



TransAlta Corporation
Keephills 1 Repowering Project
AUC Rule 007 Thermal Power Plant Application



Submitted to:

Alberta Utilities Commission

Submitted by:

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INTERNAL

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List of Abbreviations

AAAQG	Alberta Ambient Air Quality Guidelines
AAAQO	Alberta Ambient Air Quality Objectives
ABSA	Alberta Boilers Safety Association
ACO	Aboriginal Consultation Office
AIES	Alberta Interconnected Electric System
AEPA	Alberta Environment and Protected Areas (formerly Alberta Environment and Parks)
AESO	Alberta Electrical System Operator
ASME	American Society of Mechanical Engineers
AUC	Alberta Utilities Commission
CO	Carbon Monoxide
CT	Combustion Turbine
EPP	Environmental Protection Plan
EPEA	<i>Environmental Protection and Enhancement Act</i>
ESDV	Emergency Shutdown Valve
HEEA	<i>Hydro and Electric Energy Act</i>
HRIA	Historical Resources Impact Assessment
HRSG	Heat Recovery Steam Generator
IAAC	Impact Assessment Agency of Canada
ISO	International Organization for Standardization
MC	Maximum Capacity
MSSC	Most Severe Single Contingency
NH ₃	ammonia
NIA	Noise Impact Assessment
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
NSR	North Saskatchewan River
PESR	Pressure Equipment Safety Regulation
PIP	Participant Involvement Program
PM	Particulate Matter
PSL	Permissible Sound Level
ROC	Record of Contact
SASR	System Access Service Request
SCR	Selective Catalytic Reduction
SO ₂	Sulphur dioxide
STG	Steam Turbine Generator
TransAlta	TransAlta Corporation

List of Units

GJ	gigajoules
GJ/MWh	gigajoules per megawatt hour
km	kilometre
kPag	kilopascals gauge
kg/MWh	kilograms per megawatt hour
kV	kilovolt
MW	megawatt
MWh	megawatt hour
$\mu\text{g}/\text{m}^3$	micrograms per cubic metre

1. INTRODUCTION

TransAlta Corporation is seeking approval from the Alberta Utilities Commission (AUC) for the repowering of Unit 1 and the construction of a combined-cycle power plant at Keephills Power Plant (Keephills, or the Plant). A similar application to repower Keephills 1 was previously approved by the Commission in Approval 25240-D02-2020, using a single, larger combustion turbine (CT) rated at a combined 655 MW. The key difference with this application is that TransAlta will use two, smaller CTs to drive the existing steam turbine.

Keephills is located approximately 60 kilometres (km) west of Edmonton and 5 km south of Wabamun Lake. The Plant, which has three units (Keephills 1 – 3), has a total Maximum Capacity (MC) of 861 MW. Table 1-1 shows the approved MC for each unit.

Table 1-1: Keephills Power Plant Generating Capacity

Unit	Maximum Capacity (MW _{Net})	Note(s)
Unit 1 ^(a)	N/A	Decommissioned
Unit 2	395	Coal to gas converted
Unit 3 ^(b)	466	Coal to gas converted
Total	861	

Notes:

- a) Unit 1 is not currently operating and was not converted from coal to gas. See Approval 26946-D02-2021.
- b) The generating capacity for Unit 3 is included for completeness. Unit 3 operates under a separate Power Plant Approval (28482-D02-2023) and no changes in capacity are proposed for this unit.

The Keephills 1 Repowering Project (the Project) includes a highly efficient combined-cycle unit with increased electrical output and lower emissions intensity, that will support the reliability needs of the Alberta electricity system. The Project consists of two new CT generators and two new heat recovery steam generators (HRSG) that will be integrated into the existing infrastructure at the plant to produce electricity and steam. A detailed engineering study will be carried out regarding the repurposing of the steam turbine generator, cooling water, and electrical systems.

Relative to a coal to gas conversion, the Project will create a highly efficient combined-cycle unit with increased electrical output and lower emissions intensity. The Project will provide the ability to ramp up more quickly and with more flexibility, allowing for better response to market needs and delivering affordable and reliable energy to Albertans. The Project will change aspects of the existing plant infrastructure, as follows:

- Installation of two new CT generators and HRSGs, along with associated equipment and infrastructure (e.g., compressors, stacks) to integrate with the existing facility and generate steam and electricity.
- The existing steam turbine will receive steam from the new HRSGs and the old boiler will be disconnected.
- New electrical connections from the facility to the substation (320P) located adjacent will be required for the two gas turbine generators.
- One new natural gas-fired auxiliary boiler will be added to Keephills to facilitate startups.

- The existing natural gas lines and a modification for a new pipeline connection will be required for the facility. The applications for the new pipeline connection are not finalized and will be part of a separate regulatory process by a third-party provider.
- Air and noise emissions from the plant will change compared to the previously approved coal to gas conversion amendments for Keephills.
- Keephills 1 is retired, and the life of the new power plant will extend out to at least 2049.

Aspects of the plant that will remain unchanged are as follows:

- Existing infrastructure will be used to the extent possible and reasonable (e.g., existing steam turbine, generator, cooling system, and transmission infrastructure), except for the additional electricity and steam generation equipment, pipelines (see above) and modifications to existing substations.
- The footprint (developed area) of the plant will not change as the new equipment will be located in brownfield areas adjacent to the existing Keephills plant within the existing fence line of the plant.
- Water use will be within existing licensed limits.
- There will be no changes to the Keephills Plant boundary due to the Project. The proposed Project will remain fully within the existing Keephills Plant boundary as depicted in Figure 1-1 below.



Figure 1-1: Keephills Power Plant Boundary and Project Area

This application is organized according to the information requirements outlined in Rule 007 AUC 2025 under the *Hydro and Electric Energy Act*, RSA 2000, c. H-16 (HEEA). The application follows a question-and-answer format and is numbered in accordance with Rule 007. Questions related to the Participant Involvement Program (PIP) are summarized in the body of the application, with a full description of the PIP provided in Appendix A. This application provides a description of the applicant, the proposed Project, existing environmental conditions, anticipated environmental interactions and the public engagement program.

This application provides responses to the information requirements in Section 4.5 (thermal power plant applications, TP1 to TP42), Appendix A1 (Participant involvement program guidelines) and Appendix A1-B (Participant involvement program guidelines for Indigenous groups) of Rule 007 (AUC 2025).

Biophysical surveys for fish, wildlife, soils, vegetation and wetlands are considered not required as the Project will be on existing brownfield disturbance within Keephills. Air dispersion modelling has been conducted for substances of concern for maximum and typical operations, including nitrogen dioxide (NO₂). The Project will meet the applicable Alberta Ambient Air Quality Objectives and Guidelines (AAAQO and AAAQG; AEPA 2024). Detailed information on current emission standards, guidelines, and the air emissions associated with the Project can be found in the Air Quality Assessment in Appendix B.

A Noise Impact Assessment (NIA) was prepared for the Project in accordance with assessment methods presented in Rule 012 (AUC 2024). The NIA is being submitted with this AUC application. For both the daytime period and the nighttime period, the Project NIA predicts that Application Case cumulative noise levels will comply with applicable Rule 012 Permissible Sound Levels (PSL) limits at all receptors in the noise study area. Noise impacts from the Pinnacle Power Plant are not included in the NIA, as TransAlta has submitted a cancellation of Approval 28464-D02-2024 simultaneous with the submission of this application. A copy of the NIA is provided in Appendix C.

Pending approval of the Project in a timely manner, construction is expected to begin in Q4 2027, with an anticipated in-service date in Q4 2030. However, due to uncertain and long lead times for critical equipment, such as turbines, transformation equipment and switching equipment that is physically connected to, and critical to the operation of the Plant, TransAlta respectfully requests that the Commission provide the full 7 year initial period (Q2 2033) from the date of issuance of the approval, contemplated in Section 5.1 of Rule 007, to complete construction and commissioning activities.

2. PROJECT DESCRIPTION

TP1) State the approvals that are being applied for from the AUC and describe the power plant and collector system including:

- **Number of generating units and their make, model and the nominal capability of each generating unit in megawatts (MW).**
- **The total capability of the power plant in MW.**
- **The anticipated make and model of each generating unit.**

TransAlta is applying under Section 11 of the *Hydro and Electric Energy Act*, RSA 2000, c.H-16 (HEEA) for a new Power Plant Approval.

The Project involves the installation of two (2) Siemens SGT6-5000F 260 MW turbines and accompanying HRSGs. The boilers will provide superheated steam to a common steam turbine and condenser in a “2x2x1” configuration. The system will be engineered to meet the reliability requirements of Alberta’s current Most Severe Single Contingency (MSSC) of 466 MW and generate an estimated 829 MW gross output and 809 MW net output. TransAlta will confirm the exact make and model of the gas turbines at the time of making its final investment decision. However, the characteristics of the turbines are not expected to be substantially different from those described above.

The power plant will be connected to the Alberta Interconnected Electric System (AIES) via the existing AltaLink substation, Keephills 320P. It is expected that some portion of the existing electrical infrastructure at 320P will be reused from the retired Keephills 1 generating unit. New interconnections will be entirely contained on the existing Keephills site.

Once commissioned, it is expected that the Project will operate at a baseload capacity and is expected to have an operational lifespan of at least 19 years pending regulatory constraints.

TP2) Provide a list of existing approvals for facilities directly affected by this project, if any.

The existing approvals for Keephills that will be affected by this Project are listed in Table 2-1.

TransAlta is not applying for an amendment to the licence under the *Water Act* because water use by the Project will be within existing licensed limits.

The Keephills site is currently zoned as “RI - Resource Industry District” with a “DC - Direct Control District”, specifically “Keephills Direct Control District (DC Area 4)”, as specified by the Parkland County Land Use Bylaw 2025-12 (Parkland County 2025). “Utility, Major, limited to Power Generation Facilities” is a listed use in the “Keephills Direct Control District (DC Area 4)”, and the Project and existing Keephills facility are consistent with this land use designation. The Project does not change the land use and there are no siting or land use issues. The Project will be within the existing operational site, which is zoned and approved for the intended use and consistent with existing land use plans.

