K+S Potash Canada

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ks-potashcanada.com

Training and Planning Critical as Legacy Site Prepares for Start-up

How do you train people to operate and maintain a brand new solution potash mine that's never been switched on? Thoroughly and carefully are two words that come to mind.

"There are some pieces of equipment here that cost tens of millions of dollars," says Trevor Dyck, Manager of Production and Start-up at K+S Potash Canada (KSPC).

"There's no room for failure – executing on well thought out plans is the only assurance to manage risk."

More than 100 Legacy site tradespeople and operators are undergoing intensive training on-site and at sister operations in Europe, where they're training with equipment and systems similar to those they'll be working with when the Legacy site reaches start-up at the end of this year. Some experts from European business units will be at the

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What a Difference a Year Can Make

2015
232
EMPLOYEES

2016
407
EMPLOYEES

Our family has almost doubled in size!

Over
5000

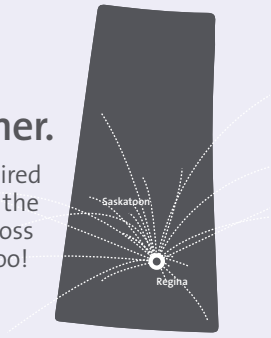
applications received
in the last year!

~50

New employees still to hire in temporary & permanent positions.

Closer together.

We've not only hired from around the province, but across the country too!



Training and Planning Critical as Legacy Site Prepares for Start-up

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Rendering of the Legacy Project process plant with roof, walls and steel structure removed for a better view of the different areas of the process.

Legacy site in the fall to offer support during commissioning. A greater number of these people will arrive in time to help their Canadian colleagues bring more Legacy plant systems on-stream in January. Careful planning of these activities is essential.

> **"We've been doing a lot of commissioning planning – organizational planning – to fine tune our structure and specify who's doing what," says Sam Farris, Vice President and General Manager of Operations at KSPC.**

"There are many details to work out and a lot of things that have to come together at this stage." Commissioning involves testing pieces of equipment to make sure they're functioning properly. Start-up gets underway when the pieces are linked together to make sure they function cohesively as an entire area of operation.

Commissioning is proceeding in phases at the Legacy site and will get into full swing this summer, beginning with two of the plant's three boiler systems. That will give operators time to heat the primary mining caverns in preparation for start-up, when hot water will continuously be pumped into the caverns and be "pulled" back to the process plant as a brine containing potash, salt and other minerals. Equipment required to process the brine would be commissioned and ready for use by that point, says Dyck.

The 18 caverns situated one mile beneath wellpads 2 and 3 will provide the first feed to the process plant, while feed from wellpads 4 and 5 will follow quickly thereafter.

> **"We're on course to commission the plant this summer and produce the first tonne by the end of 2016," says Farris.**

Aerial photo of the Legacy Project mine site, spring 2016.

European Experts to Assist Legacy Colleagues

European CSU Support Team's first trip to Canada.

More than two dozen subject matter experts and experienced operators from K+S Group's European mines will be lending a hand to their Canadian counterparts during commissioning and start-up of the K+S Potash Canada (KSPC) Legacy Site.

"These are experienced people from Germany who will really be able help out our team with any technical challenge that might arise," says Thomas Papst, Vice President of Engineering at KSPC. "If there's an issue with equipment or process when we commission the plant or during start-up, they'll be there to say, 'yes, I've seen this before and these are the actions you can take to address that issue.'"

Daniel Ross, KSPC Manager, Human Resources at the Legacy site, was part of a contingent of KSPC officials who visited the experts and operators in Germany in February to explain work and life at the Legacy site and to answer questions. "They really want to come to Canada to help their Canadian colleagues experience success at this new facility," says Ross.

The Europeans visited Saskatchewan in one of two, five-day orientation tours in February and March. Ross says the trips were designed to acquaint them with the province and included a tour of the Legacy site as well as point-of-interest tours of Regina and Moose Jaw.

They got an in-depth look at Legacy site operations and the Canadian setting in which they will assist during a two-week visit in July, says Trevor Dyck, Manager of Production and Start-up at KSPC. Dyck says the July visit will not focus on training because group members already have expertise in very specific areas, such as particular equipment and process operations. All are proficient in English.

"The July visit will be more about onboarding the European team to specify safety aspects of this plant and worksite and the methodology we will use to commission and start-up the facility," says Dyck. "Legacy is a unique asset. There's only one plant like it."

The Europeans will begin returning to the Legacy site in the fall as commissioning moves into high gear. Most are expected to stay in Saskatchewan for five to six months.

KSPC Welcomed Neighbours to Annual Open House

K+S Potash Canada (KSPC) representatives were happy to welcome a small group of area residents to its community information meeting at the Bethune Community Hall on April 2.

"This annual open house gives us an opportunity to update everyone on the progress we're making on the Legacy Project," says Maeghan Dubois, Senior Communications Specialist at KSPC.

