

North West Redwater Partnership Sturgeon Refinery

Environmental Operating Approval Renewal

Report of Public Engagement Program Results

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Appendix 1

Terms of Reference, Stakeholder and Public Involvement Objectives and Guiding Principles
North West Upgrading Inc., February 28, 2005

Appendix 2

NWR Sturgeon Refinery – Operating Approval Renewal
June 1, 2016 Open House – Exit Interview Results

Executive Summary

The North West Redwater Partnership (NWR), Sturgeon Refinery began construction in fall of 2007 following receipt of the appropriate regulatory approvals. The first phase of the Sturgeon Refinery is targeted to come into operation late in 2017. Original permitting requirements for site development and construction included an environmental operating approval (operating approval) and a licence for the facility under the *Water Act*. The operating and water licence approvals have a 10-year term under the Alberta *Environmental Protection and Enhancement Act* (EPEA) and the *Alberta Water Act* respectively. NWR Sturgeon Refinery representatives wished to engage with stakeholders as part of the preparation of the operating approval renewal application.

Consistent with Section 19.7 of *Part 3: Amendments - Environmental Protection and Enhancement Act Guide to Content for Industrial Approval Applications* (Government of Alberta, August 1, 2013), NWR Sturgeon Refinery representatives planned, designed and held two public engagement events. One was held in conjunction with an Alberta's Industrial Heartland Association, Life in the Heartland Community Information Meeting on May 2, 2016 and the second was an open house on June 1, 2016 in Redwater, Alberta.

Although engagement opportunities were to focus on environmental management and mitigation, between the two engagement events, 68 participants provided 92 comments and questions on all aspects of the NWR Sturgeon Refinery project that were of interest or concern to them. The comments and questions were grouped into nine themes:

- ▶ Environmental management and mitigation
- ▶ Safety and emergency response
- ▶ Equipment and infrastructure planning and management
- ▶ Public communication and outreach
- ▶ Transportation and traffic
- ▶ Employment and contracting
- ▶ Feedstock and by-product management
- ▶ Refinery products and marketing
- ▶ Community investment

Similar to the public engagement process followed for the original project approval, NWR Sturgeon Refinery representatives provided responses to each of the questions and comments submitted (see Tables 2-1 to 2-8 starting on page 11 of this report).

A number of the June 1st open house participants also completed an exit interview to ensure participants' needs for learning and participation were met. The exit interview included a list of potential environmental and social concerns and interests that could be considered as part of the operating approval renewal, water licence application as well as ongoing operation. They included:

- ▶ Residential or private property impacts
- ▶ Odours
- ▶ Air quality
- ▶ Noise
- ▶ Traffic safety
- ▶ Emergency response
- ▶ Human health
- ▶ Groundwater quality
- ▶ Surface water quality
- ▶ Wildlife
- ▶ Public engagement process/events/opportunities

Introduction

The North West Redwater Partnership (NWR), Sturgeon Refinery commenced construction in late 2007 following receipt of appropriate regulatory approvals. The first phase of the Sturgeon Refinery is targeted to come into operation in late 2017.

As part of the original permitting requirements for site development and construction, an environmental operating approval (operating approval) was required. The approval to construct and operate the facility was issued under the Alberta Environmental Protection and Enhancement Act (EPEA) with a 10-year term and will require renewal prior to expiry September 1, 2017. Similarly, the licence for the facility under the Water Act, as issued in 2007, requires renewal before September 1, 2017. Although NWR Sturgeon Refinery representatives engage with stakeholders through many varied means, NWR wished to provide stakeholders with an additional opportunity for engagement and consultation as part of the preparation of the operating approval renewal applications.

Section 19.5 of the *Environmental Protection and Enhancement Act Guide to Content for Industrial Approval Applications* (August 1, 2013) states:

If public consultation or stakeholder engagement has been, or will be, conducted outside of this approval amendment process for the proposed changes, provide the following information:

- target audience(s);
- type, purpose, and frequency of consultation or engagement; and
- identified environmental concerns and how they were, or will be, addressed in the project design.

NWR Sturgeon Refinery representatives planned, designed and held two recent stakeholder engagement events. One was held in conjunction with an Alberta's Industrial Heartland Association (AIHA), Life in the Heartland Community Information Evening on May 2, 2016; the second event was a public open house held on June 1, 2016 in Redwater, Alberta.

The two engagement opportunities were planned and designed to be consistent with the company's original terms of reference used to guide public engagement during the preparation of the Environmental Impact Assessment and application for the Sturgeon Refinery, approved in 2007. (See Appendix 1: *Terms of Reference - Stakeholder and Public Involvement Objectives and Guiding*

*Principles*¹. NWR adopted the principles and approach for stakeholder involvement outlined in the 2007 Terms of Reference for public involvement.

Purposes of public engagement

There were five purposes for public engagement:

- ▶ Provide the opportunity for stakeholders to continue to learn about the project the status of the Sturgeon Refinery currently under construction.
- ▶ Outline the anticipated start up and operating schedule for Phase 1 and the status of additional proposed project phases.
- ▶ Understand the regulatory requirement, history and need for an operating approval along with its renewal.
- ▶ Identify environmental concerns that, in their opinion, must be addressed in the operating approval renewal, and
- ▶ Provide follow-up with open house participants who have an interest, need or concern related to the operating approval renewal that may be specific to them.

