



## S-Chem

### S-Chem Realizes 25% Savings on Costs and 75% on Time Through Improved Management Of Change Process

A pioneer in the production of petrochemical products, Saudi Arabia-based S-Chem comprises three companies: Saudi Chevron Phillips Company (SCP), Jubail Chevron Phillips Company (JCP) and Saudi Polymers Company (SPCo). Together, these entities operate with the mission of safely producing reliable, optimal cost and high quality products while exceeding customer, community and partner expectations.<sup>1</sup>

With an enterprise focus on operational excellence, S-Chem maintains its high standards and complies with regulatory requirements. Therefore, the company continually looks for ways to innovate and improve its processes to mitigate the safety and environmental risks inherent in the petrochemical industry. One key area is managing the multi-step workflows involved with expanding existing operations or building new facilities.

“Partnering with Sphera has enabled us to better manage change, leading to heightened operational excellence and efficiency,” said Udayakumar Selvam, Senior Process Safety Management (PSM) Engineer, S-Chem.

#### Streamlining the MOC Process to Better Manage Complex Workflows

In the petrochemicals industry, operational changes to a new or existing facility need to be managed carefully to reduce process safety, personnel safety and security concerns. Therefore, it is a business imperative to have a solid process for risk mitigation through effective Management of Change (MOC). In the past, S-Chem relied on a cumbersome paper-based MOC system to manage the complex workflows and multiple action items necessary to add new equipment or make other operational changes.

S-Chem turned to the Sphera Operational Risk Solution as a means to automate, standardize and improve the MOC process. Initially, S-Chem used the solution only within the Process Safety department. Based on proven efficiency and accuracy gains, the company greatly expanded its use of Sphera’s Stature® software for managing MOC and related risk management processes. Today, hundreds of employees throughout the enterprise rely on the web-based solution as a centralized method of identifying and monitoring all of the steps, approvals and tasks involved with an operational change.

#### CHALLENGE

- Automate the process to manage operational changes and assess risks
- Reduce time and costs involved with manual processes
- Ensure compliance with regulatory and corporate standards

#### SOLUTION

##### Operational Risk

- Management of Change (MOC)
- Action Item Management
- Process Hazard Analysis (PHA)

#### RESULTS

- Processed approximately 1,500 MOCs between 2010 and 2015, with periods of increased activity tied to company growth
- Reduced time spent on manual MOC data compilation processes by 75% – from one day to 1-2 hours per MOC
- Experienced 25% monetary savings through automated MOC process
- Received commendation from affiliate company president for use of sustainable system to support operational excellence

## S-Chem Realizes Cost/Time Savings with Improved MOC

### Saving Time and Reducing Business Costs

“The manual process was complex and time-consuming,” said Selvam. “Each MOC is made up of six to nine steps, so it took us almost a whole day just to compile all the necessary data. With the web-based solution, we’ve been able to significantly reduce the time we spend on each MOC to one or two hours.”

S-Chem sees the benefits of having a centralized, web-based system that clearly identifies required steps and approvals and prompts appropriate team members to take action. “When the raw information is retrieved instantly, team members no longer have to “go from department to department looking for hard copies. They can just access everything on the Stature platform. That saves time and makes everyone more efficient.”

Due to streamlined workflows, Selvam estimates that S-Chem has experienced a 75 percent time savings across the Management of Change process. In addition, he said, “As a result of the time savings, we’ve experienced a 25 percent reduction in expenses related to the MOC process.”

### Supporting Corporate Expansion

According to Selvam, S-Chem processed approximately 1,500 MOCs between 2010 and 2015, with periods of increased activity tied to company growth. One of the S-Chem companies, SPCo, is currently expanding to increase future production capacity. As it and other S-Chem companies add boilers, furnaces, combustors and other new equipment, they process more MOCs, emphasizing the need for an accurate, automated MOC process.

### Empowering Employees with Automated MOC

Inputting all MOC-related data into a centralized system improves accuracy and reduces errors. “Today, the MOC owner still needs to be a subject matter expert, but the system makes his job a lot easier. In fact, I’d say that our people are able to work a lot more independently, rather than needing the support of a PSM representative at every step of the MOC process. This is a really positive improvement.”

The system also simplifies the process of tracking metrics related to MOCs, such as the percentage of MOCs that are fully compliant with procedures and the percentage of safe start-ups following changes.

### Ensuring Compliance with Centralized Tracking

For S-Chem, Process Hazard Analysis (PHA) and management of change are closely related, and the company benefits from having an integrated solution that combines the two. Accurate action tracking is critical for minimizing safety risks, and for incident investigations and audits.

S-Chem relies heavily on the centralized action tracking process when it conducts emergency drills, which are critical for minimizing safety risks, as well as for incident investigations and audits. “For example, when an auditor comes in, he’d easily find every action item and incident related to a specific piece of equipment,” said Selvam.

As a regulated enterprise, S-Chem must adhere to radiation safety, environmental and securities-related standards, as well as to safety standards set by affiliate organization of CPChem (Chevron Phillips Chemical Company, USA). Using a centralized system to track risk analyses and mitigation actions is essential to ensuring compliance with multiple standards.

*“As a result of the time savings, we’ve experienced a 25 percent reduction in expenses related to the MOC process.”*

Udayakumar Selvam,  
PSM Engineer,  
S-Chem

### Improving Transparency at All Levels

For team members directly involved in the MOC process, the automated system emails the task owners to make people more committed to taking appropriate actions in a timely manner. “We now have a far more transparent process, which makes everyone involved more accountable and responsible as a team,” says Selvam.

S-Chem’s senior management is also strongly committed to the improved MOC process. Every month, the Incident Investigation action items and Process Hazard Analysis action items are compiled for review by corporate management. A president at an S-Chem affiliate company commended the company for its commitment to closing all action items by their due date and for using a sustainable, automated process to improve operational excellence.

“Sphera has truly been a trusted partner in helping S-Chem to better manage change, reduce risk and improve operational excellence. In fact, I’ve recommended Stature to other companies while participating in information-sharing forums,” said Selvam.

1 <http://www.schem.com/uniqueidg46f124970bbd8faba6d6dfcf423f3ab/uniqueidg0/English/ourvision.html>