Josephburg Condensate Fractionation Project

Summary of the Initial Project Description

Keyera Energy Ltd.

Type of document:
Final Submission to IAAC

Project name:
Josephburg Condensate Fractionation Project

Date submitted:
July 2025

Prepared by:
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On behalf of

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Abbreviations and Key Terms

Abbreviation/Term	Definition
ACO	Aboriginal Consultation Office
ACSW	Arts, Culture, and the Status of Women
AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
AQHI	Air Quality Health Index
BPSD	Standard barrels per day
CO_2e	Carbon dioxide equivalents
EIA	Environmental Impact Assessment
EPEA	Environmental Protection and Enhancement Act
EXP	EXP Services Inc.
GHG	Greenhouse Gas
GoA	Government of Alberta
GPS	Global Positioning System
ha	Hectare
IAA	Impact Assessment Act
IAAC	Impact Assessment Agency of Canada
IH-DIZ	Industrial Heartland-Designated Industrial Zone
IHH	Heavy Industrial Zoning
IPD	Initial Project Description
KAPS	Key Access Pipeline System
Keyera Energy Ltd.	Keyera
km	Kilometer
LPG	Liquid Petroleum Gas
NCIA	Northeast Capital Industrial Association
NGL	Natural Gas Liquids
Josephburg Project	Josephburg Condensate Fractionation Project

Executive Summary

EXP Services Inc. (EXP) was retained by Keyera Energy Ltd. (Keyera) to prepare an Initial Project Description (IPD) for the proposed Josephburg Condensate Fractionation Project (the Josephburg Project or Project). This document has been prepared as a Plain Language Summary (Summary) of the IPD. Additional details on the Josephburg Project can be found in the detailed IPD filed with the Impact Assessment Agency of Canada (IAAC).

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. With over 25 years of experience, we operate an interconnected network of assets while maintaining a strong focus on safety, environmental responsibility, and operational excellence.

The proposed Josephburg Project is designed to take 15,900 m^3/day (100,000 standard barrels per day or BPSD) of condensate from Keyera's existing KAPS pipeline and separate it into various hydrocarbon streams, such as light and midweight condensates, Liquid Petroleum Gas (LPG) and other hydrocarbon products. The process will not make use of chemical processes like those found in a refinery; rather the various products will be processed as fractions using heat. 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 main points in the Initial Project Description are:

- The Project will be located entirely on industrial-zoned and previously disturbed Keyera-owned lands in SW 19 and NW 18-55-21 W4M within Strathcona County, Alberta (see Figures 1-1 and 1-2).
- Keyera provided Project Notification Packages to 17 Indigenous groups (11 were consulted and 6 were notified). To date, a number of those groups have advised that they are considering conducting site visits or have expressed interest in being included in the Project's procurement process. No site-specific concerns or impacts to Treaty and/or Indigenous Rights have been raised.
- The Josephburg Project Lands have been studied during several extensive environmental assessments over the past 18 years, including two complete Provincial Environmental Impact Assessments (EIAs) for previous projects that were not constructed. Keyera has also completed many environmental studies on the Josephburg Project Lands, and more are underway for the Project.
- Potential environmental effects from the Project are anticipated to be limited to air emissions, noise, minor alteration or loss of wildlife habitat, and replacement of a small number of wetlands. There are no potential Project effects to watercourses or waterbodies. Potential social and economic effects of the Josephburg Project, including for Indigenous peoples, are anticipated to be beneficial, or negligible if adverse.
- Keyera estimated the sources of Greenhouse Gas (GHG) emissions associated with two years of construction, 1-year operation and two-years decommissioning to be 203,844 tonnes CO_2e.
- Since December 2024, 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, 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 approvals.
- Stakeholder and Indigenous consultation will continue throughout the Project lifecycle, as required by regulations.

1. Part A: General Information

1.1 Project Name, Type/Sector and Proposed Location

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 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 Private Land owned by Keyera