Methods of engagement

NWR Sturgeon Refinery representatives used two formal opportunities for direct engagement with the regional community.

The first was collection of comments and questions at AIHA's Life in the Heartland event on Monday, May 2, 2016 from 5 to 8 p.m. at the Lamont Hall in Lamont, Alberta.

The second was an open house event, sponsored by the NWR Sturgeon Refinery, held on Wednesday, June 1, 2016, from 4 to 8 p.m. at Pembina Place in Redwater, Alberta.

Target audiences, notification and awareness

NWR Sturgeon Refinery representatives, along with representatives of five other companies² are sponsors and active members of a Community Advisory Panel (CAP) in the Redwater-Gibbons area. Since all of the CAP's company sponsors

¹ North West Upgrading Inc., February 28, 2005.

² Other company sponsors of CAP 643 include: Evonik Industries, Access Pipeline, Pembina NGL, Agrium and Suncor.

have facilities that are accessed from Highway 643, it was agreed to name the group CAP 643.

At the CAP's April 21, 2016 meeting, NWR Sturgeon Refinery representatives asked CAP 643 community members for their advice on target audiences for public engagement. The following list of potential audiences for participation in the review of the operating approval and water licence renewal applications were recommended:

Target audiences

- ▶ General population
- ▶ Urban and rural municipalities' elected and administrative officials
- ▶ First Nations communities on the periphery
- ▶ Immediate residential neighbours
- ▶ Local suppliers
- ▶ Customers
- ▶ Employees and contractors
- ▶ Participating industrial associations
- ▶ Industrial neighbours

As a result of this advice, the following notification and awareness methods were used to target the recommended audiences:

Social media and email notification

The AIHA, Life in the Heartland communications coordinator used Facebook and email notification to inform local residents of the opportunity to attend and learn about the current status of industrial development at the event on May 2, 2016.

The AIHA, Life in the Heartland communications coordinator also posted information on the NWR Sturgeon Refinery sponsored public open house event on June 21, 2016 through Facebook, encouraging people to participate.

An email was sent directly to CAP 643 members on May 23, 2016, reminding them of the event and encouraging them to participate.

Newspaper advertising

Public open house notices were placed by NWR Sturgeon Refinery staff in the following regional newspapers with appropriate lead times for the June 1st event: The

Redwater Review
Heartland Xtra
Fort Saskatchewan Record
St. Albert Gazette
Edmonton Journal
Edmonton Sun

PUBLIC NOTICE

North West Redwater Partnership

INFORMATION OPEN HOUSE

North West Redwater Partnership ("NWR") through its wholly-owned subsidiary, North West Redwater Holdings Corp. has been issued approvals under the *Environmental Protection and Enhancement Act* Approval No. 217118-00-06 and the *Water Act* Approval No. 00227773-00-01 in respect of construction and operation of three equal 50,000 barrel (8,000cubic meter) per day phases of the Sturgeon Refinery (Bitumen Upgrading Facility), valid through September 1, 2017. Phase 1 construction is currently under way, with Final Investment Decisions on the commencement of Phases 2 and 3 pending. By September 1 2016, NWR intends to apply for renewal for these **Regulatory** approvals on essentially the same basis as approvals are currently issued. **NWR invites you to an Open House event to learn more about our project status and our plans.** Details of the Open House event are

Wednesday June 1st, 2016, 4:00 pm through 8:00 pm

Pembina Place, 4944 – 53rd Street, Redwater (beside the oil derrick)

Refreshments and light snacks will be served

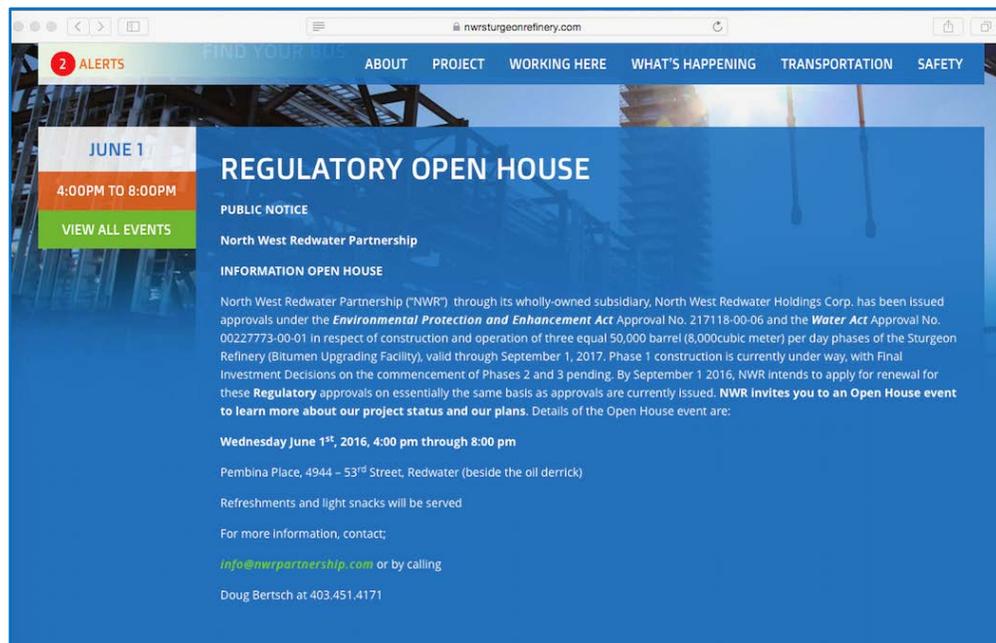
For more information, contact;

info@nwrpartnership.com or by calling

Doug Bertsch at 403.451.4171

Web site notice

On May 24, 2016 NWR Sturgeon Refinery staff posted a conspicuous banner on their web site home page, linking to a notice about the upcoming Environmental Operating Approval Renewal application open house. The banner and the notice remained until following the June 1st open house event.



