Water Engineer — In-line Chlorination

Mangrove Water

Location: Bhubaneswar, Odisha, India
Start date: Immediate
Duration: 12-months, with a possible extension; Fixed-term contract
Travel: Frequent travel to rural project sites in Odisha. Locations may include but are not limited to: Rayagada, Khorda, Puri, Gajapati, and Kandhamal districts.
Travel support: Reimbursable expenses for travel are provided.

About the organization

Mangrove Water is an international non-profit organization focused on providing technical assistance and resources to governments, NGOs, water utilities, and private sector partners to implement and operate in-line chlorination systems for safe drinking water in their service areas.

About the role

Mangrove Water is seeking a drinking water field engineer to support the installation, operation, and evaluation of in-line chlorination (ILC) devices in rural water supply systems in Odisha. In-line chlorination devices automatically dose chlorine into water systems to disinfect drinking water without requiring electricity. The role will combine hands-on engineering, water-quality monitoring, and coordination with local NGO, research, and government stakeholders. The field engineer will travel frequently to rural villages, perform technical site assessments of potential in-line chlorination installations, and engage with local NGO and research partners on ILC device installation, operation, maintenance, and water quality monitoring. The field engineer will also be responsible for leading training of other engineers and operators of in-line chlorination. The field engineer will also have an opportunity to advance the field by contributing to open-source resources on in-line chlorination, including the development of technology design/prototyping, manuals on installation, operation, and maintenance, the development of water quality monitoring dashboards, and more.

Building on earlier ILC work in Odisha, the engineer will serve in a vital role to advance in-line chlorination installation and operations across Odisha. The position suits someone who enjoys practical problem-solving, hands-on fieldwork, and working closely with rural communities.

Key responsibilities

Installation and operation of in-line chlorination devices

- Assess water supply systems and develop site-specific installation plans for in-line chlorination, including plumbing design, materials, and operation and maintenance needs.
- Serve as a technical advisor for installation and commissioning of in-line chlorination devices with local NGO and research partner organizations and Odisha's state and local government drinking-water departments.
- Maintain technical notes of installation procedures, materials, labor, costs, and technical issues; maintain an up-to-date register of devices and sites.
- Train and support local operators on device operation, refill procedures, routine checks, safe chlorine handling, and reporting problems.

Performance monitoring and troubleshooting

- Oversee routine chlorine-residual testing and other required water quality monitoring, working with the local NGO and research partners.
- Review monitoring data, identify inconsistent dosing or device failures, and design practical troubleshooting steps to improve chlorination efficacy.
- Maintain detailed records of device performance, downtime, refills, repairs, and modifications; report issues promptly and document their resolution.
- Recommend improvements to installation, refill, and monitoring procedures, and assist with device prototyping and field testing where needed on a site-by-site basis.

Technical assistance

- Coordinate field visits with Mangrove Water and local NGO and research partners to in-line chlorination installation sites.
- Perform technical assessments of prospective sites for in-line chlorination and make recommendations to local NGO and research partners on possible design alternatives for ILC installation. Provide detailed installation and operation plans on a site-by-site basis as needed.
- Write detailed technical reports on assessments of potential sites for ILC installation and operations.
- Liaison with government stakeholders in the Odisha Panchayati Raj & Drinking Water department and local Rural Water Supply and Sanitation departments.
- Attend meetings with relevant officials, share field findings and technical feedback as needed, and follow up on agreed actions.
- Build respectful working relationships with operators and community representatives, and help resolve practical concerns about device operation.
- Plan, coordinate and host capacity building workshops for local engineers and operators of in-line chlorination.
- Develop open-source resources for in-line chlorination implementation, including, but not limited to 1) Development of technology designs and technical drawings, 2) Installation,

operation, and maintenance manuals on in-line chlorination, 3) Document case studies of previous in-line chlorination applications.

Required qualifications and skills

- University degree in civil, environmental, mechanical, or a related engineering discipline.
- Demonstrated knowledge of fluid dynamics and hydraulics, with experience installing, operating, or monitoring water treatment or distribution systems.
- Ability to diagnose technical problems in the field, take initiative, and develop practical solutions with available materials and support.
- Competence in preparing and understanding civil site drawings.
- Demonstrated ability to work effectively with Odisha's state and local government drinking-water departments, communicate technical findings constructively, attend meetings, and provide timely feedback and follow-up.
- Strong attention to detail and the ability to maintain accurate technical, operational, and cost records in technical reports or memos.
- Competence with Microsoft Excel and Word, or equivalent spreadsheet and document tools.
- Strong spoken and written English, with the ability to communicate technical findings clearly.
- Willingness to spend substantial time at rural sites and coordinate work across multiple locations.

Preferred qualifications

- Odia language proficiency and experience working with rural communities in Odisha.
- Competence with civil engineering CAD software (AutoCAD, Civil 3D, etc.).
- Experience with water distribution system design, construction, and operations.
- Experience with chlorine dosing, residual-chlorine testing, or other drinking-water quality testing.
- Experience leading technical trainings of water treatment operators and engineers or supervising operators of water treatment systems.

How to apply

Please submit your CV/resume and cover letter using the online application form.
Application deadline: November 27th, 2026
Shortlisted candidates will be invited to a technical interview to discuss their relevant experience and approach to practical engineering challenges. Shortlisted candidates will be asked to provide 2-3 references who can comment on their professional experience to-date.

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