

Monitoring the Environmental Impact of Radioactive Waste in the UK with MonitorPro



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

MonitorPro has been helping a radioactive waste repository in the UK manage their environmental data for over 17 years. The repository has been managing radioactive waste at its site since 1959, receiving waste products from various industries including power stations, universities, hospitals, medical companies and the oil industry. The environmental impacts of the site are monitored through extensive monitoring and analysis of data before reporting results to the UK's Environment Agency (EA).

Before MonitorPro: Problems of Environmental Data Management in Multiple Systems and Datasets

In addition to extensive airborne and waterborne radiometric monitoring at a number of different locations (both on and off site) a variety of different data sources were collected at the site including; drilling logs, soil samples and analyses, ground and surface water data, leachate levels and flow rates, and air samples. These results required reporting to the Environmental Agency (EA) and other bodies to ensure the site remained compliant with its environmental permits.



Prior to 2009 this was stored in a number of different systems and datasets, however, using several different systems to manage the continually growing amount of environmental data was becoming increasingly difficult and time consuming, resulting in a significant cost to the company. In addition there was no way of validating the incoming data for errors, which could have significant implications when reporting results.

It was clear that a different solution was required to collate all collected and historical data in one centralised location, with inbuilt data validation highlighting any potential errors to ensure future monitoring, analysis and reporting could be completed efficiently.

MonitorPro: A Flexible and Easy to Use Environmental Data Management System

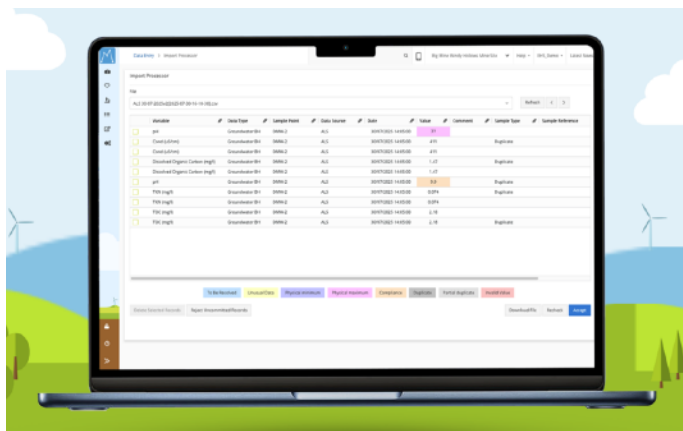
In 2009 **MonitorPro** was implemented on site, starting with the successful transfer of 30 years of historical data into the database, and all future collated data is now automatically uploaded into the database. Despite the huge amount of data contained within this 30 year historical dataset **MonitorPro** was able to handle the upload and storage with ease because **MonitorPro** is perfectly suited for handling large and continuous datasets, so even with the addition of data to the database over the last 17 years and with what is to come in the future it will still be able to handle all of this data and perform analysis and create reports using it without any problems.

Automated Data Importing

Several importer features contained within **MonitorPro** automate the uploading of new data into the database including: the Importer API (data from generic data sources such as weather data, data loggers or weather stations, and lab data), an Email importer which removes the need for manually processing routine emails and eliminates the issues of employee absence, shared inboxes, and human error.

Automatic Data Validation

As well as being automatically uploaded it is also automatically validated for errors and **MonitorPro** highlights data which is outside the usual range in the Importer log, it will automatically email a report highlighting unusual data has been found and requires checking, enhancing the ability to review and react to 'unusual' data.