Table 2-1: Existing Approvals Directly Affected by the Project

Legislation	Regulatory Authority	Approval No.	Date of Issuance/Effective Date	Purpose of Existing Approval	Change Required for Project
<i>Environmental Protection and Enhancement Act</i>	Alberta Environment and Protected Areas	10324-03-02	Nov 24, 2020	Unit 1 repowering	Amendment to reflect 2 smaller CTs in lieu of 1 large CT
<i>Water Act</i>	Alberta Environment and Parks	License No. 00033383-00-03, As Amended	Sept 27, 2010	Industrial (cooling) of Keephills	No change required
<i>Municipal Government Act</i>	Parkland County	Development Permit – Industrial General Use		Development of Industrial Facility	TransAlta will consult with Parkland County to determine the scope of any new or amended permits

TP3) Provide details of the project ownership structure, including the names of all companies having an ownership interest in the project and their ownership share, and if applicable, the name of the project operator. Confirm that the applicant is a qualified owner.

The Project will be owned and operated by TransAlta Generation Partnership. The TransAlta Generation Partnership itself is managed by TransAlta Corporation, which has a 99.99% ownership in the partnership. The remaining 0.01% is owned by TransAlta Generation Ltd., itself a wholly owned subsidiary of TransAlta Corporation.

TP4) For a municipality or a subsidiary of a municipality to hold an interest in a generating unit, provide documentation confirming compliance with Section 95 of the *Electric Utilities Act*.

Not applicable.

TP5) Describe the location of the project:

- Provide the legal description of the proposed power plant boundary (legal subdivision [LSD], section, township, range, meridian and/or plan, block, lot, municipal address for urban parcels) and connection point, if applicable.
- Provide a Keyhole Markup Language (.kml/.kmz) file that reflects the information shown on the drawings and maps submitted to address information requirement TP6. The file should contain the geospatial data (geometry location, and attributes) of each of the major components. See the glossary definition for .kml/.kmz files for detailed specifications.

The Project will be located within the existing Plant, approximately 50 km southwest of Edmonton, AB. Approximate coordinates of the Plant are 53.447724°N, -114.448837°W. The Keephills Power Plant overlaps all or portions of the following legal subdivisions: 01-36-051-04 W5M, 07-36-051-04 W5M, 08-36-051-04 W5M, 09-36-051-04 W5M, 10-36-051-04 W5M, 15-36-051-04 W5M, 16-36-051-04 W5M, 05-31-051-03 W5M, 11-31-051-03 W5M, 12-31-051-03 W5M, 13-31-051-03 W5M.

The kml file accompanying this application contains the following information from the drawings and figures presented in TP6:

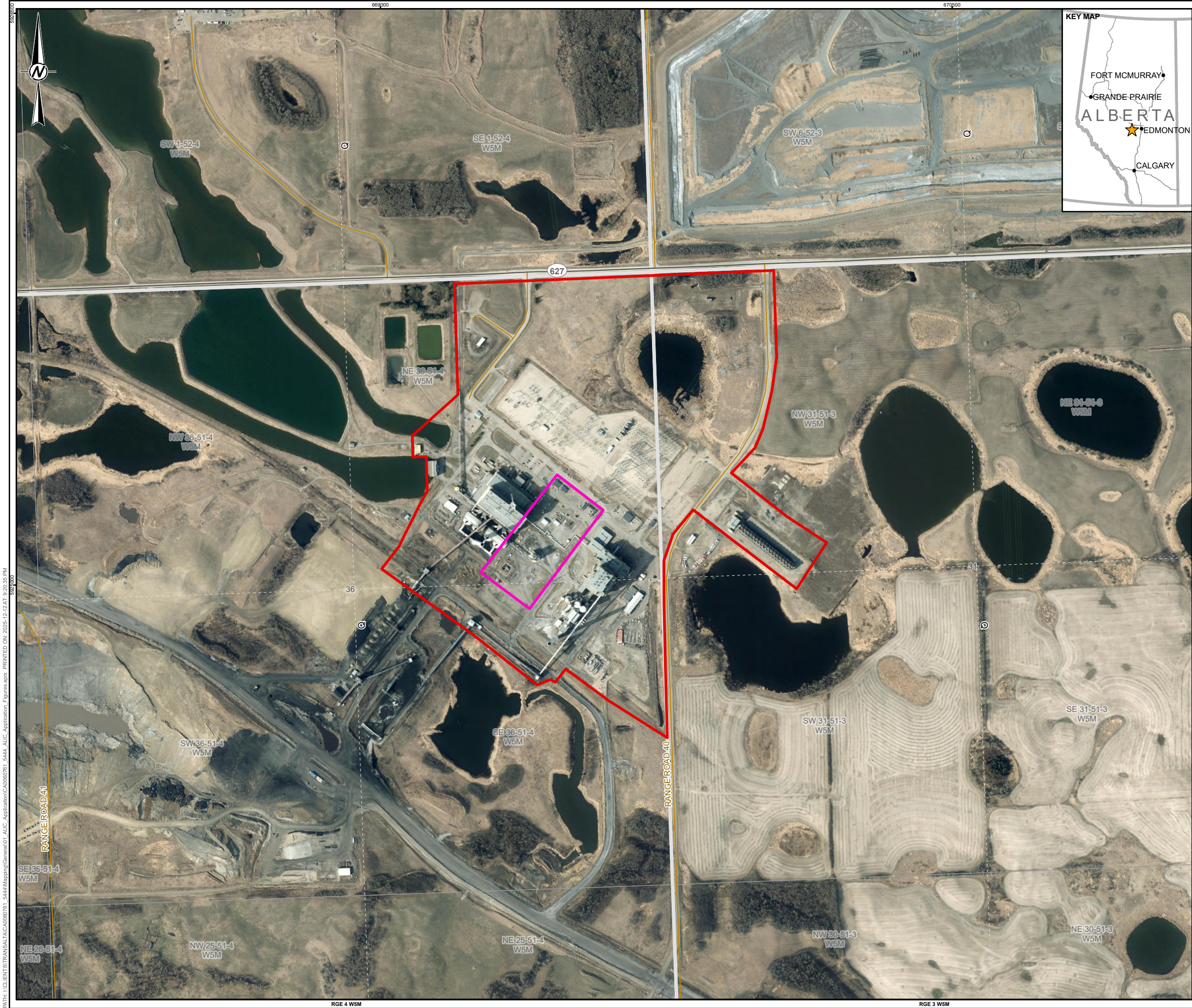
- Keephills 1 Repowering Project Area
- Keephills Power Plant Boundary

- Project Equipment Layout
- Regional Area Map Features
- Land Ownership Map Features

TP6) Provide the following drawings and maps with units of measure/scale and the direction of north specified:

- i. **A legible plant site drawing showing all major equipment components, for example, generators, turbines, heat recovery steam generator, step-up transformers, boilers and the power plant project boundary.**
- ii. **Legible maps showing:**
 - **The power plant project boundaries.**
 - **Land ownership of surrounding lands, including any residences and dwellings within the notification and consultation radii described in Appendix A1– Participant involvement program guidelines, Table A1-1: Electric facility application notification and consultation requirements.**
 - **Neighbouring municipalities, First Nation reserves, Metis Settlements, including nearby roads, waterbodies and other landmarks that may help identify the general location of the project area. This map may be at a larger scale than the detailed maps provided in response to other information requirements.**
 - **Important environmental features and sensitive areas in the local study area.**
 - **Any additional energy-related facilities within the project area.**
 - **The major land use and resource features (e.g., vegetation, topography, existing land use, existing rights-of-way). This information should also be provided in air photo mosaics.**

The Project equipment layout is provided in Figure 2-1. The Project site is provided in Figure 2-2. A Local Area map is provided in Figure 2-3. Land ownership within the notification radius of the Plant is indicated in Figure 2-4. The regional area is provided in Figure 2-5.



LEGEND

— SECONDARY HIGHWAY
— LOCAL ROAD

KEEPHILLS 1 REPOWERING PROJECT AREA
KEEPHILLS POWER PLANT BOUNDARY

0 0.25 0.5
1:10,000 KILOMETRES

REFERENCE(S)

ALBERTA DIGITAL BASE DATA MAY BE OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED, ALTALIS LTD. © GOVERNMENT OF ALBERTA 2025. ALL RIGHTS RESERVED, OR S&P GLOBAL INC. IMAGERY COPYRIGHT © 20230430, ESRI AND ITS LICENSORS. SOURCE: PARKLAND COUNTY, VANTOR. USED UNDER LICENSE, ALL RIGHTS RESERVED.
PROJECTED COORDINATE SYSTEM: NAD 1983 UTM ZONE 11N

