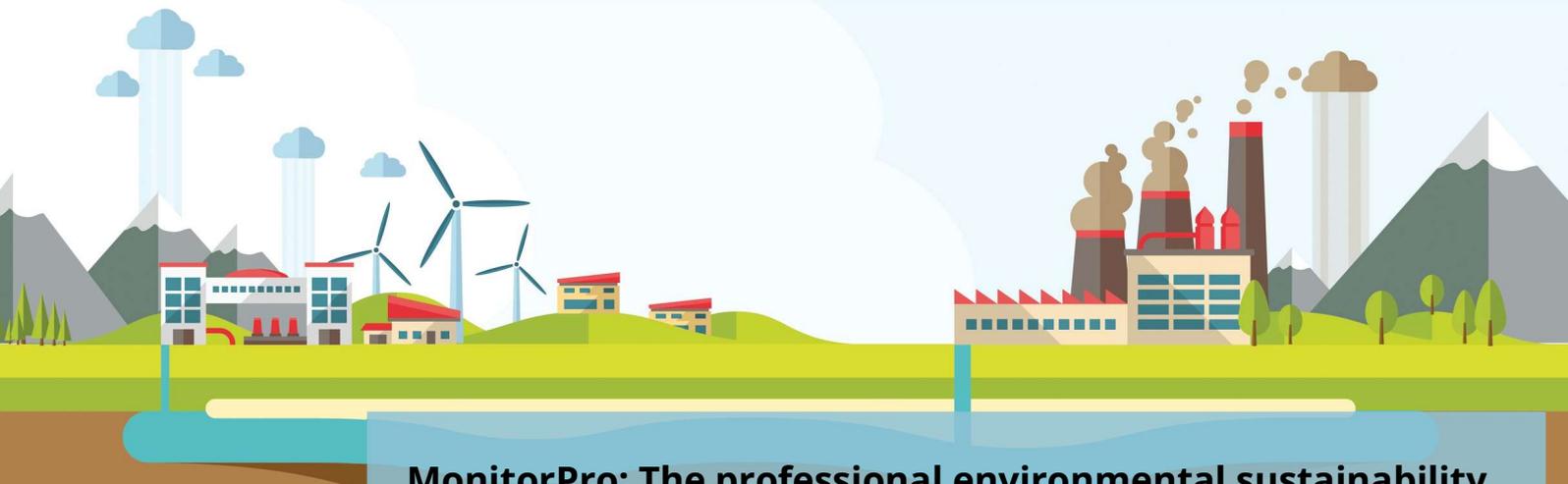


MonitorPro Case Study: Mineral Sand Ore Mining



MonitorPro: The professional environmental sustainability and management solution, trusted by thousands of users worldwide.

Mineral sand ores contain titanium-bearing minerals of ilmenite, rutile, and leucoxene, as well as the mineral zircon. They also contain trace quantities of the radioactive elements of uranium and thorium. These minerals originate in sediments contained within igneous and metamorphic rocks which are eroded, transported, and deposited by numerous natural processes. This concentrates the heavier mineral grains, forming mineral sand ore deposits (Source: USGS).

Why are Mineral Sand Ores Important?

Rutile, leucoxene, and ilmenite are mainly used in the building and construction industries. The titanium dioxide (TiO₂) contained in these sands is a compound used primarily to produce white pigments, widely used in paints, plastics, papers, and inks. Products with a higher TiO₂ content are used in the manufacture of titanium metal, as well as in the welding flux industry. Due to the increase in demand for these products the market is likely to continue to see an increase over the next decade.



Mineral Sand Ore Mining and Environmental Regulations

Due to the impact of mineral sand ore mining on the local environment and ecosystems, many rules and regulations have been implemented to ensure that the resulting effect of this mining is significantly reduced. These rules and regulations mean that large and varied amounts of environmental data need to be monitored, recorded, and managed to ensure that mining industries adhere to the local legal requirements.

Managing these large datasets requires more than just a spreadsheet system, to ensure data is held together in one centralised location that can be accessed by a number of different users in multiple locations. Many auditors also prefer to work with a commercially accepted software certified by a regulator which cannot be attained using spreadsheets.

MonitorPro is Perfectly Suited for the Management of Mineral Sand Ore Environmental Data

For over 10 years we have had users in the mineral sand ore sector, with numbers steadily increasing over that time. Clients in this sector range from operations in the US, Africa, and Australia, all seeking to better manage their environmental obligations, monitoring, and compliance.

MonitorPro has a suite of features built around our client's processes in a range of industries. With flexibility at the core of everything we develop, it has been a seamless fit to support the demands of our mineral sand ore clients.

While clients use MonitorPro for more standard environmental monitoring purposes, such as groundwater, surface water, and air quality, several specific types of monitoring are more prevalent in mineral sand mining. One aspect is the clearing of land and its subsequent restoration. Clients therefore use MonitorPro to track land restoration, seed collection, flora surveys, and fauna movements. Another characteristic of mineral sand ore mining is the radiological implication the ore presents. Users therefore use MonitorPro for radiological surveys of various types, to enable the tracking of the levels of radiation and any possible contamination.