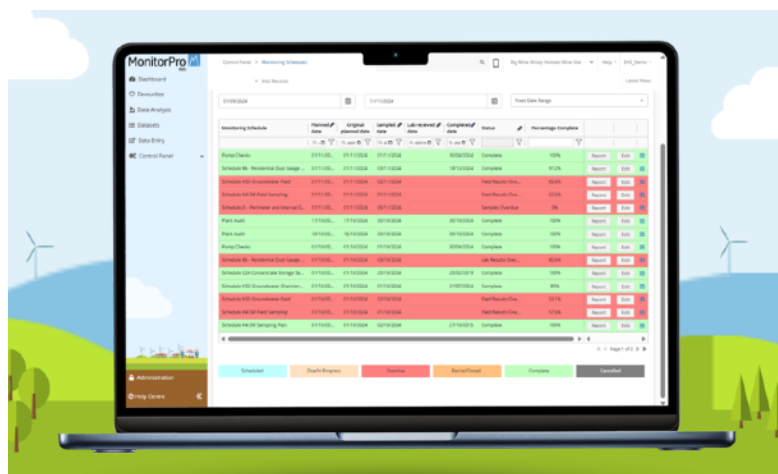
Database Calculations

Now both the historical and new data is contained within a centralised single database they are able to perform a number of calculations in **MonitorPro**. These involve a range of automated calculations to support data summarisation, including the generation of results based on the mean plus three or four standard deviations across defined data ranges. Additional functionality allows data to be aggregated over specified periods and automatically aligned to the end of the previous calendar month, ensuring consistent and standardised reporting of monitoring data. All calculations can be filtered by specific data types or monitoring locations and reported either independently or as part of a wider dataset. In addition, we have produced several bespoke reports that align precisely with formal reporting requirements, both in terms of content and visual presentation.

The Monitoring Scheduler

Another feature of **MonitorPro** which was ideally suited for the site and it's environmental regulations was the Monitoring Scheduler. The Monitoring Scheduler in MonitorPro means a Visit schedule can be created for specific locations, this requires certain locations to be visited and have specified variables measured. Once the data or lab analysis from these visits arrives in the database the percentage completion at that site is updated, this means if all required data is not received it is highlighted to the user in the Monitoring Scheduler and via Email that data is missing and further action is required.

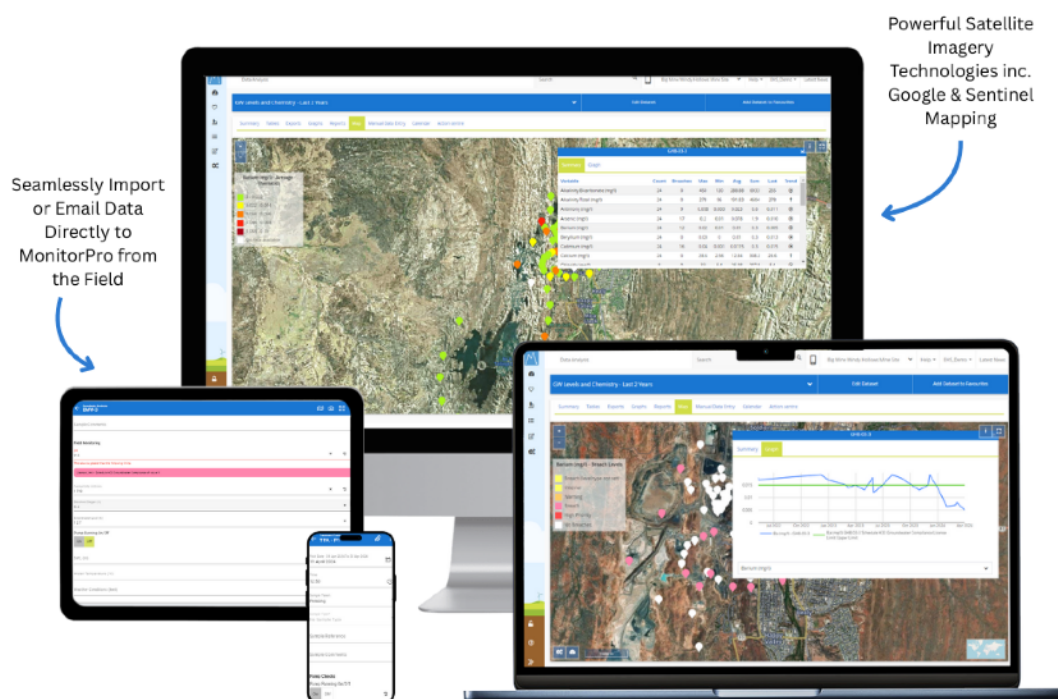
Through the implementation of **MonitorPro** and discussions with the Environment Agency the company was able to rationalise the required frequency of monitoring, and this reduction in monitoring costs saved approximately £150,000.



The Future with MonitorPro

MonitorPro has now been used on site for over 17 years, **MonitorPro's** continued development means it is always up to date with and responds to any changes in environmental regulations. This in turn means the company can be confident that the software they have invested in will be adaptable to their changing needs and will continue to be so in the future. In addition to this the outstanding support provided by **EHS Data** means they have and will continue to get the most out of their software.

MonitorPro is still used daily on site meaning more time can be spent on analysing and reporting data ensuring all permitting obligations are met, through this it is still saving the company considerable time and resulting costs.



*"The ability to establish and track a monitoring schedule in **MonitorPro** will be particularly useful. We are also able to show full audibility and validation of our data which has been key."*

Environmental Advisor, Radioactive Waste Processing Client



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