

Trinity Helps Mining Leader Elevate Ambient Air Monitoring Program



CHALLENGE

With complex and evolving regulatory requirements and a growing facility, the mining company needed external expertise to proactively improve ambient air quality and ensure compliance and the best possible data collection outcomes.

SOLUTION

Trinity manages the company's ambient air monitoring program 24/7, ensuring compliance and quality assurance of data and enabling a real-time dashboard to guide day-to-day operations.

RESULT

The mining organization's robust and reliable ambient air quality monitoring program has enabled the company to reduce emissions, meet regulatory requirements, and build trust with the surrounding community.

A global leader in mining and metals is dedicated to discovering better ways to provide the materials the world needs for growth and decarbonization. From mining and processing to hydroelectric power generation, the company places a strong emphasis on minimizing environmental harm, particularly pollution. Recognizing that clean air is critical for the health of the communities it operates in, and the surrounding ecosystems, the company prioritizes air quality management through operational discipline and continuous process improvement.

Through its continual efforts to improve ambient air quality at one of its major operations in Utah, the company turned to its long-time partner and ally, Trinity Consultants. Together, they worked to ensure compliance with stringent environmental regulations while also proactively improving their relationship and reputation with the local community.

CHALLENGE

The Clean Air Act, which regulates air pollution from major industrial sources, requires facilities that emit large amounts of air pollutants to obtain a Title V permit. Facilities must regularly certify their compliance with the permit conditions, ensuring ongoing adherence to air quality standards.

A Utah facility, which encompasses a concentrator, smelter and refinery and tailings storage facility, operates under a Title V permit. Under the permit, the mining leader must report ambient air quality data, including sulfur dioxide levels and particulate matter, to regulators. The company also needs to respond rapidly in the case of any exceedances or instrument malfunctions.

The mining company lacked the internal resources and expertise to directly focus on and manage the increasingly complex requirements of its ambient air monitoring network. This included ensuring data accuracy, taking samples, managing and maintaining the monitoring stations, and providing real-time feedback to operational teams to ensure compliance. The potential for data discrepancies and the lag in real-time monitoring capabilities posed significant risks to not only regulatory compliance but also the company's reputation within the community.

SOLUTION

Trinity Consultants kicked off a thorough ambient air monitoring program for the Utah facility. The team began by assessing and addressing the gaps in the facility's existing monitoring systems, adding and moving air quality stations as needed, upgraded aged instrumentation, installed a continuous metals monitor, and created a data portal that allows the mining company to monitor ambient air conditions in real time.

The real-time data portal has been a game-changer, giving the company leadership a continuously updated view of the air quality data that is critical for informed decision-making. With customized alerts for any exceedances, the mining leader can address any potential issues rapidly, reducing the concentration of pollutants released into the air. It's a real-time, hands-on approach, with Trinity teams monitoring data 24/7 to identify any measurements that fall outside of acceptable quality assurance parameters and solving any problems that may arise.

With technical writing experts on staff, Trinity also handles routine data validation and reporting to the U.S. Environmental Protection Agency as well as state agencies, ensuring that all data submitted is accurate and compliant with regulatory standards and that the mining leader can tell a powerful story about its commitment to ensuring air quality.

RESULT

By leveraging Trinity's expertise and real-time data solutions, the global mining leader has been able to comply with state and federal air quality regulations, avoiding potential fines and operational delays. The real-time data portal allows the Utah facility to quickly identify and address any issues, reducing emissions as well as the risk of non-compliance. The proactive installation of additional monitoring stations, including a continuous metals monitor, has also helped the company build trust and mitigate community concerns.

The ongoing support from Trinity helps ensure that the mining company's air quality monitoring program is able to adapt and respond to changing regulatory requirements and operational needs, providing a sustainable solution for the long term as the company's facilities continue to expand.

ABOUT TRINITY CONSULTANTS

Trinity Consultants, a leading global environmental consulting firm, provides services and solutions in the EHS Regulatory Compliance, Built Environment, Life Sciences, and Water & Ecology markets. Founded in 1974, Trinity has the technical expertise, industry depth, and capabilities to help clients achieve their goals across the natural and built environments.