

# Silvia Gianetti Barber

## Consultant



### Education and Credentials

M.S., Natural Resources and Environmental Management, University of Hawai'i at Mānoa, Honolulu, Hawai'i, 2008

M.A., Philosophy of Science, Università degli Studi di Milano, Milano, Italy, 2000

Certified Lead-Based Paint Activities Risk Assessor: Hawai'i (Certification No. PB-0957)

### Continuing Education and Training

Hazardous Waste Operations and Emergency Response 8-Hour Supervisor Training Certification (2017)

Lead Risk Assessor Initial Course (2017)

Lead Inspector Initial Course (2017)

Hazardous Waste Operations and Emergency Response 40-Hour Certification (2009, followed by yearly refreshers)

Current Red Cross First Aid, CPR, and AED Certified

### Professional Affiliations

Member of Hawai'i Association of Environmental Professionals (2009 to present)

## Professional Profile

Ms. Silvia Barber is a scientist at Integral with 11 years of consulting experience in environmental projects with a primary focus on site investigation and remediation. Her responsibilities include technical evaluation, project management, business development, and office operations. Ms. Barber serves as project manager for most of Integral's Hawai'i projects and has participated in soil, sediment, water, air, and biota assessments at several Superfund sites in the mainland United States. She is a certified lead risk assessor in the state of Hawai'i. Her experience includes using GIS mapping software and handheld X-ray fluorescence (XRF) instrumentation for metals analysis in soils.

## Relevant Experience

### Site Assessment and Remediation

**Assessments of Hazardous Materials in Soil, Various Public Schools Statewide, Hawai'i**—Project manager of two investigation projects for the State of Hawai'i Department of Education, Facilities Division. The projects consist of building-exterior soil studies at various school campuses in Hawai'i, including development of sampling strategies, field implementation, and determining mitigation actions. Field activities include use of both XRF and multi-increment soil sampling. Developed recommendations and soil management plans for soil containing metals (primarily arsenic and lead) or organochlorine termiticide compounds at concentrations above regulatory action levels.

**Investigation, Remedy Design, Remedy Implementation Oversight, and Site Closure at a Lead-Impacted Site, Kona, Hawai'i**—Project manager for the oversight of a remediation project at a former scrap metal recycling facility with lead-contaminated soil and debris. Conducted multiple site investigations to evaluate removal action alternatives. Quantified lead concentration in more than 100 discrete soil samples via innovative use of XRF technology. Performed air sampling to assess exposure of onsite workers. Prepared an environmental assessment for the site remediation considering ongoing and future uses of the property by the County. Helped with engineering design for the selected remedy. Provided oversight of the implementation of the remedial action, which consisted of soil and debris excavation and removal. Currently



assisting the client in gaining regulator's approval of a proposed remedy modification based on site constraints.

***Sediment Remediation and Upland Source Tracing and Control at Electric Power Generating Station, Hawaii***—Project manager for a range of projects conducted for an electrical utility in association with the U.S. Navy's planned Superfund cleanup of PCB-impacted sediments in Pearl Harbor. Activities included a PCB source tracing and control project at the power plant to identify continuing upland sources of PCBs and ensure that those sources are mitigated; developing source control design plans for various areas with historical PCB contamination in accumulated sediment in water bodies, pipes, and tunnels; ongoing permitting support in order to obtain federal, state, and local approvals for the remedial actions; and providing ongoing support to the facility with TSCA requirements regarding PCB.

### **Field Assessment and Environmental Sampling/Analysis**

***Background Metal Study, Hawaiian Islands***—Conducted a study for the Hawai'i Department of Health to identify background concentrations of metals in Hawaiian soils; findings were intended for use in setting action levels. Reviewed and statistically analyzed published data to establish upper thresholds in metal concentrations. Designed and implemented a soil sampling plan, and collected soil samples across the Hawaiian Islands.

***Upper Columbia River RI/FS, Washington***—Participated in the collection and processing of sediment samples from 34 remote beaches extending over 150 miles of river in northeastern Washington State. The main chemicals of concern were heavy metals.

***Berry's Creek Superfund Site RI/FS, Bergen County, New Jersey***—Participated in sampling biota from Berry's Creek and from surrounding waterways and wetlands. The main chemicals of concern were mercury and PCBs. Biota included perch, blue crab, fiddler crab, and mummichog. Sampling methods included gill nets, cast nets, and traps. Responsibilities included sample collection, handling, and processing.