CLIENT

transalta

PROJECT
KEEPHILLS 1 REPOWERING

TITLE
PROJECT SITE

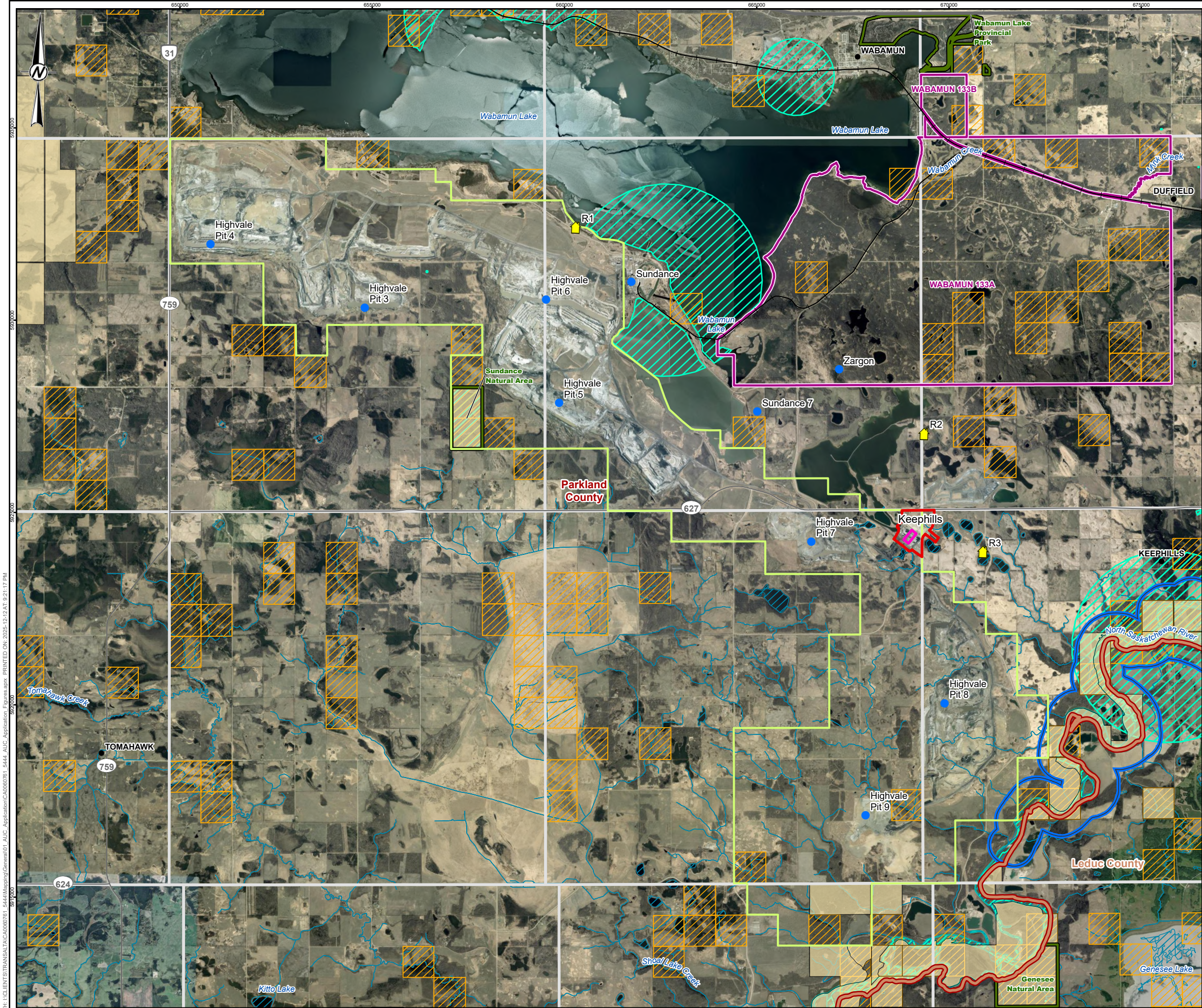
CONSULTANT	YYYY-MM-DD	2025-12-12
	DESIGNED	VY
	PREPARED	BS LB
	REVIEWED	SC
	APPROVED	TC

PROJECT NO. CONTROL

CA0060761.5444

REV. 0

FIGURE 2-2



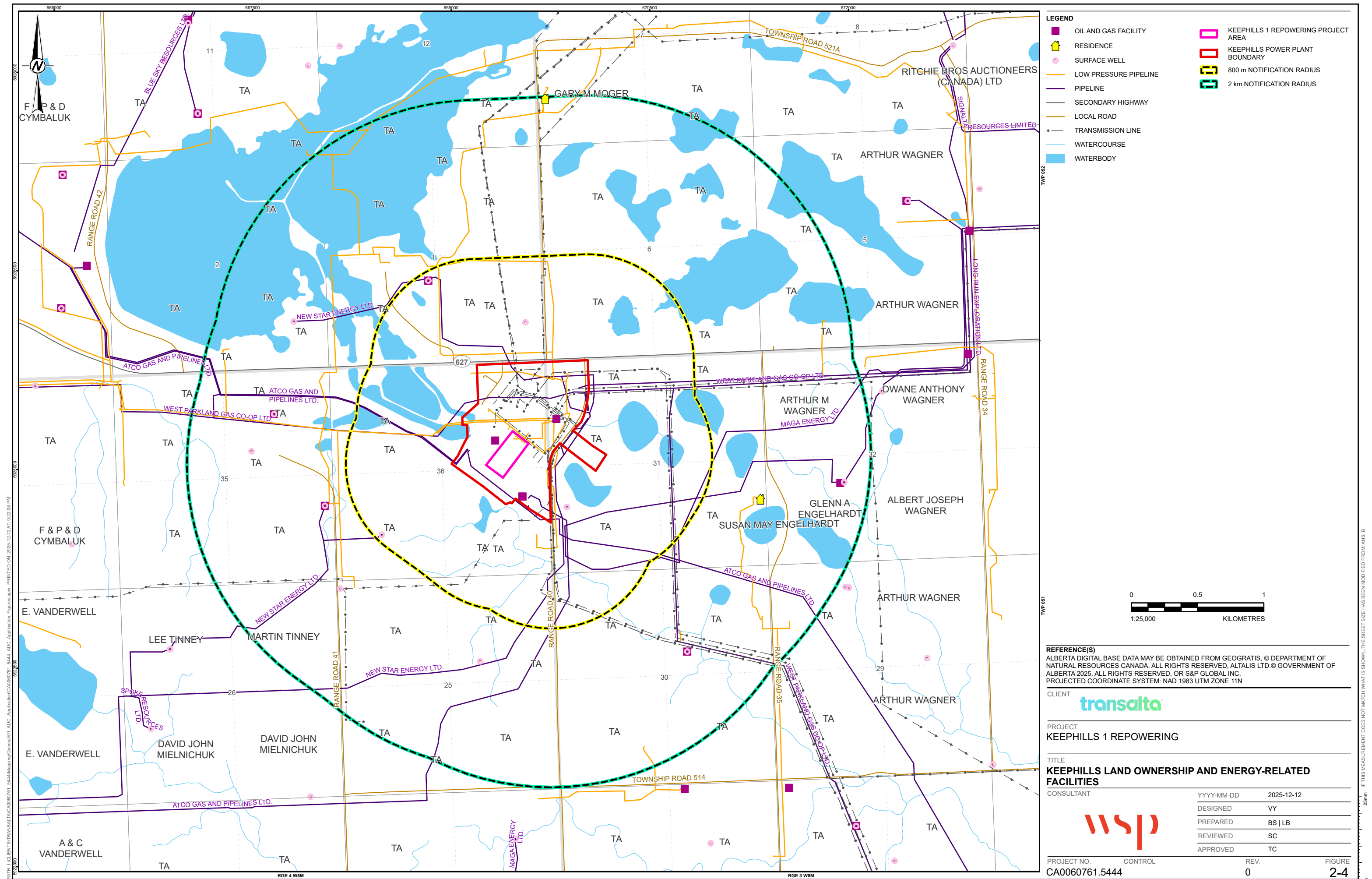
- LEGEND**
- KEEPHILLS 1 REPOWERING PROJECT AREA
 - KEEPHILLS POWER PLANT BOUNDARY
 - HAMLET
 - INDUSTRIAL FACILITY
 - RESIDENCE
 - PRIMARY HIGHWAY
 - SECONDARY HIGHWAY
 - RAILROAD
 - INDIGENOUS RESERVE
 - HIGHVALE MINE PERMIT BOUNDARY
 - PARK / PROTECTED AREA
 - ACIMS NON-SENSITIVE ELEMENT OCCURRENCE
 - CROWN RESERVATION
 - ENVIRONMENTALLY SIGNIFICANT AREA
 - SPECIES AT RISK AQUATIC DISTRIBUTION RANGE
 - SPECIES AT RISK CRITICAL HABITAT

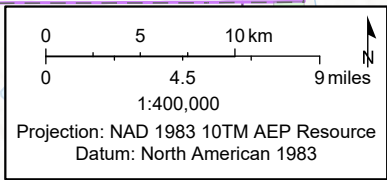
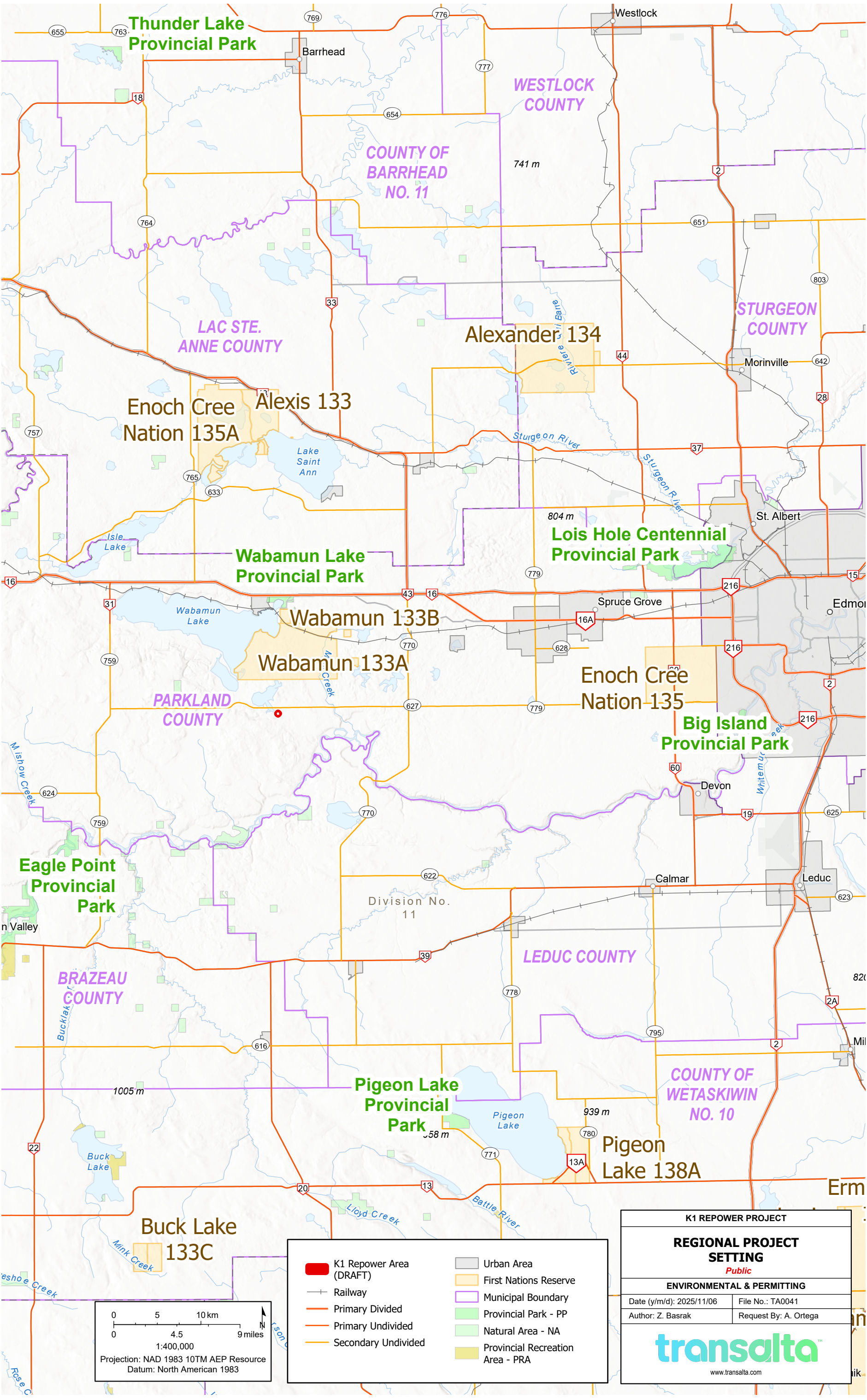
REFERENCE(S)

