Josephburg Condensate Fractionation Project

Initial Project Description

Keyera Energy Ltd.

Type of document:
Final Submission to IAAC

Project name:
Josephburg Condensate Fractionation Project

Date submitted:
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On behalf of

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Abbreviations and Key Terms

Abbreviation/Term	Definition
AAQO	Ambient Air Quality Objectives
ACIMS	Alberta Conservation Information Management System
ACO	Aboriginal Consultation Office
ACSW	Arts, Culture and the Status of Women
AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
AESRD	Alberta Environment and Sustainable Resource Development
AFN	Alexander First Nation
AQHI	Air Quality Health Index
ANSN	Alexis Nakota Sioux Nation
ATS	Alberta Township System
BLMG	Buffalo Lake Métis Government
BMP	Best Management Practices
BPSD	Standard barrels per day
C8+	Midweight condensate
CEAA	Canadian Environmental Assessment Agency
CH_4	Methane
CDU	Condensate Distillation Unit
CGSB	Canadian General Standards Board
COSEWIC	Committee of the Status of Endangered Wildlife in Canada
DFO	Department of Fisheries and Oceans
ECCC	Environment and Climate Change Canada
ECN	Enoch Cree Nation
ERCM	Ermineskin Cree Nation
EF	Emission Factor
EIA	Environmental Impact Assessment
EPEA	Environmental Protection and Enhancement Act
EPP	Environmental Protection Plan
ERCB	Environmental Resource Conservation Board
ESA	Environmental Site Assessment
ESC	Erosion and Sediment Control
EXP	EXP Services Inc.

Abbreviation/Term	Definition
FOFN	Foothills Ojibway First Nation
FSCS	Fort Saskatchewan Condensate System Integration Site
FWIMT	Fish and Wildlife Internet Mapping Tool
GHG	Greenhouse Gas
GoA	Government of Alberta
GoC	Government of Canada
GPS	Global Positioning System
GTL	Gas to Liquids
GWP	Global Warming Potential for an evaluated GHG gas
ha	hectare
HRA	Historical Resources Act
IAA	Impact Assessment Act
IAAC	Impact Assessment Agency of Canada
IH-DIZ	Industrial Heartland-Designated Industrial Zone
IPD	Initial Project Description
KCN	Kehewin Cree Nation
KFS	Keyera Fort Saskatchewan
KJT	Keyera Josephburg Rail Terminal
Keyera Energy Ltd.	Keyera
LMN	Lakeland Métis Nation
LBT	Louis Bull Tribe
LPG	Liquid Petroleum Gas consisting of propane and butane
LSAM	Lac Ste Anne Métis Community
m^3	Cubic meter
m^3/day	Cubic meter per day
MBCA	Migratory Birds Convention Act
MFN	Montana First Nation
MIFN	Michel First Nation
NCIA	Northeast Capital Industrial association
NOx	Nitrogen Oxides
NSRP	North Saskatchewan Regional Plan
OMG	Otipemisiwak Métis Government
PFN	Paul First Nation
PIP	Participant Involvement Program

Abbreviation/Term	Definition
$PM_{2.5}$	Fine Particulate Matter
Josephburg Project	Josephburg Condensate Fractionation Project
SCN	Samson Cree Nation
SLCN	Saddle Lake Cree Nation
SARA	Species At Risk Act
SO2	Sulphur Dioxide
TBD	To be determined
TC	Transport Canada
TIER	Technology Innovation and Emissions Reduction (TIER) regulation.
VOC	Volatile Organic Compounds
VRU	Vapour Recovery unit
WFLN128	Whitefish (Goodfish) Lake First Nation #128

Executive Summary

EXP Services Inc. (EXP) was retained by Keyera Energy Ltd. (Keyera) to prepare this Initial Project Description (IPD) for submission to the Impact Assessment Agency of Canada (IAAC), under the *Impact Assessment Act* (IAA) (Government of Canada, 2019a), for the proposed Josephburg Condensate Fractionation Project (the Josephburg Project or Project).

Keyera is a leading Canadian energy infrastructure company that provides essential services in the gathering, processing, transportation, storage, and marketing of natural gas and natural gas liquids (NGLs). With over 25 years of experience, we operate an interconnected network of assets that forms a fully integrated value chain, helping our customers across North America maximize the value of their energy products. Our business is built on a predominantly fee-for-service model, offering reliable, high-quality solutions while maintaining a strong focus on safety, environmental responsibility, and operational excellence.

As one of Canada's largest midstream companies, Keyera is known for its industry-leading safety performance, achieving a zero Lost Time Incident Frequency (LTIF) for the second consecutive year in 2024. Our team of over 1,700 people ensures the safe and efficient delivery of energy that powers homes, businesses, and industries. Committed to responsible growth, sustainability, and strong partnerships, we continue to create lasting value for our customers, stakeholders, and the communities where we operate.

Keyera has been in consultation with IAAC regarding the proposed Josephburg Project since December 2024, and during that consultation IAAC confirmed the Josephburg Project meets the provisions of the *Physical Activities Regulations* specifically, *37(a) The construction, operation, decommissioning and abandonment of one of the following: a new oil refinery, including a heavy oil upgrader, with an input capacity of 10 000 m^3/day or more.*

The proposed Josephburg Project is designed to take condensate (C5+) from Keyera's existing KAPS pipeline as a feedstock and process it using a Condensate Distillation Unit (CDU) to separate the condensate into various hydrocarbon streams, such as pentanes (light condensate), C8+ (midweight condensates), Liquid Petroleum Gas (LPG) and Atmospheric Bottoms (ATB). The CDU will not make use of chemical processes like those found in a refinery; rather the various products will be processed as fractions within a range of boiling points known as 'cuts' by separating the lighter fractions from the heavier fractions. Therefore, while the Josephburg Project has been designated by IAAC as a refinery, the facility design is more similar to the design of a fractionation facility.

The proposed Project is designed to process 15,900 m^3/day (100,000 standard barrels per day or BPSD) of condensate feedstock. C8+ produced by the facility will be transported via pipeline to a nearby rail terminal (location to be confirmed). Lighter condensate produced by the facility will be returned to the existing Fort Saskatchewan Condensate System (FSCS). The ATB (remaining hydrocarbons left over from distillation of C8+ and lighter condensate) will be transported via pipeline to the existing Edmonton Tank and Pipeline System. LPG will move by pipeline to connect to Keyera's NGL Pipeline System.

The Josephburg Project will be located entirely on Keyera-owned lands in SW 19 and NW 18-55-21 W4M within the Industrial Heartland-Designated Industrial Zone (IH-DIZ) in Strathcona County, Alberta (see Figure 1-1). Keyera operates several existing facilities in the vicinity of the proposed Josephburg Project site (see Figure 1-2) and therefore has extensive experience working with local stakeholders including landowners, Indigenous groups, industry, Strathcona County, the City of Fort Saskatchewan, the Alberta Energy Regulator (AER), Alberta Environment and Protected Areas (AEPA), Alberta Arts, Culture and Status of Women (ACSW), the Aboriginal Consultation Office (ACO), Northeast Capital Industrial Association (NCIA), Department of Fisheries and Oceans (DFO), Environment and Climate Change Canada (ECCC), Transport Canada (TC), and Nav Canada. Keyera's stakeholder consultation for the Project is described in this IPD and will be ongoing throughout the Project design, planning and approval process.

The Josephburg Project lands have been the subject of extensive environmental assessments over the past 18 years, including two complete provincial Environmental Impact Assessments (EIAs) which were approved by AEPA

(or legacy entity at the time). The projects that were assessed under EIAs were not constructed; however, it is noted the proposed activities were significantly larger in nature and scale than the proposed Josephburg Project. Further, Keyera as a company has performed many other assessments in the Project area in support of pipelines and adjacent facilities. Specific environmental studies and assessments for the proposed Josephburg Project will be completed by Keyera in support of regulatory approvals and planning; however, this extensive previous work provides substantial information to understand the baseline environmental and socio-economic setting in the area, and to inform the prediction of potential effects.

The Project will be located entirely on previously disturbed private land (farmstead and pasture). Potential environmental effects from the construction and operation of the Project are expected to be limited to air emissions, noise, minor alteration or loss of wildlife habitat, and replacement of a small number of wetlands. Potential socio-economic effects of the Josephburg Project are anticipated to be beneficial, or negligible if adverse. There are no watercourses within the Project footprint, or surface connections to other watercourses; therefore, there are no potential impacts to fish or fish habitat. Potential effects on migratory birds, other wildlife, and wildlife habitat will be mitigated through the completion of biophysical surveys in 2025 and pre-construction sweeps prior to construction.

Keyera provided Project Notification Packages to 17 Indigenous groups of which, 11 communities were consulted, and 6 communities were notified as outlined by IAAC. Keyera continues to engage with the interested groups and has followed up with consulting groups that have not yet responded to initial notifications. Seven groups have confirmed an interest in the project. To date, a number of those groups have advised that they are considering conducting site visits to the proposed location, and a number have expressed interest in being included in the Project's procurement process. Keyera has informed interested groups that they will work to facilitate site assessments and participation in the project's procurement processes. To date, no site-specific concerns or impacts to Treaty and/or Indigenous Rights have been raised by the Indigenous groups regarding the Josephburg Project. Keyera will continue consultation and engagement throughout project development.

Keyera estimated the direct sources of Greenhouse Gas (GHG) emissions associated with two years of construction activities, one-year operational emissions and two-years decommissioning, based on the Project information available at the planning stage. The estimated GHG for two years of construction is 5,808 tonnes CO_2e, 192,228 tonnes/year CO_2e during operations and 5,808 tonnes CO_2e for two-years decommissioning. The estimated total Project GHG emissions (two years construction, 1-year annual operations and two-years decommissioning combined) are 203, 844 tonnes CO2e.

There are no federal lands nearby and the Josephburg Project does not cross or impact other provinces. There is no federal funding planned or required for the Josephburg Project. Outside of IAA requirements, there are no additional Federal regulatory approvals anticipated to be required for the Josephburg Project other than possible notification to NavCanada and Transport Canada for the flare stack.

A robust suite of provincial and municipal laws and regulations provide the regulatory context to ensure Project and cumulative effects are mitigated. Keyera has worked extensively with Alberta Environment and Protected Areas (AEPA) and the Alberta Energy Regulator (AER) to clarify the provincial regulatory jurisdiction. In June 2025, the AEPA confirmed the project does not meet the definition of an oil refinery under the *Activities Designation Regulation* (Alberta Regulation 276/2003) or the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* (Alberta Regulation 111/1993). The project will be regulated under the *Environmental Protection & Enhancement Act* (EPEA) by the Ministry of AEPA. Keyera will be completing further engineering, biophysical, air emissions, noise and safety assessments in 2025 prior to applying to provincial and municipal regulators for permits and approvals. Stakeholder and Indigenous consultation will continue throughout the Project lifecycle, as required by regulations. These provincial and municipal processes will address all potential impacts of the Josephburg Project on areas of federal jurisdiction (which, as noted above, are expected to be negligible).

Document Layout

The information in this IPD meets the requirements of the *Guide to Preparing an Initial Project Description and a Detailed Project Description Annex I - Contents of an Initial Project Description* (Government of Canada, 2024a), which adheres to the prescribed information set out in Schedule 1 of the *Information and Management of Time Limits Regulations* (Government of Canada, 2019b).

Within this IPD, blue text beneath each section heading contains the guidance language from *Annex I – Contents of an Initial Project Description* for ease of review and to demonstrate concordance with the requirements of Annex I.

1. Part A: General Information

1.1 Project Name, Type/Sector and Proposed Location

The project's name, type or sector and proposed location. When naming the project, proponents are encouraged to include a unique identifier (i.e. "Moose Jaw", "Crow's Nest", "Victory"), the main resource or sector that is the focus of the project (i.e. "gold", "hydroelectric", "all season"), and the type of project (i.e. "mine", "marine terminal", "road").

General Project information is provided in Table 1-1. Figures 1-1 and 1-2 illustrate the Josephburg Project regional setting and proposed Project development area.

Table 1-1 General Project Information

Project Name	Josephburg Condensate Fractionation Project
Type/Sector	Condensate Distillation Facility
Proposed Location of the Project	Alberta Township System (ATS) Location: SW 19-55-21 W4M and NW 18-55-21 W4 Approximate Global Positioning System (GPS) Coordinate: 53.762744° Latitude -113.120924° longitude Municipality: Strathcona County, Alberta, Canada Project site is currently zoned as IHH (Heavy Industrial – Heartland) (Strathcona County, 2025a) Current Land Use: Agriculture

1.2 Proponent Name and Contact Information

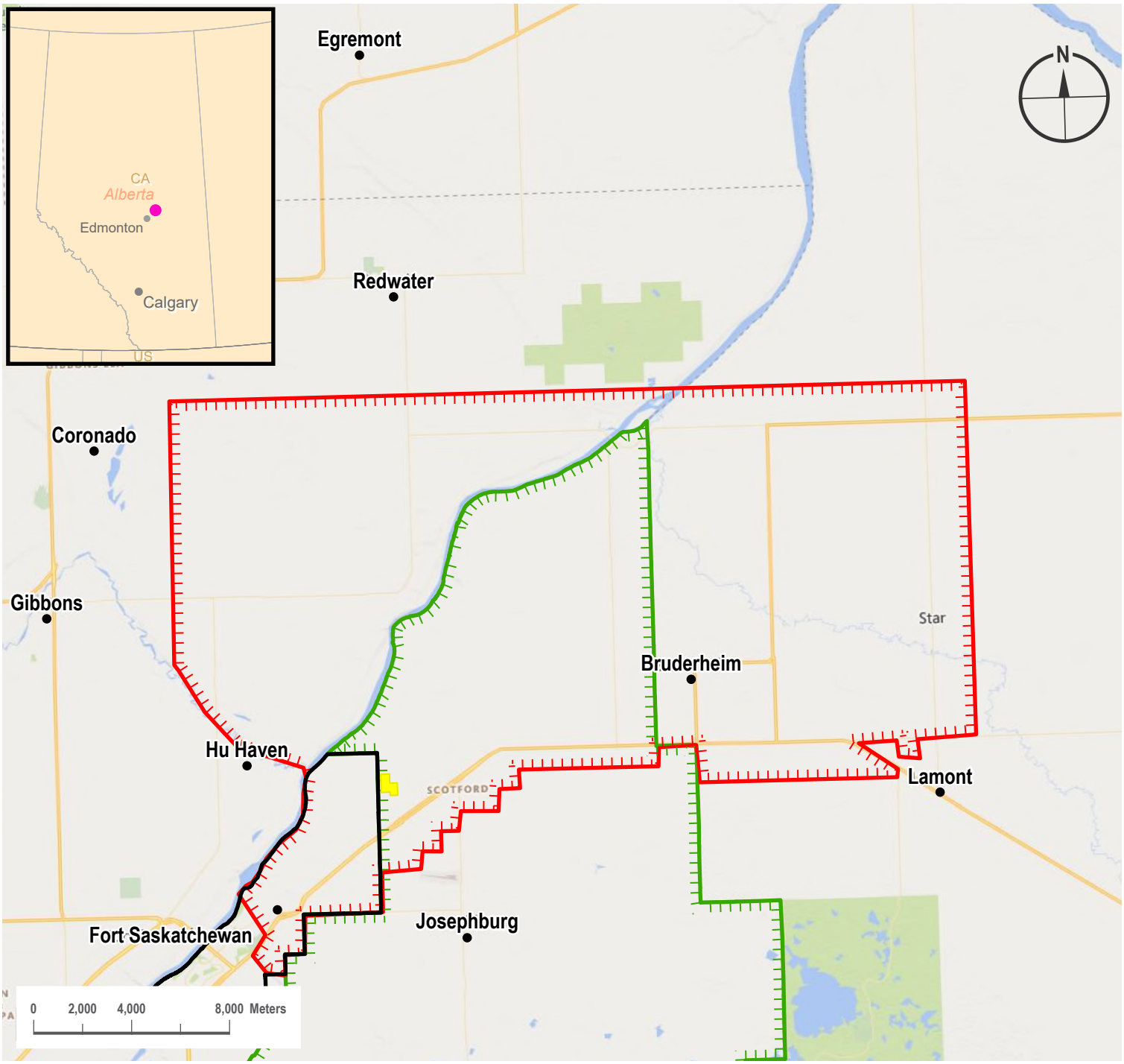
The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.

The Proponent's name and contact information are provided in Table 1-2.

Table 1-2 Proponent Name and Contact Information

Company	Primary Representative
Keyera Energy Ltd. The Ampersand, West Tower 200 144 – 4th Avenue SW Calgary, Alberta T2P 3N4 403-205-8300 www.keyera.com	Jauna Anstett, B.Sc., P. Biol. Regulatory Authorizations Specialist Office: 403-205-8300 Email: Regulatory_Authorizations@keyera.com

FIGURE 1-1: REGIONAL LOCATION



Disclaimer:

LEGEND

- Keyera Josephburg Condensate Fractionation Project Footprint
- Industrial Heartland: Designated Industrial Zone (East portion)
- Strathcona County
- City of Fort Saskatchewan Boundary

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REVISIONS

Date	Revised by	Checked by
2025-05-27	DG	JG

1 - Issued for Regulatory Submission
Issued figure for regulatory submission

Date	Revised by	Checked by

KEYERA JOSEPHBURG CONDENSATE FRACTIONATION PROJECT

Client: KEYERA

Figure Title: Figure 1-1
Regional Location

Scale: 1 : 230,000
1 centimeter equals 2.3 kilometers

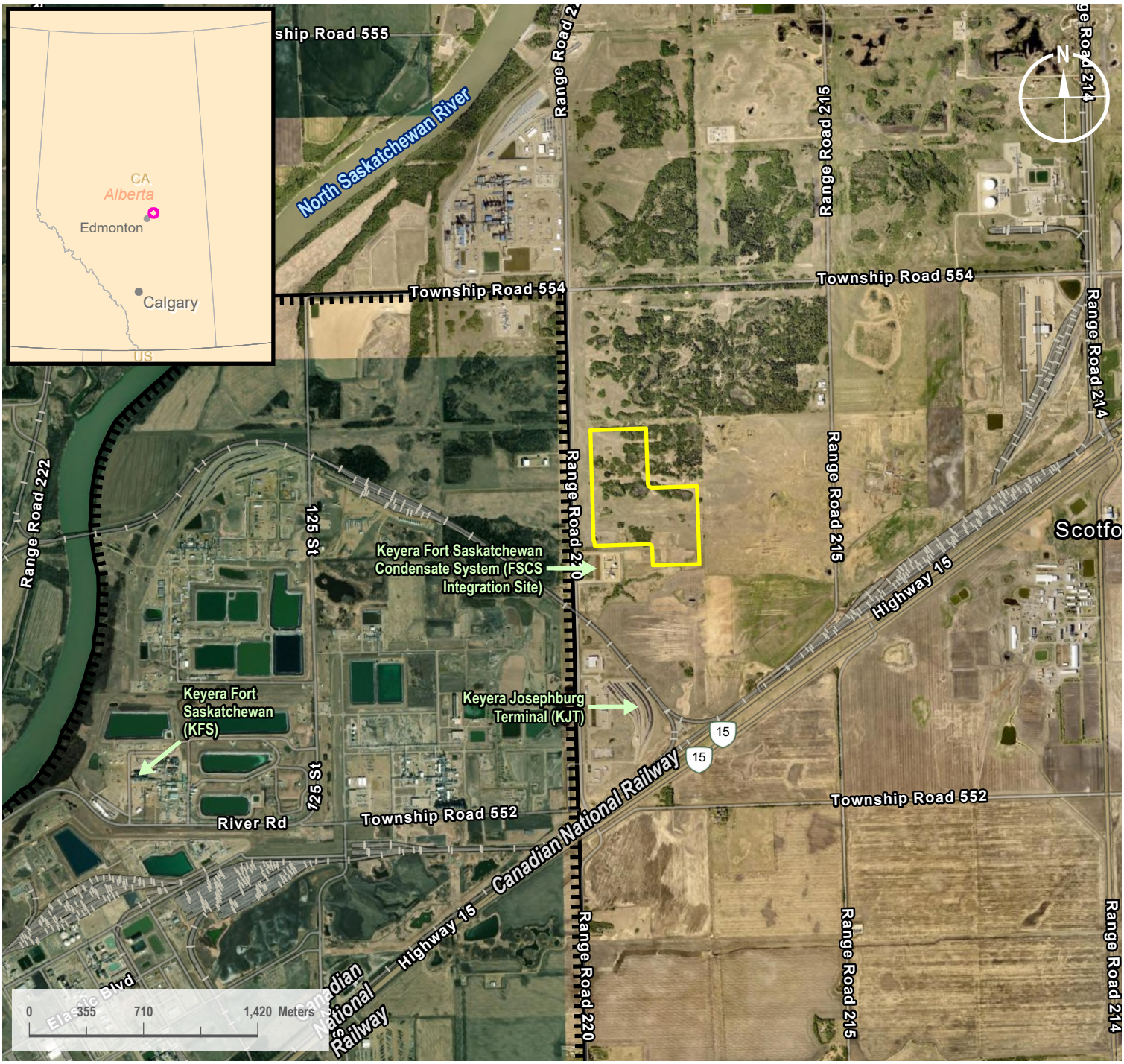
Projection: Transverse Mercator
NAD 1983 10TM AEP Forest

Sheet: 1
1 of 1

Drawing Number: 1002-03-003
Revision 1

Path: G:\Projects\OGY-240142944-00 - Keyera - Prism CS+ Splitter\0800_GEO\10_Mapping\02 Overview\03 Environmental\1002-03-003\1002-03-003.aprx

FIGURE 1-2: PROJECT LOCATION



Disclaimer:

LEGEND

- Keyera Josephburg Condensate Fractionation Project Footprint
- City of Fort Saskatchewan Boundary

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REVISIONS

Date	Revised by	Checked by
2025-05-27	DG	JG

1 - Issued for Regulatory Submission
Issued figure for regulatory submission .