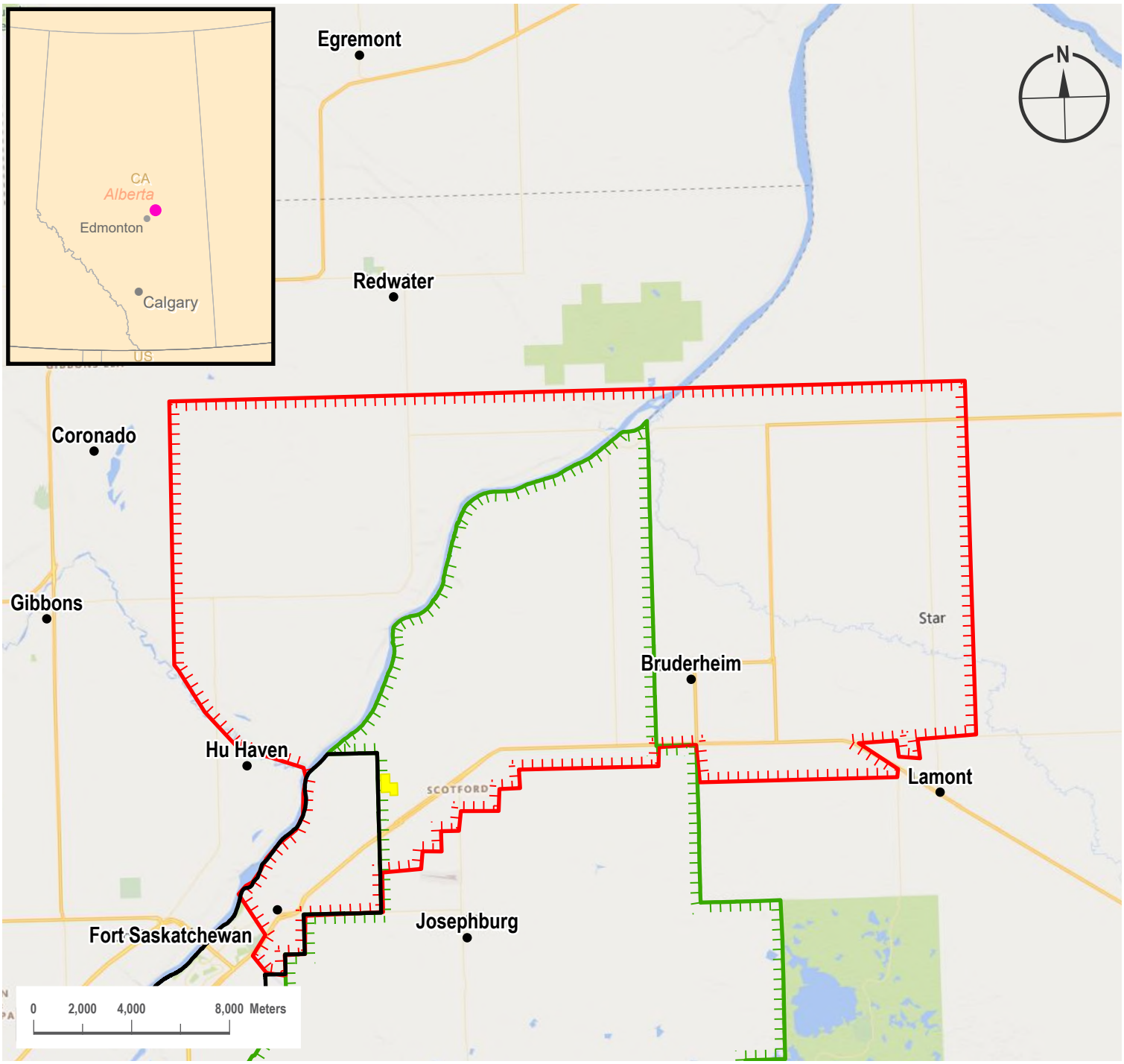
1.2 Proponent Name and Contact Information