Process and participants

Each of the two engagement approaches used distinct processes to solicit questions and comments for the NWR Sturgeon Refinery operating approval renewal. Both were designed to meet the five public engagement purposes:

- ▶ Provide the opportunity for stakeholders to continue to learn about the project the status of the Sturgeon Refinery currently under construction.
- ▶ Outline the anticipated start up and operating schedule for Phase 1 and the status of additional proposed project phases.
- ▶ Understand the regulatory requirement, history and need for an operating approval along with its renewal,
- ▶ Identify environmental concerns that, in their opinion, must be addressed in the operating approval renewal, and
- ▶ Provide follow-up with open house participants who have an interest, need or concern related to the operating approval renewal that may be specific to them.

AIHA Life in the Heartland Community Information Evening

On May 2, 2016 AIHA's Life in the Heartland conducted their semi-annual community and industry information meeting in Lamont, Alberta at the Lamont Hall. Representatives of NWR Sturgeon Refinery were present to share information and engage with the residents and industry representatives attending.

- ▶ NWR Sturgeon Refinery representatives procured a "trade show" space as one of the active companies in the AIHA area and attended with senior representatives throughout the event.
- ▶ The information provided to and collected from people included:
 - An update to the community on the status of construction;
 - An overview of the environmental operating approval renewal contents and requirements;
 - Soliciting questions and comments related to the operating approval renewal application that people believed should be addressed.³
- ▶ Participants' statements were transcribed with company responses to be provided for each question and comment:
 - The results have been used by the company to identify and, where appropriate, address environmental concerns in the operating approval renewal application;
 - The list of environmental interests, needs and concerns and the company's response were finalized and made available through the NWR Sturgeon Refinery web site.

Although no registration was required, 22 people representing the interest categories of: regional residents; municipal governments; industrial operators; industrial associations; businesses; environmental non-government organization, and people employed or wanting to be employed in the industrial sector provided 30 comments and questions.

³ People were encouraged to comment on or question any area of the Sturgeon Refinery construction or operation as well as operating approval renewal.

They were grouped into nine theme areas:

- ▶ Safety and emergency response
- ▶ Equipment and infrastructure planning and management
- ▶ Public communication and outreach
- ▶ Air emissions management
- ▶ Noise
- ▶ Transportation and traffic
- ▶ Land management
- ▶ Employment
- ▶ Nuisance impacts

Open house – June 1, 2016

The open house plan and design were similar to those held during the environmental impact assessment and permit application public engagement program in 2005:

- ▶ Participants were welcomed and asked to register as they entered and provided with a series of information stations with poster boards and other information, each attended by a NWR Sturgeon Refinery staff member and selected consultants.
- ▶ People were encouraged to visit the information stations to learn about the status of or information about the NWR Sturgeon Refinery as a construction project and the operating approval renewal requirements.
- ▶ People were encouraged to identify environmental interests, needs or concerns to be addressed in the operating approval renewal through the project design; comments were actively and obviously recorded.⁴
- ▶ The record was kept by NWR representatives and project consultants in two ways: using flip charts to support one-to-one or small group discussions during the open house; and use of a “contact record” format to capture specific interests, needs or concerns.
- ▶ An exit interview, conducted with a smaller number of randomly selected participants, assisted in evaluating how well the open house met participants’ needs and what environmental factors were, in their opinions, important to address.

⁴ Similarly to the LITH event, people were encouraged to comment or question any aspect of the Sturgeon Refinery project.

- ▶ The results were transcribed and company responses provided for each question and comment.
 - The results have been used by the company to identify and address environmental concerns in the operating approval renewal application.
 - The list of environmental interests, needs and concerns and the company's response were finalized and made publicly available through the NWR Sturgeon Refinery web site.

Thirty-six (36) people attended the open house, representing interests in the areas of: municipal government (elected officials and service providers); local and regional residents; economic development; business; and those currently employed or seeking employment in local industry. They provided 62 comments and questions that have been transcribed and responses to each provided by NWR Sturgeon Refinery staff.

The questions and comments were grouped into seven themes:

- ▶ Employment and contracting
- ▶ Equipment and infrastructure planning and management
- ▶ Feedstock and by-product management
- ▶ Environmental management and mitigation
- ▶ Transportation and traffic
- ▶ Refinery products and marketing
- ▶ Community investment

Open house exit interview

In order to determine if the open house process, content and conversations with the NWR Sturgeon Refinery staff and consultants worked for participants, a sample of open house visitors responded to an exit interview. Six participants completed an exit interview. The highlights included:

- ▶ All six respondents indicated the information and learning opportunities provided, relating to the operating approval renewal, were helpful.
- ▶ Everyone thought the materials to support the NWR Sturgeon Refinery staff and consultant responses and explanations, relating to their questions and comments, were easy to understand and use.
- ▶ All indicated their questions were answered fully as they commented on those areas of greatest need or concern.
- ▶ It was agreed that staff demonstrably listened to and recorded participants' comments.