SPECIES AT RISK AQUATIC DISTRIBUTION RANGE OBTAINED FROM FISHERIES AND OCEANS CANADA - SPECIES AT RISK PROGRAM. AREAS OF CONCERN OBTAINED BY ALBERTA WILDERNESS ASSOCIATION. ENVIRONMENTALLY SIGNIFICANT AREAS CREATED BY FIERA BIOLOGICAL CONSULTING. LISTED PLANTS AND BUFFERS OBTAINED FROM ALBERTA CONSERVATION INFORMATION MANAGEMENT SYSTEM (ACIMS). ALBERTA DIGITAL BASE DATA MAY BE OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED. ALTALIS LTD. © GOVERNMENT OF ALBERTA 2025. ALL RIGHTS RESERVED. OR S&P GLOBAL INC. PARKS AND PROTECTED AREAS OBTAINED FROM ALBERTA PARKS, GOVERNMENT OF ALBERTA. IMAGERY COPYRIGHT © 20230430 & 20230501, ESRI AND ITS LICENSORS. SOURCE: PARKLAND COUNTY, EARTHSTAR GEOGRAPHICS. USED UNDER LICENSE. ALL RIGHTS RESERVED.

PROJECTED COORDINATE SYSTEM: NAD 1983 UTM ZONE 11N

CLIENT				transalta	
PROJECT				KEEPHILLS 1 REPOWERING	
TITLE				LOCAL AREA	
CONSULTANT		YYYY-MM-DD	2025-12-12		
		DESIGNED	VY		
		PREPARED	BS LB		
		REVIEWED	SC		
		APPROVED	TC		
PROJECT NO.		CONTROL	REV.	FIGURE	
CA0060761.5444			0	2-3	





K1 Repower Area (DRAFT)	Urban Area
Railway	First Nations Reserve
Primary Divided	Municipal Boundary
Primary Undivided	Provincial Park - PP
Secondary Undivided	Natural Area - NA
	Provincial Recreation Area - PRA

K1 REPOWER PROJECT	
REGIONAL PROJECT SETTING	
Public	
ENVIRONMENTAL & PERMITTING	
Date (y/m/d): 2025/11/06	File No.: TA0041
Author: Z. Basrak	Request By: A. Ortega
www.transalta.com	

Disclaimer: TransAlta Corporation shall have no liability for any errors, omissions, or inaccuracies in the information provided. TransAlta Corporation assumes no liability for any decisions made or actions taken or not taken in reliance upon the data provided on this map. Usage, manipulation, or reproduction of the data and information contained herein is prohibited without permission of TransAlta Corporation.

TP7) Present the estimated power plant heat rates, efficiency of the power plant and details of the cooling system for the power plant.

The Keephills Unit 1 Repowering Project will have an estimated base load heat rate of:

- 7,270 kJ/kWh HHV Unfired or 49.5%; and
- 7,880 kJ/kWh HHV Fired or 45.7%,

at site average annual temperature. Unfired and fired states correspond to zero and full use of the HRSG duct burners.

The primary cooling system of the facility will not change with the repowered configuration. The Keephills Cooling Pond will continue to be utilized for the steam turbine heat sink.

TP8) For power plants with natural gas piping located within the power plant boundary, provide the following information:

- **A schematic showing the tie-in points and associated design and operating pressures (both upstream and downstream of the tie-in points).**
- **The diameter, maximum operating pressure (in kilopascals), design pressure (in kilopascals), wall thickness, pipe specification, pipe grade and length of the natural gas pipelines proposed within the power plant boundary.**
- **The design philosophy that will be utilized for the pipeline connections.**
- **The associated qualifications of the gas installation contractor.**
- **Confirmation that the fuel gas piping within the proposed plant site will be designed and constructed as pressure piping in accordance with the Pressure Equipment Safety Regulation AR49/2006 administered by the Alberta Boilers Safety Association (ABSA) and that all required ABSA approvals will be obtained before operation.**

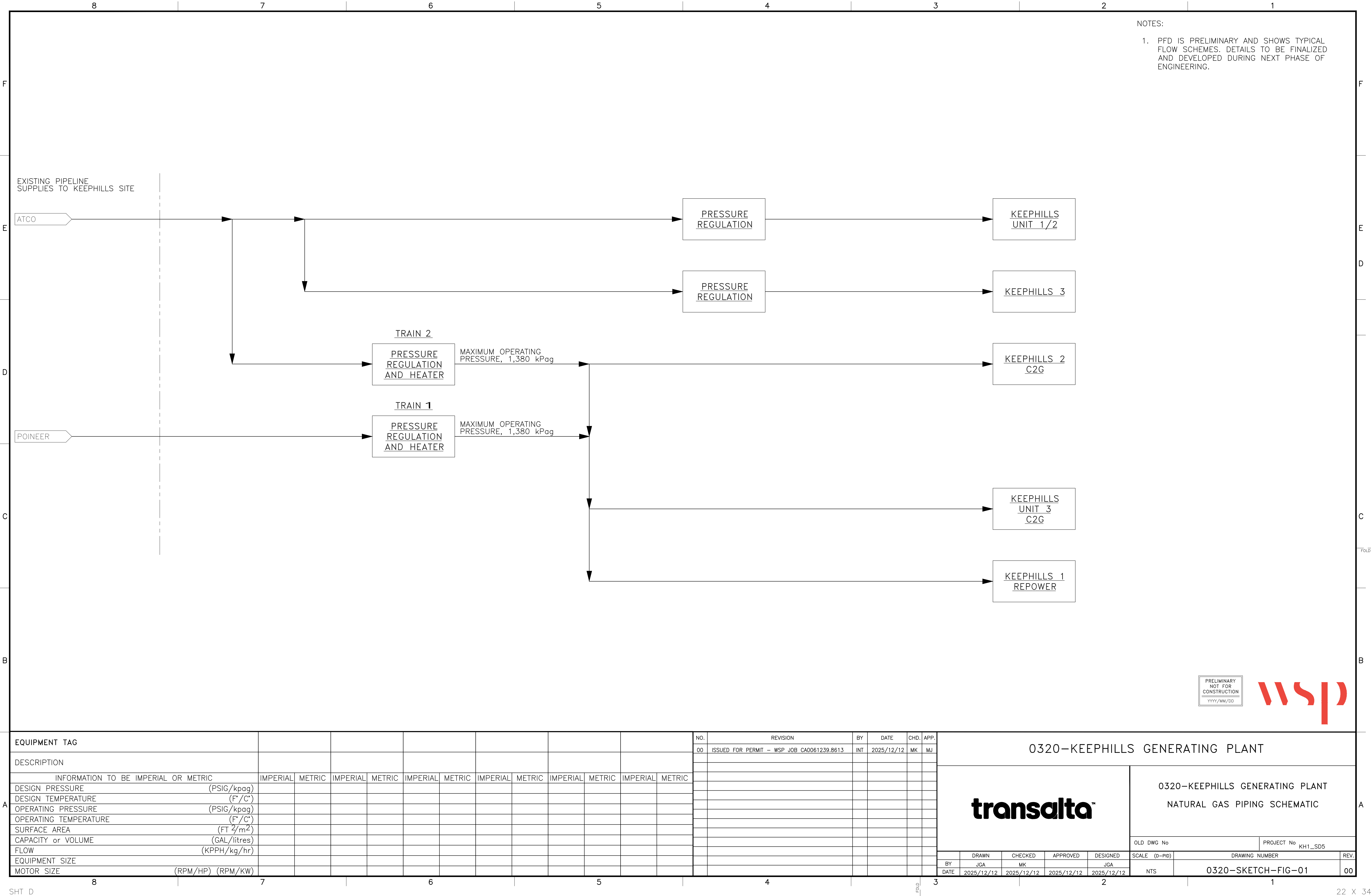
A natural gas process flow schematic is included as Figure 2-6 below.

The natural gas piping within the proposed plant site will be designed and constructed as pressure piping in accordance with Alberta Boilers Safety Association (ABSA) requirements and all required ABSA approvals will be obtained prior to operation. Natural gas will be supplied from the existing Pioneer pipeline supply, a NPS 20 pipeline with 5/16" wall and licensed to a maximum pressure of 9,930 kPag. The normal operating pressure and temperature at the outlet of the pipeline will be 2,000 to 5,000 kPag at (0°C to 4°C). There is also an ATCO pipeline supply to the Keephills Plant sit that operates in parallel with the Pioneer let down, heating and metering station. The supplies can be blended downstream of these two trains. Supply pressure at the Letdown Station outlets is a maximum of 1,380 kPag. The tie point for the Project will be along the southwest corner of the Keephills site boundary, before the let down station that feeds into the Keephills 2 Power Plant. If additional onsite gas supply capacity or expansions are required in the future, a new letdown station can be added to operate in parallel with the existing Pioneer train, however, overall supply to site is anticipated to be adequate between the ATCO and Pioneer pipelines.