Date	Revised by	Checked by

KEYERA JOSEPHBURG CONDENSATE FRACTIONATION PROJECT

Client: KEYERA

Figure Title: Figure 1-2
Project Location

Scale: 1 : 35,000
1 centimeter equals 0.35 kilometers

Projection: Transverse Mercator
NAD 1983 10TM AEP Forest

Sheet: 1
1 of 1

Drawing Number: 1002-03-003
Revision 1

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1.3 Summary of Engagement

A summary of any engagement undertaken with any jurisdiction or other party, including a summary of the key issues raised and the results of engagement and brief description of any plan for future engagement.

This should include any engagement with public or other participants.

Strong relationships are built on trust, understanding, and respect. It is only by listening, learning, and sharing that Keyera can have meaningful dialogue and create mutually beneficial opportunities. Keyera seeks to understand the perspectives of local communities and find opportunities to contribute to their overall health and economic success. Keyera's approach to community engagement is grounded in its core values and centered around three key aspects:

- Promote meaningful dialogue and engagement.
- Enhance economic and social well-being.
- Invest in community.

In addition to adhering to all regulated stakeholder engagement processes, Keyera is committed to engaging with communities where it operates. For Projects, Keyera ensures early and continuous engagement throughout the life of a Project. Formal engagement plans are created that guide how Keyera communicates, engages, addresses interests, and delivers on its commitments. Keyera also participates in community-led initiatives, such as local forums, community meetings, and local industry association discussions.

Keyera operates several existing facilities in the vicinity of the Josephburg Project site and therefore has extensive experience working with local stakeholders including landowners, Indigenous groups, industry, Strathcona County, the City of Fort Saskatchewan, the Alberta Energy Regulator (AER), Alberta Environment and Protected Areas (AEPA), Alberta Arts, Culture and Status of Women (ACSW), the Aboriginal Consultation Office (ACO), Northeast Capital Industrial Association (NCIA), Department of Fisheries and Oceans (DFO), Environment and Climate Change Canada (ECCC), Transport Canada (TC), and Nav Canada. Keyera's consultation with all stakeholders will be ongoing throughout the life of the project, as per regulatory requirements.

As described further in Section 4.3, Keyera met both provincial regulators (AER and AEPA) and IAAC in December 2024 to discuss the Josephburg Project.

A summary of Keyera's ongoing engagement activities is provided in Table 1-3.

Table 1-3 Summary of Engagement

Stakeholder	Consultation Comments
Alberta Energy Regulator (AER)	Discussed Josephburg Project classification on December 5, 2024. A determination was received in June 2025 advising the Josephburg Project would be regulated by AEPA.
Alberta Environment and Protected Areas (AEPA)	Discussed Josephburg Project classification on December 5, 2024, April 16, 2025 and June 4, 2025. A determination was received in June 2025 advising the Josephburg Project would regulated under the *Environmental Protection & Enhancement Act* (EPEA) which is governed by the Ministry of AEPA.
Impact Assessment Agency of Canada (IAAC)	Met on December 11, 2024, to present the Josephburg Project. Keyera received a letter dated December 20, 2024, saying that the Josephburg Project is designated under the Act.
Strathcona County	Keyera met with the County on May 5, 2025, to discuss Keyera's plans in the region. A pre-application meeting will be held prior to submission of a development permit application.
City of Fort Saskatchewan	As the Josephburg Project is located on the inter-municipal boundary, the City will be notified of the development permit application to Strathcona County.

Stakeholder	Consultation Comments
Aboriginal Consultation Office (ACO)	Keyera met with the ACO on May 5, 2025, and submitted a pre-consultation assessment on May 9, 2025. On June 5, 2025 the ACO determined no consultation is recommended by the Province.
Alberta Culture and the Status of Women (ACSW)	Keyera received approval under the *Historical Resources Act* for all Josephburg Project lands on September 4, 2019 (HRA number 46680-19-0029-0001).
Northeast Capital Industrial Association (NCIA)	The NCIA is a member of several regional cumulative effects monitoring programs for air quality, ground and surface water in the Industrial Heartland of Alberta. It also manages a regional noise model. The Josephburg Project is located within this area. Keyera is a member and works with the NCIA for their other facilities and will do so for the Josephburg Project.
Industrial Heartland-Designated Industrial Zone (IH-DIZ)	Keyera meets regularly with the IH-DIZ as an industry representative on the regulatory group. The project has been discussed, and ongoing consultation is underway including potential updates to provincial regulations to account for projects similar to the Josephburg Project.
Landowners and Residents	Keyera owns the Project lands and all sections immediately north, east and south. They are currently leasing some of the land to the Scotford Hutterite Colony. Lands west of the Project, across the municipal road (Range Road 220), are owned by Dow Petrochemical and Aux Sable. Landowner and resident consultation will be ongoing as part of the project planning and development.
Industry	Keyera has a long working relationship with other companies operating in the Josephburg Project area. As part of the ongoing consultation, nearby industry will be notified, as per regulatory requirements.

1.4 Potentially Affected Indigenous Groups

A list of Indigenous groups that may be affected by the carrying out of the project, a summary of any engagement undertaken with the Indigenous peoples of Canada, including a summary of key issues raised and the results of the engagement, and a brief description of any plan for future engagement.

In an email dated January 16, 2025, IAAC identified for Keyera the Indigenous groups to be either consulted or notified for the Josephburg Project.

Notification of Consultation and Project Notification packages were e-mailed to all 17 Indigenous groups listed in Table 1-4 on February 19 and 20, 2025. Keyera's Indigenous Relations team requested delivery and read receipts from each recipient. These packages included a map of the proposed Project footprint, information about the Project design and purpose, proposed schedule, and an offer to meet to discuss the Project further. Keyera followed up with all Indigenous groups via email on May 29, 2025 to provide an updated plot plan, offer to continue engagement and let them know the IPD was being submitted.

A summary of Keyera's consultation with potentially affected Indigenous groups to date is provided in Table 1-4. To date, no site-specific issues or impacts to Treaty or Indigenous Rights have been raised by Indigenous groups regarding the proposed Project.

Keyera will continue consultation with those Indigenous groups that express interest in the Project. In addition, Keyera will follow-up with all groups that were notified but have not yet responded. Engagement efforts will remain open throughout the life of the Project, including with any groups that indicate interest at later stages, as required by regulations.

Additionally, Keyera met with the provincial Aboriginal Consultation Office (ACO). On June 5, 2025 the ACO determined no consultation is recommended by the Province.

Table 1-4 Potentially Affected Indigenous Groups

Indigenous Group	Communication Dates and Type	Key Issues, Recommendations Discussed
Consulting Group		
Alexander First Nation (AFN)	A notification package was sent to AFN on February 19, 2025 Keyera followed up with AFN on March 10, 2025	No response received from AFN to date.
Alexis Nakota Sioux Nation (ANSN)	A notification package was sent to ANSN on February 19, 2025. Keyera followed up with ANSN on March 10, 2025	No response received from ANSN to date.
Buffalo Lake Métis Government (BLMG)	A notification package was sent to BLMG on February 19, 2025. Keyera followed up with BLMS on March 10, 2025	No response received from BLMG to date.
Enoch Cree Nation (ECN)	A notification package was sent to ECN on February 19, 2025. A follow up email was sent on March 10, 2025. A meeting was held with ECN via video conference on March 24, 2025; a second meeting was held on April 25, 2025.	ECN advised it is unlikely that they would have issues or site-specific concerns with this Project; however, they will request that ECN's Consultation team perform a site visit at the proposed location. Keyera advised that they agreed with this approach and will follow up with ECN to confirm logistics.
Kehewin Cree Nation (KCN)	A notification package was sent to KCN on February 19, 2025. Keyera followed up with KFN on March 10, 2025	No response received from KCN to date.
Lac Ste Anne Métis Community (LSAM)	A notification package was sent to LSAM on February 19, 2025. An in-person meeting was held on April 7, 2025.	LSAM did not raise any site-specific concerns with the Project. LSAM advised that their leadership team will take back the information for further discussion and will follow-up with Keyera in the near future. Keyera noted that it intends to continue engaging LSAM through construction and during the operational phase of the Project.
Michel First Nation (MIFN)	A notification package was sent to MFN on February 19, 2025. Keyera followed up with MIFN on March 10, 2025	No response received from MFN to date.
Otipemisiwak Métis Government (OMG)	A notification package was sent to OMG on February 19, 2025. An in-person meeting was held with both OMG District 11 and St. Albert-Sturgeon County Métis Local 1904 on March 26, 2025. Keyera emailed OMG on April 14, 2025, to schedule a follow up meeting. Keyera and OMG District 11 met again April 16th, 2025, with further discussion to follow.	During this meeting, Keyera, OMG District 11, and St. Albert-Sturgeon County Métis Local 1904 went through the details of the proposed Project and the previously provided mapping. St. Albert-Sturgeon County Métis Local 1904 expressed interest taking part in wildlife related studies. Keyera noted that they're open to doing so. Keyera noted that it intends to continue engaging OMG and the St. Albert-Sturgeon County Métis Local 1904 through construction and during the operational phase of the Project. Keyera has shared that there will be wildlife and field studies taking place through spring

Indigenous Group	Communication Dates and Type	Key Issues, Recommendations Discussed
		and summer 2025. OMG District 11 is communicating plans internally and is to follow-up with Keyera regarding community interest in participating.
Paul First Nation (PFN)	A notification package was sent to PFN on February 19, 2025. Meeting held in person on April 2, 2025. Further email correspondence to PFN was sent on April 14, 2025. Keyera and PFN to continue discussions.	Keyera and PFN reviewed and discussed Project details and mapping. PFN advised that they would like to conduct a site visit. Keyera agreed. They may also request to have environment monitors on-site during construction. Keyera agreed.
Saddle Lake Cree Nation (SLCN)	A notification package was sent to SLCN on February 19, 2025. Keyera followed up with SLCN on March 10, 2025	No response received from SLCN to date.
Whitefish (Goodfish) Lake First Nation #128 (WFLN128)	A notification package was sent to WFLN128 on February 20, 2025. A second email was sent on February 24, 2025, and a meeting was held with WFLN128 on February 26, 2025. Keyera sent a follow up email on March 14, 2025, to confirm if the Consultation department was interested in meeting to discuss the Project further.	WFLN128 expressed that their main interest in the project is to be included in contracting opportunities during the construction phase of the Project. Keyera and WFLN128 have a long-standing relationship and meet quarterly to discuss Keyera Projects and upcoming contracting opportunities that are suited to their businesses and partners.
Notification Group		
Ermineskin Cree Nation (ERCN)	A notification package was sent to ERCN on February 20, 2025. ERCN replied via email on February 20, 2025, requesting Keyera to meet with ERCN's Consultation department. Keyera followed up on February 21 and March 19, 2025, but to date a meeting has not been set.	ERCN, in their email, advised Keyera that they will want to perform a site assessment on the Project.
Foothills Ojibway First Nation (FOFN)	A notification package was sent to FOFN on February 20, 2025	No response received from FOFN to date.
Lakeland Métis Nation (LMN)	A notification package was sent to LMN on February 20, 202. A follow up meeting was held on June 5, 2025.	LMN advised Keyera that they may want to perform a traditional land use study/site visit. Keyera and LMN will meet quarterly going forward on this project.
Louis Bull Tribe (LBT)	A notification package was sent to LBT on February 20, 2025	No response received from LBT to date.
Montana First Nation (MFN)	A notification package was sent to MFN on February 20, 2025	No response received from MFN to date.
Samson Cree Nation (SCN)	A notification package was sent to SCN on February 20, 2025. A follow up meeting was held on March 3, 2025.	Keyera and SCN reviewed and discussed Project details and mapping. SCN did not raise any site-specific concerns with the Project. They advised that they may want to conduct a site assessment of the location. Keyera and SCN agreed to plan a subsequent meeting. Keyera followed up March 3 and April 10, 2025, but the second meeting has not yet been confirmed.

1.5 Studies and Plans

Any study or plan relevant to the project that is being or has been conducted of the region where the project is to be carried out, including any Regional Assessment carried out under the Impact Assessment Act, or by any jurisdiction including by or on behalf of an Indigenous governing body, where the study or plan is available to the public.

Proponents are advised to contact the Agency during the preparation of an Initial Project Description for information regarding any regional studies that may be relevant.

Based on correspondence between Keyera and the IAAC, there are no known studies or plans directly relevant to the Josephburg Project. The *Strategic Assessment on Climate Change* (Government of Canada, 2020b) has been addressed in this report in the context of GHG estimates and net zero (Section 5.5).

Under Provincial jurisdiction, the lands have been subject to multiple detailed assessments over the previous 18 years including two complete EIAs for previous projects that were approved but never constructed (Stantec Consulting Ltd., 2013) (Total E&P Canada Ltd, 2009).

There are several regional environmental initiatives and studies which have been conducted, as well as governing policies, directives, and frameworks, which are relevant/applicable to the Josephburg Project and are publicly available:

Higher-Level Plans for Land Management

- *Terms of Reference for Developing the North Saskatchewan Regional Plan* (GoA, 2014a): Outlines the terms of reference for developing the North Saskatchewan Regional Plan (NSRP). The NSRP has been drafted but has not yet been approved. The last update to the NSRP was public consultation that occurred in 2018. The Josephburg Project is located within the NSRP area.
- *Profile of the North Saskatchewan Region* (GoA, 2014b): Outlines the key social, economic, and environmental conditions in the North Saskatchewan Region that need to be considered in the development of the NSRP.
- *Edmonton Metropolitan Region Growth Plan* (Edmonton Metropolitan Region Board, 2017): Establishes the framework for coordinating responsible development within the Edmonton Metropolitan Region, where the Josephburg Project is located.
- *Alberta's Industrial Heartland* (Alberta's Industrial Heartland Association, 2025): Alberta's Industrial Heartland Association (AIHA) is a consortium of five municipal partners: the City of Fort Saskatchewan, Lamont County, Strathcona County, Sturgeon County, and the City of Edmonton, as well as three associate members: the Town of Bruderheim, the Town of Gibbons, and the Town of Redwater, who work together to support and drive capital investment in the Industrial Heartland. The Josephburg Project is located within the Industrial Heartland, within Strathcona County.
- *Industrial Heartland Designated Industrial Zone Directive* (GoA, 2022a): Outlines the standard approval conditions for industrial facilities operating within the Industrial Heartland-Designated Industrial Zone (IH-DIZ). The Josephburg Project is located within the IH-DIZ.
- *Industrial Heartland Designated Industrial Zone Framework* (GoA, 2022b): Designates the Industrial Heartland as Alberta's first Designated Industrial Zone (DIZ). The Framework outlines the principles and operating policies for managing the DIZ including coordinated municipal zoning, threshold requirements, infrastructure capacity, harmonized permitting and bylaws, and environmental management, and provides guidance on processes and protocols for working within the DIZ. The Josephburg Project is located within the IH-DIZ.
- The IH-DIZ is working on a *Zone-Wide Environmental and Socio-Economic Assessment* to establish reference conditions for environmental and socio-economic valued components including the

quantification and management of cumulative regional effects. The purpose is to create efficiency in the provincial EIA process (GoA, 2025a).

- *Strathcona County Forwarding our Future. Together.* Municipal Development Plan, Bylaw 20-2017 (Strathcona County, 2017): The Municipal Development Plan prioritizes growth and development within the County, while ensuring that developments proceed responsibly, in a manner that is viable over the long term and provides for conservation of environmentally significant areas.
- *Strathcona County Protocol* (Strathcona County, 2022b): Outlines the municipality and community expectations for energy companies working in Strathcona County.
- *Strathcona County Heartland Industrial Area Structure Plan, Bylaw 24-2018* (Strathcona County, 2022c): Describes the vision for development within Strathcona County's portion of Alberta's Industrial Heartland and outlines policies to minimize land use conflict, impacts to the natural environment, and to promote responsible development activities.

Air Quality

- *Capital Region Air Quality Management Framework for Nitrogen Dioxide (NO2), Sulphur Dioxide (SO2), Fine Particulate Matter (PM2.5), and Zone (O3*) (AESRD, 2012): Identifies four key air contaminants of concern for the Capital Region (which includes Edmonton and 25 neighboring municipalities) and outlines the shared vision for ambient air quality management in the Capital Region. The Josephburg Project is located within the Capital Region.
- *Heartland Air Monitoring Partnership* (Heartland Air Monitoring Partnership, 2025): The Heartland Air Monitoring Partnership monitors 18 substances, known to be emitted by sources within the airshed, and compares recorded air quality to the provincial Ambient Air Quality Objectives. The Josephburg Project is within the Industrial Heartland.
- *Air Emissions Requirement Policy for the Industrial Heartland Designated Industrial Zone* (GoA, 2022c): Identifies emission requirements and targets for new and existing industrial air emission sources within the IH-DIZ. The Josephburg Project is within the IH-DIZ.
- North Capital Industrial Association (NCIA, 2025a): The NCIA is part of several regional frameworks designed to manage cumulative effects in the Josephburg Project area. These include the Fort Air Monitoring Partnership, Water Management Framework for the Industrial Heartland and Capital Region, and biannual groundwater reporting. It also manages the Regional Noise Management Plan and model.
- Reduction in the Release of Volatile Organic Compounds Regulations (Petroleum Sector) (SOR/2020-231) (Government of Canada, 2020a). These regulations mandate leak detection and repair programs to reduce emissions from the petroleum sector, including refineries.
- Reduction in the Release of Volatile Organic Compounds (Storage and Loading of Volatile Petroleum Liquids) Regulations (SOR/2025-88) (Government of Canada , 2025). These regulations mandate petroleum storage tank and loading operations to provide a national approach to reducing VOCs.

Water Management

- *Water for Life: Alberta's Strategy for Sustainability* (GoA, 2003): provides the overarching vision for water management within the province of Alberta. The key outcomes of the strategy are to maintain a healthy and sustainable water supply for our environment, communities, and for our economic wellbeing. To support this overall strategy, Provincial Water Advisory Councils, Watershed Planning and Advisory Councils, and Watershed Stewardship Groups work in partnership with the Government of Alberta (GOA) to achieve the outcomes of the Strategy.
- *Alberta Wetland Policy* (GoA, 2013) and associated Directives: The Alberta Wetland Policy and associated directives outline how wetlands are identified, classified, and managed under the provincial

Water Act. The policy prioritizes avoidance as the primary and preferred response to impacts on wetlands. Where avoidance is not possible, minimization of impacts is expected. As a last resort, where avoidance and minimization are not possible, wetland replacement is required.

- *North Saskatchewan Region Surface Water Quality Management Framework for the North Saskatchewan and Battle Rivers* (GoA, 2022d): Provides guidance to manage cumulative effects with respect to water quality within the mainstem of the North Saskatchewan and Battle Rivers. Outlines key indicators of water quality and their thresholds and management response processes to be implemented should indicators exceed thresholds. The Josephburg Project is located within the North Saskatchewan watershed.
- *Water Management Framework for the Industrial Heartland and Capital Region* (Alberta Environment, 2016a): An integrated water management framework to address cumulative effects on the environment, and specifically on the North Saskatchewan River within the IH and Capital Region. Promotes protection of and improvement (where possible) of water quality and promotes the adoption of water conservation practices. The Josephburg Project is within the Industrial Heartland.
- *Industrial Heartland Designated Industrial Zone Water Quality Management Program* (GoA, 2022e): Outlines the regulatory process for new and existing industries in the IH-DIZ, and outlines wastewater and runoff management plans to minimize cumulative effects of clustered industry on the receiving environment. The Josephburg Project is within the IH-DIZ.
- *Strathcona County Water Conservation, Efficiency, and Productivity Plan* (Strathcona County Utilities): While focused on residential water uses, this plan describes the need for conservation and efficient use of water within Strathcona County, and is used to share information on potential water saving activities with industrial users within the County.
- *Astotin Creek Resiliency Study* (WSP, 2022): Includes an assessment of the state of the watershed, and provides multiple strategies for the County to implement to reduce flood and drought risk in the Astotin Creek watershed. The Josephburg Project is located outside of but near the Astotin Creek watershed.

