

SiteLine

Joffre Site Community News

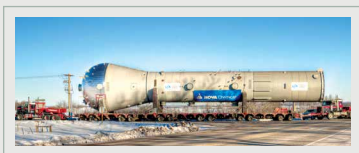
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PE1 expansion milestone: reactor delivered to site

“Working with people the way you like to work”

“I remember the excitement of Joffre in the early years when we were starting up the plant for the first time.... The excitement of working with people the way you like to work.”

– Our first plant manager Dave Clarke on the occasion of our 20th anniversary

Many of our neighbours, stakeholders and employees remember October 22, 1979 when Premier Peter Lougheed officially opened our first ethylene plant. It was the start for what is today one of the largest ethylene and polyethylene production complexes in the world.

But as the quote from Dave Clarke so aptly notes, it's not so much about the bricks and mortar, but about the excitement of “working with people the way you like to work.” On our 35th anniversary, I believe the Joffre Site still is the kind of place Dave and the many people who founded NOVA Chemicals would be proud of. We work by “Taking Care” as we put Responsible Care® into practice. We value the safety and well-being of our co-workers, communities and the environment. We are committed to be a socially responsible neighbour. And we respect each other and our community stakeholders.

Those who study successful businesses point to companies that change and adapt without compromising their core values. I see this in spades at NOVA Chemicals as we move forward with our growth plans and active investment in our business—not just on the Joffre Site but also in our important feedstock and product storage and transportation infrastructure.

Our assets require constant reinvestment if we are to sustain and continue to succeed from a business perspective as well as a socially responsible perspective. As you know, our Polyethylene 1 (PE1) Expansion

Project is underway using the best available and reliable technology. As with all our operations, construction activities are being conducted with the utmost care and consideration for public safety and the environment.

Five of our Ethylene 2 (E2) furnaces are also being refurbished and this is expected to result in air quality and noise management benefits. And early this year we began an E2 debottlenecking business analysis. A debottleneck would allow us to increase production capacity through the modification of existing equipment and possibly the addition of new equipment within E2. We expect to have a better definition of this in the next few months, and will consult with you fully on any plans and regulatory requirements.

Please join us at the May Community Open House (invitation page 5) where we hope to provide you with more information and discuss any topic of interest to you regarding our operations.

As we celebrate our 35th anniversary, we will continue to work with people “the way you like to work.” Please give us your thoughts on how we can meet your expectations in this regard.

Rick Van Hemmen, Joffre Site Leader

PE1 Expansion Project

Mechanical work soon to be underway

As many of the larger project components being manufactured off-site arrive, mechanical work on the PE1 Expansion Project is getting underway. A recent project milestone was the delivery of the new reactor for the polyethylene production train (see accompanying photos and story). We expect to set the reactor and erect the flare stack sometime this Summer.

Piling work is scheduled to be complete in May. By the end of 2014 major foundations, the cooling tower, piperack modules, structural modules and pre-engineered buildings will be complete. Mechanical, electrical and piping installations will be underway, along with cladding, HVAC and insulation of major buildings.

In related site activities, the foundations for the E2 Furnace Refurbishment Project are also nearing completion. Five of the 11 furnaces will be improved at a cost of \$150 – \$200 million to ensure a continued reliable supply of feedstock to our polyethylene facilities. We will use next generation low oxides of nitrogen (NO_x) burners as part of the improvements.

Late in 2013 we received approval from the Alberta Utilities Commission for the on-site electricity substation to meet the needs of the PE1 Expansion Project. PCL Construction is designing and building the new facility which will be complete this Fall.

As tie-ins and minor plant modifications for the expansion were completed during a 2013 PE1 outage, we have eliminated the need for an additional outage when the new production line is connected to the existing facility. Mechanical completion, commissioning and start-up will happen early in 2016. Close to \$1 billion will be invested into this project by start-up.

Please go to our website to see video footage of the construction work: www.novachemicals.com/Joffre.

Construction workforce estimates

Currently there are about 175 workers on site per day. That number will continue to slowly ramp up through 2014 and reach a peak of about 800 workers in Spring 2015. Once commissioning of the expanded facilities begins, workforce numbers will drop to about 50.