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

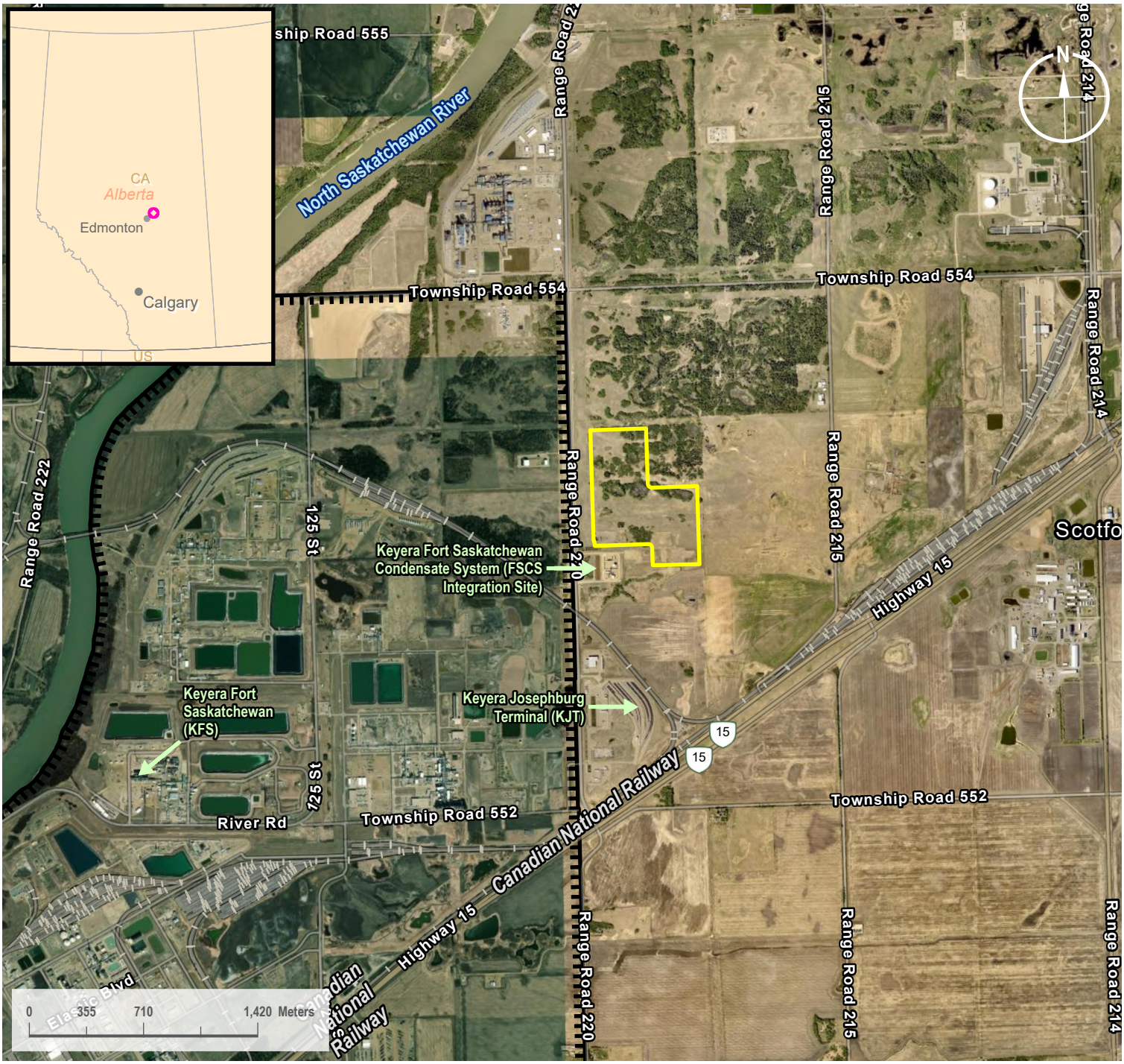
Projection: Transverse Mercator
NAD 1983 10TM AEP Forest

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



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LEGEND

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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

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

1.3 Summary of Engagement

A summary of Keyera's ongoing engagement activities to date 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 does not meet the definition of a refinery under 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.
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 attended a meeting on May 5, 2025, to discuss Keyera's plans in the region.
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.
Aboriginal Consultation Office (ACO)	Keyera met with ACO to discuss the project on May 5, 2025, and submitted a pre-consultation assessment on May 9, 2025. The ACO will review to determine if consultation will be required. On June 5, 2025, the ACO determined consultation is not recommended for the Project.
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.
Northeast Capital Industrial Association (NCIA)	The NCIA is a member of several regional monitoring programs for air quality, ground, and surface water. It also manages a regional noise model. Keyera works with the NCIA for their other facilities in the region.
Industrial Heartland-Designated Industrial Zone (IH-DIZ)	Keyera meets regularly with the IH-DIZ as an industry representative. The project has been discussed, and ongoing consultation is underway.
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

In an email dated January 16, 2025, IAAC identified the 17 Indigenous groups to be either consulted (11) or notified (6) for the Josephburg Project. Keyera sent all 17 packages on February 19 or 20, 2025 including 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 has followed up and had meetings with many of the groups. 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 to date is provided below;

- No response has been received from the Alexander First Nation, Alexis Nakota Sioux Nation, Buffalo Lake Métis Government, Foothills Ojibway First Nation, Kehewin Cree Nation, Louis Bull Tribe, Michel First Nation, Montana First Nation, and Saddle Lake Cree Nation.
- Enoch Cree Nation, Ermineskin Cree Nation, Otipemisiwak Métis Government (and St. Albert-Sturgeon County Métis Local 1904), Paul First Nation, Lakeland Métis Nation and the Samson Cree Nation have expressed an interest in a site visit to review the Project Lands or in being part of the ongoing environmental studies.
- Lac Ste Anne Métis Community is still reviewing the Project.
- Paul First Nation expressed an interest in having monitors onsite during construction.
- Whitefish (Goodfish) Lake First Nation #128 wanted to be included in potential procurement opportunities.

To date, no site-specific issues or impacts to Treaty or Indigenous Rights have been raised by Indigenous groups. Keyera will follow up with these groups and engagement will continue 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 consultation is not recommended for the Project.

