Application for Amendment to Land Use Bylaw

Foothills County **www.foothillscountyab.ca**
309 Macleod Trail, Box 5605, High River, AB T1V 1M7 • Tel: 403-652-2341 Fax: 403-652-7880
Email: planning@foothillscountyab.ca

Note: An Application Fee of $_____ shall accompany this application.

Date Received:_____ Receipt No. _____

THIS SECTION TO BE COMPLETED IN FULL BY THE APPLICANT

I, Rimrock Cattle Company Ltd.
Name of Registered Owner (please print)

hereby certify that I am the registered owner of the land described above and authorize

Garnet Dawes, P.Eng. ISL Engineering and Land Services to act as agent in the matter.
Name of Agent (please print)

PLEASE ACCEPT THIS APPLICATION REGARDING LEGAL LAND DESCRIPTION

All/part of the NE 06-19-29 W4M, and NW 05-19-29 W4M

Being all parts of lot _____ block _____ Reg. Plan No. _____ C.O.T. No. _____

TO: (Choose One)

☐ Redesignate from Agricultural (A) District to _____

☑ Amend the Land use Bylaw by adding a permitted use to the outlined registered Miscellaneous Plan of Anaerobic Digester Facility

Size of existing parcel(s) 31.03 ha (76.68 ac) Size of proposed parcel(s) 31.03 ha (76.68 ac)

The reasons for the (redesignation) (amendment) are as follows:

See land use amendment supporting document memo

I certify that the information given on this form and attachment hereto are full and complete and is to the best of my knowledge a true statement of the facts concerning this application and I am the registered owner and/or the duly authorized agent.

Date May 5, 2025 Signed _____

Landowner Information

Phone No. [redacted]

Address: [redacted]

I consent to receive documents by email: x Yes ____ No

Email Address: kendra@korovafeeders.com

Agent Information

Phone No. (403) 254-0544

Address: 4015 7 St SE, Calgary, AB T2G 2Y9

I consent to receive documents by email: x Yes ____ No

Email Address: gdawes@islengineering.com

Right of Entry

I, being the owner or person in possession of the above described land and any buildings thereon consent to an authorized person designated by Foothills County to enter upon the land for the [redacted] cessing of this application.

May 5, 2025
Date

Signat [redacted]

Is there an access or safety concern with respect to a site inspection: X Yes _____ No

If yes, please clarify:

[redacted]

***Important Note: Applications must be received with original signed signature. Photocopies, faxes and emails will not be accepted.**

DISCLAIMER: Please note that the personal information collected on this form is authorized under the Municipal Government Act and is required for the purpose of the County's Planning and Development processes. This information may also be shared with appropriate government agencies and may also be kept on file by those agencies. The application and related file contents will become available to the public and are subject to the provisions of the Freedom of Information and Protection of Privacy Act (FOIP). if you have any questions about the collection and use of this information, please contact the Municipal Planner at 403-652-2341.

This application is in two parts:

PART 1
APPLICATION FOR AMENDMENT TO LAND USE BYLAW 60/2014

The application is for the following proposed amendments to the Land Use Bylaw 60/2014:

The following new definitions are added under Section 2.5:

ANAEROBIC DIGESTER FACILITY is a facility designed to convert organic waste—such as animal manure, food and agricultural residues, or septic waste—into Renewable Natural Gas (RNA) and digestate through a controlled, oxygen-free (anaerobic) biological process.

An anaerobic digester may also include a range of ancillary facilities that support feedstock processing, biogas production, and energy generation, such as receiving docks, storage tanks or bunkers, pre-treatment systems (e.g., screening, grinding, or shredding), primary and secondary digesters with mixing, heating, and pumping infrastructure, biogas storage and cleaning systems, cogeneration units, digestate separation and storage systems, digestate ponds, composting areas, control and monitoring equipment, environmental protection measures (e.g., leachate management, odor control, and stormwater systems), exhaust stacks, emergency flare stack, as well as administration buildings, maintenance areas, and safety infrastructure like fencing and fire suppression systems.

BIOGAS is a gas produced in an anaerobic digester, mainly composed of methane and carbon dioxide, resulting from the decomposition of organic materials. Biogas can be used for heat and electricity generation, as renewable natural gas for injection into pipelines or vehicle fuel, directly in industrial processes, or for household cooking and heating.

DIGESTATE is the residual material remaining after the anaerobic digestion of organic feedstock. Digestate typically consists of both solid and liquid fractions and may be used as a soil amendment or fertilizer,

FEEDSTOCK are materials used directly in manufacturing processes and transformed into an intermediate or finished material.

RENEWABLE NATURAL GAS (RNG) is biogas that has been upgraded for use in place of fossil natural gas.

The following existing definitions under Section 2.5 shall be amended as shown with changes in red:

AGRICULTURAL PROCESSING AND DISTRIBUTION means the use of land or a building for the upgrading of a product, for distribution or for sale that was originally produced in an agricultural operation but does not include an abattoir or Cannabis production or sales, or an Anaerobic Digester Facility.

CLASS II COMPOST means an operation where only vegetative matter or manure is decomposed through a controlled bio-oxidation process, including a thermophilic phase, which results in a stable humus-like material but does not include an Anaerobic Digester Facility, on-site household composting or composing as part of agricultural general in accordance with Section10.8 or a manure storage facility.

UTILITY SERVICES, MAJOR means development for public or private utility infrastructure purposes which are likely to have a major impact on the environment or adjacent land uses by virtue of their emissions, effect, or appearance. Typical facilities would include sewage and/or water treatment plants, sewage lagoons, dams, power generating stations, cooling plants, incinerators, and, and high voltage electrical transmission towers but does not include an Anaerobic Digester Facility.

WASTE INCINERATION ENERGY RECOVERY means a waste management process that combusts waste to produce energy but does not include an Anaerobic Digester Facility.

Section 5.3.2 within *Decision on Development Permit Applications*, is deleted and replaced to read as follows in red:

~~5.3.2 Notwithstanding Section 5.3.1, if a Development Permit application for a permitted use that requires a variance to any other provision of the Bylaw, the use is considered a Discretionary use, and the application must be dealt with under all provisions for Discretionary uses under this Bylaw.~~

5.3.2 Notwithstanding Section 5.3.1, where a Development Permit application is made for a *permitted use* that does not comply with one or more other provisions of this Bylaw and therefore requires a *variance*, the application shall be considered a *Permitted Use with a variance*. In such cases, the Development Authority shall process the application in accordance with this Bylaw and may impose conditions pursuant to Section 5.4.3.

Section 9.27.24 within *Special Setback Requirements,* is amended to read as follows with the changes in red:

~~Setbacks to Municipal Utilities and Services~~ Setbacks and Provincial Legislation and Approvals

9.27.24 All development shall comply with the applicable Provincial legislation and approvals with respect to setbacks contained therein ~~with respect to setback to Municipal Utilities and Services~~ unless the setback is varied by the Approving Authority ~~with the written consent of the Deputy Minister of Environment~~ as set out in the *Matters Relating to Subdivision and Development Regulation* and *Guidelines for Setback Reviews*, each as may be replaced or amended from time to time, and notwithstanding any other provision in this Bylaw, a variance granted thereunder shall not be considered a variance under this Bylaw.

PART 2
CONCURRENT APPLICATION FOR SITE SPECIFIC AMENDMENT UNDER THE AGRICULTURAL DISTRICT

The application is for the following site specific amendments under the Agriculture District:

An application to further amend the Land Use Bylaw by authorizing a site-specific amendment to the Agricultural land use rules to allow for an *Anaerobic Digester Facility* as a Permitted Use on the subject lands, as well as to allow for the maximum height of 16m (52.49 ft.) for flare stacks on the subject lands under 12.1.7.6 C of the Agricultural District Land Use.

The subject lands include a portion of Plan 25103333, Block 1, Lot 1, NW 05-19-29-W4M and N ½ 6-19-29-W4M, consisting of an area of approximately 77+/- acres in size. A future subdivision of the 77+/- is contemplated.

Memorandum

4015 7 Street SE, Calgary AB T2G 2Y9, T: 403.254.0544 F: 403.254.9186

To:	**Foothills County**	Date:	**May 6, 2025**
Attention:	**Heather Hemingway, RPP, MCIP** **Director of Planning**		
Cc:	**Kendra Donnelly, Director,** **Rimrock Renewables Ltd.**		
Reference:	**Rimrock Renewables Anaerobic Digester Facility** **Land Use Bylaw Amendment and Development Permit Applications Package**		
From:	**Garnet Dawes P.Eng., Community Development Manager** **ISL Engineering and Land Services Ltd.**		

On behalf of Rimrock Renewables Ltd. (Rimrock Renewables), we are pleased to submit this Land Use Bylaw (LUB) Amendment and Development Permit (DP) Applications Package (the package) to Foothills County (the County) in support of the proposed Rimrock Digester Facility (the Facility).

The proposed site-specific LUB Amendment application seeks to add Anaerobic Digester Facility as a site-specific permitted use to the current agriculture use of the site which is zoned Agriculture (A) District, and other minor amendments. The DP application for the Facility, further described below, is also being provided as the County intends to run the two applications concurrently. Information provided in this package addresses both submission requirements.

The proposed Facility is located in the County, immediately adjacent to the Natural Resources Conservation Board (NRCB) regulated Rimrock Cattle Company feedlot (Feedlot), and approximately 5.5 kilometers (km) west of the Town of High River. See **Attachment G** (**Exhibit G1)** for a Facility location map. The Facility will produce 450,000 to 610,000 GJ/year of renewable natural gas (RNG) through the upgrading of biogas produced by the anaerobic digestion of feedstock comprised of: (a) livestock manure from the adjacent Feedlot (80,000 tonnes/year); and (b) organic food resources from regional sources (60,000 tonnes/year).

The RNG produced by the Facility will be transferred to an existing off-site ATCO pipeline. Digestate, a beneficial by-product of the anerobic digestion process will be separated into liquids and solids and used as either bedding material at the Feedlot or for application to lands under NRCB authorizations. Liquid and solid digestate is a less odorous, biologically stabilized, organic fertilizer alternative to raw manure which is currently being land spread in the region. Detailed information about the design and operation of the Facility is provided in this package.

The Facility will be regulated by several Provincial agencies and has undergone extensive regulatory review. The Facility has been approved under *Environmental Protection and Enhancement Act* Approval No. 484778-00-00 (the EPEA Approval), and a decision on the appeal is anticipated shortly. The EPEA Approval issued by Alberta Environment and Protected Areas (AEPA) is the primary environmental approval governing the construction, operation and reclamation of the Facility. The EPEA Approval conditions mandate compliance with environmental requirements including but not limited to air emissions, pollution abatement, odours, groundwater protection, management of feedstocks and digestate, and reclamation.

The Facility is designed as a series of integrated processes that work together to ensure efficient facility operations while minimizing potential environmental impacts such as odorous emissions, noise and contamination. It has been carefully designed to meet and exceed Municipal, Provincial and Federal standards, with an emphasis on protecting the environment, minimizing impacts to the local community, and contributing positively to the County's agricultural

and energy sectors. The EPEA Approval mandates compliance with regulatory requirements that include developing and implementing plans to manage potential odours and odour complaints, monitor and report on groundwater, prevent the attraction of pests and monitor and report on air emissions, and posting of financial security to ensure completion of reclamation.

This package addresses the specific requirements outlined in the *Anaerobic Digester Energy Production Land Use Bylaw Regulations & Applications* document dated April 7, 2025, from the County.

Supporting information included within this package includes but is not limited to:

- Land Use Bylaw Amendment and Development Permit Application Forms
- Landowner Authorization Letters
- Current Land Titles Certificates
- Provincial Regulatory Approvals
- Facility Operations Descriptions
- Site Plans, Facility Structure Descriptions, Engineering Reports and Technical Studies
- Mitigation Measures for Potential Impacts
- Lighting and Site Screening Information
- Public Safety and Emergency Response Information
- Decommissioning and Reclamation Plans
- Public consultation Information

This package represents the culmination of extensive planning, regulatory engagement, engineering design, and communication efforts with the County aimed at developing a facility that will deliver meaningful environmental, operational, and economic benefits to the County and the surrounding region. Rimrock Renewables is committed to continuing open communication with County staff, Council, and the community throughout the review process and into the future operation of the Facility.

We appreciate your careful consideration of this package and welcome the opportunity to address any questions or requests for clarification that may arise during the review.

Regards,

Garnet Dawes, P.Eng.
ISL ENGINEERING AND LAND SERVICES LTD.
Applicant on behalf of Rimrock Renewables Ltd.

APPLICATION PACKAGE

The information and section numbering in this package aligns with the document provided to Rimrock Renewables by the County on April 7, 2025 entitled: *Foothills County Anaerobic Digester Energy Production Land Use Bylaw Regulations & Applications*" (the Application Requirements). See **Attachment A**.

To avoid duplication, where information requirements are provided in another section, this is indicated in the response rather than a repeat of the information. A list of acronyms and definitions used in this package is provided as Section 21 of this package.

1. Completed Application Forms. Authorization by the landowner must be provided for representation on behalf of the landowner

Application for Amendment to Land Use Bylaw

See **Attachment B** for:

- Completed Application for Amendment to Land Use Bylaw
- Letters of Authorization signed by the Landowner

Development Permit Application

See **Attachment B** for:

- Completed Application for Development Permit
- Letters of Authorization signed by the Landowner

2. Applicable fees prescribed in accordance with the County's fee schedule bylaws

Rimrock Renewables will pay all applicable fees in full as prescribed in accordance with the County's fee schedule for the two applications.

3. Abandoned Well Site Form

See **Attachment C** for the completed Abandoned Well Site form.

4. Current Land Title Certificates

See **Attachment D** for the Land Titles Certificates for the parcels in the two applications, and **Attachment D (Exhibit D1)** for the Map showing the location of the parcels, being:

- Title No. 251 051 002; Short Legal: 2510333;1;1
- Title No. 251 051 002 +1; Short Legal: 2510333;1;2
- Title No. 241 050 283 +11; Short Legal: 4;29;19;6;NW,NE
- Title No. 241 050 283 +10; Short Legal: 4;29;19;6;SW,SE

Rimrock Renewables is currently planning the future subdivision of the Facility site and has submitted a tentative miscellaneous plan to the County for purposes of delineating the site area of the applications. The tentative miscellaneous plan is provided in **Attachment D, Exhibit D6** and shows the proposed Facility boundary. The boundary is approximately 76.7 acres and is situated within N6 19-29-W4 and NW5 19-29-W4 parcels. Further information regarding the Facility boundary and subdivision is provided in Section 7 of this package. This plan followed thorough consultations with Alberta Land Titles, during which time the requirements and documentation for the Facility were reviewed. While a subdivision application is not being made now, the submission of this plan with the package reflects Rimrock Renewables' commitment to transparency with stakeholders, long-term planning and supports a smoother regulatory and administrative process as Facility planning advances.

5. Relevant Provincial / Federal Approvals

The Facility will be regulated by several Provincial agencies and has undergone extensive regulatory review. There are no Federal approvals required for the Facility. Rimrock Renewables has obtained and/or will obtain, and is subject to, approvals from multiple regulatory agencies responsible for core aspects such as environmental protection, utilities regulation and agricultural operations. These approvals contain terms and conditions that mandate strict requirements to ensure the Facility meets operational, safety and environmental standards.

Key approvals for the Facility, including the EPEA Approval, along with relevant governing agencies, regulatory context, and status are described below in **Table 1.1**. Copies of relevant approvals are at **Attachment E**. The Facility will also be required to meet all applicable provincial and federal safety standards and codes and comply with all relevant Provincial and Federal legislation.

EPEA Approval

The EPEA Approval is the primary environmental approval governing the construction, operation and reclamation of the Facility. The EPEA application and approval process was extensive and involved detailed studies and review on behalf of Rimrock Renewables and AEPA. A summary of this process is provided below. Additional information on the EPEA Approval is provided below in **Table 1.1**.

Rimrock Renewables completed various environmental studies and field assessments in 2021 and 2022, including wildlife and wildlife habitat. This was in support of its AEPA application filed on June 10, 2022 (Original Application).

In July 2022, AEPA deemed the Original Application administratively complete and provided a Public Notice of Application to Rimrock Renewables with instructions to place it in the High River Times (both printed and online editions) and hand deliver it to residences within 2.0 km of the Facility's property line. This was completed in August 2022. Subsequently, AEPA notified Rimrock Renewables that the Director had accepted submissions from several Statement of Concern (SOC) filers. Rimrock consulted with, and responded to, all SOC filers via emails, phone calls and/or in person meetings, as reflected in detailed consultation records submitted to AEPA. See **Section 20** of this package).

In November 2022, as part of their technical review of the Original Application, AEPA sent Supplemental Information Request No. 1 (SIR #1) asking for additional information about the proposed Facility. Rimrock Renewables responded to SIR #1 in February 2023. In March 2023, AEPA sent Supplemental Information Request #2 (SIR #2) asking for additional information focused largely on odour mitigation for the Facility. Rimrock Renewables responded to SIR#2 in July 2023. The Original Application, SIR #1 response and SIR #2 response form the application for purposes of AEPA (AEPA Application).

It is important to note that feedback received from local landowners and residents of the County to both Rimrock Renewables and AEPA at the time influenced the assessment and selection of odour abatement technologies for the Facility. Their feedback was the primary driver for Rimrock Renewables to materially re-design and further optimize odour mitigation for the Facility in its SIR #2 response. These changes demonstrate Rimrock Renewables was receptive to stakeholder and public feedback and considered and incorporated such feedback into its design of the Facility.

In August 2023, AEPA provided a copy of a draft approval to Rimrock Renewables for review and comment. Rimrock Renewables provided comments in October and November 2023. AEPA required security in the amount of $3,153,353.50 to be posted prior to issuing any approval. That was done in December 2023. On December 11, 2023, the EPEA Approval was issued by the Designated Director for the construction, operation and reclamation of the *Foothills County waste management facility for the collection and processing of waste or recyclables to produce fuel, and the associated power plant*.

Table 1.1 Key Provincial Approvals

Approval / Permit	Responsible Agency	Context	Status
EPEA Approval No. 484778-00-00	AEPA	• This is the primary environmental approval governing the construction, operation and reclamation of the Facility. • Approval conditions mandate compliance with environmental requirements including but not limited to air emissions, pollution abatement, odours, groundwater protection, management of feedstocks and digestate, and financial security and reclamation.	• Approval No. 484778-00-00 was issued to Rimrock Renewables on December 11, 2023. See **Attachment E**, file 1. • An Environmental Appeals Board hearing of appeals to the EPEA Approval concluded in March 2025; a decision on the appeals is anticipated shortly.
Water Act Licence No. DAUT0010346	AEPA	• Rimrock Renewables obtained Licence No. DAUT0010346 (under Korova Feeders Ltd.) through an approved water licence transfer, under the Water Act. The transfer was reviewed by AEPA and was subject to 30-day Public Notice. The water license transfer was for an existing allocation from the Highwood River. • The licence contains limits and conditions, and a 10% holdback was applied by APEA so the net allocation is decreased from the previous license.	• Licence No. DAUT0010346 was issued to Korova Feeders Ltd. on September 26, 2022. See **Attachment E**, file 2. • The current licence accounts for approximately two-thirds of the Facility water requirements (see Section 11 of this package); Rimrock Renewables will apply for additional water licence transfer(s) to make-up the remaining water needs.
Micro-Generation Notice (AUC Rule 024: Rules Respecting Micro-Generation)	Alberta Utilities Commission (AUC)	• The two 1MW cogeneration units that will be used for Facility heat and power (see Section 8 of this package) meet technical requirements for micro-generation as stipulated under AUC Rule 024: Rules Respecting Micro-Generation. • In accordance with Rule 024, a Micro-Generation Notice was filed with the wire service provider (FortisAlberta Inc.) in February 2023, after required notifications and the 14-day public notification period required by AUC Rule 007 were completed.	• Coordination with FortisAlberta Inc. is in progress, will be completed pending final detailed Facility design.

Approval / Permit	Responsible Agency	Context	Status
Authorization for the Land Spreading of Digestate under the Agricultural Operation Practices Act (AOPA)	Natural Resources Conservation Board (NRCB)	• The NRCB regulates the storage and application of digestate on agricultural land under AOPA. Digestate produced by the Facility (see Section 8 of this package) can be treated as manure if it meets certain conditions. • To obtain an authorization for land spreading digestate the Facility is required to ensure that manure comprises at least 50% of the feedstock by wet weight annually; and the remaining feedstock consists of approved organic materials (see the following row and Section 8 of this package). • A Nutrient Management Plan (NWP) is required by the NRCB to demonstrate a land application strategy to meet nutrient requirements and provide protection to soil and groundwater. The Plan is updated periodically depending on land base and test results.	• Rimrock Renewables has been in consultation with the NRCB and will apply for authorization under AOPA for the land application of digestate resulting from the Facility prior to operational start-up.
Storage and Application of Digestate on Agricultural Land Directive	AEPA, NRCB and Alberta Agriculture and Irrigation (AGI)	• While not an approval specifically granted to the Facility, this Directive is specifically conditioned in the EPEA Approval. • The purpose of this Directive is to establish the parameters that allow digestate to be regulated as manure under the AOPA. • This Directive is specifically conditioned in the EPEA Approval and outlines the minimum manure content and the allowable feedstocks that can be used in combination with the manure. • Digestate produced in compliance with this directive can be stored in manure storage facilities regulated under AOPA and land applied as manure under AOPA and in accordance with any authorization conditions under the regulatory authority of the NRCB. • The Alberta Legislation has completed the second reading on April 17, 2025 of BILL 44 AGRICULTURAL OPERATION PRACTICES AMENDMENT ACT, 2025. It would amend AOPA to allow for, among other things, digestate to be treated the same as manure.	• This Directive is made in conjunction with the Memorandum of Understanding (MOU) among AGI, AEPA and the NRCB dated June 26, 2023, regarding the storage and application of digestate on agricultural land. • Current version of the Directive is April 20,2023. • See **Attachment E**, files 3a and 3b.
Historical Resources Act (HRA) Approval No: 4515-21-0007-002	Alberta Culture and the Status of Women (ACSW)	• The Approval requires that chance discovery of historical resources be reported to the contacts identified within Standard Requirements under the Historical Resources Act: Reporting the Discovery of Historic Resources.	• HRA Approval No: 4515-21-0007-002 was issued May 19, 2022. See **Attachment E**, file 4.

6. Information on the applicable utility operator proposed to receive the energy output

Rimrock Renewables and ATCO have entered into a producer services agreement whereby RNG produced from the Facility will be injected into ATCO's natural gas network for distribution and consumption in local markets. See **Attachment F**. ATCO's natural gas distribution system is regulated by the AUC, not the Alberta Energy Regulator (AER), as distribution networks operate at pressures below the AER threshold. The environmental attributes associated with the RNG are being purchased by FortisBC.

In accordance with AUC Rule 024, a Micro-Generation Notice was filed with the wire service provider, FortisAlberta. The Facility will consume all heat and power generated by the two onsite 1MW microgeneration cogeneration units. No excess power will be generated by the Facility for export to the grid. See **Section 5** of this package.

7. Accurate and Legible Site Plan

See **Attachment G** for the Facility Plot Plan showing existing and proposed structures and storage areas, and the site and plot plans include offsets, setbacks, project boundary, vegetation, and future subdivision access figures are referenced throughout this package:

- Exhibit G1 – Location Map
- Exhibit G2 – Facility Plot Plan
- Exhibit G3 – Site Offset Plan
- Exhibit G4 – Land Use Bylaw Amendment Area Plan
- Exhibit G5 – Future Subdivision Access Plan
- Exhibit G6 – Vegetation Plan
- Exhibit G7 – Rimrock 300m Offset Plan

The scope of the applications are described in the tentative miscellaneous plan and Land Use Bylaw Amendment Area Figure. See **Attachment G (Exhibit G4)** and **Section 4** of this package. The future subdivision parcel consolidation areas and confirmation of future access points to these parcels is demonstrated in the Future Subdivision Access Figure at **Attachment G (Exhibit G5).**

8. Statements to describe type of facility, daily operation, structure or system and the energy process involved

8 a. Description of the proposed development and how it operates:

The purpose of the Facility is to capture greenhouse gases, including odorous gases, from feedlot livestock manure and organic food resources and convert them into a usable RNG. Today, those greenhouse gases, along with the associated odorous emissions, are currently being released into the atmosphere.