A focus on local

Ledcor, our lead contractor on the PE1 Expansion Project, is having a lot of success recruiting the workforce from the Central Alberta area. In fact, more than 60% of the current project staff and craft workers are from an approximate 75-km radius of the work site.

Local job fairs held by Ledcor such as the ones in Lacombe and Red Deer have generated a lot of interest and contributed to this recruiting success. You may have heard the career fair ads on radio stations. These events and other promotions will continue as the project workforce ramps up.

PE1 expansion milestone: reactor delivered to site



February 26 was a day to celebrate on the expansion site as the largest single piece of equipment arrived. After months of planning, the two-day heavy haul was completed and the reactor was safely unloaded in the lay-down area of the expansion site. The 280-tonne reactor left KNM Process Equipment in Tofield, Alberta and made the 125-kilometre (km) trip to a pre-determined overnight parking location outside of Mirror. With speeds of 30 to 40 km per hour, that portion of the trip took seven hours. On February 26 the load travelled the remaining 50 km to the construction site. This centrepiece of the PE1 Expansion Project will be lifted into position sometime this Summer by two large cranes.

Did You Know?

- The base weight of the reactor before insulation, fireproofing and paint are applied is 253.5 tonnes—two and a half times the weight of an average blue whale.
- The diameter of the largest portion of the reactor is 7.62 metres (m)—1.5 m taller than the tallest giraffe ever recorded.
- 375 gallons of paint were used to paint the reactor—enough to fill almost nine bathtubs.
- The reactor stands over 38 m high—two-thirds the height of the Leaning Tower of Pisa.

Addressing traffic impacts during construction

As the construction workforce ramps up, our Good Neighbour Strategy Team is focusing on ways to reduce traffic impacts on our surrounding community.

Generally our efforts going forward are focused in three areas:

1. Education and awareness—We regularly communicate with our construction workforce and site employees on safe and courteous driving practices. In addition to the workforce orientation, we are providing tips and suggestions in our newsletters, are planning safety bulletins and presentations, and promoting carpooling.

2. Increased enforcement—With Lacombe County, we have put in place funding and resources for increased traffic enforcement starting in 2014 and extending through 2015.

3. Signage—We are discussing a variety of mitigation measures with Alberta Transportation. With Lacombe County

we are investigating a change in signage at Freedom Road and Highway 11 from a stop to a yield sign.

We are monitoring our initiatives on an ongoing basis, and will adjust them as required.

Carpool program gaining popularity

To help mitigate construction workforce impacts, we continue to promote our carpool program to our employees and contractors. About 190 people now participate in the program and more are signing up daily.



Community Nature Trail construction to begin this Summer

Progress on the NOVA Chemicals Community Nature Trail, our PE1 Expansion legacy project, continues. A detailed design of the trail, located to the east of the rail yard expansion, is now complete. We will be getting construction bids in the Spring and construction on the 89-hectare (220-acre) project is scheduled to start in July 2014. Depending on weather conditions which can influence construction, we hope the community can start enjoying the trail later this year or early next year.

Our commitment to Central Alberta business

NOVA Chemicals is excited to be expanding in Central Alberta. In addition to providing workers with a safe, well-organized construction worksite, we have recently implemented a *Trades Link* program that connects workers to local amenities. Participating businesses are included in a business listing and display the *Trades Link* logo at their stores.



If you are a local business with a product or service you think would be of interest to the construction trade workers at our site, get in touch with us at joffresite@novachem.com.

Update on ongoing site noise management initiatives

Our noise management strategy—to mitigate site operating noise impacts on our neighbours—continues to be a priority at the Joffre Site.

Monitoring: Community noise surveys have been conducted annually at four residences near the Joffre Site. A fifth residence was added in 2013 to monitor noise related to the north rail yard. Results for 2013 indicate that we continue to meet target sound levels at all five of the residences. Our annual community noise survey at the five residences will continue in 2014. Additionally in 2014, we will continue to investigate the enhancement of our sound measurement analyzers surrounding the site.