1.5 Studies and Plans

There are several Municipal, Provincial and Federal environmental initiatives, policies, directives, and frameworks which are applicable to the Josephburg Project.

Federally, the *Strategic Assessment on Climate Change* (Government of Canada, 2020b), the *Reduction in the Release of Volatile Organic Compounds Regulations (Petroleum Sector) (SOR/2020-231)* (Government of Canada, 2020a), and the *Reduction in the Release of Volatile Organic Compounds (Storage and Loading of Volatile Petroleum Liquids) Regulations* (SOR/2025-88 (Government of Canada , 2025) will regulate air emissions and GHG for the Project.

Provincially, there are several high-level plans which will regulate the Josephburg Project. Most importantly, the Project is within the Industrial Heartland Designated Industrial Zone (IH-DIZ) and Northeast Capital Industrial Association (NCIA) which have been created to promote development in the region (Figure 1-1) while ensuring the cumulative effects of development are properly managed (GoA, 2022b) (Alberta's Industrial Heartland Association, 2025). The IH-DIZ has developed several specific regulations and studies to ensure air emissions, noise, wildlife, water, soils, and social and economic impacts are properly managed in the region.

Strathcona County has several plans and regulations to ensure development in the County follows local regulations and protects the environment, including regional water sources (Strathcona County, 2022b) (Strathcona County, 2022c).

Along with the studies and plans listed above, the region is subject to several other province-wide regulations and policies that address regional planning, watercourses, wetlands, public lands, wildlife, fish, vegetation, soils, weeds, air emissions, noise, public health and safety, and local planning.

1.6 Strategic Assessments

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 the context of GHG.

2. Part B: Project Information

2.1 Purpose, Need, and Potential Benefits

The purpose of the proposed Josephburg Project is to take condensate from Keyera's existing KAPS pipeline and fractionate it into higher value products which all have their own individual markets. The products will include light and midweight condensates, LPG, and other hydrocarbon products. Locally produced condensate in Alberta is often mixed with oil from the oilsands operations to help facilitate flow through pipelines to market. As oilsands production increases, more condensate is required to fill the growing demand.

Additionally, the Josephburg Project will separate other hydrocarbon byproducts that are in demand in the current market. These products may be sent for further processing at other facilities.

While the Josephburg Project has been defined as a refinery by IAAC, the facility design is more similar to the design of a fractionation facility, which are common in Alberta.

2.2 Physical Activities Regulations

A letter was sent from IAAC to Keyera on December 20, 2024, confirming that IAAC has determined the proposed Josephburg Project meets the description of a refinery and input capacity under Section 37(a) of 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 *Impact Assessment Act* (IAA).

2.3 Activities, Infrastructure, Structures, and Physical Works

The proposed Josephburg Project will be located on approximately 48.5 ha of Keyera-owned land. A plot plan can be found in Appendix 1.

2.3.1 Project Infrastructure

The proposed Project will include the following:

- Condensate distillation area which contains the primary process equipment and where the condensate is separated into various products;
- Water treatment area to treat and process water used in the facility;
- Storage tanks to store products produced by the Project, and a water tank to be used in the unlikely event of a fire;
- An emergency flare to safely handle gases during startup, shutdown, or emergency conditions;
- A vapour recovery unit (VRU) to capture emissions from tanks;
- A stormwater pond to collect rain and snowmelt (stormwater runoff);
- Several new buildings to house equipment;
- One new road approach off Range Road 220;
- Internal piping and other supporting infrastructure; and

- Construction laydowns areas and locations to store salvaged soil.

2.3.2 Project Activities

The Project will consist of the following primary activities:

Planning

- Engaging with regulators, stakeholders, and Indigenous groups.
- Completing engineering, environmental and safety studies.

Applications for approvals

- Preparing and submitting applications for approval from IAAC (if required), the provincial regulator, and County for approvals and permits prior to construction.

Construction

- Clearing and grading, road construction, piling and foundations, facility and building construction and utility construction.

Commissioning

- Completing all requirements in approvals prior to startup and notifying regulators and stakeholders.
- Finalizing and initiating the Emergency Response Plan.
- Testing all systems as per design procedures.
- Completing staff training. Finalizing operational plans and incorporating them into Keyera's existing plans and procedures.

Operations

- Ensuring all operations follow Keyera's strict controls and all regulatory requirements.
- Conducting reporting as required by regulations and approvals (e.g., emissions, GHG, groundwater monitoring, stormwater testing, waste management, soils monitoring).

Decommissioning

- Amending approvals to account for regulations at the time of decommissioning.
- Completing all required reclamation and remediation to return the site to equivalent land capability and ensure any contamination is cleaned up.

