



K+S Potash Canada

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Work Advancing on Legacy Project Mine Site, Rail Connections and Shipping Facilities

The legacy is growing. Construction at K+S Potash Canada's (KSPC) \$4.1 billion Legacy Project in southern Saskatchewan is about 50 per cent completed. Beyond the mine site, workers with heavy equipment are moving massive amounts of earth in preparation for a new rail line that will transport potash from the Legacy Project mine site to the world. And at Port Moody in British Columbia, construction has begun on the world's most modern potash handling facility at Pacific Coast Terminals' (PCT) bulk handling operation, where Legacy potash will be stored and loaded onto ships bound for K+S Group's international clients.

Kevin Brown, Project Director for Amec Foster Wheeler, the contractor in charge of construction at the Legacy Project mine site, says: "We're making solid progress and we're rapidly approaching the peak of our construction program."

Brown says about 2,000 people including KSPC's operations team are working daily on site and that number will swell to about 2,400 when the construction program peaks later this fall. The Legacy Project mine site, located about 20 km southwest of Bethune, SK, is scheduled to start commissioning in summer 2016.

Structural steel work underway throughout the process plant remains the centrepiece of the construction program, says Brown. Eleven of fourteen mammoth processing vessels delivered by special trucking units or assembled on site now reside in their appropriate spots in the plant. The remaining three will soon be in place. Brown says that when steel work is finished in a particular section of the plant, the cladding contractor moves in to close the area to the elements and other workers install the mechanical, piping and electrical equipment required to operate the facility. Electrical rooms that will power

the plant were modularized off site, as were 71 pipe rack modules and 44 conveyor gallery modules.

"All this work has to be closely coordinated with the steel program so we're never putting workers in harm's way," says Brown. "For example, we can't have workers under those cranes as they're operating."

Elsewhere on site, the administration and maintenance buildings are taking shape and the structures for two product warehouses capable of storing 100,000 and 40,000 tonnes of potash respectively are approaching completion. The massive "glulam" wooden arches supporting the roofs of the warehouses may look out of place in an industrial setting, but Brown says they're used here because wood is not susceptible to the corrosive environment created by potash products. Earth leveling work is underway for KSPC's 14 km rail line

Our Current Workforce Numbers

185 
employees at the Legacy Site

80 
employees at the Saskatoon Headquarters

5 
employees in the Vancouver Office

30 
different contracting companies on site with dozens of subcontractors

2500 
people working with contractors at the Legacy Site

150+ 
positions to hire throughout 2015-16 (primarily tradespeople & operators)

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with loop at plant and 5 km of spur line and Canadian Pacific (CP)'s approximately 19 km of rail and spur line infrastructure that will connect the mine to CP's existing trackage at Belle Plaine, SK. And at PCT's bulk handling facility at Port Moody, construction is underway on a railcar unloading building and potash storage warehouse, as well as on upgrades to the water treatment facilities and ship-loading equipment. All work is scheduled for completion next year.



All aspects of the Legacy Project will accumulate to the well-known \$4.1 billion CAD investment. Dr. Gerd Dalhoff, Vice President of Controls at KSPC and one of the three managers in charge of overseeing the Legacy Project, never gets tired of making clear that there is no dollar or minute to spare.

"KSPC has formed integrated teams with both Amec Foster Wheeler for the Legacy Project and contractor CH2MHILL for the Potash

Handling Facility in Vancouver. Together, these teams work to ensure that we are on track to achieve our main goals, the first being to commission the plant in 2016 while maintaining our budget," says Dalhoff. "Our discipline to stick to our plan will take us there."

In the wellfield several kilometres east of the plant, wellpads No. 4 and No. 5 have been "handed over" to operations for initiation of cavern development processes. The 18 caverns beneath wellpads No. 2 and No. 3, where early cavern development began in March, will supply the initial feed to the processing plant when the mine goes into production.

"We need to have those first 18 caverns in place for startup," says Sam Farris, Vice President and General Manager of Operations at KSPC. "And it takes about a year to fully develop a cavern for potash production." The Legacy Project is expected to reach 2.0 million tonnes of production capacity by the end of 2017, says Farris.

However, Farris' biggest job right now is preparing the organization for the process plant startup and early operation.

"It's a big project requiring more than 200,000 person-hours of work," says Farris, adding the work involves hiring, planning and a lot of training. "The time needed to develop and deliver training alone will be about 100,000 person-hours."

Legacy Project Surpasses 5 Million Hours Worked without Lost Time Injury

On July 3, the Legacy Project surpassed 5 million hours worked without a lost time injury (LTI). And safety officials with K+S Potash Canada (KSPC) are suitably pleased – but not surprised – with the accomplishment.