Mitigation:

- In 2013, the addition of variable frequency drives on the Polyethylene 2 (PE2) flare stack blowers was completed.
- Several mitigation projects are planned to continue in 2014:
 - Ethylene 3 (E3) flare stack blower frequency drive project; and
 - PE2 agitator gearbox acoustic treatment project.
- Noise sources from the PE1 Expansion Project will be validated once construction is complete.
- The E2 Furnace Refurbishment Project will use silencers on new induced and forced draft fans for the furnaces.
- Development of the north rail noise abatement strategy will continue in 2014 – 2015 and will be implemented when the new yard is in operation.



Variable frequency drives were placed on the PE2 flare stack blowers.

Rail yard operations: stakeholder workshop follow-up

NOVA Chemicals held a Stakeholder Workshop in November 2013 to discuss our Joffre Site rail operations as well as broader CN rail operations in the Joffre area.

More than 40 people including CN, our rail service provider, and NOVA Chemicals' rail yard operations staff took part in the workshop. Community representatives included the Joffre Community Advisory Panel, surrounding neighbours who have indicated an interest, and representatives from Lacombe County and adjacent industry.

In consultation with the community, Lacombe County and CN, NOVA Chemicals has committed to a number of measures to address noise and other community concerns from our expanded rail yard operations. These measures were reviewed in detail at the workshop.

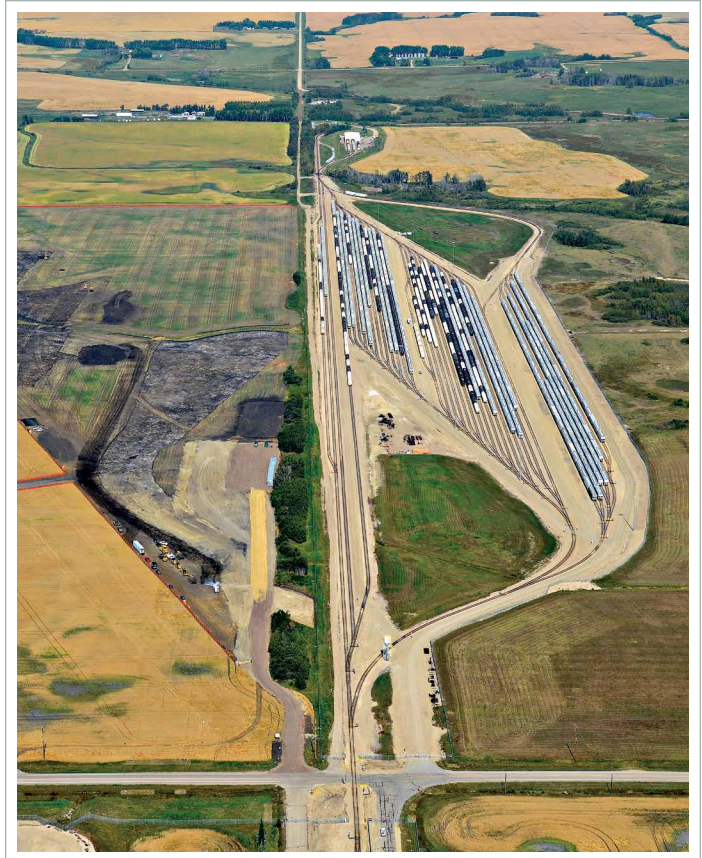
A number of items were also identified on broader Joffre-area rail operations for potential future discussion with CN, the County and interested stakeholders. These included delays at rail crossings, train whistle exemption and the possibility of establishing a local CN line route Community Advisory Panel. NOVA Chemicals would be pleased to provide a representative if such a panel is formed.

Displays at our May 2014 Open House will highlight the workshop outcomes. We welcome additional input or questions. If you are unable to attend the open house and would like a detailed summary of the workshop, please contact us.

Feedback on the workshop was positive and we look forward to reviewing progress towards our commitments as the rail yard expansion is phased in during 2015 to 2016.

NOVA Chemicals received a number of suggestions related to future communications and consultation, which we are doing, including:

- ongoing discussion on these topics; and
- communication to the community on the session through our community newsletter *SiteLine* and through the Joffre Community Advisory Panel.



Existing north rail yard with Fall field work in the expansion area.