2.4 Maximum Production Capacity and Description of the Production Process

The proposed Josephburg Project is designed to take 15,900 m^3/day (100,000 standard barrels per day or BPSD) of condensate from Keyera's existing KAPS pipeline and separate it to produce light and midweight condensates, LPG, and other hydrocarbon products. The process will not make use of chemical processes like those found in a refinery; rather the various products will be processed as fractions by separating the condensate into lighter and heavier fractions using heat.

The condensate will be brought into the Project facility by an inlet pipeline. It will be heated using steam to various temperatures which will separate it into lighter condensate and several other heavier hydrocarbon products. The products will then be cooled and treated to remove impurities (e.g., water, sulphur). The products will be sent to storage tanks before being sent via local pipelines to market.

A water treatment system will treat raw water to make it suitable for use in the facility process. All process water will be stored onsite in a tank until disposed of at an approved facility or into an approved disposal well. The

Project will have an emergency flare that will safely handle gases during startup, shutdown, and emergency situations. A vapour recovery unit (VRU) will be used to capture emissions from tanks. All stormwater runoff will be directed to a pond and managed under provincial and municipal regulations.

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.

2.5 Schedule

Keyera intends for the Josephburg Project to be online by the third quarter of 2030. Accordingly, Keyera intends to submit approval applications in Q3 2026, to begin Project construction in Q2 2028. Project construction is anticipated to require 2 years. The Project would be decommissioned in approximately 2056 and will take approximately 2 years.

2.6 Alternatives

There are no other viable alternative means of serving the purpose of the Josephburg Project or means to carry out the Project. Keyera explored other options for the facility location, including locating this Project at one of their existing facilities, but these options were not feasible due to space limitations and access to pipeline connections. As the Josephburg Project is in the planning stage it is likely some aspects will change as stakeholder and regulatory consultation and engineering progresses. However, substantial work has already been done to optimize the proposed Project location and internal facility process to minimize potential environmental impacts. This includes sighting the Project on previously disturbed land, in an industrial area, and using low emissions technologies where possible (e.g., electric instead of powered by gas).

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.

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

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. See Table 1-1 and Figures 1-1 and 1-2 for the Project location.

3.1.1 Proximity to First Nations Communities

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. 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 lands 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.

3.1.2 Proximity to Federal Lands

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).

3.1.3 Proximity to Residences and Communities

The Josephburg Project lands are zoned industrial, as are the surrounding lands. The area is mostly industrial facilities with few residential dwellings (Figure 1-2). Land on the east side of Range Road 220, within Strathcona County, are zoned Heavy Industrial (Strathcona County, 2025a). Land on the west side of Range Road 220, within the City of Fort Saskatchewan, are also zoned 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 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 the Project site to the Scotford Hutterite Colony, who use it 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, near Highway 830.

3.2 Physical and Biological Environment

3.2.1 Previous Assessments Completed in Proximity to the Project Site

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. The projects that were assessed under EIAs were not constructed; however, it is noted both EIAs were approved, and that the proposed projects were significantly larger in nature and scale than the Josephburg Project.

In 2007, Total E&P Canada (Total E&P Canada Ltd, 2009) conducted a complete EIA for a proposed upgrader. It was approved but not constructed. The lands were then sold to Sasol Canada Holdings Limited who conducted another full EIA on the lands in 2013 for a proposed Gas to Liquids project (Stantec Consulting Ltd., 2013), which was also approved but not constructed. These EIAs assessed air quality, noise and light, groundwater, surface water, fish, vegetation, wildlife, soils, land use, public health and safety, historic resources, and social and economic impacts.

Keyera then purchased the lands and between 2013 and 2024 conducted nine more environmental assessments that at least partially covered the Josephburg Project lands in support of pipelines and adjacent facilities.

3.2.2 General Description of the Project Lands

The Josephburg Project will be located entirely on previously disturbed Keyera-owned land (pasture and homestead) in Strathcona County, Alberta. Land use surrounding the Josephburg Project is made up of industrial development and agricultural land.

A summary of the physical and environmental setting within the Josephburg Project site and surrounding area is provided in Table 3-2. Environmental assessments for the Project are planned for spring/summer 2025 to confirm the findings of previous studies.

Table 3-1 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	Mostly pasture/grazing land, with shrub cover[1,2].

