

229 Tewksbury Ave., Pt. Richmond, CA 94801 TEL: 510-307-9943; FAX: 510-232-2823' CELL: 510-590-1099

OLIVIA JACOBS, C.E.M.

Principal Project Manager

Organization and Management of Data for Legal Cases Industrial History Evaluation and Litigation Support Environmental Assessment and Due Diligence

SUMMARY

Ms. Jacobs is the president and co-founder of The Auger Group, Inc., with dbas of Artesian Environmental, Fast-Tek Engineering Support Services and Clearwater Group (Clearwater). The Auger Group, Inc. provides environmental contracting and consulting including the assessment and remediation of contaminated sites including but not limited to underground fuel storage tank leaks, drilling, and hazardous materials management. Ms. Jacobs is the operations manager of a State of California Contractor, Licensed with General (A), C-57 (driller) classifications and with Hazardous Materials and Asbestos Certifications. She is a State of Nevada Certified Environmental Manager, and a State of California Certified Lead Inspector/Assessor. Her expertise relates to her role as an industrial history investigator and researcher for litigation support.

Ms. Jacobs began her career in the waste industry in 1982, when she was a Watson Foundation Fellow, studying waste; waste management, minimization and use. She participated in the mapping of the Los Angeles sewer system, while working for CH2MHILL (1983-1984) and has worked in the environmental industry since 1990, during which time she has performed Phase Is and Phase IIs on hundreds of sites. The combination of operations management, proofing technical reports and preparing reimbursement requests for the Underground Storage Tank Cleanup Fund have provided her training to see site cleanup from start to finish. She comes to the field with an interest in history, capacity for significant research and complete data collection and expertise in building and testing site conceptual models.

LITIGATION SUPPORT:

Find and Collect Source Data (i.e., historic maps, aerials); Regulatory File Review; Build Timelines; Construct Conceptual Model of Chemical Release(s) from Manufacturing, Sewer Pipelines, Fuel Systems; Build Inventory of Chemicals in Production Processes.

The following projects are selected examples of the variety of cases worked on:

- Uncontrolled Dioxin/DDT/Agent Orange Contractor Yard (San Mateo County, CA)
- Evaluation of Operational Oil Field with Environmental Liability (Livermore, CA)
- Water Well Driller Contractor Construction Fraud (Agoura Hills, CA)
- Oil Well Abandonment Contractor Failure (Huntington Beach, CA)
- Disproving of Damage to Existing Oil Well (Operations) during Oil Well Abandonment Attempt (Huntington Beach, CA)



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- Evaluation of Water Treatment Technology Contract (Fountain Hills, AZ)
- Contractor Demolition and Disposal of Power Plant Fuel Tanks Fuel and Bottom Solids (Antioch, CA)
- Fiber Optic Installation Pipe Strike of Fuel Pipeline (Dallas, TX)
- Subcontractor Disability from Well Subsidence in Landfill (Eureka, CA)
- Site Conceptual Model of Residential Property Impacted by Adjacent Gas Station Fuel Release (San Mateo, CA)
- Metals Finishing Manufacturer Release to the Soil and Groundwater of Chromium [Cr (VI)] (Burbank, CA)
- Responsible Party; Owner/Tenant Inventory, Spillage and Migration of Compounds at Pesticide/Fertilizer/Herbicide Warehouse, Mixing, Production and Distribution Center (Stockton, CA)
- Site Conceptual Model of Fuel System Release to Soil and Groundwater (Menlo Park, CA)
- Migration of Contaminated Stormwater from Fueling Operations to Neighboring Property (Conecuh, AL)
- Differentiation of Multiple Contributors of Sub-Channel Contamination in Pipeline Strike, (Houston, TX)
- Home Drug-Manufacturing Contamination of Residence and Septic System Complicated by Diesel Tank Release and Drug-Manufacturing Fires (Tiburon, CA)
- Site Conceptual Model for Nitrates Release to Groundwater at Fueling Facility Adjacent to Fertilizer Factory (Ripon, CA)
- Oil Water Separator Release Soil and Groundwater Contamination (San Mateo, CA)
- Time-line of Releases at Oil Field Tank Farm (Denver, CO)
- Personal Injury from Residual Compounds Resulting from Discharge of Hazardous Compounds by Drilling Equipment Manufacturer into Soil and Groundwater - (Orange, CA)
- Post-Fire Stormwater Migration of Hazards Wastes in Concrete Storm Channel Insurance Claim (Las Vegas, NV)

AWARDS

1982-1983: Thomas J. Watson Fellowship to study international waste use and recycling of biomass and the generation of biogas.

EDUCATION

B.A. Great Books Program, St. John's College, Annapolis, Maryland M.S. degree in Health Care Administration, Texas Women's University, Houston, Texas

LICENSES

Certified Environmental Assessor, State of Nevada, NEM since 1995



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Lead-Related Construction Inspector/Assessor, California Department of Health Services Contractor's State License Board (California) Operations Manager, CSLB #624461, #799370 Registered Environmental Assessor, State of California, REA I (Program ended 2012)

PROFESSIONAL HISTORY

1990 – 1995 President/CEO, Artesian Environmental Consultants, San Rafael, California 2001 – present; President/CEO, The Auger Group, Inc., dba Clearwater Group, Pt. Richmond, CA

OTHER COURSES:

Hazardous Waste Manager and Trainer of Facility Personnel Engaged in Hazardous Waste Handling

Certified Environmental Manager Workshop, National Environmental Health Association Building Inspection and Management Planning for Asbestos, University of California, Berkeley Extension

Contractor/Designer/Supervisor, Project Designer, Asbestos Abatement

NIOSH 582 Sampling and Evaluating Airborne Asbestos Dust. CAL Environmental Svcs., Inc.

