

Description of a Designated Project

Heartland Petrochemical Complex Rail Yard Project

July 2018

CONTENTS

CEAA Project Description Concordance Table	iv
List of Abbreviations and Acronyms	vi
1 Project Information and Contacts	1
1.1 NAME, NATURE AND LOCATION OF THE PROJECT	1
1.2 PROPONENT CONTACT INFORMATION	2
1.3 JURISDICTIONS AND OTHER PARTIES CONSULTED	5
2 Project Information	11
2.1 GENERAL DESCRIPTION AND OBJECTIVES	11
2.2 REGULATIONS DESIGNATING PHYSICAL ACTIVITIES	11
2.3 COMPONENTS AND ACTIVITIES	14
2.3.1 Physical Works Associated with the Designated Project	14
2.3.2 Anticipated Size and Capacity of the Project	18
2.3.3 Nature of the Project	18
2.3.4 Incidental Project Activities.....	18
2.4 EMISSIONS, DISCHARGES AND WASTE.....	20
2.4.1 Atmospheric Emissions	20
2.4.2 Liquid Discharges	24
2.4.3 Types of Waste and Intended Disposal	25
2.5 PROJECT PHASES AND SCHEDULE	26
2.6 PROJECT LOCATION	27
2.7 DESCRIPTION OF THE PROJECT’S LOCATION.....	29
2.7.1 Geographic Coordinates and Legal Land Description	29
2.7.2 Site Plot Plan	29
2.7.3 Regional Maps and Satellite Imagery.....	29
2.7.4 Photographs of Project Site	31
2.7.5 Proximity of the Project	31
2.8 LAND AND WATER USE.....	34
2.8.1 Zoning Designation and Land Use Plan	34
2.8.2 Legal Land Description	34
2.8.3 Land and Water Use.....	34
2.8.4 Traditional Land Use	34
3 Federal Involvement	35
3.1 FEDERAL FINANCIAL SUPPORT	35

3.2	FEDERAL LANDS	35
3.3	FEDERAL LEGISLATIVE REQUIREMENTS.....	35
4	Environmental Effects.....	36
4.1	PHYSICAL AND BIOLOGICAL SETTING	36
4.1.1	Vegetation.....	37
4.1.2	Wildlife.....	38
4.1.3	Soils	38
4.1.4	Surface Watercourses and Drainage	38
4.1.5	Groundwater	39
4.1.6	Air Quality	39
4.1.7	Noise.....	40
4.2	CHANGES PREDICTED AS A RESULT OF THE PROJECT	40
4.2.1	Fish, Fish Habitat, as Defined in the <i>Fisheries Act</i>	40
4.2.2	Marine Plants, as Defined in the <i>Fisheries Act</i>	40
4.2.3	Migratory Birds, as Defined in the MBCA	41
4.3	POTENTIAL CHANGES TO FEDERAL LANDS.....	44
4.4	PREDICTED EFFECTS ON ABORIGINAL PEOPLES.....	44
5	Engagement and Consultation with Aboriginal Groups.....	45
6	Consultation with the Public and Other Parties	51
6.1	STAKEHOLDERS AND RELATED CONSULTATION ACTIVITIES.....	51
6.1.1	Potentially Affected and Interested Stakeholders	51
6.1.2	Overview of Stakeholder Consultation Activities to Date	51
6.2	KEY COMMENTS AND CONCERNS EXPRESSED BY STAKEHOLDERS.....	52
6.3	CONSULTATION WITH OTHER JURISDICTIONS	52
6.4	ONGOING OR PROPOSED CONSULTATION ACTIVITIES	53
7	References	54

TABLES

Table 1. Tracks Breakdown and Details 14

Table 2. Equipment Required for the Construction of the Rail and Carwash Facilities 22

Table 3. Estimated GHG Emissions – Construction Phase 23

Table 4. Estimated GHG Emissions – Operations Phase 24

Table 5. Summary of Wastes and Waste Management Methods 26

Table 6. Project Schedule and Milestones 26

Table 7. Summary of Aboriginal Groups Responding to Notification 48

Table 8. Stakeholders Potentially Affected by or Interested in the Project 51

FIGURES

Figure 1: Regional Location 3

Figure 2: Site Location 4

Figure 3: Site Layout Plan 12

Figure 4: Rail Yard Track Detail 13

Figure 5: Industrial Land Ownership 28

Figure 6: Environmental Protected Areas 30

Figure 7: Site Photo (2017) 32

Figure 8: Aboriginal Communities 33

ATTACHMENT 1: TITLES OF SURFACE AND SUBSURFACE RIGHTS

ATTACHMENT 2: PROJECT ENGAGEMENT

Attachment 2a Aboriginal Notification Letter

Attachment 2b Open House Documentation – February 8, 2018

Attachment 2c Paul First Nation CEEA Project Description Follow-up Letter

CEAA PROJECT DESCRIPTION CONCORDANCE TABLE

Content required by the Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act (2012)*		Corresponding Section of the Project Description
1.	General Information and Contact(s)	1.
1.1	Nature of the designated project, and proposed location	1.1, Figures 1 and 2
1.2	Proponent information	1.2
	1.2.1 Name of the designated project	1.2
	1.2.2 Name of the proponent	1.2
	1.2.3 Address of the proponent	1.2
	1.2.4 Chief Executive Officer or equivalent	1.2
	1.2.5 Principal contact person	1.2
1.3	List of any jurisdictions and other parties that were consulted	1.3
1.4	Regulatory requirements from another jurisdiction	1.4
1.5	Regional environmental study	1.5
2.	Project Information	2.
2.1	Description of the project, context and objectives	2.1, Figures 3 and 4
2.2	Provisions of the Regulations Designating Physical Activities	2.2
2.3	Components and activities	2.3
	2.3.1 Physical works associated with the designated project	2.3.1, Figure 4
	2.3.2 Anticipated size or production capacity of the designated project	2.3.2, Figure 2
	2.3.3 Size and nature of the expansion	2.3.3
	2.3.4 Description of the physical activities that are incidental to the designated project	2.3.4
2.4	Emissions, discharges and waste	2.4
	2.4.1 Sources of atmospheric emissions	2.4.1
	2.4.2 Sources and location of liquid discharges	2.4.2
	2.4.3 Types of waste and plans for their disposal	2.4.3
2.5	Project phases and scheduling	2.5
	2.5 Anticipated scheduling, duration and staging of key project phases	2.5
	2.5 Main activities in each phase of the designated project	2.5
3.	Project Location	2.6, Figures 1 and 5
3.1	Description of the designated project's location	2.7
	3.1.1 Coordinates	2.7.1
	3.1.2 Site map / plan(s) of designated project components and activities	2.7.2 and Figures 3 and 4
	3.1.3 Map(s) showing the location of the designated project components and activities relative to existing features	2.7.3, Figures 5 and 6
	3.1.4 Photographs of work locations	2.7.4 and Figure 7
	3.1.5 Proximity of the designated project to residences, Aboriginal lands and federal lands	2.7.5, Figures 1 and 8

Content required by the Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act (2012)*		Corresponding Section of the Project Description
3.2	Land and Water use	2.8
	3.2.1 Zoning designations	2.8.1
	3.2.2 Legal Description	2.8.2 and Attachment 1
	3.2.3 Applicable land use, water use, resource management or conservation plans	2.8.3
	3.2.4 Access to land used for traditional purposes by Aboriginal peoples	2.8.4
4.	Federal Involvement	3.
4.1	Proposed or anticipated federal financial support	3.1
4.2	Federal lands that may be used	3.2
4.3	Federal permits, licenses or other authorizations	3.3
5.	Environmental Effects	4.
5.1	Description of the physical and biological setting	4.1 and Figures 2, 3, 5, and 6
5.2	Description of any changes that may be caused to:	4.2
	Fish and fish habitat, as defined in the <i>Fisheries Act</i>	4.2.1
	Marine plants, as defined in the <i>Fisheries Act</i>	4.2.2
	Migratory birds, as defined in the <i>Migratory Birds Convention Act, 1994</i>	4.2.3
5.3	Description of any change to the environment on federal lands, in another province or outside of Canada	4.3
5.4	Description of the effects on Aboriginal peoples	4.4
6.	Proponent Engagement and Consultation with Aboriginal Groups	5.
6.1	List of Aboriginal groups that may be interested in, or potentially affected by the designated project	5. and Figure 8
6.2	Description of the engagement or consultation activities carried out to date	5. and 6.
6.3	Overview of key comments and concerns expressed by Aboriginal groups	5. and Figure 8
6.4	Consultation and information-gathering plan	5. and 6.
7.	Consultation with the Public and Other Parties	6., Attachment 2a, 2b, and 2c
7.1	Overview of key comments and concerns	6.2
7.2	Overview of any ongoing and proposed consultation activities	6.1.2 and 6.4
7.3	Description of consultations with other jurisdictions	6.3

* Source: *Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act (2012)*, Canadian Environmental Assessment Agency, as modified March 2015

LIST OF ABBREVIATIONS AND ACRONYMS

AAAQO	Alberta's Ambient Air Quality Objectives
ACO	Aboriginal Consultation Office
AEP	Alberta Environment and Parks
AER	Alberta Energy Regulator
AIH	Alberta's Industrial Heartland
ATCO	ATCO Power Canada Ltd.
AUC	Alberta Utilities Commission
AWA	Alberta <i>Wildlife Act</i>
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
CH ₄	Methane
CN	Canadian National Railway
CP	Canadian Pacific Railway
CO	carbon monoxide
COGEN	Cogeneration
CO ₂ eq	carbon dioxide equivalent
CUB	Central Utilities Block
EPEA	<i>Environmental Protection and Enhancement Act</i>
ESRD	Alberta Environment and Sustainable Resource Development
FAP	Fort Air Partnership
FWMIS	Fisheries & Wildlife Management Information System
GHG	Greenhouse Gas
Ha	Hectares
H ₂ S	hydrogen sulphide
Inter Pipeline	Inter Pipeline Propylene Ltd.
Km	Kilometres
KWBZ	Key Wildlife Biodiversity Zone
MBCA	Migratory Birds Convention Act, 1994
NCIA	Northeast Capital Industrial Association
NE	Northeast
NO _x	nitrogen oxides
PDH	propane dehydrogenation
PM _{2.5}	particulate matter fine
PP	Polypropylene
ROW	right-of-way
SARA	<i>Species at Risk Act</i>
SE	Southeast
SO ₂	Sulphur dioxide
Williams	Williams Energy Canada ULC and Williams Canada Propylene ULC
WEST	Western EcoSystems Technology
W4M	West of the Fourth Meridian

1 PROJECT INFORMATION AND CONTACTS

This Project Description has been prepared in accordance with the *Prescribed Information for the Description of a Designated Project Regulations* and the *Guide to Preparing a Description of a Designated Project Under the Canadian Environmental Assessment Act, 2012* (CEAA 2012). The numbers and titles used as main headings in this document are aligned with this guide for ease of reference.

Inter Pipeline Propylene Ltd., a wholly owned subsidiary of Inter Pipeline Ltd. (hereafter interchangeably referred to as Inter Pipeline) is a major petroleum transportation, natural gas liquids processing, and bulk liquid storage business based in Calgary, Alberta, Canada. Inter Pipeline owns and operates energy infrastructure assets in western Canada and Europe.

Inter Pipeline is developing the Heartland Petrochemical Complex, a world-scale integrated propane dehydrogenation (PDH) and polypropylene (PP) facility. The Heartland Petrochemical Complex will be designed to convert locally sourced, low-cost propane into polypropylene, a high-value, easy to transport plastic used in the manufacturing of a wide range of finished products. The polypropylene plastic pellets are not considered Dangerous Goods, under the *Dangerous Goods Transportation and Handling Act*.

The development will build upon Inter Pipeline's current operations, utilizing existing infrastructure and expertise, and will create a new propane-based value chain in Canada and opportunity for further high-value derivatives production in Alberta.

1.1 NAME, NATURE AND LOCATION OF THE PROJECT

The Designated Project subject to this Project Description is the rail yard (the Project) associated with the Heartland Petrochemical Complex. Inter Pipeline is proposing to build and operate the Project consisting of a railcar loading facility and railcar storage yard. The Project will involve the construction of up to 11 kilometres (km) of rail line over 26 new tracks.

The Heartland Petrochemical Complex will consist of: (a) PDH facility designed to convert propane into propylene; (b) PP facility designed to convert the propylene from the PDH facility into various grades of polypropylene; (c) a cogeneration (Cogen) plant (to act as a Central Utilities Block [CUB]) designed to produce steam, electricity, and other utilities for the Heartland Petrochemical Complex; and (d) rail yard (the Project) to facilitate the transport of polypropylene to markets. Inter Pipeline will operate the Heartland Petrochemical Complex.

For the purpose of this Project Description, the following definitions will apply to distinguish the Project and the overall Heartland Petrochemical Complex:

- The Heartland Petrochemical Complex consists of the PDH, PP, CUB, and the rail yard;
- The Heartland Petrochemical Complex Site includes all lands as occupied by the Heartland Petrochemical Complex and associated infrastructure;
- The Project consists of the rail yard, including the rail lines and infrastructure specific to the rail yard;
- The Project Site is the component of the overall Heartland Petrochemical Complex Site that will be occupied by the rail yard.

The Heartland Petrochemical Complex will be located on freehold land owned by Inter Pipeline within the northeast (NE) and southeast (SE) quarters of Section 25, Township 55, Range 22, West of the Fourth Meridian (W4M). The land is located in Strathcona County, within the Alberta Industrial Heartland (AIH), north of the City of Fort Saskatchewan. Refer to Figure 1 for the regional location.

The Project Site is zoned for heavy industrial land use. The lands within the Heartland Petrochemical Complex Site are highly disturbed land previously used for agricultural purposes. The Project Site represents approximately 10 hectares (ha) of the 94 ha Heartland Petrochemical Complex Site. Refer to Figure 2 for the site location.

1.2 PROPONENT CONTACT INFORMATION

Project Name: Heartland Petrochemical Complex Rail Yard

Proponent Name: Inter Pipeline Propylene Ltd.

Note: some regulatory applications and documents referenced in this submission were undertaken by Williams Energy Canada ULC and Williams Canada Propylene ULC (Williams). Inter Pipeline acquired the Canadian assets of Williams Companies Inc. and Williams Partners LP effective September 23, 2016. Inter Pipeline Propylene Ltd. is the successor by way of name change of Williams Canada Propylene ULC.

Address of the Proponent:

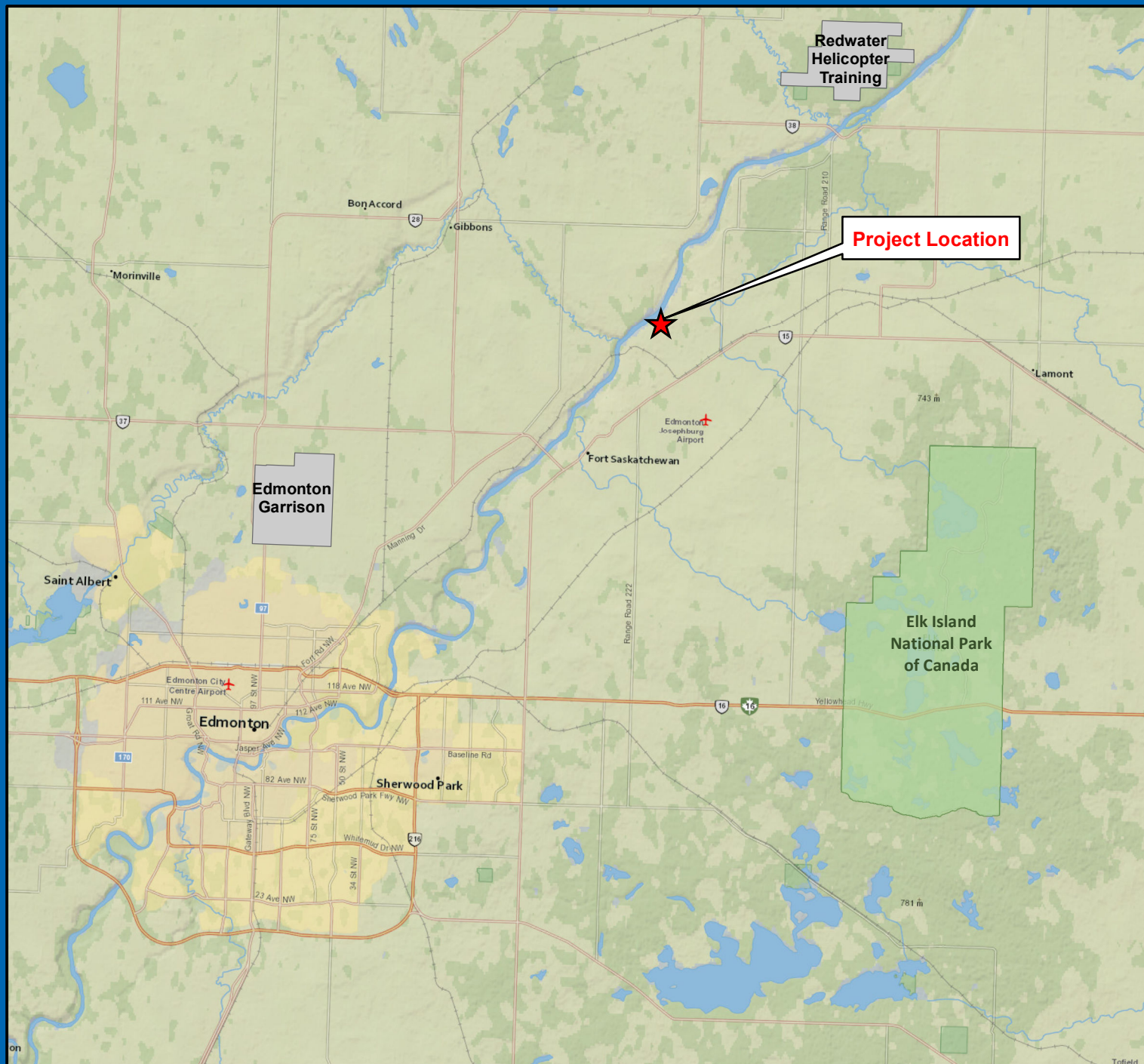
3200, 215 – 2 Street SW
Calgary Alberta T2P 1M4


CEO or equivalent:

Mr. Paul Binassi
General Manager PDH/PP Project Development
403-717-5774
paul.binassi@interpipeline.com

Principal Contacts:

Ms. Mirtyll Alboiu
Regulatory and Environmental Specialist
587-475-1101
mirtyll.alboiu@interpipeline.com



 Project Location in E 1/2 25-55-22W4M



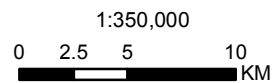
-  Military Base
-  National Parks

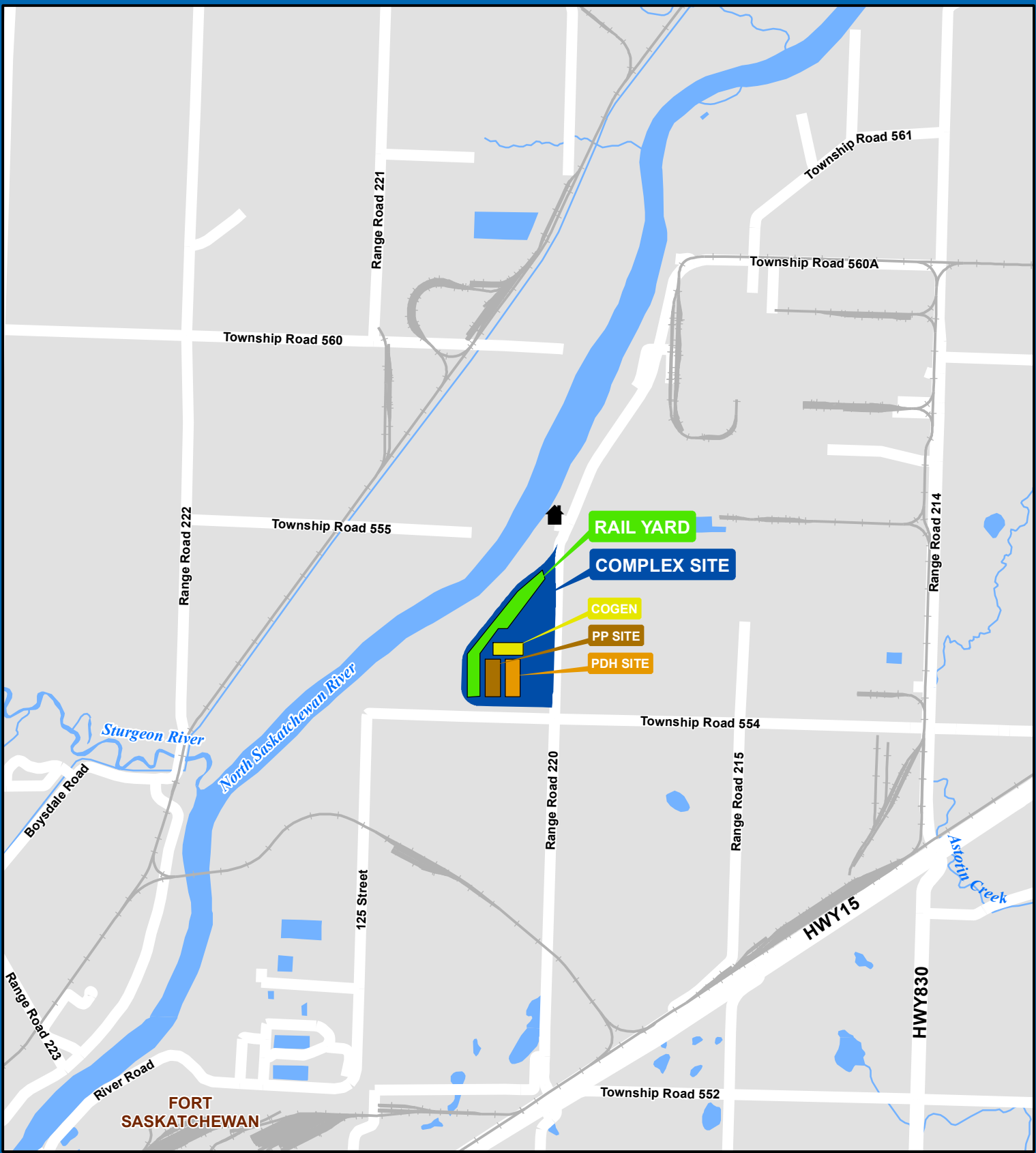








Figure 1: Regional Location
Heartland Petrochemical Complex
Inter Pipeline Propylene Ltd.