Other

- *Guideline for Industrial Operators in the Heartland Designated Industrial Zone for Conservation, Off-Site Storage and Off-Site Use of Topsoil* (GoA, 2022f): Provides guidance to industrial users regarding off-site storage of topsoil based on the conservation and reclamation requirements under the provincial *Environmental Protection and Enhancement Act* (EPEA).
- *Elemental Sulphur Management Framework* (GoA, 2009): Outlines strategies for managing elemental sulphur, a by-product of oil and gas processing and a commodity on the world market, and potential cumulative effects of elemental sulphur storage within the Industrial Heartland.
- *Northeast Capital Industrial Association Regional Noise Management Plan and Regional Noise Model* (NCIA, 2025b): Outlines the regional approach for managing environmental noise from industrial activity in the northeast capital industrial area, of which the Josephburg Project is a part. The regional noise model tracks typical noise levels in the AIH.

1.6 Strategic Assessments

Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the Act.

Proponents are advised to contact the Agency during the preparation of an Initial Project Description for information regarding any strategic assessments that may be relevant.

Based on correspondence between Keyera and the IAAC, there are no known studies or plans directly relevant to the Josephburg Project. However, the *Strategic Assessment on Climate Change* (Government of Canada, 2020b) has been addressed in this report in the context of GHG estimates and net zero (see Section 5.5).

2. Part B: Project Information

2.1 Purpose, Need, and Potential Benefits

A statement of purpose of and need for the project, including any potential benefits.

The purpose of the project is what is to be achieved by carrying out the project, including any objectives the proponent has in carrying out the project.

The need for the project is the opportunity that the project is intended to solve or satisfy. That is, the "need for" establishes the fundamental justification or rationale for the project.

The "purpose of" and "need for" the project should be established from the perspective of the project proponent and provide the context for the consideration of alternatives to and alternative means (below).

2.1.1 Purpose

The purpose of the proposed Josephburg Project is to take condensate produced from the Montney Duvernay region (Northwestern Alberta) that is flowing on Keyera's existing KAPS Condensate pipeline and fractionate it to higher value products in the Alberta Industrial Heartland where the pipeline currently terminates. The higher value products include NGL's, pentanes (a lighter condensate), C8+ (midweight condensates), and atmospheric bottoms (ATB). The facility processing will process these 'cuts' utilizing a CDU. The Project will bring value to the Alberta condensate system with a higher value diluent being supplied locally to market.

The Josephburg Project will be on Keyera-owned land in Strathcona County (Figures 1-1 and 1-2). Locating the facility on this land will reduce the overall impacts to land as this area is heavily developed and existing Keyera infrastructure can be utilized including pipelines, tankage, rail terminals and adjacent facilities.

2.1.2 Need

Locally produced condensate in Alberta is used as diluent for oilsands production to help facilitate bitumen flow to market. As oilsands production increases, more condensate is required to fill the growing demand. Condensate can be of various qualities, specifically density. As the density increases, the diluent requirement is higher, thus, lighter condensate is preferred.

The Josephburg Project will fractionate the condensate into higher value products, including a lighter condensate which is required by oil sands end users to move their bitumen production.

Additionally, the Josephburg Project will produce three other intermediate products –ATB, C8+ and small amounts of LPG. The ATB will be pipelined to the Edmonton region where it will co-mingled with similar product for processing at a future refining location. C8+ has a wide range of uses and will be sold based on best available sale price available either domestically or internationally. The LPG will be sent to Keyera's existing propane and butane system. By fractioning the condensate, the Josephburg Project will create new products in demand in the current market.

In regard to greenhouse gas emissions, the facility has been designed to utilize electric instead of gas-powered equipment (when practicable), optimize heat recovery, use high efficiency heating and also includes a vapor recovery unit to capture emissions that may be generated from tankage. Additionally, technologies for NOx reduction are being evaluated to ensure emissions meet regulations in place in the IH-DIZ. Environmental efficiency and economic viability analysis is part of the ongoing design to ensure regulatory requirements for emissions, wastes and noise are met or exceeded. The project has also been sited to avoid significant environmental impacts.

2.2 Physical Activities Regulations

The provisions in the schedule to the Physical Activities Regulations describing the project, in whole or in part.

Proponents must detail how the project meets the description, threshold (e.g., provide the length of new right of way) and the criteria in any of the other provisions.

Indicate whether the designated project is a component of a larger project that is not listed in the Project List.

A letter was sent from IAAC to Keyera on December 20, 2024, confirming that IAAC has determined the proposed Josephburg Project meets the description and applicable threshold of Section 37 of the *Physical Activities Regulation*. Specifically:

> *37(a) The construction, operation, decommissioning and abandonment of one of the following: a new oil refinery, including a heavy oil upgrader, with an input capacity of 10 000 m^3/day or more.*

The Josephburg Project has been defined as a refinery by IAAC and will have an input capacity larger than 10,000 m^3/day; therefore, it is subject to the *Physical Activities Regulation.* Therefore, this Initial Project Description is being submitted to IAAC for their review and circulation to other stakeholders.

The Josephburg Project is not part of a larger project subject to the IAA.

While the Josephburg Project has been defined as a refinery due to the exclusion of intermediate processing activities in the current regulations, it should be noted it will not use most of the processes common to a refinery (e.g., coker, crackers), but rather physical separation via distillation. It is most similar to a fractionation plant, which is under Provincial regulatory authority.

The physical footprint of the proposed Project is small (approx. 48.5 ha) as is the expected greenhouse gas emissions profile (see Section 5.5).

2.3 Activities, Infrastructure, Structures, and Physical Works

A list of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation, decommissioning of the project.

Include existing structures or related activities that will form part of or are required to accommodate or support the designated project.

For example, activities during planning, engineering, site preparation or construction might include, but are not limited to, land clearing, excavating, grading, de-watering, directional drilling, dredging and disposal of dredged sediments, infilling, and installing structures.

This list should make a clear distinction between any ongoing activities or existing physical works (e.g., those associated with ongoing advanced exploration) and those that form part of the designated project.

This is to include the physical activities that are incidental to the designated project. In determining such activities, the following criteria shall be taken into account:

- nature of the proposed activities and whether they are subordinate or complementary to the designated project;
- whether the activity is within the care and control of the proponent;
- if the activity is to be undertaken by a third party, the nature of the relationship between the proponent and the third party and whether the proponent has the ability to “direct or influence” the carrying out of the activity;
- whether the activity is solely for the benefit of the proponent or is available for other proponents as well; and
- the federal and/or provincial regulatory requirements for the activity.

Should an impact assessment be required for the designated project, the Agency will take these criteria into consideration in determining the activities that are incidental to the designated project.

Should the proposed project include transportation activities, information must be provided on where transportation will join established transportation corridors (e.g., site access road connects to municipal road)

The proposed Josephburg Project will be located on approximately 48.5 ha of Keyera-owned land. The facility will accept condensate as a feedstock via the existing KAPS pipeline and fractionate it into lighter condensate, C8+, LPG and residues called ATB using a CDU to heat the product and collect the various fractions based on their boiling points. The facility will send all products to market via pipelines or rail. See section 2.4 for a description of the processes in sequence.

While the Josephburg Project has been defined as a refinery by IAAC, it should be noted that it will not use any of the chemical processes typical of a refinery like cokers, crackers or alkylation units. It has been defined as a refinery based solely on the intermediate nature of the processing activity between fractionation and upgrading.

2.3.1 Project Infrastructure

Table 2-1 and the plot plan (Appendix 1) contains a list of the proposed new infrastructure required for the Josephburg Project. This infrastructure is discussed further in Section 2.4.

Table 2-1 Proposed New Infrastructure

Proposed Infrastructure	Description
New facility Area	As noted on Figure 1-2 and the plot plan (Appendix 1) a new facility area will be stripped and graded to accommodate the Josephburg Project. The new area is previously disturbed land adjacent to Keyera's existing Fort Saskatchewan Condensate System Integration Site (FSCS).
Condensate Distillation Area	This area contains the primary process equipment for the facility (see Section 2.4). This will include: • condensate distillation column • lighter condensate stabilization column • C8+ stripper column • charge heater • process vessels • heat exchangers and air coolers • C8+ treatment (Merox Unit, Water Wash, Salt Filter, Clay Filter) • pumps & piping
Water Treatment Area	This area will house the water treatment, chemical injection, filters, and boiler used to create steam which is sent into the condensate distillation area. There will also be a utility water tank (cone roof) in this area.
Storage Tanks	This area will hold the following tanks: • Condensate Feed Tank (cone roof) • Four (4) C8+ tanks (internal floating roof) • Atmospheric Bottoms Tank (cone roof) All tanks will have secondary containment as per AER Directive 55 and the *Guidelines for Secondary Containment for Above Ground Storage Tanks* (Alberta Environmental Protection, 1997).
Flare	This area will contain the emergency flare and knockout drums. There will be no continuous flaring.
Vapour Recovery Unit (VRU) package	This area will house a vapor recovery package to capture vapors which will be compressed and directed into the fuel gas system.

Proposed Infrastructure	Description
Stormwater Pond and Firewater Tank	The stormwater pond will be designed to accommodate industrial runoff (stormwater) and a separate firewater tank which will be used in the event of an emergency. All industrial runoff will be directed to the pond and managed under provincial and municipal regulations.
New Buildings	Several new buildings will be required including: • Control Room and Administrative Building • Laboratory • Two Electrical Houses • Two utility buildings • H_2O Treatment and Boiler building • Chemical Injection Building • VRU Compressor Package Building The buildings will be used to house office space, lab equipment, electrical infrastructure, water treatment and steam generation, chemical injection, firewater pumps, and vapor recovery system (VRU).
Main Gate and Security	This area will contain administrative, security (to be determined), warehouse, laboratory and control buildings. It will also have space for staff parking.
Access Roads	Main access to the Josephburg Project footprint will be via a new access from Range Road 220 at the north end of the facility (see Appendix 1 and Figure 1-2). A secondary access, for emergency egress purposes, is located at the south end of the facility (an existing access road associated with the Keyera FSCS Integration facility, which is regulated by the AER). All internal roads will be constructed with gravel pads and incorporate drainage to manage industrial runoff.
Services	Utility connections will be required to connect to existing power, internet, and natural gas. A new pipeline may bring nitrogen to the facility for use, and this will be reviewed during the design phase. Keyera will work with the local utility providers to design and approve all utility connections.
Inlet and Egress Pipelines	A new pipeline connection from the existing Keyera KAPS system will be constructed to provide condensate feedstock to the facility. An egress pipeline will be constructed to transport lighter condensate back into the Fort Saskatchewan Condensate System (FSCS). C8+ will move by pipeline to a nearby rail terminal (final location to be confirmed during detailed design). Atmospheric bottoms will move by pipeline to the existing Edmonton Tank and Pipeline System. LPG will move by pipeline to connect to Keyera's KAPS LPG pipeline system.
Inlet Metering	This area will house the inlet and egress metering (LACTs), pipeline connection and pigging.
Construction Laydown	A temporary construction laydown area will be located in two sections of the Josephburg Project footprint. Both will be located inside the fence line. They will be used for staging, temporary trailers, and construction equipment.
Topsoil and Subsoil Stockpiles	An area for long term topsoil and subsoil spoil piles will be located inside the fence line to store soil for reuse during decommissioning of the facility.

2.3.2 Project Activities

Although the Josephburg Projects' design, approvals and activities will be completed by third-party consultants they will remain under the direct control of Keyera. As the Project is in the early planning phase, some activities have not been identified or the consultant who will complete them has not been confirmed. All work will be subject to Keyera's strict standards and quality assurance programs in compliance with applicable regulatory requirements.

2.3.2.1 Planning Activities

The Josephburg Project is in the planning phase which involves building the business case, completing design, conducting stakeholder engagement, completing field assessments, reporting and preparation for applications to regulators. A list of the main activities includes:

- Engaging with all relevant regulators;

- Initial stakeholder engagement;
- Indigenous consultation (see Section 1.3 and 1.4 for more detail);
- Completing desktop and field biophysical (e.g., wetlands, wildlife, vegetation, soils) and geotechnical surveys to update and confirm the extensive prior knowledge of the area and lands and to ensure sufficient data exists for applications to various regulators;
- Completing a site survey;
- Completing Front End Engineering Design for the facility; and
- Competing air quality and noise assessments.

2.3.2.2 Application Activities

See Table 4-1 for a list of approvals and permits required for the Josephburg Project.

Keyera has worked extensively-with AEPA and the AER since December 2024 to clarify the provincial regulatory jurisdiction. In June 2025, AEPA confirmed the project does not meet the definition of an oil refinery under the *Activities Designation Regulation* (Alberta Regulation 276/2003) or the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* (Alberta Regulation 111/1993). AEPA will issue approvals under the *Environmental Protection and Enhancement Act* (EPEA) and the provincial *Water Act*.

Applications for development and building permits from the County will also be submitted for the facility (see Table 4-1).

2.3.2.3 Construction Activities

Once all required approvals and permits are in hand, Keyera will develop a Project specific Environmental Protection Plan (EPP) that will be used to ensure compliance with all regulations during construction.

Construction activities are anticipated to proceed with the following progression:

1. Land preparation, clearing and grading: While the land has been previously disturbed (farmstead and pasture), there are some trees and brush that will be removed. Topsoil and subsoil will be stripped and either stored onsite or offsite (under AEPA approval) to conserve it for future reclamation. Rough grading will be completed as per civil design. Soil conservation or specialized stripping will be mandated in the EPP and based on the results of the soils survey.
2. Cut and Fill: Civil grading of the facility area will be completed, and the stormwater pond will be excavated as per the approved stormwater design, geotechnical findings and facility design.
3. Road Construction: new access road(s) to Range Road 220 will be constructed as per County approved design and the internal road system will be built.
4. Pilings and foundations: As per the final geotechnical report and approved design, the piling and foundations will be installed.
5. Facility construction: the main process areas will be constructed as per the issued-for-construction design.
6. Buildings: building permits will be obtained from the County, and all building installation will follow the approved design.
7. Utilities: connections to the existing power, natural gas, internet, water, and stormwater system will be installed as per the development permit approval and conditions from utility operators.

2.3.2.4 Commissioning Activities

Final Commissioning will proceed as per the final design. Notification to stakeholders, municipal and provincial regulations will be completed, as required. The Emergency Response Plan will be developed and put into operation. All systems will be tested as per design procedures. Staff training will be completed. All operational plans will be finalized and incorporated into Keyera's existing plans and procedures.

2.3.2.5 Operation Activities

Once operational, the Josephburg Project will be receiving condensate to be fractionated into lighter condensate, LPG, C8+ and ATB. It will be operating within Keyera's robust systems and procedures currently used on their other facilities in the region. As per the provincial approvals, monthly and annual monitoring will be completed and submitted (e.g., air emissions, stormwater, groundwater testing, waste management).

2.3.2.6 Decommissioning Activities

A preliminary decommissioning and reclamation plan will be required as part of the EPEA application; with updates anticipated to be required as part of the EPEA approval conditions. At the end of the Operating Phase, the Josephburg Project will be decommissioned as per the regulations at the time. An updated plan will be developed and approved by the municipal and provincial regulator. The facility will be disassembled, all soil and groundwater will be subjected to testing to confirm if any contamination occurred. If required, remediation activities will be undertaken and then the land will be reclaimed back to equivalent capability as per EPEA and the County Land Use Bylaw. A final reclamation certificate will be obtained from the appropriate regulatory body.

2.4 Maximum Production Capacity and Description of the Production Process

An estimate of maximum production capacity of the project and a description of the production processes to be used.

Capacity refers to the maximum capacity based on the project's design and operating conditions, not the planned capacity of a project.

This information may not be relevant to all project types (e.g., highway, railway line), and the proponent should simply indicate where this is the case. The proponent may instead provide other relevant metrics of project size (e.g., area, length, usage).

The Josephburg Project is designed to take condensate from KAPS as feedstock which is processed using a CDU to produce C8+, lighter condensate, LPG, and ATB. The CDU employs a distillation process for separating the feedstock into its various constituent components to allow for downstream processing. It does not use chemical processes, but rather the various products are produced as fractions with a range of boiling points known as cuts by separating the lighter fractions from the heavier fractions.

The Josephburg Project is designed to process a maximum of 15,900 std m^3/day (100,000 BPSD). Table 2-2 provides the inlet and recovered products maximum design rates for the Project.

Table 2-2 Inlet and Recovered Product Rates

Product	Volume
Inlet Feedstock	15,900 std m^3/day (100,000 BPSD).
Recovered LPG	374 std m^3/day (2,350 BPSD)
Recovered lighter condensate	4,780 std m^3/day (30,060 BPSD)
Recovered C8+	5,780 std m^3/day (36,350 BPSD)
Recovered Atmospheric Bottoms	4,870 std m^3/day (30,630 BPSD)

Appendix 2 provides a high-level block flow diagram of the processes that will occur at the plant. These are further described in Table 2-3.

Table 2-3 High Level Process Flow

Process	Description
Inlet	An inlet pipeline will transport condensate feedstock from the existing FSCS Integration Site into a feed tank.
Condensate Distillation Unit (CDU)	Condensate in the feed tank is routed through a series of pre-heat shell and tube exchangers to the CDU using recovered heat from hot product streams, including C8+ exchangers and atmospheric bottoms exchangers. After pre-heating, the condensate enters a pre-flash drum where lighter hydrocarbon vapors are separated from the liquid and sent directly to the CDU as reflux. The liquid condensate is then heated to approximately 320°C through a fired heater (charge heater) and then sent to the CDU for distillation. The charge heater will be designed to utilize fuel gas and off-gas from the lighter condensate stabilizer. Waste heat from the heater exhaust will also be used to pre-heat the feed to the CDU. The CDU is a trayed column which separates the feedstock into three products: un-stabilized lighter condensate, C8+ (as a side product) and atmospheric bottoms (hydrocarbons from the bottom). The separation of the products occurs through selective boiling of the liquid mixture and the condensation of the vapors in the column. Stripping steam is also injected at the bottom of the column to improve separation efficiency.
C8+ Stripper Column	The C8+ stripper is a trayed column design that strips light ends from the C8+ product to meet flash point specifications. Stripping steam is used to provide the heat to the column to generate the vapor required for separation. The hot C8+ product then goes through a series of heat exchangers and aerial coolers prior to entrance into the C8+ treating system.
C8+ Treating System	The C8+ treatment system consists of trace sulphur removal from the C8+ using a Merox Unit (utilizes a caustic solution); a water wash vessel to remove sodium naphthenates and trace caustic; a salt filter to dry the C8+ product to specifications; and a clay filter to remove any final contaminants before storage.
Light Condensate Stabilizer	The light condensate stabilizer is a trayed column design that removes light hydrocarbons from the light condensate to produce a stabilized product suitable for storage at atmospheric conditions. It is also fitted with a side draw connection for LPG product recovery. The LPG product is cooled through an aerial cooler and then sent to storage.
Water Treatment	Raw water comes into the facility via pipeline. The water is treated with chemicals to produce boiler feed water which is used to create superheated low-pressure steam. Superheated steam is injected at the bottom of the CDU and the C8+ stripper to facilitate separation. Boiler blowdown water is routed to the produced water tank. Produced water is removed from the feedstock, CDU, boiler blowdown and light condensate stabilizer and routed to the produced water tank for storage. Two options for disposal are being explored; either trucking to a registered facility or installation of an offsite disposal well. Pending final design decision, approvals will be obtained.
Fuel Gas	Fuel gas enters the facility from the local utility at high pressure. It provides clean fuel to the facility, including the charge heater and steam boiler. Fuel gas is preheated in an electric heater to prevent hydrate formation during pressure letdown.
Emergency Flare	The emergency flare is designed to safely manage and dispose of excess gases during normal operations, startup, shutdown, or emergency situations. It includes a network of piping (headers) to route gases to the flare system including a knockout drum to separate liquids from the gas streams, flare stack to ensure efficient dispersion from the ground-level and a flare tip designed for efficient combustion.

Process	Description
Vapour Recovery Unit (VRU)	Vapors from the process storage tanks are captured and routed to the vapor recovery compressor for injection into the fuel gas system to prevent the release of volatile organic compounds (VOCs) to atmosphere.
Storage	Fixed cone roof and floating roof storage tanks are provided to store feedstock, products, and utility water. All process tanks will be connected to a VRU to capture emissions. The C8+ product tank will utilize a floating roof tank to ensure product quality.
Egress	All recovered products will be sent via pipeline to either a rail facility or into existing pipeline networks. All waste products will be trucked out to a registered disposal facility.

