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Kentucky's Department of Natural Resources

Completing the circle of information for real-time, status updates on mining projects



The Department for Natural Resources, Surface Mining Divisions (Mine Permits, Mine Reclamation and Enforcement, and Abandoned Mine Lands) are responsible for enforcing mining laws throughout the Commonwealth of Kentucky and protecting the citizens, environment and natural resources. Each year the divisions issue new mining permits to local developers and inspect existing mining sites to ensure on-going compliance with state laws. They also restore abandoned mine lands to a safe and environmentally stable condition.

To control and keep track of the large volume of mining activities across the state, the department uses about a dozen different types of documents, ranging from mining permits and inspection reports to legal correspondence and invoices. This represents tens of thousands of pages that need to be approved, stored and accessed each year. For example, roughly 1,500 new applications are received annually, each generating five to six correspondence letters. In addition, 30,000 sets of inspection reports are created each year, ranging from one to six pages or more. Much of this data is then referenced in a detailed statistical report for the Federal Government summarizing the

mining activities in the Commonwealth of Kentucky for the year. Accuracy of information, therefore, is key.

The division recognized that it needed to automate its paper-intensive processes so that existing staff could not only keep up with the yearly increase in mining activities, but also improve its services to the public, business developers and government constituents.

THE PROBLEM

The Department began a paperless initiative in 1996. They upgraded their document management and workflow system to reduce manual processes and enable the electronic documents to be stored and retrieved as part of an extensive, computer database called Surface Mining Information System (SMIS).

With the system in place, business and legal documents could be electronically routed amongst office staff, field inspectors and engineers; however, documents that required signing inevitably reverted back to paper. As a result, documents had to be scanned to bring them back into electronic format, representing hours of manual labour each year.



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But the manual process didn't just stop there. As with data entry processes, human error sometimes impacted what was entered into SMIS. The division recognized that an electronic signature solution was required to realize the benefits of a 100% paperless process.

THE SOLUTION

The Department established clear requirements for an electronic signature solution, as well as the criteria for selecting a vendor's solution.

The first requirement according to Project Manager, David O'Hara, was to find a solution that supports the division's existing document applications.

"We needed the solution to work with our document management and workflow system, as well as with Microsoft Word and Excel, which is used extensively amongst our staff, inspectors and suppliers," explains O'Hara. "We didn't want to throw that all away just to add electronic signatures. We also didn't want a solution that required specialized skills or 3rd party support. Silanis' solution enabled us to leverage what we already have and know."

Ease of use was the second requirement.

Some of our staff have been with the department for many years and are just starting to get comfortable with computers," says O'Hara. "We knew we had to make it as simple as possible for them to sign electronically.

Features such as Replacement Phrase, which automatically places signatures in the right spot, and Batch Signing, which allows multiple documents to be signed at once, are two examples of how Silanis' solution met that criteria."

The third requirement was to find a solution that supports the department's current workflow processes.

"THE CIRCLE OF INFORMATION IS NOW COMPLETE," ADDS O'HARA. "THE DEPARTMENT CONDUCTS REAL-TIME, DATA QUERIES IN SMIS TO VERIFY THE PRECISE STATUS OF EACH ACTIVE MINING PROJECT IN THE COMMONWEALTH OF KENTUCKY. THAT MEANS BETTER SERVICE TO THE PUBLIC, MINING

"More than 25% of our staff are field inspectors who need to capture people's signatures at mining sites," adds O'Hara. "We didn't want to force our staff and external customers and suppliers to come into the office to sign. Silanis' solution enables us to capture people's handwritten signatures electronically using a laptop computer and a signing pad."

To ensure user acceptance and return on investment, the division made sure to involve people from the very beginning and make them part of the solution.

"To rally management and user support prior to deployment, we formed a management committee and test-group," says O'Hara. "The management committee was responsible for laying out the requirements for signing electronically, while the test-group, consisting of field officers and inspectors, gave us constructive feedback on what worked and what could be improved upon."

THE RESULTS

Today more than 400 office staff, field inspectors, suppliers and development companies are experiencing the benefits of signing documents electronically.

The Abandon Mine Lands Division has equipped each office with a public signing station consisting of a desktop computer, Silanis' software and an electronic signing pad for capturing people's



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firms electronically sign and submit applications for new permits on behalf of mining companies, while suppliers use the stations to electronically sign and submit invoices. To date, the division has electronically processed approximately 400 complex invoices.

Moving the invoicing process into the electronic world has also enabled the division to maintain greater control over its costs. Once a bid is approved by the division, the electronic invoice is locked down and contractors can no longer add unapproved items to the document. They then electronically sign and submit the electronic invoice to a regional office.

And because the documents are submitted electronically, office staff can respond to requests more quickly. Each staff member is equipped with a personal desktop computer containing Silanis' electronic signature software, enabling them to electronically approve the multitude of external requests, as well as e-sign their daily correspondence.

On-the-road, field inspectors from the Division of Mine Reclamation and Enforcement also experience significant, time-saving benefits. Equipped with personal laptop computers, field inspectors prepare their electronic inspection forms by downloading information about the permit site from SMIS.

Standard data, such as name, address and key project information, automatically populate the form fields, thereby saving them valuable time and eliminating data entry errors and omissions.

Field inspectors arrive at the mining sites, complete the inspection form on their laptop computers and have the engineers of the mining projects sign the inspection form using an electronic signing pad. They then upload the report into SMIS from their homes or at one of the division's offices.

"The circle of information is now complete," adds O'Hara. "The department conducts real-time, data queries in SMIS to verify the precise status of each active mining project in the Commonwealth of Kentucky. That means better service to the public, mining companies and our government constituents."

ENGINEERING CONSULTANT

Commonwealth of Kentucky's external consultants have long been advocates for a paperless process. Most notably, the engineering firm Environment Risk Management Consulting, who routinely submit a 200 to 500 page application for a new mining permit on behalf of clients.

According to Mike Ricci, Director of Engineering at the firm, each application requires up to two dozen, oversized maps to be printed and signed at a cost of \$1.00 to \$2.00 per square foot. Each time a change is made to the mining plans, the maps need to be re-signed and three additional copies be made.

Not only is this costly for the engineering firm, many hours of unnecessary time is spent printing, copying and driving over the paper documents to the Division of Surface Mining.

"With Silanis' electronic signatures in place, we now convert AutoCAD maps into PDF files and then electronically sign and email the entire application to the Division of Surface Mining," says Ricci. "We expect to save a significant amount of time and money in 2005."

KEY BENEFITS

Keeping processes electronic has enabled the divisions to achieve a number of key benefits, including:

- Better leverage existing resources
- Elimination of manual processes, such as scanning and re-keying data
- Reduced data errors
- Heightened data accuracy and reliability
- Increased availability of data
- Improved service and responsiveness