The Facility will use the livestock manure from the adjacent NRCB-regulated Feedlot as the primary source of feedstock, along with organic food resources sourced from nearby communities. See below **Figure 1.1**. The feedstock will be mixed with water and sent to anaerobic digester tanks where micro-organisms will break down the organic material in the absence of oxygen, producing biogas.

The biogas will then be sent to an upgrader to be purified into RNG. The RNG will be injected into ATCO's natural gas distribution system. Digestate, a beneficial by-product of the anaerobic digestion process, will be separated into liquids and solids and used either as bedding material at the Feedlot or for application to lands as a less odorous, biologically stabilized, organic fertilizer alternative to raw manure, which is currently being land spread in the region.

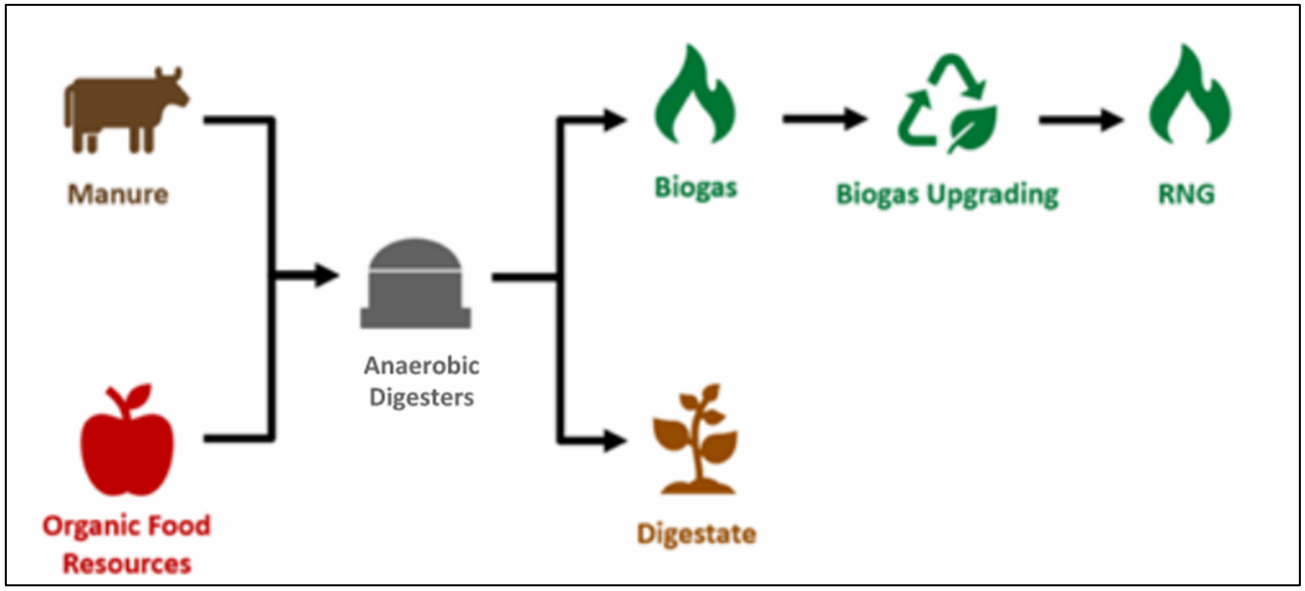

Figure 1.1 High-level Overview of Facility Process

A visual rendering of the Facility components (facing south) is provided below as Figure 1.2.

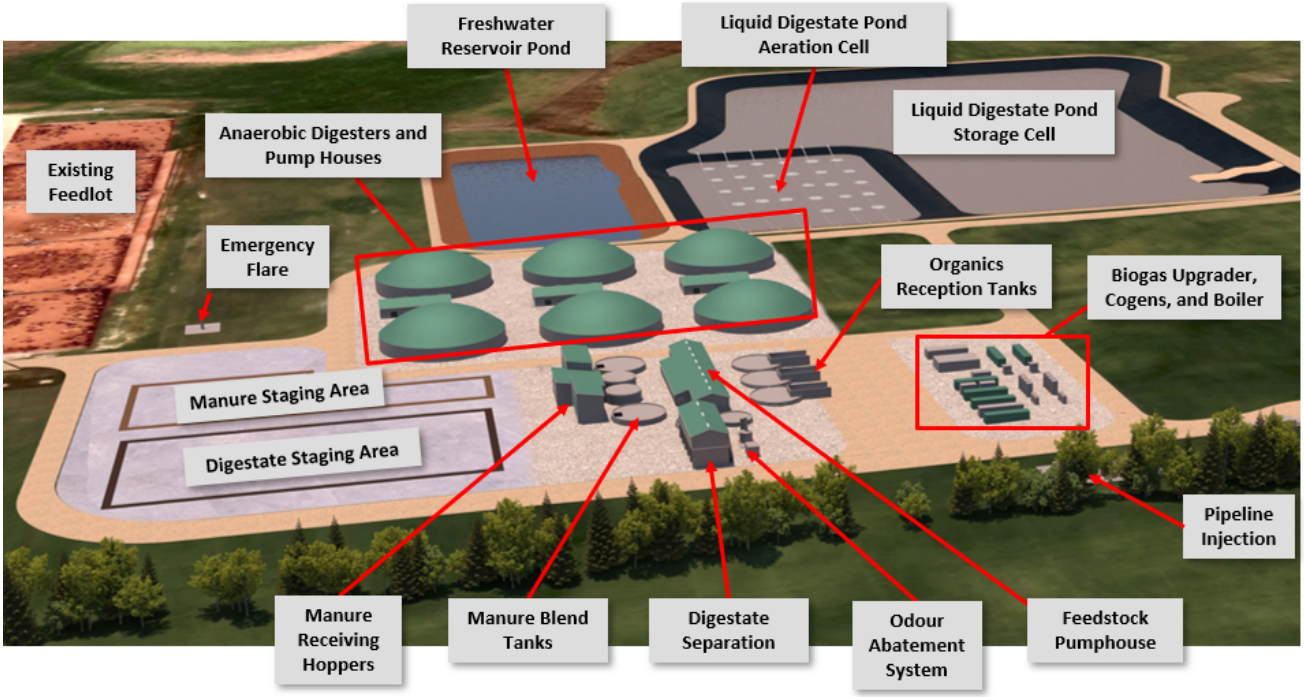

Figure 1.2 View of primary Facility components, looking south from north. Portion of the existing Feedlot shown immediately adjacent to the east.

A description of how the Facility will operate is provided in **Table 1.2**.

Table 1.2 Facility Operational Overview

Facility Component	Operational Description
Water (Freshwater Reservoir)	• Water for the Facility operations will be sourced from the Highwood River under approved water license transfers (see Section 11) and pumped from the river through an existing intake structure to the **freshwater pond** for storage and use in the **manure blend tanks**. • The freshwater pond has storage capacity for approximately 25-30 days of operation depending on the moisture content of the incoming feedstock.
Manure Feedstock Receiving and Blending	• Beef livestock manure feedstock, sourced from the adjacent **existing Feedlot**, will be transported to the Facility by truck on an internal gravel road. • Manure will be transferred from trucks into two enclosed 220 m^3 **manure receiving hoppers** and will be augured into fully enclosed **manure blend tanks** where it will be hydrated with water from the **freshwater reservoir**. • The hydrated manure with then be pumped to the six **anaerobic digester tanks**. • The combined storage of the blend and feed tanks as well as the manure receiving hoppers could provide up to 3 days of continuous operation when full. • Rimrock Renewables plans for manure trucks from the Feedlot to dump directly into the hoppers to avoid double handling. The **manure staging area** is intended to be used as contingency only and is limited in size by the EPEA Approval to 5,000 tonnes at any time.
Organic Food Resources Receiving	• Organic food resources will be pre-processed offsite (e.g., all packaging removed) and brought to the Facility in slurry form via enclosed trucks and pumped directly into fully enclosed **organic reception tanks**. The organics reception tanks provide 8-9 days of storage depending on the moisture content of the slurry. No organic resources will be stored outside of these fully enclosed tanks. • Only feedstock approved and described in the Storage and Application of Digestate on Agricultural Land Directive, Alberta Agriculture and Irrigation, 2023, as amended and listed in Rimrock Renewables' EPEA application will be received (see Section 5 of this package). It is important to note that Animal By-products in Table C of the Directive will not be accepted at the Facility since the thermal hydrolysis required to pre-treat these materials is not included in the Facility design. • The organic slurry will be pumped from the enclosed tanks to the six **anaerobic digester tanks.**
Feedstock Pumphouse	• The **feedstock pumphouse** will house mechanical and electrical equipment such as pumps and heat exchangers as well as office space and control room. This building will also be fully enclosed, and odour abated.
Odour Abatement System	• All tanks involved in feedstock receiving and digestate separation (two manure blend tanks, two digester feed tanks, three organics reception tanks, one digestate nurse tank and one liquid digestate tank) will be enclosed, under negative pressure, and tied into an Odour Abatement System (OAS) via sealed ducting. • Air from the building around the **manure receiving hoppers, feedstock pumphouse** and **digestate separation building** will also be directed to the OAS. • The OAS will consist of 2-stages that will use wet chemical and dry scrubbers to remove hydrogen sulfide (H_2S), ammonia (NH_3), reduced sulphur compounds and volatile organic compounds (VOCs).
Anaerobic Digester Tanks & Pump Houses	• The manure slurry and organic slurry will be combined in the **six anaerobic digester** tanks where it will be converted to biogas and digestate through an anaerobic digestion process. • During anaerobic digestion, micro-organisms will break down the organic material within the diluted manure and organic food resources, in the absence of oxygen, producing biogas.

Facility Component	Operational Description
	• The anaerobic digester tanks are designed with dual membranes which provide a fully enclosed airtight system (see Figure 1.3). • To protect against the effects of extreme weather, an outer membrane will be installed over top of the inner membrane. This external outer membrane is a permanently inflated textile and will be continuously inflated using electrically operated blowers. The outer external membrane is a high-tensile strength, self cleaning, UV protected, fire-proofed, and corrosion resistant membrane. • The outer membrane, including the connection of the membrane to the concrete wall, is specifically designed to its location of use to withstand effects of wind and snow loads. • The digesters also are equipped with lightning rod protection to protect the digester and membrane gas holder from lightning strikes and will comply with NFPA 780 code. • The inner membrane is designed to capture and contain biogas. The inner membrane will rise and lower depending on the biogas production and will be monitored to prevent over pressure. • The pump houses are located between the digester tanks and will house mechanical equipment such as pumps, heat exchangers, and monitoring instruments. • The digester tanks will be monitored for flow rates, pressure, temperature, liquid level, pH, and alkalinity. Biogas composition within the digester tanks will also be monitored at the biogas upgrader using continuous gas analyzers to measure H_2S, NH_3, VOCs, and other compounds. • Each digester tank will be equipped with secondary containment, leak detection, and over pressure protection.
Digestate Separation	• Digestate is treated material resulting from the anaerobic digestion process, in which manure and organic food resources are broken down by bacteria in the absence of oxygen. • Digestate is a biologically stabilized material with a substantially less odour profile compared to raw manure due to the treatment process within the digester tanks. • Digestate will be pumped from the **anaerobic digester tanks** to the **digestate separation** building where it will be separated using screw presses into liquid and solid fractions. • The liquid digestate will then be pumped to the two celled **liquid digestate pond** via the liquid digestate tank**.** • Solid digestate will fall from the screw presses into the bays below where it will be loaded using a frontend loader and either delivered to the existing feedlot to be used as bedding, land spread under NRCB authorizations, or temporarily placed in the **solid digestate staging area**. • Although digestate separation is not currently required by current AEPA regulations, Rimrock Renewables has elected to include it as the primary odour mitigation for the liquid digestate pond. • The digestate separation building includes hood vents above the screw presses connected to the OAS to capture any potential odours from the separation process.
Liquid Digestate Pond	• The liquid digestate pond will have 2 cells, an **aeration cell** (cell 1) and a **storage cell** (cell 2). • Mechanical aeration in the **aeration cell** (cell 1) will provide secondary odour control by aerobic oxidation of any residual sulfur compounds remaining after digestate separation, thereby preventing the formation and release of H_2S from the liquid digestate pond. • The **storage cell** (cell 2) will be used for seasonal storage of the fully stabilized liquid digestate after aeration occurs. The liquid digestate in the storage cell will be pumped out twice a year and land applied under NRCB authorizations. • As a tertiary odour mitigation, the liquid digestate pond will be constructed to a shallow depth to prevent anaerobic activity from occurring within the pond. • The digestate pond has been sited such that the base elevation of both cells has been set above the groundwater table. The pond will be constructed with a High-Density Polyethylene (HDPE) liner to prevent seepage. To further protect groundwater and maintain the liner's functionality, a layer of sand is

Facility Component	Operational Description
	proposed beneath the liner. This sand layer will act as a buffer zone, allowing for the passage of air and moisture and serving to protect the liner from mechanical damage and will also facilitate the identification of any leaks and aid in the repair process, and will be linked to the groundwater monitoring system. Prior to placement of the HDPE liner and sand layer the subsurface of the pond will be compacted, providing an additional later of protection. The liner will be inspected annually.
Solid Digestate Staging Area	• After separation, a portion of the solid digestate will be transferred to the **solid digestate staging area** and from there transferred back to the Feedlot to be used for bedding in the cattle pens and/or land spread under authorizations from the NRCB. • The solid digestate staging area will be lined with roller-compacted concrete (RCC) and sloped towards the stormwater collection system such that any runoff is directed to the liquid digestate pond. • The volume of solid allowed to be staged onsite is limited by the EPEA Approval to 10,000 tonnes at any one time.
Biogas Upgrading and RNG Injection	• The biogas will be sent to a **biogas upgrader** using low pressure blowers where it will be conditioned to produce RNG. • The biogas upgrader utilizes similar odorous air capture technology as the OAS in order to purify biogas including wet chemical scrubber for ammonia (NH_3) and active carbon vessels for hydrogen sulphide (H_2S) and VOCs. These compounds will be captured and will not be released to the atmosphere as is currently happening today at the Feedlot and landfills where organic food resources are being disposed of. • Moderate gas compression is required to move biogas through the membrane separation system, where CO_2 is removed and methane is concentrated to produce RNG. • The compression also provides sufficient pressure for the RNG to be transferred via **pipeline injection** and meter station into ATCO's low-pressure natural gas distribution system.
Combined Heat and Power (Cogens)	• Natural gas will be used to power two microgeneration-sized cogeneration units (**cogens**) which will provide a portion of the heat and power required for operations. • During winter months supplemental heat and power will be required which will produced by the boiler and sourced from FortisAlberta, respectively.
Emergency Flare Stack	• An **Emergency Flare** stack will operate temporarily during initial commissioning of the Facility but thereafter only intermittently when required during unanticipated Facility upset conditions. • The flare stack will be designed to applicable codes and standards used within Alberta and will meet or exceed all code requirements. These standards contain design requirements to ensure the safety of the Facility and the surrounding area, including but not limited to various minimum allowable separation distances from buildings, structures, and the property lines; 30 m clearance around the flare of all debris and combustible material; minimum allowable flare height; maximum allowable radiant heat at ground level; and an installed wind guard. • In addition, the flare stack will be operated and maintained in accordance with the vendor's specification and the EPEA Approval requirements.

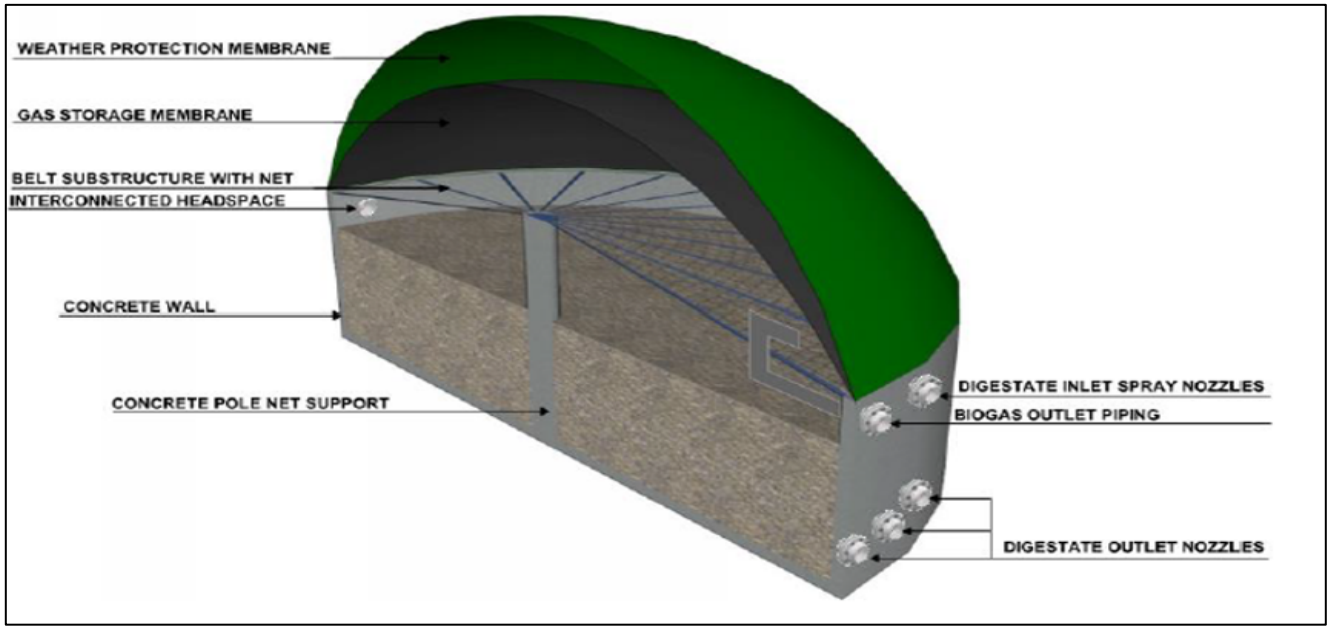

Figure 1.3 Anaerobic Digester Cross Section

8 b. Provisions for loading and parking:

Raw (un-hydrated) manure will be trucked in from the adjacent Feedlot via an existing internal gravel access road, with 15-20 truckloads per day 5-7 days per week. See below **Figure 1.4**. Manure will be delivered directly into recessed concrete manure receiving hoppers. The end-dump trucks will back up to the hoppers, at which point the overhead doors will open briefly to allow unloading. The overhead doors will remain closed at all other times, with the manure receiving hopper building maintained under negative pressure and fully odour abated.

Organic food resources will be delivered by enclosed trailers via the main Facility entrance at Meridian Road and pumped directly into enclosed organic food resource tanks through piping/hoses, 7 truckloads per day, 7 days per week. The organics will be processed offsite prior to being delivered as a slurry. The organics reception tanks and air from the building around the manure receiving hoppers will be directed to the Odour Abatement System (OAS). See above **Table 1.2**.

It is not anticipated that organics delivery vehicles or manure dump trucks will park onsite beyond the time it takes to unload feedstock. Parking for Facility staff and visitors will be provided via a small parking lot (approx. 10 stalls) north of the organics reception tanks. See below **Figure 1.4**.

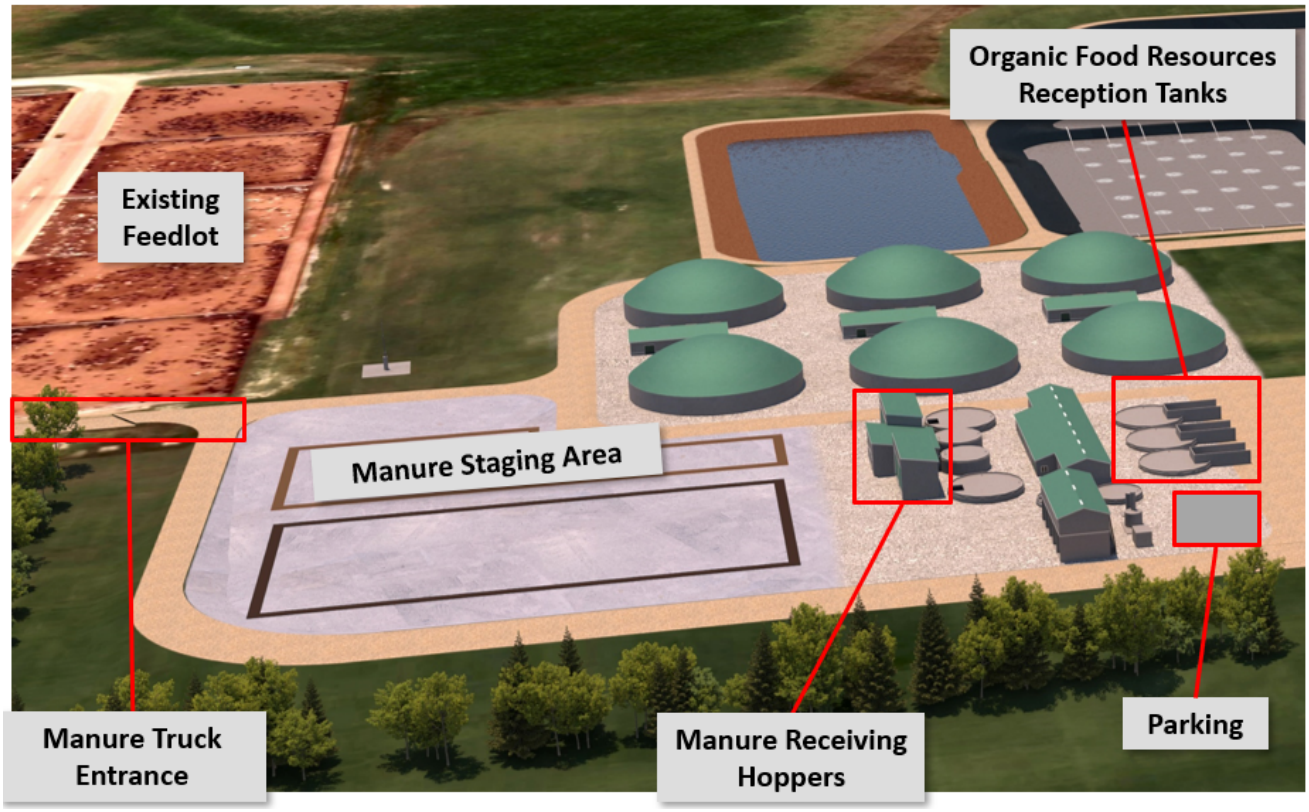

Figure 1.4 View of feedstock receiving components, looking south from north. Portion of the existing Feedlot and internal graveled access road for manure feedstock delivery shown immediately adjacent to the east. Organic deliveries will be via the main Facility entrance from Meridian Road (offscreen to the west).

8 c. Hours and days of operation:

Given anaerobic digestion is a biological process, the Facility will technically operate and be monitored remotely 24 hours a day. However, activities such as manure and organics feedstock delivery and digestate application will only occur during daytime operating hours 5-7 days per week. The Facility lighting design will comply with the County's Dark Sky Bylaw 2011-6 for use of light at night. See **Section 16** of this package.

8 d. Number of people to be employed on site:

It is anticipated that 5 operational staff will be employed onsite.

8 e. Buildings/structures or facilities used as part of the operation, including settling ponds, storage areas, and details of the purpose of the building/structure or facility for same:

Table 1.3 summarizes the primary buildings, structures, ponds and storage areas required for the Facility. Details of the purpose of these components is also provided in the preceding table and text. Refer also to the Facility Plot Plan provided in **Attachment G** (**Exhibit G2**).

