MULTIMEDIA WATER TREATMENT METHOD STATEMENT

Project No:

REVISION HISTORY	ISSUE DATE	DESCRIPTION	REVIEW / STATUS
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PREPARED BY:	**REVIEWED & APPROVED BY:**
QA QC ENGINEER	PROJECT ENGINEER

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1. INTRODUCTION

This method statement outlines the procedures and steps involved in the multimedia water treatment process. Multimedia filtration is an effective method for removing suspended solids and other impurities from water. The process involves passing water through a bed of multiple media types, such as sand, anthracite, and garnet, to achieve efficient filtration.

2. SCOPE

This method statement applies to the multimedia water treatment process for a specific project or facility. It includes the installation, operation, and maintenance of multimedia filtration units.

3. EQUIPMENT AND MATERIALS

3.1. Equipment and Materials:

- Multimedia filtration units
- Media types (sand, anthracite, garnet, etc.)
- Backwash system (pumps, valves, and controls)
- Chemical dosing system (if applicable)
- Flow meters and pressure gauges
- Testing equipment (turbidity meter, pH meter, etc.)

4. PROCEDURE

4.1. Installation:

- Identify the suitable location for multimedia filtration units based on design specifications and site conditions.
- Ensure proper foundation and support for the units.
- Connect the inlet and outlet piping to the multimedia filtration units.
- Install the backwash system, including pumps, valves, and controls.
- Install the chemical dosing system (if required) for enhanced filtration.
- Verify the proper alignment and connections of all equipment.

4.2. Operation:

- Perform a visual inspection of the multimedia filtration units and associated equipment to ensure they are in good condition.
- Start the water flow through the filtration units and adjust the flow rate as per design requirements.
- Monitor the pressure drop across the filter bed regularly to determine the need for backwashing.
- Conduct water quality tests at regular intervals to assess the efficiency of the filtration process.
- If applicable, operate the chemical dosing system to optimize the filtration performance.

- Maintain a logbook to record operational parameters, test results, maintenance activities, and any deviations.

4.3. Backwashing:

- When the pressure drop across the filter bed reaches a specified threshold, initiate the backwashing process.
- Close the influent and effluent valves and open the backwash valve to reverse the water flow.
- Start the backwash pump to fluidize the filter media and dislodge trapped solids.
- Monitor the backwash process visually and ensure the proper functioning of the system.
- Continue the backwashing process until the effluent water runs clear.
- Close the backwash valve, reopen the influent and effluent valves, and resume normal filtration.

4.4. Maintenance:

- Conduct routine maintenance of the multimedia filtration units as per the manufacturer's recommendations.
- Clean or replace the filter media periodically to maintain optimal filtration efficiency.
- Inspect and maintain the backwash system, including pumps, valves, and controls.
- Ensure the chemical dosing system is properly calibrated and maintained (if applicable).
- Address any equipment malfunctions or abnormalities promptly.
- Keep comprehensive records of maintenance activities for future reference.

5. SAFETY MEASURES

- Follow all applicable safety procedures and guidelines during installation, operation, and maintenance activities.
- Ensure proper ventilation in the treatment area to prevent the accumulation of gases or hazardous substances.
- Use personal protective equipment (PPE) such as gloves, safety glasses, and respiratory protection when required.
- Regularly inspect and maintain safety equipment, such as emergency shutdown systems and fire extinguishers.
- Provide adequate training to personnel involved in the operation and maintenance of the multimedia water treatment system.

6. ATTACHMENTS

Risk Assessment

Key Note:

This method statement is a general guideline and should be adapted and supplemented based on the specific requirements of the project, local regulations, and equipment specifications. Consult with experts and professionals in the field of water treatment for accurate and detailed guidance.