A listing of potential concerns and interests was provided and respondents to the exit interview were asked to select those they believed should be

accounted for as part of the operating approval renewal. Those interests and concerns and the number of times they were selected follow in Table 1.

TABLE 1: EXIT INTERVIEWS – CONCERNS AND INTERESTS

Interest/concern	Number of times selected
Residential or private property impacts	2
Odours	2
Air quality	3
Noise	3
Traffic safety	3
Emergency response	2
Human health	1
Groundwater quality	3
Surface water quality	3
Wildlife	2
Public engagement process/events/opportunities	3

Two people requested individual follow-up by NWR Sturgeon Refinery representatives.

The exit interview results are included in Appendix 2 of this report.

Collected comments and questions with NWR Sturgeon Refinery representatives' responses

There were 68 participants between the two public engagement opportunities on May 2 and June 1, 2016. They provided 92 comments and questions on aspects of NWR Sturgeon Refinery project that were of interest or concern to them. The 92 comments were transcribed and the themes from the two public engagement events were reviewed, revised and grouped into nine themes (the number of comments and questions for each theme is provided in brackets).

The focus of the two public engagement opportunities was to obtain questions and comments applicable to the operating approval renewal but at the same time, allow people to comment on those areas of most interest to them.

The theme of environmental mitigation and management is the first theme listed and those that follow are in the order they were transcribed.

- ▶ Environmental management and mitigation (14)
- ▶ Safety and emergency response (7)
- ▶ Equipment and infrastructure planning and management (10)
- ▶ Public communication and outreach (5)
- ▶ Transportation and traffic (19)
- ▶ Employment and contracting (18)
- ▶ Feedstock and by-product management (11)
- ▶ Refinery products and marketing (7)
- ▶ Community investment (1)

All of the comments and questions provided are included in the following tables. NWR Sturgeon Refinery representatives provided responses to each of the questions and comments.

TABLE 2-1: ENVIRONMENTAL MANAGEMENT AND MITIGATION

Question/Comment	NWR Sturgeon Refinery Response
<p>How is the NWR Sturgeon Refinery minimizing the facility's environmental impact on air, land and water?</p>	<p>Meeting regulatory standards and limits set within the <i>Alberta Environmental Protection and Enhancement Act</i> (EPEA) and <i>Water Act</i> approvals are the baseline for environmental performance. NWR made process and design decisions from the very onset of the refinery design that would minimize the environmental impact. For example, gasification technology will allow capture of an approximately 70% of the carbon dioxide (CO₂) that would otherwise be emitted as a by-product. Use of fresh water was dramatically reduced using extensive air cooling in place of water cooling, as well as use of leading water treatment technologies to allow maximized water recycling within the refinery. Sulphur recovery efficiencies are increased above Alberta Energy Regulator guidelines. NWR has followed the Water Management Framework for the Heartland region with the use of an existing water intake facility (no new facilities on the banks of the North Saskatchewan river), and having no process water release directly to the North Saskatchewan River. A wildlife corridor was left outside of the refinery fence line to allow connectivity of nearby natural areas with the North Saskatchewan River bank. Environmental initiatives continue through the construction period where 98% of construction waste materials (wood, steel, cardboard, plastic, concrete, steel, organics) are recycled each month, avoiding large quantities of waste to regional landfills.</p>
<p>What is the "Environmental Gold Standard" that you keep referring to?</p>	<p>This is a self-defined standard of performance related to minimizing the facility's impact on air, land and water as discussed in the response, above.</p>
<p>Why is CO₂ capture a good thing for the environment?</p>	<p>CO₂ is recognized as a significant contributor to global climate change. Phase 1 of the NWR Sturgeon refinery alone is designed to capture the CO₂ equivalent of 300,000 cars being taken off the road.</p>

Question/Comment	NWR Sturgeon Refinery Response
Where will the carbon capture occur, will the Sturgeon Refinery have facilities to inject CO ₂ directly into the formation?	The carbon capture is enabled through the use of a gasifier using a specialized process unit that manufactures hydrogen required for refining, along with a very pure stream of CO ₂ as a by-product. There is a booster compressor being built within the gasifier unit that will capture the CO ₂ , allow its transport by pipeline to a third party who will compress to a higher pressure, transport by pipeline and inject the CO ₂ into depleted oil formations. NWR has a commercial agreement with that third party to take the CO ₂ from the refinery fence line to its injection and sequestration location.
Collection and management of carbon dioxide (CO ₂) emissions – what are you proposing?	Please see the response, above.
Air emissions – what are the impacts on nearby residents related to sulphur dioxide (SO ₂)?	SO ₂ emissions will be managed within limits set by our EPEA operating approval. The emissions limits are guided by Alberta Ambient Air Quality Objectives. AAAQO provide guidelines to maintain human health on a cumulative effects basis, considering all emissions sources in the region.
How will odour be managed?	Odours will be managed through design of emissions containment and management systems as well as active leak detection and repair programs mandated by operating permits. Also, as an active member of the Northeast Capital Industrial Association (NCIA), NWR will abide by the odour investigation and management protocol long-established for NCIA members.
Concerned about air emissions.	Please see the previous comments. The NWR operating permit sets emission limits to be within Alberta Ambient Air Quality Objectives to maintain health of regional stakeholders.
Noise management during construction and operation – how will it be mitigated?	Pile driving, the noisiest construction activity was managed during normal waking hours and is now essentially complete. Construction equipment is fitted with appropriate noise management equipment. Noise during operations is managed through design and selection of equipment and shelters to be within Alberta Energy Regulator (AER) regional noise directive for the Heartland area.

