



Case Study:

Low Maintenance Mine Toilet Saves Time at Anglo American

Anglo American Tackles Maintenance Challenges with Self-Contained Portable Mine Toilet

Safer and more efficient sanitation

MineARC Systems worked with Anglo American to create a solution to its sanitation challenges. By using EnviroLAV from MineARC, Anglo American has been able to address their maintenance issues and provide users with a cleaner and safer environment.

The Los Sulfatos tunnel in Los Bronces posed a particularly difficult challenge. With a length of 8 kilometres and a diameter of only 4.5 meters, the weekly maintenance of the other portable toilets effects, since the tunnel dimensions provided limited options for the circulation of the trucks that perform this service.

To minimize the challenges caused by other portable toilets, Anglo American has turned to MineARC Systems to provide workers with high-quality, semi-permanent sanitation systems.

Challenges

- Elimination of interruptions in the operations of the Los Sulfatos Tunnel
- Poor visibility inside portable toilets
- Address user hygiene and safety problems

Solutions

- Install a lower maintenance EnviroLAV toilet to reduce the impact on operations
- Improved lighting for safety and personal hygiene
- Eliminate environmental and human hazards from portable toilet by-products



Photo: MineARC EnviroLAV Standard Design.

01.

Install a lower maintenance EnviroLAV toilet to reduce the impact on operations

02.

Improved lighting for security measures

The narrow diameter of the Los Sulfatos tunnel created significant difficulty for waste management vehicles attempting to service the portable toilets weekly. MineARC Systems' EnviroLAV standard design provided the Los Sulfatos tunnel with a viable solution to its waste management problems by dramatically reducing the frequency of maintenance required (from 1 - 2 weekly to 1 - annually), eliminating the need for large management vehicles of waste.

After renting an EnviroLAV system for a year, Anglo American opted to purchase the unit and rent two additional units.

The unique self-processing waste tank inside the EnviroLAV reduces routine maintenance and emptying requirements. The tank creates a miniature biological treatment environment that isolates and breaks down the deposited waste. The residues are broken down with the non-toxic EnviroZYME solution, reducing the odour within the structure. Once installed, EnviroLAV can last up to 12 months, depending on usage and external conditions, without needing to be emptied.

Poor lighting is one of the biggest challenges in the mining industry. Underground environments place workers in confined spaces with surfaces that provide poor visual contrast and high levels of dust. Portable toilets provide little or no light to users, increasing the risk of injury and poor sanitation within the facility. MineARC EnviroLAV offers internal fluorescent lighting that improves visibility inside the unit and a sink with enough soap and water to clean hands properly.



Photo: The illuminated installation with the sink for better hygiene.

03.

Eliminating Human and Environmental Hazards from Portable Toilet By-Products

Custom Industrial Solutions

Sanitation and Waste Management

- EnviroLAV standard design
- EnviroZYME Waste Decomposition Solution
- EnviroWASH hand cleaner
- EnviroCLEAN degreasing spray
- EnviroSOFT toilet paper

Training and Education

- Operational guides
- Operational training
- EnviroLAV service

Photo: The interior of the EnviroLAV unit inside Los Sulfatos.

Protecting workers from hazardous materials and waste is an integral part of every mining organization's safety standards. Open portable toilets create a potential chemical and biological hazard from spills and noxious gases. Formaldehyde is still used in some portable toilets to break down waste. However, formaldehyde is harmful to humans and the environment. Thus, MineARC has developed safer chemicals for humans, and the environment for use within the EnviroLAV closed waste system.

By installing EnviroLAV, employees can avoid handling hazardous chemicals and materials commonly used to break down waste in portable structures. Toilets contain EnviroZYME from MineARC; A solution formulated to accelerate the breakdown of waste and reduce odours within the unit. This solution is released automatically with each discharge and is non-toxic and safe for the environment.

Unit size, lighting characteristics, and maintenance requirements were critical factors in the success of this project. With the installation of EnviroLAV, Anglo American was able to provide workers with a sustainable solution to the maintenance, hygiene, and safety problems previously experienced in the tunnel. Since purchasing the first underground toilet, Anglo America has rented two additional units.



Key Takeaways

- Low-maintenance EnviroLAV installation helps productivity by reducing service frequency and complexity.
- Fluorescent lights and enhanced privacy in EnviroLAV improve sanitation, comfort, and safety for users.
- Cleaning, personal hygiene and maintenance materials included with EnviroLAV eliminate environmental risks associated with standard waste management systems.

For more information

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