Physical and Environmental Setting	Baseline Conditions within the Josephburg Project Area
Geomorphology and Geology	Bedrock is fine- to coarse-grained sandstone and siltstone[3]. Surficial geology is fine-grained sand, silt and clay that has blown in or left by ice-age lakes[4].
Topography and Soils	Soils are mostly well-drained, black prairie soils[5], topography is low relief and gently rolling. No areas of significant slopes are present[1, 2].
Wildlife	Located within Sensitive Raptor Range (Bald Eagle), Sharp-Tailed Grouse Survey Area, and partially within a Key Wildlife and Biodiversity Zone[6]. Land use within the Josephburg Project site and surrounding area comprises pasture/grazing land (disturbed grassland/improved pasture), with shrub cover and wetlands, which provide 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 includes American badger, American kestrel, black tern, black-backed woodpecker, Canada warbler, Canada toad, common yellowthroat, eared grebe, eastern kingbird, eastern phoebe, grasshopper sparrow, pied-billed grebe, pileated woodpecker, sora and western wood pewee.
Vegetation	Three rare plant species were observed within the previous EIA areas, which encompasses the Josephburg Project site. These included green saxifrage, long-leaved bluet and brachythecium moss[1,2]. However, they were not found within the Josephburg Project footprint. A review of the Provincial database found Creeping Ancylid, Pepper-Spore Lichen, Pepper-Spore Lichen and Tall Blue Lettuce have also been found within the same township as the Project since 2000[8] . Subsequent survey of the Josephburg Project site by Keyera in 2019 did not find rare plants within the Project footprint (Jacobs, 2019).
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 approximately 2.5 km and 3km, respectively.
Wetlands	Several wetland types have been identified in proximity to the Josephburg Project site based on desktop review and based on previous studies[1, 2]. Within the Project footprint a few small wetlands have been found.
Groundwater	Groundwater depths in the area range from 1.12 to 6.29 m below ground surface, with depth to groundwater generally increasing further from the North Saskatchewan River[1,2].
Historical Resources	Keyera received approval under the *Historical Resources Act* for the Project site on September 4, 2019. No historical resources are known within the Project footprint.
Air Quality	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.[9]
Noise	As per the 2023 NCIA model, the Project area is noted as having a long-term continuous average sound levels between 40 and 45 dBALeq[10] which is within regulations.

[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]Alberta Conservation Management System (ACIMS) (GoA, 2025c)
[9]The 2023 Report to Community (Fort Air Partnership, 2023)
[10]NCIA 2023 Regional Noise Model (NCIA, 2025d)

3.3 Health, Social, and Economic Context

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.

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 Section 3.1. Lands within 3 km of the Project are mostly zoned industrial and are primarily dominated by industrial facilities (Figure 1-1 and 1-2). Strathcona County is part of the IH-DIZ, which is a Designated Industrial Zone created by the Alberta government to establish a framework for incentivizing investment and centralized industrial development while ensuring environmental outcomes are met (GoA, 2025d). Keyera has a long history as an important player in Alberta's Industrial Heartland region beginning in 1998.

Strathcona County is located in the Alberta Health Services Edmonton Health Zone. 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.

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. Existing transportation networks exist throughout the County, which are maintained for both local, regional public and industrial use. 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). Economic activity continues to create job demand in the County and in the province of Alberta.

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

4.1 Financial Support and Federal Land

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

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.

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

The Josephburg Project will be regulated by several Municipal and Provincial agencies along with the associated environmental approvals, permits and licenses that may be required. These will likely include;

- IAAC may require approval under the *Impact Assessment Act*.
- The project must follow the Federal *Species at Risk Act* and *Migratory Birds Convention Act* and Provincial *Wildlife Act*.
- NavCanada and Transport Canada will be notified of the flare.
- 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 a refinery under 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*. ACO determined Indigenous Consultation will not be recommended by the province.

- ACSW have issued clearance under the *Historical Resources Act*.
- IH-DIZ manages several additional regulations for the region regarding air quality, soils, and water that the Project must comply with.
- NCIA manages the regional noise model for the area that will be used to determine the effects of noise.
- Strathcona County will issue development and building permits.
- Provincial and Federal safety codes must be followed for all engineering design.

5. Part E: Potential Effects of the Project

5.1 Fish and Fish Habitat

No fish-bearing watercourses or waterbodies, or surficial connections to these features are present within the Josephburg Project site. As such, Project effects to fish and fish habitat are not anticipated. Effects to fisheries or fish habitat outside Alberta or Canada are not anticipated as there are no connections to interprovincial, coastal or border waters.

5.2 Migratory Birds

The Josephburg Project site and surrounding area have been studied extensively over the past 18 years. Habitat is typical of the region. No unique habitat for migratory birds was found. 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. Industry standard best practices will be used to 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 an environmental protection plan for construction. Keyera will also conduct pre-construction wildlife sweeps to further minimize impacts to migratory birds and other wildlife during construction. 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.

5.3 Environment

No impacts on the environment in Federal lands are anticipated. The Josephburg Project is located entirely inside Alberta, on private land owned by Keyera. Effects outside of Alberta or Canada are not anticipated.