2.5 Schedule

The anticipated schedule for the project's construction, operation, decommissioning, and abandonment, including any expansions of the project.

This information should include the schedule for the key activities of the each of those phases.

The schedule should also take into account the anticipated time required to conduct the impact assessment, should one be required.

Keyera intends for the Josephburg Project to be online by the third quarter of 2030, as construction is anticipated to require 2 years. Approximate dates may be adjusted during the execution of key milestones and may be impacted by extensions of the expected regulatory assessment and approval processes. Should an impact assessment under the IAA be required, the Project schedule may be delayed by 2-3 years. A high-level project schedule is provided in Table 2-4.

Table 2-4 High Level Project Schedule

Key Milestone	Approximate Date
Project Engineering and Design	Q4 2024 – Q4 2025
Supporting Field Assessments	Q1 2025 – Q4 2025
Public and Indigenous Consultation	Q1 2025, ongoing
Submit Regulatory Approvals	Q2 2026
Obtain Regulatory Approvals	Q2 2028
Construction Commencement	Q2 2028
Commissioning	Q3 2030
Operations	Q3 2030
Proposed Decommissioning Date	Q4 2056
Abandonment Date	Q4 2056
Decommissioning and Reclamation Schedule	Q4 2056-Q4 2058

2.6 Alternatives

A list of potential:

a) alternative means that the proponent is considering and that are technically and economically feasible, including through the use of best available technologies; and,

b) alternatives to the project that the proponent is considering and that are technically and economically feasible, and directly related to the project.

The Agency recognizes that a proposed project may be in the early stages of planning when an Initial Project Description is being prepared. Proponents may not have made final decisions and several alternatives may exist for project components (e.g., placement of infrastructure, technologies to be employed). In these situations, proponents are strongly encouraged to identify the alternatives under consideration in the Initial Project Description. Proponents should contact the Agency for further guidance in this area prior to the submission of the Initial Project Description.

Alternative means are the various technically and economically feasible ways, including through the use of best available technologies, which would allow a designated project and its physical activities to be carried out.

Alternatives to the project are functionally different ways to meet the need for the project and achieve its purpose that are technically and economically feasible.

There are no other viable alternative means of serving the purpose of the Josephburg Project or means to carry out the Project. Keyera has explored other options for the facility location, including collocating the Project at one of Keyera's existing facilities, but these options were not feasible due to space limitations and access to pipeline connections. Alternative facility configurations were assessed as part of the Josephburg Project development including the production of diesel; however, it was ruled out due to the increased complexity, increase in footprint and increased risk in the operation.

As the Josephburg Project is in the planning stage it is likely some aspects will change as stakeholder/regulatory consultation and engineering progresses. The most likely changes could include:

- modifications to the facility plot plan as optimizations are found;
- changes to design to reduce emissions, noise or waste;
- different internal process equipment as vendors are contacted and equipment is procured;
- optimizations to the process flow inside the facility;
- changes to the final destinations and uses for the recovered products (light condensate, LPG, C8+ and ATB) as business relationships develop and markets are explored;
- Changes to the provincial regulatory process.

As Keyera owns the Josephburg Project lands, and those surrounding it, Keyera has done substantial work to optimize the proposed Project location. Several locations were explored to minimize the environmental footprint and maximize operation efficiency (e.g., reduce pipeline lengths and site the Josephburg Project adjacent to existing industrial facilities).

The facility has been designed to utilize electric instead of gas-powered equipment (when practicable), optimize heat recovery, use of high efficiency heating and also includes a vapor recovery unit to capture emissions that may be generated from tankage. Additionally, technologies for NOx reduction are being evaluated to ensure emissions meet regulations in place in the IH-DIZ. Environmental efficiency and economic viability analysis is part of the ongoing design to ensure regulatory requirements for emissions, wastes and noise are met or exceeded.

Additionally, Keyera is using a five-stage project management process to ensure all viable options are explored. Stage Zero and Stage One were completed in 2024 and included the opportunity assessment and project identification where the business case, early screening and initial engineering was completed. Stage 2 is currently underway, which is option evaluation where the facility design will progress.

Based on the alternatives analysis conducted to date there are no technically or economically feasible alternatives to the Josephburg Project.

3. Part C: Location Information and Context

3.1 Project Location

Provide a description of the designated project's proposed location including:

3.1.1 Geographic Coordinates

Proposed geographic coordinates including, for linear development projects (e.g., pipelines, transmission lines), the proposed locations of major ancillary facilities that are integral to the project, and a description of the spatial boundaries of the proposed study corridor;

Coordinates should be provided in a form suitable for use in GIS (e.g., longitude/latitude) using international standard representation.

Coordinates should be appropriate for the project type. For example: for the centre of a facility, for the boundaries of a proposed mine site, or for the beginning and end points and path of a linear project.

For linear projects under the Canadian Energy Regulator Act, proponents should also provide the extent of the consultation corridor, if it is different from the proposed study corridor.

Indicate if you will be using an existing right of way that has been previously used for a different type of linear project.

The proposed Josephburg Project will be located in NW 18 and SW 19-55-21 W4M. The central point of the Josephburg Project footprint is at approximately 53°45'45.52"N latitude and 113° 7'15.45"W longitude.

The Josephburg Project site is approximately 1.7 km north of Highway 15 on Range Road 220 and occupies an area of approximately 48.5 ha.

3.1.2 Site Maps

Site maps produced at an appropriate scale, in order to determine the project's proposed general location and the spatial relationship of the project components.

Site maps are provided in Figures 1-1 and 1-2.

3.1.3 Legal Land Location

The legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot. The level of detail should be appropriate for the project type.

The Josephburg Project will be located in NW 18 and SW 19-55-21 W4M. The lands are all owned by Keyera. A copy of the land titles can be found in Appendix 3.

3.1.4 Proximity to Residences and Communities

The project's proximity to any permanent, seasonal or temporary residences and proximity to the nearest affected communities.

The Josephburg Project lands are zoned industrial, as are the surrounding lands. The area is dominated by industrial facilities with few residential dwellings (Figure 1-2). Adjacent lands on the east side of Range Road 220 within Strathcona County are zoned IHH (Heavy Industrial – Heartland) (Strathcona County, 2025a), and adjacent lands on the west side of Range Road 220 within the City of Fort Saskatchewan are zoned IH (Heavy Industrial) (City of Fort Saskatchewan, 2020).

The closest municipality to the Project is the City of Fort Saskatchewan. The eastern boundary of the City of Fort Saskatchewan is located immediately to the west of the Project site (Figures 1-1 and 1-2); however, this portion of

Fort Saskatchewan is designated IH and is characterized by industrial development and does not contain residential dwellings.

The Hamlet of Josephburg is located approximately 4.5 km southeast of the Project site. Currently, Keyera is leasing company-owned lands approximately 1 km east of the Project site to the Scotford Hutterite Colony, who use the lands for agricultural purposes. The closest residence is located approximately 1.5 km south of the Project site, south of Highway 15. The Scotford Colony School is also located about 1.8 km southeast of the Project, adjacent to Highway 830.

3.1.5 Proximity to First Nations Communities

The project's proximity to:

- land used for traditional purposes by Indigenous peoples of Canada;
- land in a reserve as defined in subsection 2(1) of the Indian Act;
- First Nation land as defined in subsection 2(1) of the First Nations Land Management Act;
- land that is subject to a comprehensive land claim agreement or a self-government agreement; and
- any other land set aside for the use and benefit of Indigenous peoples of Canada.

The Project is located within Treaty 6 Territory and Otipemisiwak Métis Government District 11. However, lands within and surrounding the Project site are privately held and contain several existing industrial operations. Based on previously assessed projects (Total, Sasol and Keyera), and from the feedback to date on the consultation noted in Section 1.4, there is no indication that lands and resources in the Project area are currently used by Indigenous peoples for traditional purposes (e.g., harvesting). There are no reserve lands located within Strathcona County's portion of the IH-DIZ. The closest crown land is the North Saskatchewan River, approximately 2.5 km northwest. Provincial Park land is located about 10 km northeast. The nearest occupied Indigenous land bases to the Project site are:

- Enoch Cree Nation, located approximately 47 km southwest of the Project site.
- Alexander First Nation, located approximately 50 km west of the Project site.
- Paul First Nation, located approximately 85 km west of the Project site.
- Saddle Lake Cree Nation, located approximately 85 km northeast of the Project site.

3.1.6 Proximity to Federal Lands

The project's proximity to any federal lands.

The proposed Josephburg Project is located on Keyera-owned land and is surrounded by privately held land. The closest federal land to the Project site is Elk Island National Park, located approximately 17 km to the southeast of the Project site, which is part of the Beaver Hills Biosphere, located approximately 15 km east of the Project (Beaver Hills Biosphere, 2025).

3.2 Physical and Biological Environment

A brief description of the physical and biological environment of the project's location, based on information that is available to the public.

3.2.1 Previous Assessments Completed in Proximity to the Project Site

The information provided in this section was collected using publicly available databases as well as information gathered from previously completed assessments within and adjacent to the Josephburg Project site (notably the Total Bitumen Upgrader and Sasol Canada Gas to Liquids (GTL) Project EIAs), as described in Table 3-1, below.

A map showing the location of the previous Total and Sasol EIAs in relation to the Josephburg Project is provided as Figure 3-1.

Table 3-1 Previous Assessments Within and in Proximity to the Josephburg Project Site

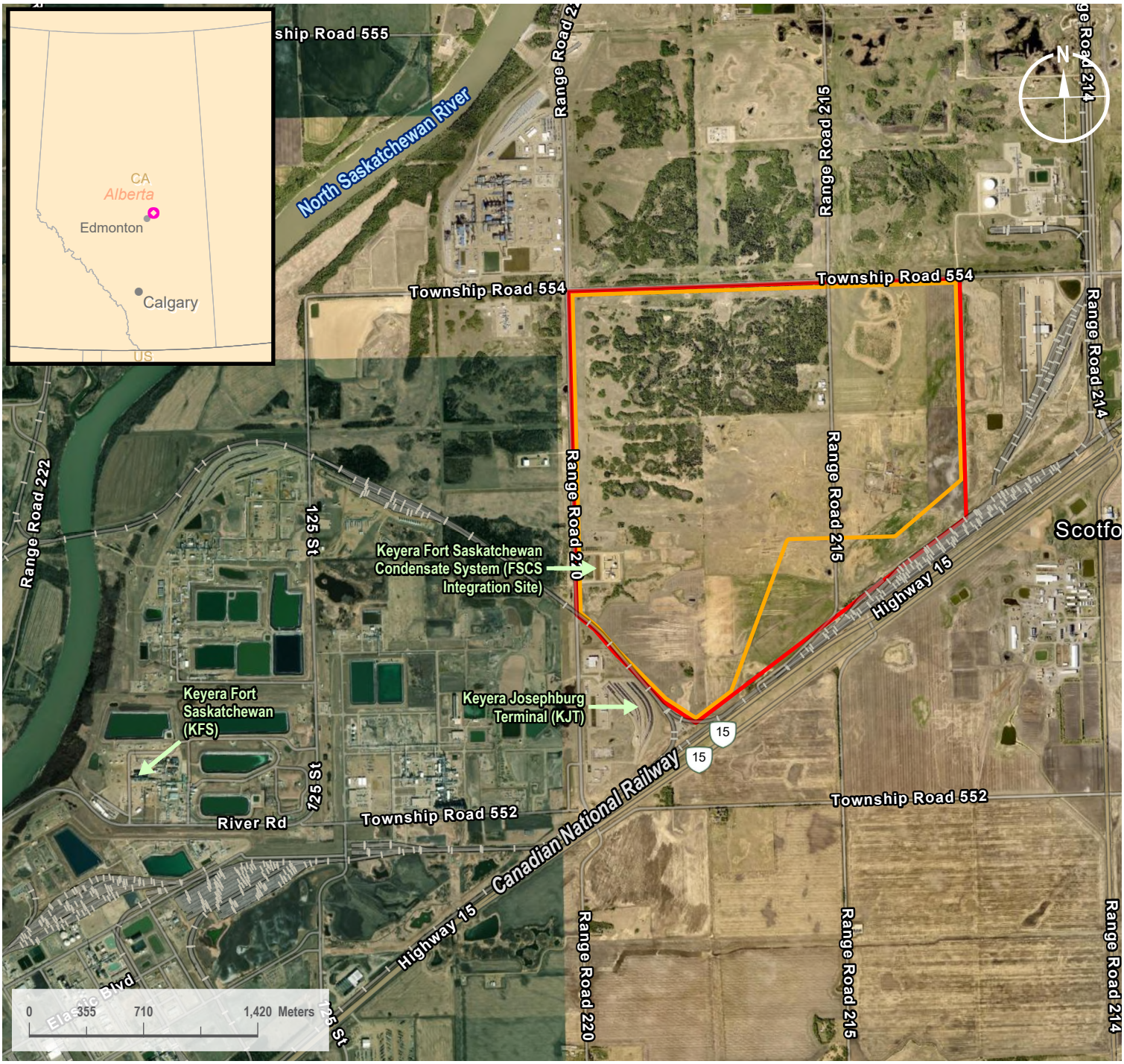
Date	Proponent	Project Name	Assessment Covers Josephburg Project Site	Comments
2007	Total E&P Canada	Total Bitumen Upgrader	Yes	A provincial EIA was completed under Section 53 of EPEA for the proposed Total bitumen upgrader. The Total bitumen upgrader was proposed on lands which include the proposed Josephburg Project site. The EIA was confirmed to be complete in August 2009 by the Alberta Energy Resources Conservation Board (ERCB). Relevant Application/Approval Numbers: EPEA: 001-245130 Water Act: 00245404 ERCB: 1551460 This EIA covered air quality, noise and light, hydrogeology, surface water hydrology and quality, aquatic resources, vegetation, wildlife, biodiversity and fragmentation, terrain and soils, land use, public health and safety, historic resources, and socio-economics. The project was never constructed, and the lands were sold to Sasol.
2013	Sasol Canada Holdings Limited	Sasol Canada Gas to Liquids (GTL) Project	Yes	A federal EIA under CEAA was not required, as the Canadian Environmental Assessment Agency determined that the Project did not meet the definition of a designated project under CEAA. A provincial EIA was completed under Section 53 of EPEA for the proposed Sasol Canada GTL Project. Sasol Canada GTL Project was proposed on lands which include the proposed Project site. The EIA was confirmed to be complete in April 2014 by Alberta Environment and Sustainable Resource Development (AESRD). Approval of the EIA under EPEA was issued on July 15, 2015 (Approval No.: 329786-00-00). The approval is valid until July 1, 2025. Relevant Application/Approval Numbers: EPEA: 329786-00-00 Water Act: 00329881

Date	Proponent	Project Name	Assessment Covers Josephburg Project Site	Comments
				This EIA covered air quality, noise and light, hydrogeology, surface water hydrology and quality, aquatic ecology, vegetation, wildlife, biodiversity, terrain and soils, land use, public health and safety, historic resources, and socio-economics. The project was never constructed, and the lands were sold to Keyera.
2013	Keyera Energy Ltd.	Josephburg 16-25-55-22 to 4-18-55-21 W4M Pipeline	Yes, partially	Baseline biophysical assessment completed to support pipeline approvals
2015	Keyera Energy Ltd.	4-18-55-21 W4M to 1-9-56-21 W4M Pipeline	Yes, partially	Baseline biophysical assessment completed to support pipeline approvals
2015	Keyera Energy Ltd.	FSCX Pipeline Project	Yes, partially	Baseline biophysical assessment completed to support pipeline approvals
2017	Keyera Energy Ltd.	Limited Phase 1 Assessment	Yes	Completed a Phase 1 Site Assessment for lands that include the project footprint.
2018	Keyera Energy Ltd.	PDH Pipeline	Yes, partially	Baseline biophysical assessment completed to support pipeline approvals
2019	Keyera Energy Ltd.	JBG Pipeline	Yes, partially	Baseline biophysical assessment completed to support pipeline approvals
2020	Keyera Energy Ltd.	2020 Wildlife Surveys	Yes, partially	Targeted Wildlife Surveys completed
2021, 2022	Keyera Energy Ltd.	KAPS Project	Yes, partially	Baseline biophysical assessment completed to support pipeline approvals; pre-construction wildlife sweeps to support pipeline construction
Regional Assessments				
2020-2023	Value Chain Solutions Inc.	Value Chain Solutions – Heartland Complex Expansion	No - Approximately 7 km northeast of the Josephburg Project site	Proposed project, regulated by the IAAC; project terminated on May 8, 2023, at the request of the proponent. Oil Sands Conservation Act Scheme Approval No. 10330B EPEA Approval No. 203303, 387876
1998- 2010	Shell Canada Ltd.	Shell Canada Ltd. – Scotford Upgrader, Upgrader	No – Approximately 2.5 km northeast of	In operation EPEA Approval No. 00049587

Date	Proponent	Project Name	Assessment Covers Josephburg Project Site	Comments
		Expansion, Upgrader 2, and Quest Carbon Capture and Storage Project	the Josephburg Project site	ERCB Application No. 1689376, 160112, 1671615
2006-2007	Petro-Canada Oil Sands Inc.	Fort Hills Sturgeon Upgrader Project	No – Approximately 8 km north of the Josephburg Project	Cancelled EUB Application No. 1490956 EPEA Application No. 001-231303 Water Act File No. 00236443
2007-2008	StatoilHydro Canada Ltd.	Oil Sands Upgrader Project	No – Approximately 4.6 km northeast of the Josephburg Project	Cancelled EPEA Application No. 001-00239532 Water Act Application No. 00245406 ERCB Application No: 1551450
2006-2008	Alberta Sulphur Terminals Ltd.	Alberta Sulphur Terminals Ltd. - Sulphur Forming and Shipping Facility	No - approximately 16 km northeast of the Josephburg Project	Cancelled EPEA Approval No. 227584 Water Act Application No. 00240288 NRCB Application No. 0702
2008	Beaver Hills Processing GP Inc.	Condensate Processing Project	No – Approximately 27 km southwest of the Josephburg Project	Cancelled EPEA Application No. 250279
2006-2008	Synenco Energy Inc.	Northern Lights Upgrader	No – Approximately 13 km northeast of the Josephburg Project	Cancelled EPEA Application No. 229135 Water Act File No. 00234914 EUB Application No. 1480989

[1]N/A = Not Applicable.

FIGURE 3-1: PREVIOUS ENVIRONMENTAL IMPACT ASSESSMENTS



Disclaimer:

LEGEND

- Previous provincial environmental impact assessment boundary for Sasol Canada Holdings Limited Gas to Liquids (GTL) Project (EPEA Approval 329786-00-00, Not Constructed)
- Previous provincial environmental impact assessment boundary for Total E&P Canada Bitumen Upgrader Project (EPEA Approval 001-245130, Not Constructed)

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REVISIONS

Date	Revised by	Checked by
2025-05-27	DG	JG

1 - Issued for Regulatory Submission
Issued figure for regulatory submission

Date	Revised by	Checked by

KEYERA JOSEPHBURG CONDENSATE FRACTIONATION PROJECT

Client: KEYERA

Figure Title: Figure 3-1 Previous Environmental Impact Assessments

Scale: 1 : 35,000
1 centimeter equals 0.35 kilometers

Projection: Transverse Mercator
NAD 1983 10TM AEP Forest

Sheet: 1
1 of 1

Drawing Number: 1002-03-003
Revision 1

Path: G:\Projects\OGY-240142944-00 - Keyera - Prism CS+ Splitter\0800_GEO\10_Mapping\02 Overview\03 Environmental\1002-03-003\1002-03-003.aprx

3.2.2 General Description of the Project Lands

The Josephburg Project will be located entirely on Keyera-owned lands within the IH-DIZ in Strathcona County, Alberta. The Project is located entirely on previously disturbed land (pasture and homestead). Land use surrounding the Josephburg Project site comprises industrial developments, along with agricultural lands.

Per mapping in the *Natural Regions and Subregions of Alberta* report (Natural Regions Committee, 2006), the majority of the Josephburg Project site is located within the Dry Mixedwood Natural Subregion of Alberta, with the exception of the extreme southwest corner, which is located within the Central Parkland Natural Subregion of Alberta. Based on the Sasol Canada GTL Project EIA (Stantec Consulting Ltd., 2013), the on-site conditions within the Josephburg Project site most closely align with the description of the Central Parkland Natural Subregion.

Generally, lands within the Central Parkland Natural Subregion comprise undulating till plains and hummocky uplands. Soils within this natural subregion generally comprise black chernozems, with some dark gray chernozems and significant occurrences of solonetzic soils. The majority of land within this natural subregion has been subject to cultivation; however, mosaics of aspen and prairie vegetation remain within remnant native parkland areas. Grassland species, including songbirds, hawks, deer and small mammals, and amphibians are supported in this natural region (Natural Regions Committee, 2006).