Question/Comment	NWR Sturgeon Refinery Response
Do baseline noise tests before start-up.	Baseline tests have been done, and a model of current and predicted noise from industries throughout the Heartland area is available at: http://www.ncia.ab.ca/noise-management-google-earth/ .
Concerned about noise from site operation.	Please see the response, above.
Wildlife management on site, particularly waterfowl.	The NWR site does not have tailings ponds like a bitumen product facility may have. Nonetheless, waterfowl are encouraged not to land or nest on ponds within the site through use of 'scarecrow-type' or noise-making technologies. NWR has also left a wildlife corridor outside of the security fence and around the refinery site.
Provide formal public access to the North Saskatchewan River for recreation – access is currently limited resulting in trespassing on private land.	NWR lands are not intended as public recreation lands and access upon or through the lands is intentionally restricted.
Concerned about noise, odours and light pollution.	See previous responses about noise and odours. NWR has followed many 'dark sky' principles throughout its design and construction to reduce light pollution.

TABLE 2-2: SAFETY AND EMERGENCY RESPONSE

Question/Comment	NWR Sturgeon Refinery Response
Will the facility have a stand-alone fire department or will it be augmented with operations staff?	The refinery operations staff will be fully trained to national standards for facility firefighting, and NWR will have firefighting equipment appropriate to this type of facility.
Do you have an emergency response plan?	Yes, appropriate to the construction phase of the project. A full operations-type Emergency Response Plan will be in place at least six months prior to operations.
Strive for continuous improvement in safety management and practices – set your own high standards.	Safe construction and operation of the Sturgeon refinery is one of our core values.

Question/Comment	NWR Sturgeon Refinery Response
Feedstock pipeline safety planning, design and management must be addressed.	This is additional to regulatory requirements. Please see the safety response, above.
Product transport – will it be by pipeline, truck or rail or some combination and how will that be managed safely?	Products will be transported by each of these means, with safety managed to meet all regulatory requirements. Please see the previous safety response.
How is process safety managed?	Safety is managed through defined operating processes implemented by thoroughly trained operations personnel.
What are your personal protection and safety processes?	Please see the response, above.

TABLE 2-3: EQUIPMENT AND INFRASTRUCTURE PLANNING AND MANAGEMENT

Question/Comment	NWR Sturgeon Refinery Response
What are the replacement requirements for aging infrastructure?	As a new facility not yet commissioned, capital replacement of aging infrastructure is not currently an issue. A regular maintenance and management system will be in place to ensure that equipment is replaced prior to its end of life.
How do construction or operating codes affect process and equipment upgrades over the 10 year operating approval?	Please see the response above.
How does process quality control work to reduce environmental emissions?	This occurs through defined operating processes implemented by thoroughly trained operations personnel.
How are non-point source emissions to air, land and water managed, accounted for and captured?	They are accounted for through design of emissions containment and management systems as well as active leak detection and repair programs mandated by operating permits.
What technology do you use to ensure air quality?	Please see the previous responses regarding environmental impact, CO ₂ capture and odour management.
Use the best available technology for effluent management.	Please see the previous responses regarding Table 2.1: ENVIRONMENTAL MANAGEMENT AND MITIGATION, page 11.

Question/Comment	NWR Sturgeon Refinery Response
Are you over your construction budget for the Sturgeon Refinery?	Construction is tracking to budget.
What is the timeline for the start of Phase 2?	There have not yet been investment sanction decisions made for Phase 2 so the timeline is as yet undefined.
Concerned about the fabrication work not coming to Canada.	Fabrication of most modules and equipment was done in Canada. Certain components were fabricated outside of Canada per the dictate of the specific equipment designers.

TABLE 2-4: PUBLIC COMMUNICATION AND OUTREACH

Question/Comment	NWR Sturgeon Refinery Response
Be transparent; share all information on construction progress, operations, scheduling of major activities on site and environmental performance.	NWR publishes regular updates on its website with information on the mentioned aspects of the project. The updates are available at: https://nwrsturgeonrefinery.com/whats-happening/news/
Provide regular construction and operation updates to the public.	Please see the previous response, above.
Have a job fair to inform and help local people learn about and apply for Refinery positions.	NWR posts its career positions on its website for all visitors to see.
Is there an opportunity for RAP students to get experience at the Sturgeon Refinery?	The Registered Apprenticeship Program (RAP) provides opportunities for high school students. The NWR site has a minimum employment age requirement of 18 years of age.