Underground Storage Tank Removal Workshop

Site Assessments for Real Property Assessments

Environmental Law and Regulation, University of California, Berkeley Extension

OSHA Supervisors Course

OSHA 40 hour Hazardous Waste Training Program (29 CFR 1910.120); and yearly refreshers

INVITED PROFESSIONAL WORKSHOP PRESENTATIONS

2018, Jacobs, J., Jacobs, O., Beckley, L., and McHugh, T., "Sewer VI: Research, Findings and Practical Implications," M-F4 Sewer Vapor Intrusion Workshop, 20th Annual California Unified Program (CUPA) Training Conference, Burlingame, California, February 5, 2018, Abstracts.

2017, Jacobs, O.P., and Jacobs, J.A, "Dispersal of VOCs; Sewer Air – Sampling Sewer Air – When, Where, How, and Mitigation of VOC-laden Sewer Air," Groundwater Resources Association's Assessment and Remediation of Dry Cleaner Sites Symposium, Concord, California, November 2, 2017, Abstracts.

2017, Jacobs, J.A., and Jacobs, O.P., "Sewer Exfiltration Allowances by Design and Failure," Groundwater Resources Association's Assessment and Remediation of Dry Cleaner Sites Symposium, Concord, California, November 2, 2017, Abstracts.



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2016, Jacobs, O.P., Jacobs, J.A., and Pennell, K.G., 2016, "Sanitary Sewer Contaminant Migration Study Manhole to Clean Out: Passive Sewer Air Sampling, Presence of VOCs in Sewer Manhole as a Predictor of VOCs in Sewer Lateral Cleanouts," 18th Annual California Unified Program (CUPA) Training Conference, Anaheim, California, February 24, 2016, Abstracts.

PUBLICATIONS – PEER-REVIEWED ARTICLES

Roghani, M., Jacobs, O.P., Miller, A., Willett, E.J., Jacobs, J.A., Viteri, C.R., Shirazi, E., and Pennell, K.G., 2018, Occurrence of Chlorinated Volatile Organic Compounds (VOCs) in a Sanitary Sewer System: Implications for Assessing Vapor Intrusion Alternative Pathways, *Science of the Total Environment*, March, 616–617, p. 1149–1162.

Jacobs, J.A., Jacobs, O.P., and Pennell, K.G., 2017, One Alternative Exposure Pathway of Volatile Organic Compound (VOC) Vapors from Contaminated Subsurface Environments into Indoor Air – Legacy Sewer-Plumbing Systems, *The Professional Geologist*, Reprint and Update of GRAC *Hydrovisions* Article, V. 54, N. 3, July-Aug-Sept., p. 28 – 32.

PUBLICATIONS – ABSTRACTS AND PRESENTATIONS

Jacobs, O.T.P., and Jacobs, J.A., 2021, Impacts of Sea Level Rise, Predicting Flooding from Emergent Groundwater – The Role of Preferential Pathways in Filled Wetlands of San Francsico Bay, Proceedings of the 58th Annual American Institute of Professional Geologists National Meeting, Sacramento, California, October 23-26, 2021, p. 30-31.

Jacobs, O.P., and Jacobs, J.A., O'Neill, H., and Schneider, R., 2018, Unintentional Discharges of Industrial Compounds into and out of Sanitary or Stormwater Drainage Systems in Urban Settings; Proceedings of the 28th Annual International Conference, Association for Environmental Health and Sciences, San Diego, California, March 19-22, Abstracts, p. 86.

Jacobs, J.A., and Jacobs, O.P., 2017, What Geologists Know about Sewer Systems that Plumbers Don't: Vapor Intrusion into Indoor Air and the Sewer-Plumbing System; Proceedings of the 54th Annual American Institute of Professional Geologists National Meeting, Nashville, Tennessee, September 23-26, Abstracts.

Jacobs, O.P., Jacobs, J.A., and Pennell, K.G., 2016, Exposure Pathway Analysis Using Passive Diffusion Air Sampling Method to Sample Sewer Air in Manholes and Cleanouts; Proceedings of the 26th Annual International Conference, Association for Environmental Health and Sciences, San Diego, California, March 21-24, Abstracts.



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Jacobs, J.A., and Jacobs, O.P., 2015, Geologists' Role in Evaluating VOCs from Illegal Drug Labs, Industrial Wastes and Household Cleaners in Sewer Air; Proceedings of the 52nd Annual American Institute of Professional Geologists National Meeting, Anchorage, Alaska, September 19-22, Abstracts, p. 38-39.

Jacobs, J.A., Jacobs, O.P., and Pennell, K.G., 2015, Updating Site Conceptual Models for Potential Sewer Gas and Vapor Intrusion Into Indoor Air From Breached Sewer Conveyance Systems; Proceedings of the 25th Annual International Conference, Association for Environmental Health and Sciences, San Diego, California, March 23-26, Abstracts, p. 93.

Jacobs, J.A., Jacobs, O.P., and Pennell, K.G., 2014, Geologists and Site Conceptual Models: VOCs and Sewer Gas in Indoor Air Resulting from Migration from Breached Sewer Conveyance Systems; Proceedings of the 51st Annual American Institute of Professional Geologists National Meeting, Prescott, AZ, September 13-16, Abstracts, p. 73-74.

Jacobs, J., Traver, R., and Jacobs, O., 1991, Environmental Investigations and Remediations of Oil and Gas Fields, Proceedings of the Annual American Association of Petroleum Geologists Meeting, Dallas, Texas, AAPG Bulletin, April, Abstracts, p. 601.