

SiteLine

Joffre Site Community News

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Assessing our performance on a continuous basis



As another year draws to a close, many of us take time to assess how we did and what we would like to achieve in the new year. At our Joffre Site we take this process very seriously — and, in fact, assess our performance on a continuous basis.

For the past few years, we have been focused on identifying opportunities to improve the way we do things. The broad initiative called Operational Excellence challenges us to continuously improve, and to implement Industry Best Practices into the way we operate our plants.

We had several unplanned flaring events in 2014 — some related to power disruptions and others for maintenance. Our operators have been pretty successful in minimizing flaring during plant upsets, shut-downs and start-ups, but we know these types of operating situations are disruptive to our community. Flaring management continues to be an important area of focus for us.

From a Responsible Care® perspective, we continued to invest time and money into the communities where we work and live as we celebrated our 35th anniversary year. A few highlights are included in this edition of *SiteLine*. I am so proud of our company's value system and how our employees take care as they generously support our United Way Campaign and enthusiastically volunteer in a wide range of initiatives from Days of Caring, to tree planting, litter cleanups and carpooling.

From a business perspective, 2014 was a strong year for NOVA Chemicals. Through the third quarter, our company celebrated some record earnings and record polyethylene sales, and we continue to achieve major milestones related to our corporate strategy. Here at the Joffre Site we have made a lot of progress on our growth projects. Our Polyethylene 1 (PE1) expansion is progressing well and remains on schedule for start-up at the end of Summer 2016. The refurbishment of our Ethylene 2 (E2) furnaces is well underway and we expect the first furnace to be completed early in 2015. As with all our operations, construction activities are being conducted with the utmost care and consideration for safety, the environment and our surrounding community.

Looking ahead to 2015, we continue to share our plans for a potential E2 Debottleneck (E2DB) Project (see update page 6). Seeking your input on site growth and activities and following up on any commitments to our community are important performance measures for us.

I wish you and your families a safe and peaceful holiday season, and all the best for 2015. Please accept sincere thanks from all of us at the Joffre Site for your continued interest and input into our operations.

Rick Van Hemmen,
Joffre Site Leader

Highlights from our 35th anniversary year

As we celebrated our 35th anniversary year at the Joffre Site, our ongoing role in the well-being of the communities where we work and live took on a special significance. NOVA Chemicals has a proud tradition of lending a hand to community organizations that make a difference and improve the overall quality of life in Central Alberta. Our *Taking Care* model — with its focus on community — ensures that this tradition will continue into the future.

There is a special culture of caring at the Joffre Site that has its roots going back to our operational start in 1979. *Taking Care* is a way to think and a way to work. It is a way of working with our community partners in important, worthwhile projects — be they large or smaller in scale. Here are some highlights from our anniversary year.

United Way campaign breaks through \$5.6-million mark since 1995

We challenged ourselves again in 2014 to increase the Joffre Site's record-setting participation in our United Way campaign — and we're proud to say even more heroes stepped forward this year! In fact, 589 "heroes for change" helped us to break through the \$5.6-million mark for funds raised (including employees, retirees and matching corporate funds) for the United Way of Central Alberta since our site campaigns began in 1995.

This year employees' generous contributions along with NOVA Chemicals' matching dollars have now raised more than \$704,000. Leaders of the Way — employees and retirees who gave at the \$1,000-plus level — increased to 143 from last year's 131.

In addition to the dollars raised, 209 of our site employees and leaders volunteered their time again for the United Way Day of Caring® Program. We invested about 1,500 hours to help 29 agencies tackle some special projects. Several of our heroes for change are pictured here at work in our community.



Painting and renovating a kitchen at Safe Harbour.



Scrubbing and cleaning at Loaves and Fishes.



On this our 35th anniversary year, our Joffre Site United Way campaign team presented a "milestone" cheque in November to the CEO of the United Way of Central Alberta Robert J. Mitchell. Our Acting CEO and Chief Financial Officer Todd Karran and Joffre Site Leader Rick Van Hemmen joined our Campaign Chair Ed Bryant and Vice Chair Chris Cooke in the event that recognized this outstanding volunteer effort.

Our 13th year at "Tis the Season" luncheon

The Festival of Trees is very much a part of the Central Alberta holiday tradition — and a valuable source of funds for urgently needed equipment and facilities for the Red Deer Regional Hospital. (Since the festival's start 21 years ago, more than \$10 million have been raised.) NOVA Chemicals volunteers have lent a hand for 13 years serving lunch for one of the key fundraising activities of the festival. This year 60 of our volunteers were at your service!