TABLE 2-5: TRANSPORTATION AND TRAFFIC

Question/Comment	NWR Sturgeon Refinery Response
Transportation impacts on the local area.	Please see the following response.
Transportation over the long term is a concern – not enough bridges over the North Saskatchewan River.	Long-term highway transportation planning and construction of bridges is the responsibility of Alberta Transportation (AT). NWR has provided regular forecasts and updates to allow AT plan for the future.
Traffic impacts during construction and operation.	Please see the previous response. NWR is meeting its commitment to mitigate traffic effects of construction by providing a mass transit (bussing) option, which is taken up by approximately 70% of workers on the NWR site.
Traffic flow improvement is required on Highway 643, it should be widened with intersection improvements.	Please see response above.
I've heard from some of the workers that your bussing system is awesome.	This comment is appreciated. NWR is meeting its commitment to mitigate traffic effects of construction by providing a mass transit (bussing) option, which is taken up by approximately 70% of workers on the NWR site.
Bussing takes cars off the roads reducing potential accidents and driver stress.	This comment is appreciated. Please see response above.
Bussing works really well from a worker's perspective.	This comment is appreciated. Please see response above.
Reinforce speed limits on rural roads with Refinery workers; speeds noted as too high.	NWR is a participant in a Sturgeon Heavy Industrial Area initiative whereby local industry operators have provided funding for enhanced police enforcement of all road safety rules, especially during peak labour travel times.
If we see risky driving on the local roads can we report it to the company?	Yes, if details of risky driving behaviour can be safely noted, report it to either of NWR or any of our industrial neighbours. This will result in a cooperative effort to take corrective actions should the driver work at one of our site(s).

Question/Comment	NWR Sturgeon Refinery Response
Back road use regarding Range Road 231 and a concern about traffic on Highway 28; is there potential to divide the highway?	While NWR cannot prohibit travel of any person on public roadways, we regularly inform our staff and contractors of our expectation that they use regional highways in preference to municipal roadways. As for highway improvements, long-term highway transportation planning and construction is a responsibility of Alberta Transportation.
Residents experience slow travel behind the modules that are being delivered to the Refinery.	Modularization is a proven effective way to reduce the amount of personnel working on the site. Transportation of the modules to site is done in accordance with approved travel permits. It is targeted that module delivery for Phase 1 will be complete in fall of 2016.
When will module delivery be finished?	Module delivery is targeted for completion fall of 2016.
Highway 825 and 643 intersection requires 4 way stop signs of traffic signal lights.	Long-term highway transportation planning and construction is a responsibility of Alberta Transportation.
The intersection at Highways 643 and 825 need traffic lights – it's difficult and hazardous to cross Highway 643 during "industrial rush hours" in the morning and afternoon.	Long-term highway transportation planning and construction is a responsibility of Alberta Transportation.
The intersection of Highways 15, 37 and 825 needs improvement for traffic flow and traffic signals at the intersection of 37 and 825 for safety.	Long-term highway transportation planning and construction is a responsibility of Alberta Transportation.
As a volunteer emergency worker, it's hard to leave the site when I'm called due to traffic volumes; is there a way that I can get priority to leave the site when a shift is letting out and I get called to go to an emergency?	This request should be put to the NWR Security lead on site who review specific circumstances to see if there is a solution.

Question/Comment	NWR Sturgeon Refinery Response
Don't bring slow moving, wide loads along major highways during the morning rush hour, if possible, vehicles stack up behind them and people are late for work.	Transportation of the modules to site is done in accordance with approved travel permits. It is targeted that module delivery for Phase 1 will be complete in fall of 2016.
Wide load and slow moving truck drivers don't seem to want to pull over at laybys on local highways so that the stacked up traffic can pass.	Transportation of the modules to site is done in accordance with approved travel permits. It is targeted that module delivery for Phase 1 will be complete in fall of 2016.

TABLE 2-6: EMPLOYMENT AND CONTRACTING

Question/Comment	NWR Sturgeon Refinery Response
Site labour force accommodation plans.	NWR continues with its commitment to not construct temporary worker accommodation camps. Given the Phased construction approach for construction, peak workforce demand is limited and work camp(s) are not planned as most of the workforce lives in the region.
With the high unemployment, what are the job opportunities?	NWR's contractors are hiring the workers they need to construct the refinery and should be contacted directly. Job postings for staff are on the NWR website at: https://nwrsturgeonrefinery.com/careers/
How do I find out about opportunities for contracting?	Please visit the following link; https://nwrsturgeonrefinery.com/about/supply-chain-management/
What are the employment opportunities at the Sturgeon Refinery?	NWR's contractors are hiring the workers they need to construct the refinery and should be contacted directly. Job postings for staff are on the NWR website at: https://nwrsturgeonrefinery.com/careers/ .
Make sure you hire qualified people.	Qualification for positions is a fundamental requirement for hiring
Encourage local young people to obtain further education to fill the jobs that will be provided at the Refinery.	Your comment has been noted. NWR is an active participant in a local community advisory panel which allows interface with local educators, giving this as an opportunity.