Track construction to start this Summer

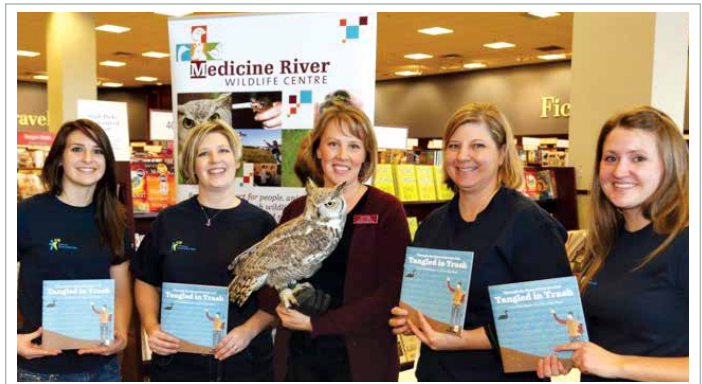
The north rail yard expansion track contract was awarded to PNR Railworks. Work will get underway this Summer, once conditions are drier and the gravel base is in place.

Rail yard expansion is targeted for a Fall 2014 completion.

Otis the Owl's new book launched in January

This is the second in the series of children's books narrated by Medicine River Wildlife Centre's (MRWC) beloved education owl and teaches the importance of keeping our environment free of garbage. "Tangled in Trash" is sponsored by NOVA Chemicals allowing all proceeds to go towards protecting the natural habitat around the Centre.

Otis was found as a four-day old injured orphan in 2003. The MRWC nursed him back to health and he now acts as an important member of the education team. To purchase either of Otis' books, contact 403-728-3467 or www.mrwc.ca.



On hand for the book launch were members of the Joffre Site Enviro-Action Team.

Turnaround allows for maintenance and renewals

The E3 facility will be shut down on May 14 for about 42 days to allow for maintenance and renewal outside of day-to-day maintenance activities.

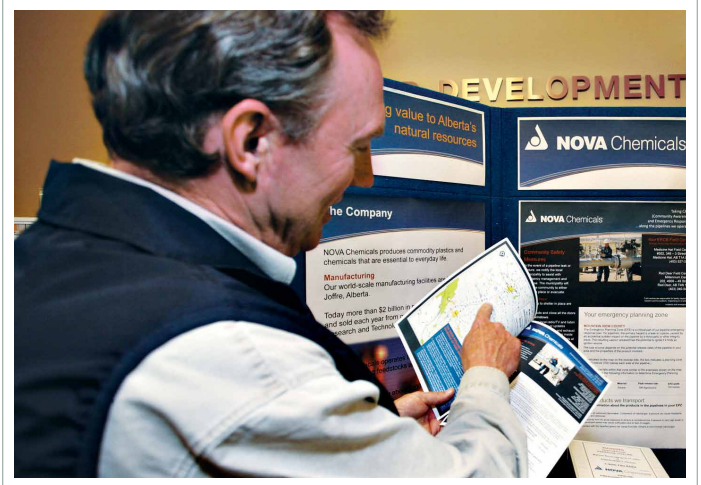
Specifically, the turnaround provides an opportunity to clean equipment, conduct pressure vessel inspections to comply with Alberta Boilers Safety Association regulatory requirements, make process optimizations / improvements and conduct preventative maintenance.

As always, minimizing impacts on the community is a key area of focus.

We will minimize flaring required during plant shut-down and start-up to reduce environmental and economic impacts. Flaring is expected to start May 14 and continue on-and-off over several days to responsibly dispose of intermediate process gases until the plant is completely shut down. Flaring and steam venting are also expected when the plant is restarted the week of June 23.

About 700 contractors will be on site working staggered shifts to decrease impact on area roadways. An emergency drill the first week of the turnaround will ensure contractors are familiar with site emergency response procedures.

If you have questions, call our 24-hour number 403-314-8767 or email joffresite@novachem.com.



New pipeline: furthering our relationships with landowners and neighbours

A new pipeline is now connected to the Alberta Ethane Gathering System (AEGS) at Empress, Alberta to bring ethane feedstock from Tioga, North Dakota to the Joffre Site.

As part of NOVA Chemicals' responsibility for the operation and maintenance of this new pipeline on behalf of the owner, an extensive community outreach program was implemented in Saskatchewan, Alberta and North Dakota. Thousands of residents in the area of the pipeline were provided with information—including details on the Emergency Response Plan—through in-person visits, information packages and postcards. We value our relationships with landowners and neighbours and continue to encourage ongoing communication on all aspects of our operations.