Date: 18-May-2018 Page Size: 8.5"x11"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.

Service Layer Credits: Content may not reflect National Geographic's current map policy.
 Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.




-  Resident
-  Cogeneration Plant
-  Polypropylene (PP) Facility
-  Propane Dehydrogenation (PDH) Facility
-  Rail Yard Facilities
-  Heartland Petrochemical Complex

1:45,000

0 250 500 1,000 M

N

Date: 18-May-2018 Page Size: 8.5"x11"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.



inter pipeline

Figure 2: Site Location
 E1/2 25-55-22W4

Heartland Petrochemical Complex
Inter Pipeline Propylene Ltd.

1.3 JURISDICTIONS AND OTHER PARTIES CONSULTED

Public and stakeholder engagement has been ongoing since March 2013 when the PDH project was announced, prior to the acquisition by Inter Pipeline. All engagement and communication from 2013 to September 2016 was conducted by Williams and was related to the PDH project. After September 2016, including the 2016 annual project update which communicated the Inter Pipeline acquisition of Williams, all engagement activities have been led by Inter Pipeline. Stakeholder engagement for the CUB project was completed by ATCO Power Canada Ltd. (ATCO) up until May 12, 2017, when Inter Pipeline assumed ownership of the CUB. Inter Pipeline notified all previously engaged stakeholders of the change in ownership on June 23, 2017.

From the commencement of development activities within the Heartland Petrochemical Complex Site, a stakeholder engagement plan was developed outlining the primary communication methods to deliver project information to the public and other stakeholders. Both Williams and ATCO held information sessions, open houses, community meetings, placed advertisements in local papers, and held in-person meetings with all potentially-affected landowners, residents, industry operators, nearby communities, local authorities, and with various regulatory agencies. All PDH and CUB project notifications were provided to residents, occupants, landowners, and industry operators within 2 km of the development site, and personal consultation was conducted with all residents, occupants, and landowners within 800 meters of the site. This radius is consistent with the Alberta Utilities Commission (AUC) *Rule 007: Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* and was selected in consultation with Alberta Environment and Sustainable Resource Development (ESRD; now known as Alberta Environment and Parks [AEP]) prior to the submission of the Industrial Approval Application for the PDH and the CUB projects.

Inter Pipeline held an open house on February 8, 2018, to provide an opportunity for all interested parties to learn about the Heartland Petrochemical Complex and project milestones. The Project was specifically covered on a display and factsheet. Inter Pipeline is committed to maintaining an open and meaningful stakeholder engagement program throughout the life of the Project and recognizes that consultation is an ongoing process.

Agencies and local authorities notified and/or consulted as part of the regulatory approvals processes include:

- AEP and AUC;
- Strathcona County, City of Fort Saskatchewan, and Sturgeon County;
- Alberta Culture and Tourism;
- Alberta Ministry of Energy;
- Alberta Ministry of Economic Development and Trade;
- Alberta Industrial Heartland Association; and

- Northeast Capital Industrial Association (NCIA).

Assessment requests were submitted for several components of the Heartland Petrochemical Complex, including the Project, to the Government of Alberta Aboriginal Consultation Office (ACO), which has determined that no First Nation consultation was required for the purpose of Alberta approvals, including the *Environmental Protection and Enhancement Act* (EPEA) and *Water Act* authorization already in place for the PDH and CUB. The ACO decision specific to the Project also indicates that no First Nation consultation was required for the purpose of Alberta approvals (dated October 31, 2017).

The following Aboriginal groups (17 First Nations, three Métis settlements, and three Métis Regions) have been notified of the Project and Inter Pipeline's intent to file this Project Description. The notification letter was sent by registered mail on January 12, 2018, and by email on January 15, 2018:

- Alexander First Nation
- Alexis Nakota Sioux Nation
- Beaver Lake Cree Nation
- Buffalo Lake Métis Settlement
- Enoch Cree Nation
- Ermineskin Cree Nation
- Foothills Ojibway First Nation
- Gunn Métis Local #55
- Kelly Lake Métis Settlement
- Louis Bull Tribe
- Métis Nation of Alberta – Region 1
- Métis Nation of Alberta – Region 2
- Métis Nation of Alberta – Region 4
- Montana First Nation
- Paul First Nation
- Saddle Lake Cree Nation
- Samson Cree Nation
- Stoney Nakoda First Nations (Bears paw First Nation, Chiniki First Nation, and Wesley First Nation)
- Tsuut'ina Nation
- Whitefish Lake First Nation #128

- Blood Tribe
- Piikani Nation
- Siksika Nation

Further details on Aboriginal engagement are included in Section 5.

1.4 OTHER ENVIRONMENTAL ASSESSMENT AND REGULATORY REQUIREMENTS

Environmental assessment and regulatory requirements relevant to the Project are presented below.

1.4.1 Federal

Federal regulations applicable to the Project are as follows:

- *Migratory Birds Convention Act, 1994* (MBCA): The Act strictly prohibits the harming of migratory birds and the disturbance of their nests and eggs. The entire Heartland Petrochemical Complex Site, including the Project Site, was cleared of vegetation in March 2015. The clearing occurred outside of the nesting period for migratory birds (April 20 – August 25).
- *Species at Risk Act* (SARA): The Act lists species that must not be harmed by the construction, operation, or decommissioning of project works. It is illegal to kill, harm, harass, capture, or take in any way any species listed under SARA. A wildlife baseline assessment was conducted by Golder Associates Ltd. in 2013 (Golder 2013a) that included a survey for the potential occurrence of listed species at the Heartland Petrochemical Complex Site. No evidence of SARA-listed species or their habitat was detected at the Heartland Petrochemical Complex Site, including the Project Site (Golder 2013a). The Act was updated in November 2017 to be more inclusive of species recommended to be listed (e.g., barn swallow). There is no habitat for listed species at the Heartland Petrochemical Complex Site as it has been cleared and no vegetation exists within the Project Site.
- *Fisheries Act*: The Act focuses on conservation and protection of fish habitat essential to sustaining freshwater and marine fish species. No fish or fish habitat occurs within the Project Site.
- *Railway Safety Act*: see below under provincial *Railway (Alberta) Act* (Alberta Transportation) in Section 1.4.2.
- Transport Canada: Assesses aeronautical impacts from obstruction or lighting of structures associated with industrial developments. None of the Project structures required an aeronautical assessment.
- NAV Canada: Assesses aeronautical impacts from obstruction or lighting of structures associated with industrial developments under the Land Use Proposal. None of the Project structures required an assessment by NAV Canada.

- CEAA 2012: the Project is listed in *Regulations Designating Physical Activities*, and therefore, requires a Project Description (subject submission). None of the other components of the Heartland Petrochemical Complex are listed activities and therefore do not require a CEAA review.

1.4.2 Provincial

Provincial approvals/permits associated with the development of the Project are as follows:

- The provincial regulatory authority with jurisdiction over the Heartland Petrochemical Complex is the AEP. The proposed activity (petrochemical manufacturing facility) is not considered an energy resource activity (as defined in the *Responsible Energy Development Act* Section 1(1)(i/j)), which would be under the Alberta Energy Regulator's (AER) jurisdiction.
- EPEA under *Environmental Assessment (Mandatory and Exempt Activities) Regulation* – the Project is not a listed activity, and therefore, does not require an Environmental Impact Assessment prior to receiving approval under EPEA from the AEP. However, as a discretionary activity, a project summary description was submitted to AEP and under section 44(3) of EPEA, the Director decided that further assessment was not required (October 24, 2017). Project summary descriptions were submitted to AEP for the other components of the Heartland Petrochemical Complex and none required further assessment (August 29, 2013, for PDH; October 24, 2017, for PP and the Project; and November 6, 2017, for CUB).
- EPEA under the Guide to Content for Industrial Approval Applications – the Project will be covered under the EPEA approval issued for the PDH facility. Inter Pipeline will obtain approval to include the Project under the current EPEA approval.
- *Alberta Wildlife Act (AWA)*: Section 36(1) of the AWA states that “a person shall not willfully molest, disturb, or destroy a house, nest, or den of prescribed wildlife”. The entire Heartland Petrochemical Complex Site, including the Project Site, was cleared of vegetation in March 2015 and heavy construction activities are ongoing making the site unsuitable for wildlife habitat.
- *A Historical Resources Act* authorization for the Heartland Petrochemical Complex Site, including the Project Site, was received from Alberta Culture and Tourism and no Historical Resources Impact Assessment was required (October 16, 2013).
- Approval to construct and operate the Project will be obtained from Alberta Transportation under the *Railway (Alberta) Act* once the design is finalized in accordance with the design standards for industrial railways in Alberta.
- The AUC and AEP approved the cogeneration plant, the substation, and industrial system designation that will support the utilities needs of the Heartland Petrochemical Complex, including the Project.

- A Preliminary Certificate under the *Water Act* was issued by AEP that allocates the annual water diversion volumes for the Heartland Petrochemical Complex. The Project water needs for the railcar cleaning facility are covered under this license.
- A *Water Act* authorization was issued by the AEP to fill and modify wetlands located within the Heartland Petrochemical Complex Site. No wetlands were located within the Project Site. All wetlands were removed under this authorization in 2015.

1.4.3 Municipal

The municipal authority for the Project Site is Strathcona County. Municipal permits associated with the development of the Project are as follows:

- *Land Use Bylaw 6-2015* – regulates the use, conservation, and development of land within Strathcona County. A development permit for the Project will be obtained from Strathcona County.
- The Heartland Petrochemical Complex Site, including the Project Site, is zoned as heavy industrial land use.

1.5 REGIONAL ENVIRONMENTAL STUDIES

There are no regional environmental studies as defined in Sections 73 and 74 of CEEA 2012 that apply to the region in which the Project is located.

The Project is located in the AIH, a region that has been the subject of several provincial and local regional studies for a number of environmental parameters (air, noise, etc.). Inter Pipeline is committed to implementing and complying with the management plans within the AIH area.

The applicable management plans in the AIH area and in Strathcona County are:

- ESRD Cumulative Effects Management System (AEP 2015a) that is built on the following environmental frameworks:
 - Water Management Framework for the Industrial Heartland and Capital Region (AEP 2008 and updates)
 - Capital Region Air Quality Management Framework (AEP 2012)
 - Elemental Sulphur Management Framework for the Industrial Heartland
 - Water Management Framework for the Industrial Heartland and Capital Region: Effluent Characterization Program (AEP 2015b)
- Capital Region Land Use Plan (Capital Regional Board 2009)
- Northeast Capital Industry Association (NCIA):
 - Regional Noise Management Plan (NCIA 2017)

- Regional Groundwater Monitoring (NCIA 2016)
- Strathcona County Management Plans:
 - Land Use Bylaw 6-2015 (Strathcona County 2015)
 - Alberta Industrial Heartland Area Structure Plan Bylaw and Amendments (Strathcona County 2001; currently in the process of being updated)
 - Municipal Development Plan Bylaw 20-2017 (Strathcona County 2017)
- Fort Air Partnership (FAP) Air Monitoring Plan (2015)

2 PROJECT INFORMATION

2.1 GENERAL DESCRIPTION AND OBJECTIVES

The Project will be located within the Heartland Petrochemical Complex Site and will support the transport of polypropylene pellets to market. The Project will consist of up to 11 km of track across 26 onsite tracks and will include rail-supporting facilities such as a locomotive shop, an operations building, and a railcar loading/railcar cleaning building. The rail storage area will include rail infrastructure able to support the loading of up to 24 cars per day, with capacity to store over 200 loaded and empty cars. Designated exchange sidings will facilitate the exchange of empty and loaded cars between Inter Pipeline operations and potential rail service providers. Further details on the Project are provided in Section 2.3.1.

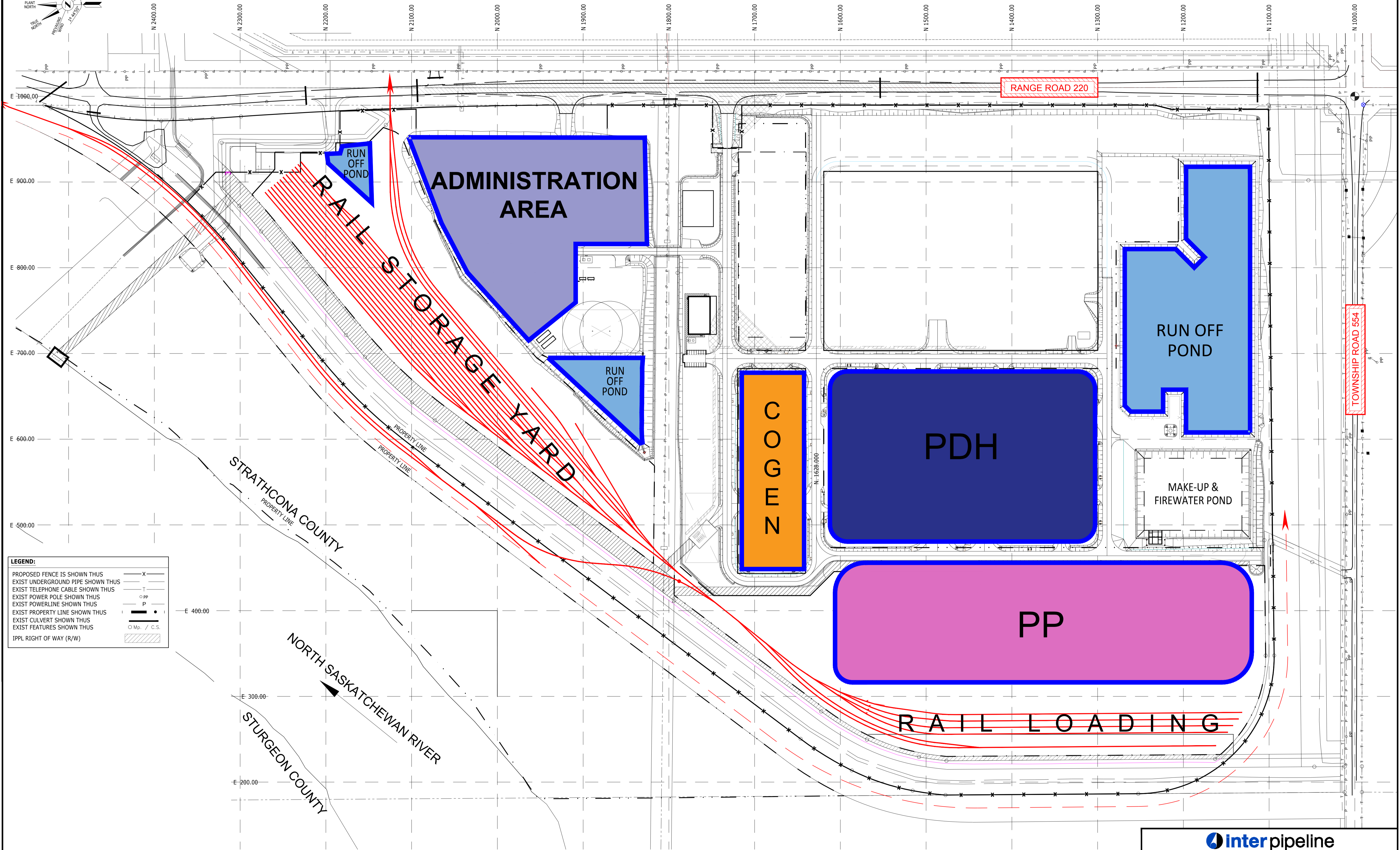
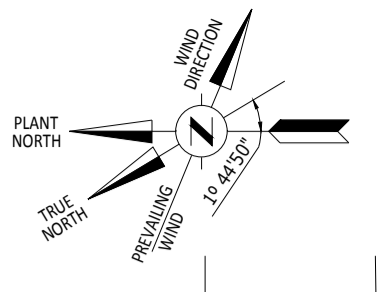
The overall site layout for the Heartland Petrochemical Complex is shown in Figure 3 and the rail yard track details are provided in Figure 4.

2.2 REGULATIONS DESIGNATING PHYSICAL ACTIVITIES

The Canadian Environmental Assessment Agency may require a federal environmental assessment, pursuant to CEAA 2012, for certain rail projects requiring submission of a Project Description. The *Regulations Designating Physical Activities* set out which projects may be subject to an environmental assessment under CEAA 2012. The following section of the *Regulations Designating Physical Activities* is applicable to this Project:

25 (b). The construction, operation, decommissioning and abandonment of a new railway yard with seven or more yard tracks or a total track length of 20 km or more.

The Project is a component of the Heartland Petrochemical Complex. None of the other components of the Heartland Petrochemical Complex, including the integrated PDH and PP facilities and the Cogen plant, meet or exceed any thresholds listed in the *Regulations Designating Physical Activities* therefore, are not subject to CEAA review.