There will be an automated emergency shutdown valve (ESDV) located at this location to isolate the pipeline from the remainder of the plant. There will also be ESDV valves located outside the power generation building wall to isolate the building from gas sources. The estimated amount of natural gas piping within the project site is roughly 350 metres, with fuel gas needed for the combustion turbines, HRSG duct burners, auxiliary boiler, and building heat. Natural gas compression is expected to be

required to ensure reliable fueling of the gas turbines. Further details will be available after the detailed design phase of development.

The design philosophy is to utilize as many welded connections as possible to avoid having leak points and hazardous areas within the project site. Natural gas piping installation will be performed by a holder of a quality management system certificate of authorization permit in full compliance with the *Pressure Equipment Safety Regulation*, Alta Reg 49/2006. The gas installation contractor will have an ABSA certificate of authorization permit in accordance with the ABSA *Pressure Equipment Safety Regulation* (ABSA 2023) and will certify the construction work has been completed in accordance with the permit and all the requirements as set out by ABSA. The fuel gas piping will be built to ASME B31.3 and designed in accordance with applicable codes and the *Pressure Equipment Safety Regulation*, stamped by an engineer licensed in Alberta. The design registration will be submitted and approved by ABSA prior to operation.



TP9) Provide the requested approval date from the Commission, the expected construction start date, the expected in-service date of the project and the requested construction completion date to be used in the project approval. Provide the rationale for these dates.

TransAlta is requesting AUC approval by April 30, 2026 as a Category 2 or 3 application pursuant to Table 3.1 of Rule 007, in order to meet construction and commissioning schedules. The anticipated Project schedule is provided in Table 2-2.

Table 2-2: Anticipated Project Schedule

Milestone	Description	Schedule*
AUC Application Approval	Anticipated AUC approval date to support planned construction start for the Project.	Q2 2026
Site preparation & Construction		Q4 2027 – Q2 2030
Commissioning	Pre-commissioning of individual equipment components and subsystems will be underway to validate subsystem performance.	Q4 2029
Commercial Operation	Project enters full operation.	Q4 2030

*Dates are as anticipated; however, they may be impacted based on regulatory, commercial and supply chain constraints.

TP10) Describe any public benefits that will be generated by the proposed project.

The Project will provide significant public benefits to the local community and the broader Alberta region. These benefits include economic growth and job creation, increased tax revenue, reliable and affordable energy supply, utilizing existing infrastructure, and community and engagement support.

Economic Growth and Job Creation

The construction and operation of the Project will generate numerous employment opportunities. At the peak of construction the Project is anticipated to employ up to 1,000 workers, providing a substantial boost to the local economy. Once operational, the Project will offer continued long-term employment opportunities, contributing to the economic stability of the region.

Increased Tax Revenue

The Project will generate increased tax revenue for local municipalities and the provincial government. This additional revenue can be used to fund essential public services and infrastructure projects, benefiting the community at large.

Reliable and Affordable Energy Supply

The Project is designed to provide a reliable and flexible energy supply to meet Alberta's growing electricity demands. The ability to ramp up quickly and respond to market needs ensures that Albertans have access to affordable and dependable energy.

Utilization of Existing Infrastructure

The Project will make use of existing infrastructure at Keephills, minimizing the need for new land development and reducing the environmental impact. This approach supports sustainable development principles and efficient land use.

Community Engagement and Support

TransAlta has engaged with local communities and stakeholders throughout the planning process to address their concerns and feedback. This collaborative approach fosters positive relationships and aligns the Project benefits with community interests.

TransAlta is a proud partner of the Keephills community. Our commitment is reflected through involvement in the Keephills Community Association and support for community initiatives such as the Keephills School Grow Program, the Seba Beach Regatta Days and the Seba Beach Pickleball Court.

3. PROJECT CONNECTION

TP11) If a connection order is not concurrently being applied for, provide the expected date when the connection order application will be submitted, if available.

TransAlta will submit the System Access Service Request (SASR) as part of the Cluster 3 process developed by the Alberta Electric System Operator (AESO). The current deadline for submissions into Cluster 3 is April 30, 2026. TransAlta expects to submit the SASR for this project on or before December 31, 2025. TransAlta has received approval from FortisAlberta under Section 101(2) of the *Electric Utilities Act*, SA 2003, c. E-5.1, to pursue a SASR directly with the AESO for the Project.

TP12) Provide asset identification code assigned by the independent system operator (ISO) and the ISO project ID number related to the system access service request, if available.

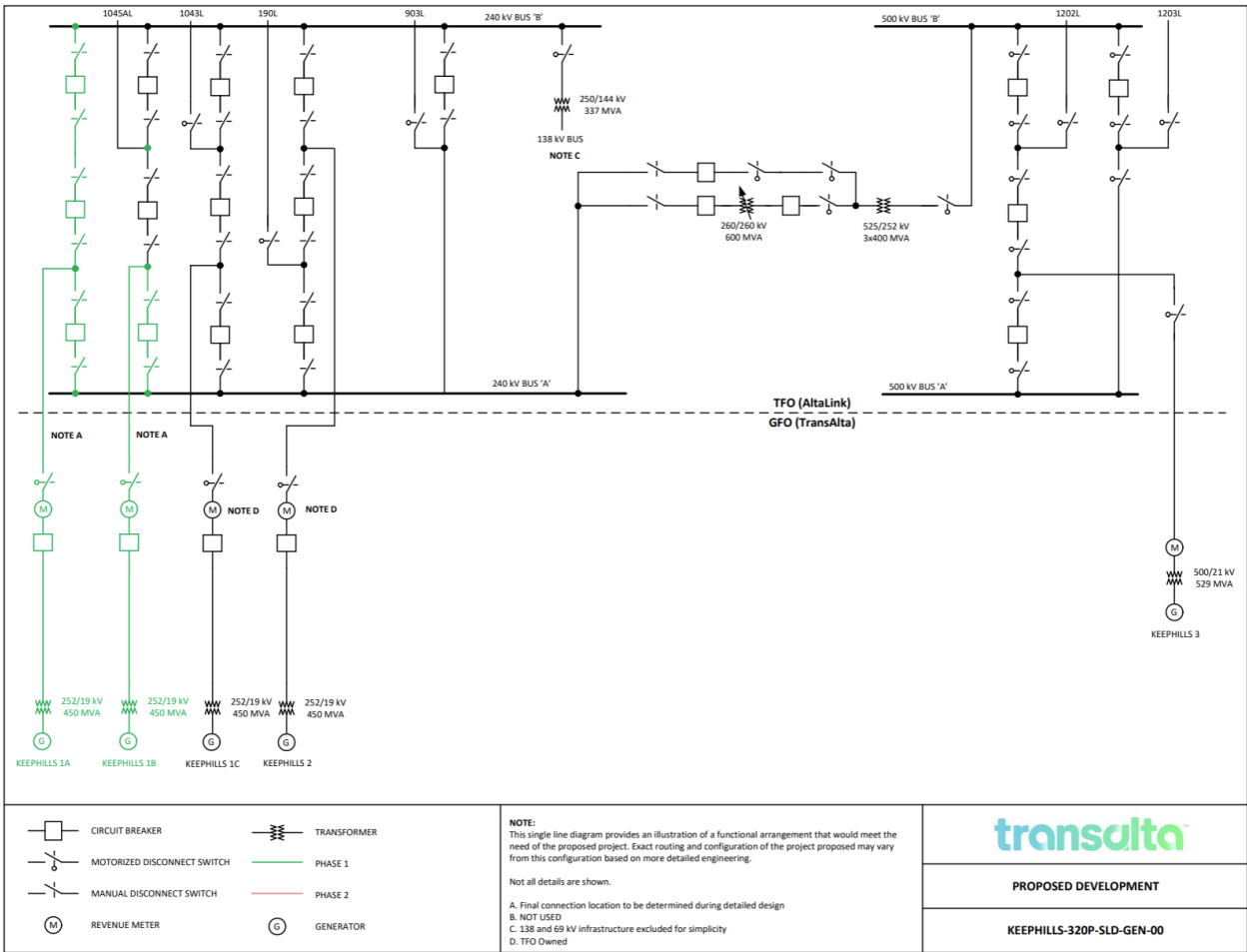
TransAlta has not been assigned a project ID number from the AESO for this project at this time.

TP13) If the power plant is to be connected to the transmission system, provide a map with one or more conceptual layouts showing possible routes and general land locations for facilities that would be used to interconnect the power plant to the Alberta Interconnected Electric System.

If the power plant is to be connected to the distribution system, provide a statement from the distribution facility owner indicating that it is willing to connect the generating facilities.

The Project will utilize existing interconnection infrastructure to the 240 kV infrastructure located at the Keephills 320P substation. The connection details are shown in the interconnection single line diagram below in Figure 3-1.

Figure 3-1: Interconnection Single Line Diagram



4. CUMULATIVE EFFECTS

TP14) Confirm whether the applicant is aware of other existing developments in the project area that could cumulatively affect the rural setting/landscape due to their proximity and/or number.

The Project will be located entirely within the existing Keephills Plant boundary, utilizing previously disturbed brownfield areas. Water use will be within existing licensed limits. As such, there are no anticipated adverse effects on terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, and environmentally sensitive areas within the Keephills Plant boundary. Cumulative effects on air quality and noise are presented in the air quality and noise assessments (Appendices B and C, respectively).

TP15) Discuss any potential positive or negative cumulative social, economic or environmental impacts or effects that may occur considering the proposed project, existing developments and any other currently planned developments. This discussion may include, but is not limited to, any economic spinoffs, community and employment benefits, visual impacts, proliferation, land fragmentation (including fragmentation of agricultural uses, wildlife habitat fragmentation, etc.), the impact of adherence to municipal planning documents, wildlife, species at risk, air quality impacts, recreational or tourism impacts, impacts to existing or anticipated resource development, wetlands, native grasslands, watersheds and water quality impacts, and surface management.