"It's an achievement that reflects our strong commitment to safe behaviours throughout our project and operations workforces," says Brett Welder, Manager, Health, Safety and Security at KSPC. "It demonstrates that strong work performance goes hand in hand with strong safety performance."

LTI figures are calculated using the number of people working and the number of hours they worked each day. An LTI is recorded when a worker injured on the job one day is not able to return to work the next, due to the injury. Work records for both KSPC and contracted employees are used in the calculations and all groups must operate with approved safety procedures.

But KSPC is still prepared for any on-site accidents that might occur. The STARS (Shock Trauma Air Rescue Society) mobile education unit visited the Legacy Project mine site on June 22 to run through various accident and emergency scenarios with KSPC's emergency response provider. Welder says employees and others on site were invited to come in and watch various scenarios playing out inside the unit, which is approximately the size of a large RV and outfitted like an emergency treatment room.

Later in the day, a STARS helicopter was involved in a scenario in which it landed and took off from the Legacy Project's helicopter landing pad, a memorable episode that served to assure all present that a fast trip to a Regina hospital awaits anyone seriously injured on site.

New Hires to Receive Training in Europe



European Area Trainer, Michael Siegemund, introducing himself to a crystallizer hotwell pump at the Legacy Project mine site.

Operators and maintenance staff hired to work at the Legacy Project mine site next year can expect to receive an interesting and unique training experience.

The Legacy Operations Training Program (LOTP) will see Canadian trainers deliver theory instruction to the newly hired workers, who will then go all the way to Europe for a combination of theory and hands-on training at K+S Group's European mines.

"We have no plant in operation in Canada where we can train them on this stuff," Marcel Meiss, LOTP Training Manager Europe, said in a June interview at the Legacy Project mine site. "That's the reason why we'll be taking them to Europe. We'll train them in potash processing and then they'll come back to Canada to run those processes here at Legacy."

Meiss and five trainers from K+S Group's European operations were at the Legacy Project mine site for a six-week visit as part of an ongoing project to prepare training courses for future Legacy mine operators and trades people. More than 100 operators and maintenance trades will be hired and trained in groups beginning early in 2016. A crew of experienced European operators and subject matter experts will be on-hand to assist the Canadian workers when the Legacy Project mine site moves to commissioning and startup, scheduled for the latter part of 2016. The LOTP is expected to end once the new mine is running smoothly. New operators and maintenance trades then will receive full training on site.

That's the LOTP in a nutshell. However, the project is a little more complex than it may seem.

Germany's technical education system is a bit different from Canada's. While Canadians interested in technical jobs typically go to school first and get jobs afterwards, most operators and maintenance workers at K+S Group's potash mines in Germany began their careers with a three- to three-and-a-half year apprenticeship program that blends classroom instruction, delivered by trade schools, with

on-the-job training and additional theoretical instruction at the mine that hired them. By the time they've completed their apprenticeships, they are well-prepared to move directly into their full-time positions. The European trainers participating in the LOTP are supervisory level production operators and maintenance supervisors who volunteered to participate in the program. They and their Canadian counterparts, a similar number of experienced mine workers, are learning how to be trainers while using their past and new experiences to create training materials for future new hires.

The LOTP matched each Canadian trainer with a European counterpart who has similar specialized knowledge and experience. The Canadians visited their counterparts' mines in Europe last year to see how they operate and note any differences in processing or equipment compared to what they and their future trainees will experience at the Legacy plant.

German trainer Sebastian Möller is impressed with the knowledge and enthusiasm shown by his Canadian counterpart while visiting Möller's plant in Germany.

"I showed him the centrifuges and he said 'Oh, great!'" Möller recalled. "And I told him we have pusher centrifuges at this other site and he said, 'I want to see them, too!' He has a huge knowledge about potash processes."

The June/July visit was the third time in Saskatchewan for the European trainers. They've been using these visits to acquaint themselves with the Legacy Project and develop training materials, as well as to polish their English skills and learn about Canadian culture.

Dr. Markus Gawlowski, Project Manager of the LOTP, says that like other projects of this size, the LOTP still faces challenges. However, the Canadian and European trainers have developed excellent working and social relationships and that have been key to overcoming any obstacles that arise.

"What we have learned from the Legacy Project is that it's a huge benefit to make use of all experiences and resources that are available in our company," says Gawlowski.



A few of the European Trainers pose at the Legacy site during their summer visit.