Table 1.3 Primary Buildings, Structures, Ponds and Storage Areas

Plot Plan ID #	Building, Structure Pond, or Storage Area	Height Above Grade (m)	Details
See Exhibit G2	Freshwater Reservoir	n/a	• Holds freshwater to be used in the mixing process for organic food resources and manure (in enclosed tanks).
7	Manure Receiving Hoppers (2)	8.5	• Manure receiving hoppers to receive raw manure from the Feedlot, see also Table 1.1.
21	Manure Feedstock Hopper Building	6.9	• Building that contains the two manure receiving hoppers. Connected to the Odour Abatement System.
8	Manure Blend Tanks (2)	2.4	• Tanks where raw manure is combined with freshwater and blended to the proper hydration. Connected to the Odour Abatement System.
22	Manure Feed Tanks (2)	2.4	• Feed tanks accept manure slurry from manure blend tanks for feeding into the anaerobic digesters. Connected to the Odour Abatement System.
5	Manure and Solid Digestate Staging Area	n/a	• This area is described in further detail in Table 1.1.
6	Organics Reception Tanks (3)	0.0	• Fully enclosed tanks for receiving of organic food resources from enclosed trailers. Connected to the Odour Abatement System.
7, 11	Feedstock Pumphouse Building	6.4	• The feedstock pumphouse will house mechanical and electrical equipment such as pumps and heat exchangers as well as the office space and control room. This building will also be fully enclosed and connected to the Odour Abatement System.
9	Anaerobic Digester Tanks (6)	8.5[1]	• Each anaerobic digester tank will be fully enclosed and connected to the biogas upgrading system. Each tank has an active storage capacity of just under 7,700 m^3 and will be equipped with secondary containment as well as leak detection.
10	Pump Buildings (3)	7.4	• The pump houses are located between the six digester tanks and will house mechanical equipment such as pumps, heat exchangers, and monitoring instruments. The pumps and exchangers provide the circulation and heat necessary to maintain a temperature of approximately 38°C, creating optimal conditions for anaerobic digestion.
2	Digestate Nurse Tank	2.4	• Holding tanks for the digestate removed from the anaerobic digestor tanks. Connected to the Odour Abatement System.
3	Liquid Digestate Tank	2.4	• Holding tank for the liquid digestate after separation using screw presses. Connected to the Odour Abatement System.
4	Digestate Separation Building	9.9	• This building houses the screw presses that will separate liquid and solid digestate. Hood vents above screw presses connected to the Odour Abatement System.
32	Odour Abatement System	4.57	• The Odour Abatement System will capture building air and tank headspace from all structures located in the feedstock receiving and digestate separation area.
See Exhibit G2	Liquid Digestate Pond (2 cells)	n/a	• Pond used to treat liquid digestate via aeriation and to store both liquid digestate and stormwater prior to land spreading on lands annual in the spring and fall.

Plot Plan ID #	Building, Structure Pond, or Storage Area	Height Above Grade (m)	Details
			• The volume of the pond is 180,000 m^3 (at high water mark). The area of the pond will be approximately 8 ha (the top of berm high water level of both cells). It is important to note the liquid digestate pond will be emptied twice annually (spring and fall) and will only be at the high-water mark 2 months out of any given year. • Refer to Table 1.1 for additional details on the pond design and secondary containment.
28	Electrical Building	3.05	• Houses electrical components need to run the equipment.
18	Boiler House	3.7	• Houses the heat medium boiler unit.
17, 19, 20	Biogas Upgrading Modules (5) (membrane, compressor, dehumidification, chilling)	3.7	• Modules house components of the biogas treatment and upgrading system.
26	NH_3 removal skid (wet chemical scrubber)	3.5 (approx.)	• Separates and captures ammonia (NH_3) from biogas.
15	Cogeneration Units (2)	3.7	• Two 1MW microgeneration sized cogeneration units to produce heat and power for the Facility.
16, 24	VOC and hydrogen sulphide (H_2S) Removal Vessels	5.3 (approx.)	• This equipment is part of the biogas upgrading system and is used to remove hydrogen sulphide (H_2S) and volatile organic compounds (VOCs) from the biogas.
14	Emergency Flare Stack	12	• Used to depressurize the Facility in the event of an upset condition or during commissioning.

Notes:
n/a = not applicable
[1]Approximate height above grade to the top of the dome / membrane.

8 f. Details on the type and amount of waste products brought to the site to be utilized at the facility

The type and amount of product (feedstock) brought to the site and processed at the Facility by anaerobic digestion to produce RNG are described below in **Table 1.4**. The EPEA Approval restricts Rimrock Renewables from receiving any other third-party waste at the Facility. See **Attachment E**.

Table 1.4 Feedstocks to be Brought Onsite and Used at the Facility

Product (Feedstock)	Volume (tonnes/yr)	Details
Livestock manure	80,000	• Manure will be sourced from the adjacent Feedlot.
Oranic food resources	60,000	• Organic food resources will consist entirely of one or more of the feedstocks listed in the Types of Feedstock tables in the Storage and Application of Digestate on Agricultural Land Directive, Alberta Agriculture and Irrigation, 2023, as amended and listed in Rimrock Renewables' EPEA application will be received (see Section 5, Table 1.1 of this package. It is important to note that Animal By-products in Table C of the Directive will not be accepted at the Facility since the thermal hydrolysis required to pre-treat these materials is not included in the Facility design.

The EPEA Approval also requires Rimrock Renewables to compile and submit to AEPA an annual feedstock summary including feedstock provider, location, description and quantities.

8 g. Description of storage areas for products/materials on site and any proposed fencing and screening proposed for same

Open air onsite staging and temporary storage areas for products/materials will be limited to the following:

- Freshwater pond which will be used for storage of freshwater for Facility processes;
- Manure staging area which will be used as required for contingency staging of manure feedstock;
- Solid digestate staging area which will be used for the temporary storage of solid digestate prior to transfer office as cattle bedding at the Feedlot and/or for land application under NRCB authorizations;
- Solid digestate staging bays which will be located on the bottom of the Digestate Separation Building. The bays will be used to capture the solid portion of the digestate after it has been separated, so that it can be transported to the solid digestate staging area. The bays will be orientated eastward and closed in on west, north, and south sides, the east side of the bays must remain open for access to front-end loaders that will relocate the solid digestate to the solid digestate staging area.
- Liquid digestate pond which will be used for temporary storage of liquid digestate. The pond will be emptied twice annually for land application under NRCB authorizations.

These are described in further detail in **Section 8 a** (**Table 1.2**) and **Section 8 e** (**Table 1.3**) of this package. A description of screening proposed for the Facility is at **Section 10** of this package.

8 h. Amount of product produced and method of distribution of end product(s) such as spreading of waste residual, distribution of biogas, transportation of materials off site, etc.

The amount of products produced by the Facility and method of distribution of end products, such as spreading of waste residual, distribution of biogas, transportation of materials off site, etc. as requested by the County, are described below in **Table 1.5**.

Table 1.5 Products Produced and Methods of Distribution

Product Produced	Amount	Distribution
RNG	450,000 to 610,000 GJ/year	• RNG will be injected into the existing ATCO natural gas network for distribution and consumption in local markets
Solid Digestate	45,000 tonnes/year	• The solid digestate will be transferred back to the Feedlot to be used as bedding in the cattle pens and/or land spread in the spring and fall under NRCB authorizations (see Section 5). Solid digestate spreading will use the same technique and equipment as is currently being used to spread raw manure.
Liquid Digestate	300,000 m^3/year	• The Facility will produce approximately 400,000 m^3 of liquid digestate. However, a 25% reuse of liquid digestate, has been conservatively estimated which will reduce the amount of freshwater required for hydration and result in 300,000 m^3 of liquid digestate too be land applied annually in the spring and fall under NRCB authorizations (see Section 5). • Rimrock Renewables will endeavor to re-use as much liquid digestate in the process as possible while maintaining stable biochemistry within the anaerobic digesters. • Land application will use a drag line technique as is common in the dairy or hog industries. Drag lining will involve pumping of liquid digestate from the pond through lay flat hosing to individual quarter sections and injected into unfrozen soil.

Rimrock Renewables has access to sufficient land parcels to support solid and liquid digestate application for the Facility. This includes quarter sections currently owned by the Rimrock Cattle Company, as well as a wide network of neighboring land parcels. Land application of digestate will be conducted annually in the spring and fall under NRCB authorizations. Rimrock Renewables will prepare a NMP for digestate land spreading as required by NRCB authorizations. The primary purpose of such plan is to ensure proper handling of digestate at rates that do not exceed crop requirements and to ensure no impacts to surface water and groundwater. The plan also contains testing and reporting requirements.

Rimrock Renewables also notes that digestate is a benign by-product of the anaerobic digestion process. It must be produced in accordance with the Digestate MOU and the Directive in order for it to be permitted to be land spread. See **Section 8 a** of this package. Digestate contains water (liquid digestate) and dissolved nutrients (solid and liquid digestate), not hazardous chemicals or contaminants, and does not present an immediate risk to the health of wildlife or livestock.

9. Engineering Feasibility Studies

Please note that several of the supporting attachments for this section contain some drawings prepared by ISL Engineering and Land Services Ltd. that reflect an older iteration of the Facility design layout, such as the Traffic Impact Assessment. However, updates to the Facility design since the creation of this package does not affect the relevant studies or conclusions contained within.

a. Water supply:

The Facility will not require connection to any municipal water infrastructure. Process water for the Facility will be obtained via Water License transfer. See Sections 5 and 11 of this package for additional details.

b. Stormwater management:

The Stormwater Management Report is provided at **Attachment H**. This Stormwater Management Report outlines how the runoff from the Facility will be fully contained and directed to the liquid digestate pond through the stormwater conveyance system. The report concludes that all stormwater from the site is contained by the liquid digestate pond and that there are no offsite runoff impacts.

c. Site grading:

Rough grading of the Facility site was completed in 2022. Final grading will be completed as part of Facility construction. The grading of the site has been carefully planned to utilize the cut from the liquid digestate pond to raise the broader site elevation. This strategic elevation is essential as it will allow for the conveyance of all onsite stormwater towards the liquid digestate pond, thus ensuring efficient management of site runoff and minimizing potential offsite impacts. Some of the temporary stockpiles that are currently onsite will be utilized to complete final grading and backfilling. Specifically, the subsoil and clay stockpiles will either be removed or modified during this activity. The topsoil and a portion of the subsoil piles will remain onsite in their current location per Provincial requirements and will form part of the landscaping / screening further described in **Section 10 b** of this package.

An Issued for construction (IFC) civil plan for the liquid digestate pond and freshwater reservoir, as well as the as-built contours for rough grading completed in 2023, are provided as **Attachment I**. Exhibits Include:

- Exhibit I1 – 2023 Grading As-built Plans
- Exhibit I2 – Liquid Digestate Pond and Freshwater Reservoir IFC Civil Plans

d. Material storage, treatment methods, and disposal

A summary of material storage, treatment methods and disposal for the Facility is provided in the Facility overview presented in **Section 8 a** of this package. Rimrock Renewables has completed extensive engineering and design studies for the Facility, including but not limited to those provided to AEPA in support of the EPEA Application. The EPEA Approval contains detailed conditions regarding the construction and operation of the Facility, including that Rimrock Renewables construct the Facility as per the design described in the EPEA Application.

Regarding "disposal" of materials, digestate, a beneficial by-product of the anerobic digestion process, will be separated into liquids and solids and used as either bedding material at the Feedlot or for application to lands under NRCB authorizations. Digestate is a less odorous, biologically stabilized, organic fertilizer alternative to raw manure, which is currently being land spread in the region. As noted in Section 8 h of this package Rimrock Renewables has access to the full hectarage of land parcels required to support solid and liquid digestate application for the Facility. Land application of digestate will be conducted annually in the spring and fall under authorizations from the NRCB. Rimrock Renewables will prepare NMPs as required for any NRCB authorizations for digestate land spreading; these must be approved by the NRCB.

Any "waste" generated by Facility operations (e.g., general construction debris, operational waste such as filters) will be identified, characterized, classified and disposed of per relevant requirements (e.g., *Alberta User Guide for Waste Managers*).

10. Description of any proposed lot grading, landscaping, and fencing to be completed

a. Site grading

Site grading information is provided in Section 9 c of this package. An IFC civil plan and rough grading as-builts drawing showing site grading is provided as **Attachment I**.

b. Landscaping, screening and fencing

Screening will minimize the visual impact of the Facility on neighboring residences and road traffic. The Facility will be surrounded by the topsoil and subsoil berms on the north and west sides and will be kept on site for future reclamation. See **Figures 1.5 – 1.8** below. They were strategically placed at these locations to improve aesthetics, blend into the natural environment, and reduce visibility from neighboring residents. The berms will be seeded with vegetation and have trees planted along the top which will create a "shelterbelt" when the trees are mature. See **Figures 1.5 – 1.8** below.

A Landscape / Vegetation Plan is provided in **Attachment G (Exhibit G6)**. The berms and plantings will also provide barriers to minimize noise, dust, and odours. As per County Screening Standards, they have been positioned to screen the stockpile areas (manure and solid digestate staging areas), exterior work areas (process areas) and loading areas (organic food resources and manure loading). The overall landscaping plan for the Facility includes extensive grass coverage around the site, for aesthetic purposes (integrate into existing surroundings) and to supplement erosion and sediment control. Within the Facility itself, tanks will be partially underground, buildings will be cladded with colors that blend into the natural environment. Fencing of the Facility site is not proposed.

Figure 1.5 View looking north, from south of the proposed Facility. Portion of Rimrock Cattle Company Ltd. Feedlot shown immediately adjacent to the east. Screening can be seen along the north and west sides.

Figure 1.6 View looking south from Coal Trail, from north of the Facility. Range Road 10/Meridian Street running adjacent west of the facility, portion of existing feedlot on the east. Screening can be seen along the north and west sides.

Figure 1.7 View looking northeast from the liquid digestate pond. Screening can be seen along the north and west sides.

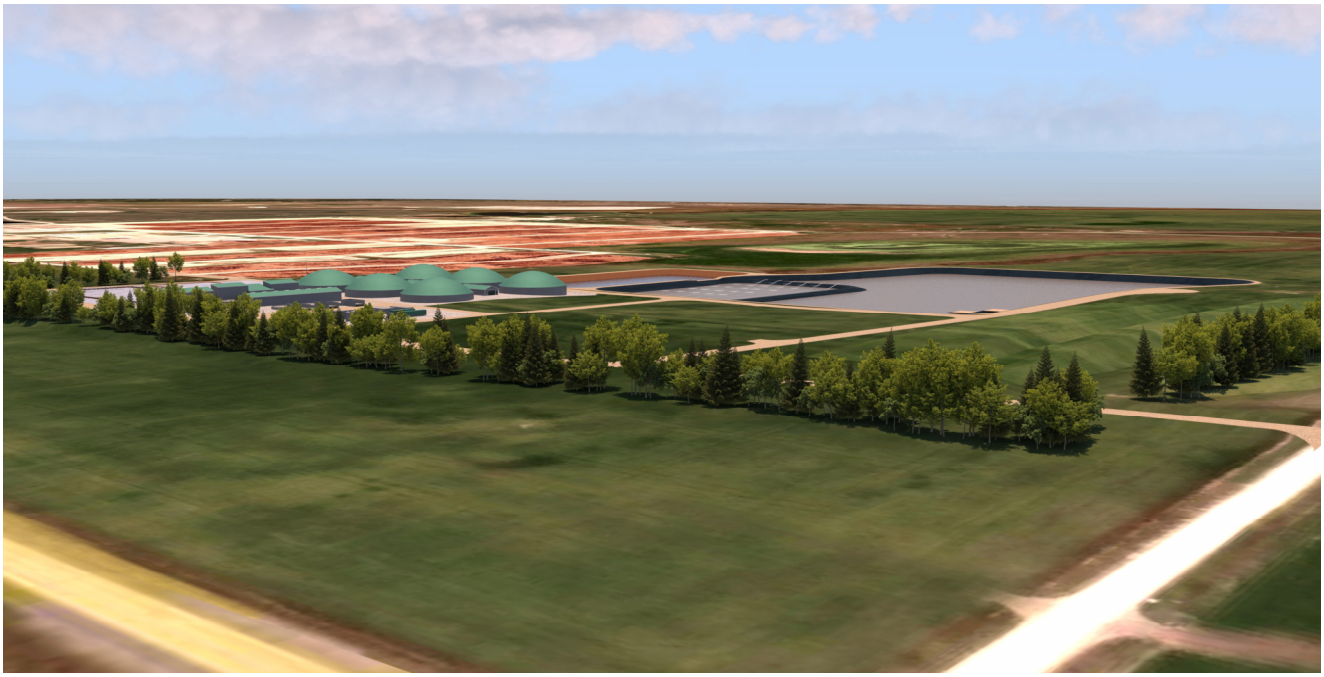

Figure 1.8 View looking southeast from the intersection of Coal Trail and Range Road 10/Meridian Street. Treed screening can be seen along the north and west sides.

11. Information on the amount of water required for this development and the proposed water source, and information on existing or proposed water licenses to be utilized.

No connections to existing County potable or grey water systems will be required for the Facility. Domestic water will be brought in by truck for use in onsite washrooms and kitchen.

The primary source of process water for the Facility will be the Highwood River under approved Water License transfers. Water will be pumped from the Highwood River through an existing water intake structure and pipe connections to the freshwater pond. A new river water intake is not required for the Facility.

Rimrock Renewables (under Korova) currently holds a Water Licence which approves the licensee to operate a works and to divert up to 160,971 m^3 of water per year from the source of water at the point of diversion at a maximum rate of 0.027 m^3 per second for the purposes of Industrial and Agricultural. See **Attachment E.** This Water License accounts for approximately two-thirds of the Facility water requirements based on 25% liquid digestate reuse. Rimrock Renewables will apply for additional water license transfer(s) to make-up the remaining water needs.

A 25% reuse of liquid digestate has been conservatively estimated which will reduce the amount of freshwater required for the Facility. See **Section 8 h** and **Table 1.5** of this package. Rimrock Renewables will endeavor to reuse as much liquid digestate in the process as possible while maintaining stable biochemistry within the anaerobic digesters. Opportunities to increase the amount of liquid digestate reuse will continue to be explored during detailed design and once operational, in order to reduce the overall water requirements of the Facility.

12. Access locations to and from the parcel(s) and identification of any impacts to local road systems.

The existing site access that has been constructed and approved by the County, and will be used, is noted on the Facility Plot Plan at **Attachment G (Exhibit G5)**. Future subdivision access for the remainder parcels after subdivision has been confirmed at **Attachment G (Exhibit G5)**.

Rimrock completed a Traffic Impact Assessment (TIA) to the County. See **Attachment J**. The TIA was scoped in conjunction with the County, and the County approved it in 2022. The key findings of the TIA include:

- The Facility will have minimal impact on the surrounding transportation network.
- No intersection upgrades are required immediately.
- The only future upgrade identified is the westbound left turn lane at Highway 543 / Range Road 10, and it is needed by 2042.

As part of the County's acceptance of the TIA, Rimrock Renewables committed to widening and paving Meridian Road to County Standards between Coal Trail and the Facility site access. This work is proposed to be completed following the construction of the Facility. See **Section 14** regarding transportation-related dust mitigation.

13. Traffic projections

The TIA has been accepted by the County as seen in **Attachment J** and **Section 12** of this package. Traffic generated by the Facility is anticipated to be modest and primarily comprised of employee vehicle and truck-mounted tank truck traffic. Based on operational assumptions provided by Rimrock Renewables, the following peak hour trip volumes were projected:

- AM Peak Hour (7:00-9:00 AM):
  - 5 inbound personal vehicle trips (employees)
  - 7 truck-mounted tank trucks making both inbound and outbound trips (14 trips total)
  - Total AM Peak Trips: 19

- PM Peak Hour (4:00-6:00 PM):
  - 5 outbound personal vehicle trips (employees)
  - 7 truck-mounted tank trucks making both inbound and outbound trips (14 trips total)
  - Total PM Peak Trips: 19

Employee traffic is distributed predominantly from the east (90%), while all truck-mounted tank truck traffic is expected to access the site via Highway 543 to/from the east. Although truck traffic is initially based on facility startup operations, Rimrock Renewables expects a future reduction in volume, particularly for solid digestate hauling, as the Facility matures.

These projections were integrated into both 2022 and 2042 background traffic conditions and formed the basis for intersection capacity analysis and warrant assessments. Further, although the TIA is based on a previous iteration of the site layout, the above trip generation numbers remain accurate as between the initial and redesigned Facility.

14. Anticipated nuisances and proposed methods of controlling or mitigating

Potential nuisances from the Facility and proposed control and mitigation measures are described below.

Noise

Noise that may be generated from the Facility will be mitigated through design and engineering controls to reduce noise emissions from operating equipment such as pumps, fans, motors, and cogeneration units. The Facility has been designed to mitigate noise and will comply with the County Community Standards Bylaw No 45/2013 and AUC Rule 012: Noise Control.

A preliminary Noise Impact Assessment (NIA) was prepared for the Facility in 2022, based on the Facility design in the Original EPEA Application. The results demonstrated compliance with AUC Rule 012: Noise Control. AUC Rule 012 is a receiver-based regulation that limits the amount of off-site noise that can be generated by energy-related facilities. AUC Rule 012 also prescribes the level of acceptable noise experienced at a receptor by defining criteria for determination of a Permissible Sound Level (PSL) at the nearest or most impacted residences. As part of ongoing detailed design, Rimrock Renewables will update the NIA as per AUC Rule 012: Noise Control.

Inspections and maintenance will be completed during operations to ensure that any noise abatement equipment is in working order. Further, the delivery of manure feedstock will be via an existing private internal graveled access between the Feedlot and the Facility and will only occur during daytime operating hours. Organic food resources deliveries via truck will also be limited to daytime operating hours. The berms surrounding the north and west side will provide a noise buffer. The Facility will also implement a no-idling policy, where practical, for vehicles onsite.

Dust

Minimal nuisance dust is anticipated during Facility operations. Manure feedstock will be delivered by trucks via an existing private internal graveled access between the adjacent Feedlot and the Facility. In the event that use of this road specifically for the Facility has the potential to produce a nuisance level of dust to nearby residents, dust control options will be implemented as needed. The use of existing paved County roads for the delivery of organic food resources feedstock is not anticipated to create nuisance dust levels. Rimrock Renewables has also committed to paving Meridian Road from Coal Trail to the Facility site access.

The manure and digestate staging areas will be routinely inspected and are anticipated to have low dust content. After the digestate is separated most of the finer digestate particulate matter that could turn to dust will remain in the liquid digestate and go to the pond. See **Section 8** of this package. Any manure staged onsite will be limited in volume and be of the same constituency as the manure being stored in Feedlot pens approx. 250 m away. In the unlikely event blowing particulate dust from the staging area is observed at the Facility, then operational staff will take measures to control dust by spraying small amounts of water. Further, Rimrock will avoid disturbing the solid digestate windrows during windy conditions.

The berms and trees surrounding the Facility (see **Attachment G, Exhibit G6** Vegetation Plan) will also reduce wind inside the facility and provide a barrier to dust moving outside the Facility. Additionally, the EPEA Approval includes conditions intended to address dust concerns. See **Attachment E**, sections 4.1.11-4.1.12.

Odour

As noted earlier, the purpose of the Facility is to capture greenhouse gases, including odorous gases, from feedlot livestock manure and organic food resources and convert them into a usable renewable energy resource called RNG. Today, those greenhouse gases, along with the associated odorous emissions, are currently being released into the atmosphere. Thus, the Facility will act as a large odour abatement system designed to capture emissions from manure at the adjacent Feedlot and convert these emissions through a closed system to RNG.

An Air Quality Assessment (AQA) completed by Rimrock Renewables in support of the Provincial EPEA approval process predicted the Facility will meet Provincial air quality requirements and that there will be a *net reduction* in regional air emissions and odours as a result of the operation of the Facility. See **Attachment L**. This reduction is due to greenhouse gases from manure at the adjacent Feedlot being captured and converted to RNG, the addition of odour abatement technology to the Facility design, and a significant reduction in the handling and amounts of raw manure that will be stored at the Feedlot.

Potential odours sources from the operation of the Facility itself will be mitigated through three primary odour abatement systems which are incorporated into the Facility design:

1. Digestate separation using screw presses that will separate the solid and liquid digestate fractions, thereby mitigating odours in both the solid and liquid digestate.

2. An Odour Abatement System (OAS), consisting of two stages that will use wet chemical and dry scrubbers to remove hydrogen sulphide (H_2S), ammonia (NH_3), reduced sulphur compounds and volatile organic compounds (VOCs). All tanks involved in feedstock receiving and digestate separation (two manure blend tanks, two digester feed tanks, three organics reception tanks, one digestate nurse tank and one liquid digestate tank) will be enclosed, under negative pressure, and tied into the OAS via sealed ducting. Air from the building around the manure receiving hoppers, the feedstock pumphouse and the digestate separation building will also be directed to the OAS.

3. Mechanical aeration in Cell 1 of the liquid digestate pond to remove H_2S from the liquid digestate through oxidation and stripping.

The EPEA Approval includes specific regulatory requirements regarding the operation and monitoring of these odour abatement systems for the Facility. See **Attachment E**, sections 3.2.5 and 4.1.