"We're pleased to be a part of this community, happy to share information with our neighbours and proud to be generating a lot of economic activity here, too," she adds.

Residents of the Rural Municipality of Dufferin and Village of Bethune were invited to the meeting and refreshments were served.

Opportunities with K+S and Contractors

Interested individuals may apply for posted jobs and keep an eye out for new ones on KSPC's career page.

ks-potashcanada.com/opportunities

Additional information on jobs, job fairs, information sessions and company culture are available by following links to KSPC's Facebook, Twitter, LinkedIn and YouTube accounts.

If you have questions or concerns about the Legacy Project, please call the K+S Community Hotline at:

1-855-385-8686 ext. 2999

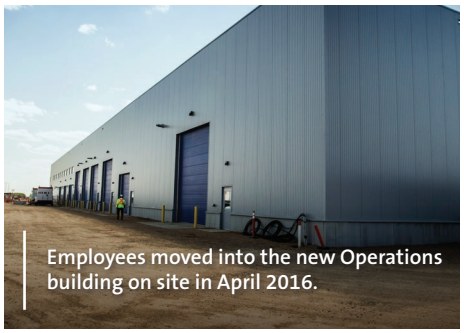
Finally, a Place to Call Home

The lunch area in the new Administration Building is a bright and spacious room for employees to gather.

Another 2016 milestone was reached at the Legacy Site this spring when more than 100 employees moved into their permanent "homes" in the brand new operations and administration buildings on site. The move came after spending many months working in temporary quarters, and brought smiles and satisfaction to many.

> **"People have been looking forward to this for a long time," says Sam Farris, Vice President and General Manager of Operations at K+S Potash Canada (KSPC). "Some people have been working in trailers for the last four years."**

The move was facilitated by completion of the Legacy site's operations and administration buildings. Farris says the operations building is now home to the mine's maintenance crew and supervisors and features large maintenance bays, a fully serviced eating



Employees moved into the new Operations building on site in April 2016.

area, showers and change rooms. KSPC's main process analytics lab is situated in the operations building as well, as is the central control room and the Plant Control System. "It's the heart and hub of our operation for production and maintenance," says Farris. "The central control room is where the entire plant is controlled from and the Plant Control System is what controls all of the systems."

Farris says on any given day approximately 60 to 70 people are working in, or out, of the operations building, while approximately 70 work in the administration building which houses all Legacy Site administration and support employees. "So that's our management team and all the support functions such as human resources, procurement, engineering and health and safety, to name a few."

> **Farris says the move represents, "an important step in our shift to become a permanent, operating potash production organization."**

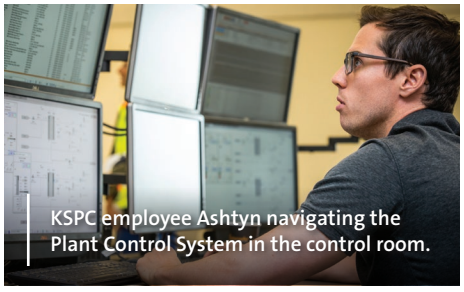
KSPC employee Hettie unpacking at her new desk in the Administration building.

State-of-the-Art Technology Will Drive the Legacy Site

Some refer to it as the control centre of the Legacy site. But Thomas Papst, Vice President of Engineering at K+S Potash Canada (KSPC), goes further in explaining the importance of the technologically advanced Plant Control System that operators will be using to "drive" the facility.

"The Plant Control System is the brain of the Legacy site," says Papst. "It's truly a complete control system."

Sitting in front of their system consoles in the central control room situated inside the maintenance building on site, operators working with the Plant Control System will be able to monitor and control all process areas of the mine. If a bearing in a pump in the wellfield begins to overheat, for example, an alarm will pop up on the operator's monitor notifying him or her that there is an issue that must be addressed. "Or, if the Plant Control



KSPC employee Ashtyn navigating the Plant Control System in the control room.

System is operating in automatic mode, it may automatically shut down the pump, no matter what the circumstances, in order to make sure the pump isn't damaged," says Papst.

Operators using the Plant Control System will monitor and control all six main process areas of the mine. In addition to the wellfield, these include the tank farm and utilities, the evaporation, wet end and dry end areas of the process plant and the storage and loadout area, where potash products will be loaded into rail cars bound for Port Moody, B.C. or customers in the U.S. The sophisticated Human Machine Interface (HMI) graphics employed by the Plant Control System were developed with input from operations. "The process engineers especially, but also superintendents, designed the graphics together," says Papst. "It will be their design that they use as they operate the plant."

The Plant Control System comes with a state-of-the-art Operator Training Simulator (OTS) that can mimic Legacy site processes prior to commissioning and start-up. "OTS allows us to 'drive' the plant from the simulator," says Papst. "It's just like a flight simulator." Should the mine develop an issue once it's in full operation, operators will be able to test potential solutions on the OTS.