A summary of the physical and environmental setting within the Josephburg Project site and surrounding area is provided in Table 3-2. Environmental assessments are planned for spring/summer 2025 to confirm the findings of previous assessments completed on the Josephburg Project lands (including most recently the findings of the Sasol EIA [Stantec Consulting Ltd., 2013]) and to document baseline conditions within the Josephburg Project footprint.

Table 3-2 Description of the Physical and Environmental Setting within the Josephburg Project Area

Physical and Environmental Setting	Baseline Conditions within the Josephburg Project Area
Land Use	Predominantly pasture/grazing land, with shrub cover and wetlands present based on aerial imagery review (Google EarthTM) and previous on-site assessments[1,2].
Geomorphology and Geology	The Josephburg Project site is underlain by the Belly River Group formation, which comprises fine- to coarse-grained sandstone, grey to brown carbonaceous siltstone, and coal, and is marginal marine to nonmarine[3]. Surficial geology in the Josephburg Project site and surrounding area may be a mix of Eolian deposits, wind deposited sediment which are well-sorted, medium- to fine-grained sand and silt with massive to locally cross-bedded or ripple laminated components and glaciolacustrine deposits, which are fine-grained, present in rhythmically laminated to massive fine sand, silt, and clay[4].
Topography and Soils	Topography within the Josephburg Project site and surrounding area is low relief and undulating to hummocky. No areas of significant slopes are present[1, 2]. The Josephburg Project site is located within two soil polygons[5]: Polygon 14102 – MDR1/U1h Comprised predominantly of the Mundare soil series (well-drained, very coarse textured orthic black chernozem) with a minority component of Primula soil series (rapidly draining, very coarse textured eluviated eutric brunisols)[5]. Polygon 14280 – MMO2/U1l Comprised predominantly of the Malmo soil series (well drained, fine textured eluviated black chernozems), with equal proportions of the Navarre soil series (imperfectly drained, fine textured gleyed black chernozem) and miscellaneous gleysols (poorly drained, variable texture/non-differentiated, orthic humic gleysols).

Physical and Environmental Setting	Baseline Conditions within the Josephburg Project Area
Biodiversity and Ecology: Wildlife	The Josephburg Project site is located within or in proximity to the following sensitive wildlife areas: Sensitive Raptor Range (Bald Eagle), Sharp-Tailed Grouse Survey Area, and Key Wildlife and Biodiversity Zone[6]. Baseline surveys and targeted wildlife surveys were completed within the Josephburg Project area by Total in 2006, 2007, and 2008[2], by Sasol in 2007, 2008, 2012[1], and by Keyera in 2013, 2015, 2018, 2019, 2020, 2021, and 2022 (see Table 3-1). Total identified potential habitat for 173 vertebrate species, including 45 species of management concern, within their assessment area, which includes, but is much larger than the Josephburg Project site[2]. Sasol identified habitat for 65 vertebrate species, including 8 species of management concern during their onsite assessments[1]. The Sasol assessment area includes, but is much larger than, the Josephburg Project site. Land use within the Josephburg Project site and surrounding area comprises pasture/grazing land (disturbed grassland/improved pasture), with shrub cover and wetlands, which provides suitable habitat for many species of mammals, grassland and migratory birds, waterfowl and shorebirds, and amphibians. A list of wildlife species previously observed in proximity to the Project site[7] and for which suitable habitat is present within 500 m of the Project site is provided in Table 3-3.
Biodiversity and Ecology: Vegetation	Baseline surveys and targeted wildlife surveys were completed within the Josephburg Project site and surrounding area by Total in 2006, 2007, and 2008[2], by Sasol in 2007, 2008, 2012[1], and by Keyera in 2013, 2015, 2018, 2019, 2020, 2021, and 2022 (see Table 3-1). Two rare plant species were observed within the Total project area, which encompasses the Josephburg Project site: green saxifrage (*Chrysosplenium tetrandrum*), listed as S3 (rare or uncommon) provincially and G5 (apparently secure) globally, and long-leaved bluet (*Hedyotis longifolia)*, listed as S2 (imperiled) in Alberta and G4G5 (apparently secure but uncommon) globally[2]. Two rare plant species were observed within the Sasol project area, which encompasses the Project site: long-leaved bluets (*Hedyotis longifolia)*, listed as S2 (imperiled) in Alberta and G4G5 (apparently secure but uncommon) globally, and brachythecium moss (*Brachythecium rutabulum*), listed as S2 (imperiled status, uncertain) provincially and G5 (apparently secure) globally[1]. They were not found within the Josephburg Project site. Subsequent survey of the Josephburg Project site by Keyera in 2019 did not observe rare plants within the assessment area (Jacobs, 2019). A list of previously observed Element Occurrences[7, 8, 9] since the year 2000, in proximity to the Project site (within the surrounding township), is provided in Table 3-4.
Biodiversity and Ecology: Watercourses, Waterbodies, and Fisheries	There are no watercourses or waterbodies within the Josephburg Project site[1, 2], and no surface connections to watercourses. The closest watercourses to the Josephburg Project site are the North Saskatchewan River and Astotin Creek, located at a distance of approximately 2.5 km and 3km, respectively. Fish habitat is present within both of these watercourses[1, 2]. Within 3 km from the Josephburg Project Area, there were historic observations of sixteen (16) fish species[7], none of which are listed as species of management concern under the *Species at Risk Act* (SARA) or by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC)[12].
Water Quality: Wetlands	Several wetland types have been identified in proximity to the Josephburg Project site based on desktop review and within the Sasol[1] and Total[2] EIAs, which encompassed the Josephburg Project site: ephemeral waterbodies, temporary, seasonal, semi-permanent, and permanent marshes, and shrubby willow swamps, treed swamps, and anthropogenic dugouts[1, 2].

Physical and Environmental Setting	Baseline Conditions within the Josephburg Project Area
Water Quality: Groundwater	Baseline hydrogeological assessments were completed by Sasol[1] and Total[2]. Groundwater depths within the Sasol and Total project areas ranged from 1.12 to 6.29 m below ground surface, with depth to groundwater generally increasing further from the North Saskatchewan River.
Historical Resources	Keyera received approval under the *Historical Resources Act* for the Project site on September 4, 2019 (HRA number 46680-19-0029-0001).
Air Quality	The Capital Region Air Quality Management Framework is a regional air monitoring framework for the area that includes mitigations and regulatory triggers when specific limits are reached. It is designed to manage cumulative effects of the various industrial developments. As of 2023, the closest station at Fort Saskatchewan recorded the Air Quality Health Index (AQHI) risk as Low, 76.21% of the time. Times when the AQHI risk were higher were largely due to wildfires.[10]
Noise	The NCIA manages a regional noise model for the area. It is designed to manage cumulative effects of the various industrial developments. As per the 2023 model, the Project area is noted as having a long-term continuous average sound levels between 40 and 45 dBA.[11]

[1]Sasol Canada Gas-to-Liquids Project EIA Report (Stantec Consulting Ltd., 2013)
[2]Total Bitumen Upgrader Report (Total E&P Canada Ltd, 2009)
[3]Bedrock Geology of Alberta (Prior, 2013)
[4]Surficial Geology of Alberta (Fenton, 2013)
[5]Alberta Soils Information Viewer (GoA, 2016)
[6]Alberta Wildlife Sensitivity Data Sets (GoA, 2021)
[7]Fish and Wildlife Internet Mapping Tool (GoA, 2025b)
[8]Element - a unit of natural biological and physical diversity. Biological elements represent species (or infraspecific taxa), natural communities, or other non-taxonomic biological entities (e.g., migratory species aggregation areas). In addition, the Alberta Conservation Information Management System (ACIMS) has developed a list of landform elements as units of natural physical diversity.
[9]Element Occurrence (EO) - An EO is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.
[10]The 2023 Report to Community (Fort Air Partnership, 2023)
[11]NCIA 2023 Regional Noise Model (NCIA, 2025d)
[12]Species at Risk Public Registry (Government of Canada, 2024b)

Previous observations of wildlife species recorded in proximity to the Josephburg Project site (as identified on the Fish and Wildlife Internet Mapping Tool [FWIMT]), and for which potentially suitable habitat is present within 500 m of the Josephburg Project site, is provided in Table 3-3.

Table 3-3 Previous Wildlife Observations in Proximity to the Josephburg Project Area based on FWIMT[1]

Species Name (Common)	Species Name	Provincial Listing[2]	SARA Listing[3]	COSEWIC Listing[3]	Previously Observed Within X km of Project Area[1]	Habitat Requirements
American Badger	*Taxidea taxus*	Sensitive	--- *Taxus* subspecies: Schedule 1 Special Concern	Non-Active *Taxus* subspecies: Schedule 1 Special Concern	3	Non-forested grassland and shrubland habitats and can be found in agricultural areas assuming that there are sufficient hedgerows, fencerows and field edges (Government of Canada, 2024c).
American Kestrel	*Falco sparverius*	Sensitive	---	---	3	Open habitats with raised perches, including farmland, within cities, and wood edges (Audobon, 2025)
Black Tern	*Chlidonias niger*	Sensitive	---	Not at Risk	3	Nest in dense marsh vegetation on the edges of shallow lakes (Cornell Lab of Ornithology, 2025a)
Black-Backed Woodpecker	*Picoides arcticus*	Sensitive	---	---	3	Nests in coniferous forests, but may also use deciduous forests; generally nesting in dead or fire-affected trees (Cornell Lab of Ornithology, 2025b)
Canada Warbler	*Cardellina canadensis/Wilsonia canadensis*	May Be at Risk	Schedule 1 Threatened, under consideration for status change	Special Concern	3	Nest in mixed conifer and deciduous forests with shrubby understories, often near water (Cornell Lab of Ornithology, 2025c)
Canada Toad	*Bufo hemiophrys/Anaxyrus hemiophrys*	May Be at Risk	---	Not at Risk	3	Breed in open habitats in shallow aquatic environments including wetlands, streams, ponds, ditches, and slow-moving rivers and streams (Canadian Herpetological Society, 2025).
Common Yellowthroat	*Geothlypis trichas*	Sensitive	---	---	1	Uses mixed habitat. Nests in areas with dense undergrowth (Cornell Lab of Ornithology, 2024d).

Species Name (Common)	Species Name	Provincial Listing[2]	SARA Listing[3]	COSEWIC Listing[3]	Previously Observed Within X km of Project Area[1]	Habitat Requirements
Eared Grebe	*Podiceps nigricollis*	Sensitive	---	---	3	Typically nests on open water wetlands and lakes with emergent vegetation (Cornell Lab of Ornithology, 2025e).
Eastern Kingbird	*Tyrannus tyrannus*	Sensitive	---	---	3	Uses open habitats with sparse trees/shrubs (grasslands with hedgerows/shrubs) (Cornell Lab of Ornithology, 2025f).
Eastern Phoebe	*Sayornis phoebe*	Sensitive	---	---	3	Breed in wooded areas near water sources, and typical nest in human-built structures (eaves, overhangs, decks, bridges, culverts) (Cornell Lab of Ornithology, 2025g).
Grasshopper Sparrow	*Ammodramus savannarum*	Sensitive	---	---	1	Occur in grasslands, prairies, hayfields, and open pasture with little to no shrub cover (Cornell Lab of Ornithology, 2025h).
Pied-Billed Grebe	*Podilymbus podiceps*	Sensitive	---	---	3	Typically nests on open water wetlands and lakes with emergent vegetation (Cornell Lab of Ornithology, 2025i).
Pileated Woodpecker	*Dryocopus pileatus*	Sensitive	---	---	1	Live in mature deciduous or mixedwood forests and nest in dead trees within mature stands of coniferous or deciduous trees (Cornell Lab of Ornithology, 2025j).
Sora	*Porzana carolina*	Sensitive	---	---	1	Typically nests on open water wetlands and lakes with emergent vegetation (Cornell Lab of Ornithology, 2025k).
Western Wood Pewee	*Contopus sordidulus*	May Be at Risk	---	---	1	Breeds in open woodlands, forest edges, especially near streams, and prefer forests with open understories and standing dead trees (Cornell Lab of Ornithology, 2025l).

SARA = *Species at Risk Act*
COSEWIC = Committee on the Status of Endangered Wildlife In Canada
[1]Fish and Wildlife Internet Mapping Tool (GoA, 2025b)
[2]Alberta Wild Species Status Search (GoA, 2024)
[3]Species at Risk Public Registry (Government of Canada, 2024b)

Previously observed element occurrences (observed since the year 2000), in proximity to the Josephburg Project Area, based on the findings of the Alberta Conservation Information Management System (ACIMS) are provided in Table 3-4.

Table 3-4 Previously Observed Element Occurrences in Proximity to the Josephburg Project Area based ACIMS[1]

Common Name	Species Name	Current Provincial Ranking[2]	Location Observed (within approx. 3 km of Project Area)	Last Observed
Creeping Ancylid	*Ferrissia rivularis*	SU	14, 23, 25, and 26-55-22 W4M	2001
Long Leaved Bluets	*Houstonia longifolia*	S3	19-55-21 W4M 23-55-22 W4M	June 2006
Pepper-Spore Lichen	*Rinodina orculata*	SU	24-55-22 W4M	September 2007
Tall Blue Lettuce	*Lactuca biennis*	S3	20 and 29-55-21 W4M	August 2016

[1]Alberta Conservation Management System (ACIMS) (GoA, 2025c)
[2]S3 - Known from 100 or fewer occurrences, or somewhat vulnerable due to other factors, such as restricted range, relatively small population sizes, or other factors; SU - taxon is currently unrankable due to lack of information or substantially conflicting information. Example - native versus non-native status not resolved.

3.3 Health, Social, and Economic Context

A brief description of the health, social and economic context in the region where the project is located, based on information that is available to the public and/or derived from any engagement undertaken.

3.3.1 Overview

The proposed Josephburg Project will be located on Keyera-owned land in Strathcona County, Alberta (Figure 1-1 and 1-2). An overview of the Project's proximity to residential dwellings, nearest communities and Indigenous communities is provided in Sections 3.1.4 and 3.1.5. As noted, lands within 3 km of the Josephburg Project are mostly zoned industrial and are primarily dominated by industrial facilities (Figure 1-1 and 1-2). The quarter sections immediately north, east and south of the Project site are also owned by Keyera, while lands immediately west of the Project in the City of Fort Saskatchewan, across Range Road 220, are owned by Dow Petrochemical and Aux Sable.

Strathcona County is part of the Industrial Heartland Designate Industrial Zone (IH-DIZ), which is a Designated Industrial Zone created by the Alberta government to establish a framework for incentivizing investment and clustered industrial development while realizing environmental outcomes (GoA, 2025d). All of the industrial operators in the IH-DIZ are members of the Northeast Capital Industrial Association (NCIA), which is a not-for profit cooperative aimed at understanding, reducing and managing cumulative environmental effects through collaboration with community groups, associations, and local, regional and provincial government organizations (NCIA, 2025c).

Keyera has a long history as an important player in Alberta's Industrial Heartland region beginning in 1998. Keyera has operated the Fort Saskatchewan facility since 2000 when the Chevron Midstream assets became part of Keyera. Keyera's strong relationships within the community have been built through collaboration and trust. Keyera has active participation in local organizations such as the NCIA, Life in the Heartland community group and local Chambers of Commerce and have built strong, positive relationships with both the local and provincial government representatives in the area. Keyera's commitment to responsible operations and meaningful engagement has enabled Keyera to contribute positively to the region's social and economic development. From supporting local initiatives and fostering education to advancing sustainability and environmental stewardship to

promoting Indigenous Reconciliation, Keyera's efforts have created lasting value for the communities in the area, cementing our role as a trusted partner in the region.

A summary of Keyera's engagement regarding the proposed Project to date is provided in Section 1.3. No health, social or economic concerns regarding the proposed Project have been identified during engagement to date.

3.3.2 Health Context

Strathcona County is located in the Alberta Health Services Edmonton Health Zone (Alberta Health, 2022a). As of March 31, 2021, the largest age group within the Edmonton Zone level population was 35 to 64-year-olds, accounting for 40.2% of the overall population in the zone and 40.5% of the population in Alberta. Children 17 years and under made up 21.5% of the zone's overall population, compared to 22.0% for Alberta. In addition, residents 65 years and older accounted for 14.0% of the zone's overall population, which is 0.1% lower than that for Alberta (Alberta Health, 2022a).

Edmonton Zone-level health status indicators for 2019 and 2020 (i.e., Body Mass Index [BMI], mental health before (2019) and during (2020) Covid, smoking, and self-perceived stress tolerance were similar when compared to the province indicators for the two most recent calendar years available (Alberta Health, 2022a). Health indicators within Strathcona County are generally positive, with a life expectancy of 82.2 years as of 2022 (GoA, 2025e). The most common causes of death were neoplasms. Emergency services were most commonly used for acute upper respiratory infections (likely due to the Covid pandemic), and semi and non-urgent visits made up 32.9% of visits (Alberta Health, 2022b).

Air Quality was considered high quality 96.6% of the time in 2022 as measured using the Air Quality Health Index at the County scale (GoA, 2025e). Recognizing that the region has significant industrial development, the cumulative effects of air emissions, noise and water use are managed under several regulatory and other agencies including the IH-DIZ (see Table 3-2). The proposed Josephburg Project is located within the Capital Airshed and Heartland Air Monitoring Partnership. Both groups manage live air quality monitoring and reporting for parts of the County. In 2023, the Air Quality Health Index for the region was considered low risk approximately 76-86% of the time depending on region (Fort Air Partnership, 2023). Very high-risk indexes were recorded between approximately 0.5-2.1% of the time, and were largely attributed to wintertime inversion, wildfire smoke, and summertime smog (Fort Air Partnership, 2023).

Currently, Keyera is leasing company-owned lands approximately 1 km east of the Project site to the Scotford Hutterite Colony, who use the lands for agricultural purposes. The closest residence is located approximately 1.5 km south of the Project site, south of Highway 15. The Scotford Colony School is also located about 1.8 km southeast of the Project, adjacent to Highway 830.

3.3.3 Social Context

Strathcona County encompasses both urban and rural areas. As of the 2024 municipal census, the County's population is 103,829, with approximately 72.8% of the population residing in the urban service area of Sherwood Park and the remaining 27.2% in rural regions. Strathcona County's population has increased by 3.5% since 2022 (Strathcona County, 2025b).

As of the 2021 federal census, the median age Strathcona County is 43.2 years, compared to 39 years for the province of Alberta (Statistics Canada, 2021). The median age in the City of Fort Saskatchewan is 34.4 years (City of Fort Saskatchewan, 2024a).

The County population consists of 99,225 people; 49,060 males and 50,165 females (49.5% and 50.5% respectively). Most residential dwellings (41,048) in the County are in urban areas and the majority of the citizens are Canadian. Approximately 23.5% of the population in the County have identified as non-Caucasian and English is spoken by approximately 84% of the population (Strathcona County, 2025b). Based on the municipal census in 2024, 2,677 people within Strathcona County identified as Indigenous (approximately 2.6% of the total County population) (Strathcona County, 2025b). According to the 2021 Canadian federal census 4,595 respondents in

Strathcona County identified as Indigenous (approximately 4.7%), compared to 6.8% overall for the province of Alberta.

The County population is highly educated, with 63% of residents holding a diploma, certificate, or degree. Common occupations among residents include sales and service roles, trades and transport positions, and business, finance, and administration jobs (Strathcona County, 2025b).

As described in Section 3.1.4, the closest community to the Project is the City of Fort Saskatchewan, located immediately to the west of the Project site. As of April 1, 2024, the population of Fort Saskatchewan was 29,857, according to the municipal census (City of Fort Saskatchewan, 2024b). The City of Fort Saskatchewan is characterized by steady population growth (12.1% between 2016 and 2021) (Statistics Canada, 2021) resulting from economic opportunities and quality of life. The median age is 34.4 years (City of Fort Saskatchewan, 2024a).

The Hamlet of Josephburg is located approximately 4.5 km southeast of the Project, with a population of 122 as of 2024 (Strathcona County, 2024a). The City of Edmonton (Alberta's Capital) is located approximately 22 km southwest of the Project site and has a population of 1,631,614 as of 2024 (Statistics Canada, 2025).

Strathcona County and the City of Fort Saskatchewan have well-developed municipal physical infrastructure, including public and private utilities, water, wastewater and solid waste management services. The County, including the City of Fort Saskatchewan and Edmonton have well established accommodations and hospitality markets, as well as varied recreational opportunities.

Existing transportation networks are present throughout the County, which have been developed and continue to be maintained for both local, regional public and industrial use. Regional air travel is supported by the Edmonton International Airport. The City of Fort Saskatchewan also has direct access to the Canadian National (CN) Class 1 railway which runs to the east, with the City falling between several transload facilities which support rail distribution activities (City of Fort Saskatchewan, 2025).