Additionally, the EPEA Approval requires Rimrock Renewables to implement, before commencing operations, and annually update, a Best Odour Management Practices Control Plan and an Odour Complaint Management and Response Program. See **Attachment E**, sections 4.1.24 and 4.1.27, respectively.

The Best Odour Management Practices Control Plan, includes but is not limited to the following:

- Procedures for the proper operation and maintenance of all air pollution abatement equipment and the associated monitoring devices to meet the design intent.
- Procedures for minimizing odour release into the atmosphere during the period of time when the Facility is starting up, shutting down or under any maintenance.
- Procedures for minimizing fugitive odour emissions, particularly intermittent sources involving agitation of material, vehicles waiting to unload or load, air displacement from loading the storage tanks, any maintenance that requires opening storage tanks, digesters and building doors.
- Corrective actions to be taken when operating parameters deviate from the established operating ranges.
- Measures to prevent anaerobic condition in the solid digestate storage pile and the liquid digestate pond.
- Management-related inspection, preventive maintenance, and recordkeeping requirements for the Facility.

The Odour Complaint Management and Response Program, includes but is not limited to the following:

- Upon receiving an odour complaint, or being informed of an odour complaint by the Director or another authority, Rimrock Renewables is required to:
  - investigate the situation; and
  - take all measures necessary to mitigate the odour, when the approval holder knows or ought to know the source of the odour being complained of results from the Facility (including but not limited the requirement to improve, repair or replace any equipment or thing in order to control or eliminate the odour; and contain, remove or treat the substance or thing causing the odour.
- Recordkeeping and retention requirements.

Rimrock Renewables is also required by the EPEA Approval to submit to AEPA a proposal for a Fugitive Emissions Monitoring Program. The purpose of the Fugitive Emissions Monitoring Program is to develop and implement a monitoring program for the “area sources” of potential odours (i.e., liquid digestate pond and manure and solid digestate storage areas) as well the digestate separation building staging bays. See **Attachment I (Exhibit I1)** sections 4.1.33 - 4.1.39. This will allow Rimrock Renewable an opportunity to take empirical measurements to validate the assumptions (mass emission rates for instance) and results of the ambient air modeling completed as part of the Air Quality Assessment (AQA) prepared for the Facility. See **Attachment L**. This Fugitive Emissions Monitoring Program and reporting will provide an assurance mechanism to ensure that there are no fugitive releases from these sources that could contribute or cause odours offsite.

The EPEA Approval conditions require Rimrock to develop and implement a Groundwater Monitoring Plan to be implemented once the Facility is commissioned. A proposed Groundwater Monitoring Plan has been submitted to AEPA for review. It is noted the current groundwater flow in the area is from the northwest to southeast (away from residences and towards the Feedlot), which significantly reduces the likelihood of impacts to nearby residents as they are north and west of the Facility site. It is further noted there are no previously identified sources of groundwater or soil contamination at the Facility site.

The 300-meter setback under Section 17(5)(d) of the current *Matters Related to Subdivision and Development Regulation* (Matters Regulation) is shown on the Site Offset Plan, **Attachment G, Exhibit G7.** It is important to note that the type of Facility in this application does not have a direct analogy in the Matters Regulation and that the primary purpose of the setbacks is to reduce the likelihood that a new waste facility will impact neighbors by increasing nuisances like odours and emissions. As noted in the AQA (see above), the Facility will *reduce* the net emissions in the region.

While Rimrock Renewables submits that the setback should not apply given that the Facility will result in a net reduction of existing emissions and odour (the primary nuisances of concern for nearby residents), the necessary information for a variance request pursuant to the Province's *Guideline for Setback Reviews [Waste Facility]* has been submitted with this application and includes:

1. Non-objection letters from two owners whose property line containing a residence is within the 300 m setback. See **Attachment K**. Note that although their property lines are within the setback, both residential sites are >800 m from the Facility working area.
    a. SE 1-19-1 West of 5 owned by Justin Flowers
    b. SW 6-19-29 West of 4, NW 5-19-29 West of 4 and NW 5-19-29 West of 4 owned by Rimrock Cattle Company

    (Note: Also provided in **Attachment K** is a non-objection letter for NE 1-19-1 West of 5 owned by Kirton (Clayton Cameron) and Rimrock Renewables is actively working to obtain a non-objection for SW 8-19-29 West of 4. These parcels however currently do not contain a residence.)

2. A copy of the AQA which notes the predicted net reduction in regional emissions and odours for the project (**Attachment L**). The AQA includes an odour assessment and wind direction and air emission/odour plume diagram.

3. Several studies indicating that in the event of an emergency, H_2S emissions will not be a risk to nearby residents. There is no risk for explosive gas impacts outside the Facility boundary and no need for evacuation, shelter-in-place or any other response from residents in the event of an emergency as all risks are contained within the Facility boundary (**Appendix M**). See also **Section 18** of this package.

As described above in this package, Rimrock Renewables will also comply with all Provincial regulations, and has developed design mitigations and management plans for odours, pests, dust, and noise. Furthermore, the robust regulatory requirements outlined in the EPEA Approval, which will be regulated and enforced by AEPA, address emissions, odours, pests, and groundwater monitoring, thereby significantly minimizing or eliminating the potential for nuisance to nearby residents.

Lot Drainage

The civil grading and stormwater design have been developed to ensure that all drainage and runoff from the Facility is fully contained and directed the liquid digestate pond through the stormwater conveyance system. See **Section 9** of this package and **Attachment H**. The Facility footprint has also been designed so that it will not affect offsite drainage.

Vegetation Management

The Facility site is currently agricultural land. Vegetation assessments completed in 2021, prior to rough grading of the site, confirmed vegetation within the Facility footprint was comprised of remnant cereal (wheat) stubble. No Prohibited Noxious weeds listed under the Provincial *Weed Control Act* were identified during the vegetation assessment; however, Canada thistle (*Cirsium arvense*), a Noxious weed, was observed sporadically within the Facility footprint and with patchy distribution within the ditch of the nearby roads (Meridian Road, Coal Trail East). The operating portions of the Facility site will be developed with a compacted and graveled surface. The presence of weeds and vegetation will be included in routine Facility inspections and vegetation and weeds will be managed within the Facility fence line as required. A Landscape / Vegetation Plan is also provided in **Attachment G (Exhibit G6).**

Vectors and Pests

Rimrock Renewables will implement measures to prevent the attraction of vectors (e.g. birds, insects and vermin) during the operation of the Facility, including a combination of facility design, operational procedures, housekeeping and, if required, pest control measures.

Facility design measures will include but may not be limited to:

- Organic food resources will be fully de-packaged offsite and transferred directly from trucks into enclosed organic food resource tanks through piping/hoses. There will be no open storage of organic food resources.
- Manure feedstock will be transferred into the manure receiving hoppers located in an enclosed building structure with overhead doors.
- All tanks involved in feedstock processing and digestate separation are fully enclosed.
- Manure and solid digestate staging areas will be entirely underlain with a Rolled Compacted Concrete (RCC) pad, with runoff fully contained and directed to Cell 1 of the liquid digestate pond through the stormwater conveyance system. This will prevent water buildup, prevent leaching, and allow for maintenance of the staging areas, including efficient material removal and loading.
- The liquid digestate pond is designed with submerged mechanical aeration in Cell 1. Aeration will increase the level of dissolved oxygen (mosquito larvae and other aquatic insects require stagnant, oxygen-deprived water to thrive), create water movement within the pond making it less suitable for insect egg-laying and larvae development, help regulate water temperature by mixing layers of water with different temperatures (insect larvae have specific temperature requirements for optimal growth), and promote breakdown of organic matter reducing the availability of nutrients that potentially support larvae development.
- The digestate pond is designed to fill from April to September and to only reach maximum depth 2 months of the year, meaning a reduction in surface area which will serve to reduce the attraction of birds or insects.
- Proper site drainage will be maintained to eliminate additional breeding grounds for insects.

Operational procedures will include but may not be limited to upfront and ongoing training and awareness of operational staff, setup and maintenance of a housekeeping inspection schedule, regular maintenance and inspection program to ensure the optimal Facility operation, implement proper waste management planning at the Facility. Pest control measures will be implemented, as required. The need for pest control measures will be determined on a case-by-case basis.

Rimrock Renewables is also required by the EPEA Approval (Approval Section 4.4.8) to implement, before commencing operations of the Facility, and annually update, a Program for Keeping Out Vectors as described in Rimrock Renewables' EPEA application. Procedures outlined in the Best Odour Management Practices Control Plan required under the EPEA Approval will also serve to prevent or reduce attraction of vectors to the Facility, through the proper containment and management of feedstock delivery and processing, as well as digestate staging and storage.

Lighting

The Facility lighting design will meet or exceed all the requirements specified by the Dark Sky Bylaw and the County Land Use Bylaw. See Section 16 of this package.

15. Descriptions of any noxious, toxic, radioactive, flammable, or explosive materials proposed; how it is being stored, storage location(s), and how much is being stored.

The Facility will have only small volumes of any hazardous materials onsite at any given time during operations. Rimrock Renewables will adhere to all regulations with respect to the management and storage of these materials and provisions for appropriate response procedures and equipment will be made in the Emergency Response Plan (see **Section 18** of this package). A description of these materials that will be used onsite is provided in **Table 1.6**.

Table 1.6 Materials Used Onsite

Materials	Description
Materials Used in Process	
Radioactive materials	None proposed
Ferric Chloride	Will be stored onsite and used as an additive to the manure slurry to control hydrogen sulphide (H_2S) levels within the digesters, if needed. It will likely be purchased in 1 m^3 plastic totes and approximately 6 totes could be stored onsite in an enclosed storage area prior to being moved into a day tank for injection into the manure slurry process. This material is corrosive.
Sulphuric acid	Will be used as part of the odour abatement system, specifically in the wet chemical scrubber to react with ammonia (NH_3) to create ammonium sulfate as a byproduct which is non-hazardous. It is expected that sulphuric acid will be purchased in 1m^3 totes and stored on-site in a fully enclosed 1.3 m^3 day tank equipped with secondary containment. It is corrosive and a strong oxidizer which can react with other compounds to create poisonous gases.
Byproducts[1]	
Hydrogen Sulphide (H_2S)	Hydrogen sulphide (H_2S) is a byproduct of the anaerobic digestion process as part of biogas production. Netting will be installed in anaerobic digester tanks to facilitate the growth of naturally occurring bacteria that consume hydrogen sulphide (H_2S). Ferric chloride will also be added to control any unexpected hydrogen sulphide (H_2S) spikes. Operational concentrations are expected not to be less than 200 ppm. See section 18 for more discussion of hydrogen sulphide (H_2S) modelling and public safety.
Ammonia (NH_3)	NH_3 is a byproduct of the anaerobic digestion process. It will be produced in anaerobic digester tanks as part of the biogas production. It is produced under low pressure conditions and removed from the biogas as part of the odor abatement system and biogas upgrading. Operational concentrations are expected to be less than 300 ppm.

Notes:
[1]H_2S and NH_3 are currently produced by the untreated manure and organics. The Facility will result in a net reduction of these substances.

Additionally, low-pressure biogas and upgraded RNG will be produced and upgraded onsite prior to injection to the grid. Both are considered flammable and potentially explosive but will be fully contained within enclosed, engineered systems designed in accordance with all applicable Canadian codes and standards for gas safety. Buildings will contain low-explosivity-limit (LEL) alarms which monitor gas in the building and will trigger an alarm that will be remotely monitored 24/7 and automatically trigger a station shutdown if required.

Hydrogen sulphide (H_2S) and ammonia (NH_3) will be present in the raw biogas stream produced by the Facility. The system will be designed as a fully enclosed gas tight system in accordance to Canadian industrial standards including but not limited to *CSA B149.6 - Code for Digester Gas, Landfill Gas, And Biogas Generation and Utilization.* Buildings will be equipped with hydrogen sulphide (H_2S) detection which trigger alarms that will be remotely monitored 24/7 and will automatically trigger a full station shutdown if required.

Comprehensive safety studies have been completed for the Facility. See **Section 18** of this package.

16. Details on outdoor lighting proposed for the site

The Facility lighting design will meet or exceed all the requirements specified by the Dark Sky Bylaw and the County Land Use Bylaw. All outdoor light fixtures are expected to be mounted on free-standing light poles with a maximum height of 9.0 m (29.5 ft) above building grade. (Land Use Bylaw 9.15.2) These will meet or exceed all the following requirements:

- Full Cut Off fixtures will be installed on all exterior lighting fixtures and be oriented to direct light below the horizon. (Dark Sky Bylaw 4.1)
- All illumination shall be extinguished when not required. (Dark Sky Bylaw 4.3)
- No illumination from a light source will be orientated such that the light emits beyond the property line. (Dark Sky Bylaw 8.7)
- Installed luminaire won't produce glare. (Dark Sky Bylaw 8.8)
- The only lamp type that will be used for external lighting at the Facility will be a Light Emitting Diode (LED).

17. Advertisements or business identification signage

Rimrock Renewables will use a sign at the Facility that meets the sizing and setbacks in the Land Use Bylaw: 4.2.1.42 Signs indicating the name of the Facility provided that they do not exceed 2.32m. (25 sq. ft.) in area, and that they are located on lands within that same Development, not within any Municipal or Provincial Road right of way, or as a means of advertisement on other lands.

Additionally, the sign will conform with General Sign Regulations and Prohibitions in the 'Private and Commercial Signs in the M.D. of Foothills Land Use Bylaws Regulations and Applications" guidance document dated April 7, 2015.

18. Public Safety and Emergency Response Planning

Rimrock Renewables has undertaken several studies to model the Facility in the highly unlikely event of a gas release or explosion. See **Attachment M**. Results of the studies indicate there will be no need for evacuation, shelter-in-place or any other response from residents in the event of an emergency as all risks are contained within the Facility boundary.

H2Safety calculated the emergency planning zone (EPZ) for the Facility. Using the maximum hydrogen sulphide (H_2S) concentrations, they calculated that the EPZ would remain within the Facility boundary. However, the regulations being used as best management practice require the EPZ to be calculated from the Facility boundary, resulting in an EPZ that extends 10 m out from the Facility boundary. As there no residences within 10 m of the Facility there is no need for shelter-in-place or evacuation in the unlikely event of an emergency. See **Attachment M (Exhibit M1)**.

ALARP Engineering conducted a Land Use Risk Assessment Study which modelled two types of failures of the Facility and found that both the release of hydrogen sulphide (H_2S) and explosion risk remained inside the Facility boundary, posing no danger to nearby residents. See **Attachment M (Exhibit M2)**.

Finally, Horizon Compliance modelled the unlikely event of all six digesters rupturing at the same time releasing all gas. To be conservative, they used hydrogen sulphide (H_2S) concentrations approximately 3-4 times higher than expected operationally (see **Section 16, Table 1.6** of this package). The modelling results were compared to the Occupational Health and Safety exposure limits and the limit considered Immediately Dangerous to Life or Health. The results predict that in the very unlikely event all six digesters failed simultaneously, the hydrogen sulphide (H_2S) concentrations outside the facility would be well below both of those safety and exposure limits. See **Attachment M (Exhibit M3)**.

Although the calculated EPZ contains no residences and there is minimal risk outside the Facility boundary, Rimrock Renewables will develop, implement, and continuously maintain an Emergency Response Plan (ERP) prior to Facility commissioning to prevent, manage, and mitigate conditions in the unlikely event of an onsite emergency.

The ERP will be continuously maintained during operations to ensure it is up-to-date. Development of the ERP will include consultation with adjacent landowners, residents, local fire and emergency services, the County and the Town of High River.

A final ERP cannot be developed until design has progressed allowing for purchasing of equipment and completion of a Hazard and Operability Study (HAZOP). A preliminary/typical table of contents for the final ERP will include the following sections:

Table of Contents

List of Tables

In addition to the ERP, the Facility will be designed with multiple safety systems to ensure safe operation and a safe and controlled shutdown in the event of a process upset, including but not limited to:

- Compliance with Canadian Codes and Standards: The Facility has been designed and will be constructed in full compliance with all applicable Canadian and Industry codes and standards, including those from Canadian Standards Association, the National Fire Protection Association, and relevant provincial regulations such as the Alberta Boilers Safety Association.

- Overpressure Protection: All pressure-containing systems are equipped with pressure relief valves and overpressure protection devices to prevent equipment failure and uncontrolled gas release as required by code.
- Process Monitoring and Detection: Continuous monitoring of key process parameters including pressure, temperature, gas composition and equipment status, allows operators to detect and respond to abnormal conditions in real-time.
- Fire and Gas Detection and Alarm Systems: Fire and Gas detectors will be installed in critical buildings to provide early warning of H_2S, lower explosivity limit (LEL), fire/smoke, and carbon monoxide. These systems will be integrated with alarms and automated shutdown protocols.
- Remote Monitoring and Control: The Facility will be equipped with a SCADA system that enables 24/7 remote monitoring and control by trained operators. This allows for immediate response to any deviations or alarms.
- Inspection and Preventive Maintenance Program: Rimrock Renewables will have a formal inspection, testing, and maintenance program which will be implemented to ensure ongoing integrity of critical equipment. This includes regular calibration of sensors, equipment function testing, system inspections and preventative maintenance in accordance with manufacturer recommendations and regulatory standards.

19. Plans outlining how the site will be decommissioned and reclaimed if the use is discontinued

As part of the EPEA Approval process, Rimrock Renewables was required to submit financial security to AEPA in the amount of $3,153,353.50 for the reclamation of the Facility. Additionally, the EPEA Approval includes conditions requiring Rimrock Renewables to annually review and revise the cost estimate for reclamation and submit the estimate to AEPA. Should AEPA deem additional security is required, Rimrock Renewables is required to provide this.

As part of the EPEA application, Rimrock Renewables submitted a conceptual reclamation plan. The plan included an assessment of baseline soils and biophysical characteristics of the site. During rough grading in 2022, the topsoil and subsoil were salvaged and will be stored onsite for future reclamation (as berms). As the site is agricultural, and no sensitive or contaminated soils were encountered, soil suitability for reclamation is expected to be good based on soil salvage potential and soil physico-chemical properties (texture, organic matter, and nutrient content). Appropriate soil conservation practices will be applied therefore equivalent land-use capability is expected to be achieved following reclamation of the site.

The EPEA Approval requires Rimrock Renewables to monitor environmental conditions (e.g., groundwater) annually and submit reports to AEPA for review and approval. The EPEA Approval also requires Rimrock Renewables to apply for an amendment at the time of decommissioning and submit a Decommissioning Plan and Land Reclamation Plan for approval by AEPA. The Decommissioning Plan must include a plan for dismantling the Facility, a comprehensive study of any contamination or affected lands, a plan to manage waste, and a strategy to remediate the site. It must also contain monitoring and testing plans. The Land Reclamation Plan must include removal of all infrastructure, restoration of drainage, soil replacement, erosion and sediment control, revegetation, and reclamation.

Once the site has been fully reclaimed, Rimrock Renewables will be required to obtain a reclamation certificate from AEPA.

20. Public consultation

Rimrock Renewables has conducted extensive consultation with area residents about the Facility in support of the EPEA, starting in July 2022. The extent of this consultation was well beyond the level of consultation that would be completed for a typical land use and/or development application - in terms of the area included, number of public stakeholders engaged, extent of the engagement, and the volume and nature of topics, concerns, and recommendations involved.

Rimrock Renewables has consulted with area residents within a 2,000 m (2 km) radius of the Facility footprint in association with the EPEA Approval process, as well as public and municipal bodies outside of this radius such as the Town of High River. See **Attachment N**. A summary of consultation with area residents is provided in **Table 1.7**, along with a summary of concerns and mitigations resulting from consultation that are directly relevant to the Land Use Bylaw Amendment and Development Permit applications in **Table 1.8**.

It is important to note that Rimrock Renewables' public consultation records make up approximately 900 pages of documentation considered by AEPA in support of the EPEA Approval. Rimrock Renewables' records of consultation reflect approximately 30 individual in-person meetings, 100 phone conversations and email exchanges, 2 public information sessions in 2023, and individual written responses to approximately 500 questions and concerns about the Facility. Rimrock Renewables is also committed to supporting the County consultation in support of these applications and to participating in County public meeting proceedings.

Table 1.7 Summary of Consultation Activities

Timeframe	Consultation Details
2022	
Summer/Fall 2022	• Rimrock Renewables hand-delivered a "Public Notice of Application" for the EPEA application to residences within 2.0 km of the Facility property line in July 2022, and posted it in the High River Times (both printed and online editions), as instructed by AEPA.
	• In July 2022, Rimrock Renewables also established a dedicated email address for stakeholder communications.
Winter 2022	• In December 2022 Rimrock Renewables launched a Facility website to provide information to the public about the proposed Facility. The website included information on the proposed Facility location, design and operations, environmental aspects, regulatory and permitting requirements, project timelines and contact information for Rimrock Renewables. The website was updated in March and August 2023 to share current information and project updates.
2023	
Winter 2023	• In January 2023 Rimrock Renewables sent a Project Update via registered mail to landowners, residents and occupants within 2.0 km of the Facility property line, as well as the County and the Town of High River. • The package also contained a copy of a public presentation to be delivered by Rimrock Renewables on January 12, 2023.

	• On January 12, 2023, Rimrock Renewables hosted a 90-minute virtual information session for residents within 2,000 m of the proposed Project, covering the following key topics:
	  • Site history and feedlot operations.
	  • Details about the proposed Facility and how it will operate.
	  • Information to address common questions raised by stakeholders (e.g., odour, air quality, traffic, noise, water).
	  • Overview of environmental studies and assessments.
	  • Operational safety and community.

Timeframe	Consultation Details
Winter 2023 cont'd.	• Project development timeline and current status. • Environmental regulatory obligations. • Public consultation and commitment to the community. • The session was formally logged into by 15 area residents. Rimrock Renewables notes that several residents likely had other individuals joining in the session with them in their homes. Therefore, Rimrock Renewables does not have access to final participation numbers, but based on questions received afterwards, the session was well attended. The session was also attended by representatives from Foothill County and the Town of High River. • Rimrock Renewables requested webinar participants to share any questions or feedback resulting from the session prior to an upcoming County Public meeting so they could be addressed in the subsequent public meeting (refer to March 2023 regarding Rimrock Renewables' responses).
	• On January 25, 2023 Rimrock Renewables delivered a detailed presentation as part of the County Public Meeting about the proposed Facility. Rimrock Renewables presented detailed project information and responded to questions asked by the County Council. The meeting, which was advertised in the Western Wheel newspaper (Okotoks) January 4, 11 and 18, 2023, was hosted by the County, the NRCB and AEPA. It was open to anyone from the public that was interested in attending. • The County provided Rimrock Renewables the following high-level registration/attendance count for the Rimrock Renewables presentation: High River – 80; Foothills County – 14; Unknown – 15; Okotoks – 3; Media – 6; and Longview – 1. • There was also an opportunity for individuals to view the public meeting on a YouTube channel, for which there was no registration required.
Spring 2023	• In March 2023, Rimrock Renewables sent a Project Update and Information Package to participants in the January 12, 2023 information session.
	• Rimrock Renewables also performed a fulsome update of the Facility website in March 2023 to include design updates as submitted to AEPA in response to supplemental information requests. • A community page was also added to the Facility website that addressed in detail specific questions and concerns that have been raised from landowners and the community.
Summer 2023	• In July 2023, Rimrock Renewables sent a detailed information package to landowners, residents within 2 km of the Facility footprint, and other stakeholders. The package included an update on the recent changes to the Facility design. • Packages also included an invitation to discuss outstanding concerns and any additional questions about the Facility.
	• Rimrock Renewables also performed an additional fulsome update of the Facility website in August 2024 to include Facility design updates as submitted to AEPA.
2024/2025	
Ongoing Consultation	• Rimrock Renewables continues to actively monitor the stakeholder email address and remains open to continued consultation with area residents and other stakeholders about the Facility.

A summary of relevant concerns and mitigations resulting from consultation that are directly relevant to the Land Use Bylaw Amendment and Development Permit applications is provided below.