LEGEND:

PROPOSED FENCE IS SHOWN THUS	— X —
EXIST UNDERGROUND PIPE SHOWN THUS	— T —
EXIST TELEPHONE CABLE SHOWN THUS	— P —
EXIST POWER POLE SHOWN THUS	○ PP
EXIST POWERLINE SHOWN THUS	— P —
EXIST PROPERTY LINE SHOWN THUS	— P —
EXIST CULVERT SHOWN THUS	— C.S. —
EXIST FEATURES SHOWN THUS	○ Mp. / C.S.
IPPL RIGHT OF WAY (R/W)	— / —

NOTES:

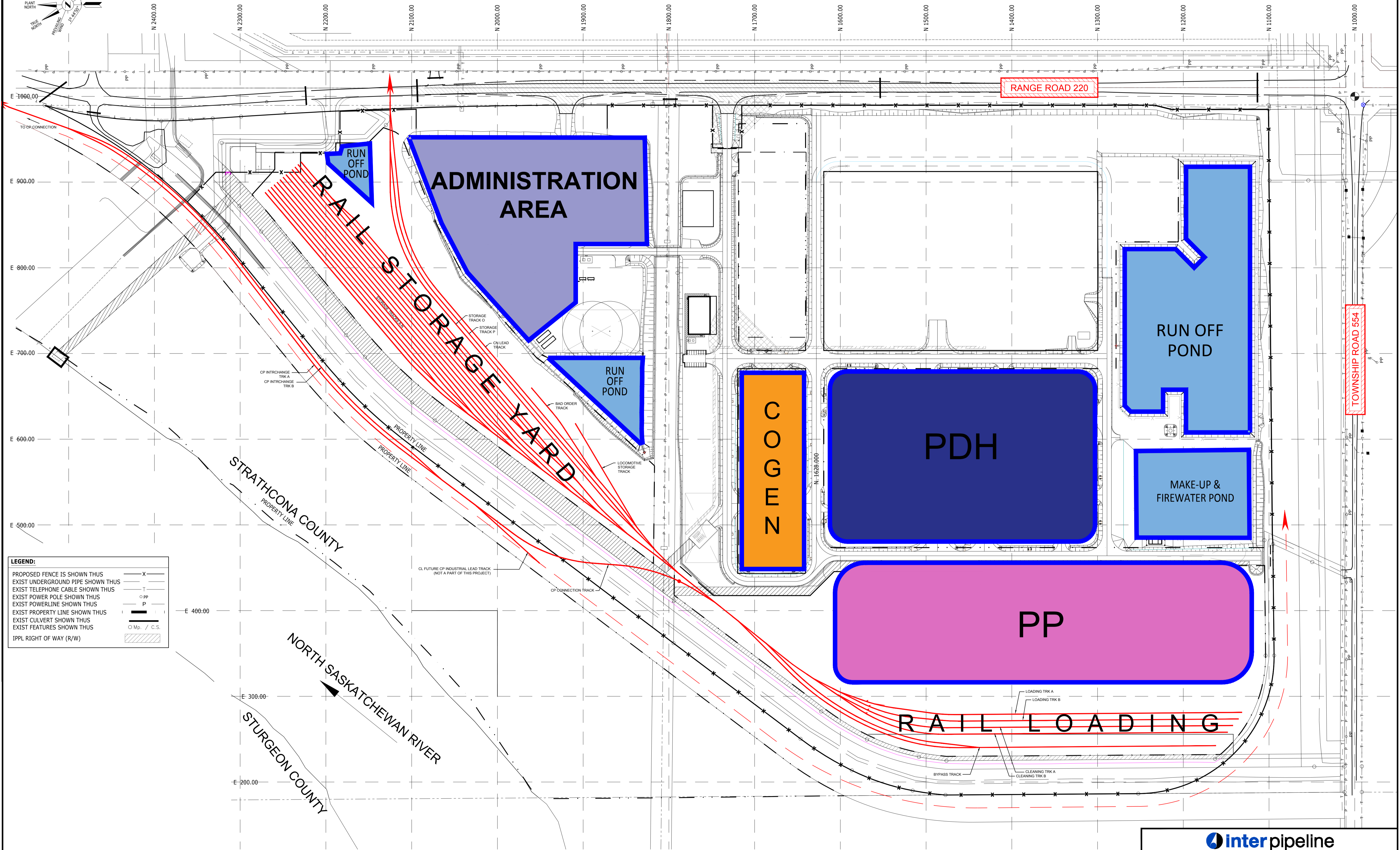
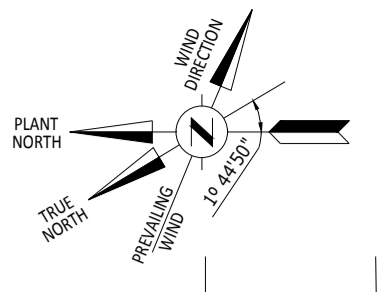
- COORDINATES AND ELEVATIONS ESTABLISHED FROM NRCm-PPP (CSRS) NAD 83 ZONE 12. DATUM OF PLANT N 1000.000 E 1000.000 IS EQUAL TO UTM N 5960501.360 E 360014.460
- GEODETIC DATUM EL 631.950 EQUALS ISBL PLAIT DATUM EL 100.000.
- SURVEY INFORMATION PROVIDED BY IPPL SEE REFERENCE DRAWING 2.

0 10 50 100 150 200 250 300m
BAR SCALE 1:2000

Interpipeline

FIGURE 3 : SITE LAYOUT PLAN
Heartland Petrochemical Complex
Inter Pipeline Propylene Ltd.

STRATHCONA COUNTY ALBERTA



LEGEND:

PROPOSED FENCE IS SHOWN THUS	X
EXIST UNDERGROUND PIPE SHOWN THUS	T
EXIST TELEPHONE CABLE SHOWN THUS	—
EXIST POWER POLE SHOWN THUS	○ PP
EXIST POWERLINE SHOWN THUS	P
EXIST PROPERTY LINE SHOWN THUS	—
EXIST CULVERT SHOWN THUS	○ Mp. / C.S.
EXIST FEATURES SHOWN THUS	—
IPPL RIGHT OF WAY (R/W)	▨

NOTES:

- COORDINATES AND ELEVATIONS ESTABLISHED FROM NRCsn-PPP (CSRS) NAD 83 ZONE 12. DATUM OF PLANT N 1000.000 E 1000.000 IS EQUAL TO UTM N 5960501.360 E 360014.460
- GEODETIC DATUM EL 631.950 EQUALS ISBL PLAIT DATUM EL 100.000.
- SURVEY INFORMATION PROVIDED BY IPPL SEE REFERENCE DRAWING 2.

BAR SCALE 1:2000

Interpipeline

FIGURE 4: RAIL YARD TRACK DETAIL
Heartland Petrochemical Complex
Inter Pipeline Propylene Ltd.

ZOOM IN FOR TRACK DETAILS

STRATHCONA COUNTY ALBERTA

2.3 COMPONENTS AND ACTIVITIES

2.3.1 Physical Works Associated with the Designated Project

Project Design Concept and Setup

The three primary components of the Project are a railcar loading facility, railcar storage, and a railcar cleaning facility. The Project will be approximately 10 ha and will contain rail support facilities such as a locomotive shop, and a building housing the railcar loading and cleaning facilities. The Project will include 26 onsite tracks totalling up to 11 km, including storage and bad order tracks. The CP rail Connection component will consist of 1 track, totaling 0.227 km of track; CP Interchange component will consist of 2 tracks, totaling 0.988 km of track; CN Connection component will consist of 1 track, totaling 0.481 km of track; Storage Track component will consist of 16 tracks, totaling 5.252 km of track; Loading component will consist of 2 tracks, totaling 0.852 km of track; Cleaning component will consist of 2 tracks, totaling 0.824 km of track; Bad Order component will consist of 1 track, totaling 0.085 km of track; Engine component will consist of 1 track, totaling 0.096 km of track; Bypass Pullback component will consist of 1 track, totaling 0.493 km of track.

A breakdown of the number of tracks for each Project component is included in Table 1 below and illustrated in Figure 4.

Table 1. Tracks Breakdown and Details

Track Name	Length in Feet	Length in Metres	Car Capacity
CP Connection	746	227	10
CP Interchange A	1,623	494	23
CP Interchange B	1,624	494	23
CN Connection	1,580	481	23
Storage A	915	279	13
Storage B	754	229	11
Storage C	753	229	11
Storage D	914	278	13
Storage E	912	278	13
Storage F	1,119	341	16
Storage G	1,102	335	16
Storage H	1,100	335	16
Storage I	1,380	420	20
Storage J	1,517	462	22
Storage K	1,099	334	16

Track Name	Length in Feet	Length in Metres	Car Capacity
Storage L	1,097	334	16
Storage M	1,234	376	18
Storage N	1,369	417	20
Storage O	1,055	321	15
Storage P	935	284	13
Loading A	1,402	427	19*
Loading B	1,396	425	19*
Cleaning A	1,358	413	18*
Cleaning B	1,350	411	18*
Bad Order	280	85	4
Engine	316	96	4
Bypass Pullback	1,619	493	23
TOTAL CAR CAPACITY	30,549	9,298	433

* Actual car capacities of the loading and cleaning tracks is somewhat reduced due to the requirement to split the cuts of cars while spotted within and outside the buildings

The Project and associated infrastructure is anticipated to operate 24-hours/day; 7-days/week; 365-days/year to match the expected overall complex operations schedule. The rail storage area will provide rail infrastructure able to support the loading of up to 24 cars per day, with capacity to store over 200 railcars in the storage yard. The storage tracks are “blind” in that they are single-ended and must be worked from the south end of the track. Railcars will be cleaned prior to loading.

The Project is designed to:

- receive empty railcars;
- allow movement of empty railcars to either storage, cleaning tracks, or loading tracks, as required;
- clean empty railcars;
- remove cleaned cars from cleaning tracks and either store in the storage yard or place on loading tracks;
- remove loaded cars from loading tracks and either store in the storage yard or place on the exchange tracks;
- build outbound car blocks for pickup by a rail service provider; and
- move bad order cars to the repair track and place in the storage yard, cleaning tracks, loading tracks, or on exchange tracks after repair, as required.

Car Loading

The polypropylene pellets will be loaded into railcars through overhead hatches. One loading spot will be provided on each of the two loading tracks. Each loading track will have a 15-car capacity, of which two will be taken up by the loading and the preload (car preparation) spot. A vacuum system will be used to remove any dust generated during loading operations. Sections of connected railcars will advance along the loading tracks until all are filled and ready for removal by the yard locomotive.

Railcar Cleaning

The railcar cleaning facility is a multipurpose shop capable of cleaning covered hopper cars prior to loading. Cleaning is required in order to remove any dust or potential residue from previous loads, to prevent cross-contamination of various polypropylene grades. The railcar cleaning facility will share a common wall with the rail loading building, and will contain the following areas:

- Two cleaning tracks
- Deheeling process
- Railcar cleaning process
- Wastewater treatment process
- Office
- Laboratory
- Personnel locker rooms and bathrooms
- Storage area

The rail cleaning facility will be able to clean four railcars simultaneously, and will involve three distinct operational processes:

1. Deheeling – removal of external and internal residues, such as plastic residues from railcars prior to loading.
2. Railcar cleaning – water wash and dry the interior of the railcars prior to loading.
3. Wastewater treatment and recycle – treat and recycle the utility water used for railcar cleaning.

The deheeling process involves two purposes: (1) external removal of snow and ice using radiant heating, steam and compressed air; and (2) internal removal of plastic residues inside the railcars using vacuum pumps. Trench drains will catch the snow/ice melt and debris removed from the cars and route it to the runoff ponds to avoid contaminating the wash water used in the cleaning process. The vacuumed residue particles are sent to a collection silo through a vacuum system and then directly loaded to offsite disposal trucks.

The cleaning process is designed to provide cleaning services for covered hopper cars after undergoing the deheeling process. The cleaning process consists of four stations on two tracks (two per track) designed to clean to a standard that meets US Food and Drug Administration criteria (and often more stringent customer-specified criteria). The washing process will use a three-water wash system consisting of dedicated, all stainless steel piping, valves, and pump heads that will be periodically sterilized using either steam or sanitizing chemicals. The piping may also be pasteurized with 82° Celsius re-circulated water.

The three-step cleaning process involves (1) a hot water pre-rinse, (2) a hot water wash, and (3) a cold fresh water final rinse. The floor of the Cleaning Building will be reinforced concrete with trench drains connected to a common sump to catch wash water and route it to the sump for recycling in the process. The railcar cleaning process will require approximately 38 m³/day of utility water from the CUB, if every railcar is washed prior to loading.

The following equipment is part of each cleaning track:

- Cleaning station with wash nozzles and associated piping
- Heated wash/rinse compartments
- Supply and return pumps
- Blower

Wastewater generated from railcar cleaning will be treated to remove plastic residues that are picked up during the cleaning process. The utility water used for cleaning will be reused and recycled to the fullest extent possible to minimize makeup water volumes. Any wastewater that can no longer be recycled will be sent offsite to a third party disposal facility. Any solid residue product (or heel) will be collected and either sold as off-spec product or disposed of via a third party waste disposal contractor, which is discussed in more detail in Section 2.4.3.

Car Storage

The rail storage area will include infrastructure able to support the loading of up to 24 cars per day, with capacity to store over 200 loaded and empty cars.

Buildings and Structures

The following buildings are included as part of the loading facility:

- Locomotive shop
- Loading building and railcar cleaning facility (connected by a common wall)

Inter Pipeline will maintain a Safety Management System for the Project that will outline how environmental and safety matters are to be managed throughout the operation. It will define

responsibilities and describe the processes and procedures that will ensure the safety of all Inter Pipeline's employees, contractors, the community, and environment around the rail facilities and within the Project Site. The Safety Management System will also include procedures for the identification of bad order railcars through mandatory inspection of cars at arrival to identify any potential mechanical defect or safety violations. In such cases, the cars will be removed from service until repaired, or set aside on the bad-order track for return to the railcar supplier.

2.3.2 Anticipated Size and Capacity of the Project

The Project will occupy approximately 10 ha of the overall 94 ha Heartland Petrochemical Complex Site, north of Township Road 554 and west of Range Road 220. The layout for the Project is shown in Figure 2.

The Project will include 26 onsite tracks totalling up to 11 km. The rail loading capacity will be of up to 24 cars per day. Each railcar can hold approximately 176 m³ of polypropylene pellets; based on a daily loading capacity of up to 24 cars per day, the Project will have a loading capacity of up to 4,233 m³/day.

2.3.3 Nature of the Project

The Project is not an expansion of an existing rail facility; it is a component within the Heartland Petrochemical Complex Site that is currently being developed.

2.3.4 Incidental Project Activities

Utilities

Utilities (water, natural gas, and electricity) for the Project will be supported by utility inputs from the onsite CUB or PDH facility that will be commissioned before the Project. These utilities will be provided via onsite pipeline connections and above and/or below ground cabling.

- Electrical power for the Project (equipment, buildings, onsite lighting, and emergency back-up power) will be supplied from the CUB whose maximum generating capacity is 102 MW. The Project will consume maximum 2,980,000 kWh of electricity per year, assuming operating at the continuous rate to service 17 railcars/day, 7-days/week, operating two 8-hour shifts/day.
- Utility water for the railcar cleaning facility will be supplied from CUB via PDH and PP interconnecting pipe racks. Approximately 38 m³/day of makeup utility water from the CUB will be required to support the Project. This volume is included in the water allocation covered in the *Water Act* Preliminary Certificate issued for the Heartland Petrochemical Complex.
- Pressure-regulated natural gas for heating the buildings associated with the Project will be provided from CUB via onsite connecting pipeline. The Project will consume maximum 2,320,000 m³/year of natural gas, assuming continuous operation of 24-hours/day, 7-days/week.

- Potable water required for domestic use by personnel in the rail loading area will either be provided from a connection to the main potable water header from the administration area or it will be trucked in directly to the Project Site. The potable water source, pipelined or trucked to the Project Site, originates from the EPCOR water treatment facility near Edmonton which is the regional supplier to other industry and communities in the area.
- Diesel fuel to be used for operating the onsite yard locomotive will be delivered as needed by a third party supplier. There will be no onsite storage of diesel.

Wastewater

The railcar cleaning facility will include a wastewater treatment facility that will treat the railcar wash water. Wastewater will be recycled and reused as much as possible, but eventually it will be trucked by a third party to offsite disposal. Approximately 18.4 m³/day of wastewater will require offsite disposal. Domestic wastewater from the Project will be collected in a septic tank and will be trucked to an offsite disposal facility.

Stormwater

Stormwater runoff from the Project Site will be collected and gravity drained through collector ditches and culverts to three runoff ponds located on the Heartland Petrochemical Complex Site. Stormwater runoff from the rail loading facility area will be directed to the runoff pond in the SE area of the Heartland Petrochemical Complex Site that also collects stormwater runoff from the PDH, PP and Cogen area, 38,900 m³ storage capacity (L=563.23m, W=155.50m L shaped pond). Stormwater runoff from the south half of the rail storage yard area will be directed to the runoff pond in the central area of the Heartland Petrochemical Complex Site that also takes the stormwater runoff from the Administration area (L=129.57 m W=125.74 m triangular shape with 11,750 m³ storage capacity). Stormwater runoff from the north half of the rail storage yard area will be directed to the runoff pond north of the rail storage yard (L=82m, W=58m and 4,398 m³ storage capacity). All three ponds are designed and sized to contain a 1:100-year, 24-hour, storm event. None of the ponds meet dam criteria as defined in the Dam and Canal Safety Guidelines (Alberta Environment 1991) or any thresholds listed in the *Regulations Designating Physical Activities*. Stormwater that meets discharge criteria will be released from the runoff ponds through an existing approved outfall structure into the North Saskatchewan River. All runoff water will be contained within the Project Site boundaries and neighbouring properties will not be impacted.

The Make-Up & Firewater Pond will be used to store raw water required for process and potential fire events (L=130.0 m, W= 100m with a design volume of 15,300 m³). This pond does not form part of the stormwater management system and will not be connected to the adjacent runoff pond. The makeup water for the Project originates from this pond but it is treated in the CUB to meet required quality.

Site Access and Traffic

Traffic during construction and operations will be from the southwest or northeast on Highway 15, then north on Range Road 220, and into the Heartland Petrochemical Complex Site through two existing

access roads. Access to the Project Site will be from designated access points off internal roads within the Heartland Petrochemical Complex Site. Internal traffic will be associated with personnel movements, diesel deliveries for locomotive fuelling, and waste and wastewater hauling.

The two main access points from Range Road 220 to the Heartland Petrochemical Complex Site will be gated, and the perimeter of the entire property boundary will be fenced to restrict public access and prevent unauthorized entry. During construction, activities at the site will follow a 10-hour workday; however, there will be 24-hour security at the site. During operations, the Heartland Petrochemical Complex and the Project Site will be staffed and operated 24-hours/day, 7-days/week.

Rail Connection

Connection of the Project Site to both Canadian National Railway (CN) and Canadian Pacific Railway (CP) existing railways are possible and commercial discussions are ongoing. The rail yard design will allow for exchange of loaded and empty cars with either and possibly both CN and CP. The estimated number and length of the connections developed by CN and/or CP, within their own right-of-way (ROW) developed outside the boundaries of the Project Site, will include approximately three exchange tracks (siding along connection tracks), with a total length of approximately 6 km and 4 km, respectively.

The rail connection, to be designed and built by the railways (CN or CP), will look for the most optimal route to avoid, as much as possible, the number of utility crossings. These railway providers already have ROW land holdings that don't traverse forested or environmentally sensitive areas. Minimal clearing may be required along the unmaintained portions of the existing railway ROWs which will remove a small amount of migratory bird habitat. Detailed design will also determine if any new at-grade public rail crossings will be required along the new connections. Inter Pipeline will be responsible for construction of tracks within the Project Site. A third party rail operator will oversee the arrival and departure of the railcars from the exchange tracks to the Project Site. CN or CP will not enter the Project Site under normal operating conditions. The AIH area has several rail terminals and a well-established railway system that will facilitate easy access from this area to several markets.

2.4 EMISSIONS, DISCHARGES AND WASTE

2.4.1 Atmospheric Emissions

Air

Air Quality Assessment

The Project is located within the Fort Air Partnership's Airshed Zone that includes nine continuous monitoring stations that measure a wide range of substances near industrial facilities and in the communities of Bruderheim, Fort Saskatchewan, Gibbons, Lamont County, Redwater and Elk Island National Park. Ambient monitoring data from the two closest monitoring stations, Range Road 220 station and Fort Saskatchewan station, will be used to show compliance with Alberta's Ambient Air

Quality Objectives (AAAQO) (AEP 2017). As required by AEP, Inter Pipeline will participate in the Fort Air Partnership's regional monitoring program and initiatives to ensure that an appropriate level of ambient air quality monitoring is conducted at the Project Site.

An air dispersion modeling assessment was completed for the Project and included the rail facility emissions sources: two boilers that provide hot water and steam for the railcar cleaning facility, an infrared heater for drying the cars in the railcar cleaning facility, and a space heater mounted at the ceiling of the locomotive shop. The boilers and the heaters are natural gas fired. Air emissions from these sources consist of products of natural gas combustion that are primarily composed of nitrogen, carbon dioxide, and water vapours with trace amounts of nitrogen oxides (NO_x), fine particulate matter (PM_{2.5}), and carbon monoxide (CO). Trace emissions of sulphur dioxide (SO₂) from the heaters and the boilers might be present resulting from a small amount of hydrogen sulphide (H₂S) in natural gas.

Non-point emission sources like diesel combustion emissions from locomotive operations were also included as part of the air emission sources modeled for the Project. The US EPA emission factors (US EPA 2009) for locomotives were used to calculate NO_x, CO and PM_{2.5} combustion emissions from the non-point emission sources. In addition to the yard locomotive, the model considered the emissions from a Trackmobile to account for a potential scenario of requiring additional resources during operation. The yard locomotive and Trackmobile were also very conservatively assumed to operate continuously for the purposes of the air assessment.

The results of the air quality assessment indicate that predicted ground-level concentrations of NO₂, CO, PM_{2.5}, and SO₂ associated with the Project are well below the AAAQO and a minor contributor to the existing background emissions associated with all the existing and approved regional emission sources in the Project area.

Project Construction and Decommissioning Emissions

Sources of emissions during Project construction will include fugitive dust from movement of equipment and disturbance of materials and soils, and exhaust from mobile equipment. Dust and exhaust emissions from construction equipment are temporary in nature and limited to normal working hours. Mobile equipment used during construction is expected to include excavators, dozers, cranes, trucks, etc., predominantly using diesel fuel. Key contaminants from the mobile equipment exhaust would include CO₂, NO_x, CO, hydrocarbons, and particulate matter. Construction of the Project is expected to take 14 months. If required, mitigation of onsite dust emissions associated with earth moving and construction work will be addressed through appropriate dust suppression measures outlined in the Dust Control Plan developed by Inter Pipeline for the Heartland Petrochemical Complex Site. Similar emissions would be experienced during decommissioning (dismantle and removal of the rail facility components), depending on the extent of re-grading required with the site reclamation.