5.4 Indigenous Peoples

As noted previously, the proposed Josephburg Project will be located entirely on Keyera-owned land within the IH-DIZ in Strathcona County (Figures 1-1 and 1-2). Lands in the region are mostly zoned industrial and privately-owned. The closest crown land is the North Saskatchewan River, approximately 2.5 km northwest. Provincial Park land is located about 10 km northeast. To date, no site-specific issues or impacts to Treaty or Indigenous Rights have been raised by Indigenous groups during consultation. No habitation, cultural or spiritual sites or structures have been identified within or near to the Project site, and Keyera received approval under the *Historical Resources Act* for the Project site on September 4, 2019. 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.

5.5 Health, Social or Economic Conditions

To date, no health, social or economic issues or concerns regarding the Project have been identified during Project engagement or Indigenous consultation. Potential effects of the Project are anticipated to be beneficial from a social and economic perspective, or negligible if adverse.

Potential health effects from the proposed Project are anticipated to be limited to air emissions, acoustics and noise. However, air and noise are not predicted to be significant since Keyera will implement mitigation measures into the design and will complete air quality and noise assessments to ensure compliance with all regulations. Health effects resulting from Project impacts to water quality are not anticipated. The Project is not located in crown lands, or near watercourses or Municipal water supply sources. Engineering controls and a spill response plan will be implemented to prevent spills, leaks, or seepage to groundwater. 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. The project will be located in lands zoned for heavy industrial and will follow all County requirements in terms of visual design. As there are no crown or occupied Indigenous land bases near the proposed Project, and there is no indication that lands and resources in the Project area are currently used for traditional purposes (e.g., harvesting or hunting), health effects to Indigenous peoples are not expected.

Potential effects to local and regional services are predicted to be negligible given Strathcona County and the City of Fort Saskatchewan have well-developed public and private utilities, water, wastewater, and solid waste management services with no publicly reported current capacity constraints. Existing temporary and permanent housing and accommodations are expected to accommodate the construction workforce and operations staff. Additionally, measures will be implemented during the construction phase to reduce traffic effects. As there are no occupied Indigenous land bases near the Project, effects on Indigenous infrastructure or services are not anticipated.

The Project is not expected to result in significant changes to population makeup or negatively affect Indigenous peoples or community well-being.

The construction and operation of the Josephburg Project will be a benefit to the County and the City of Fort Saskatchewan. The Project is predicted to create approximately 700 - 800 full time equivalent construction jobs lasting about two years. Beneficial economic effects are also predicted to be generated during construction through spending associated with the workforce. Once operational, the Josephburg Project will require approximately 50 full-time staff. The Project will also contribute positively through Federal and Municipal taxes during operations. 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 construction or operations opportunities.

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

5.6 Greenhouse Gas Emissions

Keyera estimated the sources of GHG emissions associated with the two-years of construction, one-year of operational emissions and two-years decommissioning. Construction and decommissioning emissions will come from the heavy equipment used (e.g., track hoes, loaders, skid steers, work trucks) and electricity supplied from the local grid. Total construction emissions have been estimated to be 5,808 CO_2e equivalent for the two years of construction. The same estimate of 5,808 CO_2e equivalent was used for the two years of decommissioning.

While Keyera has chosen equipment with no emissions, where practicable, and will install a vapour recovery system to limit emissions, some operational emissions are anticipated. These will come from several pieces of

equipment that use fuel gas as their energy source, electricity brought to the site, the occasional use of the emergency flare, and from unanticipated loses from things like broken seals. Using industry standard calculations, Keyera estimates operational emissions to be 192,228 CO_2e equivalent per year.

It should also be noted that Keyera has a corporate target of 50% reduction in direct emissions intensity by 2035 which will apply to the Josephburg project, if approved and constructed. Options for GHG reductions at all Keyera's assets are being evaluated.

5.7 Waste and Emissions

As noted earlier, the Josephburg Project is a relatively simple condensate distillation facility. It will therefore have minimal waste or emissions streams. These will include;

- Air emissions that will comply with Provincial and Federal air quality guidelines and regulations.
- Construction waste and dust which will be managed under approval for the Project and with a project-specific environmental protection plan.
- Stormwater, which will be sent to an onsite pond, will be managed under provincial and municipal regulations.
- Wastewater, which will be stored onsite until sent to an approved disposal facility or disposal well.
- All operational waste (e.g., process chemicals, spent filters, domestic waste), which will be disposed of at an approved disposal facility.

6. Summary

The proposed Josephburg Project will be located entirely on previously disturbed lands owned by Keyera. It will seperate condensate into lighter condensate and other heavier hydrocarbon byproducts which will be sent via existing pipelines to market. While the Project has been determined to be a refinery by IAAC, it is most like a fractionation facility, which are common in Alberta.

