



PROFESSIONAL PROFILE



Christopher Rose, PE

Principal Engineer

EXPERIENCE SUMMARY

More than nineteen years of environmental consulting experience providing services to aerospace and oil-industry clients, real estate developers, and State of California entities. Principal Engineer and Senior Engineer at Roux; Project Manager at Avocet Environmental.

TECHNICAL SPECIALTIES

Environmental site assessment and subsurface investigation; remediation system and civil infrastructure design; coordination and supervision of groundwater monitoring; solid waste facility permitting, design, and operation; construction management and oversight.

REPRESENTATIVE PROJECTS

Site Investigation and Remediation

- Conducted Phase I environmental site assessments for numerous properties within California, typically at facilities associated with the aerospace/defense industry with complex environmental issues. Based on the findings of Phase I ESAs, has designed and executed comprehensive Phase II investigations utilizing most drilling methods and sampling techniques.
- Conducted a Phase II investigation at a major oil company research facility in Whittier Narrows. Oversaw the oil company's contractor during site redevelopment. Site work included building and fuel system demolition, remediation of petroleum-impacted soil, and the steam-cleaning and removal of hundreds of feet of subsurface product pipeline. Given the sensitive nature of the research facility, existing site plans frequently omitted pipelines and other subsurface features. Mr. Rose was responsible for directing the handling of undocumented subsurface features as they were encountered during demolition. In cooperation with the contractor, it was possible to minimize additional fuel-related releases from the historical piping as it was excavated from below grade.
- Litigation support for an aerospace client, one of whose legacy companies was identified as a potentially responsible party for a multiple-source chlorinated solvent plume beneath the City of Hawthorne.
- Considerable experience in groundwater well installation using a variety of drilling methods at many sites throughout California. This experience includes the designing, permitting, drilling, construction, and development of extraction and monitoring wells. It also includes aquifer testing and chemical well rehabilitation.
- Conducted environmental soil monitoring, impacted soil remediation, and tank closure services at a site under supervision from the DTSC. Coordinated environmental work at the site to allow major grading and aboveground construction activities to be undertaken concurrently with remediation. Held responsibility for addressing a wide range of previously unidentified subsurface impacts encountered during development.
- Conducted a site investigation at a municipal sports facility to identify suspected asbestos-containing material in near-surface soils. The project included a review of historical sources to establish a timeline for soil imports to the property, followed by a thorough trenching, sampling, and analysis plan under the supervision of DTSC. Prepared a preliminary endangerment assessment including conceptual site model and a simplified risk assessment.

CONTACT INFORMATION

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EDUCATION

MEng, Civil Engineering,
University of Bristol, United
Kingdom, 2004
Education Abroad Program,
University of California, San
Diego, 2002-2003

PROFESSIONAL LICENSES

California Registered
Professional Engineer C82606

PROFESSIONAL TRAININGS

40-Hour OSHA 29 CFR 1910.120
8-hour OSHA Annual Refreshers
AutoCAD Civil 3D Fundamentals
(USCAD Training)

PROFESSIONAL AFFILIATIONS

Manager of Landfill Operations
(Solid Waste Association of
North America)
American Society of Civil
Engineers
American Water Works
Association
Solid Waste Association of North
America

- Assisted in the design and operation of a groundwater extraction and treatment system to destroy 1,4-dioxane and VOCs. The project involved evaluation of the existing groundwater conditions; conducting aquifer pumping tests for capture zone modeling; constructing groundwater extraction wells; and the design, permitting, and construction of the treatment system. Assisted in the operation and maintenance of the system, data management and evaluation, and quarterly NPDES reporting. The system includes a bag filter, an advanced oxidation unit, liquid-phase granular activated carbon (LGAC), and a SCADA and telemetry system.
- Responsible for the development and management of GIS geodatabases for sites throughout California. Set up computer database management and computer contouring programs that have been applied to hydrogeologic and chemical data.
- Completed a confirmation sampling program for a former agricultural site in Orange County, California. Coordinated the removal of 70,000 cubic yards of pesticide- and lead-impacted soil from the site.

Solid/Hazardous Waste Experience

- Performed design for closure of an existing landfill cell and construction of a new, composite-lined waste management unit for a government owned landfill on the California Central Coast. Design included alternate monolithic soil cover, surcharge of existing waste, composite liner, leachate collection and removal system (LCRS), surface drainage improvements, and environmental monitoring points (landfill gas probes, groundwater monitoring wells).
- Principal author of a comprehensive Joint Technical Document (JTD) in accordance with requirements of the California Code of Regulations (CCR) Title 27, with contributions on several other JTDs.
- Responsible for the grading design, volume calculations, permitting, airspace reports, fill plans, and annual reports for an active Class III landfill.
- Performed the design of a leachate management system to handle leachate generated from multiple LCRS components. The leachate management system included pumps, holding tanks, secondary containment, a solar power array, and an irrigation system.
- Extensive field experience as a construction manager for landfill related projects. Oversaw implementation of design drawings and specifications, supervised construction quality assurance (CQA) activities, chaired construction meetings with contractors, and inspected completed work.
- Principal author of a California Special Waste Application to the Department of Toxic Substances Control (DTSC). Together with the accompanying Waste Disposal Variance (also principal author), this successful application allowed disposal of certain California Hazardous Waste within a designated cell of a Class III landfill. To date, this remains the only successful application for Special Waste classification issued by the DTSC.
- Developed demolition specifications for a high-risk building deconstruction project. Structures scheduled for demolition were dilapidated to the point of instability and their demolition may have exposed workers to the risks of Valley Fever, Hanta Virus, asbestos-containing materials, lead-based paint, and poisonous animals. Specifications were successful in creating "zero dust" demolition and the process was commended by the regulatory agencies involved.

Civil Design Experience

- Responsible for design of a potable water distribution pipeline from concept and engineering studies through production of bid documents. Supervised junior staff and assisted in the design, personally utilizing AutoCAD Civil 3D to produce pipeline plans, profiles, and sections used in construction. Retained to oversee construction of the potable water pipeline, manage contractor submittals, requests for information, change orders, and verify finished work product.
- Prepared a feasibility study for the replacement of a two million gallon per day wastewater treatment plant operating at a military installment on the California Central Coast. Identified critical design flaws and identified suitable replacement technology and the equalization volume required to achieve compliance with updated regulatory requirements.
- Principal designer of a gravity-only sanitary sewer system for an existing military facility in Orange County, California. The reconfiguration of the existing force-gravity system was complicated by the elimination of several lift stations, the intensity of existing near-surface utilities, and an intersecting storm drain network.
- Lead design of a fire suppression water supply (storage and pumping system) for a helicopter hangar building. Fire codes required approximately 4,000 gallons per minute capacity at 275 pounds per square inch pressure.
- Design and field construction of a soil vapor extraction system for a new commercial building in Commerce, California.
- Over ten years' experience preparing design drawings and figures using AutoCAD and AutoCAD Civil 3D software on a wide range of landfill, water, wastewater, and remediation system projects.