Project Operations Emissions

During operations, there will be emissions from the yard locomotive that will move railcars around the Project Site, emissions from the gas-fired steam boiler in the railcar cleaning facility and potential fugitive emissions of particulate matter associated with loading railcars. The air quality assessment predicted that emissions associated with Project operations are expected to be well below the AAAQO.

Greenhouse Gas (GHG) Emissions

Estimated GHG from Project Construction

Operation of diesel-fuelled equipment over the construction period and associated estimated GHG emissions are included in the tables below. A 14-month construction period and a 10-hour per day, 5-day per week work schedule was assumed.

Table 2. Equipment Required for the Construction of the Rail and Carwash Facilities

Quantity Estimate		Equipment	Months													
Low	High		1	2	3	4	5	6	7	8	9	10	11	12	13	14
4	8	Self-Propelled Scrapers	X	X	X	X										
2	4	Bull Dozers	X	X	X	X										
1	1	Excavators		X	X	X	X									
1	1	Backhoes				X	X									
4	8	Dump trucks		X	X	X	X	X	X							
1	2	40 Ton Hydraulic Crane				X	X	X	X	X	X	X	X	X	X	X
1	1	Concrete Pump						X	X	X						
1	1	Yard Locomotive				X	X	X								
1	1	Front End Loader				X	X	X								
1	2	80 ton Crane				X	X	X	X	X	X	X	X	X	X	X
1	3	Tractor Backhoe loader						X	X	X	X	X				
10	20	Pick-up trucks	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1	1	Water Truck	X	X	X	X	X									
1	1	Delivery trucks (semi-truck)			X	X	X	X	X	X						
2	5	High Lifts						X	X	X	X	X	X	X	X	X

Table 3. Estimated GHG Emissions – Construction Phase

Activity	GHG Emissions (tonnes)			
	CO ₂	Methane (CH ₄)	N ₂ O	CO ₂ eq
Construction Equipment	3,903	0.176	0.956	4,193

Estimated GHG from Project Operations

GHG emissions during the operations phase assumed a 4-hour average, 7-day per week schedule for the onsite vehicles (pickup trucks, waste removal trucks, delivery trucks) and a 16-hour, 7-day per week schedule for the yard locomotive. Estimated GHG emissions are included in the table below.

Table 4. Estimated GHG Emissions – Operations Phase

Activity	GHG Emissions (tonnes)			
	CO ₂	CH ₄	N ₂ O	CO ₂ eq
Onsite Vehicles	130	0.005	0.023	137
Yard Locomotive	539	0.030	0.200	600
Heater	556	0.011	0.009	559
Total	1,225	0.046	0.233	1,296

Operation of the Project is anticipated to emit approximately 1,300 tonnes/year of carbon dioxide equivalent (CO₂eq). The estimated GHG emissions for both the construction and operations phases are very low and will not trigger provincial or federal reporting thresholds.

Noise

There will be short-term temporary noise increases during construction and decommissioning of the Project. Construction schedule will be maintained within the hours of operation stipulated in the Strathcona County Noise Bylaw (7:00am – 10:00pm) and stakeholder notification will be provided in advance of any activities associated with excessive noise.

Noise during operations will be typical of a rail yard facility, and will include idling engines, wheel squeal, reversing engines, and clanking of cars as they are decoupled and connected. Noise may also be attributed to the operation of stationary components within the Project, such as the pneumatic conveyor system used to deliver pellets from hoppers to the loading building where the pellets will be loaded into railcars, and the railcar cleaning building, where railcars will be inspected, vacuumed, washed, and dried. A noise impact assessment will be completed to ensure that operation of the Project and the overall Heartland Petrochemical Complex will comply with applicable regulatory requirements and regional plans.

2.4.2 Liquid Discharges

Surface Water

A Surface Water Management Plan was developed to control and contain the surface water runoff within the Heartland Petrochemical Complex Site boundaries and to ensure neighbouring properties or the river are not impacted. Stormwater runoff from the Project Site will be directed through open

ditches to the stormwater runoff ponds located within the Heartland Petrochemical Complex as described in section 2.3.4. Under normal operating conditions, the surface water runoff is not expected to have contact with any industrial sources of contaminants, other than contact with gravel road surfaces, ballast from the rail lines, and surface soils on the Project Site. Stormwater that meets discharge criteria will be released from the runoff ponds through an existing approved outfall structure into the North Saskatchewan River. In the unlikely event that the water quality does not meet discharge limits, the water will be contained and an appropriate treatment or disposal program will be developed in coordination with AEP.

Process Wastewater

The Project includes a railcar cleaning facility that will generate wastewater from cleaning the railcars prior to loading. The water will be reused at the fullest extent to minimize the generation of wastewater requiring disposal. It is estimated that approximately 18.4 m³/day of wastewater will be disposed offsite to a third party disposal facility.

Domestic Wastewater

Domestic wastewater generated by the Project will be collected in septic tanks and transferred to a third party disposal facility.

2.4.3 Types of Waste and Intended Disposal

The Project will generate recyclable and non-recyclable solid waste. Sources include waste (household-type garbage) generated by the staff working at the facility (approximately 10 people over two shifts). All non-recyclable domestic waste will be collected onsite and sent to an approved disposal facility by a third party. Recyclable material will be separated into containers and removed from the Project Site for recycling by a third party.

During construction and decommissioning, debris and unwanted construction waste will be collected and removed from the Project Site by third party and disposed at a licensed facility. During operations, waste will be generated at the railcar cleaning facility, including heel (leftover product in cars) and debris from washing. These wastes will be collected and disposed offsite to a licensed facility by a third party. Solid residue product will be collected and either sold as off-spec product or disposed of via a third party waste disposal contractor. Waste resulting from potential spills or other sources of contamination will be appropriately collected, characterized and removed for offsite disposal by a third party. No hazardous waste will be generated by the Project however provisions have been made for small spills (i.e. lube oil, or hydrocarbon residual from cleaning cars) which may result in contaminated soils or water.

A summary of waste most likely generated by the Project and the associated waste management approach is included below.

Table 5. Summary of Wastes and Waste Management Methods

Waste Type	Management Method
Domestic Solid Waste, Construction Debris	Contracted Disposal
Recyclables	Contracted Recycling
Potential contaminated material from small excursions and or spills; (i.e.any residual hydrocarbon in reclamation tank removed from process water at car wash)	Licensed Hauler and Approved Disposal Facility
Heel from railcars and debris from wash water from railcar cleaning	Sold if possible, alternatively, Licensed Hauler and Approved Disposal Facility
Domestic Wastewater	Licensed, Contracted Disposal

2.5 PROJECT PHASES AND SCHEDULE

Table 6 summarizes the anticipated development timelines for the Project as of the date of this submission. Construction of the Project will occur concurrently with construction of the other components of the Heartland Petrochemical Complex that will commence earlier due to longer construction timelines.

Table 6. Project Schedule and Milestones

Task/Milestone	Timeframe
Construction Start	Q2 to Q4 2020
Construction Complete	Q4 2020
Project Operations Commence (commissioning and start up)	Q2 to Q4 2021
Project Decommissioning	Approximately 2047 based on 25 year lifespan

Engineering design and regulatory permitting work for the Project are ongoing. Regulatory approvals are discussed in Section 1.5, and the Project is described in a number of the preceding sections.

Construction

The Project Site was cleared in 2015 and topsoil and subsoil was removed and salvaged for reclamation purposes as of 2017, therefore, site preparation activities will be minimal. Regular site maintenance will be ongoing to prevent vegetation from re-growing prior to and during construction. Construction of the Project will include the installation of subsurface utilities and septic tanks followed by construction of the buildings and rail loading and cleaning infrastructure and installation of the rail tracks. The primary access points from Range Road 220 are already constructed, and the internal roads system and the runoff ponds will be in place prior to commencement of Project construction. The development area around the Heartland Petrochemical Complex Site will be fenced to restrict public access.

Operations

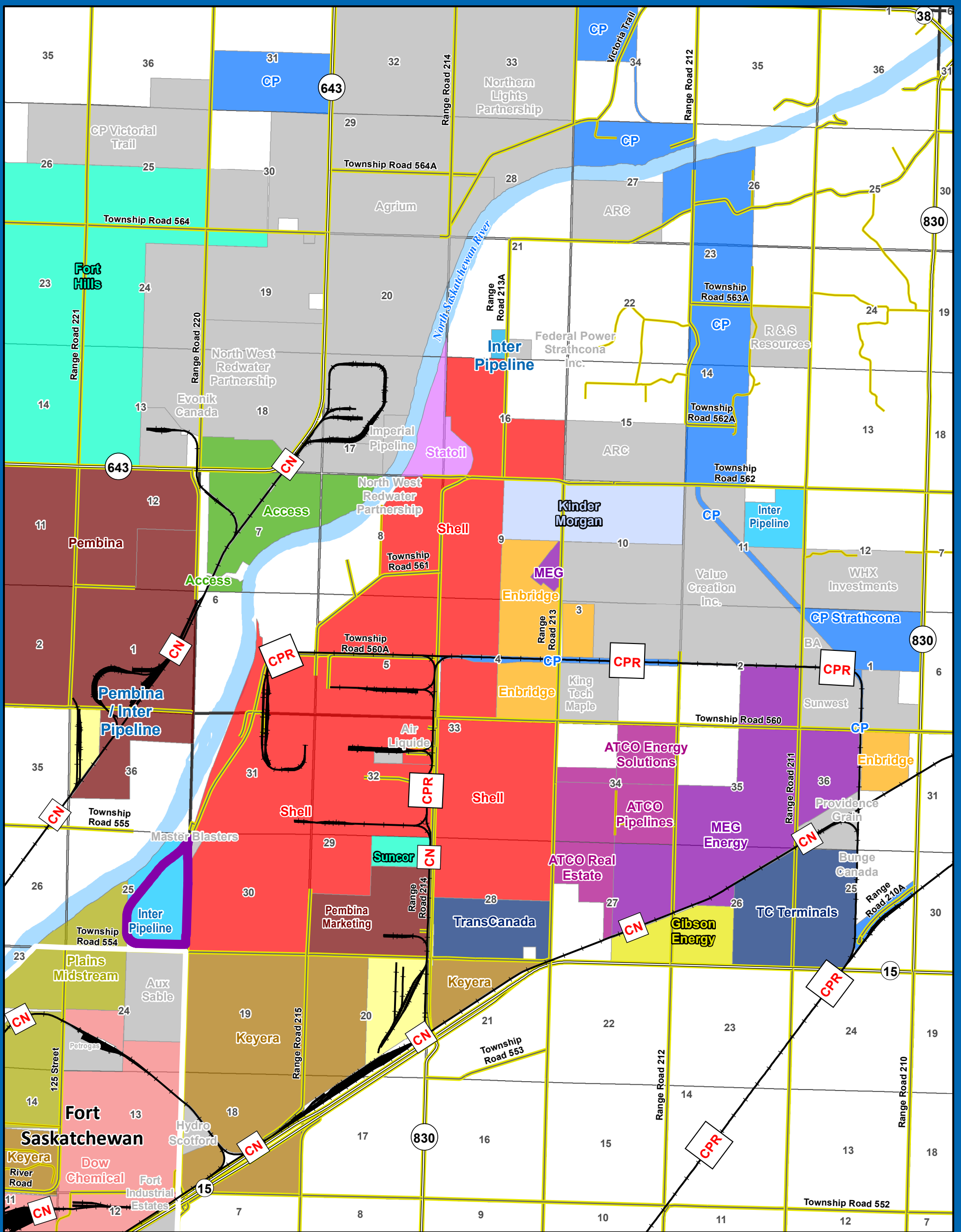
The Project components and operations of the Project are described in Section 2.3.1. All Project components will be regularly inspected and a comprehensive maintenance plan will be developed to ensure safe operations and compliance with all applicable regulations and with Inter Pipeline's safety policy and procedures. The maintenance plan will include a preventative program of regular, routine maintenance, and systematic inspection of all aspects of the facility operations to prevent equipment failure before it occurs therefore, reduce unplanned downtime and expensive repair costs. Accurate maintenance and servicing records will be kept to document systematic failures and help schedule appropriate replacement frequency.

Decommissioning

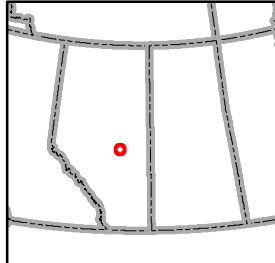
The Project is anticipated to operate for a period of 25 years to match the Heartland Petrochemical Complex design criteria. The Project lifespan may be extended, if the complex continues to operate after 25 years, with planned and preventative maintenance and selective replacement of infrastructure as required. At the end of the operating lifecycle, the Project components will be decommissioned in an environmentally sound manner and to a condition outlined in an approved reclamation plan for the Heartland Petrochemical Complex Site. This will include removal of tracks and other surface infrastructure (such as internal roads and buildings) and discontinuation of all underground utilities and services. Efforts will be made to salvage and recycle equipment and materials, as much as possible. If required, remediation activities will be completed post removal of infrastructure. The Project Site will be re-graded and natural drainage will be restored. Salvaged soil will be replaced throughout the Project Site and natural vegetation will be re-established according to decommissioning and reclamation plans approved at that time under the EPEA approval. It is anticipated that decommissioning of the Project will take approximately 1 year.

2.6 PROJECT LOCATION

The Project will be located within the Heartland Petrochemical Complex Site that is located on the northern limits of the City of Fort Saskatchewan (Figure 1) and falls within the AIH, in proximity to a number of large industrial facilities (Figure 5).

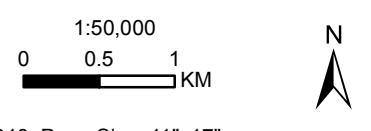


- | | | |
|---|--|---|
| Transportation
Local/Other
Highway
Arterial
Collector
Railway | Land Holdings
Other Owner
ATCO
Access Pipeline Inc.
CNR
CPR
Dow Chemical
Enbridge
Gibson
Inter Pipeline Ltd.
Inter Pipeline Propylene Ltd.
Keyera
Kinder Morgan | MEG
Pembina
Plains Midstream
Shell
Statoil
Suncor
TCPL
Heartland Petrochemical Complex |
|---|--|---|



inter pipeline

Figure 5: Industrial Land Ownership
 Heartland Petrochemical Complex
 Inter Pipeline Propylene Ltd.



Date: 01-Mar-2018 Page Size: 11"x17"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.

2.7 DESCRIPTION OF THE PROJECT'S LOCATION

2.7.1 Geographic Coordinates and Legal Land Description

The geographic coordinates and legal land description of the Project are as follows:

- NE and SE quarter sections of 25-55-22W4M
- Latitude: 53-46'30" N
- Longitude: 113-07'48"W

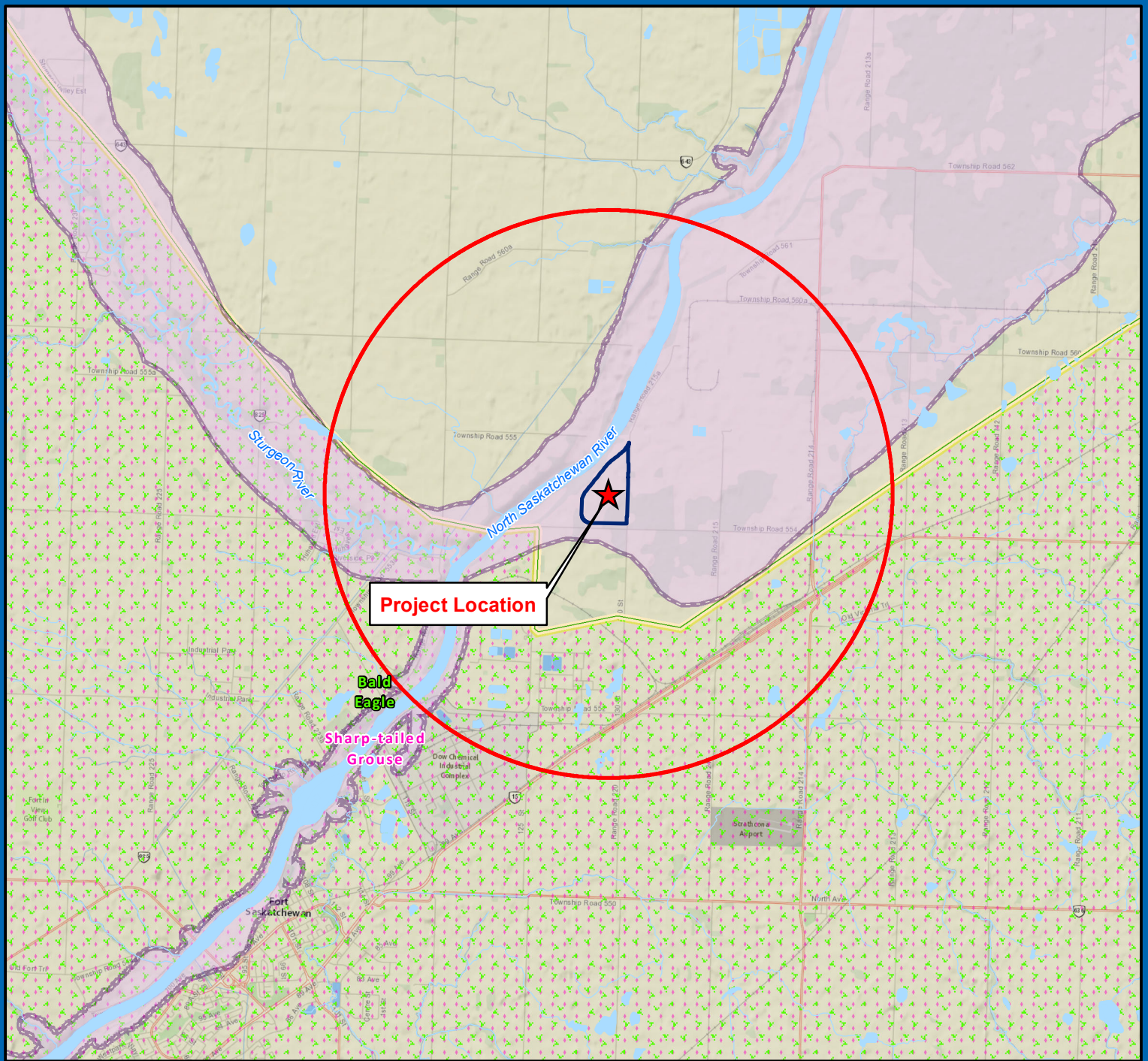
2.7.2 Site Plot Plan

Figure 3 and Figure 4 illustrate the layout of the Project.

2.7.3 Regional Maps and Satellite Imagery

Figure 6 provides details regarding the location of environmental protected features within 5 km of the Project Site, including:

- Land use designations based on the AIH Area Structural Plan - the Project is located on lands zoned as Heavy Industrial.
- Lakes and waterbodies - the closest waterbody is the North Saskatchewan River, approximately 0.3 km west of the Project.
- Environmentally sensitive areas - the Project Site is within an area designated as a Key Wildlife Biodiversity Zone (KWBZ), mainly relevant along the valley of the North Saskatchewan River.
- Regional Land Use Planning - the Project Site falls within the AIH. Large industrial developments, pipelines, and transmission lines are located throughout the vicinity of the Project.
- Historical Resources – no archaeological or historic sites occur within the Project Site. Historical Resources Act Clearance was received from Alberta Culture and no Historical Resources Impact Assessment was required.
- Land use and land ownership - the most recent land ownership map (Figure 5) was used to identify landowners within the area of the Project. The Project Site is freehold land owned by Inter Pipeline. The immediately adjacent lands are also privately owned.



Project Location

Bald Eagle

Sharp-tailed Grouse

Project Location in E 1/2 25-55-22W4M

Lease Boundary

Project Buffer - 5km

Key Wildlife and Biodiversity Zone

Sensitive Raptor Range (Bald Eagle)

Sharp-tailed Grouse Survey

Waterbody

Watercourse

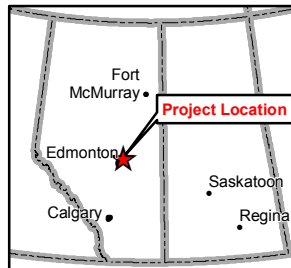
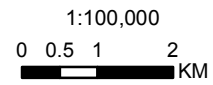


Figure 6: Environmental Protected Areas

*Heartland Petrochemical Complex
Inter Pipeline Propylene Ltd.*



Date: 01-Mar-2018 Page Size: 8.5"x11"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.

2.7.4 Photographs of Project Site

Figure 7 provides an aerial view of the Heartland Petrochemical Complex Site, and includes the Project Site taken in the summer of 2017.

2.7.5 Proximity of the Project

Proximity of the Project to Residences

One residence is located within 1.5 km of the Project Site and is illustrated on Figure 1.

