.

Assisted facilities in various industrial sectors regarding GHG compliance, including California and Federal mandatory GHG emissions reporting, third party emissions verification, analysis of GHG BACT, and assistance with pollution controls for high GWP gases.

Prepared a Tribal Minor New Source Review application for a helium extraction plant located in an oil and gas extraction field on the reservation of the Navajo Nation.

For a major bromine manufacturer, performed an assessment of market opportunities created by the Boiler MACT standard imposing stringent limits on mercury emissions from coal-fired boilers.

Provided air permitting and compliance assistance, as well as CEQA impact review and approval, to an international food production and distribution company in siting large-scale commercial meat cooking ovens at a facility in Central California.

Prepared an Environmental Impact Report (EIR) under CEQA and assisted with air permitting for a major expansion project located at a sulfuric acid manufacturing facility located in California.

Led a team of staff assisting Guam EPA in implementing its Title V air permit program. This work included oversight of staff at ENVIRON and at Guam EPA reviewing applications and writing permits, as well as providing assistance with Title V rule revisions. As part of this work, traveled to Guam to give a 3-day training on Title V to local regulators and permit applicants.

Assisted in multi-year enforcement negotiations and air permitting for an industrial gas manufacturing facility in Arizona that develops specialty gasses used in the semiconductor industry. This work involved preparation of air dispersion modeling to demonstrate compliance with State air toxics standards.

Led a team of people performing a facility-wide multimedia health risk assessment for an oil refinery in Minnesota. This work included the development of appropriate health risk factors from a database of Federal and State factors, and major revisions to the existing air toxics emissions inventory.

Provided compliance assistance to a polyethylene foam extrusion facility in California, including assessing pollution control options, evaluating offset requirements, and performing a health risk assessment. This work required extensive negotiations with federal and local regulators.

Prepared PSD permit applications for the expansion of aluminum smelters located in Washington state and in Maryland. Extensive coordination was required for each of these projects between multiple stakeholders, including state and federal government agencies, non-government organizations, and representatives from the Canadian government.

Performed an assessment of air quality and climate change impacts, including associated mitigation measures, under the California Environmental Quality Act (CEQA) for a zoo expansion in Northern California.

Provided litigation support to an oil refinery in Louisiana related to emergency releases over a period of several decades, and related to impacts on the surrounding community due to a fire at the plant.

Performed a site-wide air quality compliance audit and assisted in regulatory enforcement negotiations for a digital storage media production facility, including work with State, Local and Federal air quality requirements.

Provided technical and regulatory compliance assistance to a polyvinyl chloride facility in California. This work included analysis of requirements in local district regulations and in the Vinyl Chloride NESHAP.

Obtained a PSD permit for the installation of continuous casting operations at a steel mill in Alabama, including preparation of a BACT analysis and of all required dispersion modeling. Follow-on work included preparation of a Title V permit and assistance with ongoing compliance and annual emissions calculations.

Prepared an application for the renewal of a Title V permit for a steel mill located in Mississippi, including the development of a Compliance Assurance Monitoring (CAM) plan for the facility.

Performed a health risk assessment under California AB 2588 for a cement manufacturing plant located in California. This included assessment of facility-wide air toxics emissions and associated risks assessed using air dispersion modeling and California risk methodologies.

Assisted in the development of a PM10 attainment plan for Imperial County APCD for approval into the California State Implementation Plan. This work included the preparation of regional air quality modeling using USEPA-approved dispersion modeling (CALPUFF). This work also included an area-specific analysis of possible control measures for technical and economic feasibility.

Conducted a complete air quality regulatory assessment for facilities owned and operated by a small city in southern Nevada. This work included a review of air permit requirements, as well as fee and obligations.

Provided assistance to a glass plant in California during settlement discussions with state and federal regulators. This work included assisting in preparation of a BACT analysis, as well as evaluating costs, control requirements, and offset liabilities under various scenarios.

Participated in a team that prepared a PSD permit application for the expansion of a secondary lead smelter located in Missouri.

Provided technical and regulatory compliance assistance to a secondary aluminum facility in Southern California with respect to USEPA MACT Standard.

Prepared a permit application for a natural gas-fired power plant expansion located in a residential area in the State of Arizona. This work included analyses required to demonstrate compliance with PSD, nonattainment NSR, and Title V permit requirements for an area with a merged permitting program.

Prepared all required analyses for a geothermal development project on behalf of a permitting agency in Northern California. These analyses evaluated applicability of local, state, and federal regulations, appropriateness of pollution controls, modeling to determine ambient impacts, and an assessment of health risks