INEOS

Joffre Site
Community Open House

Please join us:

Tuesday, May 6, 2014

- **5:30 to 6:30 p.m.**
"Drop in to Chat"
- **6:30 to 7:30 p.m.**
Presentation / Discussion

Satinwood School Gym

(on Twp Rd 39-0 about 5 km east of SH #815, northeast of the Joffre Site)

Refreshments will be served

We hope to see you there!



Responsible Care
Our commitment to sustainability.

Agenda:

- Get business / operations updates
- Discuss Polyethylene 1 (PE1) Expansion Project status:
 - Construction timelines
 - Related infrastructure
 - Good Neighbour Policy
 - Preferred Site Strategy
- View Safe Communities Central Alberta display
- View North America Occupational Safety and Health (NAOSH) display
- View Ducks Unlimited display
- Discuss any topic of interest
- Provide your input and suggestions



To prepare for the Summer arrival of the new PE1 expansion cooling tower, the foundation will be poured over the cooler months. A 1,750-m² hoarding tent was erected and "shrink-wrapped" over the foundation area. This allows the construction crews to heat the area prior to concrete pouring.

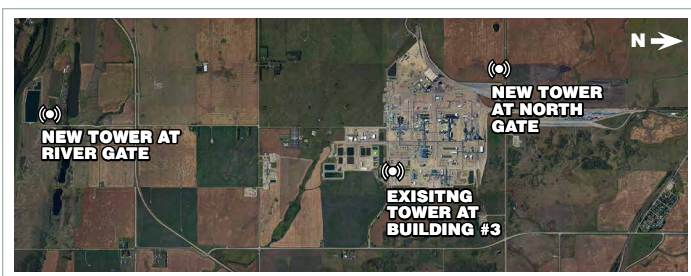
Regulatory updates

Temporary PE1 Expansion Project laydown area and assets—We are currently investigating the regulatory implications of keeping this a permanent area for housing equipment laydown and the temporary / contractor personnel facilities for ongoing site activities. Surface water flow and minimizing impacts to agricultural use are important considerations as we discuss the possibility with regulators.

Free-standing radio communications towers—We are proposing to build two new radio communications towers to improve the connectivity of hand-held radios used by our personnel for operating and safety / emergency response purposes throughout the site and adjacent vicinity. An existing 45.72 metre (150-foot) tower is located on site. The two new towers are similar and will be located on land owned by us. They are classified as low-power private communications systems. (These are not Wi-Fi or cell phone towers.) The proposed tower near our river pump house, just outside the gate on the north side of the Red Deer River requires a development permit from Lacombe County. The new tower at our North Gate is within the NOVA Chemicals' developed area, and does not require a development permit. We have received the necessary federal agency approvals for both the towers. In March we submitted our development permit application to the County. Stakeholders within an 800-m radius of the River Gate Site tower will be consulted directly by the County. More information will be available at our Open House or contact us if you have any questions.



Existing radio tower at the Joffre Site. The proposed new towers are similar in appearance.



This photograph shows the location of the existing and two proposed radio communications towers.

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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



On the occasion of our 35th anniversary, here are a few Joffre Site milestones:

- 1973** NOVA, an Alberta Corporation made a commitment to expand its participation in Alberta's economic base by investigating the opportunity for ethylene and derivative manufacturing.
- 1979** E1 was brought into operation at the beginning of August, one month ahead of schedule. This plant was officially opened on October 22.
- 1982** The community liaison group FARM-AGE (now Joffre Community Advisory Panel [JCAP]) was formed.
- 1984** PE1 started up on June 22; E2 was brought into operation on June 29.
- 1986** The Canadian Chemical Producers' Association (now the Chemistry Industry Association of Canada) launches its Responsible Care® program. We are instrumental in the program's development.
- 1987** The Hydrogen Off-Gas Facility (HOG) started up in the Spring to supply high purity hydrogen for the manufacture of ammonia-based fertilizer. Started up polyethylene pelletizer unit and comonomer recovery facility. Debottlenecked E2.
- 1988** Debottlenecked E1 and PE1 to increase production capacity.

Watch for more milestones in coming issues.

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