Table 1.8 Summary of Relevant Concerns and Mitigations

Topic	Concern(s)	Proposed Mitigations

Odours	Potential impact of Facility operations on existing regional odours	• Rimrock Renewables notes a majority of the concerns regarding odours were directly in relation to the existing Feedlot. As described in Sections 8 and 14 of this package, the entire Facility is essentially a large odour abatement system designed to capture emissions from manure at the adjacent Feedlot and convert them through a closed system to RNG.
		• Concerns from area residents about potential odours from the Facility itself were the primary driver for Rimrock Renewables to materially re-design and further optimize odour mitigation for the Facility (see Section 8 and 14 of this package for details on odour management and abatement).
		• Air quality assessments prepared for the Facility in support of the EPEA application demonstrate the Facility will comply with the Alberta Ambient Air Quality Objectives (AAAQO), including odorous compounds hydrogen sulphide and ammonia (H_2S and NH_3), and that there will be a net reduction in regional air emissions and odours as a result of the operation of the Facility. Further, AEPA has included strict conditions in the EPEA Approval (**Attachment E**) for:
		  • Pollution Abatement Equipment (Approval Section 3.2.5),
		  • Air Operations, Limits, Monitoring and Reporting (Approval Section 4.1), and
		  • Odour Management (Approval Section 4.1).

Noise	Noise levels that will be generated by equipment and operations of the Facility, including traffic noise.	• Noise that may be generated from the Facility will be mitigated through design and engineering controls to reduce noise emissions from operating equipment such as pumps, fans, motors, and cogeneration units. • The Facility has been designed to mitigate noise and will comply with the County Community Standards Bylaw No 45/2013 and Alberta Utilities Commission (AUC) Rule 012: Noise Control. • Inspections and maintenance will be completed during operations to ensure that any noise abatement equipment is in working order. • The delivery of manure feedstock will be via an existing private internal graveled access between the Feedlot and the Facility and will only occur during daytime operating hours. Organic food resources deliveries via truck will also be limited to daytime operating hours. • The berms surrounding the north and west side will provide a noise buffer. The Facility will also implement a no-idling policy, where practical, for vehicles onsite. • See Section 14 of this package for additional details.
Lighting	Facility lighting and additional impacts to dark sky.	• Facility lighting will meet or exceed all the requirements specified by the Dark Sky Bylaw and the County Land Use Bylaw (see Section 16 of this package).
Viewshed	Facility screening and obstruction of views.	• The Facility will be screened on the north and west sides by vegetated topsoil berms and trees (see Section 9 of this package). • The tallest building onsite will be the Digestate Separation Building (9.9 m) (see Section 8 of this package).

Topic	Concern(s)	Proposed Mitigations
Dust Control	Increased dust pollution and dust control.	• Minimal nuisance dust is anticipated during Facility operations. Manure feedstock will be delivered by trucks via an existing private internal graveled access between the adjacent Feedlot and the Facility. In the event that use of this internal road specifically for the Facility has the potential to produce a nuisance level of dust to nearby residents, dust control options will be implemented as needed. The use of existing paved County roads for the delivery of organic food resources feedstock is not anticipated to create nuisance dust levels. Rimrock Renewables has also committed to paving Meridian Road from Coal Train to the Facility access. • The manure and digestate staging areas will be routinely inspected and are anticipated to have low dust content. • The berms and tress surrounding the Facility will also reduce wind inside the facility and provide a barrier to dust moving outside the fence line. • See Section 14 of this package for additional details. • Additionally, the EPEA Approval (**Attachment E**) includes conditions intended to address dust concerns (4.1.11 to 4.1.12)
Traffic	Increased local traffic as a result of Facility operations and traffic safety.	• The results of the Traffic Impact Assessment (TIA, **Attachment J**) indicate there will be minimal traffic added in the peak hours and no impacts to the intersection operations at start up. • In the long term, there will be a net decrease in annual traffic from the Facility. The volume of solid digestate that will be land spread by truck, combined with the delivery of organic food resources using enclosed truck/trailer, is less than the amount of manure currently being land spread by the CFO. Liquid digestate is proposed to be applied via pump and drag line, not by truck. Therefore, operation of the Facility will result in a net reduction in traffic on County roads.
Zoning/Land Use	The site should be re-zoned from agricultural to industrial for this Facility	• This application is being submitted to facilitate appropriate and proper land use for the Facility.
Facility Location	The size of the Facility and that it should be moved to an existing industrial area	• The Facility must be located adjacent to the primary source of feedstock, which is manure from the existing Feedlot. Moving the on-farm Facility closer to an "industrial area" would result in additional traffic on County roads for manure feedstock and solid digestate transportation which would diminish the overall environmental benefit of the Facility and likely result in increase to regional odours compared to collocating the Facility adjacent to the Feedlot. It is also noted that there are numerous other residents located within 500 m of the Aldersyde industrial corridor. • Extensive measures have been incorporated into the Facility design to mitigate potential nuisances such as noise, odour, dust, and lighting (see Section 14 of this package) and the EPEA Approval contains strict conditions for the construction and operation of the Facility, including limits on emissions. • As described in Section 13 of this package and the TIA (**Attachment J**), in the long term, there will be a net decrease in annual traffic volumes as a result of the Facility. • Rimrock has committed to developing and implementing an ERP prior to commissioning the Facility (see additional details in Section 18 of this package).

Topic	Concern(s)	Proposed Mitigations
Reclamation	Reclamation liability and costs	• Rimrock Renewables submitted a conceptual decommissioning and reclamation plan with the EPEA application. • As part of the EPEA Approval process Rimrock Renewables was required to submit financial security to AEPA in the amount of $3,153,353.50 for the reclamation of the Facility. • Additionally, the EPEA Approval (**Attachment E**, Approval Part 5) requires Rimrock Renewables to annually review and revise the cost estimate for reclamation and submit the estimate to AEPA. Should AEPA deem additional security is required, Rimrock Renewables is conditioned to provide it. • The EPEA Approval (Part 5) also requires that Rimrock Renewables shall apply for an amendment to this approval to reclaim the Facility by submitting a Decommissioning Plan and Land Reclamation Plan within six (6) months of the facility ceasing operation.

21. Acronyms and Definitions

Table 1.9 Acronyms and Definitions

Acronyms and Terms	Definitions
AAAQO	Alberta Ambient Air Quality Objectives
ACSW	Alberta Culture and the Status of Women
AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
AGI	Alberta Agriculture and Irrigation
AOPA	Agricultural Operation Practices Act
AQA	Air Quality Assessment
ATCO	ATCO Natural Gas
AUC	Alberta Utilities Commission
County	Foothills County
ERP	Emergency Response Plan
EPZ	Emergency Planning Zone
EPEA	Environmental Protection and Enhancement Act
Facility	Rimrock Digester Facility
Feedlot	Rimrock Cattle Company Confined Feeding Operation (CFO)
GJ	gigajoules
H_2S	hydrogen sulfide
HAZOP	Hazard and Operability Study
HDPE	High Density Polyethylene
IFC	Issued for Construction
LEL	Low-explosivity-limit

Acronyms and Terms	Definitions
LED	Light Emitting Diode
m	meter
m^2	meter squared
M^3	cubic meter
MW	megawatt
MWh	megawatt hour
NH_3	ammonia
NIA	Noise Impact Assessment
NRCB	Natural Resources Conservation Board
NMP	Nutrient Management Plan
OAS	Odour abatement system
Rimrock Renewables	Rimrock Renewables Ltd.
RNG	Renewable natural gas
RCC	Roller-compacted concrete
SOC	Statement of Concern
TIA	Traffic Impact Assessment
VOC	volatile organic compounds

Alberta Environment and Protected Areas

APPROVAL

PROVINCE OF ALBERTA

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended.

APPROVAL NO.: 484778-00-00

APPLICATION NO.: 001-484778

EFFECTIVE DATE: December 11, 2023

EXPIRY DATE: December 10, 2033

APPROVAL HOLDER: Rimrock Renewables Ltd.

ACTIVITY: **Construction, operation and reclamation of the**

Foothills County waste management facility for the collection and processing of waste or recyclables to produce fuel and the associated power plant

is subject to the attached terms and conditions.

Designated Director under the Act: Craig.Knaus Digitally signed by Craig Knaus Date: 2023.12.11 15:14:15 -07'00'

Craig Knaus, B.Sc.

Date Signed: December 11, 2023

TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 1: DEFINITIONS

SECTION 1.1: DEFINITIONS

1.1.1 All definitions from the Act and the regulations apply except where expressly defined in this approval.

1.1.2 In all PARTS of this approval:

(a) "Act" means the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c.E-12, as amended;

(b) "air effluent stream" means any substance in a gaseous medium released by or from a facility;

(c) "anaerobic digester tank" means a reaction vessel that converts soluble organic compounds into biogas, as described in the application;

(d) "AOPA" means the *Agricultural Operation Practices Act*, R.S.A. 2000, c.A-7, as amended;

(e) "APEGA" means the Association of Professional Engineers and Geoscientists of Alberta;

(f) "application" means the written submissions from the approval holder to the Director in respect of application number 001-484778 and any subsequent applications where amendments are issued for this approval;

(g) "arable land" means the land that has the same meaning as that used in section 24(1) of the *Agricultural Operation Practices Act Standards and Administration Regulation,* Alta. Reg. 267/2001, as amended;

(h) "biogas" means gaseous fuel produced from the anaerobic digestion of feedstock;

(i) "biogas upgrading system" means the system used to purify biogas into renewable natural gas that can be injected into a natural gas distribution system and includes chemical scrubber, activated carbon filter and membrane containers;

(j) "cogeneration unit" means a 1095 KW natural gas fired reciprocating engine generator set, as described in the application;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(k) "combined total thermal energy" means thermal energy is recovered from the reciprocating engine exhaust, cooling water and lubricating oil, and subsequently used at the facility;

(l) "composite sample" means a sample prepared from not less than 15 sub-samples that are representative of the entire volume of solid digestate being tested;

(m) "container" means any portable device in which a substance is kept, including but not limited to drums, barrels and pails which have a capacity greater than 18 litres;

(n) "confined feeding operation" means confined feeding operation as defined in AOPA;

(o) "day", when referring to sampling, means any sampling period of 24 consecutive hours;

(p) "decommissioning" means the dismantling and decontamination of a facility undertaken subsequent to the termination or abandonment of any activity or any part of any activity regulated under the Act;

(q) "decontamination" means the treatment or removal of substances from the facility and affected lands;

(r) "Detailed Design Drawings and Specifications" means the detailed design drawings and specifications, signed and stamped by a professional registered with APEGA, that are issued for construction or tendering;

(s) "digestate" means liquid or solid material formed during the production of biogas in an anaerobic digester tank at the facility and includes solid digestate and liquid digestate;

(t) "Directive" means the Storage and Application of Digestate on Agricultural Land Directive, Alberta Agriculture and Irrigation, 2023, as amended;

(u) "Director" means an employee of the Government of Alberta designated as a Director under the Act;

(v) "dismantling" means the removal of buildings, structures, process and pollution abatement equipment, vessels, storage facilities, material handling facilities, railways, roadways, pipelines and any other installations that are being or have been used or held for or in connection with the facility;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(w) "domestic wastewater" means wastewater that is the composite of liquid and water-carried wastes associated with the use of water for drinking, cooking, cleaning, washing, hygiene, sanitation or other domestic purposes, together with any infiltration and inflow wastewater, that is released into a wastewater collection system;

(x) "emergency flare" means the flare used for combustion of the biogas that can not be released into the biogas upgrading system or a natural gas distribution system;

(y) "excavation zone" means the volume containing a tank and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the tank is placed at the time of installation;

(z) "facility" means all buildings, structures, process and pollution abatement equipment, vessels, storage facilities, material handling facilities, roadways, railways, pipelines and other installations, and includes the land, located on the Northwest Quarter of Section 5, Township 19, Range 29, West of the 4th Meridian and the Northeast Quarter of Section 6, Township 19, Range 29, West of the 4th Meridian, that is being or has been used or held for or in connection with the Foothills County waste management facility and the associated power plant;

(aa) "facility developed area" means the areas of the facility used for the storage, treatment, processing, transport, or handling of raw material, intermediate product, by-product, finished product, process chemicals, or waste material;

(bb) "feedstock" means manure and any substance listed in the Directive that are used to produce biogas in the anaerobic digester tanks at the facility;

(cc) "fugitive emissions" means emissions of substances to the atmosphere other than ozone depleting substances, originating from a facility source other than a flue, vent, or stack but does not include sources which may occur due to breaks or ruptures in process equipment;

(dd) "ISO/IEC 17025" means the international standard, developed and published by International Organization for Standardization (ISO), specifying management and technical requirements for laboratories;

(ee) "incompatible waste" means waste materials which could cause dangerous reactions from direct contact with one another;

(ff) "industrial runoff" means precipitation that falls on or traverses the facility developed area;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(gg) "industrial runoff control system" means the parts of the facility that collect, store or treat industrial runoff from the facility;

(hh) "industrial wastewater" means the composite of liquid wastes and water-carried wastes, any portion of which results from any industrial process carried on at the facility;

(ii) "industrial wastewater control system" means the parts of the facility that collect, store or treat industrial wastewater;

(jj) "liner" means a continuous layer constructed of natural or man-made materials, which restricts the downward or lateral migration of the contents of the structure or facility;

(kk) "liquid digestate pond" means a pond used to store liquid digestate and industrial runoff at the facility;

(ll) "local environmental authority" means the Department of Environment and Protected Areas, in the Province of Alberta, or the agency that has the equivalent responsibilities for any jurisdiction outside the Province;

(mm) "manual stack survey" means a survey conducted in accordance with the *Alberta Stack Sampling Code*, Alberta Environment, 1995, as amended;

(nn) "manure" means manure as defined in AOPA;

(oo) "manure storage facility" means a manure storage facility as defined in AOPA;

(pp) "membrane container" means the equipment used for removal of carbon dioxide contained in the biogas, as described in the application;

(qq) "month" means calendar month;

(rr) "MWh_{net}" means MegaWatt-hour that includes both the combined total thermal energy and the net generation of electricity, excluding any electricity used by the cogeneration units;

(ss) "NRCB" means the Natural Resources Conservation Board in the Province of Alberta;

(tt) "odour abatement system" means air pollution abatement equipment used to treat the air effluent streams and includes chemical scrubber and carbon filter that are operated in series for removal of ammonia, total reduced sulphur and volatile organic compounds contained in the air effluent streams, as described in the application;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(uu) "process and building air system" means the system used to collect building air and the air effluent streams from the processes and subsequently direct them to the odour abatement system for treatment, as described in the application;

(vv) "QA/QC" means quality assurance and quality control;

(ww) "record drawing/document" means a document prepared by a professional member of APEGA to record design changes for which they accept professional responsibility and which represents the final design of the project that was either approved or authorized according to the terms and conditions of this approval;

(xx) "regulations" means the regulations enacted pursuant to the Act, as amended;

(yy) "release detection" means determining whether a release has occurred from a tank into the environment or a leak has occurred into the interstitial space between the tank and secondary containment around it;

(zz) "representative grab" means a sample consisting of equal volume portions of water collected from at least four sites between 0.20-0.30 metres below the water surface within a pond;

(aaa) "routine parameters" means Ca, Mg, Na, K, Cl, SO_4, NO_3 + NO_2 – Nitrogen, hardness, alkalinity (HCO_3, CO_3), pH, conductance (electrical conductivity), total dissolved solids (calculated), SAR (calculated), and cation/anion balance;

(bbb) "run-on" means precipitation that may drain as surface flow onto the facility developed area;

(ccc) "soil" means mineral or organic earthen materials that can, have, or are being altered by weathering, biological processes, or human activity;

(ddd) "storm event" means a 1 in 100 year precipitation event occurring over 24 hours in High River, Alberta;

(eee) "tank" means a stationary device, designed to contain an accumulation of a substance, which is constructed primarily of non-earthen materials that provide structural support including wood, concrete, steel and plastic;

(fff) "topsoil" means the uppermost layer of soil and consists of:

(i) the A-horizons and all organic horizons as defined in *The Canadian System of Soil Classification* (Third Edition), Agriculture and Agri-Food Canada, Publication 1646, 1998, as amended, and

(ii) the soil ordinarily moved during tillage;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(ggg) "total reduced sulphur" means a gaseous mixture consisting of hydrogen sulphide, methyl mercaptan, dimethyl sulphide, dimethyl disulphide, carbon disulphide and carbonyl sulphide;

(hhh) "upper subsoil" means the layer of soil directly below the topsoil layer that consists of the B-horizons as defined in *The Canadian System of Soil Classification,* (Third Edition), Agriculture and Agri-Food Canada, Publication 1646, 1998, as amended;

(iii) "volume estimate" means a technical evaluation based on the sources contributing to the release including but not limited to pump capabilities, water meters and batch release volumes;

(jjj) "waste storage areas" means the areas designated for storage of waste, as described in the application;

(kkk) "water table" means the upper level of groundwater, below which the pore spaces in the soil or rock are saturated with water;

(lll) "week" means any consecutive 7-day period; and

(mmm) "year" means calendar year, unless otherwise specified.

PART 2: GENERAL

SECTION 2.1: REPORTING

2.1.1 The approval holder shall immediately report to the Director by telephone any contravention of the terms and conditions of this approval at 1-780-422-4505.

2.1.2 The approval holder shall submit a written report to the Director within seven (7) days of the reporting pursuant to 2.1.1.

2.1.3 The approval holder shall immediately notify the Director in writing if any of the following events occurs:

(a) the approval holder is served with a petition into bankruptcy;

(b) the approval holder files an assignment in bankruptcy or Notice of Intent to make a proposal;

(c) a receiver or receiver-manager is appointed;

(d) an application for protection from creditors is filed for the benefit of the approval holder under any creditor protection legislation; or

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(e) any of the assets which are the subject matter of this approval are seized for any reason.

2.1.4 If the approval holder monitors for any substances or parameters which are the subject of operational limits as set out in this approval more frequently than is required and uses procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval.

2.1.5 The approval holder shall submit all annual reports required by this approval to be compiled or submitted to the Director on or before March 31 of the year following the year in which the information was collected, unless otherwise specified in this approval.

SECTION 2.2: RECORD KEEPING

2.2.1 The approval holder shall:

(a) record; and

(b) retain

all the following information in respect of any sampling conducted or analyses performed in accordance with this approval for a minimum of ten (10) years, unless otherwise authorized in writing by the Director:

(i) the place, date and time of sampling,

(ii) the dates the analyses were performed,

(iii) the analytical techniques, methods or procedures used in the analyses,

(iv) the names of the persons who collected and analysed each sample, and

(v) the results of the analyses.

SECTION 2.3: ANALYTICAL REQUIREMENTS

2.3.1 With respect to any sample required to be taken pursuant to this approval, the approval holder shall ensure that:

(a) collection;

(b) preservation;

(c) storage;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(d) handling; and

(e) analysis

shall be conducted in accordance with the following, unless otherwise authorized in writing by the Director:

(i) for air:

(A) the *Alberta Stack Sampling Code*, Alberta Environment, 1995, as amended,

(B) the *Methods Manual for Chemical Analysis of Atmospheric Pollutants*, Alberta Environment, 1993, as amended, and

(C) the *Air Monitoring Directive,* Alberta Environment and Parks, 2016, as amended;

(ii) for industrial wastewater, industrial runoff, groundwater and domestic wastewater:

(A) the *Standard Methods for the Examination of Water and Wastewater*, published jointly by the American Public Health Association, American Water Works Association, and the Water Environment Federation, 2023, as amended;

(iii) for soil:

(A) the *Soil Monitoring Directive,* Alberta Environment, 2009, as amended, and

(B) the *Soil Quality Criteria Relative to Disturbance and Reclamation*, Alberta Agriculture, 1987, as amended;

(iv) for waste and digestate:

(A) the *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, USEPA, SW-846, 1986, as amended,

(B) the *Methods Manual for Chemical Analysis of Water and Wastes*, Alberta Environmental Centre, Vegreville, Alberta, 1996, AECV96-M1, as amended,

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(C) *ASTM D5623, Standard Test Method for Sulfur Compounds in Light Petroleum Liquids by Gas Chromatography and Sulfur Selective Detection*, ASTM International, West Conshohocken, PA, 2019, as amended, or

(D) the *Standard Methods for the Examination of Water and Wastewater*, American Public Health Association, American Water Works Association, and the Water Environment Federation, 2023, as amended.

2.3.2 The approval holder shall analyse all samples that are required to be obtained by this approval in a laboratory accredited pursuant to ISO/IEC 17025, as amended, for the specific parameter(s) to be analysed, unless otherwise authorized in writing by the Director.

2.3.3 The term sample used in 2.3.2 does not include samples directed to continuous monitoring equipment, unless specifically required in writing by the Director.

2.3.4 The approval holder shall comply with the terms and conditions of any written authorization issued by the Director under 2.3.2.

SECTION 2.4: OTHER

2.4.1 The terms and conditions of this approval are severable. If any term or condition of this approval or the application of any term or condition is held invalid, the application of such term or condition to other circumstances and the remainder of this approval shall not be affected thereby.

2.4.2 All tanks shall conform to the *Guidelines for Secondary Containment for Above Ground Storage Tanks,* Alberta Environmental Protection, 1997, as amended, unless otherwise authorized in writing by the Director.

2.4.3 All above ground storage tanks containing liquid hydrocarbons or organic compounds shall conform to the *Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks*, Canadian Council of Ministers of the Environment, PN 1180, 1995, as amended.

PART 3: CONSTRUCTION

SECTION 3.1: GENERAL

3.1.1 If construction of the Foothills County waste management facility as described in application number 001-484778 has not commenced by December 31, 2024, the approval holder shall apply for an amendment to this approval, unless otherwise authorized in writing by the Director.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

3.1.2 The approval holder shall notify the Director in writing at least 14 days before commencing operations of the facility, unless otherwise authorized in writing by the Director.

3.1.3 The approval holder shall construct the Foothills County waste management facility as described in the application and shall include, at a minimum, all of the following:

(a) the two (2) feedstock receiving hoppers;

(b) the two (2) manure blend tanks;

(c) the two (2) digester feed tanks;

(d) the three (3) organics reception tanks;

(e) the digestate nurse tank;

(f) the liquid digestate tank;

(g) the six (6) anaerobic digester tanks;

(h) the feedstock receiving hopper building;

(i) the feedstock pumphouse building;

(j) the digestate separation building;

(k) the biogas upgrading system;

(l) the two (2) cogeneration units; and

(m) the process heater.

3.1.4 The approval holder shall construct, at a minimum, all of the following for each of tanks referred to in 3.1.3(b) to (g):

(a) automatic shutoff devices for overfill protection;

(b) a secondary containment for leak detection; and

(c) a ground water monitoring well within the excavation zone for release detection.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

3.1.5 The approval holder shall construct the secondary containment required by 3.1.4 according to the application and shall include, at a minimum, all of the following:

(a) a geomembrane barrier to surround the below-ground portions of an underground tank; and

(b) a leak detection and removal system.

SECTION 3.2: AIR

3.2.1 The approval holder shall construct the following stacks according to the corresponding height requirements referred to in the TABLE 3.2-A.

TABLE 3.2-A: STACK HEIGHTS

STACK	MINIMUM HEIGHT ABOVE GRADE (metres)
The odour abatement system exhaust stack	6.0
The emergency flare stack	12.0
Each of the two (2) cogeneration unit exhaust stacks as identified in the application by the designations Cogen 1 and Cogen 2	10.0
The process heater exhaust stack as identified in the application by the designation H-701	6.1

3.2.2 The approval holder shall equip the following stacks with sampling facilities:

(a) the odour abatement system exhaust stack;

(b) each of the two (2) cogeneration unit exhaust stacks as identified in the application by the designations Cogen 1 and Cogen 2; and

(c) the process heater exhaust stack as identified in the application by the designation H-701.

3.2.3 The approval holder shall:

(a) install;

(b) operate; and

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(c) maintain

the sampling facilities required by 3.2.2 in accordance with, at a minimum, all of the following:

(i) the *Alberta Stack Sampling Code,* Alberta Environment, 1995, as amended, and

(ii) the *Air Monitoring Directive,* Alberta Environment and Parks, 2016, as amended.

3.2.4 The approval holder shall install, at a minimum, all of the following on the emergency flare stack:

(a) wind guard;

(b) pilot light; and

(c) electric igniter

unless an equivalent system is authorized in writing by the Director.

POLLUTION ABATEMENT EQUIPMENT

3.2.5 The approval holder shall construct, at a minimum, all of the following pollution abatement equipment:

(a) the odour abatement system;

(b) the nitrogen oxides abatement equipment;

(c) the aeration system in the liquid digestate pond; and

(d) the emergency flare.

