



ANNUAL WATER CONSUMPTION AND RECLAMATION PLAN



Water Reclamation Plan for Machinery Use

Objective

To maximize the use of recycled water in machinery operations, aiming for a 99.63% recycling efficiency, and to implement a sustainable system for replenishing evaporated water from water settlement tanks with freshwater used for dust suppression.

Scope

This plan covers all machinery operations requiring water use, the management of water settlement tanks, and the integration of freshwater sources for dust suppression within the facility.

Water Recycling System for Machinery

Process Description

- Recycling Process: Implement a closed-loop water system for machinery, where water from operations is collected into settlement tanks for sediment removal.
- Filtration and Treatment: After settlement, water passes through filtration units to remove particulates, followed by any necessary treatment to meet the quality required for machinery use.
- Recycling Efficiency Monitoring: Install flow meters and quality sensors to continuously monitor water recycling efficiency and ensure it meets the 99.63% target.

Water Settlement Tanks Management

Process Description

- Settlement Tank Design: Design tanks to maximize sediment removal and reduce evaporation. Include covers to minimize direct sunlight exposure and reduce evaporation rates.
- Regular Maintenance: Schedule routine cleaning and maintenance of tanks to ensure optimal performance and prevent overflow or sediment buildup.

Replenishing Evaporated Water

Process Description

- Evaporation Compensation System: Integrate a system to automatically replenish water lost to evaporation in the settlement tanks with freshwater.
- Freshwater Source: Utilize freshwater from within the building, designated for dust suppression, ensuring it meets the required standards for machinery use after treatment.
- Integration with Dust Suppression: Ensure the system balances the needs for machinery water use and dust suppression, optimizing the use of freshwater across operations.

Monitoring and Adjustments

Process Description

- Continuous Monitoring: Employ real-time monitoring systems for water levels in settlement tanks and water quality to ensure compliance with machinery use standards.
- Adaptive Management: Develop protocols for adjusting the water

treatment process and replenishment rates based on seasonal variations in evaporation and water use patterns.

Environmental and Regulatory Compliance

Process Description

- Compliance Checks: Regularly review and ensure the water reclamation system complies with local environmental regulations and industry standards.
- Documentation and Reporting: Maintain detailed records of water usage, recycling rates, and quality tests for regulatory compliance and internal review.

Implementation Timeline

- Phase 1: System Design and Integration (3-6 months): Finalize the design of the recycling and replenishment systems and integrate them into existing operations.
- Phase 2: Testing and Optimization (2-4 months): Conduct comprehensive testing to fine-tune the systems for maximum efficiency and reliability.
- Phase 3: Operational Roll-out and Monitoring (Ongoing): Implement the system fully and commence continuous monitoring and adjustments.

Conclusion

This Water Reclamation Plan aims to significantly enhance water sustainability in machinery operations, contributing to environmental conservation efforts and operational efficiency. Continuous evaluation and adaptation of the plan will ensure long-term success and compliance with sustainability goals.



This report outlines the total water consumption for the year, segmented by source and application. Data for this report has been compiled by Tanya and Catherine, who have verified the information from reliable sources.

- Total Water Consumption for 2023: 781 gallons, as per the water district billing records.
- Water Source: All water utilized was sourced from freshwater reserves.
- Usage Breakdown:
 - Dust Suppression: Utilization of water within the factory for dust control measures.
 - Common Utilities: Includes water used in utility sinks.
 - Sanitation Facilities: Water consumed by restroom facilities, including sinks and toilets.

This inventory is critical for monitoring our environmental footprint and optimizing water use efficiency in our operations.



Employee Engagement and Training

What will the workshops cover?

Workshops should cover the importance of water conservation, practical tips for conserving water at work, and how to report water waste.

How can we motivate employees to participate?

Introduce incentives for water-saving ideas that are implemented and hold a competition for departments to reduce their water usage with rewards for the most efficient department.

Policy and Practice Changes

What policy changes are needed?

Update procurement policies to prioritize water-efficient equipment and supplies. Incorporate water conservation into the company's environmental policy.

Which best practices should be adopted?

Look into industry benchmarks for water use and aim to meet or exceed these standards. Adopt practices such as regular maintenance schedules to check for leaks and efficient water use training for new employees.

How can we engage with local initiatives?

Partner with local water conservation groups for community projects, such as river clean-ups or educational programs, and encourage employee participation.



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