The Project is designed to provide significant public benefits to the local community and the broader Alberta region. These benefits include economic growth and job creation, increased tax revenue, reliable and affordable energy supply, utilizing existing infrastructure, and community and engagement support.

The Project will be located within the existing Keephills Plant boundary, minimizing visual impacts on the surrounding landscape. The Project will utilize previously disturbed brownfield areas, reducing the potential for land fragmentation, including fragmentation of agricultural uses and wildlife habitat. These land uses are consistent with the land use designation, and the Project adheres to municipal planning documents. The Project is not expected to have significant impacts on recreational or tourism activities in the area. The Project will not adversely affect existing or anticipated resource development.

The Project will meet the applicable Alberta Ambient Air Quality Objectives and Guidelines (AAAQO and AAAQG) as outlined in the Air Quality Assessment report (Appendix B). For both the daytime period and the nighttime period, the Project NIA predicts that Application Case cumulative noise levels will comply with applicable Rule 012 Permissible Sound Levels (PSL) limits at all receptors in the noise study area (Appendix C).

There are no anticipated adverse effects on terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, and environmentally sensitive areas within the Keephills Plant boundary. The Project will implement an Environmental Protection Plan (EPP) (Appendix E) for compliance with environmental regulations and to minimize potential adverse effects.

TP16) Discuss the applicant's alignment, or efforts to align, with Alberta's Land-use Framework and the economic, orderly and efficient development of industrial facilities including efficient land use principles.

The Project aligns with Alberta's Land-use Framework and the economic, orderly, and efficient development of industrial facilities, including efficient land use principles. The Project will make use of existing infrastructure at Keephills, minimizing the need for new land development and reducing the environmental impact. This approach supports sustainable development principles and efficient land use.

5. EMERGENCY RESPONSE PLAN

**TP17) Confirm the applicant has or will have a corporate or site-specific emergency response plan for the construction and operation of the proposed power plant.
If the applicant will have a corporate emergency response plan, explain why it decided not to develop a site-specific emergency response plan.**

TransAlta's existing site-specific emergency preparation and contingency plans will be reviewed and updated where required, to reflect the Project. Upon completion of the detailed engineering design phase, information from the Project's design will be used to update existing systems, programs, procedures and plans. Keephills meets International Organization for Standardization (ISO) 14001:2004 standards and has formal systems and procedures in place to meet the environmental requirements of this certification.

TransAlta's latest emergency response plan for the combined Keephills and Sundance power plants and Sunhills mining site was last updated January 2023 and is included as Appendix D. It contains the following major sections:

- Initial Response – level classification, notifications, briefing and public safety
- Roles and Responsibilities – response teams, key personnel, public safety staff
- Communications & Media – spokesperson, press releases and communications
- Emergency Response Guidelines – responder safety, public protection, spill response, flammable liquids, corrosive materials, ash, glycol spill, transformer oil spill, fire, gas release, natural gas pipeline breaks, transportation incidents, medical emergency, rescue, dam breach, environment, animal encounter, system disturbances/power loss, security incidents, weather and natural disasters and post incident activities
- External Agency Roles & Procedures – government consultation, notifications
- Forms – Incident Command System, emergency, resident and media
- Appendices – ERP scope, training and plan maintenance, Incident Command Post, NERC, land descriptions and incident classification procedures.

TP18) Provide a summary of the following:

- **The site-specific risks (construction phase and operations phase) that have been identified to date.**
- **The emergency mitigation measures that have been identified.**
- **The site monitoring and communication protocols that will be put into place.**

Site-specific risks encountered during construction and operations will be documented and mitigated through development and implementation of an Environmental Protection Plan, discussed further in TP22 and included in Appendix E.

The existing monitoring programs, operation procedures, management systems, emergency preparation and contingency plans will be reviewed and updated where required, to reflect the Project. Upon completion of the detailed engineering design phase, information from the Project's design will be used to update existing systems, programs, procedures and plans. As noted above in TP17, Keephills meets ISO 14001:2004 standards and has formal systems and procedures in place to meet the environmental requirements of this certification.

TP19) Confirm that local responders and authorities have been contacted or notified regarding the project emergency response plan.
Describe any requirements or feedback received and describe how the applicant intends to address the requirements and feedback received.

Local responders and authorities will be contacted in advance of construction activities being initiated.

6. MUNICIPAL LAND USE INFORMATION

TP20) Confirm whether the proposed project area complies with the applicable municipal planning documents including municipal development plans, intermunicipal development plans, area structure plans, land use bylaws (including applicable setbacks) and other municipal bylaws.
Identify any instances where the proposed project area does not comply with applicable municipal planning documents and provide a justification for any non-compliance.

The Project will be within the existing operational site, which is zoned and approved for the intended use and consistent with existing land use plans. The Project does not change the land use and there are no siting or land use issues. The municipal engagement form provided by Parkland County is included in Appendix G.

TP21) Provide the current land use zoning for the proposed project area. If applicable, provide the land use amendment and/or development permit status for the proposed project area.

The Keephills site is currently zoned as "RI - Resource Industry District" with a "DC - Direct Control District", specifically "Keephills Direct Control District (DC Area 4)", as specified by the Parkland County Land Use Bylaw 2025-12 (Parkland County 2025). "Utility, Major, limited to Power Generation Facilities" is a listed use in the "Keephills Direct Control District (DC Area 4)", and the Project and existing Keephills facility are consistent with this land use designation. The Project does not change the land use and there are no siting or land use issues. The Project will be within the existing operational site, which is zoned and approved for the intended use and consistent with existing land use plans.

7. ENVIRONMENTAL INFORMATION

TP22) Identify the current emissions standards or guidelines that are applicable to the proposed project. Submit a table that provides the plant's emission rates (e.g., kg/MWh) for nitrogen oxides (NOx), sulphur dioxide (SO2), and primary particulate matter. The table must compare the emission rates to the current Alberta Air Emissions Standards for Electricity Generation and any other emission standards or guidelines that are applicable to the proposed project.

The Project involves the construction and operation of new CT generators and HRSGs at Keephills. The generation units will be integrated with existing steam turbine generator and infrastructure for Keephills Unit 1. The design also includes the construction and operation of an auxiliary boiler unit to support start-up and HRSG sparging activities. The Project will introduce three new air emission sources at Keephills: two HRSG stacks and one auxiliary boiler stack.

There are both federal and provincial emission standards and guidelines that are applicable to Project. They are:

- Federal Guidelines for Reduction of Nitrogen Oxide Emissions from Natural Gas-fuelled Stationary Combustion Turbines (ECCC 2017);
- Alberta Emission Standards for Electricity Generation and Alberta Air Emission Guidelines for Electricity Generation (AEPA 2005); and
- 2018 CASA Electricity Framework Review: Perspectives on a NOX Emission Standard for Natural Gas-Fired Turbines (CASA 2018).

Detailed information on current emission standards, guidelines, and the air emissions associated with the Project can be found in the Air Quality Assessment in Appendix B.

TP23) Indicate whether the proposed plant will be in compliance with the Alberta air quality standards or guidelines (e.g., Ambient Air Quality Objectives and Guidelines Summary) applicable to the proposed project for ground-level concentrations of pollutants. Identify all standards and guidelines that apply.

An air quality assessment was conducted to quantify the potential air emission and air quality changes associated the Project. Air dispersion modelling was completed using CALPUFF model and a 5-year (2015-2019) meteorological dataset to predict the potential changes to the maximum ground-level NO₂ concentrations. The maximum predictions were compared with the Alberta Ambient Air Quality Objectives (AAAQOs). The results showed that the maximum ground concentrations predictions are in compliance with the AAAQOs. Detailed information on current emission standards, guidelines, and a comparison of Project emissions to AAAQOs can be found in the Air Quality Assessment in Appendix B.

TP24) Provide a summary of any feedback received to date from Alberta Environment and Protected Areas (AEPA) addressing the environmental aspects of the project and any mitigation measures and monitoring activities recommended by AEPA.

The Project does not meet the definition of either a mandatory activity or an exempt activity as described in the *Environmental Assessment (Mandatory and Exempt Activities) Regulation*, Alta Reg 111/1993 under the *EPEA*. TransAlta submitted a request to Alberta Environment and Protected Areas (AEPA) for clarification if an environmental impact assessment (EIA) would be needed. To date, no other feedback on the environmental aspects of the Project, including mitigation measures and monitoring activities, have been provided by AEPA. TransAlta does not foresee that an EIA would be required for the Project, as it is an alteration that does not change the activities of the existing Keephills facility, which already operates under an EPEA approval.

TP25) Provide the emissions modelling report that was prepared for the Environmental Protection and Enhancement Act application to AEPA.

The Air Quality Assessment for the Project is provided in Appendix B.

TP26) If preparation of either a federal impact assessment or a provincial environmental impact assessment report was required, provide a copy as an appendix to the application and a separate environmental evaluation is not required. [Attach]

If a federal impact assessment or a provincial environmental impact assessment is not required, submit an environmental evaluation of the project. The environmental evaluation must:

- **Describe the present (pre-project) environmental and land use conditions in the local study area. Provide all definitions and standards (i.e., Alberta Wetland Identification and Delineation Directive) used to prepare this description.**
- **Identify and describe the project activities and infrastructure that may adversely affect the environment. Include a description and the area (hectares) of permanent and temporary project activities and infrastructure.**
- **Identify what specific ecosystem components (i.e., terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, air quality and environmentally sensitive areas) within the local study area may be adversely affected by the project.**
- **Describe any potential adverse effects of the project on the ecosystem components during the life of the project.**
- **Describe the methodology used to identify, evaluate and rate the adverse environmental effects and determine their significance, along with an explanation of the scientific rationale for choosing this methodology.**
- **Describe the mitigation measures the applicant proposes to implement during the life of the project to reduce these potential adverse effects.**
- **Describe the predicted residual adverse effects of the project and their significance after implementation of the proposed mitigation.**
- **Describe any monitoring activities the applicant proposes to implement during the life of the project to verify the effectiveness of the proposed mitigation.**
- **List the key environmental regulations and guidelines applicable to the project and provide rationale for any deviations from the guidelines.**
- **List the qualifications of, or provide a CV for, the individual(s) who conducted or oversaw the environmental evaluation and indicate the respective practice areas, practice standards or standards of competence demonstrated by these individuals.**

The Project does not meet the definition of a designated project as described in the *Physical Activities Regulations*, SOR/2019-285 under the *Impact Assessment Act*, SC 2019, c. 28, s.1. As such, a federal impact assessment is not required unless the Minister of the Environment, Climate Change and Nature designates the Project. TransAlta submitted a request to the Impact Assessment Agency of Canada (IAAC) for clarification if an impact assessment (IA) would be needed. IAAC responded on November 28, 2025 indicating that the proposed Project does not meet the definition of a designated project.