3.2.6 The approval holder shall construct the process and building air system as described in the application to direct the air effluent streams from all of the following sources to the odour abatement system:

(a) the feedstock receiving hopper building including the two (2) feedstock receiving hoppers;

(b) the tanks referred to in 3.1.3(b) to (f); and

(c) the digestate screw presses.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

SECTION 3.3: LIQUID DIGESTATE, INDUSTRIAL RUNOFF AND INDUSTRAIL WASTEWATER

3.3.1 The approval holder shall construct:

(a) the industrial runoff control system; and

(b) the industrial wastewater control system

as described in the application.

3.3.2 At least three (3) months prior to the commencement of construction of the liquid digestate pond, the approval holder shall submit to the Director the following documents for the liquid digestate pond construction, signed and stamped by a professional registered with APEGA:

(a) Detailed Design Drawings and Specifications prepared in accordance with the application;

(b) a Construction Quality Assurance Plan; and

(c) a Construction Quality Control Plan.

3.3.3 If any Detailed Design Drawings and Specifications are found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.

3.3.4 The approval holder shall implement the Detailed Design Drawings and Specifications as authorized in writing by the Director.

3.3.5 The Detailed Design Drawings and Specifications required by 3.3.2 shall include, at a minimum, all of the following:

(a) a geomembrane liner that shall have:

(i) a thickness of not less than 50 mil, and

(ii) a hydraulic conductivity of not more than $1x10^{-9}$ metres per second;

(b) separation between the seasonally high water table and the bottom of the liner;

(c) a liner uplift analysis that considers effects of an underdrain or a dewatering system in the event that separation referred to in (b) is less than one (1) metre;

(d) a system capable of preventing accumulation of gases under the entire liner;

(e) a prepared clay sub-grade suitable to protect the integrity of liner system; and

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(f) any other information as required in writing by the Director.

3.3.6 The approval holder shall submit to the Director a summary report of the Construction Quality Assurance and Construction Quality Control results, signed and stamped by a professional registered with APEGA, at least one (1) month prior to commencement of the liquid digestate pond operation.

3.3.7 The summary report required by 3.3.6 shall contain, at a minimum, all of the following:

(a) confirmation that the liquid digestate pond has been constructed according to:

(i) the Construction Quality Assurance Plan,

(ii) the Construction Quality Control Plan, and

(iii) the Detailed Design Drawings and Specifications;

(b) a description of any deviations that resulted in a minor adjustment to the Detailed Design Drawings and Specifications to suit field conditions encountered;

(c) confirmation by the professional registered with APEGA that deviations will result in an equivalent design performance of the liquid digestate pond;

(d) record drawing/document; and

(e) any other information as required in writing by the Director.

SECTION 3.4: SOLID DIGESTATE AND MANURE

3.4.1 The approval holder shall construct:

(a) the solid digestate staging area; and

(b) the manure staging area

as described in the application and shall include, at a minimum, all of the following:

(i) a liner that shall:

(A) be constructed of clay material or alternative material,

(B) have a thickness of at least 0.3 metres measured perpendicular to the liner surface, and

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(C) have a hydraulic conductivity of not more than 1 $x10^{-9}$ metres per second;

(ii) an industrial runoff control system with the capability of collecting and controlling the volume of industrial runoff expected from a storm event, and

(iii) a run-on control system with the capability of preventing the volume of run-on expected from a storm event.

SECTION 3.5: DOMESTIC WASTEWATER

3.5.1 The approval holder shall construct the domestic wastewater system according to the application and shall include, at a minimum, all of the following:

(a) a domestic wastewater holding tank; and

(b) a domestic wastewater collection and removal system.

SECTION 3.6: LAND CONSERVATION

3.6.1 The approval holder shall:

(a) salvage; and

(b) conserve

all topsoil for land reclamation.

3.6.2 The approval holder shall:

(a) salvage; and

(b) conserve

all upper subsoil for land reclamation.

3.6.3 The approval holder shall:

(a) conserve; and

(b) stockpile

all topsoil separately from the upper subsoil.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

3.6.4 The approval holder shall locate all:

(a) topsoil stockpiles; and

(b) upper subsoil stockpiles

at the facility.

3.6.5 The approval holder shall stockpile all topsoil as follows:

(a) on stable foundations; and

(b) on undisturbed topsoil.

3.6.6 The approval holder shall stockpile all upper subsoil as follows:

(a) on stable foundations; and

(b) on areas where the topsoil has been removed.

3.6.7 The approval holder shall take all steps necessary to prevent erosion, including but not limited to, all of the following:

(a) revegetating the stockpiles; and

(b) any other steps authorized in writing by the Director.

3.6.8 The approval holder shall immediately suspend conservation of:

(a) topsoil; and

(b) upper subsoil

when wet or frozen conditions will result in mixing, loss or degradation of topsoil or upper subsoil.

3.6.9 The approval holder shall recommence conservation of:

(a) topsoil; and

(b) upper subsoil

only when wet or frozen field conditions in 3.6.8 no longer exist.

TERMS AND CONDITIONS ATTACHED TO APPROVAL

PART 4: OPERATIONS, LIMITS, MONITORING AND REPORTING

SECTION 4.1: AIR

OPERATIONS

4.1.1 The approval holder shall not release any air effluent streams to the atmosphere except as authorized by this approval.

4.1.2 The approval holder shall only release air effluent streams to the atmosphere from the following sources:

(a) the odour abatement system exhaust stack;

(b) the two (2) membrane container vents;

(c) each of the two (2) cogeneration unit exhaust stacks as identified in the application by the designations Cogen 1 and Cogen 2;

(d) the emergency flare stack;

(e) the process heater exhaust stack as identified in the application by the designation H-701;

(f) any emergency pressure relief valves;

(g) the space ventilation exhaust stacks as described in the application;

(h) the space heater exhaust vents as described in the application; and

(i) any other source authorized in writing by the Director.

4.1.3 The approval holder shall direct air effluent streams from all of the following sources to the odour abatement system:

(a) the feedstock receiving hopper building including the two (2) feedstock receiving hoppers;

(b) the three (3) organics reception tanks;

(c) the two (2) manure blending tanks;

(d) the two (2) digester feed tanks;

(e) the digestate nurse tank;

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(f) the liquid digestate tank;

(g) all hood vents and air ducts above the digestate screw presses; and

(h) any other source authorized in writing by the Director.

4.1.4 In addition to the limits specified in 4.1.13, the approval holder shall not operate the process equipment unless and until the pollution abatement equipment associated with the process equipment is operating.

4.1.5 The approval holder shall only release biogas from each of the six (6) anaerobic digester tanks to:

(a) the biogas upgrading system;

(b) the emergency flare;

(c) the emergency pressure relief valves; and

(d) the two (2) cogeneration units

as described in the application.

4.1.6 The approval holder shall prevent excessive biogas from being built up in each of the six (6) anaerobic digester tanks.

4.1.7 The approval holder shall maintain the following stacks according to the minimum height requirements specified in TABLE 4.1-A.

TABLE 4.1-A: STACK HEIGHTS

STACK	MINIMUM HEIGHT ABOVE GRADE (metres)
The odour abatement system exhaust stack	6.0
The emergency flare stack	12.0
Each of the two (2) cogeneration unit exhaust stacks as identified in the application by the designations Cogen 1 and Cogen 2	10.0
The process heater exhaust stack as identified in the application by the designation H-701	6.1

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4.1.8 The approval holder shall continuously operate the emergency flare stack with the following minimum systems:

(a) wind guard;

(b) pilot light; and

(c) electric igniter

unless an equivalent system is authorized in writing by the Director.

4.1.9 The approval holder shall ensure the combustion of all combustible gases released to the emergency flare stack.

4.1.10 The approval holder shall operate:

(a) the odour abatement system;

(b) the nitrogen oxides abatement equipment;

(c) the aeration system in the liquid digestate pond; and

(d) the emergency flare

in accordance with their respective manufacturers' operation and maintenance manuals.

4.1.11 The approval holder shall control fugitive emissions and any source not specified in 4.1.2 in accordance with 4.1.12 of this approval, unless otherwise authorized in writing by the Director.

4.1.12 With respect to fugitive emissions and any source not specified in 4.1.2, the approval holder shall not release a substance or cause to be released a substance that causes or may cause any of the following:

(a) impairment, degradation or alteration of the quality of natural resources;

(b) material discomfort, harm or adverse effect to the well being or health of a person; or

(c) harm to property or to vegetative or animal life.

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AIR LIMITS

4.1.13 Releases of the following substances to the atmosphere shall not exceed the limits specified in TABLE 4.1-B.

TABLE 4.1-B: LIMITS

FACILITY UNIT	EMISSION SOURCE	SUBSTANCE	LIMIT
Power plant	Each of the two (2) cogeneration unit exhaust stacks as identified in the application by the designations Cogen 1 and Cogen 2	Nitrogen oxides	0.20 kg/MWh_{net} on an annual average and 0.45 kg/hour
Feedstock and digestate processing units	The odour abatement system exhaust stack	Hydrogen sulphide	0.0008 kg/hour
		Ammonia	0.040 kg/hour
Process heater	The process heater exhaust stack as identified in the application by the designation H-701	Nitrogen oxides	16.0 g/GJ

MONITORING AND REPORTING

4.1.14 The approval holder shall monitor the air emission sources as specified in TABLE 4.1-C.

4.1.15 The approval holder shall report to the Director the results of the air emission source monitoring as required in TABLE 4.1-C.

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TABLE 4.1-C: SOURCE MONITORING AND REPORTING

Emission Source	Monitoring			Reporting Frequency
	Parameter	Frequency	Method	
Each of the two (2) cogeneration unit exhaust stacks as identified in the application by the designations Cogen 1 and Cogen 2	Nitrogen oxides	Annually	Manual stack survey	End of the month following the month in which the manual stack survey was done
	Stack effluent flowrate			
	Temperature			
The process heater exhaust stack as identified in the application by the designation H-701	Nitrogen oxides	Once every five (5) years		
	Stack effluent flowrate			
	Temperature			
The odour abatement system exhaust stack	Total reduced sulphur	Twice per year, at least six (6) months apart		
	Ammonia			
	Volatile organic compounds			
	Stack effluent flowrate			
	Temperature			

4.1.16 The information required by:

(a) 4.1.14;

(b) 4.1.15; and

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(c) 4.1.22

shall, at a minimum, comply with:

(i) the *Alberta Stack Sampling Code*, Alberta Environment, 1995, as amended, and

(ii) the *Air Monitoring Directive*, Alberta Environment and Parks, 2016, as amended.

4.1.17 The approval holder shall notify the Director in writing a minimum of two (2) weeks prior to any manual stack survey that is required to be conducted by this approval.

4.1.18 The approval holder shall daily:

(a) monitor; and

(b) record

dissolved oxygen concentrations in each of two (2) cells of the liquid digestate pond.

4.1.19 The approval holder shall:

(a) continuously monitor pH of the scrubbing solution of the odour abatement system; and

(b) record the time, date and pH when pH is outside of the designed operating range provided by the manufacturer.

4.1.20 The approval holder shall retain the records required by 4.1.18 and 4.1.19 for a minimum of five (5) years.

4.1.21 The approval holder shall make the records required by 4.1.18 and 4.1.19 available immediately upon request by the Director.

4.1.22 The approval holder shall submit to the Director an Annual Air Emissions Summary and Evaluation Report.

4.1.23 The approval holder shall include in the Annual Air Emissions Summary and Evaluation Report, at a minimum, all of the following:

(a) information as specified in the following sections of the *Air Monitoring Directive Chapter 9: Reporting*, Alberta Environment and Parks, 2016, as amended:

(i) section 6.2,

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(ii) sections 6.4.3 and 6.4.4,

(iii) sections 6.4.7 to 6.4.10, and

(iv) section 6.6;

(b) a month-by-month summary of information required by:

(i) 4.1.18,

(ii) 4.1.19, and

(iii) 4.1.31; and

(c) any other information as required in writing by the Director.

ODOUR MANAGEMENT

4.1.24 The approval holder shall:

(a) implement, before commencing operations of the facility; and

(b) annually update

the Best Odour Management Practices Control Plan as described in the application.

4.1.25 The approval holder shall submit to the Director an up-to-date Best Odour Management Practices Control Plan, when requested in writing by the Director.

4.1.26 If the Best Odour Management Practices Control Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified by the Director by the date specified in writing by the Director.

4.1.27 The approval holder shall:

(a) implement, before commencing operations of the facility; and

(b) annually update

the Odour Complaint Management and Response Program as described in the application.

4.1.28 The approval holder shall submit to the Director an up-to-date Odour Complaint Management and Response Program, when requested in writing by the Director.

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4.1.29 If the Odour Complaint Management and Response Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified by the Director by the date specified in writing by the Director.

4.1.30 Upon:

(a) receiving an odour complaint; or

(b) being informed of an odour complaint by the Director or another authority,

the approval holder shall immediately:

(i) investigate the situation, and

(ii) take all measures necessary to mitigate the odour, when the approval holder knows or ought to know the source of the odour being complained of results from the facility, including but not limited to:

(A) improve, repair or replace any equipment or thing in order to control or eliminate the odour; and

(B) contain, remove or treat the substance or thing causing the odour.

4.1.31 The approval holder shall:

(a) record; and

(b) retain

all of the following information regarding odour complaints referred to in 4.1.30 for a minimum of five (5) years:

(i) the organization that received the complaint,

(ii) the contact information of the complainant, if provided to the approval holder,

(iii) the date and time of the complaint,

(iv) the approximate location where the odour was detected,

(v) the date and time that the complainant detected the odour,

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(vi) the hourly average wind speed and wind direction at or near the facility over a period of 24 hours prior to the complaint,

(vii) the hourly average ambient outdoor temperature at or near the facility over a period of 24 hours prior to the complaint,

(viii) the investigation outcomes pursuant to 4.1.30,

(ix) for where the source of odour being complained of results from the facility:

(A) a detailed description of the measures taken pursuant to 4.1.30,

(B) a detailed description of how the source of the odour may have given rise to the complaints,

(C) a follow-up review of actions taken to determine the effectiveness of eliminating the source of the odour from that occurrence, and

(D) measures that will be taken in the future to prevent the same situation that caused that odour from re-occurring; and

(x) any other information as required in writing by the Director.

4.1.32 The approval holder shall make the records required by 4.1.31 available immediately upon request by the Director.

4.1.33 The approval holder shall submit a proposal for Fugitive Emissions Monitoring Program to the Director within the first 12 months of the operation.

4.1.34 The approval holder shall develop the proposal for Fugitive Emissions Monitoring Program, at a minimum, comparable with the following:

(a) the *Measurement of Gaseous Emission Rates from Land Surfaces Using an Emission Isolation Flux Chamber – User's Guide*, EPA 600/8-86/008, 1986; and

(b) the *Quantification of Area Fugitive Emissions at Oil Sands Mines*, Version 2.2, Government of Alberta, 2023, as amended.

4.1.35 In the proposal for Fugitive Emissions Monitoring Program, the approval holder shall include, at a minimum, all of the following:

(a) a detailed description of the fugitive emission sources at the facility, including but not limited to:

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(i) the liquid digestate pond,

(ii) the digestate separation building staging bays,

(iii) the solid digestate staging area, and

(iv) the manure staging area;

(b) an identification of factors that may affect the actual emission rates of:

(i) total reduced sulphur,

(ii) ammonia, and

(iii) volatile organic compounds

from the fugitive emission sources referred to in (a);

(c) a sampling strategy to determine:

(i) the sampling numbers,

(ii) the sampling locations, and

(iii) the sampling duration and frequency

so that the spatial and temporal variability of the air emissions from the fugitive emission sources at the facility is adequately addressed;

(d) the methods to be used for quantification of the mass emission rates of:

(i) total reduced sulphur,

(ii) ammonia, and

(iii) volatile organic compounds

from the fugitive emission sources referred to in (a), including but not limited to:

(A) the procedures for the sampling and analysis of air emissions,

(B) the design and specifications of the sampling apparatus,

(C) the quality control plans for the sampling and analysis of air emissions, and

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(D) the surface area measurement and calculation methods; and

(e) any other information as required in writing by the Director.

4.1.36 If the proposal for Fugitive Emissions Monitoring Program is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.

4.1.37 The approval holder shall implement the Fugitive Emissions Monitoring Program as authorized in writing by the Director.

4.1.38 The approval holder shall submit to the Director any written Fugitive Emissions Monitoring Program Report obtained from the fugitive emissions monitoring referred to in 4.1.37 by the end of the month following the month in which the fugitive emissions monitoring was done, unless otherwise authorized in writing by the Director.

4.1.39 If any Fugitive Emissions Monitoring Program Report is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.

SECTION 4.2: INDUSTRIAL WASTEWATER AND INDUSTRIAL RUNOFF

OPERATIONS

4.2.1 The approval holder shall not release any substances from the facility to the surrounding watershed except as authorized by this approval.

4.2.2 The approval holder shall manage:

(a) industrial wastewater; and

(b) industrial runoff

as described in the application, unless otherwise authorized in writing by the Director.

4.2.3 The approval holder shall only release industrial wastewater as follows:

(a) to the facility to be used within the process;

(b) to facilities holding a current Act authorization;

(c) to an Alberta Energy Regulator approved facility; or

(d) as otherwise authorized in writing by the Director.

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4.2.4 The approval holder shall only release industrial runoff as follows:

(a) to the facility to be used within the process;

(b) to facilities holding a current Act authorization;

(c) to the liquid digestate pond; or

(d) as otherwise authorized in writing by the Director.

SECTION 4.3: WASTE MANAGEMENT

OPERATIONS

4.3.1 The wastes referred to in SECTION 4.3 of this approval do not refer to:

(a) feedstock; and

(b) the digestate released in accordance with 4.4.7 (a) and (b).

4.3.2 The approval holder shall release waste generated at the facility only:

(a) to facilities holding a current Act authorization;

(b) to an Alberta Energy Regulator approved facility;

(c) to facilities approved by a local environmental authority outside of Alberta; or

(d) as otherwise authorized in writing by the Director.

4.3.3 The approval holder shall not:

(a) receive; or

(b) store

any third party waste at the facility.

4.3.4 The approval holder shall:

(a) treat; and

(b) store

waste generated at the facility in accordance with this approval.

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4.3.5 The approval holder shall store hazardous waste or hazardous recyclables stored in containers or tanks in accordance with the *Hazardous Waste Storage Guidelines*, 1988, Alberta Environment, as amended.

4.3.6 The approval holder shall not:

(a) transfer;

(b) treat; or

(c) store

waste or recyclables in an amount or in a manner that will cause or may cause an adverse effect on human health or the environment.

4.3.7 The approval holder shall not:

(a) treat; or

(b) store

waste or recyclables at the facility in an amount or in a manner that causes or may cause:

(i) fire,

(ii) explosion,

(iii) violent reaction,

(iv) emission of toxic dust, mist, fumes or gases, or

(v) emission of flammable fumes or gases.

4.3.8 The approval holder shall store waste generated at the facility only in the waste storage areas.

4.3.9 The approval holder shall:

(a) provide and maintain an adequate aisle space between containers in the waste storage areas to allow:

(i) inspection, and

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(ii) unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of the waste storage areas; and

(b) arrange inspection aisles in the waste storage areas such that the identification label on each container is readable.

4.3.10 The approval holder shall prevent direct contact of incompatible waste with one another.

MONITORING AND REPORTING

4.3.11 Prior to the consignment or storage of any waste generated at the facility, the approval holder shall:

(a) identify;

(b) characterize; and

(c) classify

the waste but not including industrial runoff and air effluent streams in accordance with:

(i) the *Industrial Waste Identification and Management Options*, Alberta Environment, 1996, as amended, and

(ii) the *Alberta User Guide for Waste Managers*, Alberta Environment, 1996, as amended.

4.3.12 The approval holder shall measure or, when not practical to measure, estimate the quantity of waste generated at the facility each year.

4.3.13 The approval holder shall compile all the information required by 4.3.11 and 4.3.12 in an Annual Waste Management Summary Report as indicated in TABLE 4.3-A.

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TABLE 4.3-A: ANNUAL WASTE MANAGEMENT SUMMARY REPORT

Waste Name	Uniform Waste Code				Quantity (kg or L)		Stored	Recycled		Disposed	
	WC	PIN	Class	Mgmt	Hazardous	Non-hazardous	On-site	On-site	Off-site	On-site	Off-site
				TOTAL							

4.3.14 The approval holder shall submit the Annual Waste Management Summary Report to the Director.

SECTION 4.4: FEEDSTOCK AND DIGESTATE MANAGEMENT

OPERATIONS

4.4.1 The approval holder shall only process feedstock as described in the Directive.

4.4.2 In the event the percentage of manure by wet weight of the feedstock falls below 50%, the approval holder shall apply for an amendment to this approval on or before March 31 of the year following the year in which the percentage of manure by wet weight used as feedstock fell below 50%.

4.4.3 The approval holder shall manage digestate as described in the application.

4.4.4 At any one time the approval holder shall not store more than:

(a) ten thousand (10,000) tonnes of solid digestate in the solid digestate staging area; and

(b) five thousand (5,000) tonnes of manure in the manure staging area.

4.4.5 The approval holder shall only release the following to the liquid digestate pond:

(a) liquid digestate;

(b) industrial runoff; and

(c) any accidental release of manure or digestate.

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4.4.6 The approval holder shall operate the liquid digestate pond at or below a maximum level of 0.6 metres below the top of the pond liner, unless otherwise authorized in writing by the Director.

4.4.7 The approval holder shall only release digestate as follows:

(a) by application to arable land in accordance with the Directive;

(b) to the following that is the subject of the appropriate Approval, Registration or Authorization under AOPA:

(i) a confined feeding operation, or

(ii) a manure storage facility;

(c) to facilities holding a current Act authorization;

(d) to the facility to be used within the process; or

(e) as otherwise authorized in writing by the Director.

4.4.8 The approval holder shall:

(a) implement, before commencing operations of the facility; and

(b) annually update

the Program for Keeping Out Vectors as described in the application.

4.4.9 The approval holder shall submit to the Director an up-to-date Program for Keeping Out Vectors, when requested in writing by the Director.

4.4.10 If the Program for Keeping Out Vectors is found deficient by the Director, the approval holder shall correct all deficiencies identified by the Director by the date specified in writing by the Director.

MONITORING AND REPORTING

4.4.11 The approval holder shall monitor digestate as required in TABLE 4.4-A, unless otherwise authorized in writing by the Director.

4.4.12 The approval holder shall report to the Director the results of the digestate monitoring as required in TABLE 4.4-A, unless otherwise authorized in writing by the Director.

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TABLE 4.4-A: DIGESTATE MONITORING AND REPORTING

MONITORING				REPORTING FREQUENCY
Parameters	**Frequency**	**Sampling Method**	**Sampling Location**	
Total Kjeldahl Nitrogen (without reduction of nitrate) Ammonium-nitrogen (KCl extract) Nitrate-nitrogen (KCl extract) Total phosphorus (strong acid digest) Routine parameters Total metals (strong acid digest) Solid content Reduced sulphur compounds Any other parameters as required in writing by the Director	Twice per year, at least six (6) months apart	(a) one (1) composite sample for solid digestate; and (b) one (1) representative grab for liquid digestate.	(a) solid digestate staging area; and (b) liquid digestate pond.	Annually

4.4.13 The approval holder shall record all the information as indicated in:

(a) TABLE 4.4-B; and

(b) TABLE 4.4-C.

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TABLE 4.4-B: ANNUAL DIGESTATE RELEASE SUMMARY

Owner of the Facility or Land	Facility Type Referred to in 4.4.7	AOPA or EPEA Authorization Referred to in 4.4.7*	Legal Land Description of the Land Referred to in 4.4.7	Type of Digestate (Liquid or Solid Digestate)	Digestate Quantity (kg)

* If grandfathered under AOPA without a municipal permit, just state: "grandfathered"

TABLE 4.4-C: ANNUAL FEEDSTOCK SUMMARY

Feedstock Provider	Legal Land Description	Feedstock Description	Feedstock Quantity (kg)

4.4.14 The approval holder shall submit an annual Feedstock and Digestate Management Report on or before March 31 of the year following the year in which the information was collected to:

(a) the Director; and

(b) the NRCB

unless otherwise authorized in writing by the Director.

4.4.15 The annual Feedstock and Digestate Management Report shall include, at a minimum, all of the following:

(a) the information required in:

(i) 4.4.11,

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(ii) 4.4.12, and

(iii) 4.4.13; and

(b) any other information as required in writing by the Director.

