

Langer Heinrich Uranium Mine

A total control system designed to fast-track greenfield site's automation



The Challenge

The Langer Heinrich Uranium Mine is a greenfield site that required the fast-tracked implementation of a complete automation system, including hardware and the latest SCADA and reporting software.

The Solution

To expedite the engineering phase of the Langer Heinrich project, the professional services team drew on their global knowledge base to create customized, proven device function blocks based on those successfully implemented at a number of previous projects. They deployed a complete solution that utilized CitectSCADA and CitectHistorian to provide real-time, quality information for better decision making.

The Benefits

In just 10 short months from inception, Langer Heinrich was able to reap the benefits of a thoroughly tested, reliable and complete control system as deployed by the professional services team. They now enjoy all the benefits of an integrated automation system, with up-to-the-minute reporting.



The Langer Heinrich uranium mine in the Namibian desert

Paladin Resources Ltd. is a mineral resource exploration and development company whose focus is acquiring, evaluating and developing uranium projects in Australia and Africa.

In 2002, they acquired Langer Heinrich, a large greenfield site in the southern African state of Namibia with an estimated project life of 24 years. The operation achieved nameplate production in December 2007 and is in the process of increasing capacity from the original target of 2.6Mlb/annum of triuranium octaoxide (U_3O_8) to 3.7Mlb/annum. Work is now progressing on the Stage II expansion, with the intention of achieving the upgraded production targets by the end of 2008.

The Challenge

Paladin needed both a solution and a provider with the experience of working in a fast-paced environment and who could provide an exceptionally scalable solution to minimize risk. A total project construction period

of only 15 months required a quick development and commissioning cycle.

The continued development throughout the life of the project created an environment of constant change. This environment required an implementation team of seasoned engineers who would be able to draw upon their mining experience to deliver the project on time and on budget. They would be responsible for the design, implementation, training, support, change management strategies, risk management, budget and schedule for the entire automation control system.

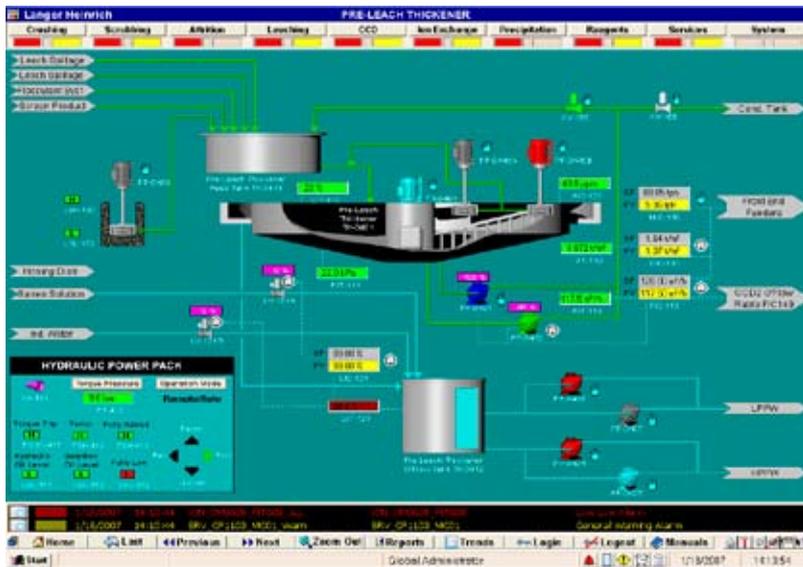
The Solution

Langer Heinrich worked with a team of professional services experts to design, install and commission the entire control automation system consisting of CitectSCADA and CitectHistorian, combined with Siemens S7-400 PLCs. This integrated solution would provide the advanced plant automation needed to deliver quality, real-time information to mine personnel.

CitectSCADA

CitectHistorian

Case Study



The advanced alkaline leaching process is highly automated. CitectSCADA provides real-time information to operators for effective decision making.

The fast-tracked deployment schedule meant control system information, only became available as the designs were being finished for the various areas of the plant. This staged approach to change management ensured time constraints were not compounded by poor communication that would lead to delays.

Langer Heinrich chose CitectSCADA and Citect-Historian for their exceptional scalability that allows the engineering to be completed in a small testing environment before being rolled out to the entire plant. This was integral to meeting the fast-paced deadline and ensuring secure and high-performance monitoring and control across the system.

The SCADA implementation process began with a design phase in which technical clarification was completed and an FDS was created. The professional services team created a mimic plan from P & IDs and device lists that received client approval before the mimics were made. All screens were then drawn in static form. When the client approved the mimics, the animation and database generation started.

All SCADA objects were tested thoroughly with an in-house PLC before the Factory Acceptance Test (FAT) and release to site.

To ensure that Langer Heinrich achieved the highest return on its investment, an on-site three-day operators' training course was also provided. Each operator received a tailored manual and could replicate all plant control system functionality in simulation mode on CitectSCADA operator work stations without physically starting or stopping any equipment on site. Also provided were maintenance training, manuals and procedures to enable staff to support the system after commissioning.

The Benefits

In just 10 short months from inception, Langer Heinrich was able to reap the benefits of a thoroughly tested, reliable and complete control system as deployed by the local professional services experts.

They now enjoy all the benefits of a fully integrated automation system, with access to real-time reporting data enabling timely and effective decision making.

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