RCMP and enforcement services within the County include 9-1-1, RCMP, traffic safety and enforcement, and bylaw enforcement (Strathcona County, 2025c). Strathcona County's Family and Community Services (FCS) is a partnership between the Alberta Government and Strathcona County and provides a range of supportive community programs and social services (Strathcona County, 2025d). Regarding health services, the Fort Saskatchewan Community Hospital, provides a wide range of inpatient and outpatient healthcare services including a 24/7 emergency department, as well as lab services, child health clinic, and adult community services, including addiction and mental health (Alberta Health Services, 2025). The City of Edmonton also offers a full array of medical, health and emergency services commensurate with a large urban center.

3.3.4 Economic Context

Strathcona County boasts a robust economy, with leading industries of agriculture and agrifood, hydrogen and petrochemicals, construction, technical services, transportation and manufacturing (Strathcona County, 2024b). The County has a diverse business community, comprising over 3,600 businesses, including both small enterprises and large industrial operations (Strathcona County, 2025b) and is a significant player in Canada's energy sector. The County is part of Alberta's Industrial Heartland, the nation's largest hydrocarbon processing region. The County's strategic location also offers excellent transportation links, including major highways, railways and proximity to Edmonton International Airport.

For example, the County produced 14.7 million m^3 of natural gas and 95,956 m^3 of oil in 2023. It has 523.2 million m^3 of natural gas reserves (Strathcona County, 2025b). Along with the primary production the area is home to significant midstream and downstream processing capacity with most of the major oil and gas companies owning facilities in the County, nearby Counties or the City of Fort Saskatchewan.

Economic activity continues to create labour demand in Strathcona County and in the province of Alberta. The County continues to be host to a number of heavy industrial construction projects, with the majority concentrated in the IH-DIZ. As noted in Section 3.3.3, the median age in Strathcona County is 43.2 years (Statistics Canada, 2021)

and the median age in the City of Fort Saskatchewan is 34.4 years (City of Fort Saskatchewan, 2024a), which offers a generally young regional and local workforce.

Labour force status statistics indicate an employment rate of 61.6 % in Strathcona County (71.6% male and 63.9% female), compared to 60.2% for Alberta, and an unemployment rate of 9.1% (9.2% male and 9.0% female), compared to 11.5% for Alberta (Statistics Canada, 2024) (Statistics Canada, 2024b). The median household income in 2020 in the County was $124,000, significantly higher than Alberta's median of $83,000 (Statistics Canada, 2021). Income statistics of individuals in 2020, show a median income of $54,400 and $70,000 for men and $43,600 for women, compared to the provincial $44,800 median income ($53,200 for men and $38,400 for women) (Statistics Canada, 2025). As per the 2021 census, approximately 4% of Indigenous adults in Strathcona County were identified as low income and 5.5% of all Indigenous people were below the poverty line (Statistics Canada, 2021).

4. Part D: Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects

4.1 Financial Support

A description of any financial support that federal authorities are, or may be, providing to the project.

The Josephburg Project is not receiving any Federal funding. It will be fully financed by Keyera.

4.2 Federal Land

A list of any federal land that may be used for the purpose of carrying out the project.

There are no Federal lands within or adjacent to the Josephburg Project footprint. The closest federal land is Elk Island National Park, located approximately 17 km to the southeast.

4.3 Jurisdictions With Power, Duties, or Functions in Relation to the Projects Environmental Effects

A list of any jurisdictions that have powers, duties or functions in relation to an assessment of the project's environmental effects.

This may include permits, licenses, or other authorizations that may be required by federal authorities or other jurisdictions.

A list of any changes to the environment or to health, social or economic conditions that may occur in Canada that are directly linked or necessarily incidental to the involvement of a federal authority that would permit or enable the project to be carried out in whole or in part.

The Josephburg Project will be regulated by several municipal and provincial agencies (see Table 4-1), along with the associated environmental approvals, permits and licenses that may be required.

As noted in Section 1.3, Keyera met with both AER and AEPA in December 2024 to confirm the facility classification and therefore which agency will regulate the Josephburg Project. It was confirmed in June 2025 the Josephburg Project would be regulated by AEPA, not the AER.

The Josephburg Project lands have been assessed many times over the previous 18 years, including two full provincial EIAs, by Total in 2009 (Total E&P Canada Ltd, 2009) and Sasol in 2013 (Stantec Consulting Ltd., 2013). Both project activities were much larger in nature, scale and potential impacts than the proposed Josephburg Project. While both project proponents completed all assessments required under the provincial EIA, and approval was received, neither project was constructed. Further, neither project triggered requirements under the CEAA. These assessments provide significant baseline, residual and cumulative effects analysis directly relevant to the proposed Josephburg Project.

Since December 2024, Keyera has worked extensively with AEPA and the AER to clarify the provincial regulatory jurisdiction. In June 2025 AEPA confirmed the project does not meet the definition of an oil refinery under the *Activities Designation Regulation* (Alberta Regulation 276/2003) or the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* (Alberta Regulation 111/1993). The project will be regulated under the *Environmental Protection & Enhancement Act* (EPEA) by the Ministry of AEPA.

Keyera also operates several other facilities and terminals in the area which were all subject to environmental assessments as required under regulation. The proposed Josephburg Project will be subject to environmental assessments appropriate to the final assessment of the facility designation and regulated by the province of Alberta for all environmental effects.

Table 4-1 Approval or Regulating Agencies

Agency	Approvals	Comments
Impact Assessment Agency of Canada (IAAC)	If it is determined that the Josephburg Project requires an assessment under the IAA, approval from the IAAC will be required.	This IPD is the first step in this process.
NAV Canada	Notification for stacks of a given height may be required (e.g., flare)	n/a
Transport Canada	Approval of stacks of a given height may be required (e.g., flare)	n/a
Environment and Climate Change Canada (ECCC)	While no approvals will be issued, the Josephburg Project is required to comply with the SARA and MBCA, and VOC regulations.	Proposed compliance methods are noted in earlier sections.
Alberta Energy Regulator (AER)	All pipelines into and out of the facility will be licensed by the AER.	AER regulations will also be used as best management practice for noise control (Directive 38), stormwater release criteria and tank storage requirements (Directive 55), flaring and venting (Directive 60), wildlife surveys and sweeps, emergency preparedness and response (Directive 71).
Alberta Environment and Protected Areas (AEPA)	APEA would review and issue approvals under EPEA and the *Water Act* for the Josephburg Project.	n/a
Strathcona County	The County will issue a development permit and building permits.	The Strathcona County Design and Construction Standards and AEPA Stormwater Management Guidelines will be followed. The County will also approve the new access road(s)/approach(s) to Range Road 220.
Aboriginal Consultation Office (ACO)	The ACO will issue a decision on the need for Indigenous Consultation and will manage the process if it is required.	Keyera submitted a pre-consultation assessment on May 9, 2025. On June 5, 2025, the ACO determined no consultation will be recommended by the Province.
Alberta Culture and the Status of Women (ACSW)	None	Keyera received approval under the *Historical Resources Act* for all Josephburg Project lands on September 4, 2019 (HRA number 46680-19-0029-0001.
Northeast Capital Industrial Association (NCIA)	The NCIA is a member of several frameworks designed to manage cumulative effects in the Capital region, of which the Josephburg Project is a part.	The NCIA will be consulted on noise to ensure compliance with regional models and frameworks.

Agency	Approvals	Comments
	These include the Heartland Air Monitoring Partnership, Water Management Framework for the Industrial Heartland and Capital Region, and biannual groundwater reporting. It also manages the Regional Noise Management Plan and model.	
Industrial Heartland-Designated Industrial Zone (IH-DIZ)	The IH-DIZ is a designated industrial area created by the Government of Alberta to stimulate investment in the Heartland Region. Part of their mandate was development of several regulatory frameworks which will apply to the Josephburg Project including; *Air Emissions Requirements Policy for the IH-DIZ* (AEPA, 2022a) which regulates NOx release limits and the *Guideline for Industrial Operators in the Heartland Designated Industrial Zone for Conservation, Off-Site Storage and Off-site Use of Topsoil* (AEPA, 2022b) which regulates how topsoil must be managed.	The IH-DIZ is currently developing management frameworks for water quality, biophysical and socio-economic assessment that will also apply to the Josephburg Project.
Provincial and federal Safety Codes	The Josephburg Project will meet all provincial and federal safety codes (e.g., tank and vessel design, emergency response, fire safety)	n/a

n/a = not applicable.

There is robust provincial regulatory regime that will address all potential valued components for the Josephburg Project, as described in Table 4-2.

Table 4-2 Provincial Regulatory Regime for Valued Components

Valued Components	Provincial Agency or Regulation	Comments
Biodiversity and Ecology: Wildlife	AEPA under the Alberta *Wildlife Act*, which regulates all projects. Wildlife zones and policy documents direct surveys and mitigations.	Requirements for pre-construction surveys and sweeps. Adherence to wildlife zones and setbacks. The Josephburg Project will also be subject to the federal SARA and MBCA during all phases.
Biodiversity and Ecology: Vegetation	AEPA under EPEA. Alberta *Wildlife Act* regulates all projects. Biophysical zones and policy documents direct surveys and mitigations.	Requirements for pre-construction surveys. Adherence to biophysical zones and setbacks. The Josephburg Project will also be subject to the federal SARA during all phases.
Biodiversity and Ecology: Fisheries	AEPA under EPEA. Alberta *Wildlife Act* and *Water Act* regulates all projects.	There are no predicted impacts to fisheries as there are no affected watercourses within or adjacent to the Josephburg Project footprint. Regulatory approvals from DFO are not anticipated to be required.
Water Quality: Watercourses	AEPA under EPEA, *Public Lands Act, Water Act*	There are no predicted impacts to watercourses as there are no affected watercourses within or adjacent to the Josephburg Project footprint. Regulatory approvals from DFO are not anticipated to be required.
Water Quality: Wetlands	AEPA under EPEA, *Public Lands Act, Water Act,* Alberta Wetland Policy	Keyera will obtain approval under the *Water Act* for any wetland impacts and ensure no net loss as per the Policy. Should the bed and shore of any impacted wetland be considered Crown land under the *Public Lands Act,* approval will be obtained.
Water Quality: Groundwater	AEPA under EPEA, *Water Act*	Keyera's provincial approval will contain requirements for a groundwater monitoring system, annual reporting and remediation (if required).
Geomorphology, Geology and Soils.	AEPA under EPEA	The EPEA application will outline local geological conditions and how they might impact the Josephburg Project design or mitigations.
Waste Management	AEPA under EPEA and AEPA waste management regulations	The EPEA application will contain conditions on waste management, including reporting.
Air Quality, Air emissions and Greenhouse Gas	AEPA under EPEA. The Josephburg Project will have to meet IH-DIZ NOx limits and the provincial Ambient Air Quality Objectives (AAQO). It will also be regulated under the Technology Innovation and Emissions Reduction (TIER) regulation.	The Josephburg Project will have to meet the provincial AAQO, TIER and IH-DIZ regulations. It will also meet Federal VOC regulations.
Noise and Light	AEPA under EPEA and Directive 38.	A Noise Impact Assessment will be completed. Lighting requirements will be managed under the County Development Permit.

Valued Components	Provincial Agency or Regulation	Comments
Cumulative Effects	AEPA under EPEA and policies under the IH-DIZ and NCIA.	As noted earlier, the NCIA manages regional noise models and is a member of several other frameworks to ensure cumulative effects are account for with all industrial development in the area. Additionally, the IH-DIZ has several policies in place for the region which do the same for air, water and soil. The IH-DIZ is also working on a Zone-wide Environmental and Socio-Economic Assessment of the entire region to facility cumulative effects reviews.
Transportation	AEPA under EPEA and the Development Permit through Strathcona County.	There are no provincial roads so the province will not be involved in transportation approvals.
Utility Infrastructure and Stormwater	AEPA under EPEA and the Development Permit and/or Strathcona Count and Fort Saskatchewan.	The Project will require Development Permit(s).
Socio-economics: land use, demographics, health	AEPA under EPEA and the Development Permit and/or Strathcona County.	The Project will require Development Permit(s).
Socio-economics: resource use and economics	AEPA under EPEA and the Development Permit and/or Strathcona County.	The Project will require Development Permit(s).
Socio-economics: visual landscape	Development permit(s) through Strathcona County	The Project will require Development Permit(s).
Emergency Response and hazards	AER Directive 71 and the Development Permit through Strathcona County.	An Emergency Response Plan will be developed for the Josephburg Project as will an engineering hazard assessments.
Stakeholder Engagement	AEPA under EPEA and Water Act and Development permit through Strathcona County.	The Project will require Development Permit(s).
Cultural and Historical Resources	ACSW under *Historical Resources Act*	As noted earlier, clearance under the Act has been obtained for all Josephburg Project lands.
Indigenous Rights	ACO	On June 5, 2025 the ACO determined no consultation will be recommended by the Province.
Construction	AEPA under EPEA and *Water Act* and Strathcona County bylaws.	Approvals will be obtained prior to construction.
Operations	AEPA under EPEA, Auditing by AEPA or the County. Regular monitoring and reporting under to the NICA and regulation under EPEA.	The EPEA approval will require continual monitoring and reporting of emissions, waste, storm and groundwater. There will be an operational emergency response plan that will address spill response.
Decommissioning	AEPA under EPEA. Reclamation certification.	The EPEA approval will be amended prior to decommissioning.

n/a = not applicable.

5. Part E: Potential Effects of the Project

5.1 Fisheries

A list of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:

a. fish and fish habitat as defined in subsection 2(1) of the *Fisheries Act*;
b. aquatic species, as defined in subsection 2(1) of the *Species at Risk Act (marine plants)*; and
c. migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Act*, 1994.

5.1.1 Fish and Fish Habitat

No fish-bearing watercourses or waterbodies, or surficial connections to these features is present within approximately 2 km of the Josephburg Project site (Total E&P Canada Ltd, 2009) (Stantec Consulting Ltd., 2013). The closest fish-bearing watercourses are the North Saskatchewan River and Astotin Creek, located approximately 2.5 km and 3 km from the Josephburg Project site, respectively. Based on the findings of the Total EIA (Total E&P Canada Ltd, 2009), Sasol EIA (Stantec Consulting Ltd., 2013), and publicly available information, fish habitat is present in both of these watercourses.

Direct Project effects to fish and fish habitat, as defined in subsection 2(1) of the *Fisheries Act* are not anticipated. Effects to fisheries for fish habitat outside Alberta or Canada are not anticipated as there are no connections to interprovincial, coastal or border waters.

Localized alteration of topography (as a result of site grading), removal of vegetation (including potential wetland vegetation, to be confirmed during the 2025 field season), and an increase in imperviousness within the Josephburg Project site (as a result of vegetation removal and gravel installation) may have an effect on the overall drainage and stormwater management in the vicinity of the Josephburg Project site. However, these effects will be managed and mitigated through municipal stormwater requirements, and under the *Water Act*, EPEA, and County approvals. Industry standard Best Management Practices (BMP) will be implemented to prevent the movement of any deleterious substances off site. Wastewater will be kept separate from stormwater and will not be released off site.

Environmental assessments for the proposed Project will include hydrological studies and Keyera will implement mitigation measures as required to avoid or reduce potential effects to drainage. Further, approval for stormwater management and release will be obtained from both AEPA and the County. As such, Project effects to fish and fish habitat are not anticipated.

5.1.2 Aquatic Species under the *Species at Risk Act*

As described in Section 5.1.1, no fish-bearing watercourses or waterbodies, or surficial connections to these features are present within approximately 2 km of the Josephburg Project site. Project effects on fish and fish habitat are not anticipated (see Section 5.1.1). No changes to aquatic species as defined in subsection 2(1) of the *Species at Risk Act* are anticipated as a result of the Josephburg Project.

5.1.3 Migratory Birds

The Josephburg Project site and surrounding area has been studied extensively over the past 18 years, including during the completion of two EIAs by Total (Total E&P Canada Ltd, 2009) and Sasol (Stantec Consulting Ltd., 2013), and multiple biophysical surveys, including targeted wildlife surveys for migratory birds, completed by Keyera in 2013, 2015, 2018, 2019, 2020, 2021, and 2022 (see Table 3-1). Habitat was typical of the region and no Important Bird Areas are located nearby. No unique habitat for migratory birds was found during previous on-site assessments.

Approximately 48.5 ha of vegetation (including primarily pasture/disturbed grassland, shrub/woody vegetation, and wetland vegetation, to be confirmed during the 2025 field season) will be removed from the Josephburg

Project footprint during construction. While construction of the Josephburg Project will alter and remove wildlife habitat within the footprint, lands surrounding the Project provide similar quality habitat to support wildlife. Construction activities may also temporarily result in sensory disturbance to wildlife species as a result of noise and increased activity on site and may have the potential for increased wildlife mortality due to interactions with vehicles. During operations, noise levels and air emissions will be monitored, as required by project approvals and are not anticipated to have adverse impacts on wildlife. Continuous flaring is not anticipated for the Josephburg Project; however, emergency flaring may occur in the event of an emergency. Effects on wildlife are not anticipated to be significant.

Industry standard BMPs will be implemented to avoid or minimize impacts on wildlife. In addition, Keyera will complete wildlife surveys in support of regulatory applications, including an assessment of migratory birds, to further understand use of the Josephburg Project site by wildlife. The results of these assessments will be used to develop the EPP mitigation measures that will apply during construction. Keyera will also conduct pre-construction wildlife sweeps to minimize impacts to active nest and niche sites (if present) during construction. If active nest or niche sites are encountered, mitigation including setbacks or timing restrictions will be implemented, as required. During operations, Keyera will ensure that the Josephburg Project operates such that provincial and federal wildlife regulations are followed and that any impacts to wildlife are mitigated. During decommissioning, Keyera will develop a plan to ensure all lands are reclaimed to equivalent land capability and all contamination (if present) is fully remediated.

5.2 Environment

A list of any changes to the environment that, as a result of carrying out the project, may occur:

- on federal lands;
- in a province other than the province in which the project is proposed to be carried out; or,
- outside of Canada.

No impacts to federal lands are anticipated (see Section 3.1.6). The Josephburg Project is located entirely inside Alberta, on private land owned by Keyera. Due to the distance from any provincial or federal border, impacts outside of Canada are not anticipated because of the Project.

5.3 Indigenous Peoples

With respect to Indigenous peoples of Canada, a brief description of any impact – that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment – on:

- physical and cultural heritage,
- the current use of lands and resources for traditional purposes, and
- any structure, site or thing that is of historical, archaeological, paleontological or architectural significance,

based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.

Keyera deeply respects and acknowledges the long history and enduring connection Indigenous Peoples have with the land where our infrastructure is located.

Keyera is committed to ongoing learning and reflection on Canada's history and is eager to embrace pathways to Reconciliation with Indigenous Peoples. Keyera firmly believes that Reconciliation is the collective responsibility of all who inhabit this land and benefit from its resources.

Keyera's Reconciliation journey is guided by the following principles:

- *Seek to understand* the truths of history, traditions, culture, perspectives of the Indigenous peoples, their communities, and organizations we interact with through meaningful dialogue and engagement.

- *Actively listen* and honour the voices of Indigenous peoples to understand priorities and impacts to build collective capacity for a better future.
- *Advance Reconciliation* for those impacted by our operations by supporting initiatives that provide meaningful opportunities in training and employment and actively engage safe and reliable business participation.

In 2024, Keyera published its commitment to Indigenous Reconciliation. Keyera also launched its Reconciliation Action Plan, an internal strategic framework that guides Keyera in its journey to advance Reconciliation with Indigenous Peoples. Priorities for the plan include advancing economic inclusion through Indigenous employment and supplier participation, as well as increasing employee cultural awareness. Keyera is proud to have strong relationships with Indigenous Nations and communities across Alberta.

As noted in Section 3.3, the proposed Josephburg Project will be located on Keyera-owned land within the IH-DIZ in Strathcona County, Alberta (Figures 1-1 and 1-2). Lands in the region are zoned industrial, privately held and dominated by industrial facilities. The quarter sections immediately north, east and south of the Project site are also owned by Keyera, while lands immediately west of the Project in the City of Fort Saskatchewan, across Range Road 220, are privately owned by Dow Petrochemical and Aux Sable.

No habitation, cultural or spiritual sites or structures have been identified within or proximate to the Project site, and Keyera received approval under the *Historical Resources Act* for the Project site on September 4, 2019 (HRA number 46680-19-0029-0001).

As mentioned above, lands within and surrounding the Project site are privately held and contain several existing industrial operations. There is no indication that lands and resources in the Project area are currently used for traditional purposes. Given the proposed Project's setting and its location, construction and operation of the Project is not anticipated to alter traditional activities, traditionally used sites or resources, or heritage or historical sites. No adverse effects on Indigenous peoples are expected to occur as a result of the Project.

5.4 Health, Social or Economic Conditions

A brief description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with the Indigenous peoples of Canada.