SECTION 4.5: GROUNDWATER

4.5.1 The approval holder shall develop a proposal for a Groundwater Monitoring Program for the facility which shall include, at a minimum, all of the following:

(a) a hydrogeologic description and interpretation of the facility;

(b) a map and description of surface water drainage patterns for the facility;

(c) a lithologic description and maps, including cross-sections, of the surficial and the upper bedrock geologic materials at the facility;

(d) a site map showing the location and type of current and historical potential sources of groundwater contamination;

(e) cross-sections showing depth to water table, patterns of groundwater movement and hydraulic gradients at the facility;

(f) the hydraulic conductivity of all surficial and bedrock materials at the facility;

(g) a map showing the location of existing and additional proposed groundwater monitoring wells at the facility;

(h) a lithologic description of all boreholes drilled at the facility;

(i) construction and completion details of existing groundwater monitoring wells;

(j) a rationale for proposed groundwater monitoring well locations and proposed completion depths of those wells;

(k) a description of groundwater monitoring well development protocols;

(l) a list of parameters to be monitored and the monitoring frequency for each groundwater monitoring well or group of groundwater monitoring wells at the facility;

(m) a description of the groundwater sampling and analytical QA/QC procedures;

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(n) details of a groundwater response plan specifying actions to be taken should contaminants be identified through the Groundwater Monitoring Program; and

(o) any other information relevant to groundwater quality at the facility.

4.5.2 The approval holder shall submit the proposal for the Groundwater Monitoring Program to the Director on or before December 31, 2024.

4.5.3 If the Groundwater Monitoring Program proposal is found deficient by the Director, the approval holder shall correct all deficiencies as identified in writing by the Director within the timeline specified in writing by the Director.

4.5.4 The approval holder shall implement the Groundwater Monitoring Program as authorized in writing by the Director.

4.5.5 The approval holder shall:

(a) protect from damage; and

(b) keep locked except when being sampled

all groundwater monitoring wells, unless otherwise authorized in writing by the Director.

4.5.6 If a representative groundwater sample cannot be collected because the groundwater monitoring well is damaged or is no longer capable of producing a representative groundwater sample, the approval holder shall:

(a) clean, repair or replace the groundwater monitoring well; and

(b) collect and analyse a representative groundwater sample prior to the next scheduled sampling event

unless otherwise authorized in writing by the Director.

4.5.7 In addition to the sampling information recorded in 2.2.1, the approval holder shall record the following sampling information for all groundwater samples collected:

(a) a description of purging and sampling procedures;

(b) the static elevations above sea level, and depth below ground surface of fluid phases in the groundwater monitoring well prior to purging;

(c) the temperature of each sample at the time of sampling;

(d) the pH of each sample at the time of sampling; and

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(e) the specific conductance of each sample at the time of sampling.

4.5.8 The approval holder shall carry out remediation of the groundwater in accordance with the following:

(a) the *Alberta Tier 1 Soil and Groundwater Remediation Guidelines*, Alberta Environment and Parks, August 2022, as amended; and

(b) the *Alberta Tier 2 Soil and Groundwater Remediation Guidelines*, Alberta Environment and Parks, August 2022, as amended.

4.5.9 The approval holder shall compile a Groundwater Monitoring Report which shall include, at a minimum, all of the following information:

(a) a completed *Record of Site Condition* Form, Government of Alberta, 2014, as amended;

(b) a legal land description of the facility and a map illustrating the facility boundaries;

(c) a topographic map of the facility;

(d) a description of the industrial activity and processes;

(e) a map showing the location of all surface and groundwater users, and a listing describing surface water and water well use details, within at least a three (3) kilometre radius of the facility;

(f) a general hydrogeological characterization of the region within a three (3) kilometre radius of the facility;

(g) a detailed hydrogeological characterization of the facility, including an interpretation of groundwater flow patterns;

(h) cross-sections showing depth to water table, patterns of groundwater movement and hydraulic gradients at the facility;

(i) borehole logs and completion details for groundwater monitoring wells;

(j) a map showing locations of all known buried channels within at least three (3) kilometres of the facility;

(k) a map of surface drainage within the facility and surrounding area to include nearby water bodies;

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(l) a map of groundwater monitoring well locations and a table summarizing the existing groundwater monitoring program for the facility;

(m) a summary of any changes to the groundwater monitoring program made since the last groundwater monitoring report;

(n) analytical data recorded as required in 4.5.4 and 4.5.6(b);

(o) a summary of fluid elevations recorded as required in 4.5.7(b) and an interpretation of changes in fluid elevations;

(p) an interpretation of QA/QC program results;

(q) an interpretation of all the data in this report, including the following:

  (i) diagrams indicating the location and extent of any contamination,

  (ii) a description of probable sources of contamination, and

  (iii) a site map showing the location and type of current and historical potential sources of groundwater contamination;

(r) a summary and interpretation of the data collected since the groundwater monitoring program began including:

  (i) control charts which indicate trends in concentrations of parameters, and

  (ii) the migration of contaminants;

(s) a description of the following:

  (i) contaminated groundwater remediation techniques employed,

  (ii) source elimination measures employed,

  (iii) risk assessment studies undertaken, and

  (iv) risk management studies undertaken;

(t) a proposed sampling schedule for the following years;

(u) a description of any contaminant remediation, risk assessment or risk management action conducted at the facility; and

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(v) recommendations for changes to the groundwater monitoring program to make it more effective.

4.5.10 The approval holder shall submit the Groundwater Monitoring Report to the Director on or before March 31 of every year, unless otherwise authorized in writing by the Director.

4.5.11 If the Groundwater Monitoring Report is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.

SECTION 4.6: SOIL MANAGEMENT

Not used at this time.

SECTION 4.7: DOMESTIC WASTEWATER

4.7.1 The approval holder shall only release domestic wastewater to facilities holding a current Act authorization, unless otherwise authorized in writing by the Director.

PART 5: FINANCIAL SECURITY REQUIREMENTS

5.1.1 The approval holder shall annually review and revise the cost estimate for reclamation of the facility including decommissioning and land reclamation.

5.1.2 The annual revised cost estimate for the facility shall be submitted to the Director by March 31 of each year.

5.1.3 The approval holder shall review and revise the cost estimate for reclamation of the facility when one or more of the following occurs:

(a) the cost estimate of future conservation and reclamation of the facility changes;

(b) the extent of the operation of the facility is increased or reduced;

(c) the facility or any portion of it is conserved and reclaimed;

(d) the conservation and reclamation plan required by this approval is changed; or

(e) the activities conducted at the facility for which security is required are increased or decreased.

5.1.4 The approval holder shall submit the revised cost estimate arising from 5.1.3 to the Director within 30 days of the occurrence of any of the circumstances described in 5.1.3.

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5.1.5 The approval holder shall provide additional financial security as required in writing by the Director.

5.1.6 The approval holder shall renew the financial security for the facility at least 30 days prior to the date it expires.

5.1.7 The approval holder shall maintain the financial security for the facility until returned in accordance with the Act or the regulations.

PART 6: DECOMMISSIONING AND LAND RECLAMATION

SECTION 6.1: GENERAL

6.1.1 The approval holder shall apply for an amendment to this approval to reclaim the facility by submitting a:

(a) Decommissioning Plan; and

(b) Land Reclamation Plan

to the Director.

6.1.2 The approval holder shall submit the:

(a) Decommissioning Plan; and

(b) Land Reclamation Plan

referred to in 6.1.1 within six (6) months of the facility ceasing operation, except for repairs and maintenance, unless otherwise authorized in writing by the Director.

SECTION 6.2: DECOMMISSIONING

6.2.1 The Decommissioning Plan referred to in 6.1.1 shall include, at a minimum, all of the following:

(a) a plan for dismantling the facility;

(b) a comprehensive study to determine the nature, degree and extent of contamination at the facility and affected lands;

(c) a plan to manage all wastes at the facility;

(d) evaluation of remediation technologies proposed to be used at the facility and affected lands;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(e) a plan for decontamination of the facility and affected lands in accordance with the following:

(i) for soil or groundwater, the *Alberta Tier 1 Soil and Groundwater Remediation Guidelines*, Alberta Environment and Parks, August 2022, as amended,

(ii) for soil or groundwater, the *Alberta Tier 2 Soil and Groundwater Remediation Guidelines*, Alberta Environment and Parks, August 2022, as amended,

(iii) for drinking water, the *Canadian Environmental Quality Guidelines*, Canadian Council of Ministers of the Environment, PN 1299, 1999, as amended, and

(iv) for surface water, the *Environmental Quality Guidelines for Alberta Surface Waters*, Alberta Environment and Parks, 2018, as amended;

(f) confirmatory testing to indicate compliance with the remediation objectives;

(g) a plan for maintaining and operating contaminant monitoring systems;

(h) a schedule for activities (a) through (g) above; and

(i) any other information as required in writing by the Director.

6.2.2 If the Decommissioning Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.

SECTION 6.3: LAND RECLAMATION

6.3.1 The Land Reclamation Plan referred to in 6.1.1 shall include, at a minimum, all of the following:

(a) the final use of the reclaimed area and how equivalent land capability will be achieved;

(b) removal of infrastructure;

(c) restoration of drainage;

(d) soil replacement;

(e) erosion control;

TERMS AND CONDITIONS ATTACHED TO APPROVAL

(f) revegetation and conditioning of the facility including:

(i) species list, seed source and quality, seeding rates and methods,

(ii) fertilization rates and methods, and

(iii) wildlife habitat plans where applicable;

(g) reclamation schedule; and

(h) any other information as required in writing by the Director.

6.3.2 If the Land Reclamation Plan is found deficient by the Director, the approval holder shall correct all deficiencies identified in writing by the Director by the date specified in writing by the Director.

December 11, 2023

DATE

Craig.Knaus Digitally signed by Craig.Knaus Date: 2023.12.11 15:14:33 -07'00'

DESIGNATED DIRECTOR UNDER THE ACT
CRAIG KNAUS, B.Sc.

LICENCE

PROVINCE OF ALBERTA

Water Act, RSA 2000, c.W-3, as amended

LICENCE NUMBER:	DAUT0010346
PRIORITY NUMBER:	1907-10-03-01
EFFECTIVE DATE:	2022-09-26
EXPIRY DATE:	2032-09-30
SOURCE OF WATER:	Highwood River
POINT OF DIVERSION:	SE-32-018-29 W4M
POINT OF USE:	NW 05-019-29-W4M, SW 05-019-29-W4M and NE 06-019-29- W4M
LICENSEE:	Korova Feeders Ltd.

This Licence is the result of a permanent transfer of a water allocation from Licence No. 0045742-00-01 issued to Hugh and Susan McPherson.

Pursuant to the Water Act, RSA 2000, c.W-3, as amended, a licence is issued to the Licensee to:

- operate a works and to divert up to 160,971 cubic metres of water per year from the source(s) of water at the point(s) of diversion at a maximum rate of 0.027* cubic metres per second for the purpose(s) of Industrial and Agricultural.
  * see condition 6980 for details on maximum rate of diversion

subject to the attached terms and conditions.

Designated Director under the Water Act: Craig Kraus

Date Signed: 2022-09-26

TERMS AND CONDITIONS

1. DEFINITIONS

6560. All definitions from the Act and the Regulations apply except where expressly defined in this licence.

6570. In all parts of this licence:

a. "Act" means the Water Act, RSA 2000, c.W-3, as amended;

b. "Application" means the written submissions to the Director in respect of application number DAPP0002975 and any subsequent applications for amendments of Licence No. DAUT0010346;

c. "Director" means an employee of the Government of Alberta designated as a Director under the Act;

d. "Instream Objective" means the water flow in the source of water that remains in the source of water immediately downstream of the Point(s) of Diversion, during the diversion of water by the Licensee;

e. "Point of Diversion" means the place in which water is diverted by the Licensee for the licenced purpose, specified in 6880;

f. "Point of Use" means the place in which the diverted water is used by the Licensee for the licenced purpose, specified in 6880;

g. "Regulations" means the regulations, as amended, enacted under the authority of the Act;

h. "Water Conservation Objective" means the amount and quality of water necessary for the protection of a natural water body or its aquatic environment, including water necessary for the rate of flow or water level requirements;

i. "Water Conservation Objective" means the amount and quality of water established by the Director under Part 2, based on information available to the Director, to be necessary for the protection of a natural water body or its aquatic environment, or any part of them, protection of tourism, recreational, transportation or waste assimilation uses of water, or management of fish or wildlife, and may include water necessary for the rate of flow of water or water level requirements.

j. "Water Use Reporting System" means the Alberta Environment and Parks secure internet website for submitting measuring and monitoring results electronically to the Director.

2. GENERAL

6770. The Licensee shall immediately report to the Director by telephone any contravention of the terms and conditions of this licence at 1-780-422-4505.

6780. The terms and conditions of this licence are severable. If any term or condition of this licence is held invalid, the application of such term or condition to other circumstances and the remainder of this licence shall not be affected thereby.

6790. The Licensee shall not deposit or cause to be deposited any substance in, on, or around the source of water that has, or may have, the potential to adversely affect the source of water.

6800. Unless otherwise specified in writing by the Director, the Licensee shall submit an application to the Director for the decommissioning of the works within six months after permanently ceasing operation of the works or diversion of the water.

6804. The Licensee will implement the Water Shortage Response Plan (WSRP) submitted on February 10, 2022 when water supply shortages occur.

6805. The Licensee will review the WSRP after each implementation of the Plan and provide revisions to the Director for review and approval.

6806. The Licensee will implement any revisions to the WSRP approved by the Director.

6810. The Licensee shall comply with the terms and conditions of the Water Use Reporting System User Consent.

3. PARTICULARS

6880. This licence is appurtenant to the following:

(a) the Point of Diversion described as the actual point of removal from the Highwood River at SE 32-018-29-W4 as described in Plan No.19110-5, as specified in Licence No 00032187-00-00; and

(b) the Point of Use located at NW 05-019-29-W4, SW 05-019-29-W4 and NE 06-019-29-W4 as shown on Plan No. DAPP000975-P001.

6890. The Licensee shall only undertake the Diversion of Water in accordance with Plan No. 19110-5 and DAPP0002975-P001.

6900. The works used to divert, convey and use the water to the Point(s) of Use authorized by this licence shall include, at a minimum, all of the following:

(a) the intake site as specified in 6890; and

(b) water supply lines, pumps, reservoirs, tanks, and any other works associated with the biodigester project.

6920. The Licensee shall undertake the diversion in accordance with the plans and reports as specified in 6890

6930. The Licensee shall divert water only for the purpose(s) specified in this licence.

6940. The Licensee shall divert water only from the source(s) of water specified in this licence.

6950. The Licensee shall divert water only from the Point(s) of Diversion.

6960. The Licensee shall divert the water only to the Point(s) of Use.

6970. The Licensee shall not divert more than 160,971 of cubic metres of water per year.

6980. The Licensee shall not divert water at a rate of diversion greater than 0.027 cubic metres per second, but this rate may be increased upto 0.056 cubic metres per second but only when all licensees and registrants with a numerically lower priority than 2015-05-08-001 in the Highwood River Basin have sufficient water to divert their whole allocation of water specified under the licence or registration.

6990. The diversion during winter season (November 1 to March 31) will have a priority number of 2022-02-10-001.

7010. The Licensee shall cause any water entering an intake pipe leading to pumps to first pass through a screen with openings no larger than 2.54 millimetres.

7030. Prior to diverting any water from the source of water, the Licensee shall equip the Point of Diversion with a meter which measures:

(a) cumulatively the quantity of all water diverted; and

(b) the rate of diversion in cubic metres per second.

7040. The Licensee shall maintain each measuring device referred to in 7030 at all times.

7050. The Licensee shall calibrate each measuring device referred to in 7030 in accordance with manufacturer's specifications.

7060. The Director may amend this licence to establish or change the:
(a) rate of flow requirement;
(b) instream objectives;
(c) water conservation objectives;
(d) water level requirements;
(e) exceedence flows; and
(f) cumulative allocations
upon a minimum of 12 months written notice to the Licensee.

7070. The instream objectives is set out in the Schedule 1 for the periods of time specified.

7080. The Licensee shall divert the water authorized by this licence only when there is sufficient water flow in the source of water to meet or exceed the requirement, instream objectives set out in 7070.

7090. The Licensee shall divert the water authorized by this licence only when the water level in the source of water is at or above the water level requirements set out in 7070.

7100. Unless otherwise authorized in writing by the Director, the instream objectives in 7070 is to be met:
(a) at Water Survey of Canada Station No. 05BL004 (Highwood River below Little Bow Canal)
(b) when diverting any water

4. MONITORING AND REPORTING

9200. Unless otherwise authorized in writing by the Director, the Licensee shall measure the total number of cubic metres of water diverted from the source of water on a monthly basis while water is being diverted.

9220. Unless otherwise authorized in writing by the Director, the Licensee shall measure the total number of cubic metres of water returned to the source of water on a ${daily, weekly, monthly, quarterly, annual} basis.

9230. Unless otherwise authorized in writing by the Director, the Licensee shall measure the rate of diversion from the source of water on a per second basis.

9250. The Licensee shall:
(a) record all of the following information:
(i) the place, date and time of all monitoring, measuring and sampling;
(ii) the results obtained pursuant to:
(A) 9220 and 9230,
(iii) the name of the individual who conducted the monitoring, measuring and sampling stipulated in (i); and
(b) retain the information in (a) for a minimum of 5 years after being collected.

9260. The Licensee shall report to the Director the results of the recording in 9250 using the "Water Use Reporting System" and any other information required in writing by the Director.

9270. The Licensee shall submit the report required in 9250 on or before the end of the year following of the year in which the information is based upon was collected.

5. COMPLAINTS

9370. The Licensee shall:
(a) make reasonable efforts to obtain further information regarding complaints of surface water and groundwater interference as a result of the diversion; and
(b) prepare a written report describing the steps taken to comply with (a) including, at a minimum, each of the following:
(i) a detailed description of the efforts taken by the Licensee to obtain further information regarding the complaints as required in (a);
(ii) all of the information obtained by the Licensee as result of the efforts required in (a);
(iii) recommendations for measures to remediate and mitigate the interference(s) with surface water and groundwater as a result of the diversion;
(iv) detailed information describing how the Licensee will implement the measures recommended in (iii);
(v) a schedule of implementation for the measures recommended in (iii); and
(vi) any other information required in writing by the Director.

9390. If the written report in 9370 (b) is found deficient by the Director, the Licensee shall correct all the deficiencies identified by the Director by the date specified in writing by the Director.

9400. The Licensee shall implement the measures in 9370 (b) as approved in writing by the Director.

Alberta

HRA Number: 4515-21-0007-001
October 27, 2021

Historical Resources Act Approval

Proponent: Korova Feeders Ltd.
Box 65, 294044 Range Road, Acme, AB T0M 0A0
Contact: Kendra Donnelly

Agent: Bison Historical Services Ltd.
Contact: Sean Goldsmith

Project Name: **Rimrock's Biodigester NE 1/4, SEC. 6-19-29-W4M**

Project Components: Feedlot
Other - Biodigester

Application Purpose: Requesting HRA Approval / Requirements

Historical Resources Act approval is granted for the activities described in this application and its attached plan(s)/sketch(es) subject to Section 31, "a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the Minister of the discovery." The chance discovery of historical resources is to be reported to the contacts identified within Standard Requirements under the *Historical Resources Act*: Reporting the Discovery of Historic Resources.

Rebecca Traquair
Regulatory Approvals Coordinator
Alberta Culture and Status of Women

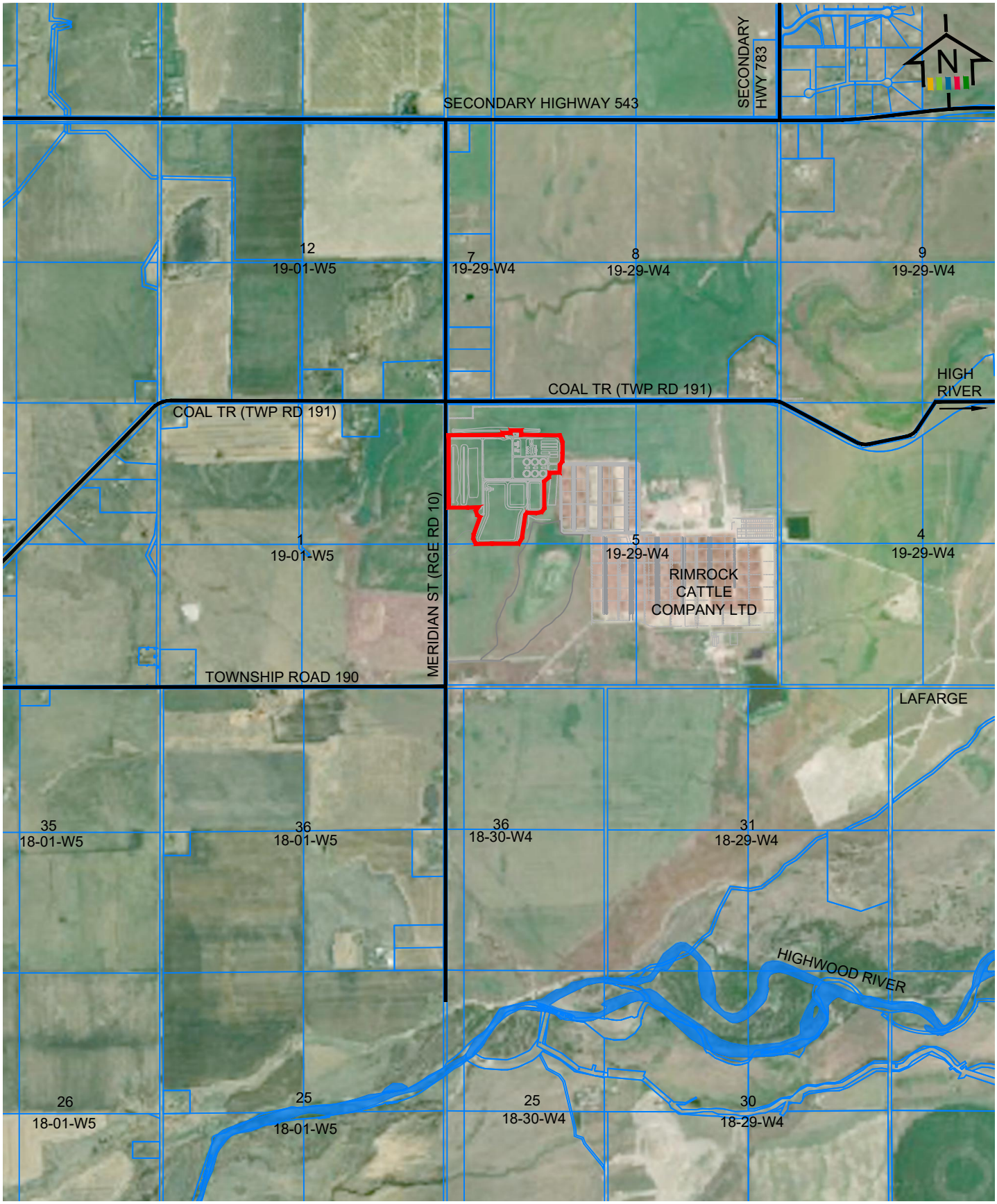
Lands Affected: All New Lands

Proposed Development Area:

MER	RGE	TWP	SEC	LSD List
4	29	19	5	12-14
4	29	19	6	9,16

Documents Attached:

Document Name	Document Type
Project Plans	Illustrative Material



Rimrock Digester Facility Boundary
Highway / Roads

ISL Engineering and Land Services

0 600 1200 m
1:30,000

Rimrock Digester Facility
Foothills County, Alberta

Exhibit G1

Facility Location Map

May 2025

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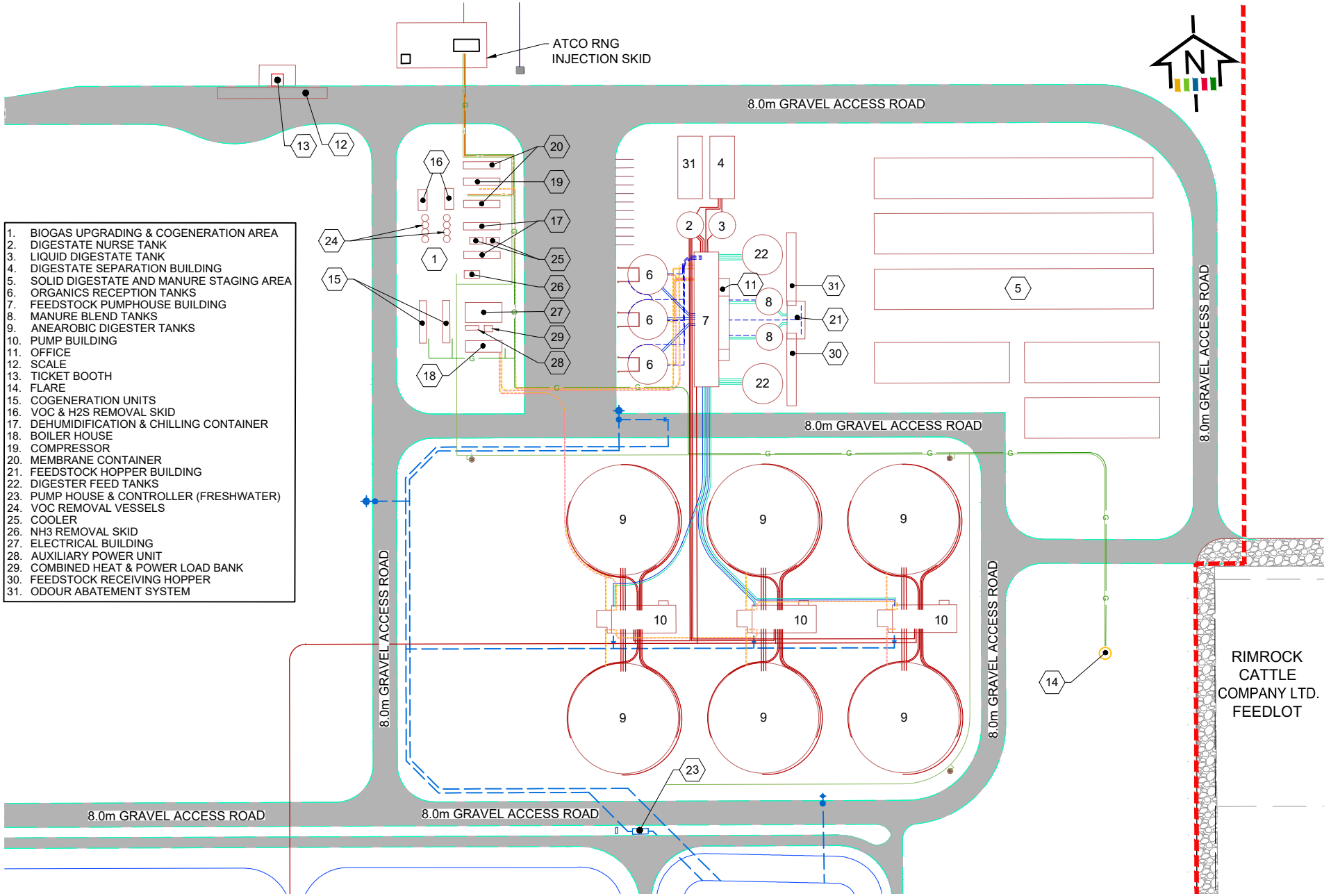

PROJECT FOOTPRINT
WATERLINE
HYDRANT
MANHOLE
PROPOSED TRANSFORMER LOCATION
HEAT MEDIUM RETURN LINE
HEAT MEDIUM SUPPLY LINE

DIGESTATE LINE
MANURE LINE
BIOGAS LINE
NATURAL GAS PIPELINE
RNG LINE
POWERLINE
ORGANIC FOOD RESOURCES SLURRY

ISL Engineering and Land Services

0 35 75 m
1:1750

Rimrock Digester Facility
Foothills County, Alberta
Exhibit G2
Facility Plot Plan
May 2025

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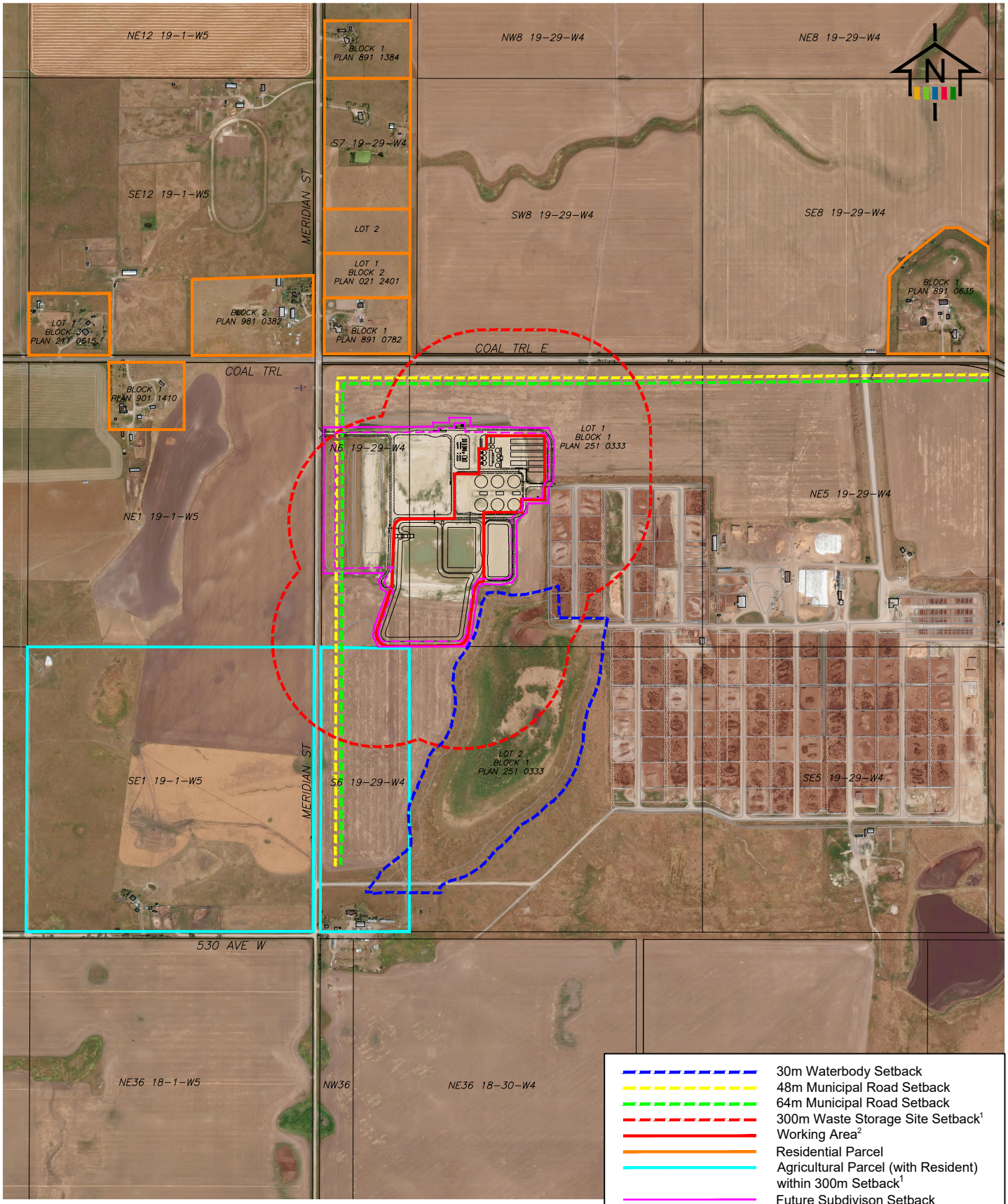

Note 1: Setback required under Land use bylaw 9.27.24 and Section 17(5)(d) of the *Matters Related to Subdivision and Development Regulation*.
Note 2: The working area as defined in Section 1(ii) of the *Waste Control Regulation*.

ISL Engineering and Land Services

0 300 600 m
1:15000

Rimrock Digester Facility
Foothills County, Alberta
Exhibit G3
Site Offset Figure
May 2, 2025

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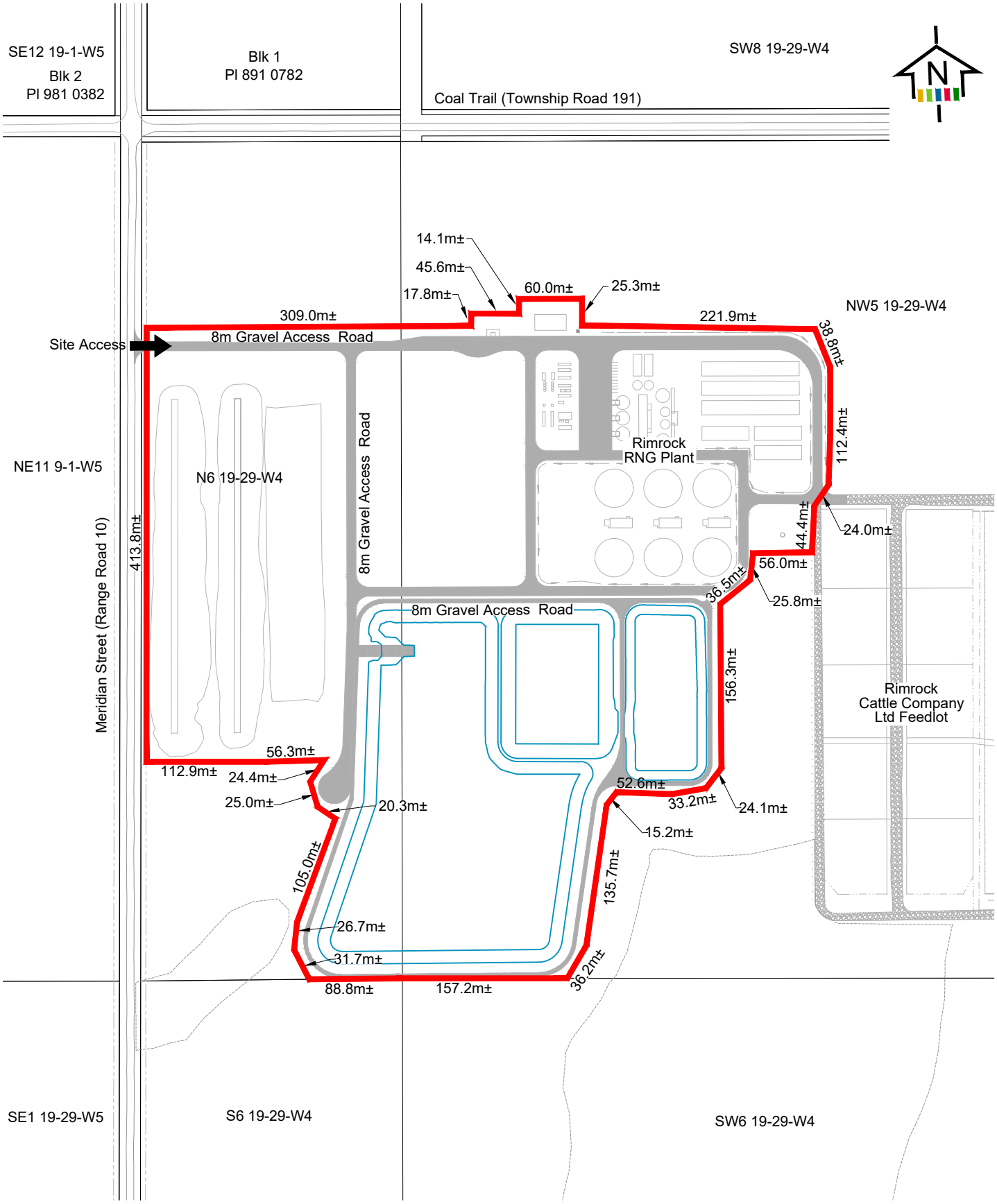

Rimrock Digester Facility Boundary

ISL Engineering and Land Services

0 100 200 m
1:5,000

Rimrock Digester Facility
Foothills County, Alberta
Exhibit G4
Landuse Amendment Area
May 2025

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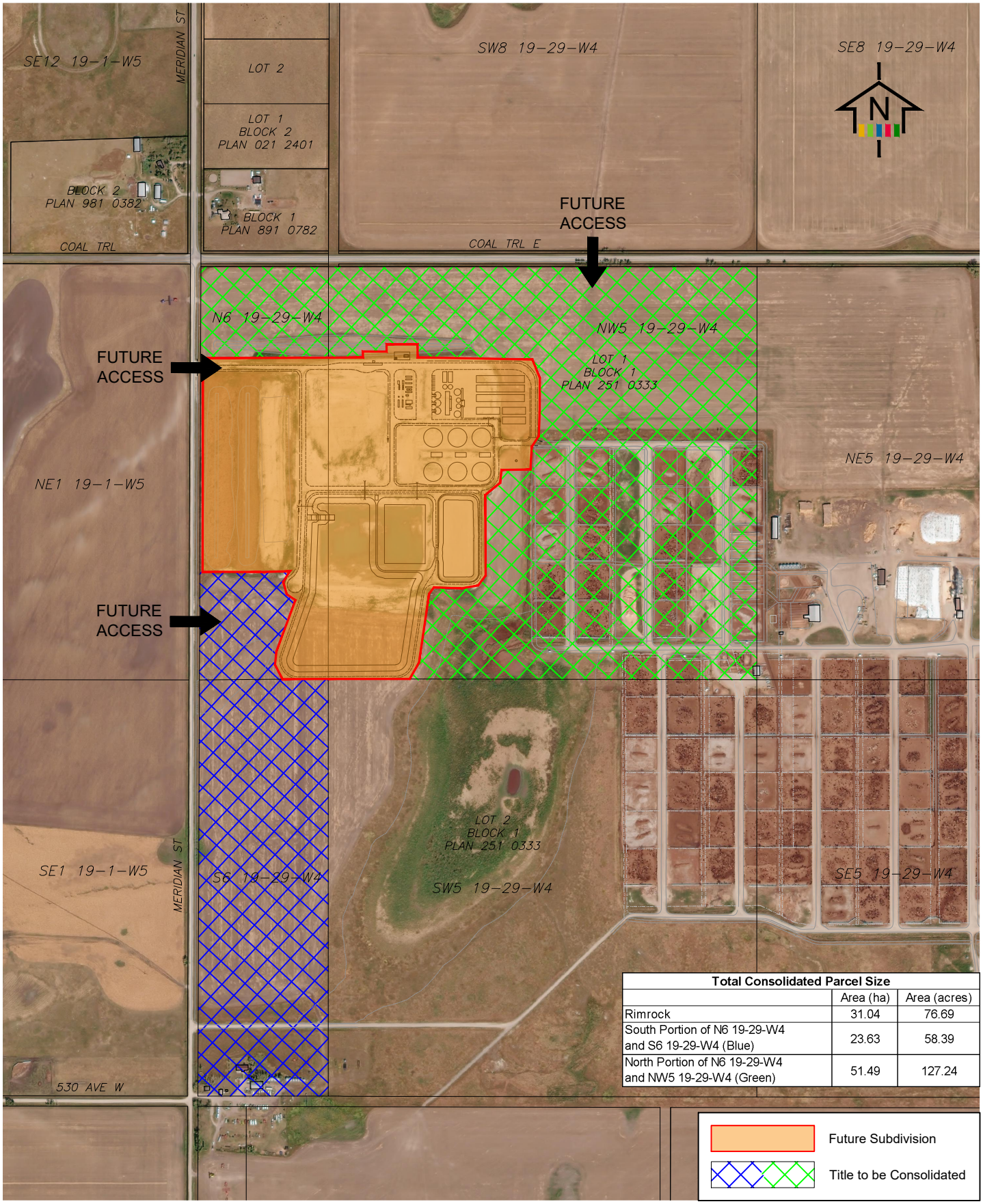

Total Consolidated Parcel Size		
	Area (ha)	Area (acres)
Rimrock	31.04	76.69
South Portion of N6 19-29-W4 and S6 19-29-W4 (Blue)	23.63	58.39
North Portion of N6 19-29-W4 and NW5 19-29-W4 (Green)	51.49	127.24

Future Subdivision

Title to be Consolidated

ISL Engineering and Land Services

0 200 400 m

1:10000

Rimrock Digester Facility
Foothills County, Alberta

Exhibit G5

Future Subdivision Access Figure

May 2025

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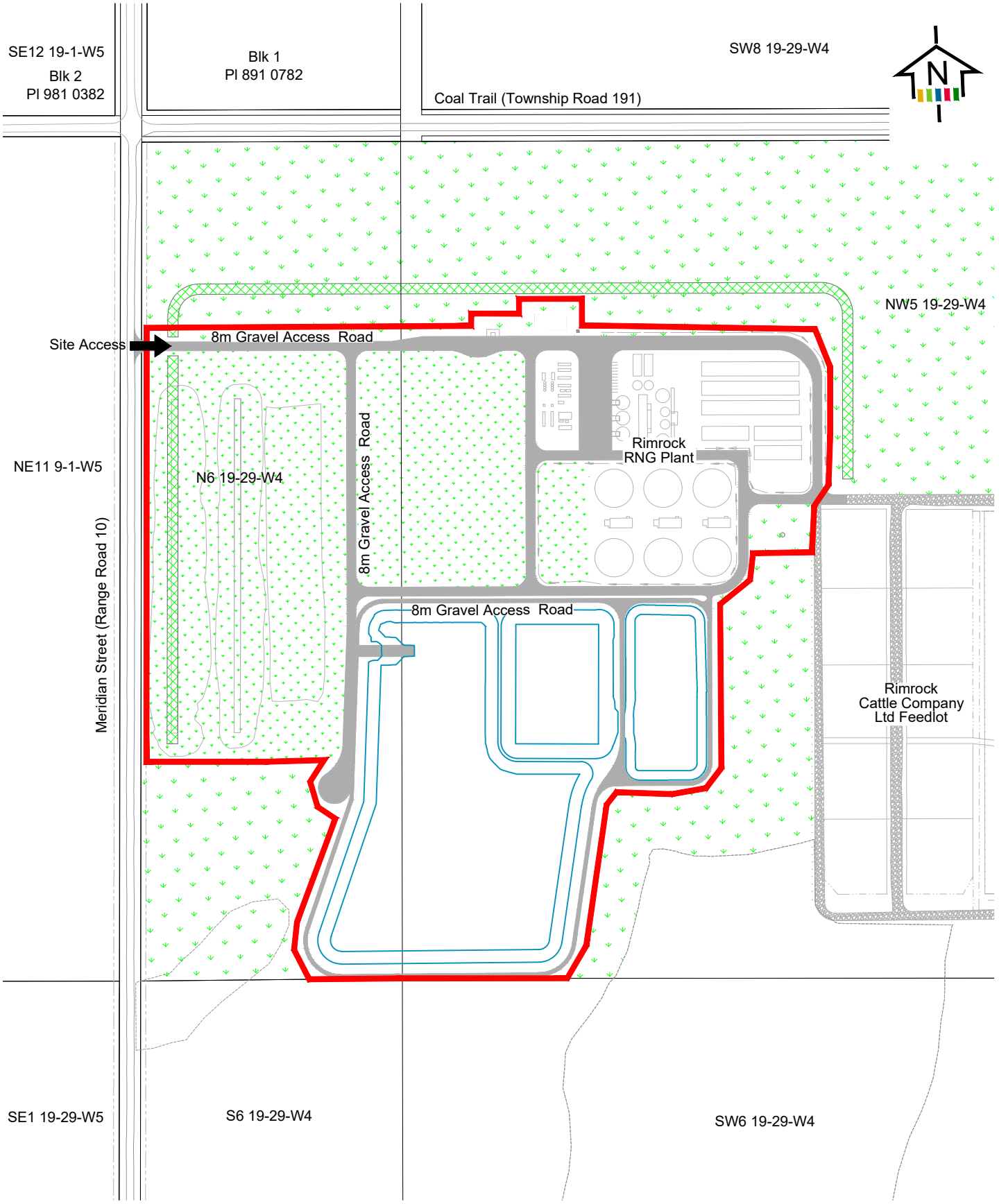

ISL Engineering and Land Services

0 100 200 m
1:5,000

Rimrock Digester Facility Boundary
Cereal Crop
Landscape Area
Trees Area

Rimrock Digester Facility
Foothills County, Alberta
Exhibit G6
Vegetation Plan
May 2025

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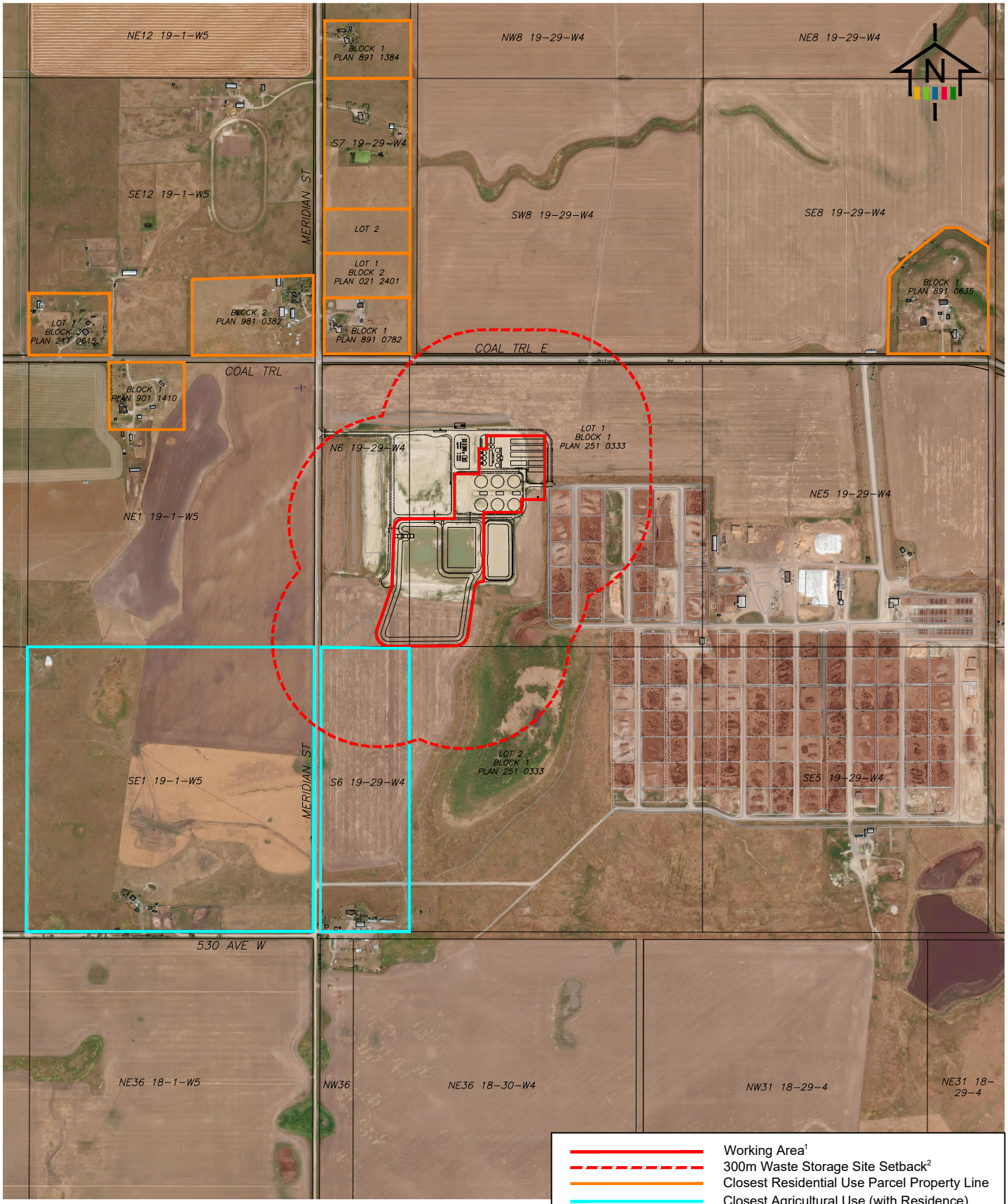

Note 1: The working area as defined in Section 1(ii) of the *Waste Control Regulation*.
Note 2: Setback required under Land use bylaw 9.27.24 and Section 17(5)(d) of the *Matters Related to Subdivision and Development Regulation*.

ISL Engineering and Land Services

0 300 600 m
1:15000

Rimrock Digester Facility
Foothills County, Alberta

Exhibit G7
Rimrock 300m Offset Figure
May 2, 2025

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