Belle Plaine Spur Line an Ambitious Project

A massive amount of earth is being moved to prepare the foundation of the new Belle Plaine Spur line linking the Legacy Project mine site to Canadian Pacific's (CP) trackage at Belle Plaine, SK.

"We have approximately 40 dump trucks running round the clock on building the foundation alone," says John Brooks, CP's Vice-President Sales and Marketing, Bulk. "It's an impressive feat. It's the largest earth-moving project in Saskatchewan in several generations."

Brooks says CP began developing the new 30-km line in late April and work has progressed well due to the warm and dry summer. He estimates 20 per cent of the grading and shaping of the land has been completed, and the right of way has been cleared.

Steffen Brill, Senior Manager, Logistics and Transportation at K+S Potash Canada says KSPC's agreement with CP calls for the work to be completed by October 2016. Brill says construction is well underway on the approximately 19 km of rail and spur line infrastructure project that KSPC is building adjacent to the mine site. The project comprises a rail loop and a rail yard to store rail cars. The loop will be used in loading product onto unit trains and will connect to CP's new spur line.

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

Construction Camp Soon to Hit Peak Occupancy

Construction camp life has seldom been this comfortable.

The KSPC construction camp situated on the northeast perimeter of the Legacy Project mine site features individual rooms with flat-screen televisions, cable TV service, private washrooms with showers, internet connections (WiFi), comfy double beds, individual climate controls – pretty much everything you’d expect to find in a nice, smaller hotel room.

“This is one of the highest quality camps I’ve seen,” says Chris Whorton, Construction Manager, Legacy Project, Amec Foster Wheeler, and the man who oversees operations at the camp.

“And I’ve seen a lot of them. I’ve been doing this kind of work for 30 years.” The Legacy camp opened in May 2014 and currently is



Contractors Angel Polsom (left) and Julie Wangler (right) love to see how the Legacy site changes every week.

home to about 850 people employed at the project. Whorton says the camp will hit a projected 1,470 residents when construction work peaks this autumn.

ATCO operates the camp in partnership with George Gordon First Nation, an arrangement that covers housekeeping, maintenance and catering. Unlike most construction camps, this one employs “built-in” water, power and gas utilities for efficient and dependable services. And while smoothly operating utilities may – and should – go largely

unnoticed, residents can’t miss the wide range of recreational activities offered at the camp. There are two small movie theatres where people can watch everything from Hollywood offerings to pay-per-view sporting events and there are billiards and foosball tables for those who appreciate good old live, three-dimensional gaming. There’s also a large, well-equipped and popular exercise facility, and the camp recently hired a recreation director who will coordinate and organize different recreational activities for the residents. There’s even a lounge that seats about 250 people.

“The lounge opens after the evening meal and closes at 10 p.m.,” says Whorton. “Last call is around 9:15.”

Tractor operators Julie Wangler, from Vancouver, and colleague Angel Polsom, of Saskatoon, give high marks to the KSPC construction camp.

“I especially like the big beds, the privacy that workers have with the single rooms and, of course, the food!” says Polsom.

KSPC Supports Community with New Road Grader and Hall Sponsorship

Higher than normal rainfall and a large increase in traffic due to construction were taking a heavy toll on approved site access roads in the vicinity of the Legacy mine in southern Saskatchewan. When the issue was raised at a meeting of the Joint Road Management Committee established to deal with such matters, the Rural Municipality of Dufferin, K+S Potash Canada (KSPC) and Legacy Project construction management company Amec Foster Wheeler agreed a new road grader was needed to help address the problems.

“We agreed KSPC would provide the funds to purchase a new grader and the RM of Dufferin would provide the manpower and operating budget,” says Sam Farris, VP & General Manager, Operations at KSPC.

Dufferin RM administrator Rodney Audette says KSPC’s contribution for the grader will go a long way toward improving road conditions in the area.

“That additional grader should allow us to double the frequency in which those roads are being maintained,” says Audette.

Bethune and region residents will also benefit from a new sponsorship agreement between KSPC and the board of directors of the Bethune Community Hall, now known as K+S Potash Canada Community Hall.

“Youth groups and clubs in a lot of small communities struggle to get by,” says Randy Sigmeth, president of the community hall board of directors. “K+S Potash Canada’s



Sam Farris, VP and General Manager of Operations at KSPC and Randy Sigmeth, RM Foreman, RM of Dufferin (#190), pose next to the new grader.

sponsorship will allow us to give them a discount on rental fees for the hall.”

Sigmeth says some of the money also will go toward upgrading and modernizing the 40-year-old facility, which is beginning to show its age.

“These are just a few examples of how KSPC is supporting the communities where we operate and working together to address common issues,” says Farris.