Question/Comment	NWR Sturgeon Refinery Response
What are the opportunities for power engineers?	NWR’s contractors are hiring the workers they need to construct the refinery and should be contacted directly. Job postings for staff are on the NWR website at: https://nwrsturgeonrefinery.com/careers/ .
Will the Phase 1 construction workers continue working on Phases 2 and 3?	Timing of Phase 2 and beyond will be driven by final investment decisions. NWR cannot assure any worker of continuous work on the construction of the Sturgeon Refinery.
I’m concerned that we won’t get Phases 2 and 3 constructed fast enough – it will keep Albertans working and it will be good for the Redwater community.	Timing of Phase 2 and beyond will be driven by final investment decisions. NWR cannot assure any worker of continuous work on the construction of the Sturgeon Refinery.
How can contractors apply for work at the Sturgeon Refinery?	Visit the following link for information: https://nwrsturgeonrefinery.com/about/supply-chain-management/
Where would we go to apply for a job at the Sturgeon Refinery?	NWR’s contractors are hiring the workers they need to construct the refinery and would have to be contacted directly. Job postings for staff are on the NWR website at: https://nwrsturgeonrefinery.com/careers/
What is the policy for supporting out of Province workers once the Refinery begins operation?	The requirements for operational job postings will be clearly communicated on the NWR website at: https://nwrsturgeonrefinery.com/careers/
On your poster board entitled “Workforce” you have a category representing 30% of the workers as “non-trade/unclassified,” what kinds or workers are included?	This is a range of skills including engineers, administrators, as well as trades persons engaged at the site prior to NWR starting to gather the statistics of trade attribution.
Workforce poster board – if the board and information is to be used again, redo it to better define “non-trades/unclassified” to split out engineers and administrators.	Your comment has been noted.
Get local young people involved by encouraging participation in the trades.	Your comment has been noted. NWR is an active participant in a local community advisory panel that allows interface with local educators, giving this as an opportunity.

Question/Comment	NWR Sturgeon Refinery Response
Will NWR be using foreign workers?	NWR's contractors are hiring the workers they need to construct the refinery and should be contacted directly as to their policies re foreign workers. Job postings for staff are on the NWR website at: https://nwrsturgeonrefinery.com/careers/ .
Create opportunities for subsistence instead of hiring foreign workers.	Your comment has been noted. Please see the response above.
Will maintenance during operations be contract or staffed?	It is expected that there will be a mixture of contract and staff as maintenance activity scope requires.

TABLE 2-7: FEEDSTOCK AND BY-PRODUCT MANAGEMENT

Question/Comment	NWR Sturgeon Refinery Response
Where does the Refinery feedstock come from?	Feedstock for Phase 1 of the refinery comes from Alberta Petroleum Marketing Commission (75%) and Canadian Natural Resources Limited (CNRL) (25%).
Why aren't we keeping more bitumen in Alberta for refining and upgrading it locally rather than exporting it?	This is best put to your Provincial Government representative.
Will the proposed Refinery Phases 2 and 3 help with more local refining of bitumen rather than it being exported?	Yes.
Where will the carbon dioxide (CO ₂) that's captured from the Refinery be shipped for enhanced oil recovery?	NWR is constructing equipment to capture and process CO ₂ and will supply same to the refinery fence line where an independent third party intends to transport it for use in enhanced oil recovery projects in Alberta.
How will the CO ₂ get into the formation for enhanced oil recovery?	For an informational video regarding this, visit: http://www.enhanceenergy.com/ and click on the video box on the right side of the screen.
Is it true that there is about 50% of the oil in depleted reserves that can still be recovered?	NWR is not in the position to comment on geological reservoir questions. More information can be found by visiting: http://www.enhanceenergy.com/

Question/Comment	NWR Sturgeon Refinery Response
What's the benefit to NWR Sturgeon Refinery of carbon capture?	By capturing CO ₂ from the gasifier in the Sturgeon Refinery, the fuel manufactured will be marketable as a 'low carbon fuel', making it attractive to environmentally conscious customers.
What's the benefit to Alberta of carbon capture at the Sturgeon Refinery?	Please see the response above.
Is your only feedstock bitumen?	The feedstock for the Sturgeon Refinery is bitumen mixed with the diluent required to transport it in pipelines.
Can diluent be reused?	Yes.
Why is it important to keep diluent in Alberta rather than have it leave the Province with exported bitumen?	Diluent is required to mix with bitumen to thin the mixture and allow transportation down pipelines. Keeping diluent in Alberta allows transportation of Alberta's bitumen resources.

TABLE 2-8: REFINERY PRODUCTS AND MARKETING

Question/Comment	NWR Sturgeon Refinery Response
Will the production from the Sturgeon Refinery eliminate diesel fuel shortages in Alberta?	We anticipate that refinery production will increase the amount of diesel fuel available to meet local demand.
What are the Refinery's products?	The products will primarily be ultra low sulphur diesel fuel and Diluent/Vacuum Gas Oil. All products and their descriptions can be found at: https://nwrsturgeonrefinery.com/project/maximizing-the-value/
How will refined products be transported?	Please see the response below.
Will you have to construct new rail or pipelines to ship Refinery products?	NWR will not construct any new rail lines. Relatively short segments of new pipeline were constructed to allow refinery products to connect to existing shipment infrastructure.
Will the Refinery's products be consumed in Canada?	Yes, as much as Canadian market conditions will reasonably absorb. Product destinations will be determined by markets at the time of production.
Are all three of the Refinery construction phases for the production of diesel fuel?	Yes, as reflected in the original application and approval.
Where are the geographic markets for the Sturgeon Refinery's diesel fuel?	Please see response above.

TABLE 2-9: COMMUNITY INVESTMENT

Question/Comment	NWR Sturgeon Refinery Response
Is it possible for the Sturgeon Refinery to support the Redwater Foodbank?	Yes, this cause has been supported regularly by NWR to date.