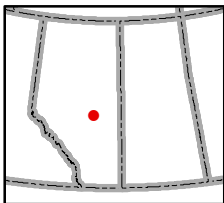
Proximity of the Project to Traditional Territories

The Project is located within the area of Treaty 6. The closest First Nation reserves are the Enoch Cree Nation (Reserve 135) and Alexander First Nation (Reserves 134, 134A, and 134B) located approximately 60 km southwest and 68 km west of the Project Site, respectively. The Project is located within the Métis Nation of Alberta Region 4. The closest Métis Settlement Areas are the Buffalo Lake Settlement Area and the Kikino Settlement Area that are approximately 85 km northwest of the Project Site. Figure 8 identifies the location of the Project Site in relation to Aboriginal communities within 150 km of the Project Site.

Inter Pipeline reviewed the public records available online for other developments in the AIH area and near the Project Site to find out if traditional or current land use or occupancy has been identified in proximity to the Project Site. The Project Site was homesteaded in the late 1800s, and has been cultivated land until it was purchased by Williams (the owner prior to Inter Pipeline) in 2013. To date, no information or maps have been identified from publicly available sources that indicate any current or recent historical traditional land use or occupancy of the Project Site by Aboriginal groups.

Proximity of the Project to Federal Lands

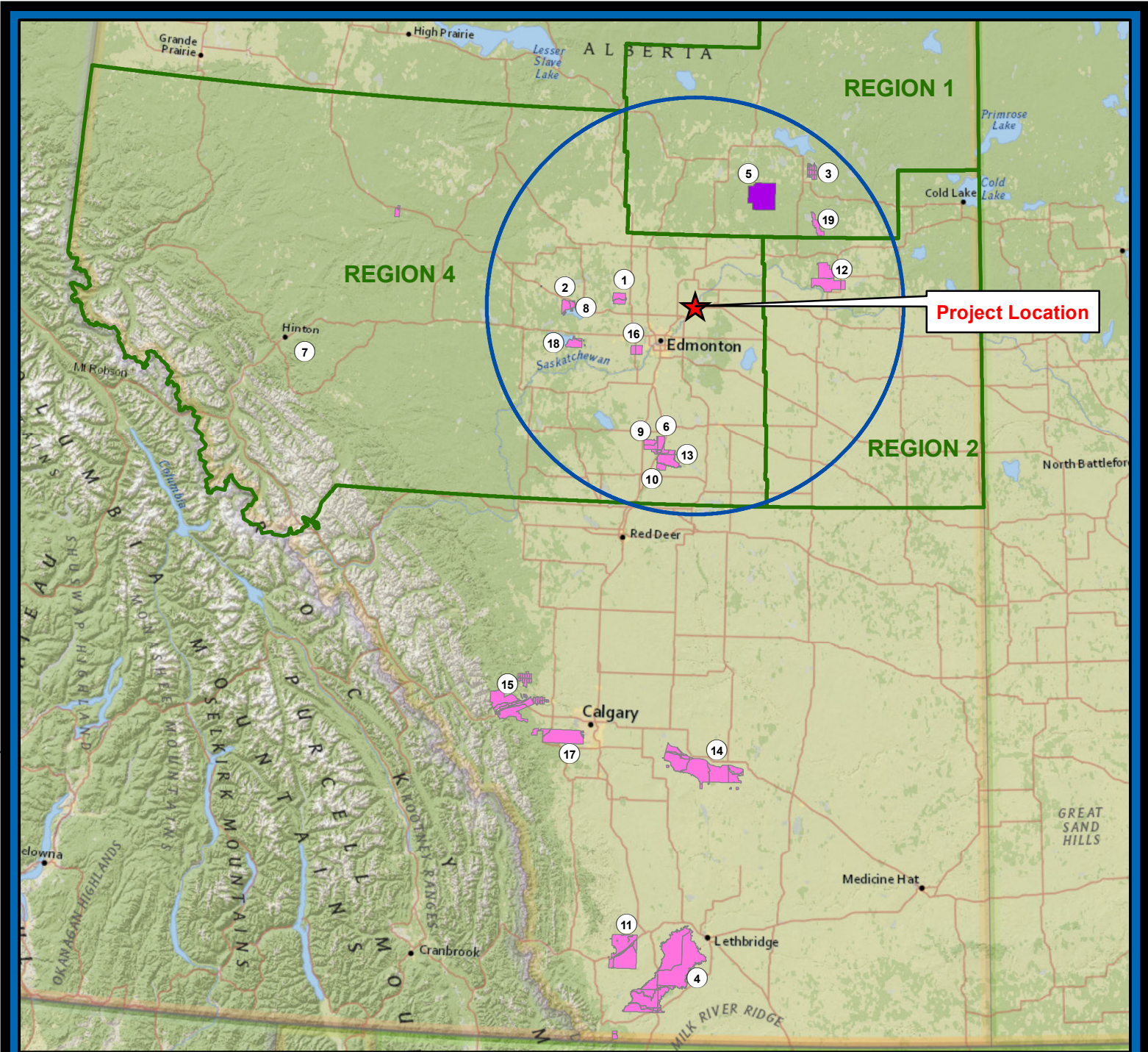
The Project Site is not located within federal designated lands. The closest federal lands to the Project Site are Elk Island National Park, approximately 20 km to the southeast; Canadian Forces Base Edmonton (Edmonton Garrison), located approximately 20 km to the southwest; and the Redwater Helicopter training site, located approximately 17 km to the northeast (Figure 1).







Date: 07-Feb-2018 Page Size: 11"x8.5"
Coordinate System: NAD 1983 UTM Zone 12N
Created by: GIS/Drafting Group
Note: Paper Copies are uncontrolled.
This copy is valid only at the time of printing.



Figure 7: Site Photo (2017)
Heartland Petrochemical Complex
Inter Pipeline Propylene Ltd.



-  Project Location in E 1/2 25-55-22W4M
-  Project Buffer - 150km
-  Metis Nation of Alberta Association (MNA) Region
-  Indian Reserve
-  Metis Settlement

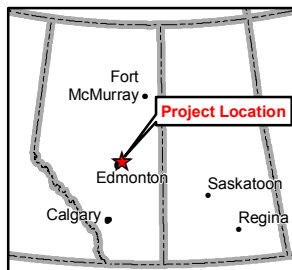
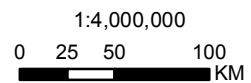


Figure 8: Aboriginal Communities

Heartland Petrochemical Complex

Inter Pipeline Propylene Ltd.

- | | |
|---|---|
| 1. Alexander First Nation (IR No. 134) | 11. Piikani Nation (IR No. 147) |
| 2. Alexis Nakota Sioux Nation (IR No. 133) | 12. Saddle Lake Cree Nation (IR No. 125) |
| 3. Beaver Lake Cree Nation (IR No. 131) | 13. Samson Cree Nation (IR No. 137) |
| 4. Blood Tribe (aka Kainai First Nation) (IR No. 148) | 14. Siksika Nation (IR No. 146) |
| 5. Buffalo Lake Metis Settlement | 15. Stoney Nakoda First Nations (IR No. 142, 143, 144) |
| 6. Ermineskin Tribe (IR No. 138) | 16. Enoch Cree Nation (IR No. 135) |
| 7. Foothills Ojibway First Nation | 17. Tsuut'ina Nation (IR No. 145) |
| 8. Gunn Metis Local #55 | 18. Paul First Nation (IR No. 133) |
| 9. Louis Bull (IR No. 138B) | 19. Whitefish Lake First Nation (IR No. 128) |
| 10. Montana First Nation (IR No. 139) | Kelly Lake Metis Settlement (located in British Columbia) |



Date: 01-Mar-2018 Page Size: 8.5"x11"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.

2.8 LAND AND WATER USE

2.8.1 Zoning Designation and Land Use Plan

The Project Site was rezoned in 2014 from Agricultural to Heavy Industrial land use. The west boundary of the Project Site along the North Saskatchewan River (where no development is proposed) is zoned as Agricultural. The CP ROW south of the site is also zoned Agricultural, and the properties to the east and west are zoned Medium Industrial. The Heartland Petrochemical Complex Site is within the Scotford: Heavy Industrial Policy Area according to the AIH Area Structure Plan.

2.8.2 Legal Land Description

The legal land description of the Project Site is portions of northeast and southeast quarters of section 25-55-22 west of the 4th Meridian. Inter Pipeline owns both the surface and the subsurface rights for the Heartland Petrochemical Complex Site, including the Project Site. A copy of the land title and mineral title are included in the Attachment 1.

2.8.3 Land and Water Use

The Project falls within the area covered by the AIH Area Structural Plan and the Strathcona County Municipal Development Plan. No details are available regarding the level of public engagement undertaken during development of these plans. Other land use, water use (including groundwater), resource management, or conservation plans applicable to or near the Project Site include the Capital Region Land Use Plan, the North Saskatchewan Regional Plan, and the Water Management Framework for the AIH and Capital Region.

2.8.4 Traditional Land Use

The Project occurs in an area that includes current and historical agriculture and oil and gas activities. There are no known traditional use claims on or in the immediate vicinity of the Project Site that have been identified to date. Records indicate agricultural homesteading on the Project Site and surrounding area dating back to the late 1800s. The Project Site has been in private land tenure and agricultural production for both field crops and grazing for generations, based on the tenancy of the families that owned the property prior to acquisition by Williams, and now Inter Pipeline. The private land tenure and agricultural land use appear to limit the possibility of traditional activities being practiced on the Project Site in recent history. No Project site-specific information that demonstrate traditional or current land use or occupancy of the Project Site has been identified or provided to Inter Pipeline, to date, by any of the Treaty 6 or Treaty 7 Aboriginal groups and Métis Settlements.

3 FEDERAL INVOLVEMENT

3.1 FEDERAL FINANCIAL SUPPORT

No federal financial support has been provided from federal authorities to carry out this Project.

3.2 FEDERAL LANDS

No federal lands will be used for carrying out the Project, including easements, ROWs, or transfers of ownership.

3.3 FEDERAL LEGISLATIVE REQUIREMENTS

No other federal permits, licences, or authorizations are required to carry out the Project.

4 ENVIRONMENTAL EFFECTS

Inter Pipeline has developed an Environmental Protection Plan, a KWBZ Mitigation Plan and a Tree Conservation Plan for the Heartland Petrochemical Complex, including the Project. These plans provide environmental management practices, mitigation measures and planning tools to conduct work during the construction and operation phases of the Project in an environmentally acceptable manner and in compliance with regulatory approvals and commitments made to regulatory agencies and other stakeholders.

4.1 PHYSICAL AND BIOLOGICAL SETTING

The Project is a component of a provincially approved petrochemical facility that is currently under construction, located within AIH an area designated for heavy industrial use. The approximately 10 ha Project Site is located within the 94 ha Heartland Petrochemical Complex Site. The Project is located within the E ½ of 25-55-22W4M (Figure 2).

The Project Site is within the Eastern Alberta Plains physiographic region, and falls within the Central Parkland and Dry Mixedwood Natural subregions (Natural Regions Committee 2006). Land uses within the Central Parkland subregion are dominated by oil and gas uses, grazing, and cultivated cropland. Vegetation, in general, is comprised of patches of aspen clones, interspersed with open grassland, dominated by plains rough fescue.

The Project Site and the surrounding lands are not included in the *Environmentally Significant Areas of Alberta* (Fiera Biological Consulting 2014). No migratory bird sanctuaries are located on or near the Project Site. A KWBZ extends along the North Saskatchewan River within the riparian area (Figure 6). KWBZs typically occur in major river valleys and areas that have been identified as important ungulate winter habitat or have the potential for high biodiversity (ESRD 2015). Recommended guidelines developed by ESRD (2015) provide strategies to protect these areas by minimizing industrial activity and restricted construction during winter months, between January 15 and April 30. Inter Pipeline developed a KWBZ Mitigation Plan that outlines measures to minimize disturbance to vegetation and displacement of wildlife during construction and operation of the Project. Inter Pipeline is committed to no new clearing or construction of new accesses during the restricted timelines and to no new disturbance in the forested areas along the North Saskatchewan River. If construction needs to occur adjacent to the KWBZ during timing restrictions, mitigation measures will be developed in consultation with AEP.

The Project will be constructed along the west boundary in the northwest portion of the Heartland Petrochemical Complex Site (Figure 3). The CP ROW, a pipeline corridor running north-south and a transmission line running east-west through the north central portion of the site, borders the west boundary of the Project Site. The Project is surrounded by large industrial facilities such as the Aux Sable Offgas Facility to the south and Shell Scotford Refinery to the northeast (Figure 5).

The topography within and in the vicinity of the Project Site is generally flat with slight undulations, and has an elevation ranging between 630.0 to 632.8 m above mean sea level.

4.1.1 Vegetation

Vegetation within the Project Site was cleared under Strathcona County permit in 2015. Topsoil and subsoil were removed and salvaged for reclamation purposes in 2017 under provincial authority. The Project Site has been rough graded. Vegetation growth at the Project Site is minimal and the remaining vegetation provides low quality habitat. Prior to clearing, the Project Site was dominated by pasturelands. The forested area adjacent to the west and the North Saskatchewan River are outside of the Project Site.

Prior to vegetation clearing, a desktop study and a field survey were conducted in 2013. The desktop study included a query of Alberta's Conservation Information Management System for occurrences of rare provincial plant species, the General Status of Alberta Wild Species (ESRD 2011), Committee on the Status of Endangered Wildlife in Canada, and the SARA databases for records of potential occurrences of listed species (Golder 2015). The field survey was conducted in the spring and fall of 2013 to capture both early- and late-flowering rare plant species. The field survey also focused on upland and wetland plants and weed species.

No federally- or provincially-listed species of concern were observed during vegetation surveys of the Project Site. A total of 72 vascular plants were recorded (Golder 2015). The Project Site consisted of cleared pasture/hayland dominated by awnless brome (*Bromus inermis*), narrow-leaved hawkweed (*Hieracium umbellatum*), common horsetail (*Equisetum arvense*), and extensive populations of common dandelion (*Taraxacum officinale*), common tansy (*Tanacetum vulgare*) and Canada thistle (*Cirsium arvense*).

The riparian forested area along the North Saskatchewan River is fragmented because of existing infrastructure (pipeline ROW and transmission line). Vegetation in this riparian area is comprised of young and mature aspen, with spruce and balsam poplar occupying the subcanopy and becoming more dominant closer to the North Saskatchewan River (Golder 2015). The riparian forested area is under a tree conservation and management policy implemented by Strathcona County and no development is permitted in this area. This area is outside the Project Site and will not be altered or used for the development of the Project. Furthermore, Inter Pipeline developed a Tree Protection Plan that outlines monitoring measures during construction and operation to ensure no activity occurs in this area, and tree health is not affected by the Project.

A weed survey was conducted (Golder 2013b) prior to the commencement of approved construction activities to assist in the identification and subsequent control of weed problems. Five noxious weed species were documented during the field survey: Canada thistle; scentless chamomille (*Matricaria perforatum*), yellow toadflax (*Linaria vulgaris*), perennial sow thistle (*Sonchus arvensis*), and common tansy. Weed control has been conducted in areas that were not stripped. A Weed Management Plan was developed that outlines prevention measures to minimize the introduction and spread of weeds

and recommends best practice weed management techniques and strategies that are specific to the species identified at the site. Weed control was conducted prior to clearing and stripping and weed monitoring measures are part of the routine inspections and/or maintenance activities during construction.

4.1.2 Wildlife

A literature review was completed to assess the potential presence of species identified under the *Species at Risk Act* and the *Alberta Wildlife Act*. A wildlife sign survey was also conducted in 2013 (Williams 2013). The Fisheries and Wildlife Management Information System query identified three historical observations of species of conservation concern: northern pintail (*Anas acuta*), sora (*Porzana carolina*), and Swainson's hawk (*Buteo swainsoni*) (ESRD 2011). Prior to the vegetation clearing and during the field visit, 18 wildlife species were observed or detected. This included: the least flycatcher (*Empidonax minimus*), sora (*Porzana carolina*), boreal chorus frog (*Pseudacris maculate*), wood frog (*Lithobates sylvatica*), deer (*Odocoileus sp.*), moose (*Alces alces*), red-tailed hawk (*Buteo jamaicensis*), American robin (*Turdus migratorius*), woodpeckers (*Picoides spp.*), five species of sparrow, and three warbler species.

Since the vegetation was cleared and given the historical agricultural land use of the Project Site, the remaining habitat is considered of low quality (Golder 2015).

4.1.3 Soils

A baseline soil assessment was completed in 2013 and identified the Project Site as underlain by deposits of Quaternary age glacial ice contact, moraine, and advance outwash deposits. Soils identified include Peace Hills, Mundare, Ukalta, and Primula soil series. They were primarily Orthic Black Chernozems with some inclusion of Eluviated Eutric Brunisols (Golder 2013c). These soils are rated 'poor' to 'fair' for reclamation suitability. During approved site preparation activities in 2015, all topsoil and a portion of the upper subsoil was salvaged and stockpiled at an offsite location owned by Inter Pipeline. Soils will be monitored and maintained for final reclamation purposes.

4.1.4 Surface Watercourses and Drainage

A wetland assessment was conducted in 2013 to classify and delineate the wetlands within the Heartland Petrochemical Complex Site (Golder 2015). No wetlands were present within the Project Site.

The North Saskatchewan River is approximately 300 m from the Project Site. A steep embankment separates the Project Site boundary from the river. This area is a forested riparian and a conservation area along the North Saskatchewan River and will be maintained as spatial undeveloped buffer between the Project Site and the river valley. The product being handled at the Project Site is stable plastic pellets with low potential for environmental impact. Due to the distance from the river, the steep embankment, the protective treed buffer area, and the silt fence delineating the Project Site boundary, any potential spills at the Project Site are very unlikely to reach the river.

The Project Site is located on a local high topography and natural drainage is directly to the North Saskatchewan River. Surface water runoff will be collected and gravity drained through collector ditches and culverts to a runoff pond located on the Project Site. The pond will be designed and sized to contain a 1:100-year, 24-hour, storm event. Stormwater that meets release criteria will be discharged through an existing approved outfall structure into the North Saskatchewan River.

4.1.5 Groundwater

Baseline groundwater assessment was completed in 2013 and 2015 to assess regional and site-specific hydrogeology, groundwater depth and flow direction, and current groundwater quality at the Heartland Petrochemical Complex Site (Golder 2013d). The regional geology consists of a sequence of Quaternary deposits overlying bedrock of Cretaceous age. The regional hydrogeology of the northeast section of the Edmonton Area (including the Project Site) is represented by the regional aquifer of the Empress Formation located within the Beverly Channel. Regional groundwater flow is generally toward the Beverly Channel and the North Saskatchewan River, which are hydraulically connected and the water levels in the channel vary with river water levels. The subsurface conditions encountered across the Heartland Petrochemical Complex Site are generally consistent with the regional subsurface conditions. Groundwater samples collected during the field investigation indicated no issues of environmental concern, and the slight exceedance in some parameters were attributed to dissolved nitrate from former agricultural activities, fertilizer application, and to dissolved iron and manganese that are naturally elevated in the area (Advisian 2016).

Inter Pipeline developed a groundwater monitoring plan that was approved by the AEP. The plan outlines groundwater monitoring measures around and on the Project Site prior to and during the operation of the Heartland Petrochemical Complex, including the Project.

4.1.6 Air Quality

The Project Site is located within the Fort Air Partnership's Airshed Zone. There are nine continuous monitoring stations within this airshed zone that can be used to demonstrate compliance with AAAQO (AEP 2017). The two closest monitoring stations, Range Road 220 station and Fort Saskatchewan station, will be used to show Project compliance with AAAQO. Inter Pipeline will work with Fort Air Partnership to ensure an appropriate level of ambient air quality monitoring is conducted within the vicinity of the Project Site.

An air dispersion modeling assessment was completed for the Project and included the rail facility emissions sources (two boilers and two heaters) and non-point emission sources (yard locomotives). The results of the air quality assessment indicate that predicted ground-level concentrations of NO₂, CO, PM_{2.5}, and SO₂ associated with the Project are well below the AAAQO and a minor contributor to the existing background emissions associated with all the existing and approved regional emission sources in the Project area.

4.1.7 Noise

The Project is located within the AIH that is subject to the Regional Noise Management Plan developed by NCIA as an alternative method for demonstrating noise compliance due to the high concentration of industrial activity present in the AIH and the already high background noise levels for the area. The AUC and the AER recognize the regional plan and both accept compliance with the regional plan as an acceptable alternative to conventional permissible sound level approach established under AUC *Rule 12: Noise Control* and AER *Directive 038: Noise Control*.

Inter Pipeline will become a member of the NCIA prior to the commencement of operations of the Project. A noise impact assessment for the Project will be completed to ensure adherence to the regional plan and other applicable regulatory requirements.

