

**Quality Checklist for Construction of Solar-Powered Water Infiltration Gallery Gweila Community, Shelleng Ward Shelleng, Adamawa State.**

**1. Site Preparation:**

- Ensure that the site surveyed and approved is prepared for the installation of the solar-powered water infiltration gallery.

- Verify that the location of the gallery receives adequate sunlight exposure for optimal solar power generation.

- Ensure that site clearance is conducted, and the surroundings are free from refuse dumps, soak-aways, animal resting points, open defecation, and graveyards.

- Ensure flood-prone zones are considered and precautionary measures taken.

**2. Materials and Equipment:**

- Check that all materials and equipment used in the construction meet the required specifications and standards.

- Verify the quality and compatibility of solar panels, batteries, pumps, and other components.

**3. Installation of Solar Panels:**

- Ensure that solar panels are securely mounted and positioned to maximize sunlight exposure.

- Verify proper wiring and connections to ensure efficient power generation.

- Ensure the panel specification attached is adhered to.

**4. Construction of Infiltration Gallery:**

- Confirm that the infiltration gallery is constructed according to approved design plans and specifications.

- Check for proper installation of filtration systems, drainage components, and other necessary infrastructure.

**5. Electrical System:**

- Verify the installation of a reliable electrical system to connect the solar panels to the infiltration gallery components.

- Ensure that all electrical connections are properly insulated and protected.

**6. Testing and Commissioning:**

- Conduct thorough testing of the solar-powered water infiltration gallery to ensure functionality and efficiency.

- Verify that the system can effectively collect, and infiltrate water based on design, as-built, and able to discharge using solar power.

**7. Health and Safety:**

- Ensure that all safety measures are in place to protect workers and site personnel during construction and operation.

- Comply with all relevant health and safety regulations throughout the project.

**8. Documentation and Reporting:**

- Maintain detailed records of the construction process, including quality control checks and test results.

- Prepare a comprehensive report documenting the construction of the solar-powered water infiltration gallery.

**9. Training and Maintenance:**

- Provide training to site personnel on the operation and maintenance of the solar-powered system.

- Ensure that maintenance guidelines are followed to maximize the lifespan and efficiency of the infiltration gallery.

- Potential Facility managers should be engaged in the construction process to gain ample experience in maintenance.

**10. Community Satisfaction:**

- Regularly communicate with the community to provide updates on the construction progress and address any concerns or feedback.

- Ensure that the final product meets the community's expectations and requirements.