Opening of NOVA Chemicals Imagination Grove celebrates our anniversary

We were pleased to commemorate our 35th anniversary with the signature sponsorship of a wonderful community resource: the NOVA Chemicals Imagination Grove.

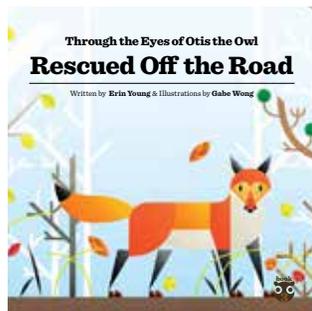
The outdoor classroom and natural learning play space at the Kerry Wood Nature Centre is the result of a partnership with the Waskasoo Environmental Education Society (WEES) and the Province of Alberta. The Imagination Grove is a dynamic space that engages children and their families in individual and group learning, exploring and gaining comfort, confidence and respect for the natural world.

In early October, our Responsible Care Director Jim Dixon joined Mayor Tara Veer of The City of Red Deer at the grand-opening ceremony “ribbon-cutting.”



Otis the Owl inspires third book

Readers can't get enough of the insights into our natural world that the beloved education owl Otis from the Medicine River Wildlife Centre (MRWC) has to offer. “Rescued off the Road” is the third book in the Otis series, and the second book sponsored by NOVA Chemicals. The tale unfolds when a fox is hit by a car. Otis narrates the story of its rescue, care and eventual release back into the wild. The books provide a great educational component, but also leave young readers feeling inspired and empowered.



Kids at work

Whether the kids were in the Mad Scientist Group or the Project Protégé Group, our 25 career day participants said they loved seeing where their parents work and investigating some future opportunities for themselves! Plant tours were complemented by hands-on exercises such as “Ideal Bathtub” and a chance to test out equipment such as the hearing test monitor at Occupational Hygiene.



The spirit of our community



NOVA Chemicals Community Activity Centre officially opened

More than 60 people took part on August 7, 2014 in the official opening of this new facility which demonstrates “the spirit of our community.” The Joffre Community Society, Lacombe County and NOVA Chemicals are proud sponsors of the all-season, multi-use facility in the Hamlet of Joffre. The Olympic-size skating rink and facilities support a variety of activities such as hockey and skating, ringette, basketball, volleyball, badminton, community events and more.

Pictured left-right: Scott Kay, a leader at the Joffre Site; Mike Marshall, President Joffre Community Society; Cliff Soper, former Lacombe County Councillor; Barb Shepherd, Lacombe County Councillor.



Responsibly shipping our goods

Early in September, Technical Advisors from the Joffre Site Logistics Emergency Response Team (NOVALERT) participated in a large TRANSCAER® event in Calgary. The two-day event for emergency responders was well attended with over 250 participants. This was an opportunity for our Technical Advisors to provide information about our main products and how the team supports transportation emergency response capabilities within Canada, United States and Mexico where our products are shipped by rail car.

NOVALERT was created in 1989 to provide NOVA Chemicals with emergency response capability associated with the transport of products and co-products into and out of our manufacturing facilities.



More green shirts help out: tree planting

During Environment Week in June, Joffre Site employees wearing our signature green shirts joined efforts and planted nearly 800 seedlings including green alder, white spruce, tamarack, dogwood, cranberry and lodge pole pine with The City of Red Deer as part of their Urban Forestry Project. We were pleased to mark the 16th consecutive year we have participated in this project that benefits air quality, biodiversity and habitat for wildlife corridors.

Putting litter in its place — on our shores and along our highways



Annually we participate in two river cleanups in partnership with the City of Red Deer. To support Environment Week in June, Joffre Site's Enviro-Action Team engaged an enthusiastic group of almost 40 to clean up around the Red Deer River. Joffre employees were also among the 50-plus participants in the Red Deer Great Canadian Shoreline cleanup in September helping collect 600 kilograms of trash. Participants at both cleanups enjoyed a BBQ hosted by NOVA Chemicals.



Each year we also support four youth groups (two in the Spring; two in the Fall) who join forces and help clean up our "adopted" five-kilometre stretch of Highway 11 near the Joffre Site. In addition, Parkland Trek "sweeps" the ditches of the section of Highway 815 in front of the plant site.

**Wishing you all the
hope, wonder, and joy
that this season can bring!**

From all of us at the Joffre Site



Joffre Site skyline changes again

Early in October, the PE1 Expansion Project changed the skyline at the Joffre Site again as the Product Purge Bin (PPB) was delivered and lifted into position. The PPB enables the last major process step in the polymerization area where polyethylene is made by the chemical reaction of ethylene.