4.2 CHANGES PREDICTED AS A RESULT OF THE PROJECT

4.2.1 Fish, Fish Habitat, as Defined in the *Fisheries Act*

A field survey and a wetland assessment completed in 2013 determined that no fish habitat occurs within the Project Site. No wetlands were identified within the Project Site.

Fish and fish habitat occurs in the North Saskatchewan River that is approximately 300 m from the Project Site. Surface water runoff within the Project Site will be directed to onsite stormwater runoff ponds from which water that meets approved discharge criteria will be released to the North Saskatchewan River through an approved existing outfall.

Adverse effects on fish or fish habitat from the Project are highly unlikely as no activities within a waterbody are proposed as part of the Project. No change in surface water or groundwater quality is anticipated as a result of the construction or operation of the Project. The polypropylene plastic pellets that will be managed on the Project Site, are stable inert solids that have very low environmental impact potential.

4.2.2 Marine Plants, as Defined in the *Fisheries Act*

There are no marine environments in proximity to the Project Site, and therefore, no impacts are anticipated to marine plants.

4.2.3 Migratory Birds, as Defined in the MBCA

Alberta's Fisheries and Wildlife Management Information System (FWMIS) was queried on June 3, 2013, in support of development on the lands within the Heartland Petrochemical Complex Site. Additionally, a wildlife field survey was conducted on June 4, 2013 (Golder 2013a), and a winter track survey in 2013 (TRACE 2013). The database search and field survey did not identify any suitable habitat for migratory species listed (Golder 2013a). However, the database search did contain two historic observations of migratory birds and the field survey from 2013 observed both sora (*Porzana carolina*) and northern pintail (*Anas acuta*). While the winter track survey did not observe individuals, it did confirm the presence of pileated woodpecker (*Dryocopus pileatus*).

After the review of the area for migratory bird habitat, the Project Site was cleared with consideration to avoid the breeding bird nesting season (April 20 to August 25, 2015) and any additional land clearing activities, if required, will be done outside of the restricted activity period. No further clearing is required or anticipated as part of Project construction.

2018 Site Visit

Western EcoSystems Technology (WEST) was contracted to conduct a site visit to assess current avian use of the Project Site and surrounding area, address recent changes in species statuses (e.g., SARA), and assist with feedback to Canadian Environmental Assessment Agency comments during draft review.

WEST completed a FWMIS search (3 km buffer) and likely due to additional observations submitted to FWMIS from nearby projects, historical wildlife species observations increased from two migratory bird species to eight. The additional species include: Baltimore oriole (*Icterus galbula*), barn swallow (*Hirundo rustica*), black-backed woodpecker (*Picoides arcticus*), black-throated green warbler (*Setophaga virens*), eastern kingbird (*Tyrannus tyrannus*), eastern phoebe (*Sayornis phoebe*), and least flycatcher (*Empidonax minimus*). Northern pintail is no longer a species of management concern and was downgraded from sensitive to secure (updated 2017 SARA) and therefore no longer shows up on a FWMIS search. Barn swallow is now listed under SARA as threatened (updated 2017 SARA).

The site visit was conducted on May 17, 2018 by a qualified avian biologist. At the time of the visit, there was excessive noise and vibration from piling and concrete work underway at the PDH site, civil work ongoing in other areas of the Heartland Petrochemical Complex Site, and heavy construction traffic. No activities were conducted at the Project Site. All of the Heartland Petrochemical Complex Site has been cleared of vegetation, with the exception of some unmaintained areas along the existing pipeline ROW and CP ROW (future rail interconnection line). Two small wetlands and standing water were also present; however, are not within the Project Site. Seventeen species protected under the MBCA were documented immediately adjacent to the Project Site boundary. Eleven MBCA protected bird species were documented adjacent to the Project Site. Seven species were different than those previously identified (Golder 2013b) and included: tree swallow (*Tachycineta bicolor*), savannah sparrow (*Passerculus sandwichensis*), killdeer (*Charadrius vociferous*), spotted sandpiper (*Actitis macularius*),

blue-winged teal (*Anas discors*), mallard (*Anas platyrhynchos*), and northern shoveler (*Anas clypeata*); none of these species are listed under SARA.

Noise and Vibration

There will be an increase in noise and vibration levels during construction and operation of the Project, including that of passing locomotives. Studies have shown that chronic exposure to high noise levels can, among other effects, mask avian vocal communications, increase the risk of predation, and cause birds to abandon nests or otherwise modify their behaviour (Dufor 1980; Habib et al. 2007; Kaseloo and Tyson 2004; Barber et al. 2010); however, studies have also shown that some birds (e.g., red-tailed hawk [*Buteo jamaicensis*], American wigeon [*Anas Americana*] – these species were not observed on the Project Site, but are potentially present) habituate to high noise levels in at least some situations (Anderson et al. 1989, Conomy et al. 1998). It has also been shown that some bird (e.g., white-throated sparrow [*Zonotrichia albicollis*] - this species was not observed on the Project Site, but is potentially present) species can compensate for the masking effect of noise through shifts in vocal amplitude, song and call frequency, and component redundancies, as well as temporal shifts to avoid noisy periods (e.g., rail traffic; Ortega 2012).

Construction and operation activities could modify the behaviour and reduce presence of birds that would typically nest in the riparian forested area along the North Saskatchewan River adjacent to the Project Site. However, since the Project Site is buffered by treed areas and a fair distance from other large industrial facilities (the closest large industrial facility is approximately 1 km to the northeast), and the fact that these facilities have already operated in the area for decades, it is anticipated that the construction and operation of the Project will not impact birds cumulatively.

The undeveloped riparian forested area between the Project Site boundary and North Saskatchewan River will be maintained, as much as possible. This forested buffer does provide suitable habitat for migratory birds; however, there is an additional approximately 90 m distance (30 m existing CP ROW, 30 m existing pipeline ROW, 20 m proposed pipeline ROW, and 10 m between proposed ROW and rail storage yard) between the suitable migratory bird habitat and the bulk of the rail activity (i.e., in the rail storage yard). One trip per day (drop off empty cars and pick up loaded cars) is anticipated through the interconnect lines (CP Interchange tracks A and B on Figure 4) to be built by CP in the existing CP ROW. Therefore, minimal and brief increase in noise is expected during operations of the Project which likely will have little to no impact on nearby migratory birds either breeding, foraging, or roosting.

It is anticipated that once in operation, noise and vibration levels from the Project will be similar to that during construction. Based on the number of species observed during the 2018 site visit and considering the added 90 m distance between habitat and the Project Site, minimal to no impact on migratory birds is anticipated from the Project.

Stormwater

The onsite stormwater runoff ponds and all drainage collector ditches will be lined with high density polyethylene geomembrane liners that will be covered by a nonwoven geotextile fabric and a layer of gravel that will prevent vegetation growth and discourage use and nesting by bird species. In the event any bird species temporarily land on or access the ponds, no adverse effects are expected as under normal operating conditions, the surface water runoff is not expected to have contact with any industrial sources of contaminants. The ponds will be fenced to keep personnel and any potential wildlife away and to control the area from any unauthorized access and prevent any potential incidents.

Lighting

Consideration was given to the type of lighting used at the Project Site mainly during operations since the rail yard will be operated 24-hours/day; 7-days/week. Studies have shown that artificial night lighting can cause changes in behaviour, abundance, and reproductive fitness of birds and other wildlife (Longcore 2004; de Molenaar et al. 2006; Kempenaers et al. 2010). Outdoor lighting fixtures and roadway lighting within the Project area will be LED type with minimal use of wide area flood lighting. The number of lights and illumination intensity will be minimized as much as possible to still ensure visibility for safety and security purposes. Motion detectors or similar systems will be used where practical. Flashing lights will be avoided and will be substituted with white lighting systems that are known to cause less disorientation to birds than red lights. The lighting system will be task-focused and shielded lighting systems will be installed to minimize changes in light levels outside the perimeter of the Project Site and within the riparian forest

Dust Emissions

Dust emissions associated with construction work will be minimized through dust suppression measures outlined in the Dust Control Plan developed by Inter Pipeline as studies have shown that dust could temporarily reduce primary production, and possibly reproduction and abundance of insects and other avian prey (Farmer 1993). Dust emissions from the Project are expected to be very low as most construction activities associated with the Project do not require intensive earth work. Most areas within the Project Site will be gravelled or paved.

Summary

Migratory bird habitat currently present at the Project Site is of low quality as the site was cleared of vegetation and top soil stripped (i.e., only bare ground remains). It is therefore very unlikely that migratory birds would use the Project Site or would be killed or otherwise directly harmed or disturbed during construction and operation of the Project. Responses to the various activities associated with the construction and the operation of the Project are generally species-specific; however, based on the May 2018 site visit, ongoing construction at the Heartland Petrochemical Complex Site seems to have minimal impact to migratory bird habitat. The potential increase in noise, dust, and light pollution from the Project during construction, operation, and decommissioning phases to migratory bird species are considered minimal.

4.3 POTENTIAL CHANGES TO FEDERAL LANDS

The Project is not anticipated to have any environmental effects on federal lands. The Project is not developed on or near federal lands. The Project is located 531.7km from the United States border, 204.4 km from the Saskatchewan border and 442.8 km from the British Columbia border. The Project will not have any effect on air or noise emissions extending to federal lands. No changes to the environment will occur, as a result of carrying out the Project, in a province outside of Alberta, or outside of Canada.

4.4 PREDICTED EFFECTS ON ABORIGINAL PEOPLES

The closest First Nation or Métis communities are approximately 60 km away. To date, no information has been identified that indicates recent historical traditional or current land use or occupancy of the Project Site.

The Project is located on private land previously disturbed by agricultural activities. It was rezoned for heavy industrial land use in 2013 when it was purchased by Inter Pipeline for the development of the Heartland Petrochemical Complex. The Project Site is located within the AIH, an area dedicated to heavy industrial activities and development.

Historical Resources Act clearance was received for the Project Site from Alberta Culture and Tourism in October 2013. No known historic resource sites or Aboriginal traditional use sites have been discovered since agricultural activities started in the 1800s and no discoveries were encountered during the civil work conducted at the Project Site to date. To ensure compliance with section 31 of the *Historical Resources Act*, the Environmental Protection Plan developed by Inter Pipeline for the Project included procedures to follow if a suspected artifact of historical value was discovered. Work is to be suspended immediately at the discovery site and the finding reported to the onsite environmental inspector who would notify the appropriate regulatory authority of the discovery. Work at the discovery site would not resume until permission was granted by the Inter Pipeline regulatory specialist. No discoveries were encountered during the clearing and soil stripping activities at the Project Site.

Based on the above, no impacts are anticipated from the Project to Aboriginal health and socioeconomic conditions, current use of lands and resources for traditional purposes, physical and cultural heritage, and on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

5 ENGAGEMENT AND CONSULTATION WITH ABORIGINAL GROUPS

The Project Site is located within the traditional territory of Treaty 6 and Métis Nation of Alberta Region 4 (Figure 8). The Project Site is freehold land owned by Inter Pipeline and has been freehold land since early 1800s. For the past 20 years (since May 1998), the area surrounding the Project Site, known as the AIH, has attracted a large number of chemical, petrochemical, and oil and gas development projects. There are no current or known traditional uses of the Project Site. No impacts to hunting, fishing, or gathering uses by Aboriginal people are anticipated as the Heartland Petrochemical Complex Site has been fenced and under use for agricultural crops or industrial use since the early 1800s.

The government of Alberta Aboriginal Consultation Office (ACO) determined on October 31, 2017 that no Aboriginal consultation was required for the Project (FNC201708163). The ACO also determined no Aboriginal consultation was required for all other components of the Heartland Petrochemical Complex.

Aboriginal engagement specific to the Project has been conducted during the development of this Project Description. Based on the recommendation from the Canadian Environmental Assessment Agency and other recently proposed rail yard projects in the AIH, the following Aboriginal groups were notified of Inter Pipeline's intent to submit this Project Description. Project notification letters to the list below were sent by registered mail on January 12, 2018, and by email on January 15, 2018. A copy of the notification letter is included in Attachment 2a.

- Alexander First Nation
- Alexis Nakota Sioux Nation
- Beaver Lake Cree Nation
- Buffalo Lake Métis Settlement
- Enoch Cree Nation
- Ermineskin Cree Nation
- Foothills Ojibway First Nation
- Gunn Métis Local #55
- Kelly Lake Métis Settlement
- Louis Bull Tribe
- Métis Nation of Alberta – Region 1
- Métis Nation of Alberta – Region 2
- Métis Nation of Alberta – Region 4
- Montana First Nation
- Paul First Nation

- Saddle Lake Cree Nation
- Samson Cree Nation
- Stoney Nakoda First Nations (Bears paw First Nation, Chiniki First Nation, and Wesley First Nation)
- Tsuut'ina Nation
- Whitefish Lake First Nation #128
- Blood Tribe (Kainai Nation)
- Piikani Nation
- Siksika Nation

Inter Pipeline recognizes the Aboriginal and Treaty Rights of the eleven Treaty 6 Aboriginal groups within the Project Site area. Inter Pipeline is aware that the Aboriginal and Treaty Rights Information System indicates that five Treaty 7 Aboriginal groups, Foothills Ojibway First Nation, and three Métis Settlements have also been identified as having Aboriginal or Treaty Rights within the region. Inter Pipeline recognizes that these Aboriginal groups have asserted their Aboriginal and/or Treaty rights to the Project Site area. No Project site-specific information that demonstrate traditional or current land use or occupancy of the Project Site has been identified or provided to Inter Pipeline, to date, or by any of the Treaty 6 or Treaty 7 Aboriginal groups and Métis Settlements.

Inter Pipeline acknowledges that the *Natural Resources Transfer Acts* (a series of Acts passed by Parliament of Canada and the provinces of Alberta, Saskatchewan, and Manitoba in 1930 to transfer control over crown lands and natural resources within these provinces from the federal government to the provincial governments), stipulates that Aboriginal Peoples are guaranteed the right to take game and fish for food during all seasons of the year on unoccupied Crown lands and on any other lands to which they have right of access. The Project area is not on unoccupied Crown lands; the land has been allocated for agricultural purposes since the 1800's. There is no evidence that Aboriginal people had access rights on the Project Site. The Project area does not limit Aboriginal Peoples access to fishing on the North Saskatchewan River. The lands owned by Inter Pipeline are characterized by a very steep terrain to the river and this would not have been a physical access point to the river. The Project does not impact any known hunting areas or wildlife habitat where Aboriginal Peoples can exercise their Aboriginal or Treaty right to take game.

Table 7 below lists the Aboriginal groups that have contacted Inter Pipeline in response to the Project Description notification and outlines the concerns expressed by these Aboriginal groups.

Inter Pipeline has had several meetings and economic opportunity discussions with Enoch Cree Nation and Alexander First Nation about the Heartland Petrochemical Complex, including the Project. These two First Nation communities are closest to the Heartland Petrochemical Complex Site. Inter Pipeline is

working closely with these two First Nations to facilitate business and employment opportunities for their members. No concerns were expressed by these two First Nations with the Project.

Inter Pipeline has been informed by Paul First Nation of concerns that an Aboriginal traditional land use assessment was not conducted prior to topsoil and subsoil removal from the Project Site. Inter Pipeline has had two meetings with Paul First Nation and has offered the opportunity for the nation to conduct a traditional land use assessment in the undeveloped forested area and the riverbank along the North Saskatchewan River. Business and employment opportunities had also been discussed at these two meetings.

Inter Pipeline was also informed by the CEAA representative that Stoney Nakoda First Nations expressed general concerns around air quality from particulate matter emissions and its impact on wildlife, potential spills to adjacent lands and emergency response, and negative experience with past rail projects.

Other Aboriginal groups, including those within the notification radius, will have the opportunity for potential economic participation in the Heartland Petrochemical Complex through a process developed by Inter Pipeline.

Table 7. Summary of Aboriginal Groups Responding to Notification

Aboriginal Group	Request or concern	Reponses	Comments
Alexander First Nation	In October 2016, Alexander First Nation initiated discussions for business opportunities on new construction in the Heartland Industrial Area. No response to the Project Description notification was received.	Inter Pipeline has been actively engaged with Alexander First Nation to establish a relationship with the community and their business partners.	Business and employment opportunities have been provided and confirmed with the community for the Heartland Petrochemical Complex. No Project site-specific concerns have been identified.
Enoch Cree Nation	In December 2017, Inter Pipeline initiated discussions with Enoch Cree Nation to determine their interest for business opportunities with the Heartland Petrochemical Complex. No response to the Project Description notification was received.	Inter Pipeline has been actively engaged with Enoch Cree Nation to establish a relationship with the community and their business partners.	Business opportunities and employment opportunities have been provided to the community for the Heartland Petrochemical Complex. No Project site-specific concerns have been identified.
Buffalo Lake Métis Settlement	Requested shapefiles on January 15, 2018.	Inter Pipeline uploaded the Heartland Petrochemical Complex shapefiles onto Buffalo Lake Metis Settlement's Traditional Land Use Portal on January 18, 2018.	No Project site-specific concerns have been received.
Louis Bull Tribe	Requested additional information on April 5, 2018.	Inter Pipeline provided additional information on the Project Site via e-mail to Louis Bull Tribe on April 5, 2018.	No Project site-specific concerns have been received.

Aboriginal Group	Request or concern	Reponses	Comments
<p>Paul First Nation</p>	<p>At a meeting with an Inter Pipeline representative on January 19, 2018, Paul First Nation requested to conduct a cultural assessment of the Project Site.</p> <p>Same concern was also relayed by CEAA representative from a meeting between CEAA and Paul First Nation on February 26, 2018.</p> <p>A second meeting took place on May 4, 2018 between Paul First Nation and Inter Pipeline representatives. Business opportunities were discussed and Inter Pipeline requested to schedule a date for the cultural assessment of the undeveloped forested area as requested by Paul First Nation at the previous meeting</p>	<p>This request could not be accommodated as the Project Site had already been cleared, stripped, and graded, and all topsoil and some subsoil had been removed from the Project Site.</p> <p>Alberta Culture provided clearance and determined that no Historical Resource Impact Assessment was required as no sites were identified. No paleontological or archaeological artifacts were found during the clearing and site grading activities. The Environmental Protection Plan provided provisions on the process to follow if any artifacts were discovered.</p> <p>Inter Pipeline has sent Paul First Nation a letter (Attachment 2c) on March 14, 2018 indicating that it would commission Paul First Nation to undertake a cultural assessment on the undisturbed portion of the land holding, the riparian forested buffer between the Heartland Petrochemical Complex Site and the top bank of the North Saskatchewan River. Inter Pipeline has followed up with email and discussed this assessment during the May 4th meeting.</p>	<p>Cultural assessment will be commissioned for the undisturbed portion of the land holding (outside of the Project Site) once snow has melted and frost-free conditions have been achieved.</p>
<p>Piikani Nation</p>	<p>Requested a meeting and additional information on January 31, 2018.</p>	<p>Inter Pipeline sent Project update information on February 20 and 21, 2018 and offered to schedule a meeting at the end of March 2018 and asked that any site-specific concerns be provided in advance of the meeting.</p>	<p>No Project site-specific concerns have been received</p>

Aboriginal Group	Request or concern	Reponses	Comments
Samson Cree Nation	Requested a meeting to discuss the Project on January 26, 2018.	Inter Pipeline sent Project update information on February 20, 21, and 23, 2018 and offered to schedule a meeting at the end of March 2018 and asked that any site-specific concerns be provided in advance of the meeting.	No Project site-specific concerns have been received.
Stoney Nakoda First Nations	<p>Requested a meeting to discuss the Project and additional project information on January 23 and February 15, 2018.</p> <p>Concern relayed by CEAA representative from a meeting between CEAA and Stoney Nakoda First Nation on March 3,, 2018 in regards to air quality, spills and emergency response.</p>	Inter Pipeline exchanged a few calls with Stony Nakoda representative to determine concerns about the Project from January 23 rd to February 20, 2018. Sent Project update information on February 20 and 21, 2018 and offered to schedule a meeting at the end of March 2018 and asked that any site-specific concerns be provided in advance of the meeting.	No Project site-specific concerns have been received.
Tsuut'ina Nation	<p>Requested a meeting to discuss the Project on January 29, 2018.</p> <p>Requested an update on the CEAA Project Description on April 24, 2018.</p>	<p>Sent Project update information on February 20 and 21, 2018 and offered to schedule a meeting at the end of March 2018 and asked that any site-specific concerns be provided in advance of the meeting.</p> <p>Inter Pipeline provided an update and will inform Tsuut'ina Nation when the CEAA Project Description is submitted.</p>	No Project site-specific concerns have been received.

6 CONSULTATION WITH THE PUBLIC AND OTHER PARTIES

6.1 STAKEHOLDERS AND RELATED CONSULTATION ACTIVITIES

6.1.1 Potentially Affected and Interested Stakeholders

Stakeholders identified by Inter Pipeline who may be potentially affected and/or have an interest in the Project are summarized in Table 8.

