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NOVA Chemicals®

So much to be proud of!

As 2016 comes to a close, the Joffre Site is proud to celebrate a major milestone in our company's history.

The Polyethylene 1 (PE1) Expansion Project is completing the final stages of commissioning, carefully testing all equipment prior to the start-up phase when the new reactor will begin to produce polyethylene by year end. On behalf of our leadership team, I want to congratulate the hundreds of people who made a contribution to this \$1-billion project — from our project design and regulatory teams, to the construction teams, contractors and workforce, to our suppliers and to the commissioning group. And to our community who shared input, suggestions and patience at every phase of the project.

This will be the first new linear low density polyethylene reactor to start up in the Americas in a decade. It positions us well for a sustainable future where we can continue to serve our growing customer demands while bringing added value to Central Alberta and Canada.

With the start-up of these expanded operations, a mix of 60 permanent and contract positions have been created at the Joffre Site. We also estimate that 125 to 175 spin-off jobs resulted from our manufacturing sector investment. As we look at the immediate and longterm economic boost from this four-year project, there is a whole other aspect that we are equally proud of.

Beyond economics, our Taking Care approach equally considers how we carry out our operations and projects in terms of the community and the environment. Our construction team

incorporated a Good **Neighbour Strategy** through all stages of the expansion. We hope you agree it was effective in mitigating negative impacts and creating opportunities. Let me assure you that



this care and attention will continue as we return to more typical operations.

Expansion workforce donations to community agencies and programs provided more than \$45,000 to Central Alberta agencies. After completing the construction phase, we coordinated a garage sale and community day referred to as Never Refuse to Reuse. What a great way to take care of our environment and also give back to Central Alberta community agencies who operate with so little.

As a PE1 Project environmental legacy, the NOVA Chemicals Community Nature Trail has brought much enjoyment to many in our community and our employees. We also met our commitments of zero net tree loss and containing the expansion mostly within the existing site footprint.

As I look ahead to 2017, all of us at the Joffre Site are proud to be a vital part of this community. We will continue to work in a way that we hope reflects our community's expectations. We wish you a safe and peaceful holiday and look forward to your ongoing interest in our operations.

Rick Van Hemmen, Joffre Site Leader

2016 highlights: Taking Care in our community

NOVA Chemicals Joffre Site has a long history of community involvement and investment — a direct reflection of our Taking Care model and our commitment to the Responsible Care® ethic.

Not only do our employees contribute hundreds of volunteer hours each year, but we also invest in the well-being of our community by lending a hand to organizations dedicated to making a difference and improving the overall quality of life for Central Alberta and fellow Albertans.

Throughout the year we feature our community stories in *SiteLine*. In keeping with our tradition, here is a closer look at some of our more recent community involvement activities.



Creating possibilities for Central Alberta: \$728,669 raised for United Way

This year's United Way Central Alberta campaign was focused on creating possibilities for those in our community who need a hand up.

At the Joffre Site, we measure our campaign progress by the number of heroes who make a pledge to the United Way. This year we had a total of 602 heroes and the total campaign dollars were revealed through "the magic of numbers" magic act performed by our Mystical Santos (Arnel Santos, Senior VP Operations) assisted by our President and CEO Todd Karran and our Campaign Chair Scott Kay.

The \$728,669 raised this year brought our cumulative total for the United Way Central Alberta to over \$7 million.

United Way Campaign Co-Chair for the Central Alberta campaign Craig Curtis commended us on another successful campaign: "I'm humbled by your achievements and for moving possibility to reality."

Craig's Co-Chair, Ken Johnston, highlighted the generosity of our employees, retirees and company matching dollars adding: "Magic is the art of illusion. For folks in our community hope is an illusion. Today, with this money, you've replaced hopelessness with the reality of hope."

Also part of the campaign is the annual Day of Caring® initiative. This year 233 employees and leaders provided 1,600 hours of service in our community to help a variety of agencies such as the Kerry Wood Nature Centre, the Red Deer Museum and the Boys and Girls Club. Over the years, we have provided more than 18,000 hours of service.



Lending a hand for fall clean-up at the Imagination Grove at Kerry Wood Nature Centre.



Helping to clear trees at the Youth and Volunteer Centre camp in support of the FireSmart program.



Never refuse to reuse! Bargains and benefits galore at our garage sale and Community Day



As our PE1 Expansion Project was completed, we undertook to ensure that any useful materials remaining from the project could be recycled and reused. These initiatives were part of our overall site waste management and recycling programs to keep materials out of the landfill. We also included site-wide materials at the events.

Not only did we donate surplus materials and equipment to Habitat Re-Store and the Alix Archery Club, but in October we also held a huge garage sale for our employees (pledges and matching corporate dollars for items raised an additional \$18,000 for our United Way campaign). We also had a special Community Day Free & Carry Event for Central Alberta non-profit agencies.