The Project does not meet the definition of either a mandatory activity or an exempt activity as described in the *Environmental Assessment (Mandatory and Exempt Activities) Regulation* under the *EPEA*.

All proposed works associated with the Project will be located entirely within the existing Keephills Plant boundary and are planned to be on previously disturbed and developed areas of Keephills (Figure 2-2). As such, there are no anticipated adverse effects to the environment in relation to terrain and soils, surface water bodies and hydrology, groundwater, wetlands, vegetation species and communities, wildlife species and habitat, aquatic species and habitat, and environmentally sensitive areas within the Keephills Plant boundary. Consequently, a stand-alone environmental evaluation is deemed not required for the Project.

While the Project requires the diversion of water from the existing Keephills cooling pond, diversion from the North Saskatchewan River (NSR) will remain within the limits (volume and rate) of the current Keephills *Water Act*, RSA 2000, c. W-3, licences for the diversion of water. No changes to the existing water intake at the NSR are proposed. Water withdrawals and releases from/to the existing Keephills cooling pond are not expected to result in changes to water levels or quality in the cooling pond.

The Project will meet the applicable provincial and federal emissions and air quality guidelines and standards.

TP27) For projects wholly or partially located on federal lands (First Nation reserves, national parks or military bases), provide a copy of the environmental impact analysis completed for the corresponding federal government department. [Please submit along with your application].

Indicate whether the project has the potential to cause effects that may cross into another jurisdiction. Environmental effects that originate on federal lands, but cross into another jurisdiction, must be addressed as part of the environmental review process. If not contained within the impact analysis, include information describing all potential environmental effects of the project. Projects on federal lands may be subject to provincial laws, standards and permits.

The applicant must address how it has considered AUC Rule 007 and Rule 012 and describe the steps taken, if any, to address specific requirements set out in these rules.

Not applicable. The Project is entirely on private lands.

TP28) Submit a stand-alone, project-specific environmental protection plan (or environmental management plan) that itemizes and summarizes all of the mitigation measures and monitoring activities that the applicant is committed to implementing during construction and operation to minimize any adverse effects of the project on the environment.

As construction of the Project will occur on existing brownfield disturbance, there is limited potential for adverse environmental effects. The major environmental compliance requirement is the completion of the daily EHS Environmental inspection check sheets. These cover numerous conditions of the Operating Approvals with respect to the cooling pond makeup/blowdown, the potable water system, noise and air emissions. TransAlta will continue to follow the existing environmental management plans and monitoring programs (as amended), including the following:

Spills:

- COA.04.0195 Alberta Thermal Oil Spill Control Procedure
- COA.04.0220 Alberta Thermal Glycol Spill Control and Recovery Procedure
- COA.04.0031 Multiple Plant PCB Management Procedure
- COA.04.0868 Hazardous Material and Waste Emergency Spill Response

Ammonia:

- COA.05.1479 Anhydrous Ammonia Offloading
- COA.03.2204 Anhydrous Ammonia Training Standard
- COA.05.0357 Keephills Condensate Polishers and Turbine Condenser Anhydrous Ammonia Gas Cylinders
- COA.03.0221 Multiple Plant Chemical Handling and Labeling (WHMIS) Procedure
- COA.03.0004 Environmental Aspects - Hazards Identification, Risk Assessment and Determining Controls

Incidents:

- COA.10.2078 EHS Incident and Regulatory Reporting

Groundwater Monitoring:

- COA.04.0153 Groundwater Monitoring Compliance

Cooling Pond Management, Noise and Air Emission Limit Management:

- COA.04.2082 Keephills Shift Supervisor Environmental Overview
- COA.03.2217 Noise Management Program
- COA.05.0060 Keephills Cooling Pond and Ash Lagoon Dyke Monitoring Procedure
- COA.04.0251 LCAP - KPH Procedures Manual - Cooling Pond Monitoring
- COA.05.0612 Keephills Dam Operations, Maintenance and Surveillance Manual
- COA.04.0330 LCAP - Multiple Plant Procedures Manual - Environmental Data Entry

Fuel tanks:

- COA.04.0219 Keephills Fuel Tank Procedure

Waste Management:

- COA.04.0021 Alberta Thermal Waste Management Code of Practice
- COA.04.0942 Non-Hazardous, Hazardous, And Universal Wastes

Vegetation Management:

- COA.04.0029 Alberta Thermal Vegetation Management

NSR and Wildlife:

- COA.04.0100 Dredging of North Saskatchewan River
- COA.04.0022 Fish Monitoring Management and Reporting
- COA.04.0865 Pesticide and Herbicide Storage, Handling, And Application

As necessary, the existing monitoring programs, operating procedures, management systems, and emergency preparation and contingency plans will be reviewed and upon completion of detailed design, updated to reflect the process changes, hazards and other requirements of the Project. The Environmental Protection Plan prepared for the Project is presented in Appendix E.

8. VISUAL IMPACT ASSESSMENT

TP29) If the project is located within a buffer zone or a visual impact assessment zone, as defined in Schedule 2 and Schedule 3 of the Electric Energy Land Use and Visual Assessment Regulation and in the Pristine Viewscapes and Visual Impact Assessment Zones map, submit a visual impact assessment. The visual impact assessment must include:

- **An evaluation of the anticipated visual impacts on the buffer zone or visual impact assessment zone.**
- **Visual simulations from key vantage points illustrating the potential visual impact of the project.**
- **Key vantage points should include locations with viewscapes determined to have a major or major/moderate severity of impact ranking in the visual impact assessment. If desired, visual simulations may also be provided for other viewpoints in the project area so that a range of views at different distances and in different landscapes may be presented. Some of these additional visual simulations can include viewpoints from nearby residences.**
- **Visual simulations must include an accurate representation of the viewscape:**
 - **Before project construction has commenced.**
 - **After project construction has been completed, but without any mitigation measures implemented.**
 - **After project construction has been completed, and any proposed mitigation measures have been implemented.**
- **The visual simulations should include an explanation of how they were prepared, how they are to be viewed, and what was done to ensure they were prepared accurately. A map must be provided that shows the location and direction of each visual simulation.**
- **Proposed mitigation measures to minimize or offset any adverse visual effects on the buffer zone or visual impact assessment zone.**
- **Where mitigation is proposed, describe the mitigation measures that will be implemented, including their location, predicted effectiveness during the project's full life cycle and whether the mitigation measures have been discussed with adjacent landowners. If vegetation screening is planned, confirm that the final plan has also been or will be discussed with local authorities.**

The Project is not located within a buffer zone or a visual impact assessment zone, so this section is not applicable. The Project is not anticipated to impact the general appearance of site infrastructure or impact the existing industrial footprint of Keephills.

9. END-OF-LIFE MANAGEMENT AND RECLAMATION SECURITY

TP30) Describe the reclamation security plan for the proposed power plant. The plan should include:

- **A cost estimate prepared by a third party which describes the estimated costs of reclaiming the proposed project.**
- **Confirmation that the operator will have sufficient funds at the project end of life to meet its reclamation security plan.**
- **How the amount of the reclamation security will be calculated.**
- **The year of initial posting and when each subsequent amount will be added.**
- **The frequency with which the reclamation security estimate will be updated or re-assessed.**
- **What form the reclamation security will take (e.g., letter of credit, surety bond, other). Include an explanation of why the form of security was selected, having regard to its attributes and priority in bankruptcy, including how the secured party would be able to realize on the reclamation security should the project owner and operator be in default.**
- **The security beneficiaries to whom the reclamation security will be committed.**
- **When and how the beneficiary can access the security and any constraints on such access.**
- **The estimated salvage value of project components, including any supporting calculations and assumptions used to substantiate the salvage value.**
- **The standard to which the project site will be reclaimed upon decommissioning.**

The reclamation security plan for the Project is designed so that sufficient funds are available to meet reclamation obligations at the end of the project's life. The Project is within the brownfield areas of the existing Keephills Plant boundary, which are covered by the existing reclamation plan for Keephills, and those existing obligations are unaffected by the Project. The Project area will be reclaimed as part of the overall decommissioning and reclamation of the existing Keephills facilities, which are not included in the cost estimate below.

A third-party cost estimate has been prepared by WSP Canada Inc. for the decommissioning and demolition of the proposed repowering infrastructure associated with the Project. The estimate, classified as a Class 5 Estimate, has an expected accuracy range of +50% / -30%. The total estimated cost for decommissioning and demolition of the repowering infrastructure is approximately \$4,045,000, with a low estimate of \$2,831,000 and a high estimate of \$6,068,000. The detailed cost estimate is provided in Appendix F.

TransAlta will make sufficient funds available to meet the reclamation security plan. The amount of the reclamation security will be calculated based on the final Project design. The initial posting of the reclamation security will consider site-wide commitments in the year the project commences, with subsequent site-wide revisions considered annually. It is anticipated that the reclamation security estimate will be updated or re-assessed every five years to account for any changes in Project scope or market conditions.

Consistent with section 21 of the Conservation and Reclamation Regulation, TransAlta proposes to provide reclamation security in the form of a surety bond. This form of security ensures that the secured party can realize on the reclamation security and ensure the reclamation work will be completed should the project owner and operator be in default.

The reclamation security will be committed to the Government of Alberta as the obligee. The Government of Alberta will have access to the security in the event of default by the project owner and operator, with no constraints on such access.

The estimated salvage value of project components, including supporting calculations and assumptions, has been considered in the cost estimate. The total estimated salvage value is approximately \$1,434,000 CAD.