***Portland Harbor Superfund Site RI/FS, Portland, Oregon***—Participated in surface and subsurface sediment sampling to define vertical and horizontal extent of contaminants at a Superfund site on the Willamette River. The main chemicals of concern were organochlorine pesticides (DDx). Sampling methods included drilling sediment boreholes from a barge. Responsibilities included sample collection, handling, and processing.

### **Litigation Support**

***Assessment of Herbicide Drift Claim, Hawai'i***—Provided pre-trial expert services on a case involving alleged herbicide drift. Reviewed scientific evidence and laboratory reports to assess the validity of the damage claims.

***Quantification of Remedial Cost Allocation, Alaska***—Provided expert services to an oil company for litigation involving groundwater contamination. Conducted GIS analyses and reviewed scientific evidence to support the allocation of remedial costs among the parties involved.



*Evaluation and Quantification of Settlement Scenarios, Honolulu, Hawai'i*—Provided expert services on a high-profile EPA litigation matter involving illegal storage and disposal of hazardous waste. Conducted forensic analysis of EPA removal actions and costs in support of the sentencing process.

*Evaluation of PCB Sources, New Jersey*—Provided expert services to a chemical company for litigation involving sediment contamination at a Superfund site. Reviewed historical documentation to identify possible sources of PCBs at an industrial facility.

## **Environmental Due Diligence and Property Transaction Support**

*Phase I and II Environmental Site Assessments, Hawai'i*—Conducted Phase I and II environmental site assessments in support of various property transactions, including acquisitions, leasing arrangements, and divestitures.

*Phase I and II Environmental Site Assessments, Continental U.S., Canada, and Europe*—Coordinated Phase I and II environmental site assessments in support of commercial property transactions for the car rental industry. Phase II site assessments involved soil, groundwater, and air testing.

*Phase I Environmental Site Assessment of Former Honouliuli Internment Camp, Hawai'i*—Conducted a Phase I environmental site assessment of a former World War II internment camp on the island of Oahu. Now the Honouliuli National Monument, the site was acquired from a private landowner. The due diligence process included review of archaeological reports and other historical documents.

## **Agribusiness Support**

*Dust Monitoring Study, Hawai'i*—Designed and coordinated sampling activities to assess airborne fugitive dust concentrations at various farms across the State of Hawai'i. Used air sampling pumps and portable TSI Dust Trak™ units to generate real-time, continuous dust concentration readings for various particle sizes. The study documented correlations of dust with human activities and with meteorological conditions.

*Phase I and II Environmental Site Assessments of Agricultural Lands, Hawai'i*—Conducted site assessments of former pineapple and sugarcane fields acquired by agricultural businesses for growing seed crops. Main contaminants were residual pesticides (arsenic, dioxins, and organochlorine pesticides). Analyzed arsenic concentrations using XRF.

*Slope Analysis, Seed Corn Producer, Oahu, Hawai'i*—Classified and quantified tillable, pasture, and unusable acres on a property using slope data with ArcGIS 9.2.

## **Agricultural Industry Analysis**

*Avocado Industry Analysis, Hawai'i*—Coordinated a project funded by an Extension Service special grant to investigate the use of locally grown avocados instead of imported avocados. Identified avocado cultivars with the highest potential for grafting and propagation.



## **Publications**

Barber, S.G., C. Chan-Halbrendt, J. Krishnakumar, T.J. Radovich, and K. Love. 2008. Hawai'i avocado industry analysis, part 2. EI-15. University of Hawai'i Cooperative Extension Service, Honolulu, HI.

Barber, S.G. 2008. Consumer preferences for avocados in Honolulu, Hawai'i: Latent class analysis of a conjoint choice experiment. Thesis. University of Hawai'i at Mānoa, Honolulu, HI.

## **Invited Presentations/Panels/Peer Reviews**

National Business Institute Seminar: Environmental Liabilities in Real Estate Transactions. Invited speaker. December 2016.

Hawai'i Tropical Fruit Growers 18th Annual International Conference: Sustainable Diversification of Tropical Fruit. Served as moderator. September 2008.

## **Presentations/Posters**

Barber, S. 2018. Do you have a fugitive dust problem? World Ag Expo. Tulare, CA. February 13–15.

Barber, S. 2012. Arsenic in soils of former sugarcane plantation, Island of Hawai'i. ESRI International User Conference. San Diego, CA. July 23–28.

Barber, S.G. 2008. Consumer preferences for Hawaiian grown avocados. 2008 College of Tropical Agriculture and Human Resources Student Research Symposium, Honolulu, HI.