The consultation strategy was selected in consultation with AEP and the requirements of the AUC prior to the submission of the regulatory submissions for projects within the Complex Site. A consultation radius consistent with AUC Rule 007 was used for notification purposes. All project notifications were provided to residents, occupants, landowners, and industry operators within 2 km of the Heartland Petrochemical Complex Site and personal consultation was conducted with all residents, occupants and landowners within 800 m.

Table 8. Stakeholders Potentially Affected by or Interested in the Project

Type	Stakeholder
Federal	Fisheries and Oceans Canada
	Canadian Environmental Assessment Agency
Provincial	AEP
	Alberta Transportation
	Alberta Culture and Tourism
	ACO
Municipal	City of Fort Saskatchewan
	Strathcona County
	Sturgeon County
Local Landowner, Occupants and Residents	Notifications were provided to residents, occupants, landowners, and industry operators within 2 km of the Project Site.
	Personal consultation was conducted with all residents, occupants, and landowners within 800 m of the Project Site.
Utilities, Associations, Other	CP
	CN
	AltaLink
	AIH
	NCIA

6.1.2 Overview of Stakeholder Consultation Activities to Date

Changes to the project progress and schedule were communicated to all stakeholders through annual project update letters. Inter Pipeline is committed to maintaining an open and meaningful stakeholder

engagement program throughout the life of the project and recognizes that consultation is an ongoing process.

On February 8, 2018, Inter Pipeline held an open house at the Josephurg Community Hall. Invitations were extended to all previously engaged stakeholders within 2 km radius of the Project Site. In addition, municipalities surrounding the Project Site, regional agencies, government groups, and Aboriginal groups closest to the Project Site were invited. Over 100 people attended the event. Information on all components of the Heartland Petrochemical Complex, including the Project, was provided and the regulatory processes (including this CEAA submission) were discussed for each component. Various questions were addressed and all inquiries are being followed up. None of the questions or inquiries were related to the Project. Documentation related to the open house is included in Attachment 2b.

In the past 6 months, several presentations on the Heartland Petrochemical Complex at various conferences, forums, and government and municipal agencies were given by Inter Pipeline staff involved with the Project.

6.2 KEY COMMENTS AND CONCERNS EXPRESSED BY STAKEHOLDERS

Two landowners within the notification radius expressed concerns during consultation for the PDH and CUB regulatory applications, which did not relate to the Project. Their concerns have since been resolved; the resident landowner has moved out and no longer lives in the area, and the other landowner's concerns have been addressed and resolved. No response was received to the CEAA Project Description notification from this landowner.

The overall feedback to date has been positive, and both the public and local municipalities are supportive of the project. The Heartland Petrochemical Complex received a support letter from the Mayor of Strathcona County. The resident within the 1.5 km radius of the Heartland Petrochemical Complex Site has no concerns and is supportive of the overall development, including the Project.

6.3 CONSULTATION WITH OTHER JURISDICTIONS

Consultation specific to the Project has been conducted, and includes the following activities:

- A project summary description was submitted to the AEP. On October 24, 2017, the Director decided that further assessment is not required.
- An assessment request was submitted to the ACO. On October 31, 2017, the ACO indicated that no First Nation consultation was required.

Upcoming consultation with other jurisdictions, specific to the Project or that include the Project, include the following activities:

- Amending the EPEA approval that was issued for the PDH facility to include the PP facility and the Project.

- Submitting an application to Alberta Transportation for Approval to Construct and Operate the Project once the design is finalized.
- Applying for a development permit and a building permit from Strathcona County once site layout and design details are finalized.

6.4 ONGOING OR PROPOSED CONSULTATION ACTIVITIES

Engagement has been and continues to be conducted with all identified stakeholders to ensure project updates are distributed to all interested parties and all questions and concerns are promptly addressed. Inter Pipeline is committed to maintaining and documenting the public engagement process throughout the life of the project. Inter Pipeline recognizes that consultation is an ongoing process.

Inter Pipeline will continue to provide regular project status updates through letter or newspaper notification and community information sessions to all stakeholders engaged to date and all other parties that expressed interest in the project. Inter Pipeline will also notify local municipalities of any activities that could have a potential impact on the communities to ensure effective communication and awareness and prompt response to any concerns that local councils or communities might have with the project.

Inter Pipeline is also updating its corporate website regularly to keep the stakeholders informed on construction progress, major milestones, and any activities that would require public awareness. The website provides contact information and the opportunity for public feedback.

7 REFERENCES

- Advisian. 2015. Investigation of the North Saskatchewan River Adjacent to Williams Alberta PDH Site Development. Fisheries assessment.
- Advisian. 2016. Groundwater Assessment in Support of Planned Construction Site Dewatering, Summary for Williams' Alberta PDH Site, Fort Saskatchewan, Alberta. 162 pp.
- Advisian. 2017. Propane Dehydrogenation Site in NE/SE 25-55-22 W4M: Proposed outfall Fisheries Act Self-Assessment Summary. 28pp.
- AEP. 2012. Capital Region Air Quality Management Framework. Accessed at: www.aep.alberta.ca/land/cumulative-effects/regional-planning/capital-region/documents/CapitalRegionAirQualityManagementFramework.pdf.
- AEP. 2015a. Cumulative Effects Management System. Accessed at www.aep.alberta.ca/cumulative-effects/regional-planning/capital-region/documents/CumaEffectsCapitalRegion-Apr2013.pdf.
- AEP. 2015b. Water Management Framework for the Industrial Heartland and Capital Region: Effluent Characterization Program. Accessed at: aep.alberta.ca/land/cumulative-effects/regional-planning/capital-region/documents/EffluentCharacterizationProgram-Jun15-2015.pdf.
- AEP. 2017. Alberta Ambient Air Quality Objectives and Guidelines Summary. Accessed at: aep.alberta.ca/air/legislation/ambient-air-quality-objectives/documents/AAQO-Summary-Jun29-2017.pdf
- Alberta Environment Protection. 1991. Dam and Canal Safety Guidelines. Water Act. Water (Ministerial) Regulation Part 6. December 1991.
- Alberta Environment and Parks (AEP). 2008. Water Management Framework for the Industrial Heartland and Capital Region. Accessed at: www.municipalaffairs.alberta.ca/documents/7864.pdf
- Alberta Intergovernmental and Aboriginal Affairs. 2015. Accessed at: www.alberta.metis.com.
- Anderson, D.E., O.J. Rongstad, and W.R. Mytton. 1989. Response of red-tailed hawks to helicopter overflights. *Condor* 91:296-299
- Barber, J.R., K.R. Crooks, and K.M. Fristrup. 2010. The Costs of Chronic Noise Exposure for Terrestrial Organisms. *Trends in Ecology and Evolution* 25:180-189.
- Bollinger, E. K., P. B. Bollinger, and T.A. Gavin. 1990. Effects of hay-cropping on eastern populations of the Bobolink. *Wildlife Society Bulletin* 18:143-150.
- Canadian Environmental Assessment Agency. 2012. Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act (2012). (As modified March 2015).

- Capital Region Board. 2009. Capital Region Land Use Plan. Accessed at: www.capitalregionboard.ab.ca/priorities/land-use.
- Conomy, J.T., J.A. Collazo, J.A. Dubovsky, and W.J. Fleming. 1998. Dabbling duck behavior and aircraft activity in coastal North Carolina. *Journal of Wildlife Management* 62:1127-1134.
- de Molenaar, J.G., M.E. Sanders, and D.A. Jonkers. 2006. Road Lighting and Grassland Birds: Local Influence of Road Lighting on a Black-Tailed Godwit Population. Chapter 6 in Rich, C. and T. Loncore (Eds.). *Ecological Consequences of Artificial Night Lighting*. Island Press, Washington, D.C.
- Dufor, P.A. 1980. Effects of noise on wildlife and other animals: Review of research since 1971. U.S. Environmental Protection Agency. EPA 550/9 BO-00. Washington, D.C.
- ECCC. 2016. Canada Multi-Sector Air Pollutant Regulation. Environment Canada and Climate Change (MSAPR). Available at: <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2016-151/index.html>. Accessed: February 2018.
- Environment and Sustainable Resource Development (ESRD). 2011. The General Status of Alberta Wild Species 2010. Alberta Environment and Sustainable Resource Development, Fish and Wildlife Service Division, Edmonton. Access at: www.srd.gov.ab.ca/fish/wildlife/wildspecies/search/htm
- ESRD. 2015. Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones. Accessed at: www.aep.alberta.ca/fish-wildlife/wildlife-land-use-guidelines/documents/KeyWildlifeBiodiversityZones-Apr08-2015.pdf
- Faaborg, J., F.R. Thompson III, S.K. Robinson, T.M. Donovan, D. R. Whitehead, and J.D. Brawn. 1998. Understanding fragmented Midwestern landscapes: the future. *In* Marzluff, J.M., and R. Sallabanks (eds). *Avian Conservation: Research and Management*. Island Press, Washington D.C. 563 pp.
- Farmer, A.M. 1993. The Effects of Dust on Vegetation—a Review. *Environmental Pollution*. 79:63-75.
- Fiera Biological Consulting Ltd. 2014. Environmentally Significant Areas in Alberta: 2014 Update Report prepared for the Government of Alberta.
- Fort Air Partnership (FAP). 2015. Fort Saskatchewan Regional Air Monitoring Plan. Accessed at: www.fortair.org/wp-content/uploads/2016/05/2015-Air-Monitoring-Plan.pdf.
- Golder and Associates (Golder). 2013a. Supporting Doc 6: Wildlife Baseline Assessment. Found in Williams Energy's Industrial Approval Application PDH Project Strathcona County, AB. 10pp.

- Golder. 2013b. Supporting Document 5: Vegetation and Wetland Report. Found in Williams Energy's Industrial Approval Application PDH Project Strathcona County, AB. 61pp.
- Golder. 2013c. Supporting Document 2: Terrain and Soil Baseline Assessment. Found in Williams Energy's Industrial Approval Application PDH Project Strathcona County, AB. 15pp.
- Golder. 2013d. Attachment B: Groundwater Report. Found in Williams Energy's Industrial Approval Application PDH Project Strathcona County, AB. 18pp.
- Golder. 2015. Vegetation and Wetland Report. Williams Heartland PDH, Strathcona County Alberta.
- Habib, L. E.M. Bayne, and S. Boutin. 2007. Chronic Industrial Noise Affects Pairing Success and Age Structure of Ovenbirds *Seiurus aurocapilla*. *Journal of Applied ecology* 44:176-184.
- Indian and Northern Affairs Canada. 2009. Accessed at: report.hcom.ca/people/first-nations-communities-alberta/
- Kaseloo, P.A., and K.O. Tyson. 2004. Synthesis of noise effects on wildlife populations. U.S. Department of Transportation, Federal Highway Administration. FHWA-HEP-06-016. McLean, Virginia
- Kempnaers B., P. Borgstorm, P. Loes, E. Schlicht, and M. Valcu. 2010. Artificial Night Lighting Affects Dawn Song, Extra-Pair Siring Success, and Lay Date in Songbirds. *Current Biology* 20:1735-1739.
- Longcore. T. 2004. Ecological Light Pollution. *Frontiers in Ecology and the Environment* 2:191-198.
- Nagy, L.R., and R.T. Holmes. 2004. Factors influencing fecundity in migratory songbirds: is nest predation the most important? *Journal of Avian Biology* 35:487-491.
- Natural Regions Committee. 2006. Natural Regions and Subregions of Alberta. Compiled by D.J. Downing and W.W. Pettapiece. Government of Alberta.
- NCIA. 2016. Regional Groundwater Monitoring. Accessed at: www.ncia.ab.ca/wp-content/uploads/2015/09/Spring-2016-Groundwater-Monitoring-Report.pdf.
- NCIA. 2017. Regional Noise Management Plan. Accessed at: www.ncia.ab.ca/wp-content/uploads/2015/09/NCIA-RNMP-2017-Annual-Report.pdf.
- Ortega, C. 2012. Chapter 2 - Effects of noise pollution on birds: a brief review of our knowledge. *Ornithological Monographs* 74:6-22.
- Perlut, N.G., A.M. Strong, T.M. Donovan, and N.J. Buckley. 2006. Grassland songbirds in a dynamic management landscape: behavioural responses and management strategies. *Ecological Application* 16:2235-2247.

Strathcona County. 2001. Alberta Industrial Heartland Area Structure Plan Bylaw and Amendments. Accessed at: www.industrialheartland.com. (currently in the process of being updated)

Strathcona County. 2015. Land Use Bylaw Amendments 6-2015. Accessed at: www.strathcona.ca/files/files/pds-lub-amendments_log-sep17.pdf.

Strathcona County. 2017. Municipal Development Plan Bylaw 20-2017. Accessed at: www.strathcona.ca/departments/planning-development-services/special-projects-initiatives/municipal-development-plan-review/

TRACE Associates. 2013. 2013 Environmental Baseline Field Study. Report prepared for Williams Energy Canada. Calgary, AB. Submitted April 30, 2013. 10pp.

University of Alberta. 2015. Map courtesy of Alberta Aboriginal Affairs. Accessed at: www.ualberta.ca/~walid/ab2a.html.

US EPA. 2009. Emission Factors for Locomotives: Office of Transportation and Air Quality. Available online at: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100500B.pdf>. Accessed February 2018.

Williams Energy Canada ULC (Williams). 2013. Industrial Approval Application PDH Project Strathcona County, AB. Submitted October 23, 2013. 604 pp.

Attachment 1: Titles of Surface and Subsurface Rights

CERTIFIED COPY OF
Certificate of Title



S

LINC	SHORT LEGAL
0037 545 920	4;22;55;25;NE
0037 545 938	4;22;55;25;SE

TITLE NUMBER: 172 085 325
ROAD PLAN
DATE: 06/04/2017

AT THE TIME OF THIS CERTIFICATION

INTER PIPELINE PROPYLENE LTD.
OF SUITE 3200,215-2ND STREET SW
CALGARY
ALBERTA T2P 1M4

IS THE OWNER OF AN ESTATE IN FEE SIMPLE
OF AND IN

FIRST

MERIDIAN 4 RANGE 22 TOWNSHIP 55
SECTION 25

ALL THAT PORTION OF THE NORTH EAST QUARTER
WHICH IS NOT COVERED BY ANY OF THE WATERS OF THE NORTH SASKATCHEWAN RIVER
AS SHOWN ON A PLAN OF SURVEY OF THE SAID TOWNSHIP
SIGNED AT OTTAWA ON THE 2ND DAY OF MAY A.D. 1883
CONTAINING 46.70 HECTARES (115.5 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

		HECTARES	(ACRES)	MORE OR LESS
A)	ALL THAT PORTION WHICH LIES TO THE NORTH OF THE SAID RIVER CONTAINING	5.462	13.50	
B)	PLAN 8322154 RAILWAY	3.08	7.61	
C)	PLAN 1520323 ROAD	0.491	1.21	
D)	PLAN 1721195 ROAD	0.040	0.10	

EXCEPTING THEREOUT ALL MINES AND MINERALS

SECOND

MERIDIAN 4 RANGE 22 TOWNSHIP 55
SECTION 25

ALL THAT PORTION OF THE SOUTH EAST QUARTER
WHICH IS NOT COVERED BY ANY OF THE WATERS OF THE NORTH SASKATCHEWAN RIVER
AS SHOWN ON A PLAN OF SURVEY OF THE SAID TOWNSHIP
SIGNED AT OTTAWA ON 2 MAY, 1883
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

		HECTARES	(ACRES)	MORE OR LESS
A)	PLAN 8322154 RAILWAY	0.936	2.31	
B)	PLAN 0826605 RAILWAY	7.41	18.31	
C)	PLAN 1520323 ROAD	0.062	0.15	
D)	PLAN 1721195 ROAD	0.040	0.10	

EXCEPTING THEREOUT ALL MINES AND MINERALS

SUBJECT TO THE ENCUMBRANCES, LIENS AND INTERESTS NOTIFIED BY MEMORANDUM UNDERWRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER.

Certificate of Title

TITLE NUMBER: 172 085 325

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
3074KN	13/02/1957	UTILITY RIGHT OF WAY GRANTEE - ATCO GAS AND PIPELINES LTD. 10035-105 ST EDMONTON ALBERTA T5J2V6 AS TO PORTION OR PLAN:2346KS (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 962185356) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 012017326)
842 256 059	27/11/1984	UTILITY RIGHT OF WAY GRANTEE - ALTALINK MANAGEMENT LTD. 2611 - 3 AVE SE CALGARY ALBERTA T2A7W7 "TAKES PRIORITY DATE OF CAVEAT #842221271" (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 022218684) (DATA UPDATED BY: CHANGE OF ADDRESS 092057538)
972 283 255	17/09/1997	UTILITY RIGHT OF WAY GRANTEE - PEMBINA NGL CORPORATION. 3800, 525-8 AVE SW CALGARY ALBERTA T2P1G1 (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 002341477) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 032397518) (DATA UPDATED BY: CHANGE OF NAME 122205690)
972 371 918	02/12/1997	UTILITY RIGHT OF WAY GRANTEE - PEMBINA NGL CORPORATION. 3800, 525-8 AVE SW CALGARY ALBERTA T2P1G1 AFFECTED LAND: 4;22;55;25;NE (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 002341477) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 032397518) (DATA UPDATED BY: CHANGE OF NAME 122205690)
002 245 557	24/08/2000	SURFACE RIGHTS BOARD ORDER IN FAVOUR OF - NOVAGAS CANADA LTD. AFFECTED LAND: 4;22;55;25;NE ORDER # 2034/2000
012 341 843	25/10/2001	SURFACE RIGHTS BOARD AMENDING ORDER AFFECTS INSTRUMENT: 002245557 SURFACE RIGHTS BOARD ORDER NO. 0409/2001 AMENDING ORDER NO. 2034/2000
022 059 342	20/02/2002	CAVEAT RE : UTILITY RIGHT OF WAY AMENDING AGREEMENT CAVEATOR - ALTALINK MANAGEMENT LTD. 2611 - 3 AVE SE

(CONTINUED)

CERTIFIED COPY OF
Certificate of Title

SHORT LEGAL 4;22;55;25;NE, SE
NAME INTER PIPELINE PROPYLENE LTD.
NUMBER 172 085 325

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		CALGARY ALBERTA T2A7W7 (DATA UPDATED BY: TRANSFER OF CAVEAT 022231492) (DATA UPDATED BY: CHANGE OF ADDRESS 082539663)
032 011 010	09/01/2003	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - PEMBINA NGL CORPORATION. 3800, 525-8 AVE SW CALGARY ALBERTA T2P1G1 AFFECTED LAND: 4;22;55;25;NE (DATA UPDATED BY: TRANSFER OF CAVEAT 032397384) (DATA UPDATED BY: CHANGE OF NAME 122249579)
042 118 682	24/03/2004	SURFACE RIGHTS BOARD AMENDING ORDER AFFECTS INSTRUMENT: 002245557 SURFACE RIGHTS BOARD ORDER 2034/2000 AMENDING ORDER 0588/2004
142 157 596	27/05/2014	UTILITY RIGHT OF WAY GRANTEE - ATCO GAS AND PIPELINES LTD.
152 144 863	19/05/2015	DISCHARGE OF UTILITY RIGHT OF WAY 142157596 PARTIAL EXCEPT PLAN/PORTION: 1520820
162 058 591	24/02/2016	DISCHARGE OF UTILITY RIGHT OF WAY 972371918 PARTIAL EXCEPT PLAN/PORTION: 0024522
162 058 592	24/02/2016	DISCHARGE OF UTILITY RIGHT OF WAY 972283255 PARTIAL EXCEPT PLAN/PORTION: 0022926
162 105 888	20/04/2016	UTILITY RIGHT OF WAY GRANTEE - INTER PIPELINE PROPYLENE LTD. SUITE 3200,215-2ND STREET SW CALGARY ALBERTA T2P1M4 AFFECTED LAND: 4;22;55;25;SE (DATA UPDATED BY: CHANGE OF NAME 162357811)
162 105 891	20/04/2016	UTILITY RIGHT OF WAY GRANTEE - INTER PIPELINE PROPYLENE LTD. SUITE 3200,215-2ND STREET SW CALGARY ALBERTA T2P1M4 AFFECTED LAND: 4;22;55;25;SE (DATA UPDATED BY: CHANGE OF NAME 162357811)
162 105 967	20/04/2016	UTILITY RIGHT OF WAY GRANTEE - INTER PIPELINE PROPYLENE LTD. SUITE 3200,215-2ND STREET SW CALGARY ALBERTA T2P1M4 AFFECTED LAND: 4;22;55;25;NE (DATA UPDATED BY: CHANGE OF NAME 162357811)

CERTIFIED COPY OF
Certificate of Title

SHORT LEGAL 4;22;55;25;NE,SE
NAME INTER PIPELINE PROPYLENE LTD.
NUMBER 172 085 325

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
162 105 969	20/04/2016	UTILITY RIGHT OF WAY GRANTEE - INTER PIPELINE PROPYLENE LTD. SUITE 3200,215-2ND STREET SW CALGARY ALBERTA T2P1M4 AFFECTED LAND: 4;22;55;25;NE (DATA UPDATED BY: CHANGE OF NAME 162357811)
162 240 872	01/09/2016	CAVEAT RE : LEASE INTEREST UNDER 20 ACRES CAVEATOR - INTER PIPELINE PROPYLENE LTD. SUITE 3200,215-2ND STREET SW CALGARY ALBERTA T2P1M4 AGENT - DAVID CHAPPEL AFFECTED LAND: 4;22;55;25;NE (DATA UPDATED BY: TRANSFER OF CAVEAT 162347893) (DATA UPDATED BY: TRANSFER OF CAVEAT 172009670) (DATA UPDATED BY: CHANGE OF NAME 172009778)
162 271 906	28/09/2016	UTILITY RIGHT OF WAY GRANTEE - TELUS COMMUNICATIONS INC. AS TO PORTION OR PLAN:1622837
172 024 941	25/01/2017	UTILITY RIGHT OF WAY GRANTEE - INTER PIPELINE PROPYLENE LTD. AFFECTED LAND: 4;22;55;25;NE

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 05 DAY OF FEBRUARY ,2018



SUPPLEMENTARY INFORMATION

MUNICIPALITY: STRATHCONA COUNTY
REFERENCE NUMBER:
152 021 523 +17
TOTAL INSTRUMENTS: 020



CERTIFIED COPY OF
Certificate of Title

M

LINC	SHORT LEGAL
0024 218 018	4;22;55;25;NE
0024 217 887	4;22;55;25;SE

TITLE NUMBER: 172 202 745
TRANSFER OF LAND
DATE: 05/08/2017

AT THE TIME OF THIS CERTIFICATION

INTER PIPELINE PROPYLENE LTD.
OF 3200, 215 2ND STREET SW
CALGARY
ALBERTA T2P 1M4

IS THE OWNER OF AN ESTATE IN FEE SIMPLE
OF AND IN

FIRST

*ALL MINES AND MINERALS EXCEPT COAL WITHIN UPON OR UNDER:

MERIDIAN 4 RANGE 22 TOWNSHIP 55
SECTION 25

ALL THOSE PORTIONS OF THE NORTH EAST QUARTER
WHICH ARE NOT COVERED BY ANY OF THE WATERS OF THE NORTH SASKATCHEWAN
RIVER, AS SHOWN ON A PLAN OF SURVEY OF THE SAID TOWNSHIP SIGNED AT
OTTAWA ON THE 2ND DAY OF MAY, A.D. 1883 CONTAINING 46.70 HECTARES
(115.50 ACRES) MORE OR LESS.