Appendix 1

Terms of Reference

Stakeholder and Public Involvement Objectives and Guiding Principles

North West Upgrading Inc., February 28, 2005

Introduction

With increased bitumen production in Alberta, North West Upgrading Inc. (the Company) has identified a need for more heavy oil upgrading capacity in Alberta. The company is proposing the construction of the North West Upgrader Project in Sturgeon County. There is a requirement to conduct public consultation as part of the application process. The Company believes that public consultation is an integral part of the project. The Company wishes to share information about project plans and options to help the company address issues and build opportunities with stakeholders.

The Need for Stakeholder and Public Involvement

- North West Upgrading Inc. has a corporate commitment to public involvement.
- To gain the benefit of public comment and support to make the best possible planning and operating decisions.
- To meet the regulatory approval process requirements for an application seeking approval for the project.
- To be a good corporate neighbour and be proactive in providing project information and public involvement opportunities for the purpose of addressing the interests and concerns of our stakeholders, identifying opportunities where others may benefit from our business development and building trust and an excellent working relationship with the public.
- To identify public issues and opportunities for the purpose of addressing project concerns that will need to be addressed as part of the approval and permitting process.
- To begin to build long-term relationships with the community in which the project, if approved, will be developed and operate.

Decision Statement

North West Upgrading Inc. will decide on the methods, infrastructure and development strategies that will allow for the orderly development of the North West Upgrader in an economically viable, environmentally sound and socially responsible manner.

Appendix 1-1

Appendix 1

Terms of Reference

Stakeholder and Public Involvement Objectives and Guiding Principles

North West Upgrading Inc., February 28, 2005

Stakeholder and Public Involvement Objectives

- To recognize the public involvement program in overall application and project scheduling and budget requirements.
- To identify key community and public interest groups and individuals.
- To encourage participation of community and public groups and individuals who may have a direct interest in the project.
- To provide adequate information for people to learn about the project and weigh the advantages and disadvantages of its development.
- To obtain information from the public to assist in project decision making.
- To identify and understand the development concerns and issues of various stakeholders/communities of interest.
- To ensure public concerns are addressed.
- To enhance public understanding of the proposed project and to foster support as a result of a credible, consistent and responsive public involvement process.
- To ensure the public involvement needs identified in the during the application process are addressed during environmental impact assessment data collection and project application preparation.
- To identify opportunities for stakeholders and adjacent communities to benefit from the proposed development.

Stakeholder and Public Involvement Principles

- The Company will engage in open and transparent communication with its stakeholders and the public
- The process will be designed to meet the needs of our stakeholders
- The stakeholders will be provided the opportunity to have meaningful input into the business decisions of the Company
- Stakeholders will be satisfied that their input has been fairly considered by the Company when making decision regarding the development of the project
- We will not have a disagreement based upon a misunderstanding.

Scope of Stakeholder and Public Involvement

A broad range of community and public interests have been identified to date, including:

- Residents and public organizations in the region and nearby communities

Appendix 1-2

Appendix 1

Terms of Reference

Stakeholder and Public Involvement Objectives and Guiding Principles

North West Upgrading Inc., February 28, 2005

- Industry operators in the region
- Regional public and private sector cooperating organizations
- Business/Resource Holders
- Environmental/Health
- Provincial Government
- Federal Government
- Municipal Governments
- Recreation Users

Other, additional interests might be identified during the public involvement process. Wherever possible, local and regional representatives of organizations will be the first point of contact for involvement.

Use of Public Response

Public response will be used to assist in identifying and selecting optional methods, infrastructure and development strategies for the development of the proposed project.

Appendix 1-3

Appendix 2

NWR Sturgeon Refinery – Operating Approval Renewal June 1, 2016 Open House – Exit Interview Results

Exit interviews completed = 6

Did the open house meet the needs of attendees to learn about and comment on the Sturgeon Refinery Operating Approval Renewal? Attendees indicated the following:

	Yes	No	Somewhat
Did you get the information you needed?	6	-	-
Was the event helpful to learn about the Operating Approval Renewal?	6	-	-
Were the materials provided easy to understand and use?	6	-	-
Were staff helpful in explaining Operating Approval Renewal?	6	-	-
Were your questions answered fully?	6	-	-
Did you comment on those areas of greatest interest/need/concern to you?	6	-	-
Did staff listen and record your comments?	5	-	-

Improvements for future public engagement events: Attendees indicated the following:

- ▶ Have a job fair at the same time.
- ▶ In my opinion, the arrangements were excellent. I and one of my friends drove all the way from Edmonton so I believe that the event is properly advertised to all.

Identified community concerns and interests: Attendees indicated the following:

<ul style="list-style-type: none"> 2 Residential or private property impacts 2 Odours 3 Air Quality 3 Noise 3 Traffic safety * 2 Emergency Response 1 Human Health 3 Groundwater quality 3 Surface water quality 2 Wildlife 3 Public engagement process/events/opportunities 	<p>Other interest identified: Job opportunities.</p> <p>Additional comments:</p> <ul style="list-style-type: none"> ▶ *80 km on back roads. ▶ Things are all good. I think you need to have the same in Gibbons at some future time (support).
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Two participants indicated they would like a Sturgeon Refinery representative to follow-up with them:

Appendix 2-1

Appendix 2

NWR Sturgeon Refinery – Operating Approval Renewal June 1, 2016 Open House – Exit Interview Results

1	Start up and commissioning of plants.	By email and/or personal visit
1	Construction updates. Business and employment opportunities.	By phone and/or email

Appendix 2-2