5.4.1 Overview

The proposed Josephburg Project will be located on Keyera-owned land in Strathcona County, Alberta (Figures 1-1 and 1-2). Given that the region (IH-DIZ) is designated for industrial development, has a robust regulatory framework to address project and cumulative effects, and the area has highly educated and trained staff, Strathcona County is the ideal location for the Project. Further, as noted above, Keyera has deep roots in the local community. Keyera is a member of several local community organizations and views relationships in the area as critical to Keyera's success. Consultation with Indigenous communities, the local municipality and other stakeholders is ongoing as part of the overall Josephburg Project and associated approvals, to maximize positive effects and mitigate negative effects on health, social and economic conditions.

A summary of Keyera's engagement regarding the proposed Project is provided in Section 1.3. To date, no health, social or economic issues or concerns regarding the Project have been identified. Potential effects of the Project are anticipated to be beneficial from a social and economic perspective or negligible if adverse, and any potential adverse effects on health are expected to be mitigated by the implementation of engineering mitigation measures to be incorporated into the design of the Project, construction environmental plans, operational procedures, and emergency response planning.

Given the Project setting and various social and economic measures that will be implemented by Keyera for the proposed Project, as described below, it is not predicted that diverse groups of people (e.g., gender, class, culture, Indigeneity or ability) will be differentially affected by the Project.

5.4.2 Health

Potential health effects from the proposed Project are anticipated to be limited to contribution of Project air emissions and acoustic emissions (noise) to existing industrial, commercial and agricultural activities in the region, contributing to cumulative effects. However, Project contributions to air and noise emissions are predicted to be not significant since Keyera will implement mitigation measures to be incorporated into the design of the Project and will complete air quality and noise assessments to ensure compliance with all regulations and the regional models (see Section 3.3.2). Further, the Project will be in an area designated for industrial development which is reflected in the municipal and provincial permits and approvals that will be obtained prior to construction.

Health effects resulting from Project impacts to surface water quality are not anticipated. The Project is not located in proximity to watercourses or municipal water supply sources. Stormwater runoff will be managed under provincial and municipal regulations. Industrial wastewater will be stored onsite in tanks and transported to an approved disposal facility. Further, mitigation measures will be incorporated into the design and operation of the Project to minimize the potential effects of the Project on surface water quality and Project design and mitigation will be implemented to prevent chemical releases. Engineering mitigation and operations measures, and a spill response plan will be implemented to prevent spills, leaks or seepage from any of the Project infrastructure and ensure the Project will not contribute to cumulative contamination of groundwater. Additionally, there are no non-decommissioned domestic groundwater wells within the Project site or adjacent area. Therefore, health effects resulting from Project impacts to groundwater are not anticipated.

An environmental construction plan will be developed and implemented during the construction stage to ensure all conditions in approvals are followed and procedures are established to mitigate accidental spills or releases. Prior to operations, Keyera will implement an emergency response plan that will include a defined emergency planning zone and consultation will all residents who may be affected by an emergency and procedures for shelter-in-place or evacuation, if required. Additionally, provincial approvals will mandate ongoing monitoring and reporting for air emissions (e.g., stack surveys), noise levels, soils contamination, groundwater, stormwater and wastewater releases or disposal. These monitoring programs will ensure any potential risks, such as unplanned release, will be detected and remediated to prevent any potential health effects.

Regarding aesthetics, as described in Section 3.3, the Project will be located on Keyera-owned land in the IH-DIZ within Strathcona County, Alberta. The IH-DIZ, has been established to support clustered industrial development. The Project area is surrounded by industrial development and will be aesthetically compatible with the existing regional landscape; therefore, adverse visual effects are not predicted.

5.4.3 Social

As described in Section 3.3.1, Keyera actively participates in local organizations such as the NCIA, Life in the Heartland community group and local Chambers of Commerce and has built strong, positive relationships with both the local and provincial government representatives in the area. Keyera's commitment to responsible operations and meaningful engagement has enabled Keyera to contribute positively to the region's social and economic development, and this will be extended to the Josephburg Project.

Through Keyera Connects, an enterprise-wide social investment program, Keyera is committed to making a positive, lasting impact in the areas where we operate and live:

- Environmental Innovation: Keyera is committed to preserving the natural landscapes we call home. Through our Environmental Innovation pillar, we invest in conserving our ecosystems for future generations, as well as innovative solutions to advance the energy transition and our industry to cleaner, lower-emitting sources of energy.

- Indigenous Reconciliation: Reconciliation begins with understanding the truths of history. Through our Indigenous Reconciliation pillar, our approach is to listen with humility as we collaborate with Indigenous Peoples, communities, and organizations to determine areas of focus and impact that build capacity and strength for a better future for all.
- Community Resiliency: Resilient communities respond and adapt effectively to changes, challenges, adversity, and opportunities. Through our Community Resiliency pillar, we support infrastructure and programs that build resiliency in the communities where we live and work today and sustainably into the future.
- Skills Growth: Keyera's Skills Growth pillar is dedicated to developing essential skills needed for success in today's rapidly evolving energy landscape. We support programs that enhance energy literacy, promote STEM education, and encourage careers in skilled trades— critical areas for building a strong and capable energy workforce for the future. By investing in lifelong learning and skill development, Keyera empowers individuals and communities to thrive in an ever-changing, innovation-driven world.

Potential effects to local and regional infrastructure and services are predicted to be negligible given Strathcona County and the City of Fort Saskatchewan have well-developed physical municipal infrastructure, including public and private utilities, water, wastewater, and solid waste management services, with no publicly reported/known current capacity constraints (see Section 3.3.3). Existing temporary and permanent housing and accommodations are expected to have capacity to accommodate the construction workforce and operations staff. Additionally, measures will be implemented during the construction phase to reduce traffic effects. As such potential impacts to infrastructure and services are expected to be temporary, intermittent and negligible. Further, Keyera is committed to communicating with local and regional services providers including providing Project information and developing mutual aid agreements and protocols, as appropriate. These may include County emergency services, mutual aid agreements with other bodies, health centers and the RCMP.

Given the Project's nature, scale and setting, the Project is not expected to result in significant changes to population or demographics locally or regionally, nor adversely affect community well-being. As noted in Section 3.3.1, the proposed Project is entirely located on Keyera owned land in an Industrial area (IH-DIZ). Adjacent lands are zoned industrial and are also privately held and dominated by industrial facilities. No adverse effects on Indigenous peoples are expected to occur as a result of the Project (see Section 5.3).

5.4.4 Economic

The construction and operation of the Josephburg Project will result in beneficial economic impacts to the County and the primary services centers for the Project (e.g., City of Fort Saskatchewan). The Project is predicted to create approximately 700 - 800 full time equivalent construction jobs lasting over two years. This does not include the additional offsite jobs related to engineering, procurement and fabrication. While not yet formally developed, Keyera's approach to hiring for onsite construction will, on a competency basis, seek to prioritize the County first, the province of Alberta second and Canada third, with international (as required) last. Beneficial economic effects are also predicted to be generated during construction through accommodations and spending associated with the construction workforce.

Once operational, the Josephburg Project will require approximately 50 full-time staff. Further, the Project will contribute positively through federal and municipal taxes during operations.

As planning proceeds Keyera intends to refine their hiring and procurement process with the aim of contracting and employment opportunities that seek to prioritize local businesses that meet all performance and competitive requirements.

Keyera's Indigenous Relations and Supply Chain Management teams consider Indigenous participation in contracting opportunities related to our projects and operations. Keyera will continue to work with Indigenous groups to understand their interest in participating in project-related supply chain activities. Keyera works closely with neighboring Indigenous communities to understand the goods and services offered through their owned

and/or partnered businesses. Keyera develops Supply Chain Plans that incorporate Indigenous business information. These businesses are evaluated based on their technical capabilities and safety programs and may be included on final bid lists for new opportunities. Keyera is proud of its long-standing, positive relationships with many Indigenous businesses across its operating areas, supporting Indigenous economic reconciliation and shared success.

Further, Keyera is an equal opportunity employer with an established diversity, equity and inclusion (DEI) program, committed to inclusion, equal opportunity, and diversity.

As noted in Section 3.3.4, while economic activity continues to create labour demand in Strathcona County and in the province of Alberta, steady population growth combined with the generally young median age of the province of Alberta, Strathcona County and nearby municipalities is anticipated to serve Project needs without adverse effects to the local and regional workforce.

5.5 Greenhouse Gas Emissions

An estimate of any greenhouse gas (GHG) emissions associated with the project.

This should be calculated as the net GHG emissions associated with the project and estimated based on the information available to proponents at this stage. For guidance on the calculation of GHG emissions see the draft Strategic Assessment of Climate Change developed by Environment and Climate Change Canada: https://www.strategicassessmentclimatechange.ca/

The *Information and Management of Time Limits Regulations* under the IAA set out the information that proponents are required to provide in their Initial and Detailed Project Descriptions, which includes an estimate of any GHG emissions associated with the project (ECCC, 2021).

Keyera estimated the direct sources of GHG emissions, based on the Project information available at this stage, associated with the two-years of construction, one-year of operational emissions and two years of decommissioning (including reclamation).[1]

The objective of the presented estimate is:

- Establish the GHG emissions inventory for the construction, operation and decommissioning phases of the Project based on the available design information.
- Quantify estimated GHG emissions in all applicable categories.
- Calculate the estimated carbon intensity of the Project (ECCC, 2023).

The following Net GHG Emissions Equation was used:
Net GHG emissions = Direct GHG emissions + Acquired energy GHG emissions - CO_2 captured and stored - Avoided domestic GHG emissions - Offset credits

This Project will not have CO_2 captured and stored, avoided domestic GHG emissions, or offset credits. Additionally, given the limited vegetation or wetland removal, a carbon sink offset has not been calculated at this stage. Hence, only direct GHG emissions from construction and operations, and acquired energy GHG emissions were assessed.

[1] Given decommissioning will not be until 2056, at the earliest, the regulatory landscape, decommissioning best practices, or greenhouse gas factors are not known. Therefore, based on past experience on the effort required to decommission a facility of this type, it has been assumed both the length of time and direct and indirect emissions will be the same as the construction phase.

5.5.1. Estimated Emissions – Construction and Decommissioning Phase

This category covers the estimated GHG emissions due to the use of diesel/gasoline fuel by on-road and off-road equipment during the two-years of the construction phase and two-years of the decommissioning phase of Project. Emissions are broken down into direct and indirect sources.

5.5.1.1 Direct GHG Emissions- Construction and Decommissioning Phase

Direct emissions include on-road diesel and gasoline combustion equipment and stationary/off-road diesel combustion equipment. Examples of the construction equipment includes on-road (e.g., work trucks, crew cabs) and non-road equipment (e.g., track hoe, crane mobile 250 Ton, loader, skid steer etc.) (FuelLogic, 2025). The calculation assumes heavy equipment will be used for approximately 110,080 hours over two years.

The net GHG emissions during approximately two-year construction and decommissioning periods were quantified using the *Environment and Climate Change Canada. 2024, National Inventory Report, 1990–2022: Greenhouse Gas Sources and Sinks in Canada - Part 2"* (ECCC, 2024a) *and Emissions Factors and Reference Values V 2.0* (ECCC, 2024b) in conjunction with a list of representative off-road construction equipment and their operating hours. This assessment evaluates the contribution of GHG released during Project construction and decommissioning.

In general, the equation used to calculate the carbon dioxide equivalent is as follows:

CO_2e (tonnes/year) = AF * EF * GWP * CF

Where:

- CO_2e (tonnes/year) – estimated GHG emissions expressed as CO_2e equivalent in metric tonnes per year.
- AF – Activity Factor.
- EF – Emission Factor.
- GWP – Global Warming Potential for an evaluated GHG gas.
- CF – Units Conversion Factor, as applicable

Emissions of CO_2, CH_4, and N_2O from fuel combustion are estimated by multiplying estimated fuel consumption of the equipment by mode-specific emission factors. Mode-specific emission factors have been developed by ECCC, based on technologies typically used in Canada and are summarized in Table A6-1 to A6-13 of the *National Inventory Report 1990–2022: Greenhouse Gas Sources and Sinks in Canada, Part 2, Annex 6*.

Total GHG emissions are reported as CO_2e, whereby emissions of each of the specific GHG are multiplied by their global warming potential (GWP) factors from the Environment and Climate Change Canada (ECCC) (ECCC 2022 – Part 1) and are reported as CO_2e. A larger GWP value means the gas absorbs a larger amount of energy over a given time (ECCC, 2024c). The 100-year GWP for the assessed GHG are CO_2 = 1.0, CH_4 = 28, and N_2O = 265.

Direct GHG emissions during approximately two-year construction for the Project are estimated to be approximately **5,677 tonnes CO_2e.** The same assumptions have been made for decommissioning resulting in the same **5,677 tonnes CO_2e** estimate**.**

5.5.1.2 Indirect GHG emissions- Construction and Decommissioning Phase

The Project will be powered during construction through acquired electricity from the existing electrical grid. The estimated power requirements are 150,000 kWhr/yr and a total 300,000 kWhr for the two-year construction and decommissioning phases of the Project. A 'generation intensity' indicator is derived to reflect the GHG emissions intensity of electricity as it is delivered to the electricity grid. A 'consumption intensity' indicator is also derived to reflect the GHG emissions intensity of electricity as it is delivered to the consumer. Electricity consumption intensity values (g CO_2e/kWh electricity consumed) for 2025 for Alberta is 438, as per ECCC, Annex 13 Electricity Intensity Data,

dated March 21, 2025 (ECCC, 2025). This value was used to calculate the GHG CO_2e emissions for acquired electricity for the Project.

Indirect GHG emissions from the acquired electricity during construction are estimated to be approximately **65.5 tonnes CO2e per year,** or **131 tonnes** for the two-year construction period. The same assumptions have been made for decommissioning resulting in the same **131 tonnes CO_2e *estimate*.**

5.5.2. Estimated GHG Emissions – Operation Phase

As an effective GHG emission reduction strategy, a vapour recovery unit (VRU) is designed to capture and recover sources of emissions from storage tanks and the following equipment has been replaced with reduced direct emission technologies. Table 5-1 lists the sources not included in the calculations as they have no emissions.

Table 5-1 List of equipment with zero GHG emissions

Equipment	Replacement Technology / Equipment
C8+ Stripper Reboiler	Replaced with Steam Stripping (zero direct emissions)
Light Condensate Stabilizer Reboiler	Replaced with ATB Integration Reboiler (zero direct emissions)
Fuel Gas Water Bath Heater Package	Replaced with Electric Heater (zero direct emissions)
Storage Tanks	All Emissions captured through VRU or Internal Floating Roof

Operations emissions calculations have been broken down into direct and indirect (acquired) sources.

5.5.2.1 Direct GHG Emissions from Operation Phase

Table 5-2 outlines the emissions calculations for the direct GHG sources from the Operations Phase.

Table 5-2 Direct GHG Emissions Sources

Equipment	Calculations	Emissions
Charge Heater Package	Total GHG emissions are reported as CO_2e, based on actual combustion reaction for carbon-containing molecules in the fuel gas whereby emissions of each of the specific GHG, i.e., CO_2, CH_4 and N_2O, are multiplied by their global warming potential (GWP) factors.	CO_2 (CO2e): 147,021 tonnes/yr and CH_4 (CO2e):70 tonnes/yr N_2O (CO2e): 186 tonnes/yr Total **147,276 tonnes CO_2e per year**.
Steam boiler	Total GHG emissions are reported as CO_2e based on actual combustion reaction for carbon-containing molecules in the fuel gas whereby emissions of each of the specific GHG, i.e., CO_2, CH_4 and N_2O, are multiplied by their global warming potential (GWP) factors.	CO_2 (CO2e): 19,427 tonnes/yr and CH_4 (CO2e):11 tonnes/yr N_2O (CO2e): 27 tonnes/yr Total **19,465 tonnes CO_2e per year**.
Flaring	Total GHG emissions are reported as CO_2e, based on actual combustion reaction for carbon-containing molecules in the Fuel Gas stream and the following assumptions. Emissions of each of the specific GHG, i.e., CO_2, CH_4 and N_2O, are	CO_2 (CO2e): 882 tonnes/yr and CH_4 (CO2e):1,011 tonnes/yr N_2O (CO2e): 8 Total **1,901 tonnes CO_2e per year**.

Equipment	Calculations	Emissions
	multiplied by their global warming potential (GWP) factors: • CO_2 emissions from pilot and purge system • Estimated as 1% of total Fuel Gas usage and 0.1% of venting /offgas.	
Fugitive Emissions	Given the unpredictability of fugitive emissions, Keyera's Fort Saskatchewan plant (KFS) was considered as a comparative facility for fugitive emissions estimation. Five assessments between 2020 and 2024 indicated annual fugitive emissions between 0.02% and 0.43%, with an average of 0.17% of the total facility emissions. The fugitive emissions at KFS constitute below 0.5% of total annual direct GHG emissions. The value of Fugitive emissions in the proposed Josephburg Project is estimated to be insignificant compared total GHG (i.e., <0.5%); however, 1% of total direct GHG emissions was used in this calculation to be conservative.	As the total direct GHG emissions of the proposed Project is estimated at 168,642 tonnes CO_2e per year, the total estimated fugitive emissions (1% of total emissions) are conservativity estimated at **1,686 tonnes CO_2e per year.**

5.5.2.2 Indirect GHG Emissions from the Operation Phase

The electricity power estimate for the Project is 50,000 MWh/yr. A 'generation intensity' indicator is derived to reflect the GHG emissions intensity of acquired electricity as it is delivered to the electricity grid. A 'consumption intensity' indicator is also derived to reflect the GHG emissions intensity of electricity as it is delivered to the consumer. Electricity consumption intensity values (g CO_2e/kWh electricity consumed) for the period between 2005 and 2023 is 438 for Alberta, as per ECCC, Annex 13 Electricity Intensity Data, dated March 21, 2025 (ECCC, 2025). This value was used to calculate the GHG CO_2e emissions for acquired electricity for the Project. Indirect GHG emissions from the acquired electricity during the operation phase is estimated to be approximately **21,900 tonnes CO_2e per year**.

5.5.3. Estimated Net Total GHG Emissions – Construction Phase and Operation Phase

Estimated net total GHG emissions for two-year construction and an average operation year of the proposed Project is summarized in Table 5-3.

Table 5-3 Estimated Net Total GHG Emissions – Construction Phase and Operation Phase of the Project

Equipment / Activity / Source of Emissions	Estimated GHG Emissions CO_2e
Construction Phase	
Off-Road Equipment	3,152 tonnes
On-Road Equipment	2,525 tonnes
Acquired Electricity	131 tonnes
Total GHG- Construction Phase	**5,808 tonnes (for two years)**
Operations Phase	

Equipment / Activity / Source of Emissions	Estimated GHG Emissions CO_2e
Charge heater package	147,276 tonnes/year
Steam boiler	19,465 tonnes/year
Flare	1,901 tonnes/year
Fugitive emissions	1,686 tonnes/year
Annual Acquired Electricity	21,900 tonnes/year
Total GHG – Operation Phase	**192,228 tonnes/year**
Decommissioning Phase	
Off-Road Equipment	3,152 tonnes
On-Road Equipment	2,525 tonnes
Acquired Electricity	131 tonnes
Total GHG- Decommissioning Phase	**5,808 tonnes (for two years)**
Total Construction and Operation Phase	
Construction, Operation and Decommissioning	**203,844 tonnes (two-years construction, two-years decommissioning plus one year operation)**

It should also be noted that Keyera has a corporate target of 50% reduction in Scope 1 (direct) and 2 emissions (acquired) intensity by 2035 which will apply to the Josephburg project, if approved and constructed. Options for GHG reductions and decarbonization of all Keyera's assets are underway.

5.5.4. Estimated Carbon Intensity of the Project

Estimated carbon intensity of the project per year of the operation phase is presented as a ratio between the calculated net GHG emissions and processed condensates per year is summarized in Table 5-4.

Table 5-4 Estimate Carbon Intensity

Estimated Net Operation GHG Emissions CO_2e (tonnes/year)	Annual Designed Plant Capacity based on 100,000 BBL/D (tonnes/year)	Estimated Carbon Intensity (tonne CO_2e/tonne Processed Condensate per a year)
192,228	**4,497,353**	**0.04**

5.5.5. Estimation of Uncertainty

ISO 14064-1:2018 provides guidance on assessment of uncertainty in greenhouse gas (GHG) inventories, and the guide was used to define uncertainty of the emission estimations. While ISO 14064-1:2018 doesn't explicitly define a ranking system, it encourages organizations to prioritize and address uncertainties that are most likely to have a significant impact on the overall GHG inventory (CSA, 2018). Qualitative estimation of the impact of uncertainties on the accuracy of the presented GHG assessment is presented in Table 5-5.