EXCEPTING THEREOUT: ALL THAT PORTION OF THE SAID NORTH EAST QUARTER OF
SAID SECTION, WHICH LIES TO THE NORTH OF THE SAID RIVER CONTAINING
5.46 HECTARES (13.50 ACRES) MORE OR LESS.

SECOND

*ALL MINES AND MINERALS EXCEPT COAL WITHIN UPON OR UNDER:

MERIDIAN 4 RANGE 22 TOWNSHIP 55
SECTION 25
QUARTER SOUTH EAST

SUBJECT TO THE ENCUMBRANCES, LIENS AND INTERESTS NOTIFIED BY MEMORANDUM UNDER-
WRITTEN OR ENDORSED HEREON, OR WHICH MAY HEREAFTER BE MADE IN THE REGISTER.

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION

NUMBER	DATE (D/M/Y)	PARTICULARS
--------	--------------	-------------

NO REGISTRATIONS

Certificate of Title

TITLE NUMBER: 172 202 745

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 05 DAY OF AUGUST ,2017



SUPPLEMENTARY INFORMATION

VALUE: \$245,000

CONSIDERATION: \$245,000

MUNICIPALITY: STRATHCONA COUNTY

REFERENCE NUMBER:

112 040 793

AREA:

64.7 HECTARES (160 ACRES) MORE OR LESS (0024 217 887)

TOTAL INSTRUMENTS: 000

Attachment 2: Project Engagement

Attachment 2a: Aboriginal Notification Letter

January 12, 2018

REGISTERED MAIL



Dear [REDACTED],

**Re: Inter Pipeline Propylene Ltd. - Heartland Petrochemical Complex
Rail Yard within the Petrochemical Complex at E ½ 25-55-22W4M
Canadian Environmental Assessment Act - Project Description Notification**

Inter Pipeline Propylene Ltd (Inter Pipeline) proposes to construct and operate a petrochemical complex consisting of a propane dehydrogenation (PDH) and a polypropylene (PP) facility and associated infrastructure. The petrochemical complex will be located on freehold land owned by Inter Pipeline within the E ½ of 25-55-22 W4M. The land is in Strathcona County, in a heavy industrial area known as the Alberta's Industrial Heartland. The enclosed map illustrates the site location and layout of the petrochemical complex.

This notification relates to the rail yard component of the petrochemical complex. Inter Pipeline is preparing a Project Description to be submitted to the Canadian Environmental Assessment Agency (CEAA). The proposed rail yard meets the requirement for a Project Description under section 25 of the *Regulations Designating Physical Activities* pursuant to the *Canadian Environmental Assessment Act, 2012*.

The petrochemical complex will process propane into polypropylene plastic pellets that will be shipped by rail to market. Polypropylene is a widely produced synthetic plastic used to manufacture plastic parts and reusable containers, laboratory equipment, medical devices, automotive components, plumbing piping systems, textile, etc.

The proposed rail yard will include 26 tracks totalling approximately 11 km, a rail loading area able to support the loading of up to 24 cars per day and a rail storage area with capacity to store approximately 240 railcars. The rail yard may be connected to Canadian National Railway and/or Canadian Pacific Railway tracks. The rail yard will be constructed on cleared, previously disturbed freehold land. The overall footprint of the petrochemical complex is approximately 94 hectares out of which the rail yard component represents approximately 20 hectares. Clearance was received from Alberta Culture under the *Historical Resources Act* for the entire development site as no historical or cultural resources for traditional purposes have been identified on the development footprint.



Construction of the rail yard is expected to start in 2020, subject to regulatory approvals, and will take approximately 9 months to complete. Once the petrochemical complex is operational, the rail yard will be operated 24-hours/day, 365 days/year.

The petrochemical complex and associated infrastructure is designed to minimize environmental impact by utilizing technology with a low environmental footprint, low CO₂ and NOx emissions, and low water consumption and waste water production. In addition, energy efficiency is optimized by incorporating a cogeneration plant to produce power and steam. The Alberta Industrial Heartland area has been the subject of a number of provincial, regional and local studies for several environmental parameters (air, noise, etc.) due to extensive industrial development in the area. Inter Pipeline is committed to implementing and following practices and principles of existing management plans within the region.

As part of the regulatory review process, you will receive a Notice of Application from CEEA for the proposed rail yard. This notification will provide an opportunity for CEEA and Inter Pipeline to receive public comment in regards to the rail yard development. In the interim, if you have any questions or require further information please contact me at 403-717-5745 or email Michelle.Goodkey@interpipeline.com. You can also provide feedback at consult@interpipeline.com

With warmest regards,

A handwritten signature in blue ink that reads "Michelle Goodkey".

Michelle Goodkey
Manager, Aboriginal and Stakeholder Relations

Inter Pipeline Ltd.

3200, 215 2nd Street SW

Calgary, Alberta T2P 1M4

Tel 403.717.5745

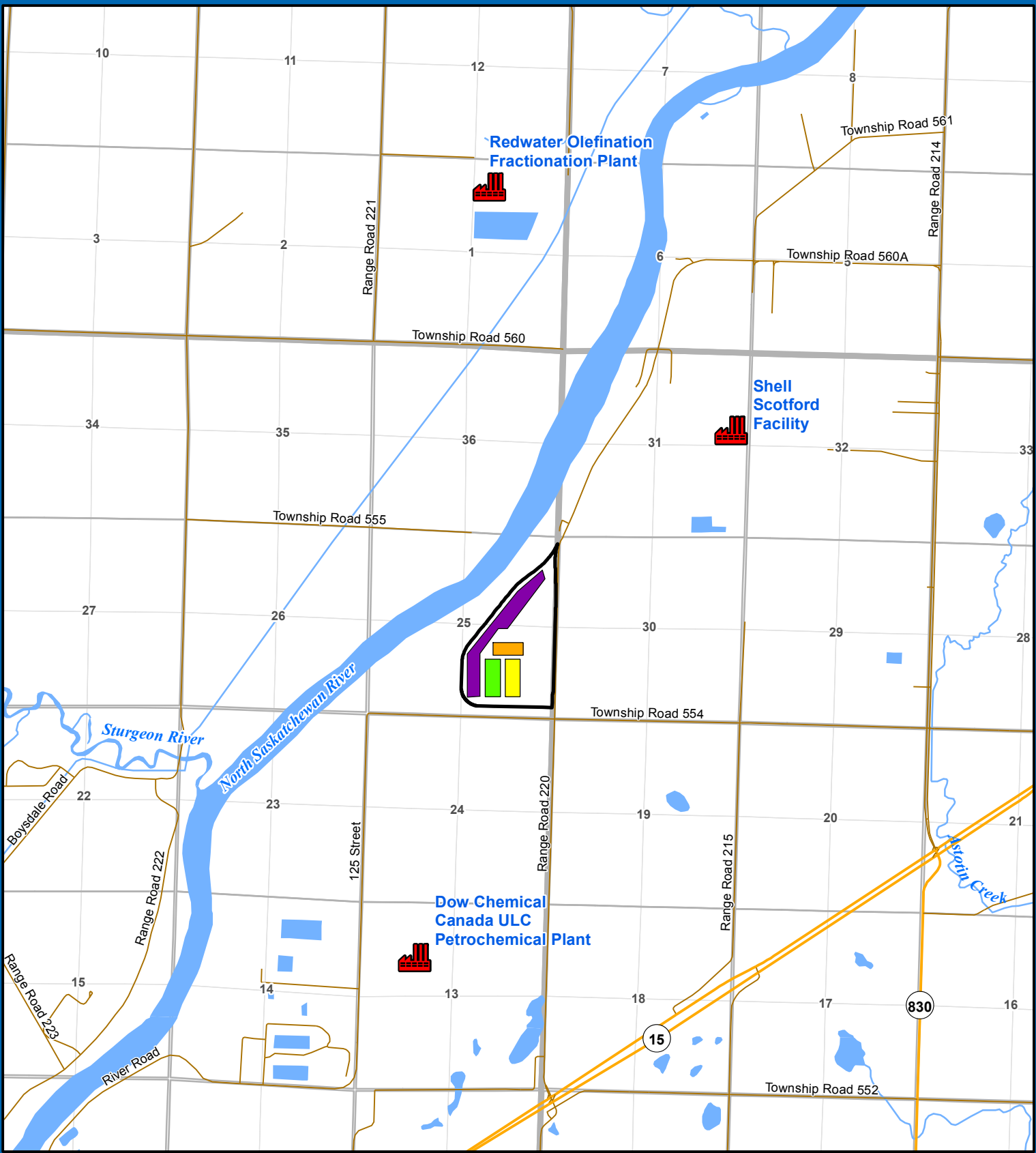
Fax 403.290.6092

E-mail Mgoodkey@interpipeline.com

Or consult@interpipeline.com

Inter Pipeline is a major petroleum transportation, bulk liquid storage and natural gas liquids extraction business based in Calgary, Alberta, Canada. Inter Pipeline owns and operates energy infrastructure assets in western Canada and northern Europe. Additional information about Inter Pipeline can be found at www.interpipeline.com

Enc. Map



Plant



Cogeneration Plant



Polypropylene (PP) Facility



Propane Dehydrogenation (PDH) Facility

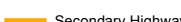


Rail Yard Facilities



Heartland Petrochemical Complex

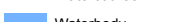
Primary Highway



Secondary Highway



Local Road

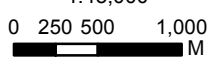


Watercourse



Waterbody

1:45,000

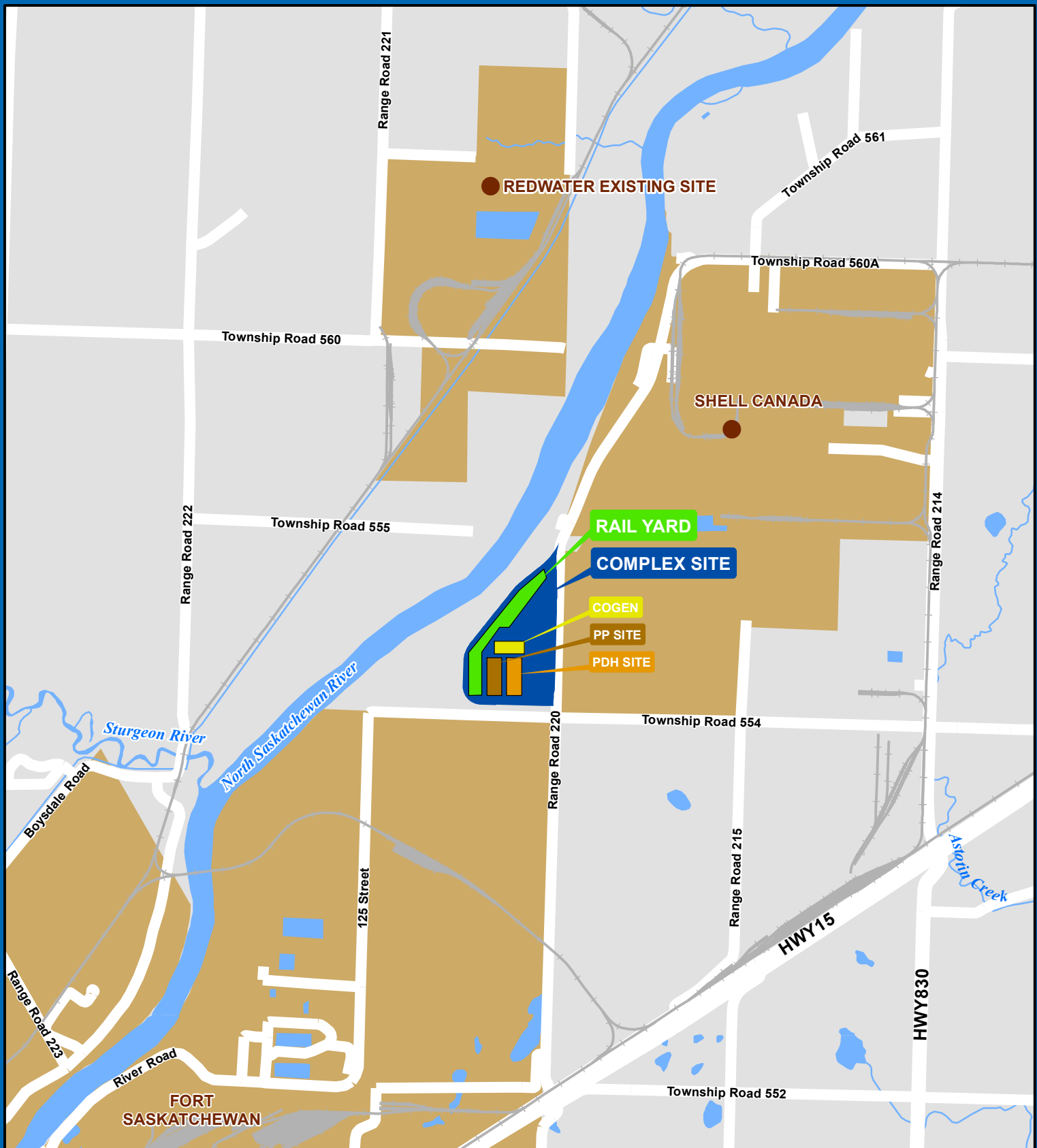


Date: 03-Jan-2018 Page Size: 8.5"x11"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.
 References: DLS grid obtained from Altalis 2017. Hydrology and Transportation obtained from - Natural Resources Canada © Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources, 2016.

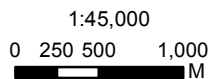


Inter Pipeline Heartland Petrochemical Complex

E1/2 25-55-22W4



- Plant
- Cogeneration Plant
- Polypropylene (PP) Facility
- Propane Dehydrogenation (PDH) Facility
- Rail Yard Facilities



Date: 09-Jan-2018 Page Size: 8.5"x11"
 Coordinate System: NAD 1983 UTM Zone 12N
 Created by: GIS/Drafting Group
 Note: Paper Copies are uncontrolled.
 This copy is valid only at the time of printing.



Inter Pipeline General Complex Representation

E1/2 25-55-22W4

Attachment 2b: Open House Documentation – February 8, 2018



Open House

Inter Pipeline is holding an open house in your area to discuss the Heartland Petrochemical Complex. This complex will convert propane into polypropylene plastic pellets and is scheduled to be operational in late 2021.

Event Heartland Petrochemical Complex
Open House

Date Thursday, February 8, 2018

Time 4pm to 8pm

Venue Josephburg Community Hall
57, 54569 Range Road 215
Fort Saskatchewan, AB



Attachment 2c: Paul First Nation CEEA Project Description Follow-up Letter



March 14, 2018

Attention: Raymond Cardinal
Industry Relations Manager

Paul First Nation

PO Box 66

Duffield, AB, T0E 0N0

Email: raymond.cardinal@gmail.com

Dear Mr. Cardinal,

**Re: Inter Pipeline Propylene Ltd. - Heartland Petrochemical Complex ("Inter Pipeline")
Canadian Environmental Assessment Act - Project Description
Rail Yard Proposal ("the Project") Follow-up**

Thank you for your interest in this project. Inter Pipeline has considered the two requests by Paul First Nation from our meeting on January 19, 2018 in Calgary.

1. Paul First Nation to complete a cultural assessment of the Project area

As I indicated at our meeting on January 19, 2018, the development area of Inter Pipeline's Heartland Petrochemical Complex site, including the Project area (the proposed rail yard), within E ½ of 25-55-22 W4M has been cleared of vegetation and civil work has been completed. Civil work includes the removal of the topsoil and upper subsoil, which has been relocated to an offsite location owned by Inter Pipeline, and the installation of deep underground utilities for the process area of the petrochemical complex. These civil activities proceeded under approvals from Alberta Environment and Parks, Strathcona County and Alberta Culture. As well, Inter Pipeline had an Environmental Protection Plan in force during these clearing activities which contained specific mitigations around the discovery of any archeological or culturally significant findings. Since the civil work has been completed and construction activities are ongoing at the petrochemical site, a cultural assessment of this area would not be feasible.

Paul First Nation had also indicated an interest in completing a cultural assessment within the treed riparian area between the North Saskatchewan River and the Heartland Petrochemical Complex site. As indicated at our meeting, development is not planned to occur in this area. Since this area is not in active construction, access could be arranged through the construction zone. Inter Pipeline will facilitate Paul First Nation access to this portion of its property to undertake a cultural assessment in the treed riparian area. To ensure weather and site conditions are suitable for a meaningful assessment, Inter Pipeline will arrange for this activity during snow free conditions, and dependant on construction activities. Please contact me to finalize the details of the assessment.



2. Paul First Nation leadership to meet with Inter Pipeline in the Paul First Nation community

Inter Pipeline's project team will meet with Paul First Nation leadership in your community. To ensure we have the proper expertise to answer all the questions your members might have, please provide an agenda and a few dates and times that will work for Paul First Nation.

As per our discussions in regards to business opportunities, Inter Pipeline has provided our prime contractor, and common site services manager on site, a listing of Paul First Nation's business partners and joint ventures.

Inter Pipeline looks forward to engaging in further discussions with Paul First Nation to providing additional details and answer any questions you, the community members or leadership may have on this project.

With warmest regards,

A handwritten signature in blue ink that reads "Michelle Goodkey".

Michelle Goodkey

Manager, Aboriginal and Stakeholder Relations

Inter Pipeline Ltd.

3200, 215 2nd Street SW

Calgary, Alberta T2P 1M4

Tel 403.717.5745

Fax 403.290.6092

E-mail Mgoodkey@interpipeline.com

Or consult@interpipeline.com

cc.

Jennifer Howe

Acting Project Manager, Prairie and Northern Region

Canadian Environmental Assessment Agency/Government of Canada

Jennifer.Howe@ceaa-acee.gc.ca

Inter Pipeline is a major petroleum transportation, bulk liquid storage and natural gas liquids extraction business based in Calgary, Alberta, Canada. Inter Pipeline owns and operates energy infrastructure assets in western Canada and northern Europe. Additional information about Inter Pipeline can be found at www.interpipeline.com