Everything from desks, computers to book shelves and kitchen appliances were available to help the 36 participating agencies upgrade their offices at no charge — avoiding expenses and instead directing funds towards their programming. What a great day! Not only did we Take Care with our environment, but we also gave back to the community.

Opening our doors for Fall Career Day



This November, 36 career day participants checked out their parents' workplace here at the Joffre Site. After a business and safety overview, the students' day consisted of career exploration through one of three workshops and an afternoon of one-on-one mentoring.



NOVA Chemicals is a Platinum sponsor for both the 2019 Canada Winter Games and the construction of the Centre for Health, Wellness & Sport at the



Red Deer College. This sponsorship provides us with a unique opportunity to contribute to the Games' Sustainable Practices and Assets, while leaving a positive legacy for future generations through the Centre.

The Games will use a suite of strategies to support a sustainability leadership vision. This is well-aligned with how NOVA Chemicals applies sustainability in our business helping address economic, social and environmental impacts.

Earlier this year, our Joffre Site Leader Rick Van Hemmen chaired the Legacy Sub-Committee on Sustainability for the Games Host Society. He is also helping to establish and guide an operational Sustainability Committee that will develop and oversee more detailed sustainability plans for the Games.



Joffre Site Leader Rick Van Hemmen at a recent Canada Winter Games Sponsor Summit encouraging the participation of potential partners.

Assisting our fellow Albertans in their time of need

In May 2016, we joined thousands of others to help the Fort McMurray evacuees who were forced out of their homes by unrelenting wildfires. To assist our fellow Albertans, we estimate that our employee donations along with NOVA Chemicals matching funds had a total impact exceeding \$487,000.

- NOVA Chemicals
- Employee Contribution
 - Alberta Provincial Government Match
- + Canadian Federal Government Match









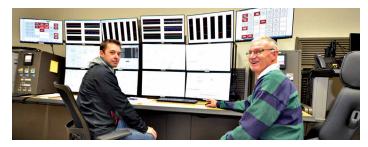




PE1 Expansion: final stages of commissioning underway

The \$1-billion PE1 Expansion Project is completing the final stages of commissioning. The commissioning team is carefully testing all equipment prior to the start-up phase when the new reactor will begin to produce polyethylene by year end.

The polyethylene manufactured at PE1 is used by our customers to make products such as food packaging, collation shrink, heavy duty sacks, trash bags and liners, and stretch film. The expansion allows us to increase our polyethylene capacity by about 40% to meet our customers' growing demand.



New training tool at PE1: We recently commissioned a new training simulator — a computerized model of the plant where operators can develop their skills through simulating various plant conditions. It also allows operators and trainers to test different operating modes and pre-plan activities such as shut-downs or start-ups. The new simulator joins the existing fleet of simulators in the other units. Developing operator skills and experience helps reduce flaring during start-ups, shut-downs and unit upsets reducing impacts on the community, environment and plant productivity.

Regulatory updates

Back-up well for caustic disposal system:

Following our application late August 2016 to the Alberta Energy Regulator under Directive 056 to drill this new disposal well, we received approval early in September to proceed with this phase of the process. Drilling work was started in November and we anticipate that completions will be finished in December. Once the well is tested and its suitability is confirmed we will apply for an amendment early in 2017 to our existing well disposal approval. We expect the regulatory process to be complete in 2017. The new disposal well will not change the source, characteristics or quantity of fluids being injected into the disposal system that has been in operation at the Joffre Site since 1979. Please see previous issues of SiteLine for more details, or view our fact sheet at www.novachem.com/pages/joffre/joffre.aspx. Information and a display on the back-up well were also provided at the October Community Open House.

Upcoming application for Renewal of Operating Approval: We have a 10-year approval from Alberta Environment and Parks (AEP) to operate Joffre Site facilities. As the current approval expires in 2019, we will be developing a renewal application during 2017 for submission to AEP by early 2018. The application will include a comprehensive evaluation of our site's environmental performance. An essential component of the renewal process is consultation with our neighbours and community. We will provide you more information about this application in future *SiteLine* editions and at the 2017 Community Open Houses. Your input is welcome.

Science fun complements October Community Open House

More than 40 people joined us at our Fall Open House October 12 to discuss our operations, PE1 Project progress and our environmental performance and sustainability goals. Young guests also had some fun experimenting with two science activities. As an industry that depends on future engineers and scientists, we support STEAM education (science, technology, engineering, arts and mathematics). Our team of employee volunteers have been bringing our new STEAM kits, including the Pressure Safety Valve experiment, to various community events.

See you again at the Spring 2017 Open House!



SiteLine is published by NOVA Chemicals Corporation

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For more information, please see these websites:

- www.novachemicals.com | www.novachemicals.com/Joffre
- Chemistry Industry Association of Canada: www.canadianchemistry.ca
- American Chemistry Council: www.americanchemistry.com