Table 5-5 Uncertainty Ranking

Equipment / Activity / Process	Uncertainty Ranking	Rationale
Diesel/Gasoline Combustion	Medium Uncertainty	Diesel consumption is based on the utilization rates estimated by manufacturer's data for equipment fuel consumption and a conservatism approach. Diesel emission factors were obtained from ECCC and are consistent and accurate.
Acquired Electricity	Low Uncertainty	Electricity consumption is based on the design electricity data at the design stage. The emission factor is based on an annual provincial grid average that includes all the province's controllable fuel sources.
Direct Process Emissions	Medium Uncertainty	The calculation is based on actual combustion reaction for Carbon containing molecules in the Fuel Gas stream.
Fugitive Emissions	High Uncertainty	Based on estimation from a comparable plant, a conservative emissions rate of 1% was used.

5.6 Waste and Emissions

A list of the types of waste and emissions that are likely to be generated - in the air, in or on water and in or on land - during any phase of the project.

As noted in Part B, the Josephburg Project is a relatively simple condensate distillation facility. It will therefore have minimal waste or emissions streams. Table 5-6 notes the likely waste streams and their environmental mitigations. Keyera will have to comply with all federal, provincial and municipal regulations with respect to storage, recording and disposal of waste. Emission limits will be prescribed in the EPEA approval for all points sources.

Table 5-6 Waste and Emissions

Waste or Emission Source	Description	Environmental Mitigation
Construction	During construction, engine combustion from trucks and other heavy equipment will generate emissions. Construction waste will be generated. Additionally, dust and other construction waste will be created.	Keyera will implement an environmental protection plan that will mandate waste disposal and spill management and response.
Air emissions	The Josephburg Project is anticipated to have the following emissions sources: • Charge heater • Steam Boiler • Firewater Diesel Engine • Emergency Flare • Tanks (see section 2.3.1) for a description. Note the tanks will be connected to a VRU. • Fugitive Emissions (seals, valves etc.) • Engine combustion from trucks and other equipment and operations Emissions will include CO, CO_2, NOx, SOx, CH_4, volatile organic compounds, and particulate matter, among others.	Keyera will complete an air quality assessment for the Project to ensure compliance with the AAQO and regional limits set by the IH-DIZ. Federal VOC regulations will also be followed.

Waste or Emission Source	Description	Environmental Mitigation
Industrial Runoff	The Josephburg Project will have a stormwater management plan and design that will ensure all industrial runoff is directed to a stormwater pond. Stormwater runoff will be managed under provincial and municipal regulations.	AEPA and County regulations will be followed to ensure the quantity and quality of stormwater meets all required guidelines.
Industrial Wastewater	All industrial wastewater will be directed to a tank and trucked to a registered disposal facility or a disposal well.	All tanks will have secondary containment as per AEPA regulations and all wastewater will be sent to a registered facility or disposal well with an approval to accept this type of waste.
Process Chemicals	Anti-flocculant will be used in the heat exchanger and water treatment chemicals will be used to treat process water.	All chemicals will be stored in secondary containment and sent to a registered facility with an approval to accept this type of waste.
Filters	Spent filters from water treatment will be collected in a waste area.	All filters will be sent to a registered facility with an approval to accept this type of waste.
Domestic Waste	Domestic wastewater and other waste from the administration area will be stored as per provincial regulations.	All domestic waste will be disposed of at a registered facility.

During construction, Keyera will implement an environmental protection plan that will mandate waste and spill management and response. All operational waste streams will be regulated under a combination of AEPA and County regulations and bylaws which will mandate ongoing monitoring and reporting for emissions (e.g., stack surveys), noise, soils contamination, ground, storm and wastewater releases or disposal. Keyera will ensure all waste is tested, documented, and disposed of at regulated facilities or by approved means.

6. Part F: Summary

A plain-language summary of the information in parts A to E is required in English and in French.

For guidance on how to write in plain language, see the style guide available online at: www.canada.ca/en/treasury-board-secretariat/services/government-communications/canada-content-style-guide.html.

The proposed Josephburg Project is designed to take condensate as a feedstock and process it to produce C8+, as well as light condensate, Liquid Petroleum Gas (LPG) and Atmospheric Bottoms (ATB). The facility will not make use of chemical processes like a standard refinery; rather the various products will be produced as fractions with a range of boiling points known as ‘cuts’ by separating the lighter fractions from the heavier fractions. Therefore, while the Josephburg Project has been designated by IAAC as a refinery, the facility design is much more similar to a fractionation plant than a refinery.

There are no federal lands nearby and the Josephburg Project does not cross or impact other provinces. There is no federal funding planned or required for the Josephburg Project. Outside of IAA requirements, there are no additional Federal regulatory approvals anticipated to be required for the Josephburg Project other than possible notification to NavCanada and TC for the flare stack.

Lands within and surrounding the Project site are privately held and contain several existing industrial operations. There is no indication that lands and resources in the Project area are currently used for traditional purposes. To date, no site-specific issues or impacts to Treaty or Indigenous Rights have been raised by Indigenous groups regarding the proposed Project.

A robust suite of provincial and municipal laws and regulations provide the regulatory context to ensure Project and cumulative effects are mitigated. Keyera has worked extensively with AEPA and the AER since December 2024 to clarify the provincial regulatory jurisdiction. In June 2025, AEPA confirmed the project does not meet the

definition of an oil refinery under the *Activities Designation Regulation* (Alberta Regulation 276/2003) or the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* (Alberta Regulation 111/1993). The project will be regulated under the -*Environmental Protection & Enhancement Act* (EPEA) by the Ministry of AEPA. Keyera will be completing further engineering, biophysical, air emissions, noise and safety assessments in 2025 prior to applying to provincial and municipal regulators for permits and approvals. Stakeholder and Indigenous consultation will continue throughout the Project lifecycle. These provincial and municipal processes will address all potential impacts of the Josephburg Project on areas of federal jurisdiction (which, as noted above, are expected to be negligible).

A plain language summary and French translation has been provided under a separate cover.

Note: Despite best efforts, if there are any discrepancies between this IPD, the English or French plain language summaries, this IPD will be deemed correct.

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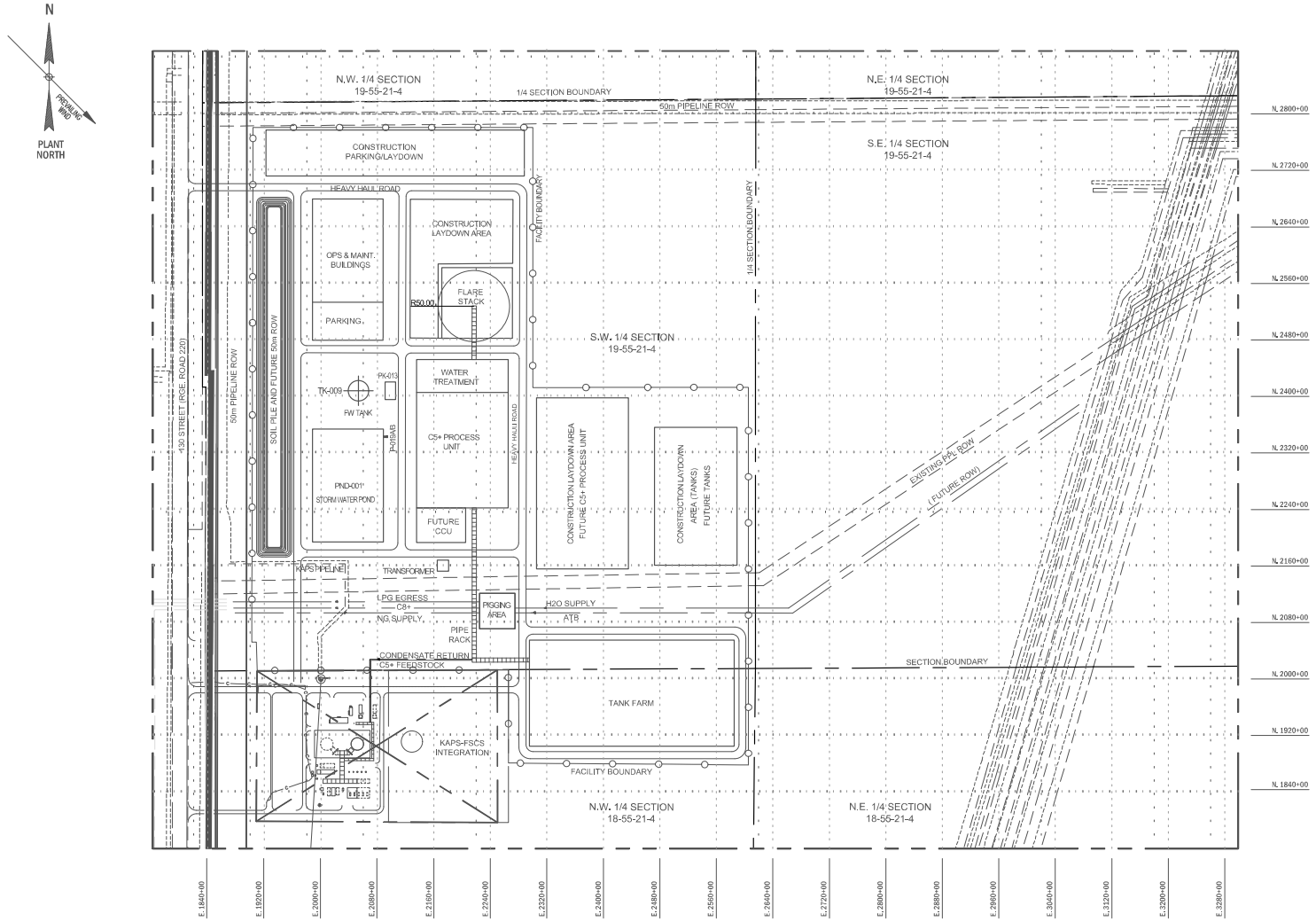
Appendix 1 – Plot Plan



NOTES:

1. N.2000.0m E.2000.0m ARE PLANT COORDINATES. SAME LOCATION IN UTM COORDINATES IS N. 5958867.016m E. 360163.554m

EQUIPMENT TAG	DESCRIPTION
PK-013(P-131A/B)	FIREWATER PUMPS
PK-013(P-132)	
PK-013(P-133)	
PND-001	STORM WATER POND
P-019A/B	STORM WATER PUMPS
TK-009	FIRE WATER/UTILITY WATER TANK

-40m 0 40m 80m 120m 160m

SCALE 1 : 300

PERMIT/SEAL

REFERENCE DRAWINGS

DWG. NO.	TITLE

REV NO.	DATE	DESCRIPTION	DWN BY	CHKD BY	APPR BY
B	2025-05-06	ISSUED FOR REVIEW	SL	TC	AJ
A	2025-03-13	PRELIMINARY LAYOUT – ISSUED FOR REVIEW	SL	TC	AJ

DATE:	2025-05-06
DESIGN:	TR
DRAWN:	SL
CHKD:	TC
APP:	AJ
SCALE:	1:300

FLUOR

KEYERA

Josephburg Condensate Fractionation Project

Overall Site Plan

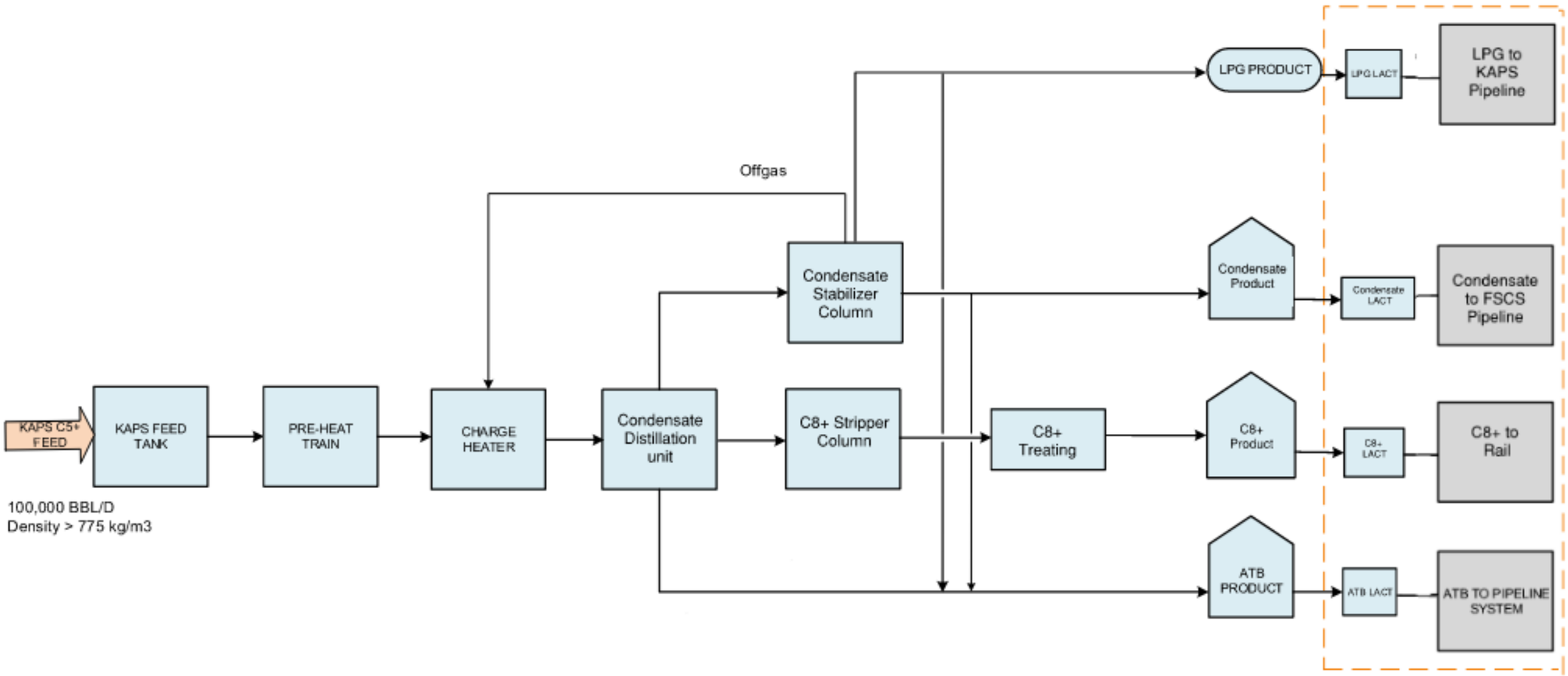
LSD: 04-19-055-21 W4M

CAD NO.	DWG. NO.	REV.
XXX	100-MEC-PP-00-0001	B
CONTRACTOR DRAWING NO.		

Appendix 2 –
Block Flow Diagram

FLARE SYSTEM | PRODUCED WATER STORAGE | INSTRUMENT AIR | MCC / DCS | OFFICE TRAILER/ CONTROL CENTRE

FUEL GAS SYSTEM | CLOSED HC DRAIN SYSTEM | WATER TREATMENT | LP STEAM BOILER | UTILITY POWER



LEGEND

New Facility

Existing System

FSCS: Fort Saskatchewan Condensate System
KAPS: Key Access Pipeline System

NOTES:

modified from original for submission to IAAC

REV.	DATE	BY	CHK'D DFTG	CHK'D ENG	APP'D PM	REASON FOR ISSUE
0	02/10/24	LKG				ISSUED FOR INFORMATION
1	03/07/25	MC				ISSUED FOR INFORMATION (Egress Addition)

SEAL:

PERMIT:

KEYERA

Keyera Josephburg Condensate Fractionation Project

SCALE:	DRAWN BY:	DATE:	PROJECT NO.	DRAWING NO.	REV.
NTS	LKG			BFD 00	1

Appendix 3 –
Land Title

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0038 618 857	4;21;55;18;NW	202 099 152 +2

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 21 TOWNSHIP 55
SECTION 18
QUARTER NORTH WEST
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS
EXCEPTING THEREOUT:

		HECTARES	(ACRES) MORE OR LESS
A) PLAN 8621568	RAILWAY	1.67	4.13
B) PLAN 0725958	DESCRIPTIVE	7.59	18.76
C) PLAN 1520323	ROAD	0.958	2.37

EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: STRATHCONA COUNTY

REFERENCE NUMBER: 192 273 829

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
202 099 152	06/05/2020	SEPARATION - PARCEL		

OWNERS

KEYERA ENERGY LTD.
OF SUITE 200, SUN LIFE PLAZA TOWER
144-4TH AVENUE SW
CALGARY
ALBERTA T2P 3N4

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
752 117 562	04/09/1975	UTILITY RIGHT OF WAY GRANTEE - LAMCO GAS CO-OP LTD.

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		" AFFECTS PART OF THIS TITLE "
782 168 608	27/07/1978	UTILITY RIGHT OF WAY GRANTEE - PEMBINA MARKETING LTD. PO BOX 22128, BANKERS HALL CALGARY ALBERTA T2P4J5 AS TO PORTION OR PLAN:7821936 "TAKES PRIORITY DATE OF CAVEAT 772169928, 01 09 1977. DATA UPDATED BY: AMALGAMATION OF UTRW NOS. 862213756 AND 862213757. DATA UPDATED BY: CHANGE OF ADDRESS FOR SERVICE NO. 862229695" (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 062241884) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 062268380) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 132254227) (DATA UPDATED BY: CHANGE OF ADDRESS 152325163)
072 378 295	25/06/2007	CAVEAT RE : TRANSFER OF LAND CAVEATOR - HER MAJESTY THE QUEEN IN RIGHT OF ALBERTA AS REPRESENTED BY THE MINISTER OF INFRASTRUCTURE AND TRANSPORTATION REGIONAL SERVICES 2 FLOOR, TWIN ATRIA BUILDING 4999-98 AVE EDMONTON ALBERTA T6B2X3 AGENT - MICHELE MCKAY " AFFECTS PART OF THIS TITLE "
212 048 672	22/02/2021	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.
212 048 673	22/02/2021	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.
212 146 429	05/07/2021	CAVEAT RE : LEASE INTEREST UNDER 20 ACRES CAVEATOR - KEYERA ENERGY LTD. 200 144 4 AVE SW CALGARY ALBERTA T2P3N4 AGENT - DAVID GIEG
212 147 359	06/07/2021	UTILITY RIGHT OF WAY

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		GRANTEE - KEYERA ENERGY LTD.
212 161 367	26/07/2021	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.

TOTAL INSTRUMENTS: 008

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 17 DAY OF JANUARY, 2023 AT 08:12 A.M.

ORDER NUMBER: 46266767

CUSTOMER FILE NUMBER: CC 45000000

END OF CERTIFICATE

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0036 517 135	4;21;55;19;SW	172 017 225 +17

LEGAL DESCRIPTION

THE SOUTH HALF OF THE SOUTH WEST QUARTER OF
SECTION NINETEEN (19)
TOWNSHIP FIFTY FIVE (55)
RANGE TWENTY ONE (21)
WEST OF THE FOURTH MERIDIAN,
CONTAINING 32.4 HECTARES (80) ACRES, MORE OR LESS.
EXCEPTING THEREOUT: 16.2 HECTARES (40.00) ACRES, MORE
OF LESS, SUBDIVIDED UNDER PLAN 1868TR.
EXCEPTING THEREOUT:

	HECTARES	(ACRES) MORE OR LESS
A) PLAN 1520323 - ROAD	0.502	1.24

EXCEPTING THEREOUT ALL MINES AND MINERALS
AND THE RIGHT TO WORK THE SAME

ESTATE: FEE SIMPLE

MUNICIPALITY: STRATHCONA COUNTY

REFERENCE NUMBER: 152 021 523 +14

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
172 017 225	18/01/2017	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

KEYERA ENERGY LTD.
OF SUITE 200, SUN LIFE PLAZA TOWER
144-4TH AVENUE SW
CALGARY
ALBERTA T2P 3N4

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
782 168 606	27/07/1978	UTILITY RIGHT OF WAY GRANTEE - PEMBINA MARKETING LTD. PO BOX 22128, BANKERS HALL CALGARY ALBERTA T2P4J5 AS TO PORTION OR PLAN:7821936 "TAKES PRIORITY DATE OF CAVEAT 772178621 DATA UDPATED BY AMALGAMATION BY 862213756 & 862213757 CHANGE OF ADDRESS FOR SERVICE BY 862229695" (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 062241884) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 062268380) (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 132254227) (DATA UPDATED BY: CHANGE OF ADDRESS 152325156)
822 142 186	25/06/1982	CAVEAT CAVEATOR - LAMCO GAS CO-OP LTD.
212 048 672	22/02/2021	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.
212 161 367	26/07/2021	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.
212 252 322	13/11/2021	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.
232 390 274	23/12/2023	UTILITY RIGHT OF WAY GRANTEE - KEYERA ENERGY LTD.

TOTAL INSTRUMENTS: 006

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 27 DAY OF MAY, 2025 AT 09:06 A.M.

ORDER NUMBER: 53818810

CUSTOMER FILE NUMBER: AFE24824

END OF CERTIFICATE

(CONTINUED)

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