The Project lands have been extensively studied during prior projects, including two complete environmental impact assessments. Environmental impacts are anticipated to be negligible, and all regulations will be followed. Social and economic impacts are anticipated to be mostly positive. Consultation and/or notification with 17 Indigenous groups has begun and to date no site-specific issues or impacts to Treaty or Indigenous Rights have been raised by Indigenous groups, other than requests to conduct site visits and be included in procurement. Consultation with stakeholders and Indigenous groups is ongoing.

Additional information on the Project can be found in the detailed Initial Project Description filed with IAAC.

A French translation of this summary of the IPD has been provided under a separate cover. Despite best efforts, if there are any discrepancies between the IPD (submitted under separate cover), the English language summary (this document) or the French translation of this document, the IPD will be deemed correct.

7. References

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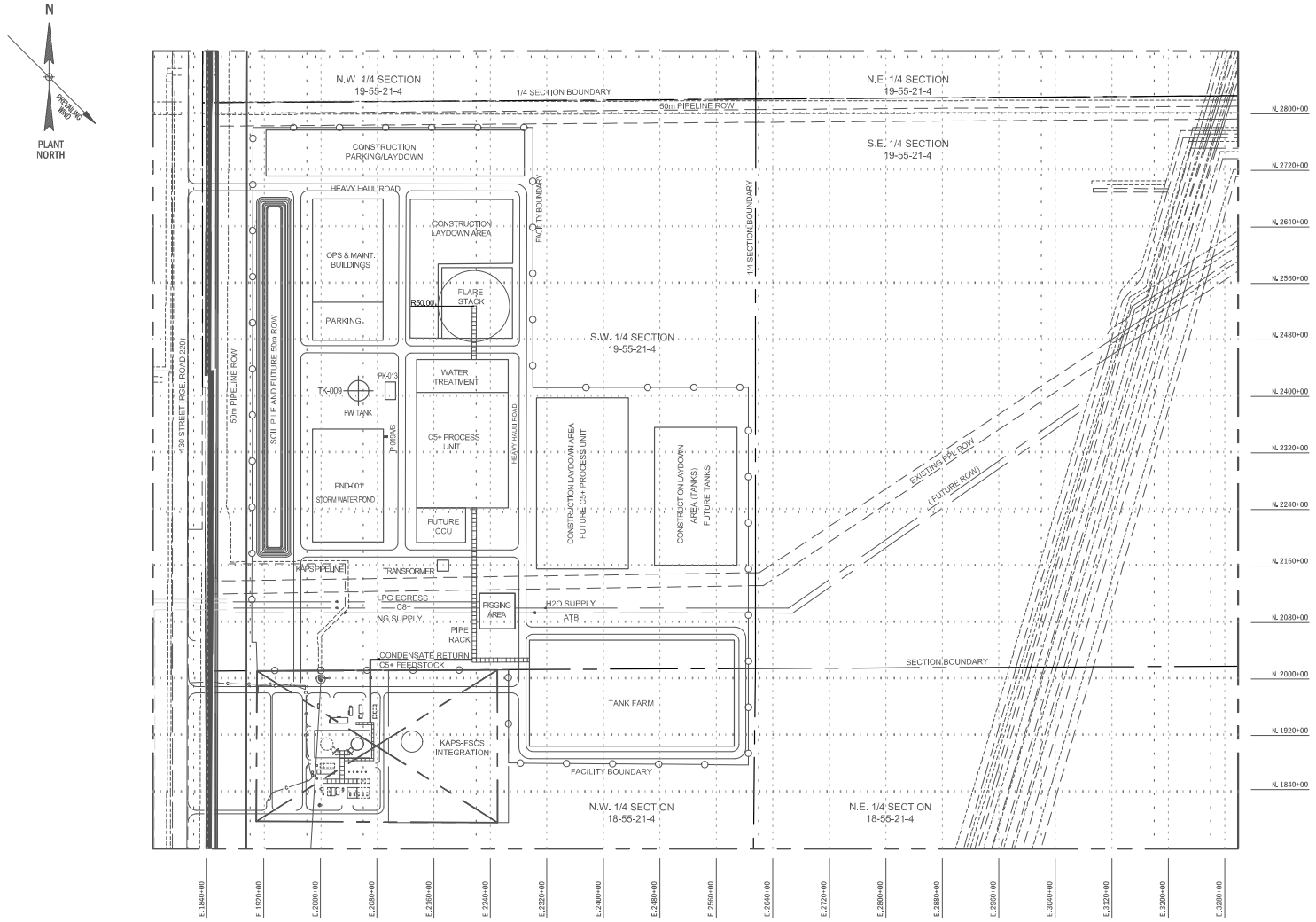
Appendix 1 – Plot Plan



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.		