Although the 94-tonne PPB is much lighter than the 280-tonne reactor which was lifted into place this summer, construction crews still used the same two cranes working in unison to lift the 37-metre tall equipment into position. To allow higher production rates, this PPB is larger than those in the existing PE1 plant. Like the reactor, it was manufactured in Tofield, Alberta.

The PE1 Expansion Project continues to progress with major foundations, cooling tower, pipe rack and structural modules substantially complete as we approach year end. The electricity substation is also complete and the tie into the existing system will be completed in the Spring. Mechanical, electrical and piping installations are underway and will continue into 2015. The PE1 Expansion Project is expected to be complete at the end of Summer 2016.

Currently there are about 300 workers on site. This number will slowly ramp up and reach a peak of about 800 workers in July 2015. In November, the project started a new work schedule with workers on site seven days a week. This shift change allows us to better attract out-of-province workers and enhance construction schedule progress. While the change introduced some additional weekend traffic, traffic volumes on Mondays and Fridays have been reduced.



The PPB towers about 14 metres above the reactor to allow room for equipment stack-up below.

Rail yard expansion nearing completion

Civil work is complete on the north rail yard expansion and rail track construction is now underway with completion targeted for Spring 2015. Included in the work was the construction of an enhanced stormwater management system and nautilus pond. About 30,000 native area plants — including trees, shrubs, bushes and grass seeding — were planted this summer in the pond area to provide for wildlife habitat.

Once the rail track is complete, we will use the track to store new rail cars expected to be delivered early in 2015. Final rail track tie-ins to the loading barn within PE1 will be completed in 2015.

Construction underway on Community Nature Trail



Construction began in November on the 89-hectare (220-acre) NOVA Chemicals Community Nature Trail — our PE1 expansion legacy project. Timcon Construction Ltd. was awarded the contract for this unique project which will demonstrate how wildlife habitat, agriculture, industrial and recreational uses can exist

harmoniously together. As part of our community commitment to zero-net tree loss during our expansion projects, 10,000 shrubs and trees will be planted in the trail area in 2015. Depending on weather conditions, we are hopeful the community can start enjoying the trail by Fall 2015.



Regulatory update

Proposed Ethylene 2 Debottleneck (E2DB) — At our October Community Open House, we provided an overview of the environmental and regulatory studies for this potential project (please see our News Room for the proposed project fact sheet www.novachemicals.com/Joffre).

We are in the process of completing a business analysis for the potential project, and our Board is expected to review this early in 2015. If our Board approves moving ahead, we expect to apply to Lacombe County for a Development Permit in Spring 2015. The application for an amendment to our site operating approval to Alberta Environment and Sustainable Resource Development would follow sometime in Spring / Summer 2015.

We will continue to provide updates on the potential project and welcome stakeholder input and suggestions.

E2 Furnace Refurbishment safety focus

To maintain plant operating capacity and accommodate the PE1 Expansion Project, five of our 11 E2 furnaces are being refurbished. The first furnace refurbishment is expected to be complete early in 2015. A number of innovative safety measures have been put in place during this work which support our on-site safety programs such as “Stop the Drop.” For example, the orange wrap along the elevated work platforms is an added measure to prevent tools from falling below (as there are workers on every level). The decks are covered with plywood painted with a non-slip paint to help prevent slips, trips and falls.



Phase 2 to refurbish four additional furnaces is proposed to start in 2016. Completion of the furnace refurbishments will help ensure a continued reliable supply of ethylene feedstock for our expanded polyethylene facilities.

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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



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As our 35th anniversary year draws to a close, here are some milestones that bring us to 2014 (see previous issues for earlier years):

The 2010s

- 2012** PE1 Expansion Project announced. To commemorate the Joffre Community Advisory Panel's (JCAP) 30 years of community liaison, we made a donation to the Lacombe Hospital and Care Centre.
- 2013** A June stakeholder event celebrated the official kick-off to start construction of the PE1 expansion. NOVA Chemicals Community Nature Trail legacy project announced.
- 2014** Now using new incremental ethane feedstock from oil sands upgrading within the original E1 unit after process modifications made. Ethane supply from the Williston Basin also available with the commissioning of a 700-km (435-mi) pipeline from North Dakota. Refurbishment of five of our E2 furnaces is underway with projected air quality and noise management benefits. Responding to positive business conditions, commenced an E2 debottlenecking business analysis and sought input from stakeholders.

Verification set for April 2015

Every four years, as part of our commitment to Responsible Care, we undergo a third-party verification through the Chemistry Industry Association of Canada (CIAC). The last verification was in 2012. Watch for more information in our first 2015 edition of *SiteLine* on our fifth verification process which will once again include a community representative.

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