The Project site will be reclaimed to the standard required by the existing reclamation plan for Keephills. This includes site grading, revegetation, and the removal of all Project-related infrastructure.

10. NOISE

TP31) Provide a noise impact assessment in accordance with Rule 012. If mitigation measures are recommended in the assessment, confirm the mitigation measures the applicant will implement.

The NIA prepared for the Project in accordance with assessment methods presented in Rule 012 (AUC 2024) is provided in Appendix C.

For both the daytime period and the nighttime period, the Project NIA predicts that Application Case cumulative noise levels will comply with applicable Rule 012 PSL limits at all receptors in the noise study area.

TP32) Confirm that the applicant will comply with the construction noise requirements in Section 2.10 of Rule 012 or explain why it is not feasible or practical to implement them.

TransAlta is committed to mitigating construction noise on nearby dwellings and will implement the mitigations outlined in Rule 012, Section 2.10 items 1b, 1c, and 2. Most construction activities are expected to occur between 7:00 a.m. and 10:00 p.m.; however, some work will need to take place during nighttime hours. Where practical, louder tasks will be scheduled during the hours of 7:00 a.m. and 10:00 p.m., but certain activities – such as concrete pours – cannot be interrupted and may require overnight operations.

One example of anticipated after-hours work is the delivery of heavy equipment. While this may affect nearby residents, performing these deliveries during the day would create greater traffic-related impacts for stakeholders.

TransAlta has a strong history of collaboration with Parkland County and local stakeholders and will continue to build on this relationship. If any noise complaints arise during construction, TransAlta will respond promptly to investigate and address concerns.

11. APPROVALS, REPORTS AND ASSESSMENTS FROM OTHER AGENCIES

TP33) Identify any other acts (e.g., *Environmental Protection and Enhancement Act*, *Water Act*, *Public Lands Act* and *Wildlife Act*) that may apply to the project, identify approvals the project may require, and provide the status of each of these approvals.

A list of existing approvals affected by the Project is provided in Table 2-1. A list of required approvals is provided in Table 11-1.

Table 11-1: Regulatory Approvals Required for the Project

Legislation	Regulatory Authority	Required Approval
<i>Environmental Protection and Enhancement Act</i>	Alberta Environment and Protected Areas	TransAlta is considering the timing of submission of the EPEA amendment approval 10324-03-02 to reflect the Project configuration updates.
<i>Hydro and Electric Energy Act</i>	Alberta Utilities Commission	Approval under Section 11 of (HEEA) to construct and operate the Project. Interconnection approval in accordance with Section 18 of HEEA.
<i>Water Act</i>	Alberta Environment and Protected Areas	Not applicable. TransAlta will not be applying for an amendment to the licence under the <i>Water Act</i> because water use by the Project will be within existing licensed limits (Licence Amendment No. 000338383-00-03).
<i>Electric Utilities Act</i>	AESO / Alberta Utilities Commission	Needs Identification Document (NID) in accordance with Section 34; to be filed by AESO.
<i>Municipal Government Act</i>	Parkland County	TransAlta will consult with Parkland County to determine if new or amended building or development permits are required.
<i>Public Lands Act</i>	Forestry, Parks and Tourism	Not applicable. The Project is located on private lands within the Keephills boundary.
<i>Wildlife Act</i>	Alberta Environment and Protected Areas	Not Applicable. The Project is located within the Keephills boundary on a brownfield area that does not provide suitable wildlife habitat.

TP34) Confirm that a *Historical Resources Act* approval has been obtained or has been applied for. If a *Historical Resources Act* approval has been obtained, provide a copy of it. If a historic resource impact assessment is required, briefly describe any known historical or archaeological sites, palaeontological sites, or traditional use sites of a historic resource nature.

A Historic Resources application will be submitted based on the final footprint and *Historical Resources Act*, RSA 2000, c. H-9 Approval will be secured before construction of the Project commences. A Historic Resources Impact Assessment (HRIA) is not anticipated as the Project is located entirely within previously disturbed terrain. All new equipment and developments for the Project will be within the existing Keephills Plant boundary and brownfield areas with previous *Historical Resources Act* Approvals.

TP35) If the government of Alberta, through the Aboriginal Consultation Office (ACO) or otherwise, directed consultation with an Indigenous group for related approvals (e.g., *Public Lands Act, Water Act, Environmental Protection and Enhancement Act, Historical Resources Act, Government Organization Act*) the applicant must provide the pre-consultation assessment, the adequacy assessment and the specific issues and response table (if prepared).

If the government of Alberta, through the ACO or otherwise, indicated that a pre-consultation assessment is not required, the applicant must provide that direction. [Please submit along with your application].

If advice from the government of Alberta has not been obtained, the applicant must provide justification for its decision to not seek advice.

TransAlta engaged the ACO regarding the Keephills Repowering Project Based on a review of the regulatory requirements for the Project, a requirement to conduct formal Indigenous Consultation was not identified.

12. PARTICIPANT INVOLVEMENT PROGRAM

TP36) Summarize the participant involvement information, including a description of the activities undertaken and include any engagement materials provided (see Appendix A1– Participant involvement program guidelines and Appendix A1-B – Participant involvement program guidelines for Indigenous groups).

Details of the PIP are provided in Appendix A.

TP37) List all persons within the appropriate notification radius as described in Appendix A1– Participant involvement program guidelines, as well as Indigenous groups or other interested persons that were notified or consulted as part of the participant involvement program.

A list of all occupants, residents, landowners, Indigenous groups, and other interested persons is provided in Table A1 in Appendix A. A map of land ownership within the notification radius of Keephills is provided in Figure 2-4.

TP38) Supply a list of contact information for all persons listed in TP37 who had been contacted as part of the participant involvement program in an Excel spreadsheet in accordance with the template included in Appendix A1 – Participant involvement program guidelines.

A list of contact information for all persons who had been contacted as part of the participant involvement program is provided in Attachment D of Appendix A.

TP39) Summarize consultation with local municipal jurisdictions (e.g., cities, towns, municipal districts, counties). Describe any concerns or requests identified by the local municipality(ies) and steps taken to resolve those concerns or requests. Summarize consultation with local municipal jurisdictions (e.g., cities, towns, municipal districts, counties). Describe any concerns or requests identified by the local municipality(ies) and steps taken to resolve those concerns or requests.

Details of consultation with local jurisdictions are provided in Appendix A. An AUC Municipal engagement form has been completed by Parkland County and can be found in Attachment F of Appendix A.

TP40) As described in Section 6.3 of Appendix A1, confirm that the municipal engagement form was provided to the applicable municipality to complete for a minimum of 30 days, before filing the application. If the municipality completed the municipal engagement form, provide this form. If the municipality declined to complete the municipal engagement form, confirm what steps were taken to follow up with the municipality, including submitting copies of correspondence.

Details of consultation with local jurisdictions are provided in Appendix A. Individual Records of Contact (ROCs) for communication with local jurisdictions can be found in Attachment F of Appendix A.

TP41) Describe how the applicant engaged with applicable municipalities to modify the proposed power plant or to mitigate any of its potential adverse impacts to the municipality, prior to filing the application

Details of consultation with local jurisdictions are provided in Appendix A. Individual Records of Contact (ROCs) for communication with local jurisdictions can be found in Attachment F of Appendix A.

TP42) Provide a feedback summary table to identify all persons who expressed a concern(s) about the project that includes the following information:

- The name and land location of the person(s).
- The specifics of the concern(s).
- Steps taken to try and resolve the concern(s).
- Whether the concern(s) was resolved.

Details of concerns are provided in the “Feedback/Concerns received” section of Appendix A.

13. LIST OF CITATIONS

ABSA (Alberta Boilers Safety Association). 2023. Pressure Equipment Safety Regulation. Published by Alberta Queen's Printer, Edmonton, AB. Current to November 8, 2023. Available online at: <https://www.absa.ca/about-absa/absa-information/acts-regulations-and-codes/>

AEPA (Alberta Environment and Protected Areas; formerly Alberta Environment). 2005. Alberta Emission Standards for Electricity Generation and Alberta Emission Guidelines for Electricity Generation. Available at: <https://open.alberta.ca/dataset/8a05c92c-5829-455e-8048-567387b55a2c/resource/d52c3bdd-8118-455c-9f33-7e092bfd0160/download/2005-airemissionstandardsguidelineselectricity.pdf>.

AEPA (Alberta Environment and Protected Areas). 2024. Alberta Ambient Air Quality Objectives and Guidelines Summary. July 19, 2024.

AUC (Alberta Utilities Commission). 2025. Rule 007: Facility Applications. Approved by the AUC on September 25, 2025 and effective on November 6, 2025.

AUC. 2024. Rule 012: Noise Control. As amended on June 5, 2024 and effective as of September 30, 2024.

CASA (Clean Air Strategic Alliance). 2018. 2018 CASA Electricity Framework Review: Perspectives on a NOX Emission Standard for Natural Gas-Fired Turbines. Interim Report for the CASA Board from the Electricity Framework Review Project Team. December 13, 2018.

ECCC (Environment and Climate Change Canada). 2017. Guidelines for the Reduction of Nitrogen Oxide Emissions from Natural Gas-fuelled Stationary Combustion Turbines. Available at: <https://www.canada.ca/content/dam/eccc/documents/pdf/cepa/CEPA-Guidelines-CombustionTurbines-2-en.pdf>.

HEEA (Hydro and Electric Energy Act). Revised Statutes of Alberta 2000, Chapter H-16. Published by Alberta Queen's Printer, Edmonton, AB. Current to December 15, 2022.

Parkland County. 2024. Parkland County Municipal Development Plan. Bylaw 2024-22. Amended by Bylaw 2025-16.

Parkland County 2016. Highvale End Land Use Area Structure Plan. Amended by Parkland County Bylaw 2025-22.

APPENDIX A

Participant Involvement Program

APPENDIX B

Air Quality Assessment

APPENDIX C

Noise Impact Assessment

APPENDIX D

Emergency Response Plan

APPENDIX E

Environmental Protection Plan

APPENDIX F

Reclamation Security Estimate

APPENDIX G

Municipal Engagement Form